# :: LinkPoint® API

Version 3.5

# INTEGRATION GUIDE

LinkPoint INTERNATIONAL®

**Contents** | Index | Search | Glossary

# Introduction to the API

## What is the API?

The API is an Application Programming Interface: a collection of functions for processing payment transactions over the Internet in a highly secure manner.

## Advantages of the API

Conducting credit card authorizations over the Internet in a secure environment is a very complex process. The API offers merchants a simpler payment solution.

Using the API is your key to connecting an online store electronically to the Payment Gateway with secure sockets layer (SSL) protection. All of your interactions with credit card processors and financial institutions are resolved and managed through the Payment Gateway. The payment processing communication highway is fast-paced with today's equipment and technology becoming obsolete within days or months. Fortunately, the API handles all of the details for merchants in one package.

Smaller merchants can quickly and easily begin payment processing through the API. By contacting a participating sales agent, a merchant is guided through the online or paper application process. Upon approval, the same merchant can be running transactions within 24 hours.

Internet service providers (ISPs), commerce service providers (CSPs) and self-hosting merchants using the API do not have to invest in the logistical strategies, personnel, hardware, software or telecommunication expenses required for hosting secure data. Another advantage for ISP and CSP customers is obtaining access to the automated system for setting up and maintaining merchant accounts.

## SECURE SOCKETS LAYER (SSL) ENCRYPTION

The API provides data encryption, server authentication, message integrity and optional client authentication for a TCP/IP connection by using version 3.0, Secure Socket Layers (SSL) protocol. SSL is a protocol developed by Netscape® to provide secure transmission of private information that is sent over the Internet. This protocol uses public and private key pairs to encrypt data. The public and private keys are dissimilar and each pair is unique; therefore, the keys you possess can verify your identity. The public key is distributed to the merchant, ISP or CSP in the form of a digital certificate, which contains information that can verify the key holder identity and the key validity. The private key is kept confidential and remains on the Gateway server. If data is encrypted with the private key, only the public key can decrypt it. If data is encrypted with the public key, only the private key can decrypt it. This process prevents the data from being compromised while in transit.

## DEVELOP IN YOUR OWN LANGUAGE

You have your choice of several different web development languages for employing the API. The languages supported are:

- C++
- C#
- COM Object technology (allows you to develop in Visual Basic, VBScript, or ASP)
- PHP
- PERL®
- Java™
- Macromedia® ColdFusion®
- .NET

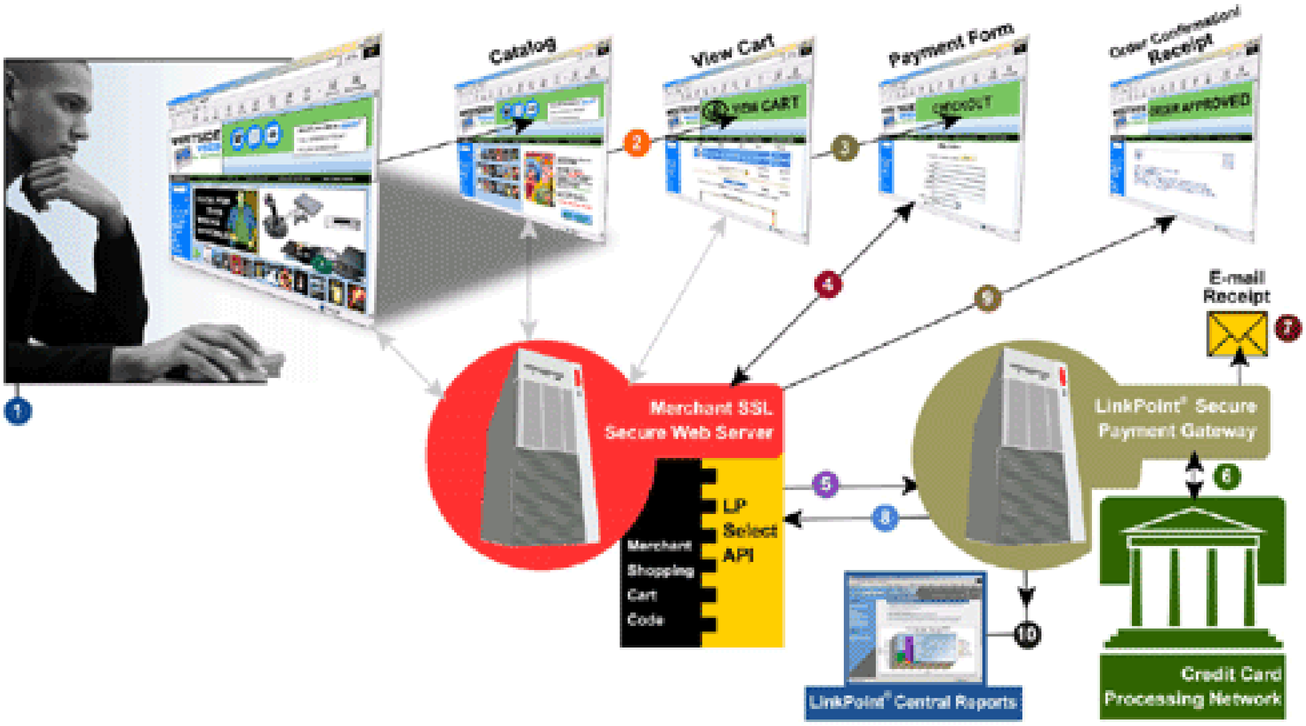
# How the API Works

A merchant uses the API software modules to build the payment solution that fits the merchant's unique needs. Modules offered are:

- The payment module
- The shipping calculator module
- The tax calculator module
- The ESD module
- The VirtualCheck module
- The Recurring payments module

Merchants can pick and choose modules as needed. For credit card payments, all of the interactions with credit card processors and financial institutions are resolved and managed through the API payment module. For electronic check payments, all of the interactions with financial institutions are resolved and managed through the API VirtualCheck module.

Once a merchant has integrated the API payment module into a Web site, a customer can purchase items on the merchant's Web site and all payment details are processed automatically. Merchants can then review transaction activity by visiting LinkPoint Central. Let's follow a simple transaction as it travels from the customer's order to approval.



1. A customer selects items for purchase from a merchant's online store over the Internet.
2. The customer clicks on the **View Cart** button and finalizes the order.
3. The customer clicks on the **Check Out** button and proceeds to the merchant's payment page.
4. The ordering information is received by the merchant's CSP or by the merchant's own server (self-hosting).
5. The merchant's customized software receives the information, uses the tax and shipping calculators as needed, calculates the order total and passes relevant order and payment information to the API payment module. The API payment module funnels the order data through the secure sockets layer (SSL) pipeline to the LinkPoint Secure Payment Gateway.
6. The LinkPoint Secure Payment Gateway calls and transmits the data through a dedicated, secure frame relay system to the banking network. (Once the transaction is approved and settled, funds are withdrawn from the credit card-issuing bank and deposited into the merchant bank.)
7. A confirmation e-mail is sent to the merchant and the purchaser when the transaction is completed.
8. The merchant's Web server receives the transaction response information. This generally happens within six seconds.
9. The merchant's Web server displays the transaction results to the customer.
10. The merchant uses LinkPoint Central reports to review transactions and mark items as shipped (e.g., ready for settlement).

# What is Required to Integrate the API?

What you need to integrate the API depends on which language you choose to develop in.

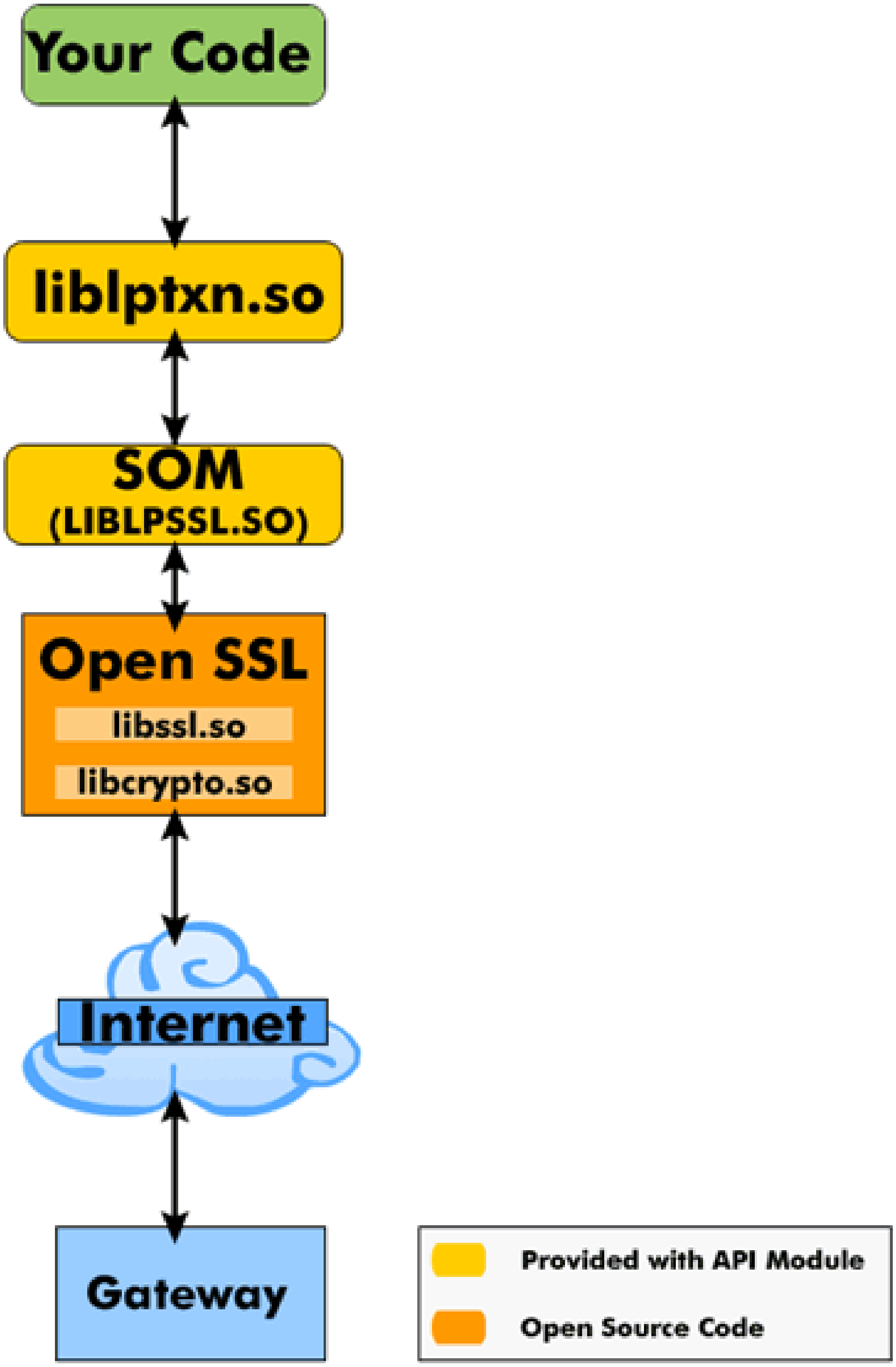
If you use PERL or PHP, you have some options. See ***Prerequisites for PERL*** and/or ***Prerequisites for PHP*** for further information.

If you are using any of the languages listed below, you will need to ensure that the OpenSSL libraries *libssl.so* and *libcrypto.so* (if using HP-UX, the file extensions would be .sl) are installed as shared objects on your Web server.

- C or C$^{++}$
- C$^{\#}$
- COM Object technology
- .NET technology
- Java$^{TM}$

See ***What is OpenSSL?*** for further information on OpenSSL and requirements for installing it.

The diagram below shows the flow between the different software modules.


Your Code
liblptxn.so
SOM
(LIBLPSSL.SO)
Open SSL
libssl.so
libcrypto.so
Internet
Gateway
Provided with API Module
Open Source Code

# Prerequisites for Java™

If you choose Java$^{TM}$ as your development language, you will need to convert your PEM file to pkcs12 format. One way to do this is to run the following from a command prompt:

```
openssl pkcs12 -export -in YOURPEM.pem -inkey YOURPEM.pem -out
YOURPEM.p12 -passout pass:YOURPASS -name "YOURNAME"
```

Where:

- YOURPEM - the name of your PEM file
- YOURPASS - any password
- YOURNAME - any arbitrary name

For example:

```
openssl pkcs12 -export -in 1234567.pem -inkey 1234567.pem -out
1234567.p12 -passout pass:987654321 -name "LinkPoint"
```

The output *.p12 file and the password are used to pass as parameters for JLinkPointTransaction object. If you have a problem converting your PEM file, please contact support.

# Prerequisites for PERL

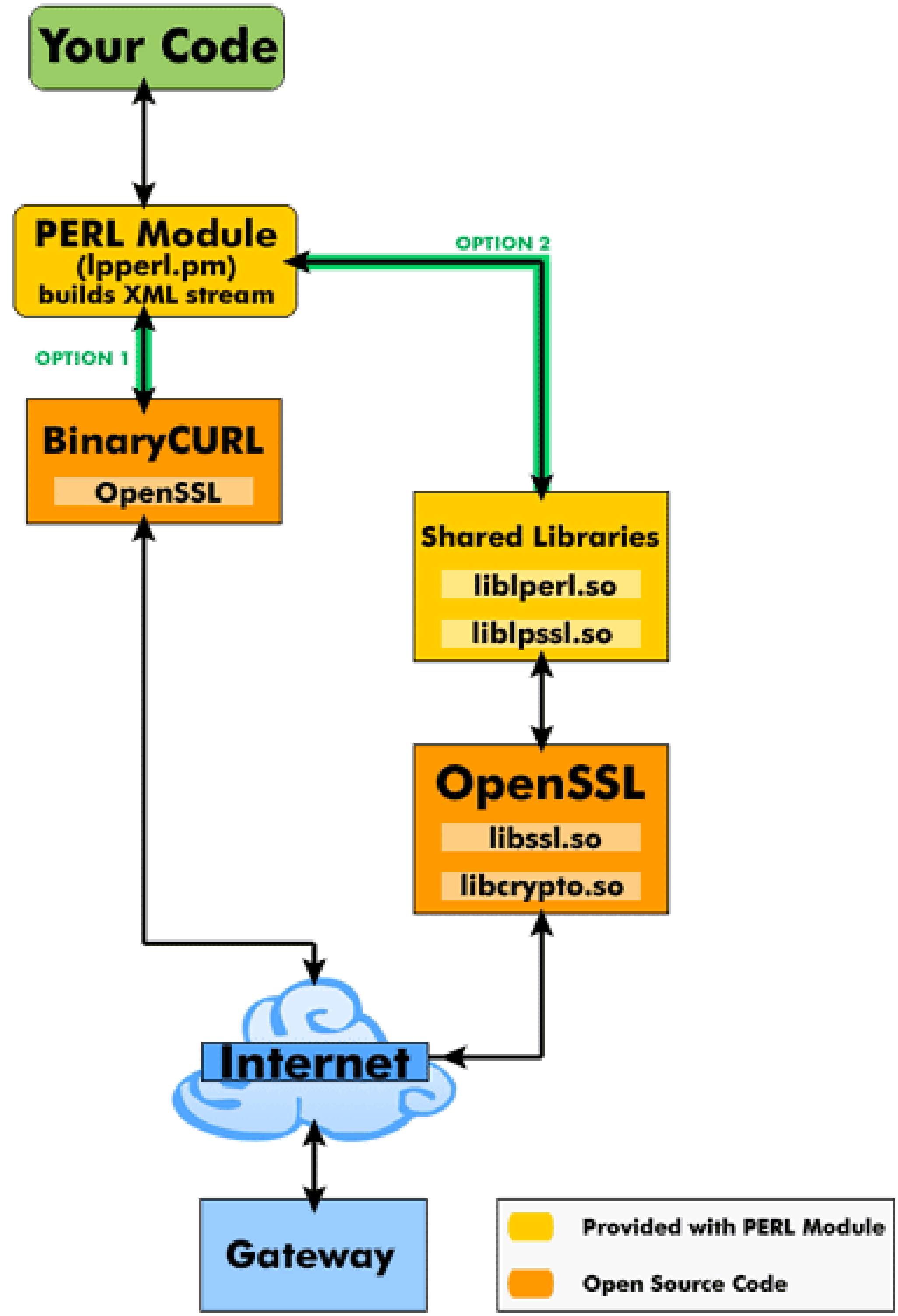
If you choose PERL as your development language, you will first need to know:

- Whether or not you have cURL and OpenSSL available on your Web server
- Whether you have root access and install privileges on your Web server

You have some choices for connecting to and sending transactions securely to the Gateway:

1. Use cURL (with OpenSSL) and DO NOT use the Shared Libraries provided with the PERL module. cURL must be built with SSL support enabled. (This is the default installation option for most cURL installations.)

2. Use the provided Shared Libraries. (This option requires the two shared libraries lpbspssl.so and liblphp.so to be installed correctly (typically in /usr/lib) and also that you have OpenSSL built with 'shared object' support on your Web server. This option is recommended for those users that have admin privileges on their Web server for correct installation of the shared libraries. BSDi™, FreeBSD® 3.3, and HPUX® PERL users should use the cURL option. Shared libraries are not supported for BSDi, FreeBSD version 3.3, or HPUX with PERL.



Please note that shared libraries are not supported for the HPUX 11 operating system, or the BSDi operating system.

## Attention WIN32 PERL Developers

If you are running PERL in a WINDOWS 32 operating system, you will need to perform some setup steps that differ from the UNIX environment. Please see the sample entitled

**Sample Code Sale WINDOWS 32 PERL** for an example of how to run a Sale using the PERL API in a WIN32 environment. Also refer to the **cURL** and **OpenSSL** topics for further setup instructions.

## Related Topics

- **What is cURL? How do I get cURL?**
- **What is OpenSSL? How do I get OpenSSL?**

# Prerequisites for PHP

If you choose PHP as your development language, what you need to get started depends on:

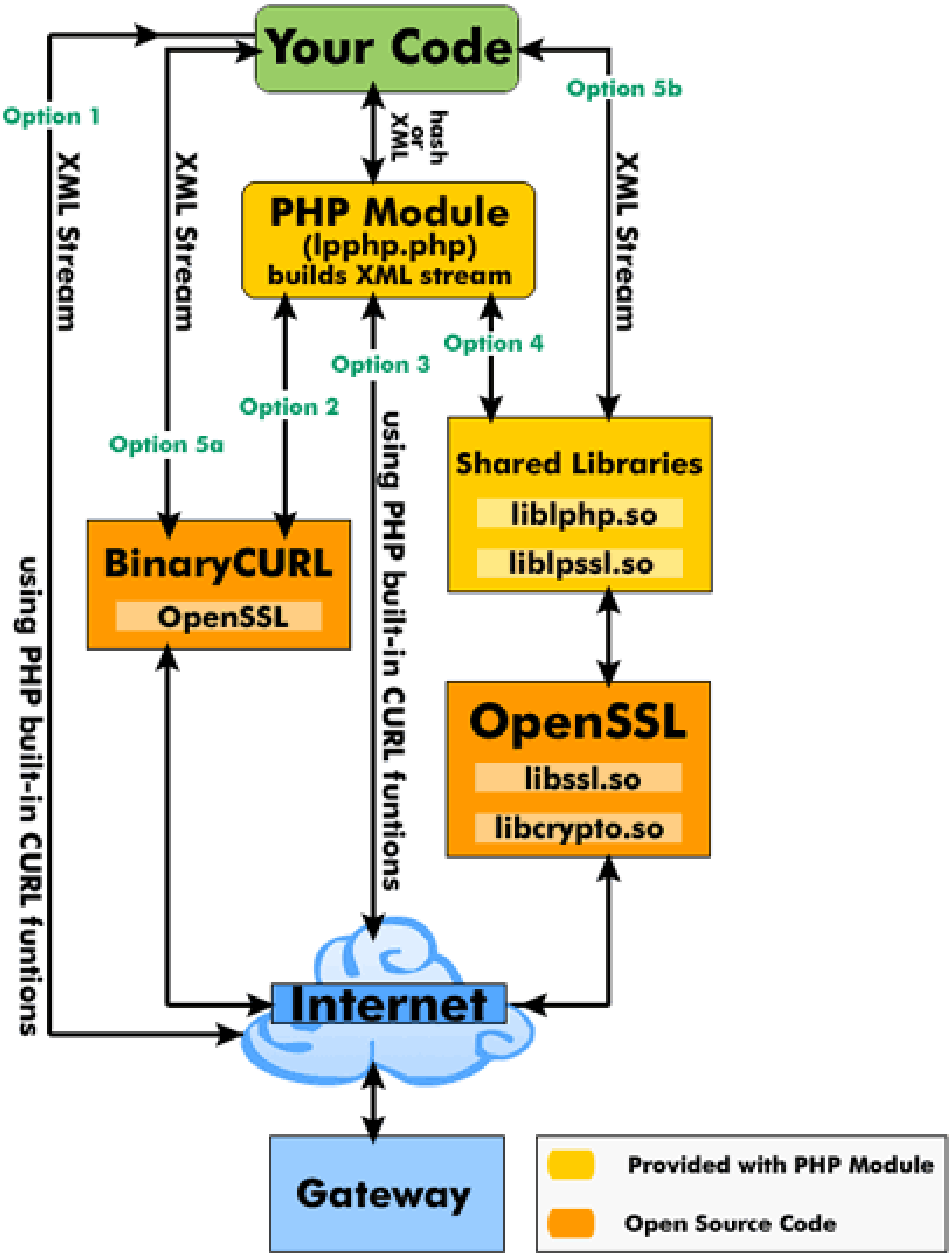
- Whether or not you have cURL and OpenSSL available on your Web server
- Whether you have root access and install privileges on your Web server
- Whether you have a version of PHP with cURL functionality built-in

You have some choices for connecting to and sending transactions securely to the Gateway:

1. If you are using PHP with built-in cURL functionality, you have the option to build the XML string yourself and send it directly to the Gateway. This option requires a PHP version greater than 4.0.2 and that cURL support has been compiled into PHP. (This is the default setup for Red Hat® Linux® server installations.) This options does not use the PHP module to build the XML string, so users must manage their own XML output. This option is demonstrated in the PHP sample program PASS_XML_DIRECT.php.
2. Use cURL (with OpenSSL) along with the **lphp.php** module. Use this option with older versions of PHP or where PHP has not been compiled to support cURL. Accepts either hash-style input or XML.
3. Use the PHP built-in cURL methods* along with the **lphp.php** module. This is the easiest option to use. It requires PHP version greater than 4.0.2 and that cURL support is compiled into PHP. (This is the default setup for Red Hat Linux server installations.) Accepts either hash-style input or XML.
4. Use the lphp.php module along with the provided Shared Libraries and OpenSSL. This option requires the provided Shared Libraries **libspssl.so** and **liblphp.so** to be correctly installed (typically in /usr/lib) and that you have OpenSSL libraries built with 'shared object' support on your Web server. This option uses the **lphp.php** module to accept either hash-style input or XML. Recommended for users with admin privileges on their server to correctly install the shared libraries. FreeBSD® 3.3 PHP users should not attempt to use the shared libraries option. Shared libraries are not supported for FreeBSD 3.3 with PHP.
5. You may also build the XML stream yourself and send it:
   a. via cURL, or
   b. via the Shared Libraries provided with the PHP module. This option requires

the provided Shared Libraries **libspssl.so** and **liblphp.so** to be correctly installed (typically in /usr/lib) and that you have OpenSSL libraries built with 'shared object' support on your Web server. This option is demonstrated in the PHP sample program PASS_XML_LIB.php.

* To determine whether PHP cURL support is installed, enter the command: ***php -m***. PHP will list all compiled modules.



# Making PHP and cURL work in Windows®

If you choose to use cURL on a Windows® platform, follow these steps to complete your PHP installation.

1. Open the file ***php.ini*** located in the ***winnt*** folder in a text editor such as Notepad. Remove the semicolon from this line:

   ```
   extension=php_cURL.dll
   ```

2. Copy ***php_cURL.dll*** into ***c:\php\***.
3. Verify that cURL works in PHP by doing the following:
   a. Open a text editor such as notepad.
   b. Copy and paste this script into the file:

      ```
      // script
      phpinfo()
      ?>
      ```

4. Save the file in your local web directory as ***phpinfo.php***.
5. Using your web browser, type in the following URL: **http://localhost/phpinfo.php**.
6. Look for the word ***cURL*** on the page displayed.

## Related Topics

- **What is cURL? How do I get cURL?**
- **What is OpenSSL? How do I get OpenSSL?**

# What is OpenSSL?

OpenSSL is well-known, widely respected open source software that provides encryption/decryption, SSL communications, and digital signature capabilities. OpenSSL is based on the SSLeay library developed by Eric A. Young and Tim J. Hudson. The OpenSSL toolkit is licensed under a Apache-style license, which basically means that you are free to use it for commercial and non-commercial purposes. If you make changes to the source code, however, you are obligated to make your changes public. See the OpenSSL web site for more information at http://www.openssl.org/. There are FAQs available there that answer many of the OpenSSL usage questions.

## HOW TO GET OPENSSL

We recommend the following course of action:

1. First, check to see if the secure Web server you are using already has OpenSSL installed on it. If you are using an ISP, ask your ISP whether this software is installed on your Web server. If it is installed, find out what version is installed.
2. If OpenSSL is installed, find out whether it is installed as SHARED libraries. If it is not, reinstall OpenSSL and make sure you install them as shared libraries.
3. Make sure you are using the latest version. OpenSSL is frequently updated. For best results, you should ensure you always have the latest version of OpenSSL on your Web server. If the version installed on your server is NOT the latest version, upgrade the software (or ask your ISP to upgrade to the latest version).
4. If OpenSSL is not already installed on your Web server, your next best move is to download the source code from **http://www.openssl.org/source**. Instructions for installing the source code are located at: **http://www.linkpoint.com/support/**. Click on **FAQs**, then on **How to Build and Install OpenSSL from Source** under **Additional Materials**.
5. OpenSSL must be installed to use the API. You will need root permissions on your Web server to install OpenSSL. If you do not have root permissions on your system (and if the latest version of OpenSSL is not already installed), ask your ISP or system administrator to install (or upgrade) it for you.

**Top**

## Do I need OpenSSL?

You will need OpenSSL before you can use the API.

**Top**

## OpenSSL is huge! Do I really need all those files?

No, you don't need all of them to use the API. Depending on which software language you choose and the operating system on your Web server, you will need two to four files. The required files for each operating system are listed in the ***OpenSSL Download and Installation Recommendations*** located in the Support/FAQs section on **linkpoint.com/support**. The binary versions of these files can be downloaded from that page. If you choose to use source code, see ***How to Build and Install OpenSSL from Source*** in the same location.

**Top**

## Do I need the OpenSSL executable file?

No, you do not need to install the executable. The LinkPoint software does not execute OpenSSL, rather it calls functions defined within the OpenSSL libraries (or dlls).

**Top**

## Where do I get OpenSSL again?

**http://www.linkpoint.com/support/index_openssl.html** for the binaries

**http://www.openssl.org** for the source code.

**Top**

# What is cURL?

cURL (or simply just 'cURL') is a library for getting or sending files using URL syntax. The name is a play on 'Client for URLs', originally with URL spelled in uppercase to make it obvious that it deals with URLs.

cURL is open source code that supports a range of common Internet protocols, currently including: HTTP, HTTPS, FTP, FTPS, GOPHER, LDAP, DICT, TELNET and FILE. cURL exists, compiles, builds and runs under a wide range of operating systems, including all modern Unixes (and a bunch of older ones too), Windows, Amiga, BeOS, OS/2, OS X, QNX, etc.

## HOW TO GET cURL

cURL is already available on some Web servers, so we recommend a similar course of action that you used with OpenSSL:

1. First, check to see if your Web server has cURL installed. If you are using Red Hat Linux, cURL is most likely included.
2. If it is installed, check the version number.
3. If it is not a compatible version, download the appropriate cURL binaries or source code and install it.
4. If you choose to build it from source, make sure you install OpenSSL first, then cURL. Also make sure you enable SSL in the installation.

Please note: If you are building the files from source, make sure you enable SSL in the installation. You can download cURL source code or binaries from the cURL Web site at **http://cURL.haxx.se/download.html**. Installation and usage instructions are also available on the cURL Web site.

# Integration Requirements for ColdFusion®

If you choose ColdFusion® as your development language, you will require the following:

1. ColdFusion server running on a Windows operating system.
2. Access to process (CFOBJECT).
3. Administrator rights to configure the server.

## Installation

1. Copy ssleay32.dll AND libeay32.dll to the %ROOT%/system32 directory (C:\WINNT\system32\).
2. Copy LPICOM_6_0.dll to the %ROOT%/system32 directory (C:\WINNT\system32\).
3. Register the LPICOM_6_0.dll. (regsvr32 c:\winnt\system32\lpicom_6_0.dll).

## Using the provided sample code

1. All samples rely upon the following templates to process correctly and should all be loaded into the same directory:
    a. CONFIG.inc **(This needs to be modified to reflect your account specific information).**
    b. FormatOutput.cfm (This contains a formated table output of the return variables for ease of reading).
    c. lpcfm.cfm (This file builds the XML to be sent, **DO NOT EDIT THIS FILE**).
    d. status.cfm (This file processes the transactions and sets the responses for output. **DO NOT EDIT THIS FILE**).
2. Once the above files are uploaded to your server, you can process any of the other sample files included.
3. For a real world sample of form input and output use, SAMPLE_SALE.htm which relies on SAMPLE_SALE.cfm to process.

- Note: You can easily remove the include for FormatOutput.cfm and replace the output results in your own format. Available return variables are listed below. The include call can be found at the end of each sample script except for SHIPPING.cfm which does not rely on this file.

## Response Variables Returned

1. #R_APPROVED# - Contains the transaction response.
2. #R_CODE# - Contains the approval code for an approved transaction.
3. #R_ERROR# - Contains an error message for a failed transaction.
4. #R_ORDERNUM# - Contains the order number. If you set one, it will be returned. If not provided, the gateway will return one to you.
5. #R_TIME# - Contains the time and date of the transaction.
6. #R_REF# - Contains the order reference number.
7. #R_AVS# - Contains the Address Verification Response code.
8. #R_SCORE# - Contains the Fraud score.
9. #R_vpasresponse# - Reserved for future use.
10. #R_CSP# - Contains the name of your merchant account service provider.
11. #R_AUTHRESPONSE# - Reserved for future use
12. #R_MESSAGE# - Contains an order message.
13. #R_APIVERSION# - Contains the version of the cf wrapper.

# E-mail Settings

Once an order is processed successfully, the system automatically sends both the merchant and the customer an e-mail receipt, which will appear to come directly from your online store. This feature can be disabled.

If the customer has ordered a soft good, the receipt includes download information. If the customer has ordered a hard good, when the product has been marked “shipped,” the system automatically sends the customer an additional message stating that the product has been shipped.

The e-mail receipt seen by the customer is created based on the items ordered and the elements of your merchant configuration file (for example, the name of the store).

## CONFIGURING E-MAIL RECEIPTS

### Disabling E-Mail Receipts

To disable the customer and/or merchant e-mail receipts function, notify Support by e-mail with your request.

### Customizing the Receipt

You have the option to include a block of text that is appended to the end of each customer e-mail receipt (e.g., appending a message like “Test Store, Inc . – One Stop Shopping for Logo Merchandise!”). If you want to use this feature, save the text message you would like appended in a file named contact.txt, using any text editor. E-mail the file to Support with your Store Number (or Storename).

### SAMPLE E-MAIL RECEIPT

This is an example of a customer receipt e-mail.

> From: Joe Merchant
> Subject: Your Online Order
> Company: Test Store, Inc.
> Reference Number: 266.266.266.266-894386536-16

Item 1:
Part #: 1
Quantity: 1
Description: Logo T-Shirt
Price: $20.00
Color: Red
Size: Extra Large
Item Total: $20.00

Item 2:
Part #: 2
Quantity: 2
Description: Bubble Pen
Price: $1.00
Item Total: $2.00

Subtotal: $22.00
Tax: $1.82
Shipping: $5.00
Total: $28.82

Test Store, Inc.
1234 Main Street
Elm, TX 77777
Phone: (512)-555-1212

# Processing Transactions Manually

If you need to process transactions manually (that is, by keying in the information), you can use the virtual point-of-sale terminal available in LinkPoint® Central (LPC).

To use it, log into LinkPoint Central at **https://www.linkpointcentral.com**, click on **POS**, then key in the information for the transaction.

You can post-authorize several transactions simultaneously by using LPC Reports:

1. Click on **Reports** in the **Main Menu Bar**, then on **View Orders**.
2. Choose the criteria for the transactions you wish to post-authorize, then click the **Submit Query** button to bring up the report.
3. Once you are viewing the report, select orders by clicking the associated checkbox in the left-most column of the table.
4. Click on the **Work with Selected Orders** button at the bottom of the page.
5. Select the option to **Confirm Shipment of Merchandise**, then click on the **Submit Query** button.
6. A confirmation page will appear.

Similarly, you can void transactions that have not yet been processed by going to the **Credit Card Batches** or **Check Batches** report, then clicking on Current Batch. Follow a similar procedure to void any transactions you need to void.

For more assistance on using LinkPoint Central, click on **Help** within LinkPoint Central. This will bring up full instructions for using LPC.

# How Transactions Are Processed

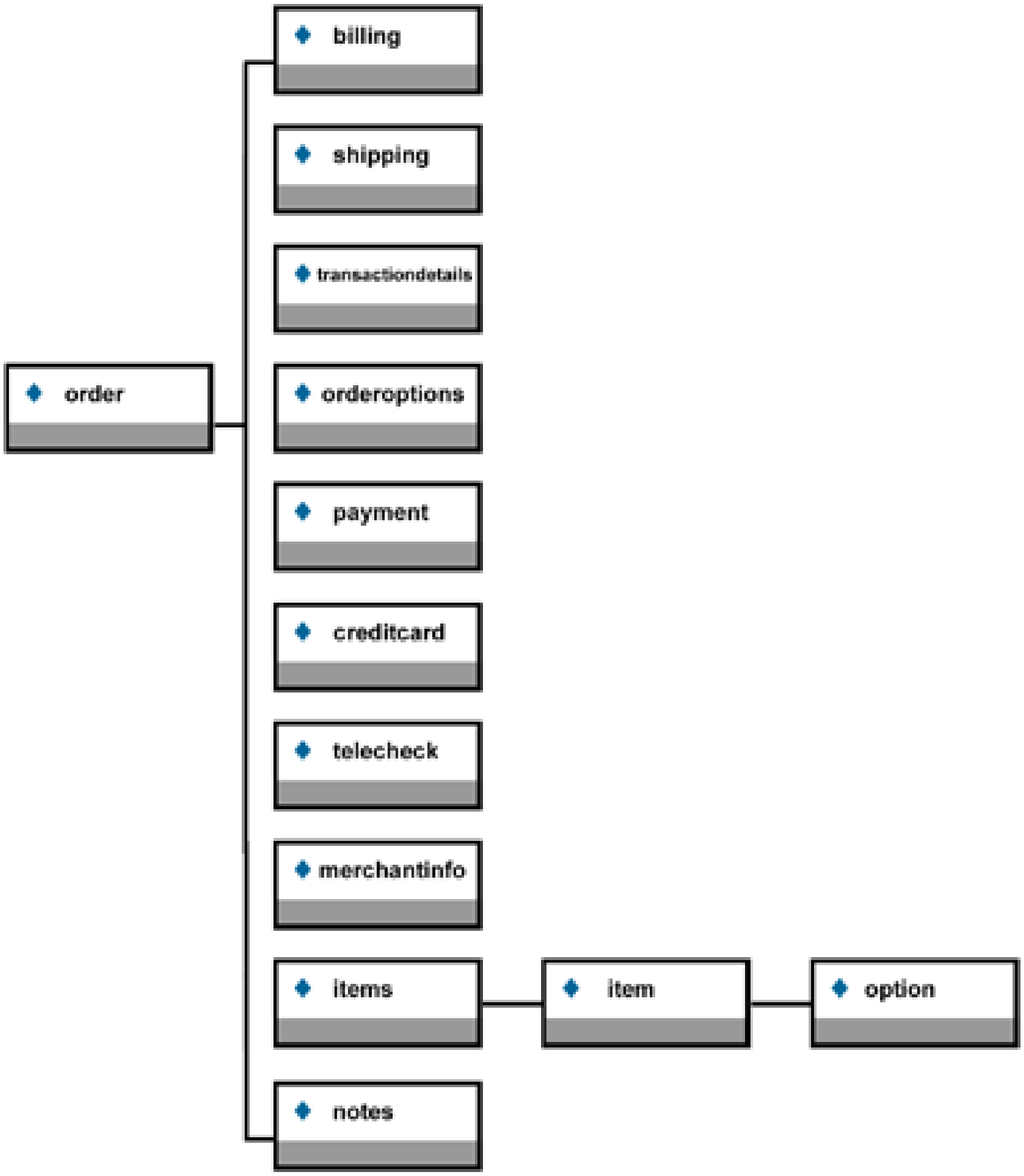
Regardless of which programming language the merchant uses to integrate with the Gateway, the Gateway uses XML to describe each transaction. The XML is often generated by the API software, but in many cases, the merchant has the option to generate the XML stream and send it to the Gateway in XML format.

The extensibility of XML helps to ensure that future modifications to the gateway transaction server have minimal impact on the merchant’s implementation. For example, in the future, if a new payment type were to be offered, the ***creditcard*** node in the XML could be replaced by the tag structure of the new payment type with little or no modification to the surrounding application. For instance, to support checks, a ***check*** node would simply replace the ***creditcard*** node. Likewise, the ***cardnumber*** tag would be replaced by a ***micr*** tag. The key is that if the merchant does not wish to support the ***check*** capability, no changes would be necessary to their implementation.

To process a transaction, the client application makes an SSL connection to the gateway server, sends a transaction in the form of an XML request and waits for the response. The response will be in the form <response>, and it contains a set of response fields that may vary depending on the type of transaction requested and whether the transaction is successful.

The XML request includes various XML entities to provide the server with inputs to the function to be performed. Some of these entities are required for any transaction, while others are optional and are specific for particular transaction types. See **Required Entities** and the **Minimum Required Fields** section for further information on which entities and fields are required for each transaction type.

The diagram below shows the entities that can make up a typical order.


order
billing
shipping
transactiondetails
orderoptions
payment
creditcard
telecheck
merchantinfo
items
item
option
notes

# Rules for Processing VirtualCheck Transactions*

VirtualCheck is a means of processing automated clearing house (ACH) via the Internet. ACH transactions debit a customer's account and transfer the funds to a merchant's account.

There are specific rules that apply when initiating a debit to a consumer's bank account that the merchant must follow. These rules are established and maintained by the National Automated Clearing House Association (NACHA) and are published periodically in *ACH Rules: A Complete Guide to Rules & Regulations Governing the ACH Network*. While we present the following synopsis as an overview, it is each merchant's responsibility to understand and abide by the published rules and regulations.

In all cases, the merchant must provide the customer with a receipt detailing the transaction. If the merchant has not disabled the API e-mail receipts, the customer will automatically receive an e-mail receipt that contains all required information. If the merchant chooses not to use this receipt, the merchant must take steps to provide a receipt (printed, faxed, or e-mailed) to the customer prior to the check settlement date.

The rules for authorization differ depending on whether the transaction is:

- **e-commerce**,
- **retail & mail order (PPD)**,
- **telephone order.**.

See below for important obligations of the merchant for each type of transaction.

Once the merchant has obtained written authorization from the consumer to debit the account and submits the transaction for processing, an immediate response will result. If the check is **immediately declined** because of the consumer's credit, an error message containing the following text will be returned in the field **r_error**.

> *We are sorry that we cannot accept your check at this time. Our decision is based, in whole or in part, on information provided to us by TeleCheck. We encourage you to call TeleCheck at 1-877-678-5898 or write TeleCheck*

> *Customer Care at P.O. Box 4513, Houston, TX 77210-4513. Please provide TeleCheck your driver's license number and the state where it was issued, and the complete banking numbers printed on the bottom of your check. Under the Fair Credit Reporting Act, you have the right to a free copy of your information held in TeleCheck's files within 60 days from today. You may also dispute the accuracy or completeness of any information in TeleCheck's consumer report. TeleCheck did not make the adverse decision to not accept your check and is unable to explain why this decision was made.*

If this error message appears, the **merchant is responsible for providing the text message in its entirety** to the consumer. The merchant should either seek another form of payment or choose not to accept the order from the customer.

## E-commerce Transactions

When processing e-commerce check transactions, the merchant must obtain electronic authorization from the consumer to debit the account. Before the merchant Web site or system submits the payment for processing, it must present the customer with an authorization form where consent language is displayed, along with an **Authorize** button and a **Cancel** button. The **Authorize** button continues with the transaction--the **Cancel** button may present the customer with other payment options, but it cannot continue to process the check transaction.

The authorization form must include:

1. The merchant's DBA name
2. The amount of the transaction
3. The date on or after which the consumer account will be debited
4. The date of the consumer's authorization
5. The merchant's customer service phone number
6. Consent language; that is, text that specifically states that the customer is authorizing the merchant to debit the customer's bank account.
7. An **Authorize** button and a **Cancel** button

## Sample Authorization Form (E-Commerce)

Date

By clicking on the **Authorize** button below, I authorize***[merchant name]*** to initiate an electronic debit to my bank account in the amount of ***[order total]***.

This authorization is to remain in full force and effect unless I provide written notification to ***[merchant name]*** within an appropriate timeframe as to allow ***[merchant name]*** to act on it. If my payment is returned unpaid, additional attempts may be made to process the payment, and I will be charged a returned item fee up to the maximum allowed by law.

Call ***[merchant phone #]*** with any questions regarding this authorization.

If you wish to cancel this transaction, click the **Cancel** button.

Authorize Cancel

## Retail and Mail Order (PPD) Transactions

When the transaction is either a retail (face to face) order or a mail order transaction, the merchant is required to obtain written authorization from the consumer to debit the account. The merchant must save the written records for four years from the date of the authorization in case of a later dispute.

For retail and mail order, VirtualCheck transactions are known as Prearranged Payment and Deposit (PPD) debit transactions.

The authorization must include:

1. The merchant's DBA name
2. The amount of the transaction
3. The date on or after which the consumer account will be debited
4. The date of the consumer's authorization
5. The merchant's customer service phone number

6. Consent language
7. The consumer's name
8. A line for the consumer to sign

For in person (face to face) transactions, a check or sharedraft that has not been previously voided or negotiated, provided by the consumer, may be used as a source and authorizing document. The document will be processed in a check reading device to capture the MICR information. The originator must provide to the consumer the voided source document, a copy of the consumer's authorization and a receipt containing information specific to the purchase.

In the case of a mail order transaction, the merchant may fax or e-mail the authorization form to the customer, if needed.

## Sample Authorization Form (Retail or Mail Order)

Date

I authorize ***[merchant name]*** to initiate an electronic debit to my bank account in the amount of ***[order total]*** that will be processed through the regular banking system on or after ***[order date]***. If my payment is returned unpaid, additional attempts may be made to process the payment, and I will be charged a returned item fee up to the maximum allowed by law.

This authorization is to remain in full force and effect unless I provide written notification to ***[merchant name]*** within in such time and in such manner as to afford ***[merchant name]*** and my financial institution a reasonable opportunity to act on it.

Call ***[merchant phone #]*** with any questions regarding this authorization.

________________________________________

Print name

______________________________________

Signature

## Telephone Order Transactions

Requirements for a telephone order include the same information and consent language- the difference is that the merchant has the option to tape record the customer's authorization and retain the recording as proof of authorization for a period of four years. For an oral authorization to be valid, the originator must (1) state clearly that the consumer is authorizing an ACH debit entry to his account, and (2) express the terms of the authorization in a clear manner.

If the merchant is not recording the conversation, the merchant must send written notification to the consumer confirming the verbal authorization prior to settlement. API e-mail receipts fulfill the requirement to send written notification, but if the merchant chooses not to use them, please note that the notification must include the following information. If the authorization is VERBAL, the merchant must use similar language (in the conversation with the customer) to the following.

The authorization must include:

1. The merchant's DBA name
2. The date on or after which the consumer account will be debited
3. The date of the consumer's authorization
4. The merchant's customer service phone number
5. Consent language similar to that below

## Sample VERBAL Authorization (Telephone Order)

By answering YES, you are authorizing ***[merchant name]*** to initiate an electronic debit to your bank account in the amount of ***[order total]*** on or after ***[today's date]***. If your payment is returned unpaid, additional attempts may be made to process the payment, and you will be charged a returned item fee up to the maximum allowed by law.

This authorization is to remain in full force and effect unless you provide written notification to ***[merchant name]*** in such time and in such manner as to afford ***[merchant name]*** and your financial institution a reasonable opportunity to act on it. You may call ***[merchant name]*** at ***[phone number]***

Do you authorize this transaction? (Please answer Yes or No.)

## Sample Authorization Form (Telephone Order)

Date

Dear ***[full customer name]***,

This notice is to confirm your verbal authorization given on ***[date of verbal authorization]*** for ***[merchant name]*** to initiate an electronic debit to your bank account in the amount of ***[order total]***. If your payment is returned unpaid, additional attempts may be made to process the payment, and you will be charged a returned item fee up to the maximum allowed by law.

This authorization will remain in full force and effect unless you provide written notification to ***[merchant name]*** in such time and in such manner as to afford ***[merchant name]*** and your financial institution a reasonable opportunity to act on it.

Sincerely,
***[Merchant DBA]*** Phone: ***[merchant phone]***

# Credit Card Transaction Types

The transaction type you use for a credit card transaction depends on whether you want to confirm that the customer has available funds (**Authorize Only**), to capture funds on a customer's card (**Sale**), or to charge the customer's card for an amount previously authorized (**Ticket Only** or **Forced Ticket**). Sale transactions can be made **Recurring** (a.k.a. Periodic Billing). You can also return money to a customer, either against an existing order on the Gateway (a **Return**) or against an existing order from outside the Gateway (a **Credit**). These same transaction types apply for credit cards and for purchasing cards. Additional information about each transaction type is provided below

To make changes to a **Recurring** credit card **Sale** transaction, you can either modify it using the API, or see your **Reports**. These recurring transactions are referred to as **Periodic Bills** in **Reports**.

No funds are transferred during any of these transactions; funds are transferred only after your batch of transactions is settled (this is set up to occur automatically once a day).

- **Sale**: immediately charges a customer's credit card. A Sale transaction can be made Recurring.

- **Authorize Only**: reserves funds on a customer's credit card. Authorize Only does not charge the card until you perform a Ticket Only transaction and/or confirm shipment of the order (using an option available in **Reports**). Note that authorization reserves funds for varying periods, depending on the issuing credit card company's policy. The period may be as little as three days or as long as several months. For your protection we strongly suggest that you confirm shipment as soon as possible after authorization.

- **Ticket Only**: a post authorization. Captures the funds from an **Authorize Only** transaction, reserving funds on the customer's card for the amount specified. Funds are transferred when your batch of transactions is settled. If you enter a larger total in the Post-Authorization transaction than was specified for the **Authorize Only** transaction, the Post-Authorization transaction may be declined. If you enter a smaller amount than was authorized, an adjustment is made to the Authorization to reserve only the smaller amount of funds on the customer's card for the transaction.

- **Forced Ticket**: a forced post authorization. This transaction type is used similarly to a **Ticket Only** transaction, except it is specifically for authorizations you obtained over the phone (not through LinkPoint Central). It requires a reference number (or approval code) that you should have received when you did the phone authorization.

- **Return**: returns funds to a customer's credit card against an existing order on the Gateway. To perform a return, you need the order number (which you can find in your **Reports**). If you perform a Return of the full order amount, the order will appear in your Reports with a transaction amount of 0.00.

- **Credit**: returns funds to a customer's credit card for orders where you do not have a Gateway order number. This transaction is intended for returns against orders processed outside the Gateway. (Credit transactions are marked as **Returns** in your **Reports**.) Credit transactions are not enabled on some merchant accounts--if you need this functionality, please contact support.

- **Void**: voids the transaction. Only transactions in the current batch which have not yet been submitted for final processing can be voided.

# Sending a Transaction to the Gateway

No matter which type of transaction you are doing, the basic steps to process it are the same. Credit card, virtual check, ESD, shipping and tax calculations all follow this same process. To process a transaction, follow the steps shown below.

1. First, instantiate the **LinkPointTransaction** object.
2. Build an XML request, either directly, or by using the **LPOrderPart** object to build XML fragments and to combine them into a complete order, ready to be sent for processing.
3. Use the **LinkPointTransaction** ***send()*** method to send the transaction to the Gateway for processing.
4. Evaluate the values returned in the **response** entity. If there are errors, they will be returned in the **r_error** field.

## Where to Go from Here

- Before you start building your XML request, make sure you review the **How Transactions are Processed** section to determine which entities and fields are required for your transaction.
- Examples of each of these steps (in computer code form) are shown in the **Sample Code** section.
- Information on the entities and data fields to include for each transaction are included in the **Entities and Data Fields** section.
- Look for information on Gateway responses and error messages/codes in the **Responses from the Gateway** section.

# Using the Shipping Calculator

The Shipping Calculator is an optional service that enables you to set precise rules for calculating shipping charges.

**NOTE:** Skip this topic if you use a third-party product or other method of calculating shipping costs. You may simply send your calculated shipping charges by populating the **shipping** field in the **payment** entity.

## IMPLEMENTING THE SHIPPING CALCULATOR

To use the shipping calculator module, you must first create a shipping and carrier file to be housed on the Gateway server. Once you've created your shipping file, send it to support, along with the appropriate merchant store number.

The shipping calculator uses the shipping address and other information sent in the **shipping** entity along with the appropriate pricing data defined in the shipping file to calculate the charges.

## CREATING A SHIPPING FILE

The shipping file is a plain text file that consists of multiple sets of programming code called zone type and zone definition lines. An example of how these lines might appear in a shipping file is shown below.

```
zone type line
zone definition line
zone definition line
zone type line
zone definition line
```

The fields within both types of lines go together to define the shipping charges. The zone type line describes the general shipping scheme, such as whether costs are based on item count, weight or price. The zone definition line gives specific parameters on pricing for each element in that pricing scheme.

One or more zone definition lines must immediately follow each zone type line. Use zone definition to set shipping prices based on specific geographic areas and/or types of carriers to determine where price breaks occur. The fields within each line of code are separated by double colons. For fields with multiple values, use commas (countries, states) or single colons (range definitions, prices).

## Creating Zone Type Lines

Each zone-type line is formatted with three fields: the tag name, a calculation code and merchant-created range definitions (see below).

```
zone type::calculation method::range1:range2...
```

You can create as many zone type lines as you need for your business. You can use a separate zone type line for different shipping-cost calculations (e.g., total weight or total cost of an order), for separate freight or air transport carrier methods, or for division of the world shipping-zone prices.

**Step 1.** Enter the following tag name, followed by two colons.

```
zone type::
```

**Step 2.** Determine how to charge customers for shipping your products (see **Selecting the Calculation Method**).

Enter an applicable code number after the tag name, followed by double colons, with no spaces (e.g., 1 for the total cost of the items or 3 for the total weight of order).

```
zone type::1::
zone type::3::
```

**Step 3.** Create quantity ranges that share common pricing. Enter each range, followed by a single colon or a comma (e.g., 1-3, 4-5, or over 6 items, 1-24, 25-50, or over 51 pounds).

```
zone type::1::1-3,4-5,6+
zone type::3::1-24,25-50,51+
```

## Selecting the Calculation Method

There are five choices for calculating the shipping charges. Select the applicable calculation method(s) for your business from the list below. Enter one code number, after the tag name, for each zone-type line.

| Method Number | Description |
|---|---|
| 1 | Charges are based on the total number of items |
| 2 | Calculates charges based on each item, then totaled |
| 3 | Charges are based on the total weight of the order |
| 4 | Charges are based on the weight of each item, then totaled |
| 5 | Charges are based on the total price of the order |

## Assigning Ranges

A **range** is defined as a value or a set of values, representing all items within a predetermined category, which use the same shipping charge. A range can be a single number (e.g., 1), two numbers separated by a hyphen (e.g., 2-7) or a number followed by a plus sign (e.g., 8+). You can specify a range to include one piece or hundreds of items; a gram, many ounces or tons. Also, an infinite number of ranges can be specified, but the number of ranges within a zone type line must correlate exactly with the number of prices in the following zone definition lines.

The following restrictions apply:

- Range definitions must be contiguous - no numbers may be skipped.
- Range definitions must start with the integer 1.
- The last range defined in each line must include a "+" sign.

## Creating Zone Definition Lines

A zone-definition line specifies data that is required by the preceding zone type line of code. Several fields are specific to each business and must be created by the merchant, including the zone name, the shipping carrier code and the shipping-cost codes for each range. See the example below.

**zone name::country::carrier::range cost::range cost**

**Step 1.** Create zone names for each shipping situation (see Assigning Zone Names). Enter a zone name (e.g., domestic), followed by two colons.

**northamerica::**

**Step 2.** Select the applicable countries for your zone name, followed by double colons. Use the 2-digit country codes specified in the Country Codes section.

**northamerica::US,MX,CA::**

For the US only, enter each applicable 2-letter state code after the country code, followed by two colons.

**westcoast::US::CA,OR,WA,HI::**

**Step 3.** Determine the different shipping methods for your business. Enter one merchant-defined shipping carrier code (e.g., ground carrier is code 1) only.

**northamerica::US,MX,CA::1::**

**Step 4.** Determine the shipping cost for each range you specified in the zone-type line (see Assigning Shipping Charges to Ranges). Enter the applicable shipping cost, followed by a colon or a comma (e.g., 1-3 items, costs $25.00 total to ship, 4-5 items cost $40.00, 6 and over $75).

**zone type::1::1-3,4-5,6+**
**northamerica::US::MX::CA::1::25,40,75**

**NOTE:** Each shipping cost value in the zone definition line must match up with a range in the zone type line.

## Assigning Zone Names

You determine the zone name for each zone definition line. Each name is an alphabetic string containing less than 20 letters and cannot include blank spaces.

## Specifying the Shipping Carriers

If you offer different types of shipping (courier, overnight, two day, ground transport), the zone definition line can list a shipping carrier option in the form of an integer. This will allow you to charge different amounts for premium shipping services.

## Assigning Shipping Charges to Ranges

The zone definition contains the actual charges for shipping items in the range(s) specified by the preceding zone type. Merchants determine the charges for their products.

## Tips for Using the Zone Definition

The following rules apply when you are creating zone-definition code:

- If you are shipping internationally, the U.S. state codes in a zone-definition line are ignored.
- If shipping prices are the same for all U.S. states, you do not need to name the states individually.
- If you have a few exceptions for shipping (such as AK and HI), you can define a zone for them and include the remaining states in a nonspecific U.S. zone.
- Any number of zone-definition lines may follow a zone-type line.
- The zone name and range charges must have values; all other fields can be blank.
- When the shipping calculator looks for a shipping file match, a blank field (such as carrier type) is treated as a match.

## CALCULATING SHIPPING CHARGES

The **shipping** entity is the data structure used to convey the shipping address, price, weight, item count and carrier-type data to the shipping calculator for computing the shipping charge.

To calculate shipping charges, **ordertype** should be set to ***calcshipping***. The shipping computation can be based on the number of items, the weight, the carrier, or the order total, so to properly calculate shipping charges, you should pass the appropriate information (for your shipping calculation method) in the **shipping** entity; that is **items**, **weight**, **carrier**, and **total**. You should also pass **state** and **country**, although **country** will default to US if not passed.

The calculated value for shipping charges will be returned in the **r_shipping** tag.

## KEEPING TRACK OF SHIPPING

Regardless if you use the API shipping calculator or another method, if shipping is to be included in the order amount that you submit for approval, you must transfer the shipping amount to the Gateway. Make sure you set the value of the **shipping** data field in the **payment** entity to the calculated shipping charges for this order.

# Using the Tax Calculator

The Tax Calculator module is an optional service that provides real-time calculation of U.S. sales tax to be charged on orders, including state and/or municipal sales tax.

**NOTE:** Skip this section if you use another method of calculating tax costs. You may simply send your calculated tax charges by populating the **tax** field in the **payment** entity. However, if you use another means of calculating tax, the tax statistics in your Reports will contain no data.

## IMPLEMENTING THE TAX CALCULATOR

To use the tax calculator module, you must create a *fulltax* line that is inserted and housed in the merchant's configuration file on the Gateway. You must send the *fulltax* line to support to load it onto the Gateway.

## Creating a Fulltax Line

The *fulltax* line provides information needed for the tax module to calculate sales tax for an order. The line includes entries only for states where sales tax must be charged. Entries are separated by a comma, which may be followed by a space.

Example:

**fulltax: TX 8.25, AL 7.00, FL 7.00, UT mun**

Most entries in the list consist of the two-digit code for the state (for codes refer to **U.S. State Codes** ) followed by a space and the tax rate to be charged for that state, like this:

**TX 8.25**

If the tax to be charged includes municipal tax, the listing is the two-digit state code followed by the designation mun, like this:

**UT mun**

Municipal taxes are calculated according to the SALESTAX.TXT file residing on the Gateway server. The SALESTAX.TXT file is updated quarterly to ensure accuracy.

## CALCULATING TAXES

To calculate sales tax, **ordertype** should be set to ***calctax***. The tax computation is based on the shipping state and the shipping zip code, so to properly calculate sales tax, you should pass the state and zip code where the goods are to be shipped. That is, in the **shipping** entity, **state** and **zip** should be present.

If the shipping state is present, but the shipping zip code is not, the Gateway will return an error. If you do not pass either the shipping state or zip code, it assumes the billing address is the shipping address and uses the billing state and zip code as the basis for tax computations.

The calculated value for sales tax will be returned in the **r_tax** tag.

## KEEPING TRACK OF TAX

Regardless if you use the API tax calculator or another method, if sales tax is to be included in the order amount that you submit for approval, you must transfer the tax amount to the Gateway. Make sure you set the value of the **tax** data field in the **payment** entity to the calculated sales tax charges for this order.

# Using the Electronic Softgood Download Module

## OVERVIEW

The Electronic Softgoods Download (ESD) module automates the Internet-based sale of soft goods. A soft good is sometimes referred to as a digital good and is any file that can be saved on a hard drive, such as software, digital images or music. Products can be ordered, paid for and delivered by electronic download.

The ESD module provides merchant protection by creating a hidden URL from which the customer downloads a purchase. Each download URL is unique to each sale, and the soft good file at that URL is automatically removed after a successful download (as verified by byte-by-byte metering). This way, the customer can return to download the purchase after obtaining a better Internet connection if it fails during a download attempt, but the soft good is inaccessible to others who have not purchased it.

The ESD process uses an ordinary Web browser and server software and standard Internet protocols, such as standard MIME types, so that browsers will recognize files. For instance, typing text/html tells the browser to display HTML. Typing video/mpeg is recognized as a movie, and the browser spawns the correct viewer. These types are set based on the extension of the file, e.g., html, jpg, mpg, mp3. There is no need to encapsulate or modify the soft good before it can be sold, and the system is easily integrated into virtual storefront and electronic catalog packages.

Before you can use the ESD module, you must arrange to upload the file to the Gateway server. Please contact support to arrange for transferring your softgood files.

## ESD TYPES

ESD works with the Payment module and includes two distinct download types: ***softgood*** and ***key***.

## Softgood Type

The ***softgood*** type works by creating a URL from which the customer can download the purchased file. The download URL is delivered to the customer by means of the onscreen transaction confirmation and in an e-mail receipt.

**NOTE:** The unique URL is a symbolic link that points to the master file. During the download process, the system measures the delivery of the soft good, byte by byte. Once the customer has successfully downloaded the purchased product, the URL is automatically removed to prevent additional downloads.

Should the download fail for some reason, the URL remains active until the customer is able to reconnect to the Internet and to the URL and successfully download the product. The URL for a softgood download created by the module is in this form:

> https://secureserver/cgi-bin/esddownload/storename/orderid/dirname/filename

This is an example of a download URL:

> https://secureserver.linkpoint.com/cgi-bin/esddownload/samplestore/266.266.266.266

## Monitoring Customer Download

Merchants can check the status of a customer soft good download in the Reports, which is described in the Help files.

To view the status in Reports, follow the **View Orders** link from the main Reports menu, generate an **Orders Received** report, then select an order number to display its Order Number Receipt. In the Order Number Receipt, if an item listed is a soft good and the soft good has not yet been downloaded, the **Download Time** field displays “Not downloaded yet.”

If the soft good item has been successfully downloaded, these three fields are displayed:

- **Download Time** — time the download began.
- **Download IP** — IP address to which the file was downloaded.
- **Download Rate** — rate (in Kilobytes/second) at which the download occurred.

## Keygen Executable Type

The ***key*** type is a mechanism to download a generated key (frequently a serial number) that enables a customer to use a “locked” file downloaded by another means. Typically, the file is freely downloadable from the merchant’s Web site, but the means to open the file must be purchased from the merchant.

The unique key is created using a keygen executable program provided by the merchant. The ESD keygen binary for your store must reside on the gateway secure server. The binary is called when an item requiring the key is sold. The binary generates output, such as text or an HTML link.

The following data fields can be passed to the key generation utility inside the ESD module by the API:

| Entity | Data Field | Notes |
|---|---|---|
| **billing** | **name** | Customer name is required if the **esdtype** is ***key***. |
| **item** | **serial** | The serial number (or key) associated with the keygen file. Only used if the if the **esdtype** is ***key*** |

If you pass the serial number (that is, the **serial** data field in the **item** entity), it is the first argument passed to the key generation application; otherwise, the customer name (the **name** field in the **billing** entity) is the first argument passed. Distribution of the generated key is handled as directed by the keygen executable and according to the settings for the ***sendclientkey:*** and ***sendmerchantkey:*** file tags in the store’s merchant configuration file. Contact support to change your *sendclientkey* and/or *sendmerchantkey* settings. The key is distributed to the customer using e-mail and/or returned to the storefront application for display through the customer’s browser.

| Merchant Configuration File Tag | Description | Settings |
|---|---|---|

| | | |
|---|---|---|
| **sendclientkey:** | Designates whether or not the key code for unlocking the downloaded software will be included in the *customer's* e-mail receipt. | ***0*** : will not be included<br>***1*** : will be included |
| **sendmerchantkey:** | Designates whether or not the key code for unlocking the downloaded software will be included in the *merchant's* e-mail receipt. | ***0*** : will not be included<br>***1*** : will be included |

## REQUIRED FIELDS FOR ESD TRANSACTIONS

The fields which you must assign values for an ESD transaction are:

| **item** sub-entity | | | |
|---|---|---|---|
| **item Field Name** | **Data Type** | **Description** | **Required?** |
| **id** | string | Item ID number | Required for each item passed |
| **description** | string | Description of this item | Required for ESD |
| **price** | string | Price of this item | Required for each item passed |
| **quantity** | string | Quantity of this item to include in this order | Required for each item passed |
| **serial** | string | Serial number associated with this item | Required for ESD if **esdtype** is set to ***key*** |

| | | | |
|---|---|---|---|
| **esdtype** | string | For electronic softgood download (ESD) items, this tag indicates which type of ESD item it is: ***softgood*** if softgood or ***key*** if a keygen executable. | Required for ESD |
| **softfile** | string | The name of the softgood file or keygen executable to be downloaded | Required for ESD items |

## MAKING ESD PRODUCTS AVAILABLE

The files you intend to make available as electronic downloads from your storefront must reside on the Gateway SSL-secure server. Send all softgood files to support for loading onto the server.

## ESD ERRORS

If for some reason the download link cannot be created or the key cannot be generated, one of the following ESD error messages will be returned:

- Could not create ESD URL.
- Could not generate key.

If you receive an ESD error message, contact support to resolve the situation because a SALE transaction was already performed, charging the customer's credit card for the product.

# Required Entities

The table below shows which XML entities are used for each transaction type or function to be performed. See the **Entities and Data Fields** section for information about the individual entity structures and data fields in each entity.

| XML Entity | Credit Card Transaction | Recurring Credit Card Transaction | VirtualCheck Transaction | Shipping Calculation | Sales Tax Calculation |
|---|---|---|---|---|---|
| **merchantinfo** | Required | Required | Required | Required | Required |
| **orderoptions** | Required | Required | Required | Required | Required |
| **transactiondetails** | Optional | Optional | Optional | Optional | Optional |
| **payment** | Required | Required | Required | Required | Required |
| **creditcard** | Required | Required | N/A | N/A | N/A |
| **telecheck** | N/A | N/A | Required | Required | N/A |
| **shipping** | Optional | Optional | Optional | Required | Required |
| **billing** | Required | Optional | Required | N/A | N/A |
| **periodic** | N/A | Required | Not Available | N/A | N/A |
| **items** | Optional | Optional | Not Available | N/A | N/A |
| **item** | Optional | Optional | Not Available | N/A | N/A |
| **option** | Optional | Optional | Not Available | N/A | N/A |
| **notes** | Optional | Optional | Optional | N/A | N/A |

# Minimum Required Fields for a Credit Card Transaction

The table below shows the absolute minimum required entities and data fields to perform a credit card transaction. You may use any or all of the data fields available, but you **must** include the entities and fields listed below.

The minimum required entities for a credit card transaction are:

- **merchantinfo**
- **orderoptions**
- **payment**
- **creditcard**

Also, if it is a card-not-present transaction (e.g., mail order, telephone order, or internet order), you should also include the **billing** entity for address verification (AVS). Most card-present transactions (i.e., retail, face-to-face) do not require AVS. The one exception is self-service stations such as gas pumps or ticket stations where you should include the **zip** data field for a partial AVS.

f you are using ASP, .NET/Visual Basic, or .NET/C#, all **billing** fields will be preceded with a lower-case "b" (e.g., **name** would be **bname**). If you are using PERL, PHP, ASP, .NET/Visual Basic or .NET/C#, all **shipping** fields will be preceded with a lower-case "s" (e.g., **name** would be **sname**).

In the **creditcard** entity, you must either pass **cardnumber**, **cardexpmonth**, and **cardexpyear** (all three fields) OR **track**.

See the table below for a list of required data fields for each entity.

| Field Name | Data Type | Description | Required? |
|---|---|---|---|
| **merchantinfo** entity | | | |

| | | | |
|---|---|---|---|
| **configfile** | string | This field should contain the merchant store name or number, which is generally a six- to ten-digit number assigned at merchant account setup. If this is a test account, the store name may be a text string. | Required for ALL transactions and function calls. |
| **orderoptions** entity | | | |
| **ordertype** | string | The type of transaction. The possible values are ***SALE***, ***PREAUTH*** (for an Authorize Only transaction), ***POSTAUTH*** (for a Forced Ticket or Ticket Only transaction), ***VOID***, ***CREDIT***, ***CALCSHIPPING*** (for shipping charges calculations) and ***CALCTAX*** (for sales tax calculations). See the **Transaction Types** section for additional information. | Required |
| **payment** entity | | | |

| | | | |
|---|---|---|---|
| **chargetotal** | double | The total dollar amount of this transaction, including subtotal, tax, and shipping | Required |
| **creditcard** entity | | | |
| **cardnumber** | numeric | The consumer's credit card number | Required for credit card transactions if ***track*** is not provided |
| **cardexpmonth** | integer from 1 to 12 | The numeric expiration month of the credit card | Required for credit card transactions if ***track*** is not provided |
| **cardexpyear** | integer from 00 to 99 | The two-digit expiration year of the credit card | Required for credit card transactions if ***track*** is not provided |
| **track** | string | Contains the data swiped from the credit card track 1 or track 2. | Required for credit card transactions if ***cardnumber***, ***cardexpmonth*** and ***cardexpyear*** are not provided |
| **transactiondetails** entity | | | |

| | | | |
|---|---|---|---|
| **oid** | string | The Order ID to be assigned to this transaction. For ***SALE*** and ***PREAUTH***, this field must be unique. For ***VOID***, ***CREDIT***, and ***POSTAUTH***, this field must be a valid Order ID from a prior ***SALE*** or ***PREAUTH*** transaction. For a Forced Ticket (that is a **POSTAUTH** where the authorization was given over the phone), the **oid** field is not required, but the **reference_number** field is required. | Required for credit card ***VOID***, ***CREDIT***, and ***POSTAUTH*** transactions |
| **reference_number** | string | Used for Forced Ticket transactions where a reference number was obtained over the phone. Set the reference number value to the word *NEW* (all caps) + the reference number given over the phone. For example, if the reference number given over the phone was ***123456***, you would | Required for Forced Ticket transactions only. |

| | | | |
|---|---|---|---|
| | | set **reference_number** to ***NEW123456***. | |
| **billing** entity | | | |
| **addrnum** | string | The numeric portion of the street address | Required for AVS |
| **zip** | string | Billing zip or postal code | Required for AVS and for Partial AVS. |

The XML stream for a minimum credit card SALE transaction would look like this:

```
<!-- Minimum Required Fields for a Credit Card SALE-->
<order>
     <merchantinfo>
        <!-- Replace with your STORE NUMBER or STORENAME-->
        <configfile>1234567</configfile>
    </merchantinfo>
    <orderoptions>
        <ordertype>SALE</ordertype>
    </orderoptions>
    <payment>
        <chargetotal>12.99</chargetotal>
    </payment>
    <creditcard>
        <cardnumber>4111-1111-1111-1111</cardnumber>
        <cardexpmonth>03</cardexpmonth>
        <cardexpyear>05</cardexpyear>
    </creditcard>
</order>
```

# Minimum Required Fields for a VirtualCheck Transaction*

The required fields for a VirtualCheck transaction depend on the type of transaction it is. VirtualCheck orders are classified as pre-authorized (paper-based orders; e.g., retail or mail order transactions), telephone (i.e., orders taken over the phone), or web orders (i.e., orders taken via e-mail or over the Internet). There are also specific rules that apply to each type of transaction; please see ***Rules for Processing VirtualCheck Transactions***.

## Required Fields (VirtualCheck)

| Field Name | Data Type | Description | Required? |
|---|---|---|---|
| **merchantinfo** entity | | | |
| **configfile** | string | This field should contain the merchant store name or number, which is generally a six- to ten-digit number assigned at merchant account setup. If this is a test account, the store name may be a text string. | Required for ALL transactions and function calls. |
| **orderoptions** entity | | | |

| | | | |
|---|---|---|---|
| **ordertype** | string | The type of transaction. The possible values for VirtualChecks are SALE or VOID only. Other transaction types do not apply for VirtualChecks. See the ***VirtualCheck Transaction Types*** section for additional information. | Required |
| **payment** entity | | | |
| **chargetotal** | double | The total dollar amount of this transaction, including subtotal, tax, and shipping | Required |
| **telecheck** entity | | | |
| **account** | string | The customer's bank account number | Required for all check transactions |
| **routing** | string | The transit routing number for the customer’s bank | Required for all check transactions |
| **bankname** | string | The name of the customer’s bank | Required for VirtualCheck transactions |

| | | | |
|---|---|---|---|
| **bankstate** | string | The state that the customer’s bank is located in | Required for VirtualCheck transactions. Use one of the **US State Codes**. |
| **dl** | string | Driver’s license number of the customer | Required for check orders taken over the telephone or the web |
| **dlstate** | string | The state where the customer’s driver's license was issued | Required for check orders taken over the telephone or the web. Use one of the **US State Codes**. |
| **void** | integer | To void an unsettled check, pass a 1 in this tag. Otherwise, do not include this data field. | Required for check VOID transactions |
| **billing** entity | | | |
| **name** | string | This should be the customer’s name as it appears on the payment account. | Required for all VirtualCheck transactions |

| | | | |
|---|---|---|---|
| **address1** | string | The 1st line of the customer's street address | Required for check orders taken over the telephone. |
| **city** | string | Billing city | Required for check orders taken over the telephone. |
| **state** | string | Billing state. For international addresses, you can use this field to hold the province or territory, as applicable. | Required for check orders taken over the telephone. Use one of the **US State Codes**. |
| **zip** | string | Billing zip or postal code | Required for check orders taken over the telephone. |
| **phone** | string | Billing phone number | Required for check orders taken over the telephone. |
| **email** | string | E-mail address | Required if you wish to send the customer an e-mail receipt. |
| **transactiondetails** entity | | | |

| | | | |
|---|---|---|---|
| **transactionorigin** | string | The source of the transaction. The possible values are ECI (if the order was received via e-mail or Internet), MAIL (mail order), TELEPHONE (telephone order) and RETAIL (face to face). For VirtualCheck transactions, mail order and telephone order transactions are treated differently and the merchant should take care to identify them separately. For a VirtualCheck order, you should **NOT** set the **transactionorigin** to ***MOTO***. | Required for retail, mail, or telephone orders. Defaults to ECI. |

## XML Stream (VirtualCheck)

The XML stream for a minimum VirtualCheck SALE transaction would look like this:

```
<!-- Minimum Required Fields for a VirtualCheck SALE-->
<order>
    <merchantinfo>
        <!-- Replace with your STORE NUMBER or STORENAME-->
        <configfile>1234567</configfile>
    </merchantinfo>
    <orderoptions>
        <ordertype>SALE</ordertype>
    </orderoptions>
    <payment>
        <chargetotal>12.99</chargetotal>
    </payment>
    <telecheck>
        <!-- Customer's Driver's license # and DL state.-->
        <dl>120381698</dl>
        <dlstate>CA</dlstate>
        <!-- Transit routing number for the customer's bank -->
        <routing>123456789</routing>
        <!-- Customer's bank account number -->
        <account>2139842610</account>
        <!-- Is this a business or consumer (personal) account? personal = pc, business =
bc -->
        <accounttype>pc</accounttype>
        <account>2139842610</account>
        <!-- Bank name and 2-letter bank state -->
        <bankname>MyBank</bankname>
        <bankstate>CA</bankstate>
    </telecheck>
    <billing>
        <name>Bill Johnson</name>
        <address1>123 Broadway</address1>
        <city>Camarillo</city>
        <state>CA</state>
        <zip>93010</zip>
        <phone>8051234567</phone>
        <email>bjohnson@somewhere.com</email>
    </billing>
    <transactiondetails>
        <!-- Required for Retail, Mail, or Telephone orders only -->
        <transactionorigin>TELEPHONE</transactionorigin>
    </transactiondetails>
</order>
```

# Minimum Required Fields to Calculate Shipping

The table below shows the absolute minimum required entities and data fields to calculate shipping charges. You may use any or all of the data fields available, but you **must** include the entities and fields listed below.

The minimum required entities needed to calculate shipping charges are:

- **merchantinfo**
- **orderoptions**
- **payment**
- **shipping**

Before you can calculate shipping charges, the payment gateway needs information from you on how to calculate shipping. You must first create a shipping file that describes the calculation method and amounts to charge. There are several different shipping methods available. Contact support to send your shipping file to the gateway. See the chapter entitled *Using the Shipping Calculator* for more information on shipping files.

To calculate shipping charges, **ordertype** should be set to ***calcshipping***. The shipping computation can be based on the number of items, the weight, the carrier, or the order total, so to properly calculate shipping charges, you should pass the appropriate information (for your shipping calculation method) in the **shipping** entity; that is **items**, **weight**, **carrier**, and **total**. You should also pass **state**. If you do not pass **country**, it will default to ***US***.

See the table below for a list of required data fields for each entity.

| Field Name | Data Type | Description | Required? |
|---|---|---|---|
| **merchantinfo** entity | | | |

| | | | |
|---|---|---|---|
| **configfile** | string | This field should contain the merchant store name or number, which is generally a six-to ten- digit number assigned at merchant account setup. If this is a test account, the store name may be a text string. | Required for ALL transactions and function calls. |
| **orderoptions** entity | | | |
| **ordertype** | string | The type of transaction. The possible values are SALE, PREAUTH (for an Authorize Only transaction), POSTAUTH (for a Forced Ticket or Ticket Only transaction), VOID, CREDIT, CALCSHIPPING (for shipping charges calculations) and CALCTAX (for sales tax calculations). See the Transaction Types section for additional information. | Required. Set to ***CALCSHIPPING*** to calculate shipping charges. |
| **payment** entity | | | |

| | | | |
|---|---|---|---|
| **chargetotal** | double | The total dollar amount of this transaction, including subtotal, tax, and shipping | Required |
| **shipping** entity | | | |
| **state** | string | Shipping state. For international addresses, you can use this field to hold the province or territory, as applicable. | Required for shipping and tax calculations |
| **weight** | decimal | The total weight of the order to be shipped. Used when the shipping calculation method is based on the total weight of the order. | Required for shipping methods 3 and 4 |
| **items** | decimal | Total number of items in the order. Used when the shipping calculation method is based on the number of items in the order. See Using the Shipping Calculator for more information. | Required for shipping methods 1, 2, and 4 |

| | | | |
|---|---|---|---|
| **carrier** | integer | The carrier to be used to ship the order (e.g., Ground, Overnight, etc.). Used when the merchant is specifying carrier. The merchant should assign integer values to each carrier the merchant uses. | Required if merchant is using carrier types. |
| **total** | decimal | The order total before the shipping charges are added. | Required for shipping method 5 |

The XML stream for a shipping calculation would look like this:

```
<!-- Minimum Required Fields to Calculate Shipping Charges -->
<order>
    <merchantinfo>
        <!-- Replace with your STORE NUMBER or STORENAME-->
        <configfile>YOURSTORE</configfile>
    </merchantinfo>
    <orderoptions>
        <ordertype>CALCSHIPPING</ordertype>
    </orderoptions>
     <shipping>
        <!-- Include the factors needed for your shipping method -->
        <carrier>1</carrier>
        <weight>2.00</weight>
        <items>2</items>
        <total>15.00</total>
        <state>TX</state>
    </shipping>
</order>
```

# Minimum Required Fields to Calculate Sales Tax

The table below shows the absolute minimum required entities and data fields to calculate sales tax. You may use any or all of the data fields available, but you **must** include the entities and fields listed below.

The minimum required entities needed to calculate sales tax are:

- **merchantinfo**
- **orderoptions**
- **payment**
- **shipping**

See the table below for a list of required data fields for each entity.

| Field Name | Data Type | Description | Required? |
|---|---|---|---|
| **merchantinfo** entity | | | |
| **configfile** | string | This field should contain the merchant store name or number, which is generally a six- to ten-digit number assigned at merchant account setup. If this is a test account, the store name may be a text string. | Required for ALL transactions and function calls. |
| **orderoptions** entity | | | |

| | | | |
|---|---|---|---|
| **ordertype** | string | The type of transaction. The possible values are SALE, PREAUTH (for an Authorize Only transaction), POSTAUTH (for a Forced Ticket or Ticket Only transaction), VOID, CREDIT, CALCSHIPPING (for shipping charges calculations) and CALCTAX (for sales tax calculations). See the Transaction Types section for additional information. | Required. Set to ***CALCTAX*** to calculate tax charges. |
| **payment** entity | | | |
| **subtotal** | double | The transaction subtotal, before shipping and tax | Required for tax calculations |
| **shipping** entity | | | |
| **state** | string | Shipping state. For international addresses, you can use this field to hold the province or territory, as applicable. | Required for shipping and tax calculations |

The XML stream for a tax calculation would look like this:

```
<!-- Minimum Required Fields to Calculate Sales Tax on an Order -->
<order>
    <merchantinfo>
        <!-- Replace with your STORE NUMBER or STORENAME-->
        <configfile>YOURSTORE</configfile>
    </merchantinfo>
    <orderoptions>
        <ordertype>CALCTAX</ordertype>
    </orderoptions>
    <shipping>
        <carrier>1</carrier>
        <weight>1.000000</weight>
        <zip>91504</zip>
        <total>26.99</total>
        <state>CA</state>
    </shipping>
    <payment>
        <subtotal>26.99</subtotal>
    </payment>
</order>
```

# Minimum Required Fields for a Recurring Credit Card Transaction

The table below shows the absolute minimum required entities and data fields to perform a recurring credit card transaction (a.k.a., periodic bill). You may use any or all of the data fields available, but you **must** include the entities and fields listed below.

The minimum required entities for a recurring credit card transaction are:

- **merchantinfo**
- **orderoptions**
- **payment**
- **creditcard**
- **periodic**

In the **creditcard** entity, you must either pass **cardnumber**, **cardexpmonth**, and **cardexpyear** (all three fields) OR **track**.

Also, if it is a card-not-present transaction (e.g., mail order, telephone order, or internet order), you should also include the **billing** entity for address verification (AVS). Most card-present transactions (i.e., retail, face-to-face) do not require AVS. The one exception is self-service stations such as gas pumps or ticket stations where you should include the **zip** data field for a partial AVS.

If you are using ASP, .NET/Visual Basic, or .NET/C#, all **billing** fields will be preceded with a lower-case "b" (e.g., **name** would be **bname**). If you are using PERL, PHP, ASP, .NET/Visual Basic or .NET/C#, all **shipping** fields will be preceded with a lower-case "s" (e.g., **name** would be **sname**).

At this time, recurring transactions can only be run in ***LIVE*** mode, so please ensure that for a recurring transaction that the **transactionorigin** field in the **transactiondetails** entity is NOT set to any other value.

See the table below for a list of required data fields for each entity.

| Field Name | Data Type | Description | Required? |
|---|---|---|---|

| | | | |
|---|---|---|---|
| **merchantinfo** entity | | | |
| **configfile** | string | This field should contain the merchant store name or number, which is generally a six- to ten- digit number assigned at merchant account setup. If this is a test account, the store name may be a text string. | Required for ALL transactions and function calls. |
| **orderoptions** entity | | | |
| **ordertype** | string | The type of transaction. The possible values are SALE, PREAUTH (for an Authorize Only transaction), POSTAUTH (for a Forced Ticket or Ticket Only transaction), VOID, CREDIT, CALCSHIPPING (for shipping charges calculations) and CALCTAX (for sales tax calculations). See the Transaction Types section for additional information. | Required |
| **payment** entity | | | |
| **chargetotal** | double | The total dollar amount of this transaction, including subtotal, tax, and shipping | Required |
| **creditcard** entity | | | |

| | | | |
|---|---|---|---|
| **cardnumber** | numeric | The consumer's credit card number | Required for credit card transactions if ***track*** is not provided |
| **cardexpmonth** | integer from 1 to 12 | The numeric expiration month of the credit card | Required for credit card transactions if ***track*** is not provided |
| **cardexpyear** | integer from 00 to 99 | The two-digit expiration year of the credit card | Required for credit card transactions if ***track*** is not provided |
| **track** | string | Contains the data swiped from the credit card track 1 or track 2. | Required for credit card transactions if ***cardnumber***, ***cardexpmonth*** and ***cardexpyear*** are not provided |
| **periodic** entity | | | |
| **action** | string | Tells which action to take regarding the periodic transaction. Possible values are ***SUBMIT*** (to submit the recurring transaction for processing), ***MODIFY*** (to edit a previously submitted recurring transaction), or ***CANCEL*** (to cancel a previously submitted recurring transaction). | Required for all recurring transactions |

| | | | |
|---|---|---|---|
| **installments** | integer from 0 to 99 | Identifies how many recurring payments to charge the customer | Required for all recurring transactions |
| **periodicity** | string | Tells how often to charge the payment. Possible values are:<br>• ***monthly*** (to charge once a month),<br>• ***bimonthly*** (to charge every other month),<br>• ***weekly*** (to charge once a week),<br>• ***biweekly*** (to charge once every other week),<br>• ***yearly*** (to charge once a year),<br>• ***daily*** (to charge once a day),<br>• or you can use the code ***XN***, which means every ***N*** days/weeks/months. ***X*** can be ***d*** for day, ***m*** for month, or ***y*** for year. ***N*** can be any integer from 1 through 999. Example: ***m3*** means charge the customer once every 3 months. | Required for all recurring transactions |

| | | | |
|---|---|---|---|
| **startdate** | string | Tells the date to begin charging the recurring payments. Should be in the format YYYYMMDD, where YYYY is the four-digit year, MM is the 2-digit month, and DD is the 2-digit day. Example: 20040910 means September 10, 2004. If you wish to start payments immediately, set this tag to ***immediate*** | Required for all recurring transactions |
| **billing** entity | | | |
| **addrnum** | string | The numeric portion of the street address | Required for AVS |
| **zip** | string | Billing zip or postal code | Required for AVS and for Partial AVS. |

The XML stream for a recurring credit card transaction would look like this:

```
<!-- Minimum Required Fields for a Recurring Credit Card Sale (Periodic Bill)-->
<order>
    <merchantinfo>
        <!-- Replace with your STORE NUMBER or STORENAME-->
        <configfile>1234567</configfile>
    </merchantinfo>
    <orderoptions>
        <ordertype>SALE</ordertype>
    </orderoptions>
    <payment>
        <chargetotal>12.99</chargetotal>
    </payment>
    <creditcard>
```

```
        <cardnumber>4111-1111-1111-1111</cardnumber>
        <cardexpmonth>03</cardexpmonth>
        <cardexpyear>05</cardexpyear>
    </creditcard>
    <periodic>
        <!-- Submits a recurring transaction charging the card 3 times, once a month,
starting today -->
        <action>SUBMIT</action>
        <installments>3</installments>
        <threshold>3</threshold>
        <!-- If you don't want it to start today, pass a date in the format YYYYMMDD -->
        <startdate>immediate</startdate>
        <periodicity>monthly</periodicity>
    </periodic>
</order>
```

# Minimum Required Fields for a Level 2 Purchasing Card Transaction

The table below shows the absolute minimum required entities and data fields to perform a Level 2 purchasing card transaction. You may use any or all of the data fields available, but you **must** include the entities and fields listed below.

The minimum required entities for a Level 2 purchasing card transaction are:

- **merchantinfo**
- **orderoptions**
- **payment**
- **transactiondetails**
- **creditcard**

In the **creditcard** entity, you must either pass **cardnumber**, **cardexpmonth**, and **cardexpyear** (all three fields) OR **track**.

Also, if it is a card-not-present transaction (e.g., mail order, telephone order, or internet order), you should also include the **billing** entity for address verification (AVS). Most card-present transactions (i.e., retail, face-to-face) do not require AVS. The one exception is self-service stations such as gas pumps or ticket stations where you should include the **zip** data field for a partial AVS.

If you are using ASP, .NET/Visual Basic, or .NET/C#, all **billing** fields will be preceded with a lower-case "b" (e.g., **name** would be **bname**). If you are using PERL, PHP, ASP, .NET/Visual Basic or .NET/C#, all **shipping** fields will be preceded with a lower-case "s" (e.g., **name** would be **sname**).

See the table below for a list of required data fields for each entity.

| Field Name | Data Type | Description | Required? |
|---|---|---|---|
| **merchantinfo** entity | | | |

| | | | |
|---|---|---|---|
| **configfile** | string | This field should contain the merchant store name or number, which is generally a six- to ten-digit number assigned at merchant account setup. If this is a test account, the store name may be a text string. | Required for ALL transactions and function calls. |
| **orderoptions** entity | | | |
| **ordertype** | string | The type of transaction. The possible values are SALE, PREAUTH (for an Authorize Only transaction), POSTAUTH (for a Forced Ticket or Ticket Only transaction), VOID, CREDIT, CALCSHIPPING (for shipping charges calculations) and CALCTAX (for sales tax calculations). See the Transaction Types section for additional information. | Required |

| | | | |
|---|---|---|---|
| **payment** entity | | | |
| **chargetotal** | double | The total dollar amount of this transaction, including subtotal, tax, and shipping | Required |
| **tax** | double | Sales tax dollar amount | Required for Level 2 purchasing card transactions only. If tax is $0.00 for a purchasing card transaction, set this field to 0. |
| **transactiondetails** entity | | | |
| **taxexempt** | string | An indicator field representing whether the order is tax exempt. It should be set to Y if the order is tax exempt, or N if not. | Required for Level 2 purchasing card transactions |
| **ponumber** | string | The purchase order number, department number, or other customer-supplied number that applies to this transaction. One P.O. number can apply to multiple orders. This value MUST be supplied by | Required for Level 2 purchasing card transactions |

| | | | |
|---|---|---|---|
| | | the customer, not the merchant. | |
| **creditcard** entity | | | |
| **track** | string | Contains the data swiped from the credit card track 1 or track 2. | Required for credit card transactions if ***cardnumber***, ***cardexpmonth*** and ***cardexpyear*** are not provided |
| **cardnumber** | numeric | The consumer's credit card number | Required for credit card transactions if ***track*** is not provided |
| **cardexpmonth** | integer from 1 to 12 | The numeric expiration month of the credit card | Required for credit card transactions if ***track*** is not provided |
| **cardexpyear** | integer from 00 to 99 | The two-digit expiration year of the credit card | Required for credit card transactions if ***track*** is not provided |
| **billing** entity | | | |
| **addrnum** | string | The numeric portion of the street address | Required for AVS |
| **zip** | string | Billing zip or postal code | Required for AVS and for Partial AVS. |

The XML stream for a level 2 purchasing card transaction would look like this:

```
<!-- An Example Level 2 Purchasing Card SALE -->
<order>
    <merchantinfo>
        <!-- Replace with your STORE NUMBER or STORENAME-->
        <configfile>1234567</configfile>
    </merchantinfo>
    <orderoptions>
        <ordertype>SALE</ordertype>
    </orderoptions>
    <payment>
        <!-- Tax is required for purchasing cards. If the tax is $0.00, pass a value of 0 for tax -->
        <tax>0.32</tax>
        <chargetotal>47.32</chargetotal>
    </payment>
    <creditcard>
        <cardnumber>4111-1111-1111-1111</cardnumber>
        <cardexpmonth>03</cardexpmonth>
        <cardexpyear>05</cardexpyear>
    </creditcard>
    <transactiondetails>
        <!-- If there is no PO Number for this order, pass a department code or other value, but make sure the value you pass is supplied by the customer -->
        <ponumber>1203A-G4567</ponumber>
        <!-- If the purchase is tax exempt, pass a value of Y for taxexempt-->
        <taxexempt>N</taxexempt>
    </transactiondetails>
</order>
```

# Minimum Required Fields for AVS and CVM

To take advantage of the fraud prevention features of the Address Verification Service (AVS) and the Card Code (commonly called CVV, CVV2, CVC2, CID or CVM), there are just a couple extra fields you need to pass to the Gateway. Look for the AVS and CVM results in the **r_avs** response field.

The table below shows the absolute minimum required entities and data fields to perform a credit card transaction using these two features. You may use any or all of the data fields available, but you **must** include the entities and fields listed below.

The minimum required entities for a credit card transaction using AVS and CVM are:

- **merchantinfo**
- **orderoptions**
- **payment**
- **creditcard**
- **billing**

In the **creditcard** entity, you must either pass **cardnumber**, **cardexpmonth**, and **cardexpyear** (all three fields) OR **track**.

If you are using ASP, .NET/Visual Basic, or .NET/C#, all **billing** fields will be preceded with a lower-case "b" (e.g., **name** would be **bname**). If you are using PERL, PHP, ASP, .NET/Visual Basic or .NET/C#, all **shipping** fields will be preceded with a lower-case "s" (e.g., **name** would be **sname**).

See the table below for a list of required data fields for each entity.

| Field Name | Data Type | Description | Required? |
|---|---|---|---|
| **merchantinfo** entity | | | |

| | | | |
|---|---|---|---|
| **configfile** | string | This field should contain the merchant store name or number, which is generally a six- to ten-digit number assigned at merchant account setup. If this is a test account, the store name may be a text string. | Required for ALL transactions and function calls. |
| **orderoptions** entity | | | |
| **ordertype** | string | The type of transaction. The possible values are SALE, PREAUTH (for an Authorize Only transaction), POSTAUTH (for a Forced Ticket or Ticket Only transaction), VOID, CREDIT, CALCSHIPPING (for shipping charges calculations) and CALCTAX (for sales tax calculations). See the Transaction Types section for additional information. | Required |
| **payment** entity | | | |

| | | | |
|---|---|---|---|
| **chargetotal** | double | The total dollar amount of this transaction, including subtotal, tax, and shipping | Required |
| **creditcard** entity | | | |
| **cardnumber** | numeric | The consumer's credit card number | Required for credit card transactions if ***track*** is not provided |
| **cardexpmonth** | integer from 1 to 12 | The numeric expiration month of the credit card | Required for credit card transactions if ***track*** is not provided |
| **cardexpyear** | integer from 00 to 99 | The two-digit expiration year of the credit card | Required for credit card transactions if ***track*** is not provided |
| **track** | string | Contains the data swiped from the credit card track 1 or track 2. | Required for credit card transactions if ***cardnumber***, ***cardexpmonth*** and ***cardexpyear*** are not provided |
| **cvmvalue** | integer from 000 to 999 | 3-digit numeric valued typically printed on the signature panel on the back of the credit card. See **Using the Card Code** for more information. | Required for CVM (CVV2, CVC2) |

| | | | |
|---|---|---|---|
| **cvmindicator** | string | Indicates whether CVM was supplied and, if not, why. The possible values are “provided”, “not_provided”, “illegible”, “not_present”, and “no_imprint”. | Required if ***cvmvalue*** is passed |
| **transactiondetails** entity | | | |
| **oid** | string | The Order ID to be assigned to this transaction. For SALE and PREAUTH, this field must be unique. For VOID, CREDIT, and POSTAUTH, this field must be a valid Order ID from a prior SALE or PREAUTH transaction. | Required for credit card VOID, CREDIT, and POSTAUTH transactions |
| **billing** entity | | | |
| **name** | string | This should be the customer’s name as it appears on the payment account. | Required for AVS and fraud name blocking |
| **addrnum** | string | The numeric portion of the street address | Required for AVS |

| | | | |
|---|---|---|---|
| **zip** | string | Billing zip or postal code | Required for AVS |

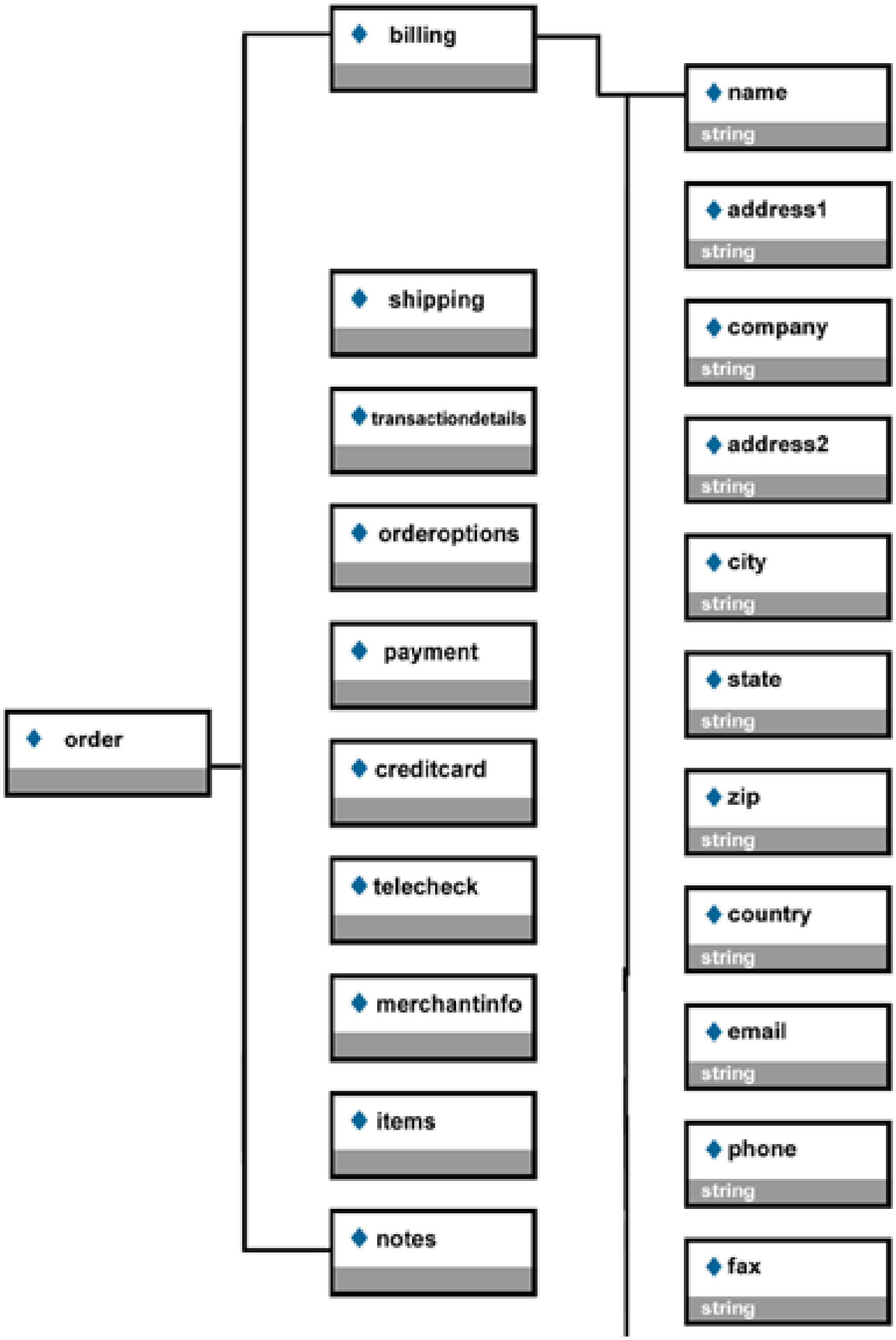
The XML stream for a credit card SALE transaction using AVS and Card Code fraud prevention would look like this:

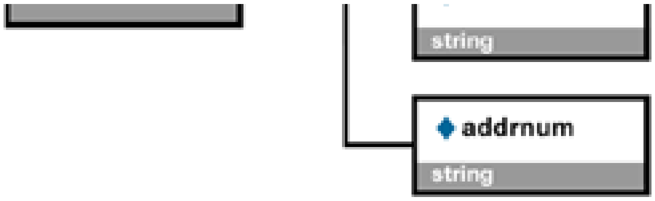
```
<!-- An Example Credit Card SALE With Minimum Fields required for AVS and Card
Code fraud prevention measures-->
<order>
    <merchantinfo>
        <!-- Replace with your STORE NUMBER or STORENAME-->
        <configfile>1234567</configfile>
    </merchantinfo>
    <orderoptions>
        <ordertype>SALE</ordertype>
    </orderoptions>
    <payment>
        <chargetotal>47.32</chargetotal>
    </payment>
    <creditcard>
        <cardnumber>4111-1111-1111-1111</cardnumber>
        <cardexpmonth>03</cardexpmonth>
        <cardexpyear>05</cardexpyear>
        <!-- CVM is the three-digit security code usually found on the signature line on the
back of the card -->
        <cvmvalue>123</cvmvalue>
        <cvmindicator>provided</cvmindicator>
    </creditcard>
    <billing>
        <!-- Required for Address Verification -->
        <addrnum>123</addrnum>
        <zip>87123</zip>
    </billing>
</order>
```

# The Billing Entity

The **billing** entity is used to describe the billing information for the customer. It contains thirteen data fields: name, company, address1, address2, city, state, zip, country, email, phone, fax, and addrnum.

The diagram below shows the **billing** entity data structure.




string
addrnum
string

# Billing Data Fields

The table below describes each data field in the **billing** entity. If you are using ASP, .NE Visual Basic, or .NET/C#, all billing fields will be preceded with a lower-case "b" (e.g., **name** would be **bname**).

| billing Field Name | Data Type | Description | Required? |
|---|---|---|---|
| **name** | string | This should be the customer's name as it appears on the payment account. | Required for AVS and fraud name blocking |
| **company** | string | Company name | Not required. If the company name has an ampersand (&) in it, replace the & with the word "***and***" or the HTML escape character ***&amp;***. |
| **address1** | string | The 1st line of the customer's address | Not required for credit card transactions. Required for VirtualCheck transactions if the order was taken over the telephone. |
| **address2** | string | The 2nd line of the customer's address | Not required |

| | | | |
|---|---|---|---|
| **city** | string | Billing city | Not required. Required for VirtualCheck transactions if the order was taken over the telephone. |
| **state** | string | Billing state. For international addresses, you can use this field to hold the province or territory, as applicable. For US states, use one of the **US State Codes**. | Not required. Required for VirtualCheck transactions if the order was taken over the telephone. |
| **zip** | string | Billing zip or postal code | Required for AVS. Required for VirtualCheck transactions if the order was taken over the telephone. |
| **country** | string | Billing country. If passed, must be a valid country code. See **Country Codes**. | Not required, but post-authorizations may require it |
| **phone** | string | Billing phone number | Required for VirtualCheck transactions if the order was taken over the telephone. |
| **fax** | string | Fax number | Not required |

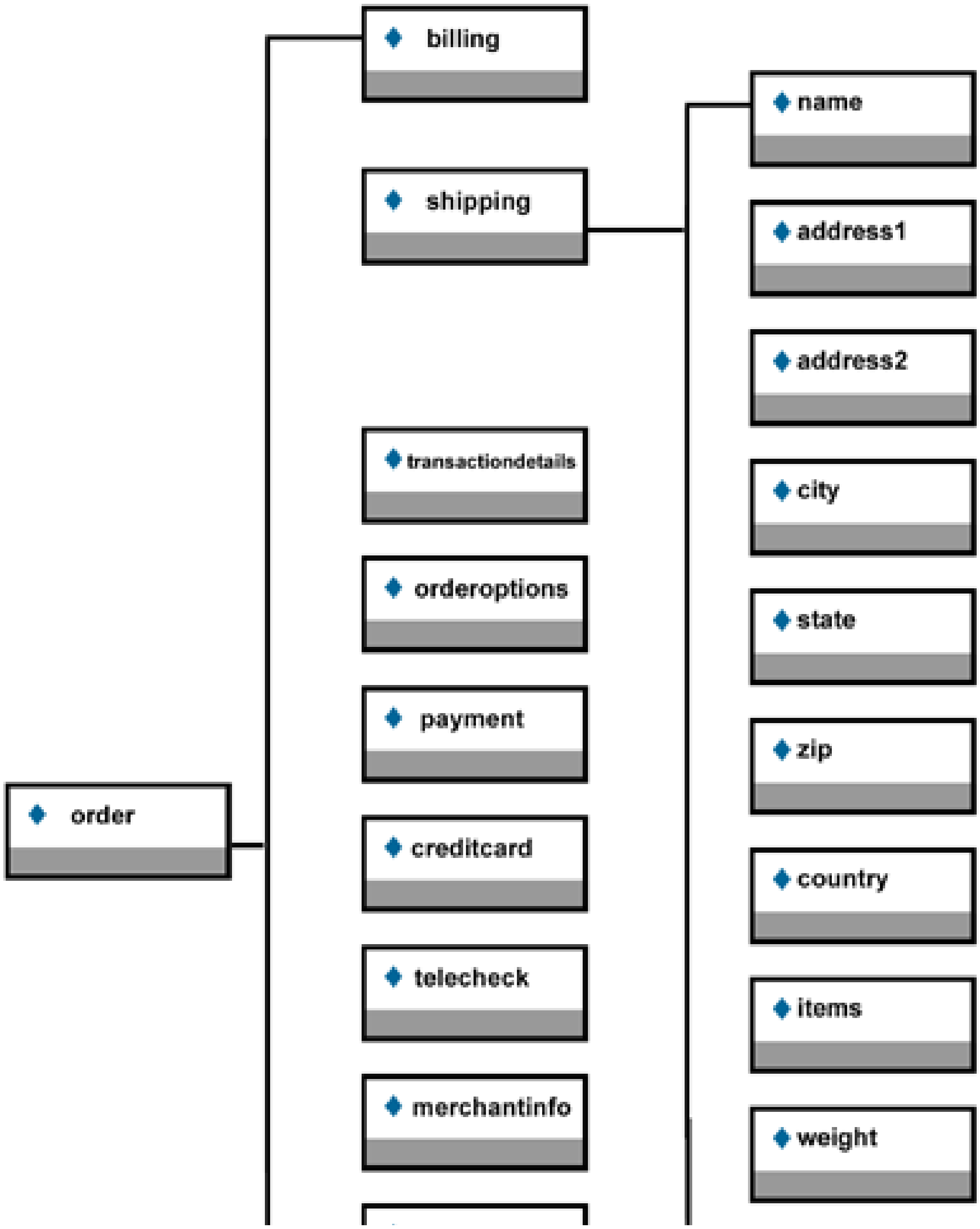
| | | | |
|---|---|---|---|
| **email** | string | E-mail address | Required if you wish to send the customer an e-mail receipt. |
| **addrnum** | string | The numeric portion of the street address | Required for AVS |

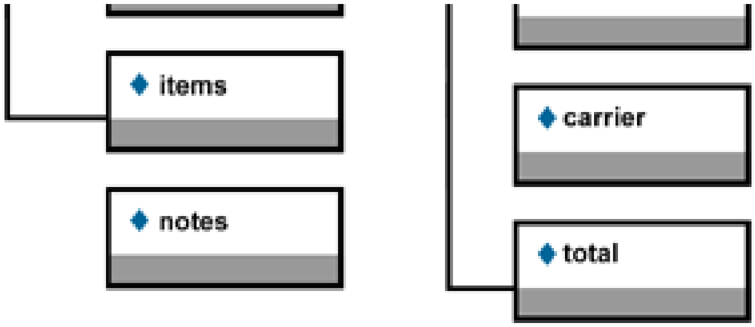
# The Shipping Entity

The **shipping** entity contains the shipping address and shipping calculation information, which contains the following data fields:

- For shipping addresses: **name**, **address1**, **address2**, **city**, **state**, **zip**, and **country**.
- For shipping calculations: **items**, **weight**, **carrier**, **total**

The diagram below shows the **shipping** entity data structure.




items
notes
carrier
total

# Shipping Data Fields

The table below describes each data field in the **shipping** entity. If you are using PERL, PHP, ASP, .NET/Visual Basic or .NET/C#, all shipping fields will be preceded with a lower-case "s" (e.g., **name** would be **sname**).

| shipping Field Name | Data Type | Description | Required? |
|---|---|---|---|
| **name** | string | The name of the person to ship to. | Not required. |
| **address1** | string | The 1st line of the shipping address | Not required |
| **address2** | string | The 2nd line of the shipping address | Not required |
| **city** | string | Shipping city | Not required |
| **state** | string | Shipping state. For international addresses, you can use this field to hold the province or territory, as applicable. For US states, use one of the **US State Codes**. | Required for shipping and tax calculations |
| **zip** | string | Shipping zip or postal code. | Not required |

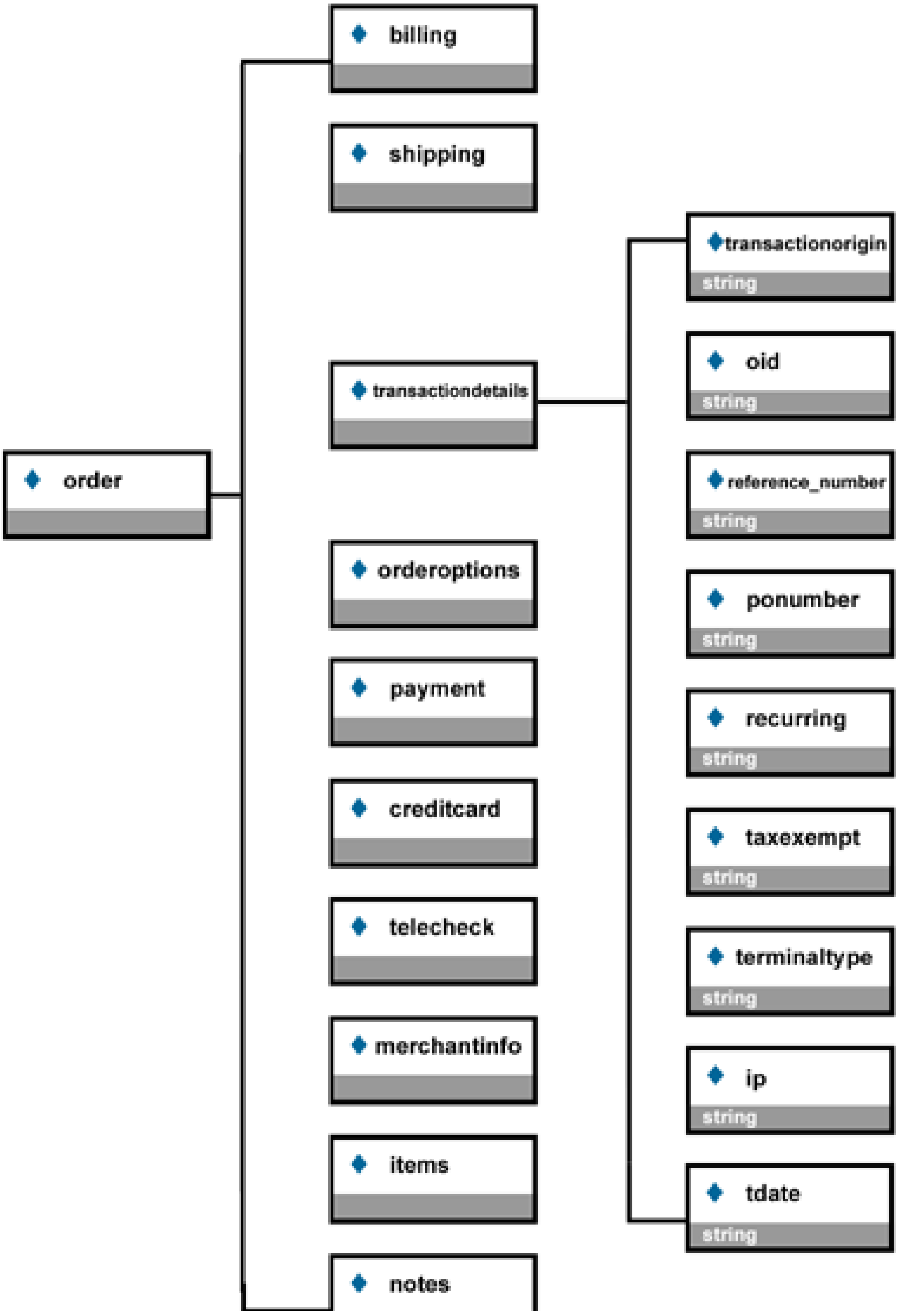
| | | | |
|---|---|---|---|
| **country** | string | Shipping country. If passed, must be a valid country code. See Country Codes. | Not required, but post-authorizations may require it. |
| **weight** | decimal | The total weight of the order to be shipped. Used when the shipping calculation method is based on the total weight of the order. | Required for shipping methods 3 and 4 |
| **items** | decimal | Total number of items in the order. Used when the shipping calculation method is based on the number of items in the order. See Using the Shipping Calculator for more information. | Required for shipping methods 1, 2, and 4 |
| **carrier** | integer | The carrier to be used to ship the order (e.g., Ground, Overnight, etc.). Used when the merchant is specifying carrier. The merchant should assign integer values to each carrier the | Required if merchant is using carrier types. |

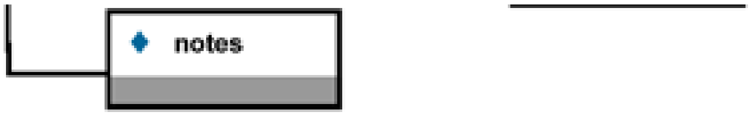
| | | | |
|---|---|---|---|
| | | merchant uses. | |
| **total** | decimal | The order total before the shipping charges are added. | Required for shipping method 5 |

# The Transaction Details Entity

The purpose of the **transactiondetails** entity is to communicate all the general information about the payment transaction. The data fields that it may contain are transactionorigin, oid, reference_number, ponumber, recurring, taxexempt, terminaltype, ip, and tdate.

The diagram below shows the **transactiondetails** entity data structure.




notes

# Transaction Details Data Fields

The table below describes each data field in the **transactiondetails** entity.

| **transactiondetails Field Name** | **Data Type** | **Description** | **Required?** |
|---|---|---|---|
| **transactionorigin** | string | The source of the transaction. The possible values are ***ECI*** (if the order was received via e-mail or Internet), ***MAIL*** (mail order), ***MOTO*** (mail order / telephone order), ***TELEPHONE*** (telephone order) and ***RETAIL*** (face to face). For credit card transactions, mail order and telephone order transactions are treated the same. However, for VirtualCheck transactions, mail order and telephone order transactions are treated differently and the merchant should take care to identify them separately. | Required for retail, mail, and telephone orders. Defaults to ***ECI***. |

| | | | |
|---|---|---|---|
| **oid** | string | The Order ID to be assigned to this transaction. For ***SALE*** and ***PREAUTH***, this field must be unique. For ***VOID***, ***CREDIT***, and ***POSTAUTH***, this field must be a valid Order ID from a prior ***SALE*** or ***PREAUTH*** transaction. For a Forced Ticket (that is a **POSTAUTH** where the authorization was given over the phone), the **oid** field is not required, but the **reference_number** field is required. | Required for credit card ***VOID***, ***CREDIT***, and ***POSTAUTH*** transactions |
| **ponumber** | string | The purchase order number, department number, or other customer-supplied number that applies to this transaction. One P.O. number can apply to multiple orders. | Required for Level 2 purchasing card transactions |

| | | | |
|---|---|---|---|
| **taxexempt** | string | An indicator field representing whether the order is tax exempt. It should be set to Y if the order is tax exempt, or N if not. | Required for Level 2 purchasing card transactions |
| **terminaltype** | string | The type of terminal that is sending the transaction. Set the value to ***STANDALONE*** for a point-of-sale credit card terminal, ***POS*** for an electronic cash register or integrated POS system, ***UNATTENDED*** for a self-service station such as a gas station terminal, vending machine, self-service ticket booth or other self checkout station, or ***UNSPECIFIED*** for e-commerce, general, CRT, or other applications. | Not required, but transactions may be downgraded if not passed properly. Default is ***UNSPECIFIED***. |
| **ip** | string | The IP address of the consumer | Not required, but needed for fraud blocking by IP address. |

| | | | |
|---|---|---|---|
| **reference_number** | string | Used for Forced Ticket transactions where a reference number was obtained over the phone. Set the reference number value to the word *NEW* (all caps) + the reference number given over the phone. For example, if the reference number given over the phone was ***123456***, you would set **reference_number** to ***NEW123456***. | Required for Forced Ticket transactions only |
| **recurring** | string | A flag to indicate whether the transaction is a recurring transaction or not. If this transaction is recurring (and if the merchant is not using the recurring processor provided here), this flag must be set to ***Yes***. | Defaults to ***No***. Set to ***Yes*** if the transaction is part of a recurring series of transactions and you are NOT using the periodic billing option of the API. |

| | | | |
|---|---|---|---|
| **tdate** | string | This field is returned with every successful transaction. If you need to run a void (or other transaction) against an existing order ID, you may need to pass the tdate to uniquely identify the specific transaction you wish to void. See below for example. | Not required, but may be needed for some transactions. See example below. |

## A tdate example

1. Say you run a Sale transaction for $10. The order ID (or oid) for your Sale transaction is 12309. The tdate returned is 9023.

2. Then you run a Credit transaction for $5 against the same order ID (12309) to return a portion of the customer's money. The tdate returned for the Credit transaction is 2134.

3. But just after you've run the Credit, you realize you made a mistake--you didn't need to credit the transaction.

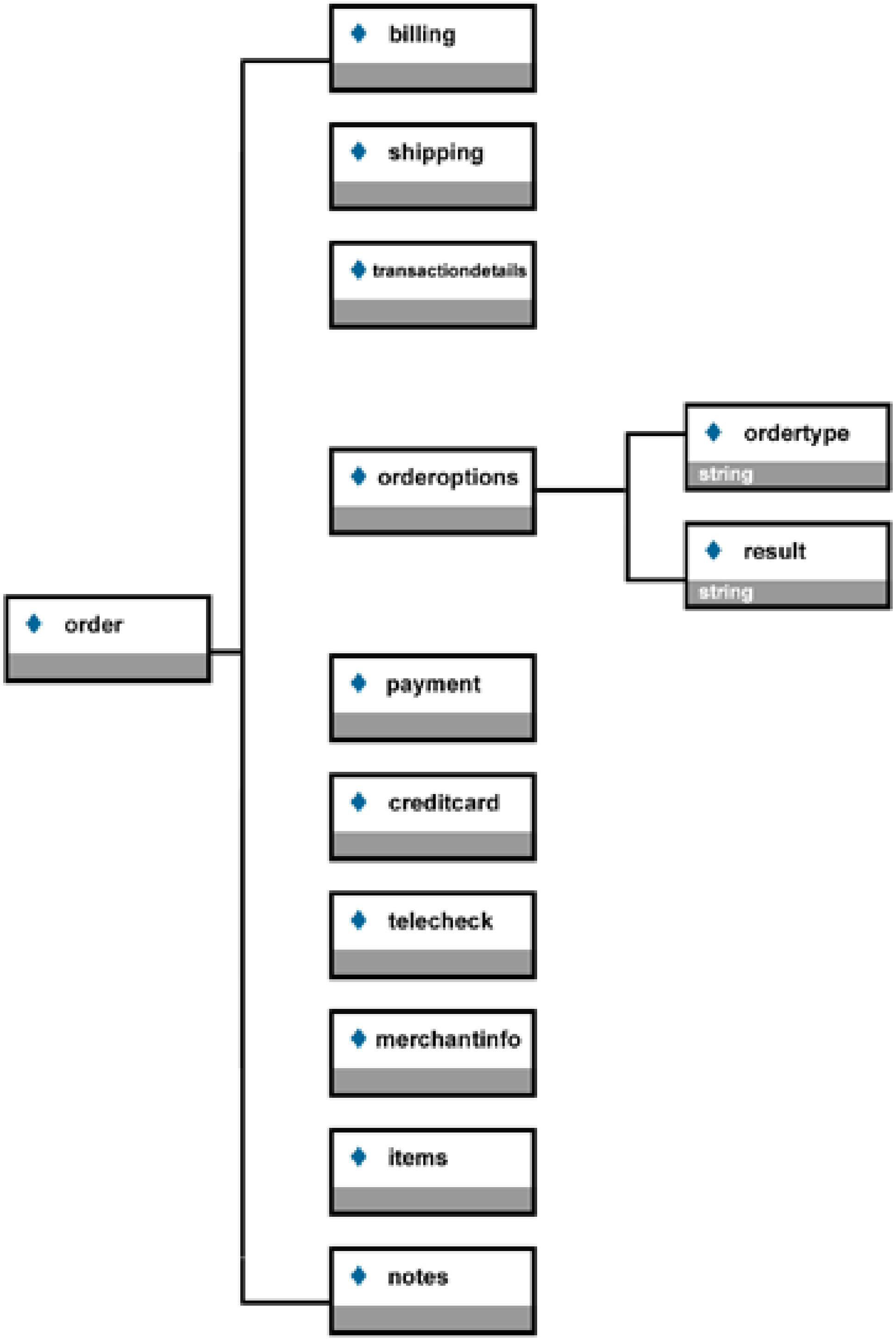
4. So now you need to void the Credit, but if you just used the Order ID (12309), the Gateway would void the entire order (both the Sale AND the Credit).

5. To void ONLY the Credit, you must pass the ***tdate*** for the Credit transaction (2134) in addition to the ***oid*** (12309). The ***tdate*** uniquely identifies the Credit transaction as the transaction you wish to void.

# The Order Options Entity

The **orderoptions** entity contains specific instructions on how to process the order. The data fields it can contain are ***ordertype*** and ***result***.

The diagram below shows the **orderoptions** entity data structure.



# Order Options Data Fields

The table below describes each data field in the **orderoptions** entity.

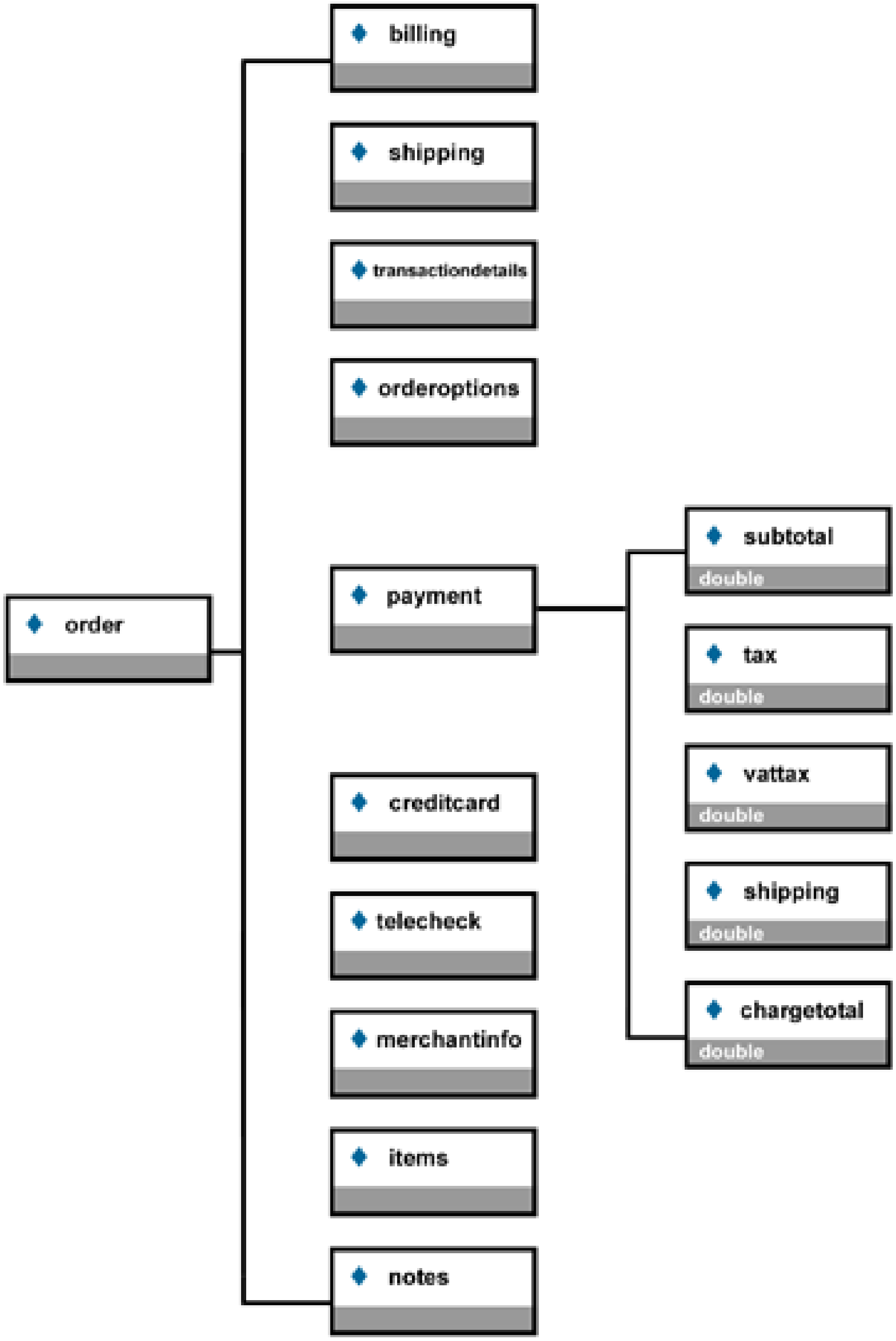
| orderoptions Field Name | Data Type | Description | Required? |
|---|---|---|---|
| **ordertype** | string | The type of transaction. The possible values are ***SALE***, ***PREAUTH*** (for an Authorize Only transaction), ***POSTAUTH*** (for a Forced Ticket or Ticket Only transaction), ***VOID***, ***CREDIT***, ***CALCSHIPPING*** (for shipping charges calculations) and ***CALCTAX*** (for sales tax calculations). See the Transaction Types section for additional information. | Required |
| **result** | string | This field puts the account in live mode or test mode. Set to ***LIVE*** for live mode, ***GOOD*** for an approved response in test mode, ***DECLINE*** for a declined reponse in test mode, or ***DUPLICATE*** for a duplicate response | Not required. Defaults to LIVE. |

| | | | |
|---|---|---|---|
| | | in test mode. | |

# The Payment Entity

The **payment** entity contains the transaction totals. The data fields available are subtotal, tax, vattax, shipping, and chargetotal.

The diagram below shows the **payment** entity data structure.



# Payment Data Fields

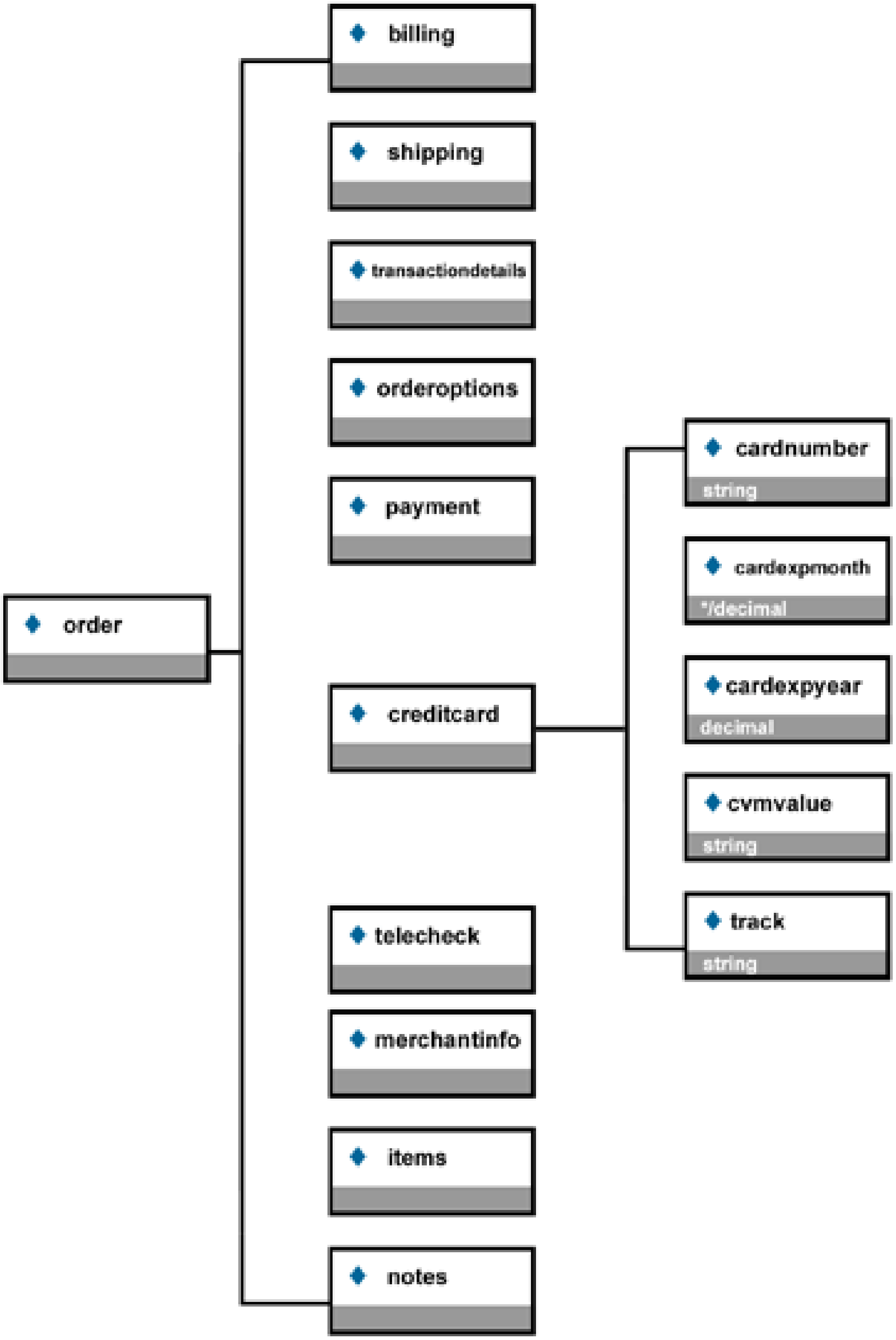
The table below describes each data field in the **payment** entity.

| payment Field Name | Data Type | Description | Required? |
|---|---|---|---|
| **subtotal** | double | The transaction subtotal, before shipping and tax | Not required |
| **tax** | double | Sales tax dollar amount | Required for Level 2 purchasing card transactions only. If tax is $0.00 for a purchasing card transaction, set this field to 0. |
| **vattax** | double | Amount of VAT (typically, only tax or vattax is used). This is a tax sometimes applied to international orders. | Not required |
| **shipping** | double | Shipping charge dollar amount | Not required |
| **chargetotal** | double | The total dollar amount of this transaction, including subtotal, tax, and shipping | Required |

# The Credit Card Entity

The **creditcard** entity contains details about the credit card order. The data fields available are cardnumber, cardexpmonth, cardexpyear, cvmvalue, cvmindicator, and track.

The diagram below shows the **creditcard** entity data structure.



# Credit Card Data Fields

The table below describes each data field in the **creditcard** entity.

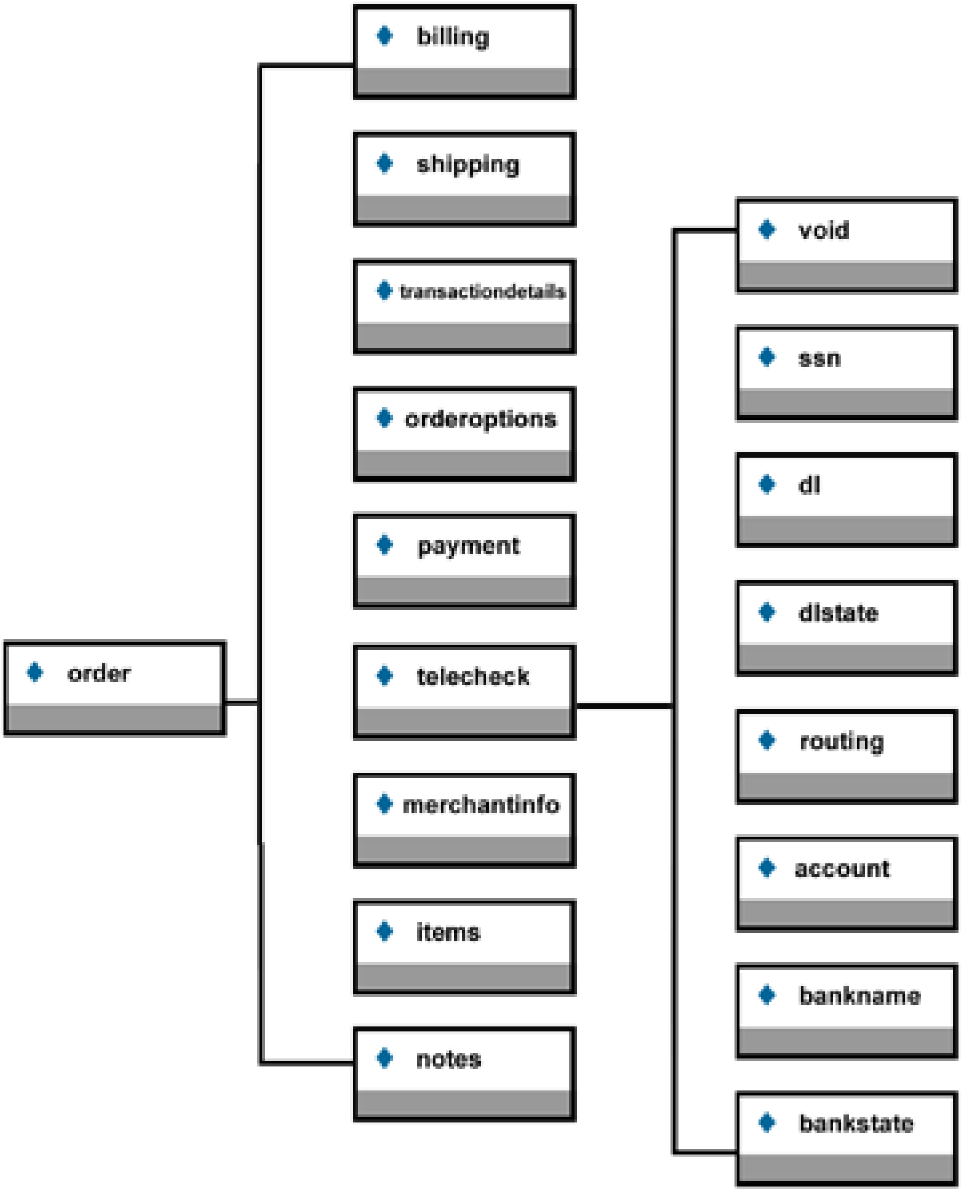
| creditcard Field Name | Data Type | Description | Required? |
|---|---|---|---|
| **cardnumber** | numeric | The consumer's credit card number | Required for credit card transactions if ***track*** is not provided |
| **cardexpmonth** | integer from 1 to 12 | The numeric expiration month of the credit card | Required for credit card transactions if ***track*** is not provided |
| **cardexpyear** | integer from 00 to 99 | The two-digit expiration year of the credit card | Required for credit card transactions if ***track*** is not provided |
| **cvmvalue** | integer from 000 to 999 | 3-digit numeric valued typically printed on the signature panel on the back of the credit card. See **Using the Card Code** for more information. | Not required, but recommended for fraud prevention |

| | | | |
|---|---|---|---|
| **cvmindicator** | string | Indicates whether CVM was supplied and, if not, why. The possible values are “provided”, “not_provided”, “illegible”, “not_present”, and “no_imprint”. | Required if ***cvmvalue*** is passed |
| **track** | string | Contains the data swiped from the credit card track 1 or track 2. | Required for credit card transactions if ***cardnumber***, ***cardexpmonth*** and ***cardexpyear*** are not provided |

# The TeleCheck Entity*

The telecheck entity contains information required by VirtualCheck to process the check payment. The data fields are void, ssn, dl, dlstate, routing, account, bankname and bankstate.

The diagram below shows the **telecheck** entity data structure.



# VirtualCheck Data Fields*

The table below describes each data field in the **telecheck** entity. The **telecheck** entity contains the data fields needed for a VirtualCheck transaction.

In addition to the fields listed as required below, if the order was taken over the telephone, the following fields from the **billing** entity are also required.

- name
- address1
- city
- state
- zip
- phone (required for ALL VirtualCheck transactions)

If this order is NOT an e-commerce order (i.e., if it was a retail, mail or telephone order), you must also pass the **transactionorigin** data field in the **transactiondetails** entity.

| telecheck Field Name | Data Type | Description | Required? |
|---|---|---|---|
| **routing** | string | The transit routing number for the customer’s bank | Required for all check transactions |
| **account** | string | The customer's bank account number | Required for all check transactions |
| **checknumber** | string | The check number from the customer's check. A VirtualCheck transaction does not use the check number; i.e., the customer can still use the paper check for another purchase. | Optional |

| | | | |
|---|---|---|---|
| **bankname** | string | The name of the customer’s bank | Required |
| **bankstate** | string | The state that the customer’s bank is located in. Set the value to one of the **US State Codes**. | Required |
| **dl** | string | Driver’s license number of the customer | Required for check orders taken over the telephone or the web |
| **dlstate** | string | The state where the customer’s driver's license was issued. Set the value to one of the **US State Codes**. | Required for check orders taken over the telephone or the web |
| **void** | integer | To void an unsettled check, pass a 1 in this tag. Otherwise, do not include this data field. | Required for check VOID transactions |

| | | | |
|---|---|---|---|
| **accounttype** | string | The type of account used for the purchase. Possible values are:<br>- “pc” for personal checking<br>- “ps” for personal savings<br>- “bc” for business checking<br>- “bs” for business savings | Required for all VirtualCheck SALES |
| **ssn** | string | Social security number of the customer | Optional, for identity verification purposes |

# Periodic Data Fields

The table below describes each data field in the **periodic** entity.

| periodic Field Name | Data Type | Description | Required? |
|---|---|---|---|
| **action** | string | Tells which action to take regarding the periodic transaction. Possible values are SUBMIT (to submit the recurring transaction for processing), MODIFY (to edit a previously submitted recurring transaction), or CANCEL (to cancel a previously submitted recurring transaction). | Required for all recurring transactions |
| **installments** | integer from 0 to 99 | Identifies how many recurring payments to charge the customer | Required for all recurring transactions |
| **threshold** | integer from 1 to 5 | Tells how many times to retry the transaction (if it fails) before contacting the merchant. | Not required. If not supplied, it defaults to 3. |

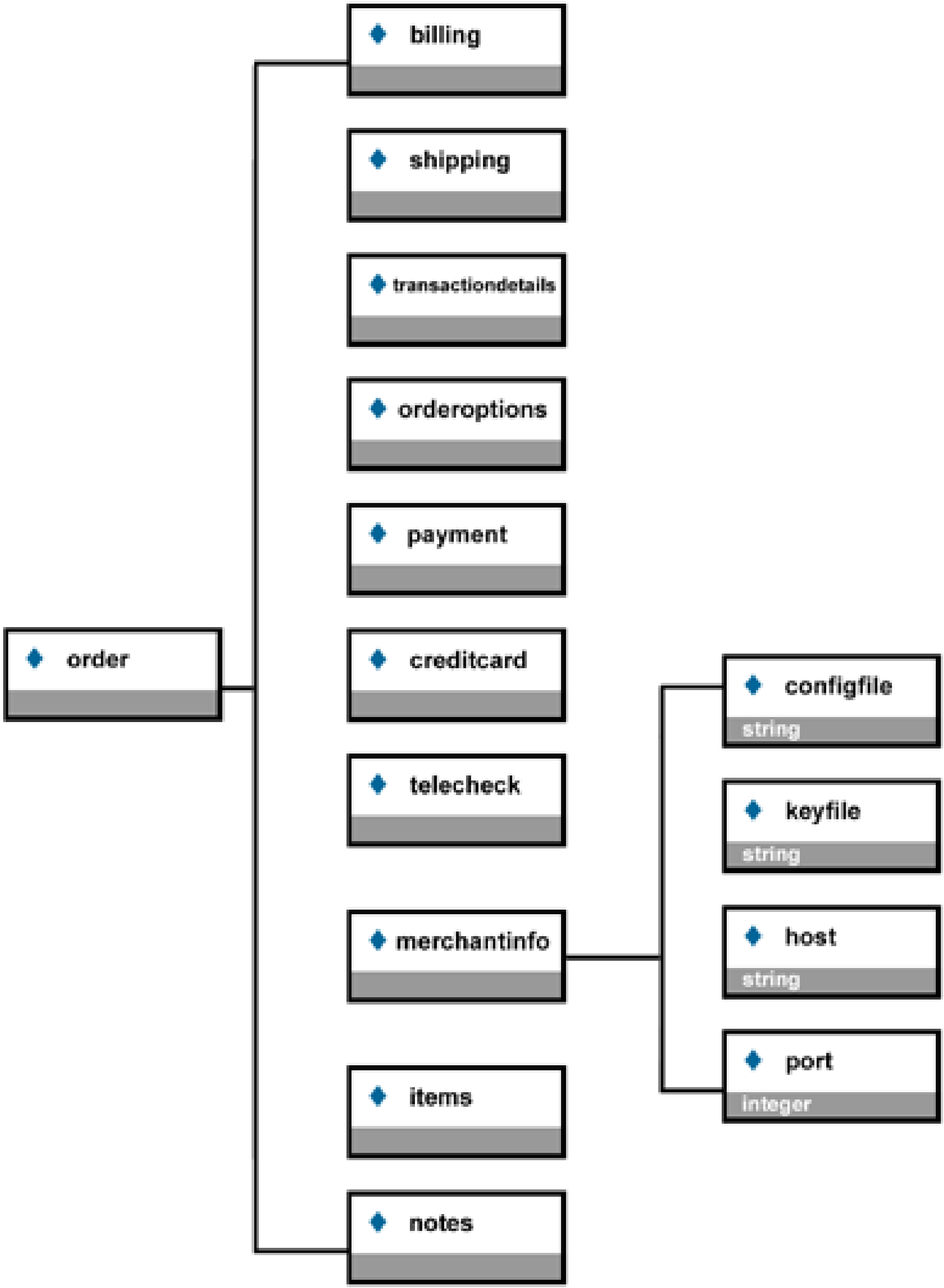
| | | | |
|---|---|---|---|
| **startdate** | string | Tells the date to begin charging the recurring payments. Should be in the format YYYYMMDD, where YYYY is the four-digit year, MM is the 2-digit month, and DD is the 2-digit day. Example: 20040910 means September 10, 2004. If you wish to start payments immediately, set this tag to ***immediate*** | Required for all recurring transactions |
| **periodicity** | string | Tells how often to charge the payment. Possible values are:<br>• ***monthly*** (to charge once a month),<br>• ***bimonthly*** (to charge every other month),<br>• ***weekly*** (to charge once a week),<br>• ***biweekly*** (to charge once every other week),<br>• ***yearly*** (to charge once a year),<br>• ***daily*** (to charge once a day),<br>• or you can use the code ***XN***, which means every ***N*** days/weeks/months. ***X*** can be ***d*** for day, ***m*** for month, or ***y*** for year. ***N*** can be any integer from 1 through 999. Example: ***m3*** means charge the | Required for all recurring transactions |

| | | | |
|---|---|---|---|
| | | customer once every 3 months. | |
| **comments** | string | Lets you enter optional comments about the transaction | Not required |

# The Merchant Info Entity

The **merchantinfo** entity contains details about the merchant. This entity is required for every transaction or function call to the Gateway. The four merchantinfo data fields are configfile (i.e., the merchant store number), keyfile, host, and port.

The diagram below shows the **merchantinfo** data structure.



# Merchant Info Data Fields

The table below describes each data field in the **merchantinfo** entity.

| merchantinfo Field Name | Data Type | Description | Required? |
|---|---|---|---|
| **configfile** | string | This field should contain the merchant store name or number, which is generally a six- to ten- digit number assigned at merchant account setup. If this is a test account, the store name may be a text string. | Required for ALL transactions and function calls. |
| **keyfile** | string | This field contains the path and filename of the digital certificate (or PEM file) issued for a given store. | Not required. Information is provided to the Gateway when setting up the SSL connection. |
| **host** | string | This is the URL or IP address of the Gateway Server. This information is provided in the merchant's Welcome e-mail. | Not required. Information is provided to the Gateway when setting up the SSL connection. |

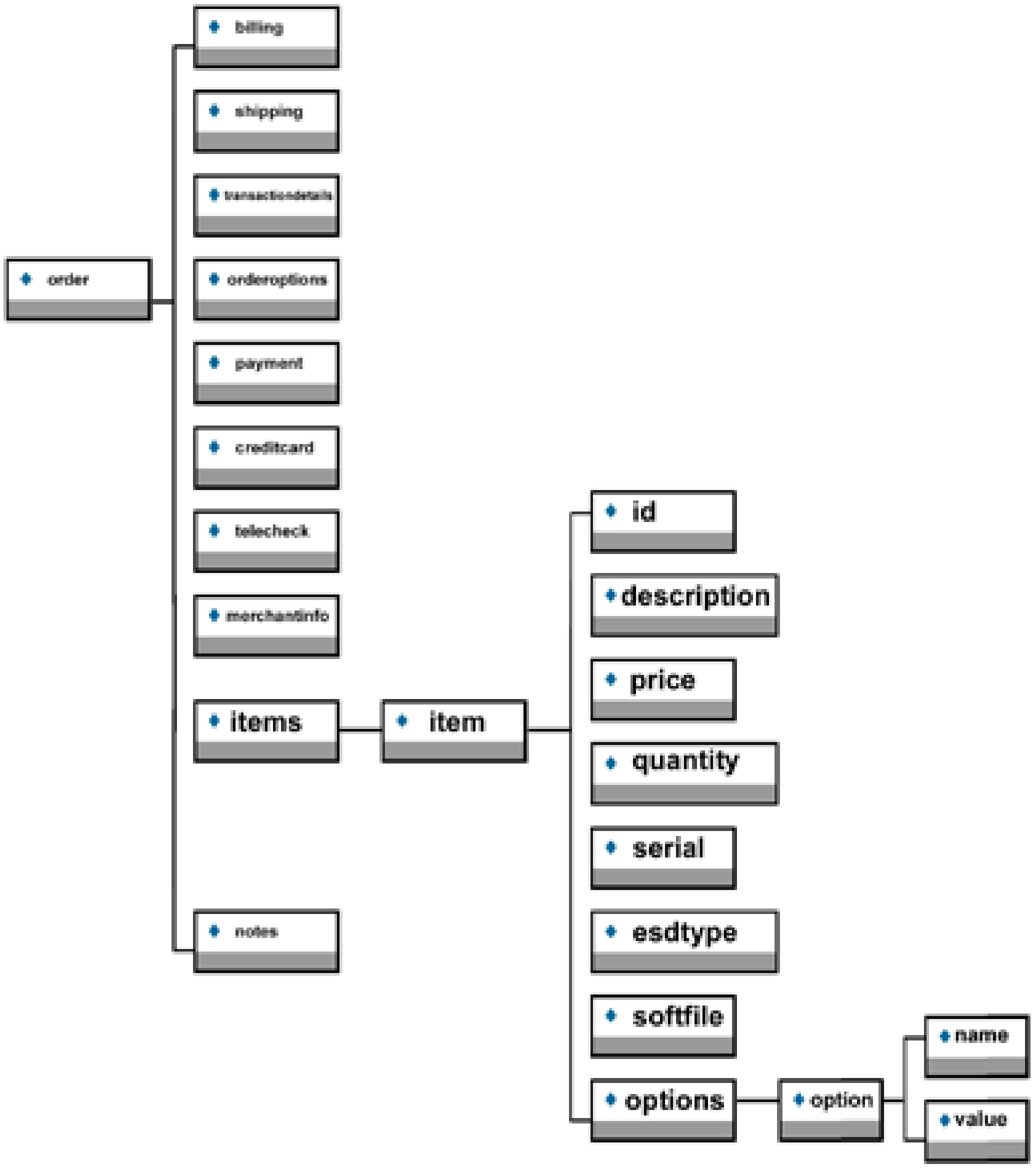
| | | | |
|---|---|---|---|
| **port** | integer | The port that the application uses to communicate to the Payment Gateway. Used only on the client side. | Not required. Information is provided to the Gateway when setting up the SSL connection. |

# The Items Entity

The **items** entity contains one or more **item** sub-entities.

Each **item** sub-entity contains up to seven data fields (id, description, price, quantity, serial, esdtype, softfile) and may also contain an **options** entity.

The **options** sub-entity can then contain one or more **option** sub-entities, as reflected in the following diagram. Each option sub-entity can contain two data fields (name and value).



# An Items Example

The items entity can contain one or more item sub-entities. Each **item** sub-entity can contain up to seven data fields, plus an **options** sub-entity. Each **options** sub-entity can contain one or more **option** entities, which can each contain two data fields. This structure is shown below.

| |
|---|
| **items** entity |
| one or more **item** sub-entities [7 data fields] |
| **options** sub-entity |
| one or more **option** sub-entities [2 data fields] |

## A Sample Order

Now let's say you are a merchant selling bowling-related products. You might receive an order like this:

1. 2 T-shirts. Red. XL.
2. 1 Bowling Ball. Weight: 12 lb.
3. 1 eBook on How to Bowl

To describe this order using the **items** entity, you might describe the order as shown in the diagram below.

# Data Fields for Each Item

All the data fields used in the **item** sub-entity are listed in the table below.

| **item** sub-entity | | | |
|---|---|---|---|
| **item Field Name** | **Data Type** | **Description** | **Required?** |
| **id** | string | Item ID number | Required for each item passed |
| **description** | string | Description of this item | Required for ESD items. Optional for other items. |
| **price** | string | Price of this item | Required for each item passed |
| **quantity** | string | Quantity of this item to include in this order | Required for each item passed |
| **serial** | string | Serial number associated with this item | Not required |
| **esdtype** | string | For electronic softgood download (ESD) items, this tag indicates which type of ESD item it is: set the value to ***softgood*** if it's a softgood file or ***key*** if it's a keygen executable. | Required for ESD items only |

| | | | |
|---|---|---|---|
| **softfile** | string | The name of the softgood file or keygen executable to be downloaded | Required for ESD items only |

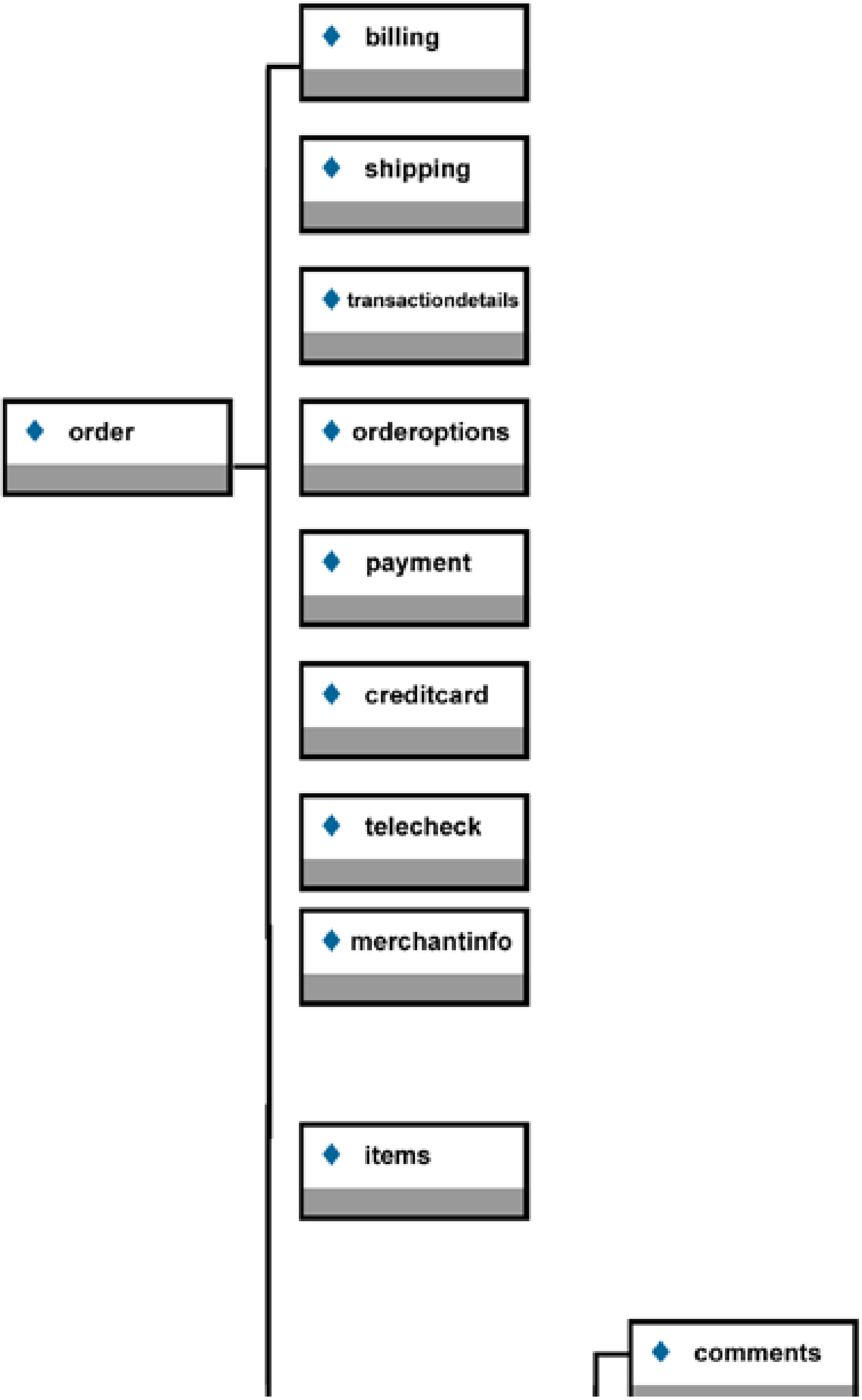
# Data Fields for Each Option

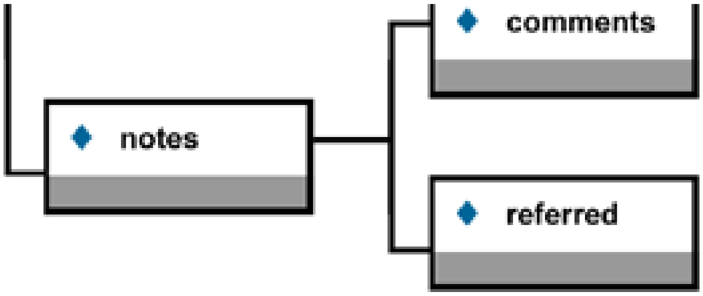
All the data fields used in the **option** sub-entity are listed in the table below.

| **option** sub-entity | | | |
|---|---|---|---|
| **option Field Name** | **Data Type** | **Description** | **Required?** |
| **name** | string | Name of the option | Required for each option passed |
| **value** | string | Value of the option for this order | Required for each option passed |

# The Notes Entity

The **notes** entity contains optional comments about the transaction. It may contain two data fields, comments and referred, as reflected in the following diagram.




comments
notes
referred

# Notes Data Fields

The table below describes each data field in the **notes** entity.

| notes Field Name | Data Type | Description | Required? |
|---|---|---|---|
| **comments** | string | For optional comments about the transaction | Not required |
| **referred** | string | Intended for merchants to track how the customer was referred to them. Often a URL is passed in this field. | Not required |

# US State Codes

When passing a value for a US State in the **billing** or **shipping** entity, you must use the 2-digit codes specified below.

| | | | | |
|---|---|---|---|---|
| **A** | **Alabama** | AL | **Alaska** | AK |
| | **Arizona** | AZ | **Arkansas** | AR |

| | | | | |
|---|---|---|---|---|
| **C** | **California** | CA | **Colorado** | CO |
| | **Connecticut** | CT | | |

| | | | | |
|---|---|---|---|---|
| **D** | **Delaware** | DE | **District of Columbia** | DC |

| | | | |
|---|---|---|---|
| **F** | **Florida** | FL | |

| | | | |
|---|---|---|---|
| **G** | **Georgia** | GA | |

| | | | |
|---|---|---|---|
| **H** | **Hawaii** | HI | |

| | | | | |
|---|---|---|---|---|
| **I** | **Idaho** | ID | **Illinois** | IL |
| | **Indiana** | IN | **Iowa** | IA |

| | | | | |
|---|---|---|---|---|
| **K** | **Kansas** | KS | **Kentucky** | KY |

| | | | |
|---|---|---|---|
| **L** | **Louisiana** | LA | |

| | | | | |
|---|---|---|---|---|
| **M** | **Maine** | ME | **Maryland** | MD |
| | **Massachusetts** | MA | **Michigan** | MI |
| | **Minnesota** | MN | **Mississippi** | MS |
| | **Missouri** | MO | **Montana** | MT |

| | | | | |
|---|---|---|---|---|
| **N** | **Nebraska** | NE | **Nevada** | NV |
| | **New Hampshire** | NH | **New Jersey** | NJ |
| | **New Mexico** | NM | **New York** | NY |
| | **North Carolina** | NC | **North Dakota** | ND |

| | | | | |
|---|---|---|---|---|
| **O** | **Ohio** | OH | **Oklahoma** | OK |
| | **Oregon** | OR | | |

| | | | |
|---|---|---|---|
| **P** | **Pennsylvania** | PA | |

| | | | | |
|---|---|---|---|---|
| R | Rhode Island | RI | | |
| S | South Carolina | SC | South Dakota | SD |
| T | Tenessee | TN | Texas | TX |
| U | Utah | UT | | |
| V | Vermont | VT | Virgina | VA |
| W | Washington | WA | Wisconsin | WI |
| | West Virginia | WV | Wyoming | WY |

# Country Codes

Whenever passing a value for **country** in the **shipping** or **billing** entity, you must use the following two-letter abbreviations. Countries are grouped by these continents:

- **Africa**
- **Antarctica**
- **Asia**
- **Australia**
- **Caribbean**
- **Central America**
- **Europe**
- **Middle East**
- **North America**
- **South America**
- **Others**

| AFRICA | | | | | |
|---|---|---|---|---|---|
| **Algeria** | DZ | **Benin** | BJ | **Burkina Faso** | BF |
| **Burundi** | BI | **Cameroon** | CM | **Cape Verde** | CV |
| **Central African Republic** | CF | **Chad** | TD | **Comoros** | KM |

| | | | | | |
|---|---|---|---|---|---|
| **Congo** | CG | **Cote D'Ivoire** | CI | **Djibouti** | DJ |
| **Equatorial Guinea** | GQ | **Eritrea** | ER | **Ethiopia** | ET |
| **Egypt** | EG | **Gabon** | GA | **Gambia** | GM |
| **Ghana** | GH | **Guinea** | GN | **Guinea-Bissau** | GW |
| **Kenya** | KE | **Lesotho** | LS | **Liberia** | LR |
| **Madagascar** | MG | **Mali** | ML | **Mauritania** | MR |
| **Mayotte** | YT | **Morocco** | MA | **Mozambique** | MZ |
| **Malawi** | MW | **Namibia** | NA | **Niger** | NE |
| **Nigeria** | NG | **Reunion** | RE | **St. Helena** | SH |
| **Sao Tome and Principe** | ST | **Senegal** | SN | **Sierra Leone** | SL |
| **Somalia** | SO | **South Africa** | ZA | **Sudan** | SD |
| **Swaziland** | SZ | **Tanzania** | TZ | **Togo** | TG |
| **Uganda** | UG | **Western Sahara** | EH | **Zaire** | ZR |

| | | | | |
|---|---|---|---|---|
| **Zambia** | ZM | **Zimbabwe** | ZW | |

## ANTARCTICA

| | | |
|---|---|---|
| **Antarctica** | AQ | |

## ASIA

| | | | | | |
|---|---|---|---|---|---|
| **Afghanistan** | AF | **Bangladesh** | BD | **Bhutan** | BT |
| **Brunei** | BN | **Cambodia** | KH | **China** | CN |
| **Hong Kong** | HK | **India** | IN | **Indonesia** | ID |
| **Japan** | JP | **Kazakhstan** | KZ | **Kyrgyzstan** | KG |
| **Laos** | LA | **Macau** | MO | **Malaysia** | MY |
| **Maldives** | MV | **Mongolia** | MN | **Nepal** | NP |
| **Pakistan** | PK | **Philippines** | PH | **Republic of Korea** | KR |
| **Russia** | RU | **Seychelles** | SC | **Singapore** | SG |

| | | | | | |
|---|---|---|---|---|---|
| **Sri Lanka** | LK | **Taiwan** | TW | **Tajikistan** | TJ |
| **Thailand** | TH | **Turkmenistan** | TM | **Uzbekistan** | UZ |
| **Vietnam** | VN | | | | |

| **AUSTRALIA** | | | | | |
|---|---|---|---|---|---|
| **American Samoa** | AS | **Australia** | AU | **Federated States of Micronesia** | FM |
| **Fiji** | FJ | **French Polynesia** | PF | **Guam** | GU |
| **Kiribati** | KI | **Marshall Islands** | MH | **Nauru** | NR |
| **New Caledonia** | NC | **New Zealand** | NZ | **Northern Mariana Islands** | MP |
| **Palau** | PW | **Papua New Guinea** | PG | **Pitcairn** | PN |
| **Solomon Islands** | SB | **Tonga** | TO | **Tuvalu** | TV |

| | | |
|---|---|---|
| **Vanuatu** | VU | |

| **CARIBBEAN** | | | | | |
|---|---|---|---|---|---|
| **Anguilla** | AI | **Antiqua and Barbuda** | AG | **Aruba** | AW |
| **Bahamas** | BS | **Barbados** | BB | **Bermuda** | BM |
| **British Virgin Islands** | VI | **Cayman Islands** | KY | **Dominica** | DM |
| **Dominican Republic** | DO | **Grenada** | GD | **Guadeloupe** | GP |
| **Haiti** | HT | **Jamaica** | JM | **Martinique** | MQ |
| **Netherlands Antilles** | AN | **Puerto Rico** | PR | **St. Kitts and Nevis** | KN |
| **St. Lucia** | LC | **St. Vincent and the Grenadines** | VC | **Trinidad and Tobago** | TT |

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|---|---|---|
| **Turks and Caicos Islands** | TC | |

## CENTRAL AMERICA

| | | | | | |
|---|---|---|---|---|---|
| **Belize** | BZ | **Costa Rica** | CR | **El Salvador** | SV |
| **Guatemala** | GT | **Honduras** | HN | **Nicaragua** | NI |
| **Panama** | PA | | | | |

## EUROPE

| | | | | | |
|---|---|---|---|---|---|
| **Albania** | AL | **Andorra** | AD | **Armenia** | AM |
| **Austria** | AT | **Azerbaijan** | AZ | **Belarus** | BY |
| **Belgium** | BE | **Bulgaria** | BG | **Croatia** | HR |
| **Cyprus** | CY | **Czech Republic** | CZ | **Denmark** | DK |

| | | | | | |
|---|---|---|---|---|---|
| **Estonia** | EE | **Faroe Islands** | FO | **Finland** | FI |
| **France** | FR | **Georgia** | GE | **Germany** | DE |
| **Gibraltar** | GI | **Greece** | GR | **Greenland** | GL |
| **Hungary** | HU | **Iceland** | IS | **Ireland** | IE |
| **Italy** | IT | **Latvia** | LV | **Liechtenstein** | LI |
| **Lithuania** | LT | **Luxembourg** | LU | **Malta** | MT |
| **Metropolitan France** | FX | **Moldova** | MD | **Netherlands** | NL |
| **Norway** | NO | **Poland** | PL | **Portugal** | PT |
| **Romania** | RO | **Slovakia** | SK | **Slovenia** | SI |
| **Spain** | ES | **Svalbard and Jan Mayen Islands** | SJ | **Sweden** | SE |
| **Switzerland** | CH | **The former Yugoslav Republic of Macedonia** | MK | **Turkey** | TR |
| **Ukraine** | UA | **United Kingdom** | GB | **Vatican City** | VA |

| | | |
|---|---|---|
| **Yugoslavia** | YU | |

## MIDDLE EAST

| | | | | | |
|---|---|---|---|---|---|
| **Israel** | IL | **Jordan** | JO | **Kuwait** | KW |
| **Lebanon** | LB | **Oman** | OM | **Qatar** | QA |
| **Saudi Arabia** | SA | **Syria** | SY | **United Arab Emirates** | AE |
| **Yemen** | YE | | | | |

## NORTH AMERICA

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|---|---|---|---|---|---|
| **Canada** | CA | **Mexico** | MX | **United States** | US |

## SOUTH AMERICA

| | | | | | |
|---|---|---|---|---|---|
| **Argentina** | AR | **Bolivia** | BO | **Brazil** | BR |
| **Chile** | CL | **Colombia** | CO | **Equador** | EC |
| **Falkland Islands** | FK | **French Guiana** | GF | **Guyana** | GY |
| **Paraguay** | PY | **Peru** | PE | **Peru** | PE |
| **Suriname** | SR | **Uruguay** | UY | **Venezuela** | VE |

| **OTHERS** | | | | | |
|---|---|---|---|---|---|
| **Bahrain** | BH | **Bouvet Islands** | BV | **British Indian Ocean Territory** | IO |

# Response Fields

The Gateway's transaction engine will return a set of response codes for each transaction that has successfully communicated with the gateway through the SSL communications link. The response codes are returned in a set of XML tags, which are prefaced with an “r_”.

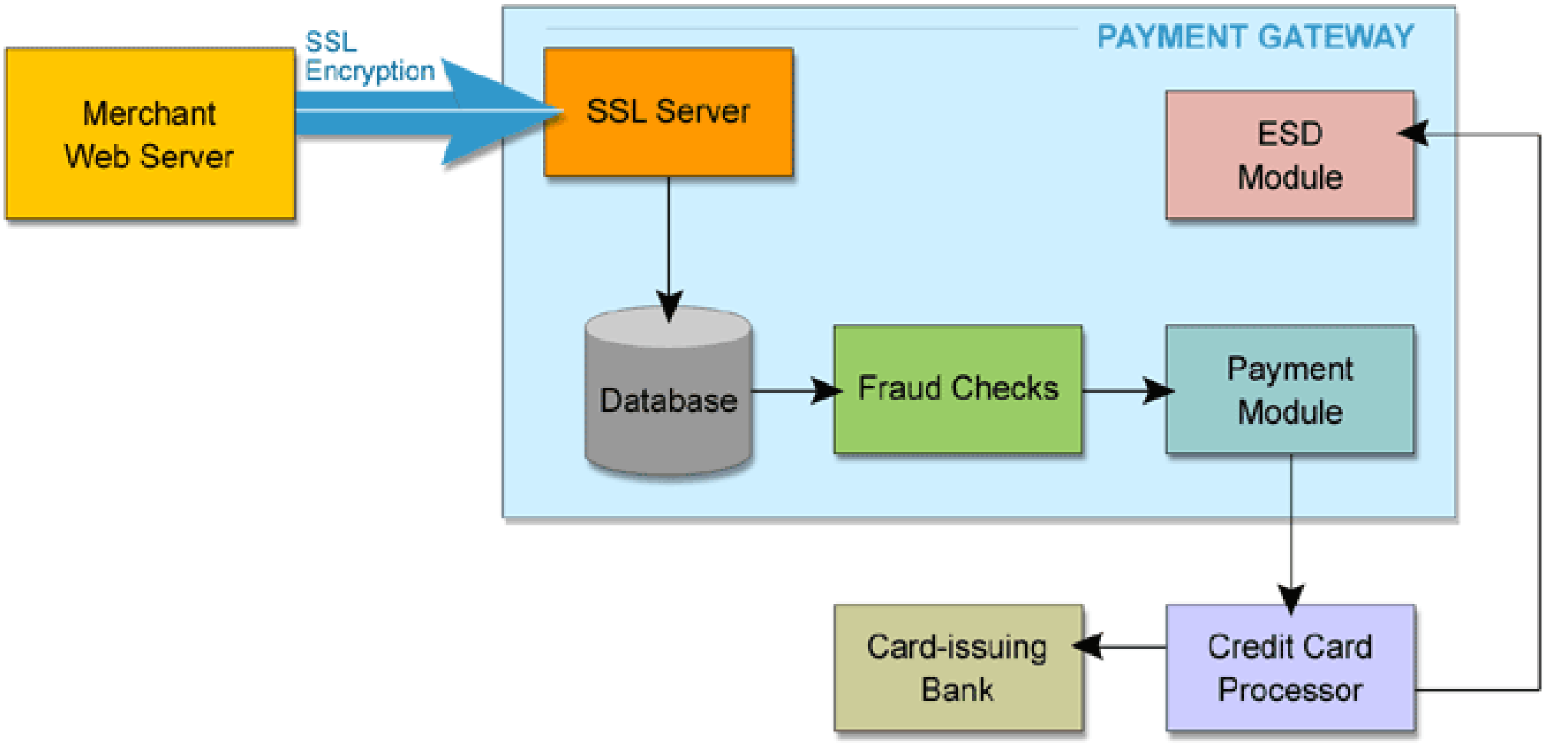
The following table represents the possible set of response tags. Note that if an error occurs, the response may contain only the **r_error** tag, although it is possible that other tags will be returned if additional information is available.

| Response Field | Description |
|---|---|
| **r_avs** | The Address Verification System (AVS) response for this transaction. The first character indicates whether the contents of the **addrnum** tag match the address number on file for the billing address. The second character indicates whether the billing zip code matches the billing records. The third character is the raw AVS response from the card-issuing bank. The last character indicates whether the **cvmvalue** was correct and may be “M” for Match, “N” for No Match, or “Z” if the match could not determined. See the sections entitled ***Using Address Verification*** and ***Using the Card Code*** for additional information on using this information to help you combat fraud. |
| **r_ordernum** | The order number associated with this transaction. |
| **r_error** | Any error message associated with this transaction. |
| **r_approved** | The result of the transaction, which may be APPROVED, DECLINED, or FRAUD. |
| **r_code** | The approval code for this transaction. |

| | |
|---|---|
| **r_message** | Any message returned by the processor; e.g., “CALL VOICE CENTER”. |
| **r_time** | The time and date of the transaction server response. |
| **r_ref** | The reference number returned by the credit card processor. |
| **r_tdate** | A server time-date stamp for this transaction. Used to uniquely identify a specific transaction where one order number may apply to several individual transactions. See the *Transaction Details Data Fields* section for further information and an example of tdate. |
| **r_tax** | The calculated tax for the order, when the ordertype is ***calctax***. |
| **r_shipping** | The calculated shipping charges for the order, when the ordertype is ***calcshipping***. |
| **r_score** | If LinkShield$^{TM}$ is enabled on the account, the LinkShield fraud risk score will be returned in this field. A value of ***0*** indicates a low risk of fraud; a value of ***99*** indicates a high risk of fraud. |

# Where and Why Errors Occur

There are many different response messages or codes you may receive from the Gateway. All response error or decline messages are passed in the **r_error** data field returned by the Gateway. Some responses indicate an error; some are returned with a declined transaction as explanation for the decline. To understand the error messages you get, it helps to understand the process a transaction goes through when you submit it to the gateway.



## The Transaction Process

The transaction process follows this general path. This description assumes an e-commerce application, but the general transaction flow is roughly the same for retail or mail order/telephone order (MO/TO) transactions.

1. The merchant's or commerce service provider's Web server sends transaction information submitted by a customer at an online store to the SSL server.
2. The SSL server decrypts the data and writes it to the database.
3. If the shipping or tax calculators are used, they are invoked immediately after the transaction information is received by the SSL server.
4. Next, fraud and error checks are performed on the data.
5. If the information passes the fraud and error checks, the transaction is passed on to the payment lease line to the credit card processor.
6. If the ESD module is used, the ESD process is invoked when the transaction is passed to the credit card processor.

7. Once the credit card processor responds, successful transaction information is run back through the gateway, ending with the transaction being logged to the database and verification being sent to the customer and merchant.

Throughout this process, however, errors and/or declines can occur at any point. Error codes are generated when transactions cannot be completed because of machine error, incomplete data types or connection/transmission problems.

Decline values result when a transaction is declined for any reason, including when a transaction fails a fraud check. Error codes and decline values are returned in the **r_error** field. We have broken up the error messages into categories. If you are encountering an error message, please see the associated *Errors* section of this document.

## Fraud and Error Checks

Fraud and error checks are performed by the Gateway Fraud Protection module. Fraud messages and declines occur when the information submitted by the customer is either incomplete/incorrect or because the information has failed one of the Gateway fraud checks. See the *Fraud Decline Messages* section for further information on what you may encounter when a transaction is declined because of fraud.

## Payment Handler Interface

Unless it is halted because an error is found, transaction processing starts in the Gateway server, passes to the payment handler, then to a card processor, then to a card-issuing bank, then all the way back through the same stages. Successful or not, every transaction ultimately produces a return value, which may indicate that the transaction completed and was approved, completed and was declined or did not complete because it failed a specific error check at any point in the process.

See the following *Errors* sections for further information on messages or codes that may be returned by the Gateway.

# Credit Card Related Errors

These errors occur when incomplete or erroneous credit card information is passed for a credit card transaction. You may receive any of the following messages in the **r_error** field when this occurs.

| Response Message | Description | Possible Cause | Populate this Data Field | In this Entity |
|---|---|---|---|---|
| **Credit card expiration month must be selected.**<br>or<br>**OrderErr_Invalid_Expmonth** | Either no expiration month for the credit card was received or the value received was outside of the allowed range. | Ensure you are passing a 2-digit number from 01 through 12. | **cardexpmonth** | **creditcard** |
| **Credit card expiration year must be selected.**<br>or<br>**OrderErr_InvalidExpyear** | Either no expiration year for the credit card was received or the value received was outside of the allowed range. | Ensure you are passing a 2-digit number from 00 through 99. | **cardexpyear** | **creditcard** |

| | | | | |
|---|---|---|---|---|
| **Credit card number must be filled in.**<br>or<br>**OrderErr_NoCardnumber** | No credit card number was received by the Gateway. | Ensure you are passing a nonempty credit card number. Check the validity of the number. Spaces and/or dashes are optional. | **cardnumber** | **creditcard** |
| **This is not a valid credit card. Please try another card.**<br>or<br>**OrderErr_InvalidCardnumber** | The card number isn't valid. | Prompt the customer to re-enter the card number or try a different card. | **cardnumber** | **creditcard** |
| **Card number has too few digits.**<br>or<br>**OrderErr_CardnumberShort** | The credit card number provided has fewer digits than allowed for that card type. | Check the number of digits for each credit card to make sure it's the correct length or prompt the customer to re-enter the card number. | **cardnumber** | **creditcard** |

| | | | | |
|---|---|---|---|---|
| **Card number has too many digits.**<br>or<br>**OrderErr_CardnumberLong** | The credit card number provided has more digits than allowed for that card type. | Check the number of digits for each credit card to make sure it's the correct length or prompt the customer to re-enter the card number. | **cardnumber** | **creditcard** |
| **Credit card number must be filled in.** | No credit card number was provided for a credit card transaction. | Ensure that the **creditcard** field is not empty when submitting a credit card transaction to the Gateway. | **cardnumber** | **creditcard** |
| **This credit card appears to have expired.** | The expiration date provided is in the past. | Compare the expiration date provided with the current month and year. If it occurs in the past, prompt the customer that the credit card appears to have expired. | **cardexpmonth** and **cardexpyear** | **creditcard** |

| | | | | |
|---|---|---|---|---|
| **OrderErr_UnsupportedCardType** | The credit card type is not supported. | Check which credit card types the merchant supports. The Gateway supports Visa, MasterCard, Diner's Club, JCB, Discover, and American Express. Ask the customer to choose a credit card of a type that is supported by both the merchant and the Gateway. | **cardnumber** | **creditcard** |
| **OrderErr_CardnumberMismatch** | The credit card number does not match. This may occur when doing a credit, post-auth, or void transaction where the credit card number supplied in the second | Check the card number in the original transaction and make sure you are populating the **cardnumber** field correctly. | **cardnumber** | **creditcard** |

| | | | | |
|---|---|---|---|---|
| | transaction does not match the card number provided in the first transaction. | | | |

# Customer Information Errors

These error responses occur when the customer information supplied for a given transaction is incomplete or erroneous. You may receive any of the following messages in the **r_error** field when this occurs.

| Response Message | Description | Possible Cause | Populate this Data Field | In this Entity |
|---|---|---|---|---|
| **Invalid e-mail address.** | E-mail address provided is not in the right format. | Ensure you are passing a valid e-mail address in the format someone@domain.com. | **email** | **billing** |
| **E-mail address must be filled in.**<br>or<br>**OrderErr_InvalidEmail** | A valid e-mail address is required for this transaction. | Ensure you are passing a valid e-mail address in the format someone@domain.com. | **email** | **billing** |
| **The ZIP code given does not match up with the city and state given.** | The zip code appears to be in a different city and state than the one specified. | Prompt the customer to re-enter the zip code or check the city and state. | **zip** | **billing** or **shipping** |
| **ZIP/postal code not found in state.** | The zip code provided is not valid for the US state value received. | Check the values for state and zip code. Prompt the customer to re-check the data entered. | **zip** | **billing** or **shipping** |
| **State must be selected.** | State is a required field for this transaction. | Make sure you are passing a valid state code. | **state** | **billing** or **shipping** |

| | | | | |
|---|---|---|---|---|
| **Name must be filled in.** | Customer's name is required for this transaction. | Make sure a value is passed in the name field. | **name** | **billing** |
| **IP address given does not match up with the city and state given.**<br>or<br>**OrderErr_InvalidIP** | IP address or location is invalid. | Check that you are passing a valid customer IP address. | **ip** | **transactiondetails** |
| **OrderErr_InvalidBname** | Customer's name is required for this transaction. | Make sure a value is passed in the **name** field. | **name** | **billing** |
| **OrderErr_InvalidBzip** | Customer's billing zip code is required for this transaction. | Make sure a valid value is passed in the zip code field. | **zip** | **billing** |

# Order-Related Errors

These error responses occur when the order data is incomplete, erroneous, or when follow-on transactions for the same order do not match up with previous transactions. You may receive any of the following messages in the **r_error** field when this occurs.

| Response Message | Description | Possible Cause | Populate this Data Field | In this Entity |
|---|---|---|---|---|
| **OrderErr_InvalidChargetype** | Order charge type specified is not valid | Make sure a valid value is passed in the **ordertype** field. The possible values are SALE, PREAUTH (for an Authorize Only transaction), POSTAUTH (for a Forced Ticket or Ticket Only transaction), VOID, CREDIT, CALCSHIPPING (for shipping charges calculations) and CALCTAX (for sales tax calculations). | **ordertype** | **orderoptions** |

| | | | | |
|---|---|---|---|---|
| **OrderErr_InvalidResult** | Order result specified is not valid | Make sure a valid value is passed in the **result** field. Set to LIVE for live mode, GOOD for an approved response in test mode, DECLINE for a declined reponse in test mode, or DUPLICATE for a duplicate response in test mode. If you are not testing (that is, if you are running your store "live"), you do not need to pass the result field. | **result** | **orderoptions** |
| **OrderErr_PostAuthRef** | No reference number was given for a POSTAUTH transaction. | Make sure a valid reference number is passed in the **reference_number** field. If you are unsure about the reference number, you can look it up in your online transaction reports. | **reference_number** | **transactiondetails** |

| | | | | |
|---|---|---|---|---|
| | | If you are doing a POSTAUTH for a PREAUTH obtained over the phone, provide the reference number given with the approved authorization. | | |
| **OrderErr_InvalidResult** | Order result specified is not valid | Make sure a valid value is passed in the **result** field. Set to LIVE for live mode, GOOD for an approved response in test mode, DECLINE for a declined reponse in test mode, or DUPLICATE for a duplicate response in test mode. If you are not testing (that is, if you are running your store "live"), you do not need to pass the result field. | **result** | **orderoptions** |

| | | | | |
|---|---|---|---|---|
| **OrderErr_VoidSaleRef** | No reference number was given for a void sale transaction. | Make sure a valid reference number is passed in the **reference_number** field. If you are unsure about the reference number, you can look it up in your online transaction reports. If you are doing a VOID for a PREAUTH obtained over the phone, provide the reference number given with the approved authorization. | **reference_number** | **transactiondetails** |
| **OrderErr_PostAuthOid** | No order number was given for a POSTAUTH transaction. | Make sure the corresponding order ID number from the PREAUTH transaction is provided when you attempt the POSTAUTH transaction. | **oid** | **transactiondetails** |

| | | | | |
|---|---|---|---|---|
| **Total charge amount ($_.__) did not match sum of the subtotal, shipping and tax amounts.**<br>or<br>**OrderErr_ChargeTotal** | The subtotal plus the shipping and tax amounts do not total up to the total amount of the order. **subtotal** + **tax** + **vattax** + **shipping** MUST = **chargetotal** | Verify that the total charge amount entered matches the sum of the subtotal, shipping and tax amounts. | **subtotal**, **tax**, **vattax**, **shipping**, **chargetotal** | **payment** |
| **OrderErr_CreditAmount** | Tried to credit more than the original amount of the sale. | Make sure the amount you are crediting is less than the original amount of the sale. If other credits have already been run against this order, check that the total credits are not more than the original amount of the sale. | **chargetotal** | **payment** |

| | | | | |
|---|---|---|---|---|
| **OrderErr_UniqueOid** | The order number given must be unique. | Verify that the order number system used assigns a unique number to each order. | oid | **transactiondetails** |
| **OrderErr_RefNumMismatch** | The reference number provided does not match the PREAUTH. | Check the reference number for the PREAUTH transaction. | **reference_number** | **transactiondetails** |
| **OrderErr_NoAmount** | No amount provided. | Verify that the **chargetotal** amount is provided and is a valid numeric value. May also apply to **tax** field if the tax field is required for this transaction. | chargetotal | **payment** |
| **OrderErr_AmountTooHigh** | The amount specified exceeds the order total. | Check that the amount specified for **tax**, **shipping**, and **vattax** are all less than the **chargetotal**. Check that the **subtotal** + **tax** + **vattax** + **shipping** = **chargetotal** | **reference_number** | **transactiondetails** |

| | | | | |
|---|---|---|---|---|
| **OrderErr_AmountTooLow** | The amount is less than one dollar. | Verify that the **chargetotal** amount is more than one dollar. | chargetotal | **payment** |
| **OrderErr_NoTransactionFound** | No corresponding transaction was found to void. | Occurs for VOID transactions. Check that the order ID number is valid. Check that you are voiding a transaction that has not yet settled. If the transaction has already settled, you will need to do a CREDIT transaction, rather than a VOID. | **oid** | **transactiondetails** |
| **OrderErr_VoidBeforePostAuth** | No post-authorization has been run to void. | Verify that the transaction you are trying to void has been post-authorized. If it has not, you do not need to void it, since an AUTH transaction will not result in charges to a card without a corresponding | -- | -- |

| | | | | |
|---|---|---|---|---|
| | | POSTAUTH. | | |
| **OrderErr_NoPreAuth** | No corresponding PREAUTH transaction was found. | Occurs for POSTAUTH transactions. Check that the order ID number is valid. Check that you are running the POSTAUTH transaction against an approved PREAUTH. | **oid** | **transactiondetails** |
| **OrderErr_NoApprovedPreAuth** | No corresponding approved PREAUTH transaction was found. | Occurs for POSTAUTH transactions. Check that the order ID number is valid. Check that you are running the POSTAUTH transaction against an approved PREAUTH. | -- | -- |

| | | | | |
|---|---|---|---|---|
| **OrderErr_ApprovedPostAuth** | An approved POSTAUTH transaction was found. The transaction appears to have been post-authorized already. | Occurs for POSTAUTH transactions. Check that the order ID number is valid. Check that you are not running duplicate POSTAUTH transactions. | **oid** | **transactiondetails** |
| **OrderErr_DeclinedAuth** | The original AUTH was not approved. | Occurs for POSTAUTH transactions. Check that the order ID number is valid. Check that you are running the POSTAUTH transaction against an approved PREAUTH. | **oid** | **transactiondetails** |

| | | | | |
|---|---|---|---|---|
| **CC-4023: Order number given must be unique.** | The same order number was used for more than one order. | Ensure that every order ID number you send is unique. You may only use an existing order number to refer to an existing order on the Gateway (e.g., for a POSTAUTH or VOID transaction). | **oid** | **transactiondetails** |

# Items and Options Errors

These errors may occur when describing items and options in an order if invalid or incomplete data is passed. You may receive any of the following messages in the **r_error** field when this occurs.

| Response Message | Description | Possible Cause | Populate this Data Field | In this Entity |
|---|---|---|---|---|
| **ItemErr_InvalidItemid** | An item identifier must be supplied. | Check that the **id** field is not empty. | **id** | **item** |
| **ItemErr_InvalidDescription** | The item description supplied is invalid. | Check the **description** field. | **description** | **item** |
| **ItemErr_InvalidPrice** | The value supplied for the item's price is null, empty or invalid. | Check that the **price** field is populated with a valid number. | **price** | **item** |
| **ItemErr_InvalidQuantity** | The value supplied for the item's quantity is null, empty or invalid. | Check that the **quantity** field is populated with a valid number. | **quantity** | **item** |

| | | | | |
|---|---|---|---|---|
| **ItemErr_InvalidEsdtype** | The value supplied for the esdtype is invalid. | If the item is an electronic softgood download item, check that the **esdtype** field is populated with one of the following: ***softgood*** if it is a softgood or ***key*** if it is a keygen executable. | **esdtype** | **item** |
| **ItemErr_InvalidSoftfile** | There is no softfile corresponding to the file specified. | Ensure you have provided the file for download to support for loading on the Gateway. Check with support whether the file has been loaded to the | **softfile** | **item** |

| | | | | |
|---|---|---|---|---|
| | | Gateway. | | |
| **ItemErr_MaxOptions** | The maximum number of options has been exceeded for this item. | You will have to use fewer options for this item. | -- | **options** |
| **OrderErr_DuplicateItems** | There are duplicate item numbers found in the order. | Ensure you send only one **item** entity for each item in the order. Ensure that the item **id** within the order are different. No two item ids in the same order should be the same. | **id** | **item** |
| **OrderErr_Datasize** | The transaction item information is over the maximum limit. | You have exceeded the maximum number of items allowed for one order. You can | -- | **item** |

| | | | | |
|---|---|---|---|---|
| | | break the order up into two or more orders if needed. | | |
| **OptionErr_InvalidOption** | The **name** field for this option must be populated. | Ensure that, for every option sent, each **option** entity contains a **name** that is not null or empty. | **name** | **option** |
| **OptionErr_InvalidChoice** | The **value** field for this option must be populated. | Ensure that, for every option sent, each **option** entity contains a **value** that is not null or empty. | **value** | **item** |

# Fraud Decline Messages

When a specific transaction is declined because of the risk of fraud, the following messages may be returned in the **r_error** data field.

| Response Message | Description |
|---|---|
| **The host you are ordering from has been blocked.** | The merchant has blocked the customer's host. |
| **The credit card you are using has been blocked.** | The merchant has blocked the customer's credit card number. |
| **The domain of your host has been blocked.** | The merchant has blocked the customer's domain name. |
| **The class C subnet for this IP has been blocked.** | The merchant has blocked the customer's Class C address. |
| **The name that was entered has been blocked.** | The merchant has temporarily blocked the customer's name. |
| **The host you are ordering from has been temporarily blocked.** | The merchant has temporarily blocked the customer's host. |
| **The credit card you are using has been temporarily blocked.** | The merchant has temporarily blocked the customer's credit card. |
| **The purchase amount exceeds the merchant approved limit.** | The total amount of the order exceeds the maximum purchase limit set by the merchant. |
| **Merchant transaction limit is less than the amount requested for that transaction.** | The total amount of the order is less than the minimum purchase limit set by the merchant. |

| | |
|---|---|
| **DUPLICATE** | A Transaction for the identical dollar amount and the identical credit card was processed within the last X hours. X is generally 24 hours, but can be altered by changing the duplicate lockout time in the merchant's fraud protection settings. |

# Other Decline or Error Response Messages

There are many other reasons that an error or decline may occur. You may receive any of the following messages in the **r_error** field if a validation, transmission, or other error occurs.

## Connection Errors

These errors may occur if the wrapper is unable to connect to the Gateway XML processor.

| Response Message | Description | Possible Course of Action |
|---|---|---|
| **Creating socket failed.** | Cannot create a socket to connect to the Gateway XML processor. | Check your host name, digital certificate, and port number. These items are included in the merchant's Welcome e-mail. If the host name, certificate, and port number are correct, retry the transaction. |
| **Unable to connect to server.** | The TCP/IP connection to the Gateway XML server failed. | Check your host name, digital certificate, and port number. These items are included in the merchant's Welcome e-mail. If the host name, certificate, and port number are correct, retry the |

| | | |
|---|---|---|
| | | transaction. |
| **Failed to resolve host** | Unknown host name | Check your host name. The host name is identified in the merchant's Welcome e-mail. |
| **Cannot find/load cert/key file.** | The client certificate file is missing or invalid | Check that you properly copied the digital certificate from the merchant's Welcome e-mail into a .PEM file on the Web server. Check the path to the file against the path and file name you provided to the Gateway. |
| **Unable to connect to SSL server.** | Cannot establish SSL connection | Check your host name, digital certificate, and port number. These items are included in the merchant's Welcome e-mail. If the host name, certificate, and port number are correct, retry the transaction. |

| | | |
|---|---|---|
| **Cannot find/load cert/key file.** | The client certificate file is missing or invalid | Check that you properly copied the digital certificate from the merchant's Welcome e-mail into a .PEM file on the Web server. Check the path to the file against the path and file name you provided to the Gateway. |
| **SSL read failed.** | One of the servers (either merchant-side or Gateway-side) has dropped the SSL connection. | Check your host name, digital certificate, and port number. These items are included in the merchant's Welcome e-mail. If the host name, certificate, and port number are correct, retry the transaction. |
| **Request rejected by SSL server.Make sure you supplied valid certificate.** | The Gateway server cannot verify the client server's credentials. | Check that you properly copied the digital certificate from the merchant's Welcome e-mail into a .PEM file on the Web server. Check the path to the file against the path and file name you provided to the |

| | | |
|---|---|---|
| | | Gateway. |

## Other Errors

These errors may occur after the merchant (or CSP) Web server has made a connection to the Gateway server. In this case, the transmission or validity error is between the Gateway server and the processor.

| Response Message | Description | Possible Course of Action |
|---|---|---|
| **A file being accessed for opening does not exist.** | A file is accessed for writing, and it cannot be written to. | Retry the transaction. |
| **Error timeout waiting for response.** | The process timed out waiting for a response from the credit card processor. This message results when the credit card processor does not respond to the leased line transmission of the transaction data within 60 seconds. | Retry the transaction |

| | | |
|---|---|---|
| **NetErr_Connect** | Unable to connect to SSL Server | Check network configuration and digital certificate. If all seems okay on your side, contact support. |
| **NetErr_SSL** | Unrecoverable SSL error. Connection closed. | Retry the transaction. |
| **NetErr_Decode** | Unable to decode received message | Check network configuration and digital certificate. If all seems okay on your side, contact support. |
| **ServerErr_Resource** | Server unable to allocate required resources. | Retry the transaction. |
| **ServerErr_Database** | Server encountered a database error. | Check network configuration and digital certificate. If all seems okay on your side, retry the transaction or contact support. |

| | | |
|---|---|---|
| **ServerErr_Encode** | Server unable to encode client response | Retry the transaction. |
| **ServerErr_Decode** | Server unable to decode client response. | Check network configuration and digital certificate. If all seems okay on your side, retry the transaction or contact support. |
| **ServerErr_Module** | Unsupported server module | -- |
| **CoreErr_Trunc** | Results truncated. | -- |
| **CoreErr_Field_Format** | Data contains invalid characters. | Check the format of your data fields. |
| **CoreErr_Alloc** | Unable to allocate memory. | -- |
| **CoreErr_InvalidHandle** | Uninitialized/invalid handle supplied as an argument. | -- |
| **CoreErr_InvalidField** | Unknown field name. | Check your data field names. |
| **CoreErr_UnknownError** | Error with unknown cause. | -- |
| **ReqErr_InvalidRequest** | Request context must be allocated. | Contact support |

| | | |
|---|---|---|
| **OrderErr_Lock** | Unable to set transaction lock on order. | Retry the transaction. |
| **OrderErr_Unlock** | Unable to remove transaction lock on order. | Retry the transaction. |
| **OrderErr_Data** | Error processing order data. | Retry the transaction. |

# Shipping Calculation Errors

These errors may occur when using the Gateway to do shipping charge calculations if invalid data is passed or if the merchant's shipping file is not properly configured for shipping calculations on the Gateway. You may receive any of the following messages in the **r_error** field when this occurs.

| Response Message | Description | Possible Cause | Populate this Data Field | In this Entity |
|---|---|---|---|---|
| **ShipErr_InvalidCriteria** | Total, items or weight must be specified to calculate the shipping charges. The data required depends on the shipping calculation method specified in the merchant's shipping file. | Check the shipping file for shipping method and provide valid data fields for that calculation method. | **weight**, **items**, and/or **weight**, depending on calculation method | **shipping** |

| | | | | |
|---|---|---|---|---|
| **ShipErr_InvalidCountry** | The ship-to country code must be a valid 2-letter country code. | Ensure you are using a valid 2-letter country code as listed in the Country Codes section. | **country** | **shipping** |
| **ShipErr_InvalidState** | The ship-to state code must be a valid 2-letter US state code. | Ensure you are using a valid 2-letter US state code as listed in the State Codes section. | **state** | **shipping** |
| **ShipErr_InvalidSyntax** | The shipping file syntax is incorrect. | Check that the shipping file is properly formatted. Resubmit to support if necessary. See the *Using the Shipping Calculator* | **--** | **--** |

| | | | | |
|---|---|---|---|---|
| | | section for further information. | | |

# Tax Calculation Errors

These errors may occur when using the Gateway to do tax calculations if invalid data is passed or if the merchant's config file is not properly configured for tax calculations on the Gateway. You may receive any of the following messages in the **r_error** field when this occurs.

| Response Message | Description | Possible Cause | Populate this Data Field | In this Entity |
|---|---|---|---|---|
| **TaxErr_InvalidZip** | The ship-to zip code passed is invalid. | Check the zip code provided. | **zip** | **shipping** |
| **TaxErr_InvalidState** | The ship-to state passed is invalid. | Ensure you are using a valid 2-letter US state code as listed in the State Codes section. | **state** | **shipping** |
| **TaxErr_InvalidTotal** | The total amount to be taxed is 0 or less. | Check the zip code provided. | **zip** | **shipping** |

| | | | | |
|---|---|---|---|---|
| **TaxErr_InvalidFullTax** | There is an invalid fulltax value in the merchant's config file on the Gateway OR the config file is not set up to process tax calculations. | Check with support that the merchant's config file is set up with the appropriate values for tax calculations. | **--** | **--** |

# VirtualCheck Errors*

The errors below may be returned from the API when a validation or transmission error occurs in processing a VirtualCheck transaction.

| Error Code | Error Message | Comments |
|---|---|---|
| Status code 0 | duplicate txn, stop | Two identical transactions were received. This is the second, which will not be processed. |
| Status code 10 | Invalid parameters | Check input parameter format and validity. Check that all required parameters were included. |
| Status code 20 | Dig Sig invalid | Check digital certificate for merchant site |
| Status code 30 | User Cancelled auth<br>-- Or --<br>incomplete data | User cancelled the transaction or not all required fields were provided |
| Status code 40 | User account error<br>-- Or --<br>We are sorry that we cannot accept your check at this time. Our decision is based, in whole or in part, on information provided to us by TeleCheck. We encourage you to call TeleCheck at 1-877-678-5898 or write TeleCheck | If this text block is included with the response, the merchant has a legal obligation to display it to the consumer. |

| | | |
|---|---|---|
| | Customer Care at P.O. Box 4513, Houston, TX 77210-4513. Please provide TeleCheck your driver’s license number and the state where it was issued, and the complete banking numbers printed on the bottom of your check. Under the Fair Credit Reporting Act, you have the right to a free copy of your information held in TeleCheck’s files within 60 days from today. You may also dispute the accuracy or completeness of any information in TeleCheck’s consumer report. TeleCheck did not make the adverse decision to not accept your check and is unable to explain why this decision was made. | |
| Status code 50 | System not available | Contact customer support if problem persists. |

| | | |
|---|---|---|
| 110 | Payment Authorization Invalid | There is no matching authorization for this Merchant; the authorization has expired or is voided; or the transaction cannot be voided because a payment has already been requested for the authorization. The Merchant must correct the problem and resubmit the Clearing Request as appropriate. |
| 120 | Clearing entry invalid | One or more fields were missing or malformed. The Merchant must correct the problem and resubmit the Clearing Request as appropriate. |
| 130 | Transfer amount invalid. | The amount requested; or the sum of all partial payments up to and including this transaction exceed the original authorization amount; or the amount field was malformed. The Merchant must correct the problem and resubmit the Clearing Request as appropriate. |

| | | |
|---|---|---|
| 140 | Account Disabled | The user or Merchant account has been disabled. The Merchant should verify their account status or contact the user to find another payment method. |
| 180 | Authorization Void confirmation | Confirmation to the Merchant that an Authorization Void was received and completed. This is as initiated by the Merchant or user. If initiated by the user, the Message field will contain additional information. |
| 210 | Account Invalid. | User's checking account is no longer active. TeleCheck will attempt to contact the user to correct the problem. If unsuccessful, the Merchant will receive a Funds Transfer Notification with a debit or credit as necessary to reverse the transaction. |
| 220 | Stop Payment. | The user has placed a stop payment on this specific transaction. No action required. This is a notification. |

| | | |
|---|---|---|
| 230 | NSF | Insufficient funds notification. TeleCheck will re-present up to twice for funds transfer, as specified by the Merchant. The user will also be contacted to correct the problem. If successful, the Merchant will not receive any other notifications. If we are unable to obtain funds from the user, funds will be reversed from the Merchant's account. |
| 240 | Final NSF | Insufficient funds notification. Funds will be reversed from the Merchant's account. The Merchant will receive a Funds Transfer Notification with a debit or credit as necessary to reverse the transaction. |
| LP-8996 | Non-live TeleCheck transactions are not supported. | VirtualCheck account not set up yet. Check with your sales agent or merchant services on account status. |
| LP-001 to LP-008 | | Contact customer support if problem persists. |

| | | |
|---|---|---|
| 32001 | CheckErr: Invalid order data. | |
| 32002 | CheckErr: Invalid check data. | |
| 32003 | CheckErr: Invalid request. | |
| 32004 | CheckErr: Invalid account type. | |
| 32005 | CheckErr: Invalid transit routing. | |
| 32006 | CheckErr: Invalid MICR. | |
| 32007 | CheckErr: Invalid check number. | |
| 32008 | CheckErr: Invalid check comment. | |
| 32009 | CheckErr: Routing number does not match. | |
| 32010 | CheckErr: Check order type is wrong. | |
| 32011 | CheckErr: Invalid check order data. | |
| 32012 | CheckErr: Error inserting order. | |
| 32013 | CheckErr: Error inserting transaction. | |
| 32014 | CheckErr: Error inserting batch transaction. | |

| | | |
|---|---|---|
| 32015 | CheckErr: Unable to verify check processing status. | |
| 32016 | CheckErr: Error deleting check batch entry. | |
| 32017 | CheckErr: Check sent for processing. | You may be trying to void a check that has been sent for processing. |
| 32018 | CheckErr: Error voiding check. | |
| 32019 | CheckErr: Error updating transaction. | |

## Other Text-Based Messages that May Occur

- Your session has expired.
- You have exceeded the maximum number of authorization attempts. Please choose another payment option.
- We are unable to verify your checking account information. Please review the information you entered to ensure that all information is correct, then click **Authorize**.
- We are unable to verify your checking account information because your bank account may not be set up to handle electronic funds transfers through the Automated Clearinghouse (ACH). Please contact your bank to determine whether this account accepts Automated Clearinghouse (ACH) transactions. If you have another checking account, you may change your routing and account number information below.
- Please enter a First Name.
- Please enter a valid First Name.
- Please enter a Last Name.
- Please enter a valid Last Name.
- Please enter an Address.
- Please enter a valid Address (Address Line 1).
- Please enter a valid Address (Address Line 2).
- Please enter a City.
- Please enter a valid City.

- Please enter your entire Driver's License or State ID Number.
- Please make sure all the information is entered correctly and submit your request again. You may also select another payment option.
- Please enter a valid Driver's License or State ID Number.
- Please select the state where your Driver's License or State ID was issued.
- Please select a State.
- Please enter a ZIP Code.
- Please enter a valid ZIP Code.
- Please enter an Email.
- Please enter a valid Email.
- Please enter a Home Phone Number.
- Please enter a valid Home Phone Number.
- Please enter the name of your Bank.
- Please enter valid information for the name of your Bank.
- Please select a Bank State.
- Please enter a Routing Number.
- Please enter a valid Routing Number.
- Please enter a Checking Account Number.
- Please enter a valid Checking Account Number.

# Requesting a Test Account

To request a test account, please fill out our **teststore form** or contact us at **teststore@linkpoint.com**.

Once your test store is set up, the test store will be valid for 30 days. For additional usage after 30 days, you may request an extension. If no extension is requested, the test store may be permanently removed any time on or after the 31st day. Maintenance on the test server may be performed without prior or adequate notice to the users. We will notify users when possible of any maintenance or outages on the staging (test) server.

## Test store policy

Test stores may NOT be used for the following purposes:

- To reverse engineer the system to understand or breach security of the LinkPoint Gateway.
- To copy any of LinkPoint International products.
- To abuse the staging server in any way.

LinkPoint International will frequently monitor test store usage. Any breach of the above policies will result in suspension or permanent removal of a test store.

## Support

Feel free to contact us at **teststore@linkpoint.com** for any test store related questions. Contact **support@linkpoint.com** for LinkPoint technical support.

## Going Live

When you apply for a live store it will be on a different server and will have a different store number. You will need to change your host name and store number in your code. Also, when you want to go live, make sure the **result** field in the **orderoptions** entity is set to ***LIVE***.

## Password

Ignore the section in your welcome e-mail about calling us for your initial password for your test store. Your initial password will be 12345678. To protect your test account, you should change this password on initial login.

## Sign In / Login

LinkPoint Central (LPC) provides you with a virtual terminal and order management functions. On the staging server, LPC is available at **https://staging.linkpt.net**. To log in, enter:

- Your Storename: (a 10-digit number for test accounts),
- Your Username: (a 6-digit number), and
- Your Password: (initial password is 12345678)

## LinkPoint Basic

To set up your LinkPoint Basic test account:

- The storename parameter will be a 10-digit number on the staging server.
- The posting url will be https://staging.linkpt.net/lpc/servlet/lppay
- The Admin url will be https://staging.linkpt.net/admin/xxxxxxxxxx/hlpadmin , where xxxxxxxxxxx is your 10-digit store number.

## LinkPoint Select API

- Set the **configfile** data field to your 10-digit test store number.
- The **host** will be ***staging.linkpt.net***.
- The **keyfile** is your digital certificate (cert and key including dashes) included at the bottom of "Welcome to LinkPoint Select API" e-mail. Save this certificate to a file on your Web server with a .pem extension. If you are using Java$^{TM}$, see **Prerequisites for Java**.
- The **port** is ***1129*** for all APIs.

## Downloading Software

For all API and Wrapper downloads visit **https://www.linkpoint.com/viewcart/index.html**

For sales please call 1.888.477.3611 option 1.

# Testing with your LIVE Account

To perform tests with your live account, set the **result** field in the **orderoptions** entity to ***GOOD*** (for an approved response), ***DECLINE*** (for a declined response), or ***DUPLICATE*** (for a duplicate response).

We do not recommend performing tests with your LIVE account other than those necessary to validate correct functionality of your live account. Please request a test account if you need to do extensive testing.

When you are through testing, make sure you set the **result** field in the **orderoptions** entity to ***LIVE***.

# Test Credit Cards

For testing purposes, you can use any of the card numbers listed below. These are test card numbers that will not result in any charges to the card. Use these card numbers with any expiration date in the future.

- **American Express**®: 371111111111111
- **Discover**®: 6011-1111-1111-1111
- **JCB**®: 311111111111111
- **MasterCard**®: 5111-1111-1111-1111
- **MasterCard**: 5419-8400-0000-0003
- **Visa**®: 4111-1111-1111-1111

# About Chargebacks

A **chargeback** is a forced refund to the customer via the merchant's bank account. Chargebacks can occur with any type of business, but it is more prevalent for Internet businesses because of the increased chance of fraud. Each fraudulent credit card transaction usually results in a chargeback. Merchants new to the Internet often begin by accepting fraud and the resulting chargebacks as part of the price of doing business. Then they regret this after the bank terminates their account for too many chargebacks.

Credit card associations penalize merchant banks for chargebacks. Naturally, the bank passes the fines on to the responsible merchant, and these penalties can be severe.

While consumers are provided with a certain degree of protection if their credit card numbers are stolen and misused, Internet merchants are fully liable for all transactions because Internet transactions are classified as "card-not-present."

There are several ways to help you prevent chargebacks:

## Address Verification

The first thing you should pay attention to is the **Address Verification System (AVS) code**. When a credit card transaction is submitted for processing, the customer's address is checked against the card-issuing bank's address on file. The transaction results page will return an AVS code, which will tell you whether the address and zip code matched or not. We encourage you to use AVS codes to help you prevent costly chargebacks. See **AVS Codes** for more information.

## Blocking and Limiting

There are other ways to prevent fraud. If you suspect certain transactions might be fraudulent, you can block further purchases by blocking credit card numbers, persons' names, domain names, IP addresses or Class C addresses from purchasing at your store. You can also limit the amount that any customer can spend at your store by setting a maximum purchase amount, and you can set how long automatic lockouts and duplicate lockouts will continue to be blocked. See **Preventing Fraud** for more information.

## Card Codes

The card code is a 3 or 4-digit number usually found on the back of the credit card. It is one more measure credit card companies are taking to help you ensure that the transaction is not fraudulent. Even though the system to check card codes for all types of cards is not yet in place, we encourage you to get in the habit of filling in the card code field. See **Using Card Codes** for more information.

# Using Address Verification

For non-swiped transactions, the Gateway provides Address Verification System (AVS) codes to help protect you from costly **chargebacks** and **fraud**. Also, some credit cards (including Discover®, MasterCard®, and Visa®) require the use of AVS when you are processing card-not-present (i.e., MO/TO or e-commerce) transactions.

Whenever you perform a credit card **Sale** or **Authorize Only** transaction, the Gateway verifies the customer’s address provided against the address that the card-issuing bank has on file for the customer. In order to take advantage of AVS, you need to pass the first line of the customer's billing address and the zip code to the Gateway.

The AVS code tells you how well the two addresses match. If the transaction is approved, you will find the 3-digit AVS code in the middle of the **Approval Code**. A typical transaction result code might look like this. The AVS code is highlighted.

```
0097820000019564:YNAM:12345678901234567890123:
```

AVS compares the numeric portion of the street address and the zip code against the information on file with the card-issuing bank. If the street address number matches, the 3-digit AVS code will begin with a **Y**. If it doesn't, the AVS code will begin with an **N**. If the zip code matches, the second digit will be a **Y**; if not, it will be an **N**. If there is insufficient information to do a comparison, an **X** will appear in the first and/or second digit. An **N** indicates a higher probability of fraud. Please see the table below for a list of codes and their meanings.

You will only get an AVS code if the transaction was approved, regardless of whether the addresses match. If you get an AVS code indicating that the address and/or zip code do not match, it is up to you to decide whether you wish to accept the risk and ship the goods to the customer to complete the transaction.

It is important to know that AVS has some limitations, because this may impact your decision-making about how to treat bad verification results:

- The AVS system isn't always reliable; bad results can be triggered unnecessarily because people move, or because some people report five-digit zip codes and some report nine-digit zip codes. This may generate a response stating that the address matches, but the zip code does not match.
- The AVS system doesn't generally handle addresses outside the U.S., so if you

decide to ship only to addresses with good AVS results, you will rule out most international orders.

However, checking the AVS response on all transactions greatly reduces your exposure to risk.

Declines can be handled politely to keep the door open to legitimate orders by displaying a message similar to: "We are unable to process your credit card payment at this time. If you still wish to purchase this product or service, please call us at 1-800….". At this time the merchant can obtain more information from the customer to verify why the address didn't match such as recently moved, city changed zip codes, etc. The merchant can also ensure their product is shipped via registered mail with a return signed receipt to ensure it was received by the proper person.

## AVS Code Meanings

Response codes can seem rather cryptic, but the table below shows what they mean.

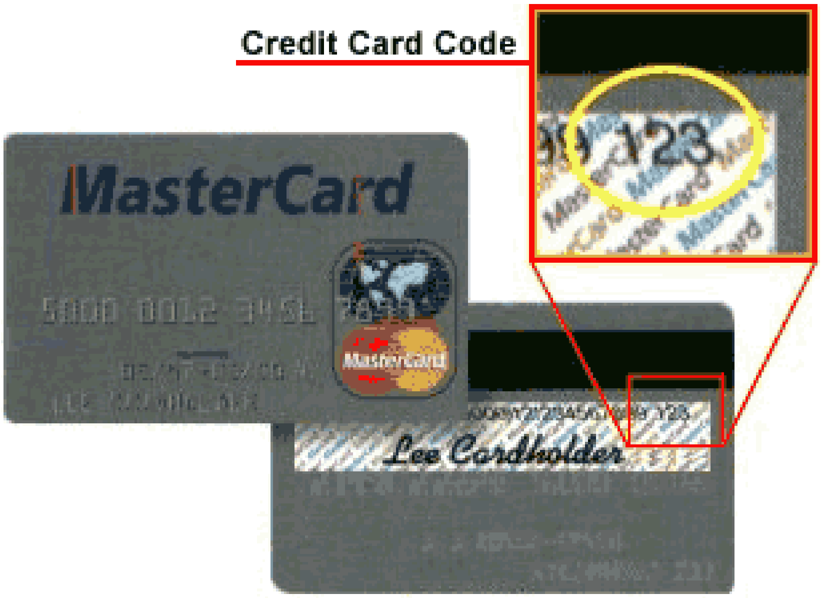
| AVS Code | DESCRIPTION |
|---|---|
| YY* | Address matches, zip code matches |
| YN* | Address matches, zip code does not match |
| YX* | Address matches, zip code comparison not available |
| NY* | Address does not match, zip code matches |
| XY* | Address comparison not available, zip code matches |
| NN* | Address comparison does not match, zip code does not match |
| NX* | Address does not match, zip code comparison not available |
| XN* | Address comparison not available, zip code does not match |

| | |
|---|---|
| XX* | Address comparisons not available, zip code comparison not available |
| (*) -- This is the one character response code sent by the authorizing bank and it varies by card type (e.g., Y,Z,A,N,U,R,S,E,G are valid responses for Visa®; Y,Z,A,N,X,W,U,R,S are valid for MasterCard®; Y,Z,A,N,U,R,S are valid for American Express® and A,Z,Y,N,W,U are valid for Discover®). | |

# Using the Card Code

## What is a card code?

To help reduce fraud in the card-not-present environment, credit card companies have introduced a card code program. Visa® calls this code Card Verification Value (CVV); MasterCard® calls it Card Validation Code (CVC); Discover® calls it Card ID (CID)*. The card code is a three- or four- digit security code that is printed on the back of cards. The number typically appears at the end of the signature panel. This helps validate that a genuine card is being used during a transaction, especially in situations like mail orders, telephone orders or Internet orders where the card is not present. All MasterCard cards, both credit and debit, were required to contain CVC2 by January 1, 1997; all Visa cards must contain CVV2 by January 1, 2001. Beginning in October 2003, Discover requires the card code for all Discover transactions. By using the card code results along with the Address Verification Service (AVS), you can make more informed decisions about whether to accept transactions.



## How does the card code work?

You send the card code to the Gateway when processing an order. The Gateway then compares the card code against the code on file with the card-issuing bank. Results of this comparison show in the transaction approval code.

## Why should I use a card code?

To help combat fraud, card-not-present merchants (those who receive orders via mail order, telephone order, or the Internet) should always enter a card code (if on the card) when processing an authorization. For retail transactions, you may wish to enter the card code printed on the card to ensure that the card was not fraudulently reproduced. By using the card code results along with the Address Verification Service (AVS), you can make more informed decisions about whether to accept transactions.

## Where do I find card code comparison results?

A typical transaction result code might look like this. The card code result is highlighted.

```
0097820000019564:YNAM:12345678901234567890123:
```

The last alphabetic character in the middle (M) is a code indicating whether the card code matched the card-issuing bank's code. An "M" indicates that the code matched. This code may or may not be present, depending on whether the card code was passed and the service was available for the type of card used. Below is a table showing all the possible return codes and their meanings.

| Value | Meaning |
|---|---|
| M | Card Code Match |
| N | Card code does not match |
| P | Not processed |
| S | Merchant has indicated that the card code is not present on the card |
| U | Issuer is not certified and/or has not provided encryption keys |
| X | No response from the credit card association was received |

| | |
|---|---|
| | A blank response should indicate that no code was sent and that there was no indication that the code was not present on the card. |

## What about American Express®? Don't they have card codes too?

Yes, American Express® does have card codes printed on their cards. The Gateway does not currently support American Express card codes, so the card code response will be blank from an American Express. We do encourage you to get in the habit of entering card codes from all cards, however.

*As of 12 March 2004, Discover CID is in beta test and will be available to the general merchant population upon completion of testing. Please contact your product manager for further information.

# Using Blocking and Limits

If certain individuals are continuously hurting your business with costly chargebacks, you can block them from purchasing at your store. We provide you the capability to block credit card numbers, names, domain names, and IP or Class C addresses from purchasing at your store. Two other capabilities available are the power to set a limit on the maximum purchase that can be made at your store, and the ability to set auto lockout and duplicate lockout times.

To change your fraud settings, log into your online account, select **Admin** in the **Main Menu Bar**, then click on **Fraud Settings** in the **Left Menu Box**. Fraud settings are sequentially ordered, so once you've finished with one, you can proceed to the next fraud setting. There is also a quick navigation bar at the top of each Fraud Setting page, which allows you to jump immediately to any Fraud Setting.

## Your Fraud Settings

Here is a list of all the fraud settings you have control over.

- Blocking Credit Card Numbers
- Blocking Names
- Blocking Domain Names
- Blocking Class C and IP Addresses
- Setting a Maximum Purchase Limit
- Setting Auto lockout times
- Setting Duplicate lockout times

# LinkShield™ Extra Fraud Protection

LinkShield is an additional fraud prevention service that operates at the point of sale, using neural net technology along with up-to-the-second information and extensive transaction databases to identify patterns associated with high-risk transactions. You get an immediate fraud risk score that allows you to make better decisions about whether or not to accept the transaction. There are no extra required fields to use LinkShield--once it's enabled on your account, you receive the fraud risk score automatically.

- **What is LinkShield™?**
- **What is a risk rating?**
- **What kind of fraud reduction should I expect?**
- **What is the minimum transaction information that I need to submit for LinkShield to generate a risk rating?**
- **What are the LinkShield fraud risk models? How do they work?**
- **What happens when more than one fraud risk service is selected?**
- **How difficult is it to call LinkShield? What do I need to change in my implementation to support it?**
- **Can I automate the use of LinkShield scores in my store?**
- **Why can't I run a SALE transaction? Instead I see an AUTH and a TICKET for the same order.**
- **Does LinkShield look at every transaction I process?**
- **Where does LinkShield get chargeback data?**

## Questions on Option 1:

- **Is older transaction data deleted from the fraud engine, and if so, how frequently is this done?**
- **How are consumer profiles identified? Are they tracked by name or by card number or by a combination of other data? If so, what data is used?**
- **Are there any privacy laws that we should be concerned about with regards to storing customer profiles?**
- **How frequently are fraud scoring models updated?**
- **Are random typed letters such as Alskdjf;alksdn, when typed in name or email addresses, taken into account in the score?**
- **Does card profiling behavior cross merchant lines? For example, if one of**

## Questions on Option 2:

## What is LinkShield?

LinkShield is a fraud prevention service that is now available to any merchant using the LinkPoint® API . Because each fraud protection tool has its own strengths, LinkShield combines the industry's top fraud-protection tools, including Fair Isaac® Falcon™ Fraud Manager for Merchants and the ClearCommerce® Corporation (CCC) FraudAnalyzer™, to provide an exceedingly comprehensive fraud protection service. LinkShield gives merchants fraud-risk ratings that measure the likelihood of fraud for each transaction at the point of sale.

**Top**

## What is a risk rating?

LinkShield's fraud engines use predictive analysis tools to provide a risk rating. LinkShield scores each transaction by analyzing cardholder and merchant data to detect patterns of fraud, and returns a risk rating ranging from 0 to 99 in the response field **r_score**. A risk rating of "0" indicates a low risk of fraud, while "99" indicates high risk. While these scores are not an absolute determination of fraud, they are an excellent indication of the probability of fraud.

**Top**

## What kind of fraud reduction should I expect?

Your reduction in fraud will depend on many factors including your type of business, current rate of fraud, the products you sell, the countries where your orders originate from, how you apply the fraud-risk score, and numerous other factors. However, if applied properly, LinkShield should significantly reduce fraud.

**Top**

## What is the minimum transaction information that I need to submit for LinkShield to generate a risk rating?

To give merchants more flexibility in processing payments, we don't require specific fields for fraud scoring purposes. However, the more information you provide, the more accurate the LinkShield risk rating will be. It is especially helpful for fraud risk scoring if you can provide the customer's name, address, country, zip code, IP address (if applicable), and e-mail address.

**Top**

## What are the LinkShield fraud risk models? How do they work?

The fraud risk models used depend on the type of fraud service you select. Currently there are two fraud risk service choices: Option 1 and Options 2. You may choose either one or both services to suit your own business.

**Top**

**Option 1:** There are two basic components of this fraud scoring tool: the neural network and the profiles that capture consumer purchasing behavior. The neural network is initially taught to recognize behavior patterns that are fraudulent based on real historical examples of fraud. It continues to learn more about the purchasing behavior of customers from their transactions as it reviews more and more transactions. Every time the model reviews a new transaction, a profile for that consumer is updated (or generated) to reflect the new purchase.

**Option 2:** This option is a statistical model specifically designed to identify potentially fraudulent online credit card transactions. The statistical model that powers this option was based on an historical database that contains millions of online credit card transactions collected from several thousand Internet merchants.

## What happens when more than one fraud risk service is selected?

LinkShield returns a combined risk rating that reflects the average of the scores from each of the fraud risk services chosen.

**Top**

## How difficult is it to call LinkShield? What do I need to change in my implementation to support it?

If fraud scoring is enabled on your merchant account and you are using the API, the actual call to LinkShield is transparent and handled by the LinkPoint Gateway. There are no additional API calls to make.

The transaction result response will contain the scoring information. This will require you to make your own decisions on whether to proceed to process the transaction (i.e. run a ticket).

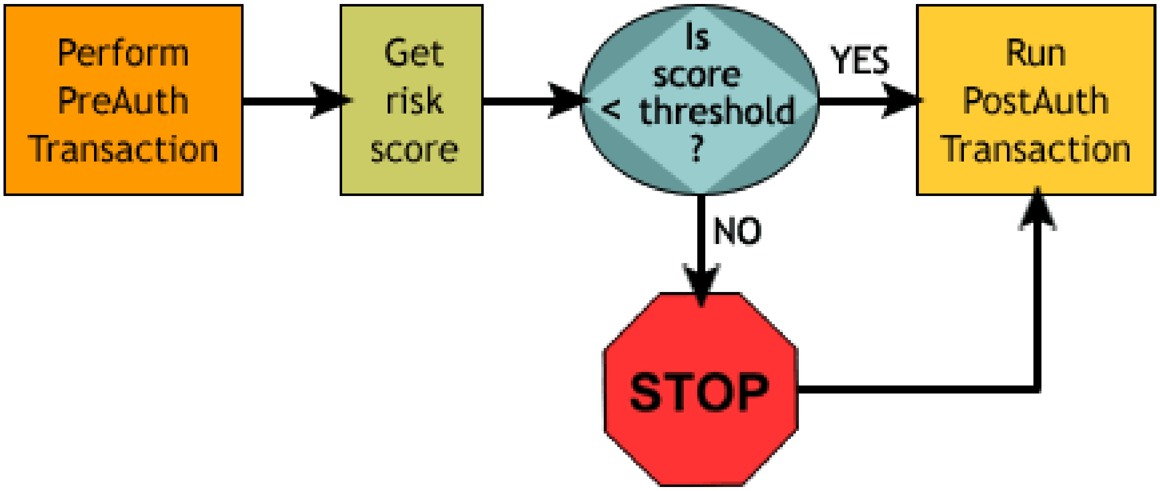
**Top**

## Can I automate the use of LinkShield scores in my store?

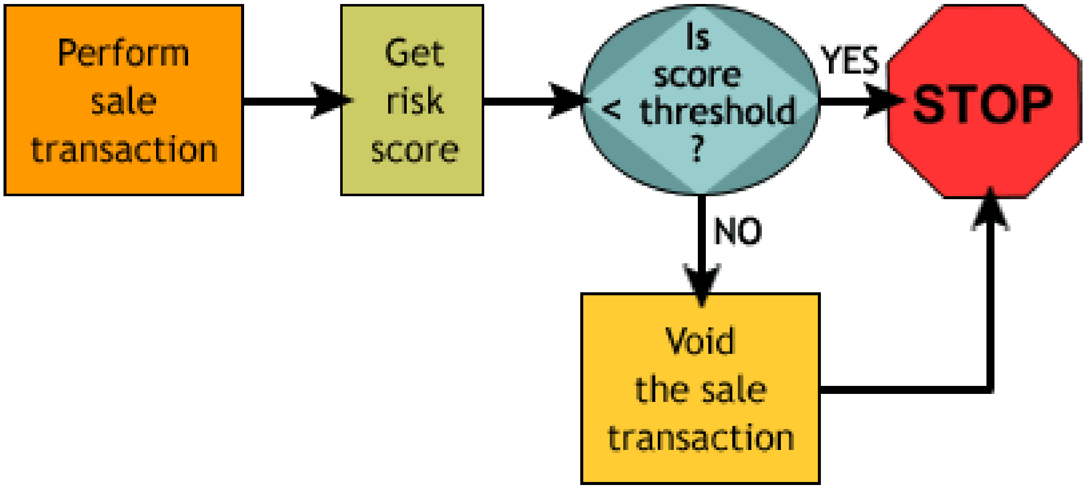
Yes, you can. Before you do, though, you need to choose the maximum value of risk score for which you will allow the transaction to continue. You do this by determining what an acceptable level of risk is for your business. Once you have done this, there are many ways to automate use of LinkShield scores for your store. We show two examples here. Sample code is provided for these examples in the **Sample Code** section.

1. Run a PREAUTH transaction, get the LinkShield risk score, compare it against the level of risk you are willing to take. If the value is less than the threshold (the maximum fraud risk score you've chosen for your store), then run the POSTAUTH transaction. If the value is higher than the threshold, there are several ways you can handle this:
   - You can choose not to accept the transaction.
   - You can seek an alternate form of payment.
   - You can choose to manually review these transactions, then run manual POSTAUTHs if the level of risk is determined to be acceptable.

   This method is shown in the diagram below.



2. Run a SALE transaction, get the LinkShield risk score, and compare it against the level of risk you are willing to take. If the value received is greater than the threshold (the maximum fraud risk score), then run a VOID transaction. If the value is lower, you accept the sale. This method is shown in the diagram below.



**Top**

## Why can't I run a SALE transaction? Instead I see an AUTH and a TICKET for the same order.

This occurs when you have chosen Option 1 as a part of your LinkShield fraud risk service. In this case, LinkShield needs to rate a transaction BEFORE it is settled, so LinkShield splits SALE transactions into an AUTH and a TICKET (or post-auth). This allows LinkShield to access risk on the AUTH. We recommend that merchants send transactions as AUTHs, not SALEs. This will allow decision logic based on the LinkShield score to react prior to settling the transaction.

**Top**

## Does LinkShield look at every transaction I process?

Yes, once you have LinkShield enabled on your account, it will return a risk score for every SALE and AUTH transaction you process.

One reason for this is that each transaction processed through LinkShield Option 1 is used to develop better profiles. It's critical to see individual behavior in order to detect a pattern. For example, one of the riskiest credit card transactions is a $1 charge. A fraudster often checks a card before using it by making a small purchase to see if the card actually works. If LinkShield only watched transactions above $100, for example, LinkShield wouldn't be able to create an entire profile for that shopper because some of the information on that consumer would be missing. LinkShield needs to see each individual purchase in order to detect all patterns.

**Top**

### Where does LinkShield get chargeback data?

Chargeback data is provided from payment platforms where the transactions are settled. This data is imported into LinkShield and helps insure LinkShield's ongoing accuracy.

**Top**

## Questions on Option 1:

### Is older transaction data deleted from the fraud engine, and if so, how frequently is this done?

Older profile data becomes less significant as it ages. Data is never deleted from the model; older transactions simply have less impact on the score than newer transactions.

**Top**

### How are consumer profiles identified? Are they tracked by name or by card number or by a combination of other data? If

## so, what data is used?

The model uses multiple profile databases for consumers. Different models use different profile databases. For example, it will use card number, IP address, e-mail address and several other pieces of information to score some transactions and the recipient's address and transaction time for others.

**Top**

## Are there any privacy laws that we should be concerned about with regards to storing customer profiles?

We are very aware of the concern about privacy. The consumer data used for profiling is used strictly for fraud scoring purposes. The databases where the information is stored are used in full compliance with the Fair Credit and Reporting Act.

**Top**

## How frequently are fraud scoring models updated?

The fraud scoring models are constantly evolving and at opportune points new models are introduced. New models are built and released based on need, not on time.

**Top**

## Are random typed letters such as Alskdjf;alksdn, when typed in name or email addresses, taken into account in the score?

Yes, the model does evaluate the name and e-mail address when they are provided. However, it's important to remember that the fraud risk model is trained to predict fraud based on historically accurate data. Just because the name part of an email has what looks to be garbage characters, it does not necessarily mean it is fraudulent. The fraud-scoring model takes this into account (with many other factors) to assess the overall risk.

Top

## Does card profiling behavior cross merchant lines? For example, if one of our customers uses a card number, does that effect future scores on the same credit card account for other merchants as well?

Yes, activity at different merchants by the same card is captured and reflected in all scores for that card. This is called velocity and is a key benefit of neural network based technology. It is one of the key differences between a system that is static and a system that can 'learn'.

Top

## How is the risk score generated?

The Option 1 neural network models are built with knowledge gained from more than 80 billion purchases world-wide. Cardholder characteristics, such as email address and zip code, captured by our patented profiling technology, are analyzed against real-time transactions. These profiles are drawn from historical data generated by thousands of merchants for similar types of sales. With every new transaction—millions per month—the models continue to learn and update profiles with positive and negative data.

# Questions on Option 2:

## How is the risk score generated?

Some of the factors used to generate the score are:

- Match between the billing zip code and the shipping zip code
- Pre-computed baseline fraud confidence levels based on certain elements of the billing and shipping fields and prior occurrences of fraudulent transactions. For example, if a zip code historically resulted in a significant number of fraudulent transactions, those results are translated into a higher fraud confidence level for the zip code-related indicator.
- Various card velocity statistics based on recent activity traces for a given attribute. These depend not only on the current order but also on prior transactions that occurred with the same attribute to identify unusual card activities that might indicate fraudulent transactions.
- Negative indicators: for example, the option 2 service checks the number of transactions on a card that are older than a certain number of days. These velocities indicate whether the cardholder is most likely a repeat customer, therefore lessening the likelihood of fraud.
- Complex interactions between derived attributes.

**Top**

## How accurate is the score?

If option 2 is used alone (that is, no other fraud risk services are selected as part of the LinkShield service), a score of 70 or greater is expected to match about 8% of all new orders for a store, and catch about 44% of all fraudulent orders. About 1 in 10 of the orders matched are expected to be fraudulent.

**Top**

# Sample Code to Pass XML to the C++ Module

The code shown below demonstrates how to process a Sale by passing an XML stream to the Gateway. The transaction shown is a credit card sale, but the same method is applicable to any type of transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/*****************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'*****************************************************************************/

// NewAPIs.cpp : Defines the entry point for the console application.
//
#include "LinkPointTransaction.h"
#include <stdio.h>
#include <string.h>

#ifdef WIN32
#include <conio.h>
#endif

void CreditCardSale();
// helpers
void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
void setOIDValue(char *out, char *in, char* rsp);

char *configfile = "1234567"; // Change this to your store number
char *host = "secure.linkpt.net";
char *pemfile="./YOURCERT.pem"; // Change this to the name and location of your certificate
```

```
file
int port=1129;
////////////////////////////////////////////////////////////////////////////////////////////////////
//////////////////
// An Example Credit Card SALE With Minimum Fields required for AVS and Card Code fraud
prevention measures
////////////////////////////////////////////////////////////////////////////////////////////////////
//////////////////
char* AVS_CVM = "<!-- An Example Credit Card SALE With Minimum Fields required for AVS and
Card Code fraud prevention measures-->\
<order>\
  <merchantinfo>\
    <!-- Replace with your STORE NUMBER or STORENAME-->\
    <configfile>1234567</configfile>\
  </merchantinfo>\
  <orderoptions>\
    <ordertype>SALE</ordertype>\
  </orderoptions>\
  <payment>\
    <chargetotal>12.99</chargetotal>\
  </payment>\
   <creditcard>\
    <cardnumber>4111-1111-1111-1111</cardnumber>\
    <cardexpmonth>03</cardexpmonth>\
    <cardexpyear>05</cardexpyear>\
    <!-- CVM is the three-digit security code usually found on the signature line on the back of the
card -->\
    <cvmvalue>123</cvmvalue>\
    <cvmindicator>provided</cvmindicator>\
  </creditcard>\
  <billing>\
    <!-- Required for Address Verification -->\
    <addrnum>123</addrnum>\
    <zip>87123</zip>\
  </billing>\
</order>";

/**/
```

```
int main(int argc, char* argv[])
{
 LinkPointTransaction lpt;
char* rsp;
 char xml[4096];

 printf("\nSSL APIs: %s\n",lpt.getVersion());

 lpt.setClientCertificatePath(pemfile);
 lpt.setHost(host);
 lpt.setPort(port);


 printf("\n\n********************************************************");
 printf("\nCredit Card SALE With Minimum Fields required for AVS");
 printf("\nand Card Code fraud prevention measures ");
 printf("\n*********************************************************");
 rsp = lpt.send(AVS_CVM);
printRes(rsp);


 // Now do sample with LPOrderPart object

CreditCardSale();


 printf("\n\nDone...\n");
#ifdef WIN32
 getch();
#endif
 return 0;
}
void setOIDValue(char *out, char *in, char* rsp)
{
char buf[128];

 out[0]= '\0';
 if(!getResVal("r_ordernum", rsp, buf))
  {
 return;
  }

 char tag[48];
 strcpy(tag,"<oid>");

 char* p = strstr(in,tag);
```

```
  if( p==NULL) { return; }


  strncpy(out,in,p-in);
  //printf("\n%s",out);
  strcat(out,tag);
  strcat(out,buf);
  strcpy(tag,"</oid>");
  strcat(out,tag);

  if( NULL == (p = strstr(p+1,tag)) )
  {
  out[0]='\0';
  return;
  }


  strcat(out,p+strlen(tag));

}
void printRes(char *response)
{
  char buffer[1024];
  char* val = NULL;



  printf("\n****** XML RESPONSE *******");


  if(getResVal("r_time", response, buffer))
  printf("\n<r_time>%s</r_time>",buffer);

  if(getResVal("r_ref", response, buffer))
  printf("\n<r_ref>%s</r_ref>",buffer);

  if(getResVal("r_approved", response, buffer))
  printf("\n<r_approved>%s</r_approved>",buffer);

  if(getResVal("r_code", response, buffer))
  printf("\n<r_code>%s</r_code>",buffer);

  if(getResVal("r_ordernum", response, buffer))
  printf("\n<r_ordernum>%s</r_ordernum>",buffer);


  if(getResVal("r_error", response, buffer))
  printf("\n<r_error>%s</r_error>",buffer);
  if(getResVal("r_fraudCode", response, buffer))
  printf("\n<r_fraudCode>%s</r_fraudCode>",buffer);

  if(getResVal("r_authresponse", response, buffer))
  printf("\n<r_authresponse>%s</r_authresponse>",buffer);

  if(getResVal("r_message", response, buffer))
  printf("\n<r_message>%s</r_message>",buffer);


  if(getResVal("r_tdate", response, buffer))
  printf("\n<r_tdate>%s</r_tdate>",buffer);

  if(getResVal("r_shipping", response, buffer))
  printf("\n<r_shipping>%s</r_shipping>",buffer);

  if(getResVal("r_tax", response, buffer))
  printf("\n<r_tax>%s</r_tax>",buffer);

  if(getResVal("r_avs", response, buffer))
  printf("\n<r_avs>%s</r_avs>",buffer);

  if(getResVal("esd", response, buffer))
  printf("\n<esd>%s</esd>",buffer);

  if(getResVal("r_score", response, buffer))
  printf("\n<r_score>%s</r_score>",buffer);


  printf("\n****** End Of XML RESPONSE ********");
}

bool getResVal(char* tag, char* data, char* buffer)
{
  int l = 0;
  char opentag[80], closetag[80];
  char temp[1024] = {'\0'};
  char* val = NULL;
  char* start = NULL;
  char* end = NULL;

  if (!buffer)
    return false;

  if (!data)
    return false;
  buffer[0] = '\0';

  strcpy (opentag, "<");
  strcat (opentag, tag);
  strcat (opentag, ">");

  strcpy (closetag, "</");
  strcat (closetag, tag);
  strcat (closetag, ">");


  start = strstr(data, opentag);

  if (start)
    end = strstr(start, closetag);

  if( !(start && end) ){ return false;}


  l = end - start;
  strncpy (temp, start, l);
  temp[l] = '\0';
  strcpy (buffer, &temp[strlen(opentag)]);



  return true;
}
```

# Sample Code to Process a Sale (Minimum Info) Using C$^{++}$

The code shown below demonstrates how to process a credit card sale. This example includes only the minimum fields required for a SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/********************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'********************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

void SALE_MININFO(LinkPointTransaction &lpt);

//////////////////////////////////////////////////////////////////////
//
// An Example of a Credit Card Sale Transaction with MINIMUM fields
```

```
//
////////////////////////////////////////////////////////////////////

void CreditCardSales()
{
  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);

  printf("\n\n*************************************************************");
  printf("\nMinimum Required Fields for a Credit Card SALE");
  printf( "\n*************************************************************");
  SALE_MININFO(lpt);

}


void SALE_MININFO(LinkPointTransaction &lpt)
{
  // Build the XML now using LPOrderPart

char buf[4096];
  memset(buf,0,sizeof(buf));



// Create an empty order
  LPOrder&   order = LPOrderFactory::createOrderPart("order");

// Create a part we wanna use to build the order
  LPOrderPart& op = LPOrderFactory::createOrderPart();


// Build 'orderoptions'
  op.put("ordertype","SALE");
// add 'orderoptions to order
order.addPart("orderoptions", op );


  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );

  // Build 'billing'
  // Required for AVS. If not provided,
  // transactions will downgrade.
  op.clear();
  op.put("zip","12345");
  op.put("addrnum","123");
  // add 'billing to order
order.addPart("billing", op );

  // Build 'creditcard'
  op.clear();
  op.put("cardnumber","4111-1111-1111-1111");
  op.put("cardexpmonth","03");
  op.put("cardexpyear","05");
// add 'creditcard to order
order.addPart("creditcard", op );

  // Build 'payment'
  op.clear();
  op.put("chargetotal","12.99");
// add 'payment to order
order.addPart("payment", op );

// Process the order
  buf[0]='\0';
  order.toXML(buf);

  //printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
printRes(rsp);

delete &op;
delete &order;
}
```

# Sample Code to Process a Sale (Maximum Info) Using C$^{++}$

The code shown below demonstrates how to process a credit card sale. This example includes samples of all the commonly used fields you can use in a SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/*************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'*************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;


void SALE_MAXINFO(LinkPointTransaction &lpt);

///////////////////////////////////////////////////////////////////
//
```

```
// An Example of a Credit Card Sale Transaction with all commonly used fields
//
////////////////////////////////////////////////////////////////////

void CreditCardSales()
{
  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);


  printf("\n\n**********************************************************");
  printf("\nAn Example Credit Card SALE with all commonly used fields included");
  printf( "\n**********************************************************");
  SALE_MAXINFO(lpt);

}


void SALE_MAXINFO(LinkPointTransaction &lpt)
{
  // Build the XML now using LPOrderPart

char buf[4096];
  memset(buf,0,sizeof(buf));



// Create an empty order
  LPOrder&   order = LPOrderFactory::createOrderPart("order");

// Create a part we wanna use to build the order
  LPOrderPart& op = LPOrderFactory::createOrderPart();


// Build 'orderoptions'
  op.put("ordertype","SALE");
  // live transaction
  op.put("result","LIVE");
// add 'orderoptions to order
order.addPart("orderoptions", op );

  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
```

```
// add 'merchantinfo to order
order.addPart("merchantinfo", op );


  // Build 'transactiondetails'
  op.clear();
  op.put("transactionorigin","MOTO");
  // If there is no PO Number for this order,
  // pass a department code or other value, but make sure the value you pass is supplied by the customer
  op.put("ponumber","09876543-Q1234");
  // If the purchase is tax exempt,
  // pass a value of Y for taxexempt
  op.put("taxexempt","N");
  op.put("terminaltype","UNSPECIFIED");
  op.put("ip","123.123.123.123");
  // add 'billing to order
order.addPart("transactiondetails", op );

  // Build 'billing'
  // Required for AVS. If not provided,
  // transactions will downgrade.
  op.clear();
  op.put("zip","12345");
  op.put("addrnum","123");

  op.put("name","Joe Customer");
  op.put("company","SomeWhere, Inc.");
  op.put("address1","123 Broadway");
  op.put("address2","Suite 23");
  op.put("city","Moorpark");
  op.put("state","CA");
  op.put("country","US");
  op.put("phone","8051234567");
  op.put("fax","8059876543");
  op.put("email","joe.customer@somewhere.com");
  // add 'billing to order
order.addPart("billing", op );


// build shipping
  op.clear();
  op.put("name","Joe Customer");
  op.put("address1","123 Broadway");
  op.put("address2","Suite 23");
  op.put("city","Moorpark");
  op.put("state","CA");
  op.put("country","US");
  op.put("zip","12345");
order.addPart("shipping",op);

  // Build 'creditcard'
  op.clear();
  op.put("cardnumber","4111-1111-1111-1111");
  op.put("cardexpmonth","03");
  op.put("cardexpyear","05");
  op.put("cvmvalue","123");
  op.put("cvmindicator","provided");
// add 'creditcard to order
order.addPart("creditcard", op );

  // Build 'payment'
  op.clear();
  op.put("subtotal","12.99");
  op.put("tax","0.34");
  op.put("shipping","1.45");
  op.put("vattax","0.00");
  op.put("chargetotal","14.78");
// add 'payment to order
order.addPart("payment", op );

// add notes to order
  op.clear();
  op.put("referred","Saw ad on Web site.");
  op.put("comments","Repeat customer. Ship immediately.");
  order.addPart("notes",op);

// Create some parts we use to build order itmes
  LPOrderPart& items = LPOrderFactory::createOrderPart();
  LPOrderPart& item  = LPOrderFactory::createOrderPart();
  LPOrderPart& options = LPOrderFactory::createOrderPart();

    // build and build 'item1'
    item.put("id","123456-A98765");
    item.put("description","Logo T-Shirt");
    item.put("quantity","1");
    item.put("price","12.99");
    item.put("serial","0987654321");

    // build item's options
     op.clear();
      op.put("name","Color");
      op.put("value","Red");
      options.addPart("option",op,1);

      op.clear();
      op.put("name","Size");
      op.put("value","XL");
      options.addPart("option",op,2);

    // add 'options' to item
    item.addPart("options", options );

   // add 'item' to 'items' collection
   items.addPart("item", item, 1 );
// add 'items' to order
order.addPart("items", items );

// Process the order
  buf[0]='\0';
  order.toXML(buf);

//   printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
printRes(rsp);

delete &op;
delete &order;
delete &items;
delete &options;
delete &item;
}
```

# Sample Code to Process a PreAuth Transaction Using C++

The code shown below demonstrates how to process a PreAuthorization Transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/********************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'*******************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

bool PREAUTH(LinkPointTransaction &lpt, char *oid);

/////////////////////////////////////////////////////////////////////
//
// An Example of PreAuth Credit Card Transaction
```

```
//
/////////////////////////////////////////////////////////////////////

void PreAuth()
{
char oid[128];


  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);

  memset(oid,0,sizeof(oid));


  printf("\n\n+++++++++++ PreAuth Credit Card Transactions using LPOrderPart object
++++++++++");
  printf("\n\n Run PREAUTH ");


  PREAUTH(lpt,oid);

}

bool PREAUTH(LinkPointTransaction &lpt, char* oid)
{
char buf[4096];
  memset(buf,0,sizeof(buf));

// Create an empty order
  LPOrder&   order = LPOrderFactory::createOrderPart("order");

// Create a part we wanna use to build the order
  LPOrderPart& op = LPOrderFactory::createOrderPart();

// Build 'orderoptions'
  // For a test, set result to GOOD, DECLINE, or DUPLICATE
  op.put("result","GOOD");
  op.put("ordertype","PREAUTH");
// add 'orderoptions to order
order.addPart("orderoptions", op );



  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );


  // Build 'creditcard'
  op.clear();
  op.put("cardnumber","4111-1111-1111-1111");
  op.put("cardexpmonth","03");
  op.put("cardexpyear","05");
// add 'creditcard to order
order.addPart("creditcard", op );

  // Build 'billing'
  op.clear();
  op.put("addrnum","123");
  op.put("zip","12345");
  // add 'billing to order
order.addPart("billing", op );


  // Build 'payment'
  op.clear();
  op.put("chargetotal","12.99");
// add 'payment to order
order.addPart("payment", op );



// Process the order
  buf[0]='\0';
  order.toXML(buf);


//  printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
printRes(rsp);


  char tmp[128];
  memset(tmp,0,sizeof(tmp));
  getResVal("r_error", rsp, tmp);
  bool ret = strlen(tmp) == 0;

  oid[0]='\0';
  if(ret)
```

```
{
  getResVal("r_ordernum",rsp,oid);
  }

delete &op;
delete &order;

return ret;
}
```

# Sample Code to Process a PostAuth Transaction Using C$^{++}$

The code shown below demonstrates how to process a PostAuthorization Transaction (that is, to complete a PreAuthorization with a valid order ID). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/********************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
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' Use is subject to license terms.
'
'********************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;


bool POSTAUTH(LinkPointTransaction &lpt, char *oid);

//////////////////////////////////////////////////////////////////////
//
```

```
// An Example of a PostAuth Credit Card Transaction
//
////////////////////////////////////////////////////////////////////

void PostAuth()
{
char oid[128];


  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);

  memset(oid,0,sizeof(oid));

  printf("\n\n+++++++++++ PreAuth/PostAuth/Void Credit Card Transactions using LPOrderPart object +++++++++");

  printf("\n\n Run POSTAUTH transaction using 'oid' recieved from PREAUTH");
  POSTAUTH(lpt,oid);

}


bool POSTAUTH(LinkPointTransaction &lpt, char* oid)
{
char buf[4096];
  memset(buf,0,sizeof(buf));

// Create an empty order
  LPOrder&   order = LPOrderFactory::createOrderPart("order");

// Create a part we wanna use to build the order
  LPOrderPart& op = LPOrderFactory::createOrderPart();

// Build 'orderoptions'
  // For a test, set result to GOOD, DECLINE, or DUPLICATE
  op.put("result","GOOD");
  op.put("ordertype","POSTAUTH");
// add 'orderoptions to order
order.addPart("orderoptions", op );



  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );


  // Build 'creditcard'
  op.clear();
  op.put("cardnumber","4111-1111-1111-1111");
  op.put("cardexpmonth","03");
  op.put("cardexpyear","05");
// add 'creditcard to order
order.addPart("creditcard", op );


  // Build 'payment'
  op.clear();
  op.put("chargetotal","12.99");
// add 'payment to order
order.addPart("payment", op );

  // Add oid
  op.clear();
  op.put("oid",oid);
// add 'transactiondetails to order
order.addPart("transactiondetails", op );


// Process the order
  buf[0]='\0';
  order.toXML(buf);


//  printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
printRes(rsp);


  char tmp[128];
  memset(tmp,0,sizeof(tmp));
  getResVal("r_error", rsp, tmp);
  bool ret = strlen(tmp) == 0;

  oid[0]='\0';
  if(ret)
```

```
{
  getResVal("r_ordernum",rsp,oid);
  }

delete &op;
delete &order;

return ret;
}
```

# Sample Code for Using AVS and CVM with C++

The code shown below demonstrates how to process a credit card sale taking advantage of both the AVS and the CVM fraud protection measures. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/*******************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
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' Use is subject to license terms.
'
'********************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

void AVS_CVM(LinkPointTransaction &lpt);

//////////////////////////////////////////////////////////////////
//
// An Example of a Credit Card Sale Transaction using AVS and CVM
```

```
//
////////////////////////////////////////////////////////////////////

void CreditCardSales()
{
 LinkPointTransaction lpt;
 lpt.setClientCertificatePath(pemfile);
 lpt.setHost(host);
 lpt.setPort(port);

  printf("\nCREDIT CARD SALE TRANSACTION using LPOrderPart object ");


  printf("\n\n********************************************************");
  printf("\nCredit Card SALE With Minimum Fields required for AVS");
  printf("\nand Card Code fraud prevention measures ");
  printf("\n********************************************************");
 AVS_CVM(lpt);

}

void AVS_CVM(LinkPointTransaction &lpt)
{
  // Build the XML now using LPOrderPart

char buf[4096];
  memset(buf,0,sizeof(buf));



// Create an empty order
 LPOrder&   order = LPOrderFactory::createOrderPart("order");

// Create a part we wanna use to build the order
 LPOrderPart& op = LPOrderFactory::createOrderPart();


// Build 'orderoptions'
  op.put("ordertype","SALE");
// add 'orderoptions to order
order.addPart("orderoptions", op );


  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );
```

```
  // Build 'billing'
  op.clear();
  op.put("zip","87123");
  op.put("addrnum","123");
  // add 'billing to order
order.addPart("billing", op );

  // Build 'creditcard'
  op.clear();
  op.put("cardnumber","4111-1111-1111-1111");
  op.put("cardexpmonth","03");
  op.put("cardexpyear","05");
  op.put("cvmvalue","123");
  op.put("cvmindicator","provided");
// add 'creditcard to order
order.addPart("creditcard", op );

  // Build 'payment'
  op.clear();
  op.put("chargetotal","12.99");
// add 'payment to order
order.addPart("payment", op );

// Process the order
  buf[0]='\0';
  order.toXML(buf);

  //printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
printRes(rsp);

delete &op;
delete &order;
}
```

# Sample Code to run a FORCED TICKET Transaction using C++

The code shown below demonstrates how to process a PostAuthorization for a Voice Authorization (a Forced Ticket transaction). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/******************************************************************************
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'
'******************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

void FORCED_TICKET(LinkPointTransaction &lpt);

///////////////////////////////////////////////////////////////////
//
```

```
// An Example of a FORCED TICKET Credit Card Transaction
//
//////////////////////////////////////////////////////////////////////

void CreditCardSales()
{
  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);

  printf("\n\n*********************************************************");
  printf("\nMinimum Required Fields for a FORCED TICKET Transaction");
  printf("\n*********************************************************");
  FORCED_TICKET(lpt);


}


void FORCED_TICKET(LinkPointTransaction &lpt)
{
  // Build the XML now using LPOrderPart

char buf[4096];
  memset(buf,0,sizeof(buf));



// Create an empty order
  LPOrder&   order = LPOrderFactory::createOrderPart("order");

// Create a part we wanna use to build the order
  LPOrderPart& op = LPOrderFactory::createOrderPart();


// Build 'orderoptions'
  op.put("ordertype","POSTAUTH");
// add 'orderoptions to order
order.addPart("orderoptions", op );

  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );
```

```
  // Build 'transactiondetails'
  op.clear();
  op.put("reference_number","NEW987654");
  // add 'billing to order
order.addPart("transactiondetails", op );

  // Build 'creditcard'
  op.clear();
  op.put("cardnumber","4111-1111-1111-1111");
  op.put("cardexpmonth","03");
  op.put("cardexpyear","05");
// add 'creditcard to order
order.addPart("creditcard", op );

  // Build 'payment'
  op.clear();
  op.put("chargetotal","12.99");
// add 'payment to order
order.addPart("payment", op );

// Process the order
  buf[0]='\0';
  order.toXML(buf);

  //printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
printRes(rsp);

delete &op;
delete &order;
}
```

# Sample Code to Process a Return Using C++

The code shown below demonstrates how to process a credit card return. To perform a return, you must have a valid order ID (**oid**) from a prior SALE or PREAUTH/POSTAUTH. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/*************************************************************************
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'
'*************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int   port;

bool RETURN(LinkPointTransaction &lpt, char *oid);

//////////////////////////////////////////////////////////////////////
//
```

```
//  An Example of a Credit Card Return Transaction
//
///////////////////////////////////////////////////////////////////

void Void()
{
char oid[128];


LinkPointTransaction lpt;
lpt.setClientCertificatePath(pemfile);
lpt.setHost(host);
lpt.setPort(port);

memset(oid,0,sizeof(oid));

printf("\n\n++++++++++++ Credit Card Return Transaction using LPOrderPart object
+++++++++");

// You must have a valid OID from a previous POSTAUTH or SALE transaction

RETURN(lpt,oid);


}


bool RETURN(LinkPointTransaction &lpt, char* oid)
{
   char buf[4096];
memset(buf,0,sizeof(buf));

    // Create an empty order
LPOrder&      order = LPOrderFactory::createOrderPart("order");

    // Create a part we wanna use to build the order
LPOrderPart&  op = LPOrderFactory::createOrderPart();

    // Build 'orderoptions'
// For a test, set result to GOOD, DECLINE, or DUPLICATE
op.put("result","GOOD");
op.put("ordertype","CREDIT");
    // add 'orderoptions to order
    order.addPart("orderoptions", op );
```

```
// Build 'merchantinfo'
op.clear();
op.put("configfile",configfile);
    // add 'merchantinfo to order
    order.addPart("merchantinfo", op );


// Build 'creditcard'
op.clear();
op.put("cardnumber","4111-1111-1111-1111");
op.put("cardexpmonth","03");
op.put("cardexpyear","05");
    // add 'creditcard to order
    order.addPart("creditcard", op );


// Build 'payment'
op.clear();
op.put("chargetotal","12.99");
    // add 'payment to order
    order.addPart("payment", op );

// Add oid
op.clear();
op.put("oid",oid);
    // add 'transactiondetails to order
    order.addPart("transactiondetails", op );


  // Process the order
buf[0]='\0';
order.toXML(buf);


//printf("\nOUTGOING XML:\n%s\n",buf);
char *rsp = lpt.send(buf);
    printRes(rsp);


char tmp[128];
memset(tmp,0,sizeof(tmp));
getResVal("r_error", rsp, tmp);
bool ret = strlen(tmp) == 0;
```

```
delete &op;
delete &order;

return ret;
}
```

# Sample Code to perform a Credit Card VOID Transaction Using C++

The code shown below demonstrates how to process a credit card VOID transaction. You can only void a credit card SALE transaction if the associated credit card batch has not yet been processed (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/*******************************************************************************
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' Use is subject to license terms.
'
'******************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

bool VOID(LinkPointTransaction &lpt, char *oid);
```

```
//////////////////////////////////////////////////////////////////////
//
// An Example of a Void Credit Card Transaction
//
//////////////////////////////////////////////////////////////////////

void Void()
{
char oid[128];


  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);

  memset(oid,0,sizeof(oid));

  printf("\n\n++++++++++++ Void Credit Card Transaction using LPOrderPart object
+++++++++");

// You must have a valid OID from a previous POSTAUTH or SALE transaction whose
// batch has not yet settled

  VOID(lpt,oid);


}


bool VOID(LinkPointTransaction &lpt, char* oid)
{
char buf[4096];
  memset(buf,0,sizeof(buf));

  // Create an empty order
  LPOrder&   order = LPOrderFactory::createOrderPart("order");

  // Create a part we wanna use to build the order
  LPOrderPart& op = LPOrderFactory::createOrderPart();

  // Build 'orderoptions'
  // For a test, set result to GOOD, DECLINE, or DUPLICATE
  op.put("result","GOOD");
  op.put("ordertype","VOID");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );


  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );

  // Build 'creditcard'
  op.clear();
  op.put("cardnumber","4111-1111-1111-1111");
  op.put("cardexpmonth","03");
  op.put("cardexpyear","05");
  // add 'creditcard to order
  order.addPart("creditcard", op );


  // Build 'payment'
  op.clear();
  op.put("chargetotal","12.99");
  // add 'payment to order
  order.addPart("payment", op );

  // Add oid
  op.clear();
  op.put("oid",oid);
  // add 'transactiondetails to order
  order.addPart("transactiondetails", op );

// Process the order
  buf[0]='\0';
  order.toXML(buf);


  //printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
  printRes(rsp);


  char tmp[128];
  memset(tmp,0,sizeof(tmp));
  getResVal("r_error", rsp, tmp);
  bool ret = strlen(tmp) == 0;


delete &op;
delete &order;

return ret;
}
```

# Sample Code to run a Credit Card Transaction using Items (Including ESD) with C++

The code shown below demonstrates how to process a Sale using the Items and Options feature. One of the items included in the example is an Electronic Softgood Download (ESD) item. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/*****************************************************************************
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' Use is subject to license terms.
'
'******************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;


void ITEMS_W_ESD(LinkPointTransaction &lpt);
```

```
///////////////////////////////////////////////////////////////////////////
//
// An Example of a Credit Card Sale Transaction using ITEMS, including ESD
//
///////////////////////////////////////////////////////////////////////////

void CreditCardSales()
{
  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);


  printf("\n\n*****************************************************************");
  printf("\nRequired Fields for Credit Card SALE with ITEMS Transaction");
  printf( "\n*****************************************************************");
  ITEMS_W_ESD(lpt);

}


void ITEMS_W_ESD(LinkPointTransaction &lpt)
{
  // Build the XML now using LPOrderPart

  char buf[4096];
  memset(buf,0,sizeof(buf));


  // Create an empty order
  LPOrder&   order = LPOrderFactory::createOrderPart("order");

  // Create a part we wanna use to build the order
  LPOrderPart& op = LPOrderFactory::createOrderPart();

  // Build 'orderoptions'
  op.put("ordertype","SALE");
  // live transaction
  op.put("result","LIVE");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );

  // Build 'merchantinfo'
```

```
 op.clear();
 op.put("configfile",configfile);
 // add 'merchantinfo to order
 order.addPart("merchantinfo", op );


 // Build 'creditcard'
 op.clear();
 op.put("cardnumber","4111-1111-1111-1111");
 op.put("cardexpmonth","03");
 op.put("cardexpyear","05");
 // add 'creditcard to order
 order.addPart("creditcard", op );

 // Build 'payment'
 op.clear();
 op.put("subtotal","45.98");
 op.put("tax","0.32");
 op.put("shipping","1.02");
 op.put("chargetotal","47.32");
 // add 'payment to order
 order.addPart("payment", op );

 // Build 'billing'
 // Required for AVS. If not provided,
 // transactions will downgrade.
 op.clear();
 op.put("zip","12345");
 op.put("addrnum","123");
 // When using ESD items - name must present
 op.put("name","Joe Customer");
 // add 'billing to order
 order.addPart("billing", op );


// Create some parts we use to build order itmes
 LPOrderPart& items = LPOrderFactory::createOrderPart();
 LPOrderPart& item  = LPOrderFactory::createOrderPart();
 LPOrderPart& options  = LPOrderFactory::createOrderPart();

   // build 'item1'
   item.put("id","123456-A98765");
   item.put("description","Logo T-Shirt");
   item.put("quantity","1");
```

```
    item.put("price","12.99");
    item.put("serial","0987654321");

    // build item's options
      op.clear();
      op.put("name","Color");
      op.put("value","Red");
      options.addPart("option",op,1);

      op.clear();
      op.put("name","Size");
      op.put("value","XL");
      options.addPart("option",op,2);

    // add 'options' to item
    item.addPart("options", options );
   // add 'item' to 'items' collection
   items.addPart("item", item, 1 );
    // build 'item2'
    item.clear();
    item.put("id","123456-A98767");
    item.put("description","Blast-Em Software");
    item.put("price","32.99");
    item.put("quantity","1");
    item.put("serial","0987654321");
    item.put("esdtype","softgood");
    item.put("softfile","blastem.exe");

   // add 'item' to 'items' collection
   items.addPart("item", item, 2 );

  // add 'items' to order
  order.addPart("items", items );

// Process the order
  buf[0]='\0';
  order.toXML(buf);

  //printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
  //printf("\nRESPONSE XML:\n%s\n",rsp);
  printRes(rsp);

delete &op;
delete &order;
delete &items;
delete &options;
delete &item;
}
```

# Sample Code to run a Level 2 Purchasing Card Transaction with C++

The code shown below demonstrates how to process a Sale including all the data elements needed for a Level 2 purchasing card transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/*********************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
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' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'*********************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

void L2PURCHASING_CARD(LinkPointTransaction &lpt);

//////////////////////////////////////////////////////////////////
//
```

```
// An Example of a Purchasing Card Sale Transaction
//
//////////////////////////////////////////////////////////////////

void CreditCardSales()
{
  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);

  printf("\n\n****************************************************************");
  printf("\nAn Example Level 2 Purchasing Card SALE ");
  printf( "\n****************************************************************");
  L2PURCHASING_CARD(lpt);

}

void L2PURCHASING_CARD(LinkPointTransaction &lpt)
{
  // Build the XML now using LPOrderPart

  char buf[4096];
  memset(buf,0,sizeof(buf));



  // Create an empty order
  LPOrder&   order = LPOrderFactory::createOrderPart("order");

  // Create a part we wanna use to build the order
  LPOrderPart& op = LPOrderFactory::createOrderPart();

  // Build 'orderoptions'
  op.put("ordertype","SALE");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );

  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );

  // Build 'transactiondetails'
  op.clear();
  // If there is no PO Number for this order,
  // pass a department code or other value, but make sure the value you pass is supplied by the customer
  op.put("ponumber","1203A-G4567");
  // If the purchase is tax exempt,
  // pass a value of Y for taxexempt
  op.put("taxexempt","N");
  // add 'billing to order
  order.addPart("transactiondetails", op );

  // Build 'creditcard'
  op.clear();
  op.put("cardnumber","4111-1111-1111-1111");
  op.put("cardexpmonth","03");
  op.put("cardexpyear","05");
  // add 'creditcard to order
  order.addPart("creditcard", op );

  // Build 'payment'
  op.clear();
  op.put("chargetotal","12.99");
  // Tax is required for purchasing cards.
  // If the tax is $0.00, pass a value of 0 for tax
  op.put("tax","0.32");

  // add 'payment to order
  order.addPart("payment", op );

// Process the order
  buf[0]='\0';
  order.toXML(buf);


  //printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
  printRes(rsp);

delete &op;
delete &order;
}
```

# Sample Code to run Multiple Transactions using C++

The code shown below demonstrates how to send multiple credit card transactions to the Gateway for processing. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/***********************************************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'***********************************************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

void MULTIPLE(LinkPointTransaction &lpt);
///////////////////////////////////////////////////////////////////
//
// An Example of MULTIPLE Credit Card PREAUTH Transactions
//
```

```
////////////////////////////////////////////////////////////////////

void CreditCardSales()
{
  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);

  printf("\n\n************************************************************");
  printf("\nSample of multiple Credit Card PreAuth Transactions");
  printf( "\n************************************************************");
  MULTIPLE(lpt);

}


void MULTIPLE(LinkPointTransaction &lpt)
{
// This sample demonstrates running an array of PREAUTH transactions.
//
// This could equally well be a series of POSTAUTHS or RETURNS if the
// OIDs match those previously approved.

  // Definition of an array of transactions specific data.
  // For minimal transaction we use following fields:
  // 1  TOTAL,
  // 2  CREDIT CARD NUMBER
  // 3  CREDIT CARD EXP. MONTH
  // 4  CREDIT CARD EXP. YEAR
  //    Next two are required for AVS. If not provided
  //    transaction will dongrade
  // 5  ADDRESS NUMBERS
  // 6  ZIP
  char* orders[][6]= { {"1.11","4111-1111-1111-1111","01","04","123","12345"},
            {"2.22","4111-1111-1111-1111","02","05","234","23456"},
            {"3.33","4111-1111-1111-1111","03","06","345","34567"}};

  char buf[4096];
  memset(buf,0,sizeof(buf));



  // Create an empty order
```

```
LPOrder&   order = LPOrderFactory::createOrderPart("order");
// Create a part we will use to build the order
LPOrderPart& op = LPOrderFactory::createOrderPart();

// 1. Add to 'order' fields which are
// the same for all transactions
// 1.1 'orderoptions'
op.put("ordertype","PREAUTH");
op.put("result","GOOD");
// add 'orderoptions to order
order.addPart("orderoptions", op );
// 1.2 'merchantinfo'
op.clear();
op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );



// 2. Now start loop sending multiple transactions
for( int i=0; i<3; i++)
 {
  // Build 'billing'
  // Required for AVS. If not provided,
  // transactions will downgrade.
  op.clear();
  op.put("zip",orders[i][5]);
  op.put("addrnum",orders[i][4]);
  // add 'billing to order
  order.addPart("billing", op );

  // Build 'creditcard'
  op.clear();
  op.put("cardnumber",orders[i][1]);
  op.put("cardexpmonth",orders[i][2]);
  op.put("cardexpyear",orders[i][3]);
  // add 'creditcard to order
  order.addPart("creditcard", op );

  // Build 'payment'
  op.clear();
  op.put("chargetotal",orders[i][0]);
  // add 'payment to order
```

```
   order.addPart("payment", op );

  // Process the order
   buf[0]='\0';
   order.toXML(buf);

   //printf("\nOUTGOING XML:\n%s\n",buf);
   char *rsp = lpt.send(buf);
   printRes(rsp);
  }



delete &op;
delete &order;
}
```

# Sample Code to Set Up a New Recurring Credit Card Transaction Using C++

The code shown below demonstrates how to process a Recurring Credit Card Transaction (Periodic Bill). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/*******************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'*******************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

bool PB_NEW(char *oid);

/////////////////////////////////////////////////////////////////////////
// Sample NEW Periodic Billing Transaction using LPOrderPart object
```

```
//
//
//////////////////////////////////////////////////////////////////////
void PeriodicBilling()
{
char oid[128];

  memset(oid,0,sizeof(oid));

  printf("\n\n+++++++++++ Sample NEW Periodic Billing Transaction using LPOrderPart object
+++++++++");
  printf("\n\n Create new Periodic Bill ");

  PB_NEW(oid);



}

bool PB_NEW(char* oid)
{
  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);

char buf[4096];
  memset(buf,0,sizeof(buf));

  // Create an empty order
  LPOrder&   order = LPOrderFactory::createOrderPart("order");

  // Create a part we wanna use to build the order
  LPOrderPart& op = LPOrderFactory::createOrderPart();


  // Build 'orderoptions'
  // For a test, set result to GOOD, DECLINE, or DUPLICATE
  op.put("result","GOOD");
  op.put("ordertype","SALE");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );
  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );


  // Build 'creditcard'
  op.clear();
  op.put("cardnumber","4111-1111-1111-1111");
  op.put("cardexpmonth","03");
  op.put("cardexpyear","05");
  // add 'creditcard to order
  order.addPart("creditcard", op );

  // Build 'billing'
  op.clear();
  op.put("addrnum","123");
  op.put("zip","12345");
  // add 'billing to order
  order.addPart("billing", op );


  // Build 'payment'
  op.clear();
  op.put("chargetotal","12.99");
  // add 'payment to order
  order.addPart("payment", op );

  // build 'periodic' part
  op.clear();
  op.put("action","SUBMIT");
  op.put("startdate","immediate");
  op.put("periodicity","monthly");
  op.put("installments","3");
  op.put("threshold","3");


  // add 'periodic' to order
  order.addPart("periodic", op );

// Process the order
  buf[0]='\0';
  order.toXML(buf);
```

```
//  printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
  printRes(rsp);


  char tmp[128];
  memset(tmp,0,sizeof(tmp));
  getResVal("r_error", rsp, tmp);
  bool ret = strlen(tmp) == 0;

  oid[0]='\0';
  if(ret)
   {
  getResVal("r_ordernum",rsp,oid);
   }

delete &op;
delete &order;

return ret;
}
```

# Sample Code to Modify a Recurring Credit Card Transaction Using C$^{++}$

The code shown below demonstrates how to modify a Recurring Credit Card Transaction (Periodic Bill). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/******************************************************************************
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' Use is subject to license terms.
'
'******************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;


bool PB_MODIFY(LinkPointTransaction &lpt, char *oid);

////////////////////////////////////////////////////////////////////
```

```
// Sample Modifying a Periodic Billing Transaction using LPOrderPart object
//
//////////////////////////////////////////////////////////////////////
void PeriodicBilling()
{
char oid[128];


  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);

  memset(oid,0,sizeof(oid));

  printf("\n\n+++++++++++ Sample Modifying a Periodic Bill using LPOrderPart object
+++++++++");
  printf("\n\n Modify a Periodic Bill ");

// Need a valid order ID from an existing Periodic Bill

  PB_MODIFY(lpt,oid);


}

bool PB_MODIFY(LinkPointTransaction &lpt, char* oid)
{
char buf[4096];
  memset(buf,0,sizeof(buf));

  // Create an empty order
  LPOrder&   order = LPOrderFactory::createOrderPart("order");

  // Create a part we wanna use to build the order
  LPOrderPart& op = LPOrderFactory::createOrderPart();


  // Build 'orderoptions'
  // For a test, set result to GOOD, DECLINE, or DUPLICATE
  op.put("result","GOOD");
  op.put("ordertype","SALE");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );
```

```
// Build 'merchantinfo'
op.clear();
op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );


// Build 'creditcard'
op.clear();
op.put("cardnumber","4111-1111-1111-1111");
op.put("cardexpmonth","03");
op.put("cardexpyear","05");
// add 'creditcard to order
order.addPart("creditcard", op );

// Build 'billing'
op.clear();
op.put("addrnum","123");
op.put("zip","12345");
// add 'billing to order
order.addPart("billing", op );


// Build 'payment'
op.clear();
op.put("chargetotal","14.99");
// add 'payment to order
order.addPart("payment", op );

// build 'periodic' part
op.clear();
op.put("action","MODIFY");
op.put("startdate","immediate");
op.put("periodicity","monthly");
op.put("installments","3");
op.put("threshold","3");
// add 'periodic' to order
order.addPart("periodic", op );

// Add oid
op.clear();
op.put("oid",oid);
// add 'transactiondetails to order
```

```
  order.addPart("transactiondetails", op );


// Process the order
  buf[0]='\0';
  order.toXML(buf);


//  printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
  printRes(rsp);

  char tmp[128];
  memset(tmp,0,sizeof(tmp));
  getResVal("r_error", rsp, tmp);
  bool ret = strlen(tmp) == 0;

  oid[0]='\0';
  if(ret)
  {
  getResVal("r_ordernum",rsp,oid);
  }

delete &op;
delete &order;

return ret;
}
```

# Sample Code to Cancel a Recurring Credit Card Transaction Using C++

The code shown below demonstrates how to Cancel an existing Recurring Credit Card Transaction (Periodic Bill). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/*****************************************************************************
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' Use is subject to license terms.
'
'******************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

bool PB_CANCEL(LinkPointTransaction &lpt, char *oid);
/////////////////////////////////////////////////////////////////////
// Sample Periodic Billing Transaction using LPOrderPart object
```

```
//
//
////////////////////////////////////////////////////////////
void PeriodicBilling()
{
char oid[128];


  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);

  memset(oid,0,sizeof(oid));

  printf("\n\n+++++++++++ Sample Cancelling a Periodic Bill using LPOrderPart object
+++++++++");
  printf("\n\nCancel Periodic Billing ");


  PB_CANCEL(lpt,oid);


}

bool PB_CANCEL(LinkPointTransaction &lpt, char* oid)
{
char buf[4096];
  memset(buf,0,sizeof(buf));

  // Create an empty order
  LPOrder&   order = LPOrderFactory::createOrderPart("order");

  // Create a part we wanna use to build the order
  LPOrderPart& op = LPOrderFactory::createOrderPart();


  // Build 'orderoptions'
  // For a test, set result to GOOD, DECLINE, or DUPLICATE
  op.put("result","GOOD");
  op.put("ordertype","SALE");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );
```

```
// Build 'merchantinfo'
op.clear();
op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );


// Build 'creditcard'
op.clear();
op.put("cardnumber","4111-1111-1111-1111");
op.put("cardexpmonth","03");
op.put("cardexpyear","05");
// add 'creditcard to order
order.addPart("creditcard", op );

// Build 'billing'
op.clear();
op.put("addrnum","123");
op.put("zip","12345");
// add 'billing to order
order.addPart("billing", op );


// Build 'payment'
op.clear();
op.put("chargetotal","14.99");
// add 'payment to order
order.addPart("payment", op );

// build 'periodic' part
op.clear();
op.put("action","CANCEL");
op.put("startdate","immediate");
op.put("periodicity","monthly");
op.put("installments","3");
op.put("threshold","3");
// add 'periodic' to order
order.addPart("periodic", op );

// Add oid
op.clear();
op.put("oid",oid);
// add 'transactiondetails to order
order.addPart("transactiondetails", op );
```

```
// Process the order
  buf[0]='\0';
  order.toXML(buf);


//  printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
  printRes(rsp);

  char tmp[128];
  memset(tmp,0,sizeof(tmp));
  getResVal("r_error", rsp, tmp);
  bool ret = strlen(tmp) == 0;

delete &op;
delete &order;

return ret;
}
```

# Sample Code to Process a Retail Swipe Transaction Using C++

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is swiped with a credit card reader. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/*****************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
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' Use is subject to license terms.
'
'*****************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

void RETAIL_SWIPE();


//////////////////////////////////////////////////////////////////
```

```
//
// An Example of a Swiped Retail Credit Card Transaction
//
///////////////////////////////////////////////////////////////////////

void Retail()
{
  printf("\n\n++++++++++++ Retail Swipe Credit Card Transaction using LPOrderPart object
+++++++++");
  RETAIL_SWIPE();

}
void RETAIL_SWIPE()
{

  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);

// Build the XML now using LPOrderPart

  char buf[4096];
  memset(buf,0,sizeof(buf));



  // Create an empty order
  LPOrder&   order = LPOrderFactory::createOrderPart("order");

  // Create a part we wanna use to build the order
  LPOrderPart& op = LPOrderFactory::createOrderPart();

  // Build 'orderoptions'
  op.put("ordertype","SALE");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );



  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );
  // Build 'transactiondetails'
  op.clear();
  // set terminaltype to POS for an electronic
  // cash register or integrated POS system,
  // STANDALONE for a point-of-sale credit card terminal,
  // UNATTENDED for a self-service station, or
  // UNSPECIFIED for e-commerce or other applications
  op.put("terminaltype","POS");
  op.put("transactionorigin","RETAIL");
  // add 'transactiondetails to order
  order.addPart("transactiondetails", op );


  // Build 'creditcard'
  op.clear();
  op.put("track","1298361023614908");
  // add 'creditcard to order
  order.addPart("creditcard", op );

  // Build 'payment'
  op.clear();
  op.put("chargetotal","12.99");
  // add 'payment to order
  order.addPart("payment", op );

  // AVS
  // You should not do AVS for a retail swiped transaction,
  // unless it is an UNATTENDED terminaltype.


// Process the order
  buf[0]='\0';
  order.toXML(buf);

  //printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
  printRes(rsp);

delete &op;
delete &order;
}
```

# Sample Code to Process a Retail Keyed Transaction Using C++

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is keyed in. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/******************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
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' Use is subject to license terms.
'
'******************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

void RETAIL_KEYED();

/////////////////////////////////////////////////////////////////////
//
```

```
// An Example of a Keyed Retail Credit Card Transaction
//
////////////////////////////////////////////////////////////////////

void Retail()
{

  printf("\n\n++++++++++++ Retail Keyed Credit Card Transaction using LPOrderPart object
++++++++++");
  RETAIL_KEYED();


}
void RETAIL_KEYED()
{
  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);
  // Build the XML now using LPOrderPart

  char buf[4096];
  memset(buf,0,sizeof(buf));



  // Create an empty order
  LPOrder&   order = LPOrderFactory::createOrderPart("order");

  // Create a part we wanna use to build the order
  LPOrderPart& op = LPOrderFactory::createOrderPart();

  // Build 'orderoptions'
  op.put("ordertype","SALE");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );



  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );
  // Build 'transactiondetails'
  op.clear();
  // set terminaltype to POS for an electronic
  // cash register or integrated POS system,
  // STANDALONE for a point-of-sale credit card terminal,
  // UNATTENDED for a self-service station, or
  // UNSPECIFIED for e-commerce or other applications
  op.put("terminaltype","POS");
  op.put("transactionorigin","RETAIL");
  // add 'transactiondetails to order
  order.addPart("transactiondetails", op );


  // Build 'creditcard'
  op.clear();
  op.put("cardnumber","4111-1111-1111-1111");
  op.put("cardexpmonth","03");
  op.put("cardexpyear","05");
  // add 'creditcard to order
  order.addPart("creditcard", op );

  // Build 'payment'
  op.clear();
  op.put("chargetotal","12.99");
  // add 'payment to order
  order.addPart("payment", op );

// Process the order
  buf[0]='\0';
  order.toXML(buf);


  //printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
  printRes(rsp);

delete &op;
delete &order;
}
```

# Sample Code to Process a Retail UNATTENDED Transaction Using C++

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card terminal is unattended (that is, a self-service station such as a gas station or ticket booth). In this case, you should do a partial AVS where you collect the zip code only. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/***************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'****************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

void RETAIL_PARTIAL_AVS();

//////////////////////////////////////////////////////////////////////
```

```
//
// An Example of a Retail Credit Card Transaction with Partial AVS
//
//////////////////////////////////////////////////////////////////////

void Retail()
{

  printf("\n\n++++++++++++ Retail Partial AVS Credit Card Transaction using LPOrderPart object
+++++++++");
  RETAIL_PARTIAL_AVS();


}

void RETAIL_PARTIAL_AVS()
{
  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);

// Build the XML now using LPOrderPart

  char buf[4096];
  memset(buf,0,sizeof(buf));



  // Create an empty order
  LPOrder&   order = LPOrderFactory::createOrderPart("order");

  // Create a part we wanna use to build the order
  LPOrderPart& op = LPOrderFactory::createOrderPart();

  // Build 'orderoptions'
  op.put("ordertype","SALE");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );



  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );

  // Build 'transactiondetails'
  op.clear();
  // set terminaltype to POS for an electronic
  // cash register or integrated POS system,
  // STANDALONE for a point-of-sale credit card terminal,
  // UNATTENDED for a self-service station, or
  // UNSPECIFIED for e-commerce or other applications
  op.put("terminaltype","UNATTENDED");
  op.put("transactionorigin","RETAIL");
  // add 'transactiondetails to order
  order.addPart("transactiondetails", op );

  // Build 'billing'
  op.clear();
  //For an UNATTENDED terminaltype,
  // do a partial AVS: zip code only.
  op.put("zip","12345");
  // add 'billing to order
  order.addPart("billing", op );

  // Build 'creditcard'
  op.clear();
  op.put("cardnumber","4111-1111-1111-1111");
  op.put("cardexpmonth","03");
  op.put("cardexpyear","05");
  // add 'creditcard to order
  order.addPart("creditcard", op );

  // Build 'payment'
  op.clear();
  op.put("chargetotal","12.99");
  // add 'payment to order
  order.addPart("payment", op );

// Process the order
  buf[0]='\0';
  order.toXML(buf);

  //printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
  printRes(rsp);
```

```
delete &op;
delete &order;
}
```

# Sample Code to perform a VirtualCheck SALE Transaction Using C++*

The code shown below demonstrates how to process a VirtualCheck SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/******************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
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' Use is subject to license terms.
'
'******************************************************************************/

#include "LinkPointTransaction.h"
#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
#include <stdio.h>
#include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

bool VCHECK_SALE(char *oid);

////////////////////////////////////////////////////////////////////////////
// Sample Telecheck SALE Transaction using LPOrderPart object
```

```
//
//
/////////////////////////////////////////////////////////////////////
void VirtualCheck()
{
char oid[128];


  memset(oid,0,sizeof(oid));

  printf("\n\n+++++++++++ Sample Virtual Check Transaction using LPOrderPart object
+++++++++");
  printf("\n\n Virtual Check sale ");

  VCHECK_SALE(oid);

}

bool VCHECK_SALE(char* oid)
{

  LinkPointTransaction lpt;
  lpt.setClientCertificatePath(pemfile);
  lpt.setHost(host);
  lpt.setPort(port);

char buf[4096];
  memset(buf,0,sizeof(buf));

  // Create an empty order
  LPOrder&   order = LPOrderFactory::createOrderPart("order");

  // Create a part we wanna use to build the order
  LPOrderPart& op = LPOrderFactory::createOrderPart();

  // Build 'orderoptions'
  op.put("result","LIVE");
  op.put("ordertype","SALE");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );



  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );


  // Build 'billing'
  op.clear();
  op.put("name","Joe Customer");
  op.put("address1","123 Broadway");
  op.put("state","CA");
  op.put("city","Moorpark");
  op.put("zip","12345");
  op.put("phone","8051234567");
  op.put("email","joe.customer@somewhere.com");
  // add 'billing to order
  order.addPart("billing", op );


  // Build 'telecheck' part
  op.clear();
  op.put("routing","123456789");
  op.put("account","2139842610");
  op.put("accounttype","pc");
  op.put("dl","120381698");
  op.put("dlstate","CA");
  op.put("bankname","Wells Fargo");
  op.put("bankstate","CA");
  // add 'telecheck' to order
  order.addPart("telecheck", op );


  // Build 'payment'
  op.clear();
  op.put("chargetotal","12.99");
  // add 'payment to order
  order.addPart("payment", op );

// Process the order
  buf[0]='\0';
  order.toXML(buf);


//  printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
  printRes(rsp);

  // telecheck can return long
  // error description
  char tmp[1024];
  memset(tmp,0,sizeof(tmp));
  getResVal("r_error", rsp, tmp);
  bool ret = strlen(tmp) == 0;


  oid[0]='\0';
  if(ret)
  {
  getResVal("r_ordernum",rsp,oid);
  }

delete &op;
delete &order;

return ret;
}
```

# Sample Code to perform a VirtualCheck VOID Transaction Using C++*

The code shown below demonstrates how to process a VirtualCheck VOID transaction. You can only void a VirtualCheck SALE transaction if it has not yet been sent for processing (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/*****************************************************************************
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' Use is subject to license terms.
'
'*****************************************************************************/

 #include "LinkPointTransaction.h"
 #include "LinkPointTransaction.h"
 #include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);
 #include <stdio.h>
 #include <string.h>


extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

bool VCHECK_VOID(LinkPointTransaction &lpt, char *oid);
```

```
//////////////////////////////////////////////////////////////////////
// Sample Telecheck Transaction using LPOrderPart object
//
//
//////////////////////////////////////////////////////////////////////
void VirtualCheck()
{
char oid[128];

 LinkPointTransaction lpt;
 lpt.setClientCertificatePath(pemfile);
 lpt.setHost(host);
 lpt.setPort(port);

 memset(oid,0,sizeof(oid));


 printf("\n\n+++++++++++ Sample Virtual Check VOID Transaction using LPOrderPart object
+++++++++");


 // You will need a valid Order ID number from a previous VirtualCheck Sale that has
 // not yet been sent for settlement (must be within the same day, in the existing
 // check batch)


   printf("\n\n Cancel existing Virtual Check using its 'oid'");
 VCHECK_VOID(lpt,oid);


}


bool VCHECK_VOID(LinkPointTransaction &lpt, char* oid)
{
char buf[4096];
 memset(buf,0,sizeof(buf));

 // Create an empty order
 LPOrder&   order = LPOrderFactory::createOrderPart("order");

 // Create a part we wanna use to build the order
 LPOrderPart& op = LPOrderFactory::createOrderPart();

 // Build 'orderoptions'
 op.put("ordertype","VOID");
 // add 'orderoptions to order
```

```
  order.addPart("orderoptions", op );


  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );

  // Build 'telecheck' part
  op.clear();
  op.put("void","1");
  // add 'telecheck' to order
  order.addPart("telecheck", op );

  // Build 'payment'
  op.clear();
  op.put("chargetotal","12.99");
  // add 'payment to order
  order.addPart("payment", op );

  // Add oid
  op.clear();
  op.put("oid",oid);
  // add 'transactiondetails to order
  order.addPart("transactiondetails", op );

// Process the order
  buf[0]='\0';
  order.toXML(buf);


//  printf("\nOUTGOING XML:\n%s\n",buf);
  char *rsp = lpt.send(buf);
  printRes(rsp);


  char tmp[128];
  memset(tmp,0,sizeof(tmp));
  getResVal("r_error", rsp, tmp);
  bool ret = strlen(tmp) == 0;
```

```
delete &op;
delete &order;

return ret;
}
```

# Sample Code to Calculate Shipping Charges Using C++

The code shown below demonstrates how to use the shipping calculator. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/************************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
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' Use is subject to license terms.
'
'*************************************************************************************/

#include <stdio.h>
#include <memory.h>

#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);

void SHIPPING();

extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

//////////////////////////////////////////////////////////////////////
// Sample Shipping Calculation
//////////////////////////////////////////////////////////////////////
void TAX()
```

```
{

 LinkPointTransaction lpt;
 lpt.setClientCertificatePath(pemfile);
 lpt.setHost(host);
 lpt.setPort(port);

 char buf[4096];
 memset(buf,0,sizeof(buf));

 // Build the XML now using LPOrderPart
 // Create an empty order
 LPOrder&   order = LPOrderFactory::createOrderPart("order");
 // Create a part
 LPOrderPart& op = LPOrderFactory::createOrderPart();

/////////////////////////////////////////////////////////////////////
// Sample Shipping Calculation
/////////////////////////////////////////////////////////////////////
void SHIPPING()
{

 LinkPointTransaction lpt;
 lpt.setClientCertificatePath(pemfile);
 lpt.setHost(host);
 lpt.setPort(port);
 char buf[4096];
 memset(buf,0,sizeof(buf));

 // Build the XML now using LPOrderPart
 // Create an empty order
 LPOrder&   order = LPOrderFactory::createOrderPart("order");
 // Create a part
 LPOrderPart& op = LPOrderFactory::createOrderPart();


 // Build 'orderoptions'
 op.put("ordertype","CALCSHIPPING");
 // add 'orderoptions to order
 order.addPart("orderoptions", op );

 op.clear();
 // Build 'merchantinfo'
```

```
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );

  op.clear();
  op.put("carrier","2");
  op.put("weight","1.2");
  op.put("total","12.99");
  op.put("state","CA");
  op.put("items","1");
  order.addPart("shipping",op);


// Process the order
  buf[0]='\0';
  order.toXML(buf);

  printf("\n\n++++++++++++ Sample Shipping Calculation using LPOrderPart object
++++++++++");
  //printf("\nOUTGOING XML:\n%s\n",buf);
  rsp = lpt.send(buf);
  printRes(rsp);

delete &op;
delete &order;
}
```

# Sample Code to Calculate Sales Tax Using C$^{++}$

The code shown below demonstrates how to use the Tax calculator. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/******************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
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' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'******************************************************************************/

#include <stdio.h>
#include <memory.h>

#include "LinkPointTransaction.h"
#include "LPOrderPart.h"

void printRes(char *);
bool getResVal(char* tag, char* data, char* buffer);

void TAX();

extern char *configfile;
extern char *host;
extern char *pemfile;
extern int port;

////////////////////////////////////////////////////////////////////
// Sample Tax Calculation
////////////////////////////////////////////////////////////////////
void TAX()
```

```
{

 LinkPointTransaction lpt;
 lpt.setClientCertificatePath(pemfile);
 lpt.setHost(host);
 lpt.setPort(port);

 char buf[4096];
 memset(buf,0,sizeof(buf));

 // Build the XML now using LPOrderPart
 // Create an empty order
 LPOrder&   order = LPOrderFactory::createOrderPart("order");
 // Create a part
 LPOrderPart& op = LPOrderFactory::createOrderPart();


 // BUILD REQUEST TO CALCULATE TAX

 // Build 'orderoptions'
 op.put("ordertype","CALCTAX");
 // add 'orderoptions to order
 order.addPart("orderoptions", op );

 op.clear();
 // Build 'merchantinfo'
 op.put("configfile",configfile);
 // add 'merchantinfo to order
 order.addPart("merchantinfo", op );

 // Build 'payment'
 op.clear();
 op.put("subtotal","12.99");
 // add 'payment to order
 order.addPart("payment", op );

 // Build 'shipping'
 op.clear();
 op.put("zip","12345");
 op.put("total","12.99");
 op.put("state","CA");
 // add shpping to order
 order.addPart("shipping", op );
// Process the order
  char *xmlOut = order.toXML(buf);
  char *rsp=NULL;

  printf("\n\n+++++++++++ Sample Tax Calculation using LPOrderPart object +++++++++");
//  printf("\nOUTGOING XML:\n%s\n",buf);
  rsp = lpt.send(xmlOut);
  printRes(rsp);


delete &op;
delete &order;

}
```

# Sample Code: Include Files for all ASP/Visual Basic Samples

The code shown below are the include files that go with all the ASP/VB samples. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## config.inc

```
<%
Const configfile = "1234567" ' Change this to your store number
Const keyfile    = "./YOURCERT.pem" ' Change this to the name and location of your certificate file
Const host       = "secure.linkpt.net"
Const port       = "1129"
%>
```

## common.inc

```
<!--#include file="config.inc"-->
<%


   ' Declarations for form fields
   Dim bname
   Dim bcompany
   Dim baddr1
   Dim baddr2
   Dim bstate
   Dim bcity
   Dim bcountry
   Dim bphone
   Dim bfax
   Dim bemail
   Dim baddrnum
   Dim bzip
   Dim sname
   Dim saddr1
   Dim saddr2
   Dim scity
   Dim sstate
   Dim scountry
   Dim szip
   Dim semail
   Dim sfax
   Dim saddrnum
   Dim sweight
   Dim sitems
   Dim scarrier
   Dim stotal
   Dim comments
   Dim referred
Dim cardnumber
Dim expmonth
Dim expyear
Dim cvmvalue
Dim cvmindicator
Dim expyearVal
Dim subtotal
Dim tax
Dim shipping
Dim total
Dim vattax
Dim refnumber
Dim ponumber
Dim taxexempt
Dim oid
Dim startdate
Dim periodicity
Dim installments
Dim pbthreshold
Dim pbcomments
Dim accttype
Dim micr
Dim accountNbr
Dim routeNbr
Dim bankName
Dim bankState
Dim dl
Dim dlState
Dim ssn
Dim checkNbr
' these two are used for flow control
Dim processed
Dim needsProcess

' transaction object
Dim LPTxn


' response holders
Dim R_Time
Dim R_Ref
Dim R_Approved
Dim R_Code
Dim R_Authresr
Dim R_Error
Dim R_OrderNum
Dim R_Message
Dim R_Score
Dim R_TDate
Dim R_AVS
Dim R_FraudCode
Dim R_ESD
Dim R_Tax
Dim R_Shipping

' Top level LPOrderPart
Dim order,op

Dim dbg
dbg = True

Sub InitFormData()
  bname    = "Joe Customer"
  bcompany    = "SomeWhere, Inc."
  baddr1    = "123 Broadway"
  baddr2    = "Suite 23"
```

```
    bstate   = "CA"
    bcity   = "Moorpark"
    bcountry   = "US"
    bphone   = "8051234567"
    bfax   = "8059876543"
    bemail   = "joe.customer@somewhere.com"
    baddrnum   = "123"
    bzip   = "87123"
    sname   = "Joe Customer"
    saddr1   = "123 Broadway"
    saddr2   = "Suite 23"
    scity   = "Moorpark"
    sstate   = "CA"
    scountry   = "US"
    szip   = "12345"
    semail   = "joe.customer@somewhere.com"
    sfax   = "8059876543"
    saddrnum   = "123"
    sweight   = "1.2"
    sitems   = "1"
    scarrier   = "2"
    stotal   = "12.99"
    comments   = "Repeat customer. Ship immediately."
    referred   = "Saw ad on Web site."
    cardnumber = "4111-1111-1111-1111"
    expmonth   = "03"
    expyear   = "05"
    cvmvalue   = "123"
    cvmindicator= "provided"
    expyearVal = 2005
    subtotal   = "12.99"
    tax   = "0.34"
    shipping   = "1.45"
    total   = "14.78"
    vattax   = "0.0"
    refnumber   = "NEW987654"
    ponumber   = "1203A-G4567"
    taxexempt   = "N"
    oid   = "9090018-A345"
    startdate   = "immediate"
    periodicity = "monthly"
    installments= "3"
    pbthreshold = "3"
    pbcomments = ""
    accttype   = "pc"
    micr   = "%B4111111111111111^CUSTOMER/JOE
^0503000500000?"
    accountNbr = "2139842610"
    routeNbr   = "123456789"
    bankName   = ""
    bankState   = "CA"
    dl   = "120381698"
    dlState   = "CA"
    ssn   = ""
    checkNbr   = ""
  End Sub


   Sub ParseFormData()

    bname = Request.Form("bname")
    bcompany = Request.Form("bcompany")
    baddr1 = Request.Form("baddr1")
    baddr2 = Request.Form("baddr2")
    bstate = Request.Form("bstate")
```

```
bcity = Request.Form("bcity")
bcountry = Request.Form("bcountry")
bzip = Request.Form("bzip")
bemail = Request.Form("bemail")
bfax = Request.Form("bfax")
bphone = Request.Form("bphone")
baddrnum = Request.Form("baddrnum")
sname = Request.Form("sname")
saddr1 = Request.Form("saddr1")
saddr2 = Request.Form("saddr2")
scity = Request.Form("scity")
sstate = Request.Form("sstate")
scountry = Request.Form("scountry")
szip = Request.Form("szip")
scarrier = Request.Form("scarrier")
sweight = Request.Form("sweight")
sitems = Request.Form("sitems")
stotal = Request.Form("stotal")
comments = Request.Form("comments")

cardnumber = Request.Form("cardnumber")
expmonth = Request.Form("expmonth")
expyear = Request.Form("expyear")
cvmindicator = "provided"
cvmvalue = Request.Form("cvmvalue")

subtotal = Request.Form("subtotal")
If Len(subtotal) < 1 Then
   subtotal = 0.0
End If
tax = Request.Form("tax")
If Len(tax) < 1 Then
   tax = 0.0
```

```
  End If
  shipping = Request.Form("shipping")
  If Len(shipping) < 1 Then
    shipping = 0.0
  End If
  total = Request.Form("total")
  If Len(total) < 1 Then
    total = 0.0
  End If

  pbthreshold = Request.Form("pbthreshold")
  startdate = Request.Form("startdate")
  periodicity = Request.Form("periodicity")
  installments = Request.Form("installments")
  pbcomments = Request.Form("pbcomments")

  accttype = Request.Form("accttype")
  micr = Request.Form("micr")

  accountNbr = Request.Form("accountNbr")
  routeNbr = Request.Form("routeNbr")
  bankName = Request.Form("bankName")
  bankState = Request.Form("bankState")
  dl = Request.Form("dl")
  dlState = Request.Form("dlState")
  ssn = Request.Form("ssn")
  checkNbr = Request.Form("checkNbr")

  refnumber = Request.Form("refnumber")
  tax = Request.Form("tax")
  taxexempt = Request.Form("taxexempt")
  oid = Request.Form("oid")

End Sub
```

```
  Sub WriteYearOpts()
   Dim yr1, yr
    Dim pad, sel

    yr1 = Year(Now)

    For yr = yr1 To yr1 + 5
       sel = ""
       If expyearVal = yr Then
          sel = " selected "
       End If
       pad = ""
       If (yr - 2000) < 10 Then
          pad = "0"
       End If
       Response.Write("<option value=" & pad & (yr - 2000) & sel & ">" & yr & "</option>")
    Next
  End Sub



   Public Sub WriteMonthOpts()
       Dim mn, cur
       Dim pad
       cur = CInt(expmonth)

       For mn = 1 To 12
          pad = ""
          If mn < 10 Then
            pad = "0"
          End If
```

```
        If mn = cur Then
          Response.Write("<option value=" & pad & mn & "
selected>" & mn & "</option>")
        Else
          Response.Write("<option value=" & pad & mn & ">" &
mn & "</option>")
        End If
      Next
  End Sub


  Function LeadingZero(ByVal InpStr)
    If Len(InpStr) = 1 Then
      LeadingZero = ("0" & InpStr)
    Else
      LeadingZero = InpStr
    End If
  End Function



  Sub ParseResponse( rsp)
    R_Time = ParseTag("r_time", rsp)
    R_Ref = ParseTag("r_ref", rsp)
    R_Approved = ParseTag("r_approved", rsp)
    R_Code = ParseTag("r_code", rsp)
    R_Authresr = ParseTag("r_authresronse", rsp)
    R_Error = ParseTag("r_error", rsp)
    R_OrderNum = ParseTag("r_ordernum", rsp)
    R_Message = ParseTag("r_message", rsp)
    R_AVS = ParseTag("r_avs", rsp)
    R_Score = ParseTag("r_score", rsp)
    R_TDate = ParseTag("r_tdate", rsp)
    R_AVS = ParseTag("r_avs", rsp)
    R_Tax = ParseTag("r_tax", rsp)
    R_Shipping = ParseTag("r_shipping", rsp)
    R_FraudCode = ParseTag("r_fraudCode", rsp)
    R_ESD = ParseTag("esd", rsp)
  End Sub

  Function ParseTag( tag , rsp )
    Dim sb
    Dim idxSt, idxEnd 'As Integer


    rsp = rsp


    sb = "<" & tag & ">"
    idxSt = -1
    idxEnd = -1

    idxSt = InStr(rsp,sb)
    If 0 = idxSt Then
      ParseTag = ""
      Exit Function
    End If

    idxSt = idxSt + Len(sb)
    sb = "</" & tag & ">"
    idxEnd = InStr(idxSt, rsp,sb)

    If 0 = idxEnd Then
      ParseTag = ""
      Exit Function
    End If

    ParseTag = Mid(rsp, idxSt, (idxEnd - idxSt))
    End Function

    Sub Cleanup()

      If Not (LPTxn Is Nothing) Then
        Set LPTxn = Nothing
      End If
      If Not (order Is Nothing) Then
        res = order.removeAllParts()
        order = Nothing
      End If
      If Not (op Is Nothing) Then
        res = op.removeAllParts()
        op = Nothing
      End If

    End Sub


  %>
```

# Sample Code to Process a Sale (Minimum Info) Using ASP and Visual Basic

The code shown below demonstrates how to process a credit card sale. This example includes only the minimum fields required for a SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=SALE_MININFO.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>SALE_MININFO</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
```

```
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="SALE_MININFO.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> CREDIT CARD
SALE (MINIMUM)</font></b><br>
      </p>
      <p align="center">An Example Credit Card SALE
Transaction with Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="238" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 238px">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Order Type:</TD>
              <TD height="1" width="115" style="WIDTH:
```

```
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>SALE</b></TD>
          <TR>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276">Total:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD>
          </TR>
          <tr>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276"> </TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
          </tr>
          <TR>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="144">Card Number:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
```

```
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expmonth" name="expmonth"
size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Year:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH:
```

```
115px"> </TD>
         <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
        </tr>
        <TR>
         <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
         <TD height="1" width="276">Address
Numbers<FONT color="red">*</FONT>:</TD>
         <TD height="1" width="115" style="WIDTH:
115px"> </TD>
         <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=baddrnum%>"
name="baddrnum"></TD>
        </TR>
        <TR>
         <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
         <TD height="1" width="276">Zip<FONT
color="red">*</FONT>:</TD>
         <TD height="1" width="115" style="WIDTH:
115px"> </TD>
         <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD>
        </TR>
        <TR>
         <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
         <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
```

```
              <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE:
solid" width="115" height="10"> </TD>
              <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
            </TR>
          </TABLE>
        </center>
      </div>
      <P align="left"><FONT color="red">*</FONT>) If not
provided, transactions will
        downgrade.</P>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'*********************************************
```

```
Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
End if

     If IsPostBack Then
       ' Parse form data
        ParseFormData()
        ' process order
        ProcessOrder()
        ' redirect to response page
        Server.Transfer("status.asp")
     Else
        InitFormData()
     End If


Sub ProcessOrder()

    ' Create an empty order
     Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
     order.setPartName("order")
  ' Create an empty part
     Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")



     ' Build 'orderoptions'
     res=op.put("ordertype", "SALE")
     ' add 'orderoptions to order
     res=order.addPart("orderoptions", op)

     ' Build 'merchantinfo'
    res=op.clear()
    res=op.put("configfile", configfile)
    ' add 'merchantinfo to order
    res=order.addPart("merchantinfo", op)

    ' Build 'billing'
    ' Required for AVS. If not provided,
    ' transactions will downgrade.
    res=op.clear()
    res=op.put("zip", bzip)
    res=op.put("addrnum", baddrnum)
    ' add 'billing to order
    res=order.addPart("billing", op)

    ' Build 'creditcard'
    res=op.clear()
    res=op.put("cardnumber", cardnumber)
    res=op.put("cardexpmonth", expmonth)
    res=op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    res=order.addPart("creditcard", op)

    ' Build 'payment'
    res=op.clear()
    res=op.put("chargetotal", total)
    ' add 'payment to order
    res=order.addPart("payment", op)

    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp
    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op    = Nothing
End Sub

%>
```

# Sample Code to Process a Sale (Maximum Info) Using ASP and Visual Basic

The code shown below demonstrates how to process a credit card sale. This example includes samples of all the commonly used fields you can use in a SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=SALE_MAXINFO.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>SALE_MAXINFO</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
```

```
 </HEAD>
 <body MS_POSITIONING="GridLayout">
   <form ACTION="SALE_MAXINFO.asp" method="post"
runat="server" ID="Form1">
     <p align="center"><b><font size="5"> SALE
TRANSACTION</font></b><br>
     </p>
     <p align="center">An Example Credit Card SALE with all
commonly used fields
       included</p>
     <div align="center">
       <center>
         <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="238" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 238px">
           <tr>
             <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
             <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
             <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
             <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
           </tr>
           <TR>
             <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
             <TD height="1" width="276">Order Type:</TD>
             <TD height="1" width="115" style="WIDTH:
115px"> </TD>
```

```
          <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><b>SALE</b></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Result:</TD>
          <TD height="1" width="115" style="WIDTH: 115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid">
            <select name="result" size="1">
              <option value="LIVE" selected>LIVE</option>
              <option value="GOOD">GOOD</option>
              <option value="GOOD">DECLINE</option>
              <option value="GOOD">DUPLICATE</option>
            </select></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Origin:</TD>
          <TD height="1" width="115" style="WIDTH: 115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid">
            <select name="origin" size="1">
              <option value="MOTO" selected>MOTO</option>
              <option value="RETAIL">RETAIL</option>
              <option value="ECI">ECI</option>
            </select></TD>
        </TR>
```

```
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1"
width="276"><b>Payment:</b></TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Subtotal:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="subtotal"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Tax:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="0.32" name="tax"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276">Shipping:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1.02" name="shipping"></TD>
          </TR>
          <TR>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276">Total:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="14.33" name="total"></TD>
          </TR>
          <tr>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276"><b>Credit
Card:</b></TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
          </tr>
          <TR>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="144">Card Number:</TD>
```

```
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-STYLE: solid"><INPUT value="<%=cardnumber%>" name="cardnumber" size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid">
                <select id="expmonth" name="expmonth" size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Year:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
  BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">CVM:</TD>
              <TD height="1" width="115" style="WIDTH:
  115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
  STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
  size="4" value="<%=cvmvalue%>" name="cvmvalue"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
  BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"><b>Billing:</b></TD>
              <TD height="1" width="115" style="WIDTH:
  115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
  STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
  BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Name:</TD>
              <TD height="1" width="115" style="WIDTH:
  115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
  STYLE: solid"><INPUT value="<%=bname%>" name="bname"
  size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
  BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Company:</TD>
```

```
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcompany%>"
name="bcompany" size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Address 1:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=baddr1%>"
name="baddr1" size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Address 2:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=baddr2%>"
name="baddr2" size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">City:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
```

```
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcity%>" name="bcity"
size="17"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="144">State:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bstate%>" name="bstate"
size="17"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="144">Country:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcountry%>"
name="bcountry" size="17"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="144">Phone:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bphone%>"
```

```
name="bphone" size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Email:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bemail%>" name="bemail"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Address
Numbers:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=baddrnum%>"
name="baddrnum"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Zip</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
```

```
size="4" value="<%=bzip%>" name="bzip"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1"
width="276"><b>Shipping:</b></TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Name:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=sname%>" name="sname"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Address 1:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=saddr1%>" name="saddr1"
size="17"></TD>
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            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Address 2:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=saddr2%>" name="saddr2"
size="17"></TD>
            </TR>
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              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">City:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=scity%>" name="scity"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Zip:</TD>
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115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=szip%>" name="szip"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">State:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=sstate%>" name="sstate"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Country:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=scountry%>"
name="scountry" size="17"></TD>
            </TR>
            <!--
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr> -->
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"><b>ITEM:</b></TD>
```

```
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
        </tr>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">ID:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="123456-A98767" name="id2"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Description:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="Logo T-Shirt" name="desc2"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Price:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
```

```
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="price2"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Quantity:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1" name="qty2"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Serial:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="0987654322" name="serial2"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Color:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select name="Color" size="1">
```

```
         <option value="Red" selected>Red</option>
         <option value="Blue">Blue</option>
        </select></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Size:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select name="Size" size="1">
         <option value="M">Medium</option>
         <option value="L">Large</option>
         <option value="XL" selected>XLarge</option>
        </select></TD>
      </TR>
      <tr>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276"><b>Notes:</b></TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
      </tr>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Comments:</TD>
       <TD height="1" width="115" style="WIDTH:
```

```
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="<%=comments%>"
name="comments"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Referred:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="<%=referred%>" name="referred"></TD>
            </TR>
            <TR>
              <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
              <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
              <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE:
solid" width="115" height="10"> </TD>
              <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
            </TR>
          </TABLE>
        </center>
      </div>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
<!-- #include file=SALE_MAXINFO.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>SALE_MAXINFO</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="SALE_MAXINFO.asp" method="post"
runat="server" ID="Form1">
      <p align="center"><b><font size="5"> SALE
TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example Credit Card SALE with all
commonly used fields
        included</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="238" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 238px">
```

```
      <tr>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
       <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
       <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
       <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
      </tr>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Order Type:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>SALE</b></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Result:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select name="result" size="1">
         <option value="LIVE" selected>LIVE</option>
         <option value="GOOD">GOOD</option>
         <option value="GOOD">DECLINE</option>
         <option value="GOOD">DUPLICATE</option>
        </select></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Origin:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select name="origin" size="1">
         <option value="MOTO" selected>MOTO</option>
         <option value="RETAIL">RETAIL</option>
         <option value="ECI">ECI</option>
        </select></TD>
      </TR>
      <tr>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1"
width="276"><b>Payment:</b></TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
      </tr>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Subtotal:</TD>
       <TD height="1" width="115" style="WIDTH:
```

```
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="subtotal"></TD>
          </TR>
          <TR>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276">Tax:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="0.32" name="tax"></TD>
          </TR>
          <TR>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276">Shipping:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1.02" name="shipping"></TD>
          </TR>
          <TR>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276">Total:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
```

```
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="14.33" name="total"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"><b>Credit
Card:</b></TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Card Number:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=cardnumber%>"
name="cardnumber" size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expmonth" name="expmonth"
```

```
size="1">
              <%WriteMonthOpts()%>
            </select></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Exp. Year:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
            <select id="expyear" name="expyear" size="1">
              <%WriteYearOpts()%>
            </select></TD>
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        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
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          <TD height="1" width="276">CVM:</TD>
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size="4" value="<%=cvmvalue%>" name="cvmvalue"></TD>
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        <tr>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276"><b>Billing:</b></TD>
          <TD height="1" width="115" style="WIDTH:
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```

```
              <TD height="1" width="78" style="BORDER-RIGHT-
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            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Name:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bname%>" name="bname"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Company:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcompany%>"
name="bcompany" size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Address 1:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=baddr1%>"
name="baddr1" size="17"></TD>
```

```
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Address 2:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
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name="baddr2" size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">City:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcity%>" name="bcity"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">State:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bstate%>" name="bstate"
size="17"></TD>
            </TR>
            <TR>
```

```
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1" width="144">Country:</TD>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD>
        <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcountry%>"
name="bcountry" size="17"></TD>
      </TR>
      <TR>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1" width="144">Phone:</TD>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD>
        <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bphone%>"
name="bphone" size="17"></TD>
      </TR>
      <TR>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1" width="144">Email:</TD>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD>
        <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bemail%>" name="bemail"
size="17"></TD>
      </TR>
      <TR>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
          <TD height="1" width="276">Address
Numbers:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=baddrnum%>"
name="baddrnum"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Zip</FONT>:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD>
        </TR>
        <tr>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1"
width="276"><b>Shipping:</b></TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
        </tr>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
              <TD height="1" width="144">Name:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=sname%>" name="sname"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Address 1:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=saddr1%>" name="saddr1"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Address 2:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=saddr2%>" name="saddr2"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">City:</TD>
              <TD height="1" width="115" style="WIDTH:
```

```
115px"> </TD>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=scity%>" name="scity"
size="17"></TD>
         </TR>
         <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="144">Zip:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=szip%>" name="szip"
size="17"></TD>
         </TR>
         <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="144">State:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=sstate%>" name="sstate"
size="17"></TD>
         </TR>
         <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="144">Country:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="199" style="BORDER-RIGHT-
```

```
STYLE: solid"><INPUT value="<%=scountry%>"
name="scountry" size="17"></TD>
            </TR>
            <!--
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr> -->
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"><b>ITEM:</b></TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">ID:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="123456-A98767" name="id2"></TD>
            </TR>
```

```
          <TR>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276">Description:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="Logo T-Shirt" name="desc2"></TD>
          </TR>
          <TR>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276">Price:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="price2"></TD>
          </TR>
          <TR>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276">Quantity:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1" name="qty2"></TD>
          </TR>
          <TR>
            <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Serial:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="0987654322" name="serial2"></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Color:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select name="Color" size="1">
         <option value="Red" selected>Red</option>
         <option value="Blue">Blue</option>
        </select></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Size:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select name="Size" size="1">
         <option value="M">Medium</option>
         <option value="L">Large</option>
```

```
                  <option value="XL" selected>XLarge</option>
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"><b>Notes:</b></TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Comments:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="<%=comments%>"
name="comments"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Referred:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="<%=referred%>" name="referred"></TD>
```

```
      </TR>
      <TR>
       <TD style="BORDER-LEFT-STYLE: solid; BORDER-BOTTOM-STYLE: solid" width="103" height="10"> </TD>
       <TD style="BORDER-BOTTOM-STYLE: solid" width="276" height="10"> </TD>
       <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE: solid" width="115" height="10"> </TD>
       <TD style="BORDER-RIGHT-STYLE: solid;BORDER-BOTTOM-STYLE: solid" width="78" height="10"> </TD>
      </TR>
     </TABLE>
    </center>
   </div>
   <p align="center"><input type="submit" value="Submit" name="Submit">
  </form>
  </P>
 </body>
</HTML>
```

# Sample Code to Process a PreAuth Transaction Using ASP and Visual Basic

The code shown below demonstrates how to process a PreAuthorization Transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=PREAUTH.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>PREAUTH</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
```

```
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="PREAUTH.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> CREDIT CARD
PREAUTH TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example Credit Card PreAuth
Transaction with Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="238" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 238px">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Order Type:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
```

```
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>PREAUTH</b></TD>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Total:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="<%=subtotal%>" name="total"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Card Number:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid">
                <select id="expmonth" name="expmonth" size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Year:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
```

```
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Address
Numbers<FONT color="red">*</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=baddrnum%>"
name="baddrnum"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Zip<FONT
color="red">*</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD>
            </TR>
            <TR>
              <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
              <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
              <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE:
solid" width="115" height="10"> </TD>
```

```
       <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
      </TR>
     </TABLE>
    </center>
   </div>
   <P align="left"><FONT color="red">*</FONT>) If not
provided, transactions will
    downgrade.</P>
   <p align="center"><input type="submit" value="Submit"
name="Submit">
  </form>
  </P>
 </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'*********************************************


Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
```

```
  IsPostBack = true
End if

     If IsPostBack Then
       ' Parse form data
        ParseFormData()
        ' process order
        ProcessOrder()
        ' redirect to response page
        Server.Transfer("status.asp")
     Else
        InitFormData()
     End If


Sub ProcessOrder()

    ' Create an empty order
     Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
     order.setPartName("order")
  ' Create an empty part
     Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")

     ' Build 'orderoptions'
     ' For a test, set result to GOOD, DECLINE, or DUPLICATE
     res=op.put("result", "GOOD")
     res=op.put("ordertype", "PREAUTH")
     ' add 'orderoptions to order
     res=order.addPart("orderoptions", op)


     ' Build 'merchantinfo'
     res=op.clear()
    res=op.put("configfile", configfile)
    ' add 'merchantinfo to order
    res=order.addPart("merchantinfo", op)


    ' Build 'creditcard'
    res=op.clear()
    res=op.put("cardnumber", cardnumber)
    res=op.put("cardexpmonth", expmonth)
    res=op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    res=order.addPart("creditcard", op)

    ' Build 'billing'
    res=op.clear()
    res=op.put("addrnum", baddrnum)
    res=op.put("zip", bzip)
    ' add 'billing to order
    res=order.addPart("billing", op)

    ' Build 'payment'
    res=op.clear()
    res=op.put("chargetotal", total)
    ' add 'payment to order
    res=order.addPart("payment", op)


    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp
    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op   = Nothing
End Sub

%>
```

# Sample Code to Process a PostAuth Transaction Using ASP and Visual Basic

The code shown below demonstrates how to process a PostAuthorization Transaction (that is, to complete a PreAuthorization with a valid order ID). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=POSTAUTH.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>POSTAUTH</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
```

```
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="POSTAUTH.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> CREDIT CARD
POSTAUTH TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example Credit Card PostAuth
Transaction with Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="396" border="0" height="233" bgcolor="#c0c0c0"
style="WIDTH: 396px; HEIGHT: 233px">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="242" style="WIDTH: 242px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE:
solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
```

```
242px">Order Type:</TD>
             <TD height="1" width="115" style="WIDTH:
115px"> </TD>
             <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><b>POSTAUTH</b></TD>
           <TR>
             <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
             <TD height="1" width="242" style="WIDTH:
242px">Total:</TD>
             <TD height="1" width="115" style="WIDTH:
115px"> </TD>
             <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD>
           </TR>
           <tr>
             <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
             <TD height="1" width="242" style="WIDTH:
242px"> </TD>
             <TD height="1" width="115" style="WIDTH:
115px"> </TD>
             <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"> </TD>
           </tr>
           <TR>
             <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
             <TD height="1" width="242" style="WIDTH:
242px">Card Number:</TD>
```

```
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid">
                <select id="expmonth" name="expmonth"
size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px">Exp. Year:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px">Order ID<FONT color="red">*</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 213px;
HEIGHT: 22px" size="30" value="<%=oid%>"
name="oid"></TD>
            </TR>
            <TR>
              <TD style="BORDER-LEFT-STYLE: solid; HEIGHT:
8px; BORDER-BOTTOM-STYLE: solid" width="103"
height="8"> </TD>
              <TD style="WIDTH: 242px; HEIGHT: 8px; BORDER-
BOTTOM-STYLE: solid" width="242" height="8"> </TD>
              <TD style="WIDTH: 115px; HEIGHT: 8px; BORDER-
BOTTOM-STYLE: solid" width="115" height="8"> </TD>
```

```
       <TD style="WIDTH: 357px;BORDER-RIGHT-STYLE:
solid;HEIGHT: 8px;BORDER-BOTTOM-STYLE: solid"
width="357" height="8"> </TD>
      </TR>
     </TABLE>
    </center>
   </div>
   <P align="left"><FONT color="red">*</FONT>) Must be a
valid order ID from a prior
    PreAuth</P>
   <p align="center"><input type="submit" value="Submit"
name="Submit">
  </form>
  </P>
 </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'**********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'***********************************************


Dim IsPostBack
```

```
If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
End if

     If IsPostBack Then
       ' Parse form data
        ParseFormData()
        ' process order
        ProcessOrder()
        ' redirect to response page
        Server.Transfer("status.asp")
     Else
        InitFormData()
     End If


Sub ProcessOrder()

    ' Create an empty order
     Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
     order.setPartName("order")
  ' Create an empty part
     Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")

     ' Build 'orderoptions'
     ' For a test, set result to GOOD, DECLINE, or DUPLICATE
     res=op.put("result", "GOOD")
     res=op.put("ordertype", "POSTAUTH")
     ' add 'orderoptions to order
     res=order.addPart("orderoptions", op)
    ' Build 'merchantinfo'
    res=op.clear()
    res=op.put("configfile", configfile)
    ' add 'merchantinfo to order
    res=order.addPart("merchantinfo", op)


    ' Build 'creditcard'
    res=op.clear()
    res=op.put("cardnumber", cardnumber)
    res=op.put("cardexpmonth", expmonth)
    res=op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    res=order.addPart("creditcard", op)


    ' Build 'payment'
    res=op.clear()
    res=op.put("chargetotal", total)
    ' add 'payment to order
    res=order.addPart("payment", op)

    ' Add oid
    res=op.clear()
    res=op.put("oid", oid)
    ' add 'transactiondetails to order
    res=order.addPart("transactiondetails", op)


    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp
    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op    = Nothing
End Sub

%>
```

# Sample Code for Using AVS and CVM with ASP and Visual Basic

The code shown below demonstrates how to process a credit card sale taking advantage of both the AVS and the CVM fraud protection measures. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<%@ Language=VBScript%>
<!--#include file="AVS_CVM.vb"-->

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>AVS_CVM</title>
    <meta name="vs_showGrid" content="True">
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">

```

```
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="AVS_CVM.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> CREDIT CARD
SALE WITH AVS/CVM</font></b><br>
      </p>
      <p align="left">
        An Example Credit Card SALE With Minimum Fields
required for AVS and Card Code
        fraud prevention measures</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="29" bgcolor="#c0c0c0">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="9" style="WIDTH: 9px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Total:</TD>
          <TD height="1" width="9" style="WIDTH:
9px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="subtotal"></TD>
        </TR>
        <tr>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276"> </TD>
          <TD height="1" width="9" style="WIDTH:
9px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
        </tr>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="144">Card Number:</TD>
          <TD height="1" width="9" style="WIDTH:
9px"> </TD>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
            <TD height="1" width="276">Exp. Month:</TD>
            <TD height="1" width="9" style="WIDTH:
9px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
              <select id="expmonth" name="expmonth"
size="1">
                <%WriteMonthOpts()%>
              </select></TD>
          </TR>
          <TR>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276">Exp. Year:</TD>
            <TD height="1" width="9" style="WIDTH:
9px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
              <select id="expyear" name="expyear" size="1">
                <%WriteYearOpts()%>
              </select></TD>
          </TR>
          <tr>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276"> </TD>
            <TD height="1" width="9" style="WIDTH:
9px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
          </tr>
          <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">CVM:</TD>
          <TD height="1" width="9" style="WIDTH:
9px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=cvmvalue%>" name="cvmvalue"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Address
Numbers:</TD>
          <TD height="1" width="9" style="WIDTH:
9px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=baddrnum%>"
name="baddrnum"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Zip:</TD>
          <TD height="1" width="9" style="WIDTH:
9px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD>
        </TR>
        <TR>
```

```
       <TD style="BORDER-LEFT-STYLE: solid; BORDER-BOTTOM-STYLE: solid" width="103" height="10"> </TD>
       <TD style="BORDER-BOTTOM-STYLE: solid" width="276" height="10"> </TD>
       <TD style="WIDTH: 9px; BORDER-BOTTOM-STYLE: solid" width="9" height="10"> </TD>
       <TD style="BORDER-RIGHT-STYLE: solid;BORDER-BOTTOM-STYLE: solid" width="78" height="10"> </TD>
      </TR>
     </TABLE>
    </center>
   </div>
   <p align="center"><input type="submit" value="Submit" name="Submit">
  </form>
  </P>
 </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'**********************************************
```

```
Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
End if

    If IsPostBack Then
      ' Parse form data
       ParseFormData()
       ' process order
       ProcessOrder()
       ' redirect to response page
       Server.Transfer("status.asp")
    Else
       InitFormData()
    End If


Sub ProcessOrder()

    ' Create an empty order
    Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
    order.setPartName("order")
  ' Create an empty part
    Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")



    ' Build 'orderoptions'
    res=op.put("ordertype", "SALE")
    ' add 'orderoptions to order
    res=order.addPart("orderoptions", op)
    ' Build 'merchantinfo'
    res=op.clear()
    res=op.put("configfile", configfile)
    ' add 'merchantinfo to order
    res=order.addPart("merchantinfo", op)

    ' Build 'billing'
    res=op.clear()
    res=op.put("zip", bzip)
    res=op.put("addrnum", baddrnum)
    ' add 'billing to order
    res=order.addPart("billing", op)

    ' Build 'creditcard'
    res=op.clear()
    res=op.put("cardnumber", cardnumber)
    res=op.put("cardexpmonth", expmonth)
    res=op.put("cardexpyear", expyear)
    res=op.put("cvmvalue", cvmvalue)
    res=op.put("cvmindicator", cvmindicator)
    ' add 'creditcard to order
    res=order.addPart("creditcard", op)

    ' Build 'payment'
    res=op.clear()
    res=op.put("chargetotal", subtotal)
    ' add 'payment to order
    res=order.addPart("payment", op)

    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp

    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)



    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op    = Nothing

End Sub

%>
```

# Sample Code to run a FORCED TICKET Transaction using ASP and Visual Basic

The code shown below demonstrates how to process a PostAuthorization for a Voice Authorization (a Forced Ticket transaction). The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!--#include file="FORCED_TICKET.vb"-->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN">
<HTML>
  <HEAD>
    <title>FORCED_TICKET</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
```

```
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="FORCED_TICKET.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> FORCED TICKET
TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example of a FORCED TICKET
Transaction with Minimum Required
        Fields
      </p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="29" bgcolor="#c0c0c0">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="9" style="WIDTH: 9px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Total:</TD>
              <TD height="1" width="9" style="WIDTH:
```

```
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Card Number:</TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Month:</TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
```

```
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select id="expmonth" name="expmonth"
size="1">
         <%WriteMonthOpts()%>
        </select></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Exp. Year:</TD>
       <TD height="1" width="9" style="WIDTH:
9px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select id="expyear" name="expyear" size="1">
         <%WriteYearOpts()%>
        </select></TD>
      </TR>
      <tr>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276"> </TD>
       <TD height="1" width="9" style="WIDTH:
9px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
      </tr>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Reference
```

```
Number:</TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="17" value="<%=refnumber%>"
name="refnumber"></TD>
            </TR>
            <TR>
              <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
              <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
              <TD style="WIDTH: 9px; BORDER-BOTTOM-STYLE:
solid" width="9" height="10"> </TD>
              <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
            </TR>
          </TABLE>
        </center>
      </div>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************


Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
End if

    If IsPostBack Then
      ' Parse form data
       ParseFormData()
       ' process order
       ProcessOrder()
       ' redirect to response page
       Server.Transfer("status.asp")
    Else
       InitFormData()
    End If


Sub ProcessOrder()

   ' Create an empty order
    Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
    res=order.setPartName("order")
  ' Create an empty part
    Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")


    ' Build 'orderoptions'
    res=op.put("ordertype", "POSTAUTH")
    ' add 'orderoptions to order
    res=order.addPart("orderoptions", op)

    ' Build 'merchantinfo'
    res=op.clear()
    res=op.put("configfile", configfile)
    ' add 'merchantinfo to order
    res=order.addPart("merchantinfo", op)

    ' Build 'transactiondetails'
    res=op.clear()
    res=op.put("reference_number", refnumber)
    ' add 'billing to order
    res=order.addPart("transactiondetails", op)

    ' Build 'creditcard'
    res=op.clear()
    res=op.put("cardnumber", cardnumber)
    res=op.put("cardexpmonth", expmonth)
    res=op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    res=order.addPart("creditcard", op)

    ' Build 'payment'
    res=op.clear()
    res=op.put("chargetotal", total)
    ' add 'payment to order
    res=order.addPart("payment", op)

    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp


    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op    = Nothing
End Sub

%>
```

# Sample Code to Process a Return Using ASP and Visual Basic

The code shown below demonstrates how to process a credit card return. To perform a return, you must have a valid order ID (**oid**) from a prior SALE or PREAUTH/POSTAUTH. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=RETURN.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>RETURN</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
```

```
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="RETURN.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> CREDIT CARD
CREDIT TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example of Credit Card CREDIT
Transaction With Minimum
        Required Fields
      </p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="29" bgcolor="#c0c0c0">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="110" style="WIDTH: 110px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="9" style="WIDTH: 9px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="110" style="WIDTH:
110px">Total:</TD>
```

```
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="<%=subtotal%>" name="total"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="110" style="WIDTH:
110px"> </TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="110" style="WIDTH:
110px">Card Number:</TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=cardnumber%>"
name="cardnumber" size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="110" style="WIDTH:
110px">Exp. Month:</TD>
```

```
       <TD height="1" width="9" style="WIDTH:
9px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select name="expmonth" size="1">
         <%WriteMonthOpts()%>
        </select></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="110" style="WIDTH:
110px">Exp. Year:</TD>
       <TD height="1" width="9" style="WIDTH:
9px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select name="expyear" size="1">
         <%WriteYearOpts()%>
        </select></TD>
      </TR>
      <tr>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="110" style="WIDTH:
110px"> </TD>
       <TD height="1" width="9" style="WIDTH:
9px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
      </tr>
      <TR>
```

```
              <TD height="36" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid; HEIGHT: 36px"> </TD>
              <TD height="36" width="110" style="WIDTH: 110px;
HEIGHT: 36px">Order ID <FONT color="red">*</FONT>
                :</TD>
              <TD height="36" width="9" style="WIDTH: 9px;
HEIGHT: 36px"></TD>
              <TD height="36" width="78" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 36px"><INPUT style="WIDTH: 150px;
HEIGHT: 22px" size="60" value="<%=oid%>"
name="oid"> </TD>
            </TR>
            <TR>
              <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
              <TD style="WIDTH: 110px; BORDER-BOTTOM-STYLE:
solid" width="110" height="10"> </TD>
              <TD style="WIDTH: 9px; BORDER-BOTTOM-STYLE:
solid" width="9" height="10"> </TD>
              <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
            </TR>
          </TABLE>
        </center>
      </div>
      <P align="left"><FONT color="red">*</FONT>) The 'Order
ID' field must be a valid
        order ID from a prior Sale or PreAuth</P>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
```

```
  </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************


Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
End if

    If IsPostBack Then
     ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
      ' redirect to response page
      Server.Transfer("status.asp")
    Else
      InitFormData()
    End If
```

```
Sub ProcessOrder()

    ' Create an empty order
     Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
     order.setPartName("order")
  ' Create an empty part
     Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")

     ' Build 'orderoptions'
     ' For a test, set result to GOOD, DECLINE, or DUPLICATE
     res=op.put("result", "GOOD")
     res=op.put("ordertype", "CREDIT")
     ' add 'orderoptions to order
     res=order.addPart("orderoptions", op)


     ' Build 'merchantinfo'
     res=op.clear()
     res=op.put("configfile", configfile)
     ' add 'merchantinfo to order
     res=order.addPart("merchantinfo", op)


     ' Build 'creditcard'
     res=op.clear()
     res=op.put("cardnumber", cardnumber)
     res=op.put("cardexpmonth", expmonth)
     res=op.put("cardexpyear", expyear)
     ' add 'creditcard to order
     res=order.addPart("creditcard", op)
    ' Build 'payment'
    res=op.clear()
    res=op.put("chargetotal", total)
    ' add 'payment to order
    res=order.addPart("payment", op)

    ' Add oid
    res=op.clear()
    res=op.put("oid", oid)
    ' add 'transactiondetails to order
    res=order.addPart("transactiondetails", op)


    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp

    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op    = Nothing
End Sub
```

```
% >
```

# Sample Code to perform a Credit Card VOID Transaction Using ASP and Visual Basic

The code shown below demonstrates how to process a credit card VOID transaction. You can only void a credit card SALE transaction if the associated credit card batch has not yet been processed (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=VOID.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>VOID</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="VOID.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> CREDIT CARD
VOID TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example Credit Card Void
Transaction with Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="396" border="0" height="233" bgcolor="#c0c0c0"
style="WIDTH: 396px; HEIGHT: 233px">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="242" style="WIDTH: 242px;
```

```
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE:
solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px">Order Type:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><b>VOID</b></TD>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px">Total:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
```

```
242px"> </TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"> </TD>
        </tr>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="242" style="WIDTH:
242px">Card Number:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="242" style="WIDTH:
242px">Exp. Month:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid">
            <select id="expmonth" name="expmonth"
size="1">
              <%WriteMonthOpts()%>
            </select></TD>
        </TR>
```

```
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px">Exp. Year:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px">Order ID<FONT color="red">*</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 213px;
```

```
HEIGHT: 22px" size="30" value="<%=oid%>"
name="oid"></TD>
      </TR>
      <TR>
       <TD style="BORDER-LEFT-STYLE: solid; HEIGHT:
8px; BORDER-BOTTOM-STYLE: solid" width="103"
height="8"> </TD>
       <TD style="WIDTH: 242px; HEIGHT: 8px; BORDER-
BOTTOM-STYLE: solid" width="242" height="8"> </TD>
       <TD style="WIDTH: 115px; HEIGHT: 8px; BORDER-
BOTTOM-STYLE: solid" width="115" height="8"> </TD>
       <TD style="WIDTH: 357px;BORDER-RIGHT-STYLE:
solid;HEIGHT: 8px;BORDER-BOTTOM-STYLE: solid"
width="357" height="8"> </TD>
      </TR>
     </TABLE>
    </center>
   </div>
   <P align="left"><FONT color="red">*</FONT>) Must be a
valid order ID from a prior
    PostAuth or Sale</P>
   <p align="center"><input type="submit" value="Submit"
name="Submit">
  </form>
  </P>
 </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************


Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
End if

    If IsPostBack Then
       ' Parse form data
        ParseFormData()
        ' process order
        ProcessOrder()
        ' redirect to response page
        Server.Transfer("status.asp")
    Else
        InitFormData()
    End If


Sub ProcessOrder()

    ' Create an empty order
    Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
    res=order.setPartName("order")
  ' Create an empty part
    Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")

   ' Build 'orderoptions'
    ' For a test, set result to GOOD, DECLINE, or DUPLICATE
    res=op.put("result", "GOOD")
    res=op.put("ordertype", "VOID")
    ' add 'orderoptions to order
    res=order.addPart("orderoptions", op)

    ' Build 'merchantinfo'
    res=op.clear()
    res=op.put("configfile", configfile)
    ' add 'merchantinfo to order
    res=order.addPart("merchantinfo", op)

    ' Build 'creditcard'
    res=op.clear()
    res=op.put("cardnumber", cardnumber)
    res=op.put("cardexpmonth", expmonth)
    res=op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    res=order.addPart("creditcard", op)

    ' Build 'payment'
    res=op.clear()
    res=op.put("chargetotal", total)
    ' add 'payment to order
    res=order.addPart("payment", op)

    ' Add oid
    res=op.clear()
    res=op.put("oid", oid)
    ' add 'transactiondetails to order
    res=order.addPart("transactiondetails", op)


    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp


    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op   = Nothing
End Sub

%>
```

# Sample Code to run a Credit Card Transaction using Items (Including ESD) with ASP and Visual Basic

The code shown below demonstrates how to process a Sale using the Items and Options feature. One of the items included in the example is an Electronic Softgood Download (ESD) item. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=ITEM_W_ESD.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>ITEM_W_ESD</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="ITEM_W_ESD.asp" method="post"
runat="server">
      <p align="center"><b><font size="5"> ITEM WITH ESD
TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example Credit Card SALE
Transaction with ESD item</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="238" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 238px">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Order Type:</TD>
              <TD height="1" width="115" style="WIDTH:
```

```
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>SALE</b></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Subtotal:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="45.98" name="subtotal"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Tax:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="0.32" name="tax"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Shipping:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
```

```
size="6" value="1.02" name="shipping"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Total:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="47.32" name="total"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Name:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bname%>" name="bname"
size="17"></TD>
            </TR>
            <TR>
```

```
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="144">Card Number:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=cardnumber%>"
name="cardnumber" size="17"></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Exp. Month:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select id="expmonth" name="expmonth"
size="1">
         <%WriteMonthOpts()%>
        </select></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Exp. Year:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select id="expyear" name="expyear" size="1">
         <%WriteYearOpts()%>
```

```
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Address
Numbers:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=baddrnum%>"
name="baddrnum"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Zip</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
```

```
            </tr>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"><b>ITEM 1
(ESD):</b></TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">ID:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="123456-A98765" name="id1"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Description:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="Blast-Em Software" name="desc1"></TD>
            </TR>
            <TR>
```

```
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Price:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px" size="6" value="32.99" name="price1"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Quantity:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px" size="6" value="1" name="qty1"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Serial:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px" size="14" value="0987654321" name="serial1"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">ESD type:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select name="esdtype" size="1">
                  <option value="softgood"
selected>softgood</option>
                  <option value="key">key</option>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">File Name:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="blastemgame.exe" name="softfile1"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"><b>ITEM
2:</b></TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
```

```
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1" width="276">ID:</TD>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="123456-A98767" name="id2"></TD>
       </TR>
       <TR>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1" width="276">Description:</TD>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="Logo T-Shirt" name="desc2"></TD>
       </TR>
       <TR>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1" width="276">Price:</TD>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="price2"></TD>
       </TR>
       <TR>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
          <TD height="1" width="276">Quantity:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1" name="qty2"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Serial:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="0987654322" name="serial2"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Color:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
            <select name="Color" size="1">
              <option value="Red" selected>Red</option>
              <option value="Blue">Blue</option>
            </select></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Size:</TD>
       <TD height="1" width="115" style="WIDTH: 
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select name="Size" size="1">
         <option value="M">Medium</option>
         <option value="L">Large</option>
         <option value="XL" selected>XLarge</option>
        </select></TD>
      </TR>
      <TR>
       <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
       <TD style="BORDER-BOTTOM-STYLE: solid" 
width="276" height="10"> </TD>
       <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE: 
solid" width="115" height="10"> </TD>
       <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
      </TR>
     </TABLE>
    </center>
   </div>
   <p align="center"><input type="submit" value="Submit" 
name="Submit">
  </form>
  </P>
 </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************


Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
 IsPostBack = true
End if

   If IsPostBack Then
    ' Parse form data
     ParseFormData()
     ' process order
     ProcessOrder()
     ' redirect to response page
     Server.Transfer("status.asp")
   Else
     InitFormData()
   End If


Sub ProcessOrder()
```

```
    ' Create an empty order
     Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
     order.setPartName("order")
  ' Create an empty part
     Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")

     ' Build 'orderoptions'
     res=op.put("ordertype", "SALE")
     ' live transaction
     res=op.put("result", "LIVE")
     ' add 'orderoptions to order
     res=order.addPart("orderoptions", op)

     ' Build 'merchantinfo'
     res=op.clear()
     res=op.put("configfile", configfile)
     ' add 'merchantinfo to order
     res=order.addPart("merchantinfo", op)


     ' Build 'creditcard'
     res=op.clear()
     res=op.put("cardnumber", cardnumber)
     res=op.put("cardexpmonth", expmonth)
     res=op.put("cardexpyear", expyear)
     ' add 'creditcard to order
     res=order.addPart("creditcard", op)

     ' Build 'payment'
     res=op.clear()
     res=op.put("subtotal", Request.Form("subtotal"))
     res=op.put("tax", Request.Form("tax"))
    res=op.put("shipping", Request.Form("shipping"))
    res=op.put("chargetotal", Request.Form("total"))
    ' add 'payment to order
    res=order.addPart("payment", op)

    ' Build 'billing'
    ' Required for AVS. If not provided,
    ' transactions will downgrade.
    res=op.clear()
    res=op.put("zip", bzip)
    res=op.put("addrnum", baddrnum)
    ' When using ESD items - name must present
    res=op.put("name", bname)
    ' add 'billing to order
    res=order.addPart("billing", op)


    ' Create some parts we use to build order itmes
    Dim items, item, options
    Set items =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
    Set item = Server.CreateObject("LpiCom_6_0.LPOrderPart")
    Set options =
Server.CreateObject("LpiCom_6_0.LPOrderPart")


    ' build 'item1' (ESD)
    res=item.put("id", Request.Form("id1"))
    res=item.put("description", Request.Form("desc1"))
    res=item.put("quantity", Request.Form("qty1"))
    res=item.put("price", Request.Form("price1"))
    res=item.put("serial", Request.Form("serial1"))
    res=item.put("esdtype", Request.Form("esdtype"))
    res=item.put("softfile", Request.Form("softfile1"))
    ' add 'item' to 'items' collection
    res=items.addPart("item", item, 1)

    ' build 'item2'
    res=item.clear()
    res=item.put("id", Request.Form("id2"))
    res=item.put("description", Request.Form("desc2"))
    res=item.put("quantity", Request.Form("qty2"))
    res=item.put("price", Request.Form("price2"))
    res=item.put("serial", Request.Form("serial2"))

    ' build item's options
    res=op.clear()
    res=op.put("name", "Color")
    res=op.put("value", Request.Form("Color"))
    res=options.addPart("option", op, 1)
    res=op.clear()
    res=op.put("name", "Size")
    res=op.put("value", Request.Form("Size"))
    res=options.addPart("option", op, 2)

    ' add 'options' to item
    res=item.addPart("options", options)
    ' add 'item' to 'items' collection
    res=items.addPart("item", item, 2)

    ' add 'items' to order
    res=order.addPart("items", items)

    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp

    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op    = Nothing
    Set items = Nothing
    Set options= Nothing
    Set item    = Nothing
End Sub

%>
```

# Sample Code to run a Level 2 Purchasing Card Transaction with ASP and Visual Basic

The code shown below demonstrates how to process a Sale including all the data elements needed for a Level 2 purchasing card transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!--#include file="L2PURCHASING_CARD.vb"-->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>L2PURCHASING_CARD</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
```

```
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="L2PURCHASING_CARD.asp"
METHOD="post" NAME="SaleForm" runat="server"
ID="Form1">
      <p align="center"><b><font size="5"> PURCHASING
CARD SALE TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example Level 2 Purchasing Card
SALE With Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="29" bgcolor="#c0c0c0">
            <tr>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="9" style="WIDTH: 9px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Total:</TD>
              <TD height="1" width="9" style="WIDTH:
```

```
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD>
            </TR>
            <tr>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Card Number:</TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=cardnumber%>"
name="cardnumber" size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Month:</TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
```

```
STYLE: solid">
                <select id="expmonth" name="expmonth"
size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Year:</TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">PO Number:</TD>
              <TD height="1" width="9" style="WIDTH:
```

```
9px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="HEIGHT: 22px" size="17"
value="<%=ponumber%>" name="ponumber"></TD>
      </TR>
      <TR>
       <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Tax Exempt
(Y/N):</TD>
       <TD height="1" width="9" style="WIDTH:
9px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="2" value="<%=taxexempt%>"
name="taxexempt"></TD>
      </TR>
      <TR>
       <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Tax:</TD>
       <TD height="1" width="9" style="WIDTH:
9px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="2" value="<%=tax%>" name="tax"></TD>
      </TR>
      <TR>
       <TD style="WIDTH: 19px; BORDER-LEFT-STYLE:
solid; BORDER-BOTTOM-STYLE: solid" width="19"
height="10"> </TD>
       <TD style="BORDER-BOTTOM-STYLE: solid"
```

```
width="276" height="10"> </TD>
       <TD style="WIDTH: 9px; BORDER-BOTTOM-STYLE:
solid" width="9" height="10"> </TD>
       <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
      </TR>
     </TABLE>
    </center>
   </div>
   <p align="center"><input type="submit" value="Submit"
name="Submit">
  </form>
  </P>
 </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************


Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
```

```
  IsPostBack = true
End if

     If IsPostBack Then
       ' Parse form data
        ParseFormData()
        ' process order
        ProcessOrder()
        ' redirect to response page
        Server.Transfer("status.asp")
     Else
        InitFormData()
     End If


Sub ProcessOrder()

    ' Create an empty order
     Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
     res=order.setPartName("order")
  ' Create an empty part
     Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")

     ' Build 'orderoptions'
     res=op.put("ordertype", "SALE")
     ' add 'orderoptions to order
     res=order.addPart("orderoptions", op)

     ' Build 'merchantinfo'
     res=op.clear()
     res=op.put("configfile", configfile)
     ' add 'merchantinfo to order
    res=order.addPart("merchantinfo", op)

    ' Build 'transactiondetails'
    res=op.clear()
    ' If there is no PO Number for this order,
    ' pass a department code or other value, but make sure the value you pass is supplied by the customer
    res=op.put("ponumber", ponumber)
    ' If the purchase is tax exempt,
    ' pass a value of Y for taxexempt
    res=op.put("taxexempt", taxexempt)
    ' add 'billing to order
    res=order.addPart("transactiondetails", op)

    ' Build 'creditcard'
    res=op.clear()
    res=op.put("cardnumber", cardnumber)
    res=op.put("cardexpmonth", expmonth)
    res=op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    res=order.addPart("creditcard", op)

    ' Build 'payment'
    res=op.clear()
    res=op.put("chargetotal", total)
    ' Tax is required for purchasing cards.
    ' If the tax is $0.00, pass a value of 0 for tax
    res=op.put("tax", tax)

    ' add 'payment to order
    res=order.addPart("payment", op)



    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp


    outXml = order.toXML()
    'Response.write(outXml)
    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op    = Nothing
End Sub

%>
```

# Sample Code to Set Up a New Recurring Credit Card Transaction Using ASP and Visual Basic

The code shown below demonstrates how to process a Recurring Credit Card Transaction (Periodic Bill). The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=PB_NEW.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>PB_NEW</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="PB_NEW.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> PERIODIC BILLING
(NEW)</font></b><br>
      </p>
      <p align="center">An Example of New Periodic Billing
Transaction with Minimum
        Required Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="368" border="0" height="249" bgcolor="#c0c0c0"
style="WIDTH: 368px; HEIGHT: 249px">
            <tr>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="220" style="WIDTH: 220px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE:
solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
              <TD height="1" width="220" style="WIDTH:
220px">Total:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="szip3"
style="WIDTH: 45px; HEIGHT: 22px" size="6"
value="<%=subtotal%>" name="total"></TD>
            </TR>
            <!--
            <tr>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
-->
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px">Card Number:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
```

```
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid">
                <select id="expmonth" name="expmonth"
size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="28" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid; HEIGHT: 28px"> </TD>
              <TD height="28" width="220" style="WIDTH: 220px;
HEIGHT: 28px">Exp. Year:</TD>
              <TD height="28" width="115" style="WIDTH: 115px;
HEIGHT: 28px"></TD>
              <TD height="28" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid; HEIGHT: 28px">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
```

```
220px">Address Numbers<FONT
color="red">*</FONT>:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"></TD>
            <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=baddrnum%>"
name="baddrnum"></TD>
          </TR>
          <TR>
            <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="220" style="WIDTH:
220px">Zip<FONT color="red">*</FONT>:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"></TD>
            <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=bzip%>"
name="bzip"></TD>
          </TR>
          <tr>
            <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="220" style="WIDTH:
220px"> </TD>
            <TD height="1" width="115" style="WIDTH:
115px"></TD>
            <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD>
          </tr>
          <TR>
```

```
                <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
                <TD height="1" width="220" style="WIDTH:
220px">Action:</TD>
                <TD height="1" width="115" style="WIDTH:
115px"></TD>
                <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><b>SUBMIT</b></TD>
              </TR>
              <TR>
                <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
                <TD height="1" width="220" style="WIDTH:
220px">Start Date:</TD>
                <TD height="1" width="115" style="WIDTH:
115px"></TD>
                <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=startdate%>" name="startdate"></TD>
              </TR>
              <TR>
                <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
                <TD height="1" width="220" style="WIDTH:
220px">Periodicity:</TD>
                <TD height="1" width="115" style="WIDTH:
115px"></TD>
                <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=periodicity%>"
name="periodicity"></TD>
              </TR>
```

```
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px">Installments:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=installments%>"
name="installments"></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px">Threshold:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=pbthreshold%>"
name="pbthreshold"></TD>
            </TR>
            <TR>
              <TD style="WIDTH: 30px; BORDER-LEFT-STYLE:
solid; HEIGHT: 23px; BORDER-BOTTOM-STYLE: solid"
width="30" height="23"> </TD>
              <TD style="WIDTH: 220px; HEIGHT: 23px; BORDER-
BOTTOM-STYLE: solid" width="220" height="23"> </TD>
              <TD style="WIDTH: 115px; HEIGHT: 23px; BORDER-
BOTTOM-STYLE: solid" width="115" height="23"> </TD>
```

```
       <TD style="WIDTH: 249px;BORDER-RIGHT-STYLE:
solid;HEIGHT: 23px;BORDER-BOTTOM-STYLE: solid"
width="249" height="23"> </TD>
      </TR>
     </TABLE>
    </center>
    <p align="center"><input type="submit" value="Submit"
name="Submit"></p>
   </div>
   <P align="left"><FONT color="red">*</FONT>) If not
provided, transactions will
    downgrade.
   </P>
  </form>
 </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************


Dim IsPostBack
```

```
If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
End if

     If IsPostBack Then
       ' Parse form data
        ParseFormData()
        ' process order
        ProcessOrder()
        ' redirect to response page
        Server.Transfer("status.asp")
     Else
        InitFormData()
     End If


Sub ProcessOrder()

    ' Create an empty order
     Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
     order.setPartName("order")
  ' Create an empty part
     Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")


     ' Build 'orderoptions'
     res=op.put("ordertype", "SALE")
     ' add 'orderoptions to order
     res=order.addPart("orderoptions", op)

     ' Build 'merchantinfo'
     res=op.clear()
     res=op.put("configfile", configfile)
```

```
' add 'merchantinfo to order
res=order.addPart("merchantinfo", op)

' Build 'billing'
' Required for AVS. If not provided,
' transactions will downgrade.
res=op.clear()
res=op.put("zip", bzip)
res=op.put("addrnum", baddrnum)
' add 'billing to order
res=order.addPart("billing", op)

' Build 'creditcard'
res=op.clear()
res=op.put("cardnumber", cardnumber)
res=op.put("cardexpmonth", expmonth)
res=op.put("cardexpyear", expyear)
' add 'creditcard to order
res=order.addPart("creditcard", op)

' Build 'payment'
res=op.clear()
res=op.put("chargetotal", total)
' add 'payment to order
res=order.addPart("payment", op)

' build 'periodic' part
res=op.clear()
res=op.put("action", "SUBMIT")
res=op.put("startdate", startdate)
res=op.put("periodicity", periodicity)
res=op.put("installments", installments)
res=op.put("threshold", pbthreshold)
' add 'periodic' to order
```

```
    res=order.addPart("periodic", op)


    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp

    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op    = Nothing
End Sub

%>
```

# Sample Code to Modify a Recurring Credit Card Transaction Using ASP and Visual Basic

The code shown below demonstrates how to modify a Recurring Credit Card Transaction (Periodic Bill). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<!-- #include file=PB_MODIFY.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>PB_MODIFY</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
```

```
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="PB_MODIFY.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> PERIODIC BILLING
(MODIFY)</font></b><br>
      </p>
      <p align="center">An Example of Periodic Billing Modify
Transaction with Minimum
        Required Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="368" border="0" height="249" bgcolor="#c0c0c0"
style="WIDTH: 368px; HEIGHT: 249px">
            <tr>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="184" style="WIDTH: 184px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE:
solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="184" style="WIDTH:
184px">Total:</TD>
```

```
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="szip3"
style="WIDTH: 45px; HEIGHT: 22px" size="6"
value="<%=subtotal%>" name="total"></TD>
            </TR>
            <!--
            <tr>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
-->
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="184" style="WIDTH:
184px">Card Number:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
            </TR>
            <TR>
```

```
          <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="220" style="WIDTH:
220px">Exp. Month:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"></TD>
          <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid">
            <select id="expmonth" name="expmonth"
size="1">
              <%WriteMonthOpts()%>
            </select></TD>
        </TR>         <TR>
          <TD height="28" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid; HEIGHT: 28px"> </TD>
          <TD height="28" width="184" style="WIDTH: 184px;
HEIGHT: 28px">Exp. Year:</TD>
          <TD height="28" width="115" style="WIDTH: 115px;
HEIGHT: 28px"></TD>
          <TD height="28" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid; HEIGHT: 28px">
            <select id="expyear" name="expyear" size="1">
              <%WriteYearOpts()%>
            </select></TD>
        </TR>
        <tr>
          <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="184" style="WIDTH:
184px"> </TD>
          <TD height="1" width="115" style="WIDTH:
115px"></TD>
```

```
               <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD>
             </tr>
             <TR>
               <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
               <TD height="1" width="184" style="WIDTH:
184px">Action:</TD>
               <TD height="1" width="115" style="WIDTH:
115px"></TD>
               <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><b>MODIFY</b></TD>
             </TR>
             <TR>
               <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
               <TD height="1" width="184" style="WIDTH:
184px">Start Date:</TD>
               <TD height="1" width="115" style="WIDTH:
115px"></TD>
               <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=startdate%>" name="startdate"></TD>
             </TR>
             <TR>
               <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
               <TD height="1" width="184" style="WIDTH:
184px">Periodicity:</TD>
               <TD height="1" width="115" style="WIDTH:
115px"></TD>
               <TD height="1" width="249" style="WIDTH: 249px;
```

```
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=periodicity%>"
name="periodicity"></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="184" style="WIDTH:
184px">Installments:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=installments%>"
name="installments"></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="184" style="WIDTH:
184px">Threshold:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=pbthreshold%>"
name="pbthreshold"></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="184" style="WIDTH:
```

```
184px">Order ID<FONT color="red">*</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px; BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px" size="22" value="<%=oid%>" name="oid"></TD>
            </TR>
            <TR>
              <TD style="WIDTH: 30px; BORDER-LEFT-STYLE: solid; HEIGHT: 23px; BORDER-BOTTOM-STYLE: solid" width="30" height="23"> </TD>
              <TD style="WIDTH: 184px; HEIGHT: 23px; BORDER-BOTTOM-STYLE: solid" width="184" height="23"> </TD>
              <TD style="WIDTH: 115px; HEIGHT: 23px; BORDER-BOTTOM-STYLE: solid" width="115" height="23"> </TD>
              <TD style="WIDTH: 249px;BORDER-RIGHT-STYLE: solid;HEIGHT: 23px;BORDER-BOTTOM-STYLE: solid" width="249" height="23"> </TD>
            </TR>
          </TABLE>
        </center>
        <p align="center"><input type="submit" value="Submit" name="Submit"></p>
      </div>
      <P align="left"><FONT color="red">*</FONT>) You MUST pass a valid Order ID for an
        EXISTING periodic bill to identify which bill you want to cancel.
      </P>
    </form>
  </body>
</HTML>
```

# Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'*********************************************


Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
End if

     If IsPostBack Then
       ' Parse form data
        ParseFormData()
        ' process order
        ProcessOrder()
        ' redirect to response page
        Server.Transfer("status.asp")
     Else
        InitFormData()
     End If


Sub ProcessOrder()
```

```
    ' Create an empty order
     Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
     order.setPartName("order")
  ' Create an empty part
     Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")

     ' Build 'orderoptions'
     res=op.put("ordertype", "SALE")
     ' add 'orderoptions to order
     res=order.addPart("orderoptions", op)

     ' Build 'merchantinfo'
     res=op.clear()
     res=op.put("configfile", configfile)
     ' add 'merchantinfo to order
     res=order.addPart("merchantinfo", op)

     ' Build 'creditcard'
     res=op.clear()
     res=op.put("cardnumber", cardnumber)
     res=op.put("cardexpmonth", expmonth)
     res=op.put("cardexpyear", expyear)
     ' add 'creditcard to order
     res=order.addPart("creditcard", op)

     ' Build 'payment'
     res=op.clear()
     res=op.put("chargetotal", total)
     ' add 'payment to order
     res=order.addPart("payment", op)
    ' build 'periodic' part
    res=op.clear()
    res=op.put("action", "MODIFY")
    res=op.put("startdate", startdate)
    res=op.put("periodicity", periodicity)
    res=op.put("installments", installments)
    res=op.put("threshold", pbthreshold)
    ' add 'periodic' to order
    res=order.addPart("periodic", op)

    ' Add oid
    res=op.clear()
    res=op.put("oid", oid)
    ' add 'transactiondetails to order
    res=order.addPart("transactiondetails", op)

    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp


    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op   = Nothing
End Sub

%>
```

# Sample Code to Cancel a Recurring Credit Card Transaction Using ASP and Visual Basic

The code shown below demonstrates how to Cancel an existing Recurring Credit Card Transaction (Periodic Bill). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=PB_CANCEL.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>PB_CANCEL</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
```

```
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="PB_CANCEL.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> PERIODIC BILLING
(CANCEL)</font></b><br>
      </p>
      <p align="center">An Example of Periodic Billing Cancel
Transaction with Minimum
        Required Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="368" border="0" height="249" bgcolor="#c0c0c0"
style="WIDTH: 368px; HEIGHT: 249px">
            <tr>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="184" style="WIDTH: 184px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE:
solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="184" style="WIDTH:
184px">Total:</TD>
```

```
          <TD height="1" width="115" style="WIDTH:
115px"></TD>
          <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="szip3"
style="WIDTH: 45px; HEIGHT: 22px" size="6"
value="<%=subtotal%>" name="total"></TD>
        </TR>
        <!--
        <tr>
          <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="220" style="WIDTH:
220px"> </TD>
          <TD height="1" width="115" style="WIDTH:
115px"></TD>
          <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD>
        </tr>
-->
        <TR>
          <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="184" style="WIDTH:
184px">Card Number:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"></TD>
          <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
        </TR>
        <TR>
```

```
       <TD height="1" width="30" style="WIDTH: 30px; BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="184" style="WIDTH: 184px">Exp. Month:</TD>
       <TD height="1" width="115" style="WIDTH: 115px"></TD>
       <TD height="1" width="249" style="WIDTH: 249px; BORDER-RIGHT-STYLE: solid">
        <select id="expmonth" name="expmonth" size="1">
         <%WriteMonthOpts()%>
        </select></TD>
      </TR>
      <TR>
       <TD height="28" width="30" style="WIDTH: 30px; BORDER-LEFT-STYLE: solid; HEIGHT: 28px"> </TD>
       <TD height="28" width="184" style="WIDTH: 184px; HEIGHT: 28px">Exp. Year:</TD>
       <TD height="28" width="115" style="WIDTH: 115px; HEIGHT: 28px"></TD>
       <TD height="28" width="249" style="WIDTH: 249px; BORDER-RIGHT-STYLE: solid; HEIGHT: 28px">
        <select id="expyear" name="expyear" size="1">
         <%WriteYearOpts()%>
        </select></TD>
      </TR>
      <tr>
       <TD height="1" width="30" style="WIDTH: 30px; BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="184" style="WIDTH: 184px"> </TD>
       <TD height="1" width="115" style="WIDTH:
```

```
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="184" style="WIDTH:
184px">Action:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><b>CANCEL</b></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="184" style="WIDTH:
184px">Start Date:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=startdate%>" name="startdate"></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="184" style="WIDTH:
184px">Periodicity:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
```

```
                <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=periodicity%>"
name="periodicity"></TD>
              </TR>
              <TR>
                <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
                <TD height="1" width="184" style="WIDTH:
184px">Installments:</TD>
                <TD height="1" width="115" style="WIDTH:
115px"></TD>
                <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=installments%>"
name="installments"></TD>
              </TR>
              <TR>
                <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
                <TD height="1" width="184" style="WIDTH:
184px">Threshold:</TD>
                <TD height="1" width="115" style="WIDTH:
115px"></TD>
                <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=pbthreshold%>"
name="pbthreshold"></TD>
              </TR>
              <TR>
                <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
       <TD height="1" width="184" style="WIDTH:
184px">Order ID<FONT color="red">*</FONT>:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"></TD>
       <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="22" value="<%=oid%>" name="oid"></TD>
      </TR>
      <TR>
       <TD style="WIDTH: 30px; BORDER-LEFT-STYLE:
solid; HEIGHT: 23px; BORDER-BOTTOM-STYLE: solid"
width="30" height="23"> </TD>
       <TD style="WIDTH: 184px; HEIGHT: 23px; BORDER-
BOTTOM-STYLE: solid" width="184" height="23"> </TD>
       <TD style="WIDTH: 115px; HEIGHT: 23px; BORDER-
BOTTOM-STYLE: solid" width="115" height="23"> </TD>
       <TD style="WIDTH: 249px;BORDER-RIGHT-STYLE:
solid;HEIGHT: 23px;BORDER-BOTTOM-STYLE: solid"
width="249" height="23"> </TD>
      </TR>
     </TABLE>
    </center>
    <p align="center"><input type="submit" value="Submit"
name="Submit"></p>
   </div>
   <P align="left"><FONT color="red">*</FONT>) You MUST
pass a valid Order ID for an
    EXISTING periodic bill to identify which bill you want to
modify.
   </P>
  </form>
 </body>
```

```
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************


Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
 IsPostBack = true
End if

    If IsPostBack Then
     ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
      ' redirect to response page
      Server.Transfer("status.asp")
    Else
      InitFormData()
    End If
```

```
Sub ProcessOrder()

    ' Create an empty order
     Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
     order.setPartName("order")
  ' Create an empty part
     Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")

     ' Build 'orderoptions'
     res=op.put("ordertype", "SALE")
     ' add 'orderoptions to order
     res=order.addPart("orderoptions", op)

     ' Build 'merchantinfo'
     res=op.clear()
     res=op.put("configfile", configfile)
     ' add 'merchantinfo to order
     res=order.addPart("merchantinfo", op)

     ' Build 'creditcard'
     res=op.clear()
     res=op.put("cardnumber", cardnumber)
     res=op.put("cardexpmonth", expmonth)
     res=op.put("cardexpyear", expyear)
     ' add 'creditcard to order
     res=order.addPart("creditcard", op)

     ' Build 'payment'
     res=op.clear()
     res=op.put("chargetotal", total)
     ' add 'payment to order
    res=order.addPart("payment", op)

    ' build 'periodic' part
    res=op.clear()
    res=op.put("action", "CANCEL")
    res=op.put("startdate", startdate)
    res=op.put("periodicity", periodicity)
    res=op.put("installments", installments)
    res=op.put("threshold", pbthreshold)
    ' add 'periodic' to order
    res=order.addPart("periodic", op)

    ' Add oid
    res=op.clear()
    res=op.put("oid", oid)
    ' add 'transactiondetails to order
    res=order.addPart("transactiondetails", op)


    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp

    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Set LPTxn = Nothing
    Set order = Nothing
    Set op    = Nothing
End Sub

%>
```

# Sample Code to Process a Retail Swipe Transaction Using ASP and Visual Basic

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is swiped with a credit card reader. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=RETAIL_SWIPE.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>RETAIL_SWIPE</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
```

```
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="RETAIL_SWIPE.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> RETAIL SWIPE
TRANSACTION </font></b>
        <br>
      </p>
      <p align="center">An Example Credit Card SALE
Transaction with Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="461" border="0" height="167" bgcolor="#c0c0c0"
style="WIDTH: 461px; HEIGHT: 167px">
            <tr>
              <TD height="14" width="12" style="WIDTH: 12px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE: solid;
HEIGHT: 14px"> </TD>
              <TD height="14" width="326" style="WIDTH: 326px;
BORDER-TOP-STYLE: solid; HEIGHT: 14px"> </TD>
              <TD height="14" width="2" style="WIDTH: 2px;
BORDER-TOP-STYLE: solid; HEIGHT: 14px"> </TD>
              <TD height="14" width="468" style="WIDTH: 468px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE: solid;
HEIGHT: 14px"> </TD>
            </tr>
            <TR>
              <TD height="29" width="12" style="WIDTH: 12px;
BORDER-LEFT-STYLE: solid; HEIGHT: 29px"> </TD>
```

```
          <TD height="29" width="326" style="WIDTH: 326px;
HEIGHT: 29px">Order Type:</TD>
          <TD height="29" width="2" style="WIDTH: 2px;
HEIGHT: 29px"></TD>
          <TD height="29" width="468" style="WIDTH: 468px;
BORDER-RIGHT-STYLE: solid; HEIGHT:
29px"><b>SALE</b></TD>
        </TR>
        <TR>
          <TD height="1" width="12" style="WIDTH: 12px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="326" style="WIDTH:
326px">Terminal Type<FONT color="red">*</FONT>:</TD>
          <TD height="1" width="2" style="WIDTH:
2px"> </TD>
          <TD height="1" width="468" style="WIDTH: 468px;
BORDER-RIGHT-STYLE: solid"><b>POS</b></TD>
        </TR>
        <TR>
          <TD height="33" width="12" style="WIDTH: 12px;
BORDER-LEFT-STYLE: solid; HEIGHT: 33px"> </TD>
          <TD height="33" width="326" style="WIDTH: 326px;
HEIGHT: 33px">Total:</TD>
          <TD height="33" width="2" style="WIDTH: 2px;
HEIGHT: 33px"> </TD>
          <TD height="33" width="468" style="WIDTH: 468px;
BORDER-RIGHT-STYLE: solid; HEIGHT: 33px"><INPUT
id="szip3" style="WIDTH: 45px; HEIGHT: 22px" size="6"
value="<%=subtotal%>" name="total"></TD>
        </TR>
        <!--
        <tr>
```

```
         <TD height="2" width="12" style="WIDTH: 12px;
BORDER-LEFT-STYLE: solid; HEIGHT: 2px"></TD>
         <TD height="2" width="326" style="WIDTH: 326px;
HEIGHT: 2px"></TD>
         <TD height="2" width="2" style="WIDTH: 2px;
HEIGHT: 2px"> </TD>
         <TD height="2" width="468" style="WIDTH: 468px;
BORDER-RIGHT-STYLE: solid; HEIGHT: 2px"> </TD>
        </tr>
        -->
        <TR>
         <TD height="1" width="12" style="WIDTH: 12px;
BORDER-LEFT-STYLE: solid"> </TD>
         <TD height="1" width="326" style="WIDTH:
326px">Card Track:</TD>
         <TD height="1" width="2" style="WIDTH:
2px"> </TD>
         <TD height="1" width="468" style="WIDTH: 468px;
BORDER-RIGHT-STYLE: solid"><INPUT value="<%=micr%>"
name="micr" size="46" style="WIDTH: 313px; HEIGHT:
22px"></TD>
        </TR>
        <TR>
         <TD style="WIDTH: 12px; BORDER-LEFT-STYLE:
solid; HEIGHT: 18px; BORDER-BOTTOM-STYLE: solid"
width="12" height="18"> </TD>
         <TD style="WIDTH: 326px; HEIGHT: 18px; BORDER-
BOTTOM-STYLE: solid" width="326" height="18"> </TD>
         <TD style="WIDTH: 2px; HEIGHT: 18px; BORDER-
BOTTOM-STYLE: solid" width="2" height="18"> </TD>
         <TD style="WIDTH: 468px;BORDER-RIGHT-STYLE:
solid;HEIGHT: 18px;BORDER-BOTTOM-STYLE: solid"
```

```
width="468" height="18"> </TD>
            </TR>
          </TABLE>
        </center>
      </div>
      <P align="left"><FONT color="red">*</FONT>)Set
Terminal Type to POS for an
        electronic cash register or integrated POS system,
STANDALONE for a
        point-of-sale credit card terminal, UNATTENDED for a self-
service station, or
        UNSPECIFIED for e-commerce or other applications</P>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'*********************************************
```

```
Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
End if

     If IsPostBack Then
       ' Parse form data
        ParseFormData()
        ' process order
        ProcessOrder()
        ' redirect to response page
        Server.Transfer("status.asp")
     Else
        InitFormData()
     End If


Sub ProcessOrder()

    ' Create an empty order
     Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
     order.setPartName("order")
  ' Create an empty part
     Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")


     ' Build 'orderoptions'
     ' For a test, set result to GOOD, DECLINE, or DUPLICATE
     res=op.put("result", "GOOD")
     res=op.put("ordertype", "PREAUTH")
     ' add 'orderoptions to order
```

```
res=order.addPart("orderoptions", op)


' Build 'merchantinfo'
res=op.clear()
res=op.put("configfile", configfile)
' add 'merchantinfo to order
res=order.addPart("merchantinfo", op)

' Build 'transactiondetails'
res=op.clear()
' set terminaltype to POS for an electronic
' cash register or integrated POS system,
' STANDALONE for a point-of-sale credit card terminal,
' UNATTENDED for a self-service station, or
' UNSPECIFIED for e-commerce or other applications
res=op.put("terminaltype", "POS")
res=op.put("transactionorigin", "RETAIL")
' add 'transactiondetails to order
res=order.addPart("transactiondetails", op)


' Build 'creditcard'
res=op.clear()
res=op.put("track", micr)
' add 'creditcard to order
res=order.addPart("creditcard", op)


' Build 'payment'
res=op.clear()
res=op.put("chargetotal", total)
' add 'payment to order
res=order.addPart("payment", op)
```

```
    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp


    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op   = Nothing
End Sub

%>
```

# Sample Code to Process a Retail Keyed Transaction Using ASP and Visual Basic

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is keyed in. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=RETAIL_KEYED.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>RETAIL_KEYED</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
```

```
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="RETAIL_KEYED.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> RETAIL KEYED
TRANSACTION </font></b>
        <br>
      </p>
      <p align="center">An Example Credit Card SALE
Transaction with Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="238" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 238px">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Order Type:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>SALE</b></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Terminal Type<FONT
color="red">*</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>POS</b></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Total:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
```

```
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Card Number:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expmonth" name="expmonth"
size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Year:</TD>
              <TD height="1" width="115" style="WIDTH:
```

```
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid">
        <select id="expyear" name="expyear" size="1">
         <%WriteYearOpts()%>
        </select></TD>
      </TR>
      <TR>
       <TD style="BORDER-LEFT-STYLE: solid; BORDER-BOTTOM-STYLE: solid" width="103" height="10"> </TD>
       <TD style="BORDER-BOTTOM-STYLE: solid" width="276" height="10"> </TD>
       <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE: solid" width="115" height="10"> </TD>
       <TD style="BORDER-RIGHT-STYLE: solid;BORDER-BOTTOM-STYLE: solid" width="78" height="10"> </TD>
      </TR>
     </TABLE>
    </center>
   </div>
   <P align="left"><FONT color="red">*</FONT>)Set Terminal Type to POS for an
    electronic cash register or integrated POS system, STANDALONE for a
    point-of-sale credit card terminal, UNATTENDED for a self-service station, or
    UNSPECIFIED for e-commerce or other applications</P>
   <p align="center"><input type="submit" value="Submit" name="Submit">
  </form>
  </P>
 </body>
```

```
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************


Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
End if

     If IsPostBack Then
       ' Parse form data
        ParseFormData()
        ' process order
        ProcessOrder()
        ' redirect to response page
        Server.Transfer("status.asp")
     Else
        InitFormData()
     End If
```

```
Sub ProcessOrder()

    ' Create an empty order
     Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
     order.setPartName("order")
  ' Create an empty part
     Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")

     ' Build 'orderoptions'
     res=op.put("ordertype", "SALE")
     ' add 'orderoptions to order
     res=order.addPart("orderoptions", op)


     ' Build 'merchantinfo'
     res=op.clear()
     res=op.put("configfile", configfile)
     ' add 'merchantinfo to order
     res=order.addPart("merchantinfo", op)

     ' Build 'transactiondetails'
     res=op.clear()
     ' set terminaltype to POS for an electronic
     ' cash register or integrated POS system,
     ' STANDALONE for a point-of-sale credit card terminal,
     ' UNATTENDED for a self-service station, or
     ' UNSPECIFIED for e-commerce or other applications
     res=op.put("terminaltype", "POS")
     res=op.put("transactionorigin", "RETAIL")
     ' add 'transactiondetails to order
     res=order.addPart("transactiondetails", op)
    ' Build 'creditcard'
    res=op.clear()
    res=op.put("cardnumber", cardnumber)
    res=op.put("cardexpmonth", expmonth)
    res=op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    res=order.addPart("creditcard", op)

    ' Build 'payment'
    res=op.clear()
    res=op.put("chargetotal", total)
    ' add 'payment to order
    res=order.addPart("payment", op)

    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp


    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op    = Nothing
```

```
End Sub

%>
```

# Sample Code to Process a Retail UNATTENDED Transaction Using ASP and Visual Basic

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card terminal is unattended (that is, a self-service station such as a gas station or ticket booth). In this case, you should do a partial AVS where you collect the zip code only. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=RETAIL_PARTIAL_AVS.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN" >
<HTML>
  <HEAD>
    <title>RETAIL_PARTIAL_AVS</title>
    <meta name="GENERATOR" Content="Microsoft Visual Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="RETAIL_PARTIAL_AVS.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> RETAIL PARTIAL
AVS TRANSACTION </font></b>
      </p>
      <p align="center">An Example Credit Card SALE
Transaction with Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="210" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 210px">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
          <TD height="1" width="276">Order Type:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>SALE</b></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Terminal Type<FONT
color="red">*</FONT>:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>UNATTENDED</b></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Total:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD>
        </TR>
        <tr>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276"> </TD>
          <TD height="1" width="115" style="WIDTH:
```

```
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Card Number:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expmonth" name="expmonth"
size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Year:</TD>
```

```
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select id="expyear" name="expyear" size="1">
         <%WriteYearOpts()%>
        </select></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Zip<FONT
color="red">**</FONT>:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD>
      </TR>
      <TR>
       <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
       <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
       <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE:
solid" width="115" height="10"> </TD>
       <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
      </TR>
     </TABLE>
    </center>
   </div>
```

```
      <P align="left"><FONT color="red">*</FONT> )Set
terminaltype to POS for an
        electronic cash register or integrated POS system,
STANDALONE for a
        point-of-sale credit card terminal, UNATTENDED for a self-
service station, or
        UNSPECIFIED for e-commerce or other applications</P>
      <P align="left"><FONT color="red">**</FONT>
      )You should not do AVS for a retail swiped transaction,
unless it is an
      UNATTENDED terminaltype.For an UNATTENDED
terminaltype, do a partial AVS: zip
      code only.
      <P></P>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
```

```
'
'**********************************************


Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
End if

    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
      ' redirect to response page
      Server.Transfer("status.asp")
    Else
      InitFormData()
    End If


Sub ProcessOrder()

   ' Create an empty order
    Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
    order.setPartName("order")
  ' Create an empty part
    Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")

    ' Build 'orderoptions'
    res=op.put("ordertype", "SALE")
    ' add 'orderoptions to order
```

```
res=order.addPart("orderoptions", op)


' Build 'merchantinfo'
res=op.clear()
res=op.put("configfile", configfile)
' add 'merchantinfo to order
res=order.addPart("merchantinfo", op)

' Build 'transactiondetails'
res=op.clear()
' set terminaltype to POS for an electronic
' cash register or integrated POS system,
' STANDALONE for a point-of-sale credit card terminal,
' UNATTENDED for a self-service station, or
' UNSPECIFIED for e-commerce or other applications
res=op.put("terminaltype", "UNATTENDED")
res=op.put("transactionorigin", "RETAIL")
' add 'transactiondetails to order
res=order.addPart("transactiondetails", op)

' Build 'billing'
res=op.clear()
'For an UNATTENDED terminaltype,
' do a partial AVS: zip code only.
res=op.put("zip", bzip)
' add 'billing to order
res=order.addPart("billing", op)


' Build 'creditcard'
res=op.clear()
res=op.put("cardnumber", cardnumber)
res=op.put("cardexpmonth", expmonth)
```

```
    res=op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    res=order.addPart("creditcard", op)

    ' Build 'payment'
    res=op.clear()
    res=op.put("chargetotal", total)
    ' add 'payment to order
    res=order.addPart("payment", op)

    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp


    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op    = Nothing
End Sub

%>
```

# Sample Code to perform a VirtualCheck SALE Transaction Using ASP and Visual Basic*

The code shown below demonstrates how to process a VirtualCheck SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=VCHECK_SALE.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>VCHECK_SALE</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
```

```
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="VCHECK_SALE.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><font size="5"><label><b>VIRTUAL
CHECK SALE TRANSACTION </b></label></font>
      </p>
      <p align="center">An Example of a Virtual Check SALE
      </p>
      <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="367" border="0" align="left" bgcolor="#c0c0c0"
style="WIDTH: 367px; HEIGHT: 311px">
        <TR>
          <TD height="25" width="44" bgcolor="#ffffff"> </TD>
          <TD height="25" width="16" style="BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="25" width="90" style="BORDER-TOP-
STYLE: solid"><FONT>Name</FONT>:</TD>
          <TD height="25" width="54" style="BORDER-TOP-
STYLE: solid"> </TD>
          <TD height="25" width="173" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"><INPUT
value="<%=bname%>" name="bname"></TD>
        </TR>
        <TR>
          <TD height="25" width="44" bgcolor="#ffffff"> </TD>
          <TD height="25" width="16" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="25" width="90">Company:</TD>
          <TD height="25" width="54"> </TD>
          <TD height="25" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcompany%>"
```

```
name="bcompany"></TD>
        </TR>
        <TR>
          <TD height="25" width="44" bgcolor="#ffffff"> </TD>
          <TD height="25" width="16" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="25" width="90">Address 1:</TD>
          <TD height="25" width="54"> </TD>
          <TD height="25" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=baddr1%>"
name="baddr1"></TD>
        </TR>
        <TR>
          <TD height="26" width="44" bgcolor="#ffffff"> </TD>
          <TD height="26" width="16" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="26" width="90">Address 2:</TD>
          <TD height="26" width="54"> </TD>
          <TD height="26" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=baddr2%>"
name="baddr2"></TD>
        </TR>
        <TR>
          <TD height="25" width="44" bgcolor="#ffffff"> </TD>
          <TD height="25" width="16" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="25" width="90">City:</TD>
          <TD height="25" width="54"> </TD>
          <TD height="25" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcity%>"
name="bcity"></TD>
        </TR>
        <TR>
          <TD height="24" width="44" bgcolor="#ffffff">
          </TD>
          <TD height="24" width="16" style="BORDER-LEFT-
STYLE: solid">
          </TD>
          <TD height="24" width="90">State:
          </TD>
          <TD height="24" width="54"> </TD>
          <TD height="24" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 30px; HEIGHT: 22px"
size="3" value="<%=bstate%>" name="bstate"></TD>
        </TR>
        <TR>
          <TD height="24" width="44" bgcolor="#ffffff"> </TD>
          <TD height="24" width="16" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="24" width="90">Zip:</TD>
          <TD height="24" width="54"> </TD>
          <TD height="24" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD>
        </TR>
        <tr>
          <TD height="19" width="44" bgcolor="#ffffff"> </TD>
          <TD height="19" width="16" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="19" width="90">Country:</TD>
          <TD height="19" width="54"> </TD>
          <TD height="19" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 28px; HEIGHT: 22px"
size="2" value="<%=bcountry%>" name="bcountry"></TD>
```

```
        </tr>
        <tr>
          <TD height="1" width="44" bgcolor="#ffffff"> </TD>
          <TD height="1" width="16" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="1" width="78">e-mail:</TD>
          <TD height="1" width="7"> </TD>
          <TD height="1" width="56" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bemail%>"
name="bemail"></TD>
        </tr>
        <tr>
          <TD height="25" width="44" bgcolor="#ffffff"> </TD>
          <TD height="25" width="16" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="25" width="78">Phone:</TD>
          <TD height="25" width="7"> </TD>
          <TD height="25" width="56" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bphone%>"
name="bphone" size="20"></TD>
        </tr>
        <tr>
          <TD height="40" width="44" bgcolor="#ffffff"
style="HEIGHT: 40px"> </TD>
          <TD height="40" width="16" style="BORDER-LEFT-
STYLE: solid; HEIGHT: 40px; BORDER-BOTTOM-STYLE:
solid"> </TD>
          <TD height="40" width="78" style="HEIGHT: 40px;
BORDER-BOTTOM-STYLE: solid">Fax:</TD>
          <TD height="40" width="7" style="HEIGHT: 40px;
BORDER-BOTTOM-STYLE: solid"> </TD>
          <TD height="40" width="56" style="BORDER-RIGHT-
```

```
STYLE: solid; HEIGHT: 40px; BORDER-BOTTOM-STYLE:
solid"><INPUT value="<%=bfax%>" name="bfax"
size="20"></TD>
        </tr>
      </TABLE>
      <TABLE id="TABLE2" cellSpacing="0" cellPadding="0"
width="353" border="0" align="left" height="290"
bgcolor="#c0c0c0" style="WIDTH: 353px; HEIGHT: 290px">
        <TR>
          <TD height="24" width="13" bgcolor="#ffffff"
style="WIDTH: 13px; HEIGHT: 24px"> </TD>
          <TD height="24" width="19" style="BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid; HEIGHT:
24px"> </TD>
          <TD height="24" width="276" style="BORDER-TOP-
STYLE: solid; HEIGHT: 24px">Total:</TD>
          <TD height="24" width="44" style="BORDER-TOP-
STYLE: solid; HEIGHT: 24px"> </TD>
          <TD height="24" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid; HEIGHT:
24px"><INPUT style="WIDTH: 45px; HEIGHT: 22px" size="4"
value="<%=subtotal%>" name="total"></TD>
        </TR>
        <TR>
          <TD height="19" width="13" bgcolor="#ffffff"
style="WIDTH: 13px; HEIGHT: 19px"> </TD>
          <TD height="19" width="19" style="BORDER-LEFT-
STYLE: solid; HEIGHT: 19px"> </TD>
          <TD height="19" width="294" style="HEIGHT:
19px"> </TD>
          <TD height="19" width="13" style="HEIGHT:
19px"> </TD>
```

```
          <TD height="19" width="151" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 19px"> </TD>
        </TR>
        <TR>
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px"> </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="1" width="294">Transit Routing:</TD>
          <TD height="1" width="13"> </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="routeNbr" value="<%=routeNbr%>"></TD>
        </TR>
        <TR>
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px"> </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="1" width="294">Account Number:</TD>
          <TD height="1" width="13"> </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="accountNbr"
value="<%=accountNbr%>"></TD>
        </TR>
        <TR>
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px"> </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="1" width="294">Check Number
```

```
(optional):</TD>
          <TD height="1" width="13"> </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="checkNbr"
value="<%=checkNbr%>"></TD>
        </TR>
        <TR>
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px"> </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="1" width="294">Account Type
(pc/bc):</TD>
          <TD height="1" width="13"> </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="accttype" value="<%=accttype%>"></TD>
        </TR>
        <TR>
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px"> </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="1" width="294">Bank Name :</TD>
          <TD height="1" width="13"> </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="bankName"
value="<%=bankName%>"></TD>
        </TR>
        <TR>
```

```
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px"> </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="1" width="294">Bank State :</TD>
          <TD height="1" width="13"> </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 28px; HEIGHT: 22px"
size="2" name="bankState"
value="<%=bankState%>"></TD>
        </TR>
        <tr>
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px"> </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="1" width="294">SSN (optional):</TD>
          <TD height="1" width="13"> </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="ssn" value="<%=ssn%>"></TD>
        </tr>
        <TR>
          <TD height="21" width="13" bgcolor="#ffffff"
style="WIDTH: 13px"> </TD>
          <TD height="21" width="19" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="21" width="294">Driver License :</TD>
          <TD height="21" width="13"> </TD>
          <TD height="21" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="dl" value="<%=dl%>"></TD>
```

```
    </TR>
    <TR>
     <TD height="29" width="13" bgcolor="#ffffff"
style="WIDTH: 13px; HEIGHT: 29px"> </TD>
     <TD height="29" width="19" style="BORDER-LEFT-
STYLE: solid; HEIGHT: 29px"> </TD>
     <TD height="29" width="294" style="HEIGHT:
29px">DL State :</TD>
     <TD height="29" width="7" style="HEIGHT: 29px;
"> </TD>
     <TD height="29" width="151" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 29px"><INPUT id="startdate"
style="WIDTH: 28px; HEIGHT: 19px" size="1" name="dlState"
value="<%=dlState%>"></TD>
    </TR>
    <tr>
     <TD colspan="5" align="middle"
bgcolor="#ffffff"> </TD>
    </tr>
    <tr>
     <TD colspan="5" align="middle" bgcolor="#ffffff"
style="HEIGHT: 7px"><INPUT name='Submit' type="submit"
value='Submit'></TD>
    </tr>
   </TABLE>
  </form>
 </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************


Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
End if

     If IsPostBack Then
       ' Parse form data
        ParseFormData()
        ' process order
        ProcessOrder()
        ' redirect to response page
        Server.Transfer("status.asp")
     Else
        InitFormData()
     End If


Sub ProcessOrder()

    ' Create an empty order
     Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
    res=order.setPartName("order")
  ' Create an empty part
    Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")

    ' Build 'orderoptions'
    res=op.put("result", "LIVE")
    res=op.put("ordertype", "SALE")
    ' add 'orderoptions to order
    res=order.addPart("orderoptions", op)


    ' Build 'merchantinfo'
    res=op.clear()
    res=op.put("configfile", configfile)
    ' add 'merchantinfo to order
    res=order.addPart("merchantinfo", op)


    ' Build 'billing'
    res=op.clear()
    res=op.put("name", bname)
    res=op.put("address1", baddr1)
    res=op.put("address2", baddr2)
    res=op.put("state", bstate)
    res=op.put("city", bcity)
    res=op.put("zip", bzip)
    res=op.put("phone", bphone)
    res=op.put("email", bemail)
    res=op.put("fax", bfax)
    ' add 'billing to order
    res=order.addPart("billing", op)
    ' Build 'telecheck' part
    res=op.clear()
    res=op.put("routing", routeNbr)
    res=op.put("account", accountNbr)
    res=op.put("checknumber", checkNbr)
    res=op.put("accounttype", accttype)
    res=op.put("dl", dl)
    res=op.put("ssn", ssn)
    res=op.put("dlstate", dlState)
    res=op.put("bankname", bankName)
    res=op.put("bankstate", bankState)
    ' add 'telecheck' to order
    res=order.addPart("telecheck", op)


    ' Build 'payment'
    res=op.clear()
    res=op.put("chargetotal", total)
    ' add 'payment to order
    res=order.addPart("payment", op)


    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp

    outXml =order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)
    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op  = Nothing
End Sub

%>
```

# Sample Code to perform a VirtualCheck VOID Transaction Using ASP and Visual Basic*

The code shown below demonstrates how to process a VirtualCheck VOID transaction. You can only void a VirtualCheck SALE transaction if it has not yet been sent for processing (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=VCHECK_VOID.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>VCHECK_VOID</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="VCHECK_VOID.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><font size="5"><b>VIRTUAL CHECK
VOID TRANSACTION </b></font>
      </p>
      <p align="center">An Example of a Virtual Check
VOID</p>
      <TABLE id="TABLE2" align="center" cellSpacing="0"
cellPadding="0" width="313" border="0" height="159"
bgcolor="#c0c0c0" style="WIDTH: 313px; HEIGHT: 159px">
        <TR>
          <TD height="24" width="19" style="BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid; HEIGHT:
24px"> </TD>
          <TD height="24" width="276" style="BORDER-TOP-
STYLE: solid; HEIGHT: 24px"> </TD>
          <TD height="24" width="44" style="BORDER-TOP-
STYLE: solid; HEIGHT: 24px"> </TD>
          <TD height="24" width="78" style="BORDER-TOP-
```

```
STYLE: solid; BORDER-RIGHT-STYLE: solid; HEIGHT:
24px"> </TD>
        </TR>

        <TR>
          <TD height="24" width="19" style="BORDER-LEFT-
STYLE: solid; HEIGHT: 24px"> </TD>
          <TD height="24" width="276" style="HEIGHT:
24px">Total:</TD>
          <TD height="24" width="44" style="HEIGHT:
24px"> </TD>
          <TD height="24" width="78" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 24px"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=subtotal%>"
name="total"></TD>
        </TR>
        <TR>
          <TD height="19" width="19" style="BORDER-LEFT-
STYLE: solid; HEIGHT: 19px"> </TD>
          <TD height="19" width="294" style="HEIGHT:
19px"> </TD>
          <TD height="19" width="13" style="HEIGHT:
19px"> </TD>
          <TD height="19" width="151" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 19px"> </TD>
        </TR>
        <TR>
          <TD height="36" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid; HEIGHT: 36px"> </TD>
          <TD height="36" width="110" style="WIDTH: 110px;
HEIGHT: 36px">Order ID <FONT color="red">*</FONT>
            :</TD>
          <TD height="36" width="9" style="WIDTH: 9px;
```

```
HEIGHT: 36px"></TD>
          <TD height="36" width="78" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 36px"><INPUT style="WIDTH: 150px;
HEIGHT: 22px" size="60" value="<%=oid%>"
name="oid"> </TD>
        </TR>
        <TR>
          <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
          <TD style="WIDTH: 110px; BORDER-BOTTOM-STYLE:
solid" width="110" height="10"> </TD>
          <TD style="WIDTH: 9px; BORDER-BOTTOM-STYLE:
solid" width="9" height="10"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
        </TR>
      </TABLE>
      <P align="left"><FONT color="red">*</FONT>) The 'Order
ID' field must be a valid
        order ID from a prior Virtual Check Sale</P>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    <br>
    </P>
    <DIV style="Z-INDEX: 101; LEFT: 7px; WIDTH: 533px;
POSITION: absolute; TOP: 442px; HEIGHT: 19px"
ms_positioning="FlowLayout">
      <P align="left"><FONT color="red">*</FONT>) The 'Order
ID' field must be a valid
        order ID from a prior Virtual Check Sale
      </P>
    </DIV>
  </body>
</HTML>
```

## Sample Visual Basic Code

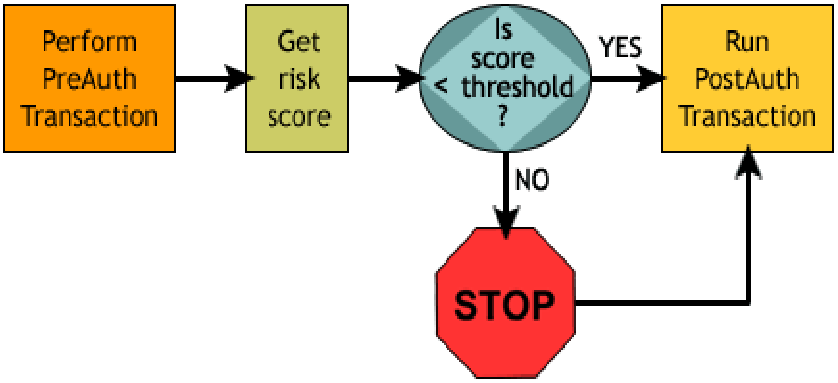
```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************


Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
End if

     If IsPostBack Then
       ' Parse form data
        ParseFormData()
        ' process order
        ProcessOrder()
        ' redirect to response page
        Server.Transfer("status.asp")
     Else
```

```
        InitFormData()
    End If


Sub ProcessOrder()

   ' Create an empty order
    Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
    res=order.setPartName("order")
  ' Create an empty part
    Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")


    ' Build 'orderoptions'
    res=op.put("result", "LIVE")
    res=op.put("ordertype", "VOID")
    ' add 'orderoptions to order
    res=order.addPart("orderoptions", op)

    ' Build 'merchantinfo'
    res=op.clear()
    res=op.put("configfile", configfile)
    ' add 'merchantinfo to order
    res=order.addPart("merchantinfo", op)

    ' Build 'telecheck' part
    res=op.clear()
    res=op.put("void", "1")
    ' add 'telecheck' to order
    res=order.addPart("telecheck", op)


    ' Build 'payment'
    res=op.clear()
    res=op.put("chargetotal", total)
    ' add 'payment to order
    res=order.addPart("payment", op)

    ' Add oid
    res=op.clear()
    res=op.put("oid", oid)
    ' add 'transactiondetails to order
    res=order.addPart("transactiondetails", op)


    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp

    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op    = Nothing
End Sub

%>
```

# Sample Code Using LinkShield™ with ASP and Visual Basic

## PreAuthorization / Postauthorization example

The code shown below demonstrates an example of one way to use LinkShield™ fraud risk scores. This example runs a preauthorization transaction, checks the fraud risk score, then runs a postauthorization if the fraud risk score is considered acceptable. The diagram shown illustrates this example. The fraud risk score used within this sample code is for explanatory purposes only; you should choose the fraud risk score threshold appropriate for your business needs. See the comments within the code for further explanation.



If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!--#include file="LINKSHIELD_PREAUTH_POSTAUTH.vb"-->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN" >
<HTML>
  <HEAD>
    <title>LINKSHIELD_SALE_VOID</title>

  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form id="Form1" action="LINKSHIELD_PREAUTH_POSTAUTH.asp" method="post"
```

```
>
      <p align="center"><b><font size="4"> LinkShield
PREAUTH/POSTAUTH TRANSACTION</font></b></p>
      <p align="center">An Example Credit Card
Preauth/Postauth with score rating
        (LinkShield). This sample first performs a credit card
PREAUTH,then checks the
        LinkShield risk score. If the score is less then given
threshold then we
        perform POSTAUTH transaction
      </p>
      <FONT color="red">*</FONT>)Replace the value for
<b>MaxScore</b> with a value
      appropriate for your business risk level.
      <div align="center">
        <TABLE id="TABLE1" style="WIDTH: 356px; HEIGHT:
238px" height="238" cellSpacing="0" cellPadding="0"
width="356" bgColor="#c0c0c0" border="0">
          <tr>
            <TD style="WIDTH: 103px; BORDER-TOP-STYLE: solid;
BORDER-LEFT-STYLE: solid" width="103" height="1"> </TD>
            <TD style="BORDER-TOP-STYLE: solid" width="276"
height="1"> </TD>
            <TD style="WIDTH: 15px; BORDER-TOP-STYLE: solid"
width="15" height="1"> </TD>
            <TD style="BORDER-TOP-STYLE: solid; BORDER-RIGHT-
STYLE: solid" width="78" height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 17px" width="103" height="17"> </TD>
            <TD style="HEIGHT: 17px" width="276"
height="17">Subtotal:</TD>
            <TD style="WIDTH: 15px; HEIGHT: 17px" width="15"
height="17"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
17px" width="78" height="17"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="12.99"
name="subtotal"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
```

```
solid; HEIGHT: 18px" width="103" height="18"> </TD>
      <TD style="HEIGHT: 18px" width="276"
height="18">Tax:</TD>
      <TD style="WIDTH: 15px; HEIGHT: 18px" width="15"
height="18"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
18px" width="78" height="18"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="0.32" name="tax"></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 11px" width="103" height="11"> </TD>
      <TD style="HEIGHT: 11px" width="276"
height="11">Shipping:</TD>
      <TD style="WIDTH: 15px; HEIGHT: 11px" width="15"
height="11"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
11px" width="78" height="11"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="1.02"
name="shipping"></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 2px" width="103" height="2"> </TD>
      <TD style="HEIGHT: 2px" width="276"
height="2">Total:</TD>
      <TD style="WIDTH: 15px; HEIGHT: 2px" width="15"
height="2"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
2px" width="78" height="2"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="14.33" name="total"></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 23px" width="103" height="23"> </TD>
      <TD style="HEIGHT: 23px" width="276"
height="23"><b>MaxScore <FONT color="red">*</FONT>
        :</b></TD>
      <TD style="WIDTH: 15px; HEIGHT: 23px" width="15"
height="23"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
23px" width="78" height="23"><INPUT style="WIDTH: 45px;
```

```
HEIGHT: 22px" size=6
   value="<%=score%>" name=score></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Card Number:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=cardnumber%>"
   name=cardnumber></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Exp. Month:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select id="expmonth" size="1"
name="expmonth">
                <%WriteMonthOpts()%>
              </select></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Exp. Year:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select id="expyear" size="1" name="expyear">
                <%WriteYearOpts()%>
              </select></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">CVM:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
```

```
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size=4
   value="<%=cvmvalue%>" name=cvmvalue></TD>
          </TR>
          <tr>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1"><b>Billing:</b></TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Name:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bname%>"
name=bname
   ></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Company:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bcompany%>"
name=bcompany
   ></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Address 1:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
```

```
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=baddr1%>"
name=baddr1
   ></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="144" height="1">Address 2:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=baddr2%>"
name=baddr2
   ></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="144" height="1">City:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bcity%>"
name=bcity
   ></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="144" height="1">State:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bstate%>"
name=bstate
   ></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="144" height="1">Country:</TD>
```

```
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bcountry%>"
name=bcountry
  ></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="144" height="1">Phone:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bphone%>"
name=bphone
  ></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="144" height="1">Email:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bemail%>"
name=bemail
  ></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="276" height="1">Address Numbers:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size=4
  value="<%=baddrnum%>" name=baddrnum></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
```

```
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Zip</FONT>:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size=4
   value="<%=bzip%>" name=bzip></TD>
          </TR>
          <tr>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276"
height="1"><b>Shipping:</b></TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Name:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=sname%>"
name=sname
   ></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Address 1:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=saddr1%>"
name=saddr1
   ></TD>
          </TR>
          <TR>
```

```
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Address 2:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=saddr2%>"
name=saddr2
   ></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">City:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=scity%>" name=scity
   ></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Zip:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=szip%>" name=szip
   ></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">State:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=sstate%>"
name=sstate
   ></TD>
          </TR>
          <TR>
```

```
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="144" height="1">Country:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=scountry%>"
name=scountry
  ></TD>
     </TR>
     <!--
      <tr>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276"> </TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
      </tr> -->
     <tr>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="276" height="1"><b>ITEM:</b></TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
     </tr>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="276" height="1">ID:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="123456-A98767" name="id2"></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
```

```
            <TD width="276" height="1">Description:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="Logo T-Shirt" name="desc2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Price:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="price2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Quantity:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1" name="qty2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Serial:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="0987654322" name="serial2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Color:</TD>
            <TD style="WIDTH: 15px" width="15"
```

```
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select size="1" name="Color">
        <option value="Red" selected>Red</option>
        <option value="Blue">Blue</option>
       </select></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="276" height="1">Size:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select size="1" name="Size">
        <option value="M">Medium</option>
        <option value="L">Large</option>
        <option value="XL" selected>XLarge</option>
       </select></TD>
     </TR>
     <tr>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="276" height="1"><b>Notes:</b></TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
     </tr>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="276" height="1">Comments:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size=14
 value="<%=comments%>" name=comments></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
```

```
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Referred:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size=14
   value="<%=referred%>" name=referred></TD>
          </TR>
          <TR>
            <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
            <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
            <TD style="WIDTH: 15px; BORDER-BOTTOM-STYLE:
solid" width="15" height="10"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
          </TR>
        </TABLE>
      </div>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'*************************************************************************
```

```
   Dim fDoPostAuth,scoreMsg,IsPostBack

 fDoPostAuth = False
 scoreMsg = ""
 IsPostBack = false

 If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
 End if

   If IsPostBack Then
     ' Parse form data
     ParseFormData()
     ' Now we process SALE order
     ProcessOrder()
     ' check LinkShield 'R_Score' value
     If Len(R_Score) = 0 Then
       scoreMsg = "No score was received in SALE transaction."
       ' client is not setup for LinkShield
     ElseIf R_Score = "ERR" Then
       scoreMsg = "Error occured in scoring during SALE transaction."
       ' scoring error
     Else
       ' get score value from the form
       Dim maxScore,txnScore
       ' set default to fail
       maxScore = CInt(-1)
       'try to parse value from form
       maxScore = CInt(score)

       ' get score value from transaction result
       txnScore = CInt(R_Score)

       ' check to see if score is acceptable
       If maxScore < txnScore Then
         scoreMsg = "The LinkShield risk score is too high : score=" & txnScore & " ( maxScore=" &
maxScore & ")."
       Else
         scoreMsg = "The LinkShield risk score is: score=" & txnScore & " ( maxScore=" & maxScore
& "). Performing POSTAUTH..."
         fDoPostAuth = True
       End If
     End If
```

```
    ' store the scoreMsg
    Session("scoreMsg") = scoreMsg

    ' if we got acceptable score and APPROVED result
    ' we run POSTAUTH transaction
    If fDoPostAuth=True AND R_Approved="APPROVED" Then
      ProcessPostAuth()
    End If

    ' we are done with transaction(s)
    ' go to status page
    Server.Transfer("status_ls2.asp")

  ' end ifPostBack
  Else
    InitFormData()
  End If

Private Sub ProcessOrder()

  Set order = Server.CreateObject("LpiCom_6_0.LPOrderPart")
  res=order.setPartName("order")
   ' create a part we will use to build the order
  Set op = Server.CreateObject("LpiCom_6_0.LPOrderPart")

  ' Build 'orderoptions'
  res = op.put("ordertype", "PREAUTH")
  ' For a test, set result to GOOD, DECLINE, or DUPLICATE
  'res = op.put("result", "GOOD")
  ' add 'orderoptions to order
  res = order.addPart("orderoptions", op)
  ' Build 'transactiondetails'
  res = op.clear()
  res = op.put("transactionorigin", "ECI")
  ' add 'transactiondetails to order
  res = order.addPart("transactiondetails", op)
  ' Build 'merchantinfo'
  res = op.clear()
  res = op.put("configfile", configfile)
  ' add 'merchantinfo to order
  res = order.addPart("merchantinfo", op)

  ' Build 'payment'
```

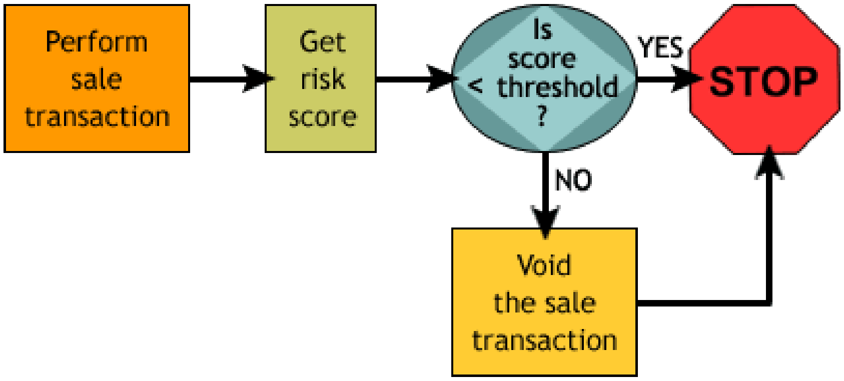
```
res = op.clear()
res = op.put("subtotal", subtotal)
res = op.put("tax",tax)
res = op.put("shipping", shipping)
res = op.put("chargetotal", total)
' add 'payment to order
res = order.addPart("payment", op)

' Build 'creditcard'
res = op.clear()
res = op.put("cardnumber", cardnumber)
res = op.put("cardexpmonth", expmonth)
res = op.put("cardexpyear", expyear)
res = op.put("cvmvalue", cvmvalue)
res = op.put("cvmindicator", cvmindicator)
' add 'creditcard to order
res = order.addPart("creditcard", op)

' Build 'billing'
res = op.clear()
res = op.put("name", bname)
res = op.put("company", bcompany)
res = op.put("address1", baddr1)
res = op.put("address2", baddr2)
res = op.put("city", bcity)
res = op.put("state", bstate)
' Required for AVS. If not provided,
' transactions will downgrade.
res = op.put("zip", bzip)
res = op.put("addrnum", baddrnum)
res = op.put("country", bcountry)
res = op.put("phone", bphone)
res = op.put("fax", bfax)
res = op.put("email", bemail)
' add 'billing to order
res = order.addPart("billing", op)

' Build 'shipping'
res = op.clear()
res = op.put("name", sname)
res = op.put("address1", saddr1)
res = op.put("address2", saddr2)
res = op.put("city", scity)
res = op.put("state", sstate)
res = op.put("zip", szip)
res = op.put("country", scountry)

' Create some parts we use to build order itmes
Dim items, item, options
Set items = Server.CreateObject("LpiCom_6_0.LPOrderPart")
Set item = Server.CreateObject("LpiCom_6_0.LPOrderPart")
Set options = Server.CreateObject("LpiCom_6_0.LPOrderPart")


' build 'item'
res = item.put("id", Request.Form("id2"))
res = item.put("description", Request.Form("desc2"))
res = item.put("quantity", Request.Form("qty2"))
res = item.put("price", Request.Form("price2"))
res = item.put("serial", Request.Form("serial2"))
' build item's options
res = op.clear()
res = op.put("name", "Color")
res = op.put("value", Request.Form("Color"))
res = options.addPart("option", op, 1)
res = op.clear()
res = op.put("name", "Size")
res = op.put("value", Request.Form("Size"))
res = options.addPart("option", op, 2)
' add 'options' to item
res = item.addPart("options", options)
' add 'item' to 'items' collection
res = items.addPart("item", item)
' add 'items' to order
res = order.addPart("items", items)

' add notes
res = op.clear()
res = op.put("comments", comments)
res = op.put("referred", referred)
res = order.addPart("notes", op)

' create transaction object
Set LPTxn = Server.CreateObject("LpiCom_6_0.LinkPointTxn")


' get outgoing XML from 'order' object
```

```
  Dim outXml,resp

  outXml = order.toXML()

  ' Call LPTxn
  resp = LPTxn.send(keyfile, host, port, outXml)

  ' response is used for next transaction
  ' so we need to parse response
  ParseResponse(resp)

  'Store transaction data on Session
  Session("outXml") = outXml
  Session("resp") = resp

End Sub
Private Sub ProcessPostAuth()

  ' create order
  Set order = Server.CreateObject("LpiCom_6_0.LPOrderPart")
  res=order.setPartName("order")
  ' create a part we will use to build the order
  Set op = Server.CreateObject("LpiCom_6_0.LPOrderPart")

  ' Build 'orderoptions'
  ' For a test, set result to GOOD, DECLINE, or DUPLICATE
  'res = op.put("result", "GOOD")
  res = op.put("ordertype", "POSTAUTH")
  ' add 'orderoptions to order
  res = order.addPart("orderoptions", op)


  ' Build 'merchantinfo'
  res = op.clear()
  res = op.put("configfile", configfile)
  ' add 'merchantinfo to order
  res = order.addPart("merchantinfo", op)


  ' Build 'creditcard'
  res = op.clear()
  res = op.put("cardnumber", cardnumber)
  res = op.put("cardexpmonth", expmonth)
  res = op.put("cardexpyear", expyear)
  ' add 'creditcard to order
  res = order.addPart("creditcard", op)


  ' Build 'payment'
  res = op.clear()
  res = op.put("chargetotal", total)
  ' add 'payment to order
  res = order.addPart("payment", op)

  ' Add oid
  res = op.clear()
  res = op.put("oid", R_OrderNum)
  ' add 'transactiondetails to order
  res = order.addPart("transactiondetails", op)

  ' create transaction object
  Set LPTxn = Server.CreateObject("LpiCom_6_0.LinkPointTxn")

  ' get outgoing XML from 'order' object
  Dim outXml
  outXml = order.toXML()

  ' Call LPTxn
  Dim resp
  resp = LPTxn.send(keyfile, host, port, outXml)

  'Store transaction data on Session
  Session("outXml_2") = outXml
  Session("resp_2") = resp

 End Sub

%>
```

# Sample Code Using LinkShield™ with ASP and Visual Basic

## Sale / Void example

The code shown below demonstrates an example of one way to use LinkShield™ fraud risk scores. This example runs a sale transaction, checks the fraud risk score, then runs a void if the fraud risk score is considered unacceptable. The diagram shown illustrates this example. The fraud risk score used within this sample code is for explanatory purposes only; you should choose the fraud risk score threshold appropriate for your business needs. See the comments within the code for further explanation.



If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!--#include file="LINKSHIELD_SALE_VOID.vb"-->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>LINKSHIELD_SALE_VOID</title>

  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form id="Form1" action="LINKSHIELD_SALE_VOID.asp"
method="post" >
```

```
    <p align="center"><b><font size="5"> LinkShield SALE
TRANSACTION</font></b></p>
    <p align="center">An Example Credit Card SALE with score
rating (LinkShield). This
     sample first performs a credit card sale,then checks the
LinkShield risk score.
     If the score is more then given threshold then we void the
previous sale
     transaction
    </p>
    <FONT color="red">*</FONT>)Replace the value for
<b>MaxScore</b> with a value
    appropriate for your business risk level.
    <div align="center">
     <TABLE id="TABLE1" style="WIDTH: 356px; HEIGHT:
238px" height="238" cellSpacing="0" cellPadding="0"
width="356" bgColor="#c0c0c0" border="0">
      <tr>
       <TD style="WIDTH: 103px; BORDER-TOP-STYLE: solid;
BORDER-LEFT-STYLE: solid" width="103" height="1"> </TD>
       <TD style="BORDER-TOP-STYLE: solid" width="276"
height="1"> </TD>
       <TD style="WIDTH: 15px; BORDER-TOP-STYLE: solid"
width="15" height="1"> </TD>
       <TD style="BORDER-TOP-STYLE: solid; BORDER-RIGHT-
STYLE: solid" width="78" height="1"> </TD>
      </tr>
      <TR>
       <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
       <TD width="276" height="1">Order Type:</TD>
       <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
       <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><b>SALE</b></TD>
      </TR>
      <TR>
       <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 17px" width="103" height="17"> </TD>
       <TD style="HEIGHT: 17px" width="276"
height="17">Subtotal:</TD>
       <TD style="WIDTH: 15px; HEIGHT: 17px" width="15"
```

```
height="17"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
17px" width="78" height="17"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="12.99"
name="subtotal"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 18px" width="103" height="18"> </TD>
            <TD style="HEIGHT: 18px" width="276"
height="18">Tax:</TD>
            <TD style="WIDTH: 15px; HEIGHT: 18px" width="15"
height="18"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
18px" width="78" height="18"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="0.32" name="tax"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 11px" width="103" height="11"> </TD>
            <TD style="HEIGHT: 11px" width="276"
height="11">Shipping:</TD>
            <TD style="WIDTH: 15px; HEIGHT: 11px" width="15"
height="11"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
11px" width="78" height="11"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="1.02"
name="shipping"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 2px" width="103" height="2"> </TD>
            <TD style="HEIGHT: 2px" width="276"
height="2">Total:</TD>
            <TD style="WIDTH: 15px; HEIGHT: 2px" width="15"
height="2"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
2px" width="78" height="2"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="14.33" name="total"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
```

```
solid; HEIGHT: 23px" width="103" height="23"> </TD>
          <TD style="HEIGHT: 23px" width="276"
height="23"><b>MaxScore <FONT color="red">*</FONT>
             :</b></TD>
          <TD style="WIDTH: 15px; HEIGHT: 23px" width="15"
height="23"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
23px" width="78" height="23"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size=6
   value="<%=score%>" name=score></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="144" height="1">Card Number:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=cardnumber%>"
   name=cardnumber></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="276" height="1">Exp. Month:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select id="expmonth" size="1"
name="expmonth">
             <%WriteMonthOpts()%>
           </select></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="276" height="1">Exp. Year:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select id="expyear" size="1" name="expyear">
             <%WriteYearOpts()%>
```

```
            </select></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">CVM:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size=4
   value="<%=cvmvalue%>" name=cvmvalue></TD>
          </TR>
          <tr>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1"><b>Billing:</b></TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Name:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bname%>"
name=bname
   ></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Company:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bcompany%>"
name=bcompany
```

```
   ></TD>
         </TR>
         <TR>
           <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
           <TD width="144" height="1">Address 1:</TD>
           <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
           <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=baddr1%>"
name=baddr1
   ></TD>
         </TR>
         <TR>
           <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
           <TD width="144" height="1">Address 2:</TD>
           <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
           <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=baddr2%>"
name=baddr2
   ></TD>
         </TR>
         <TR>
           <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
           <TD width="144" height="1">City:</TD>
           <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
           <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bcity%>"
name=bcity
   ></TD>
         </TR>
         <TR>
           <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
           <TD width="144" height="1">State:</TD>
           <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
           <TD style="BORDER-RIGHT-STYLE: solid" width="199"
```

```
height="1"><INPUT size=17 value="<%=bstate%>"
name=bstate
   ></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Country:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bcountry%>"
name=bcountry
   ></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Phone:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bphone%>"
name=bphone
   ></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Email:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bemail%>"
name=bemail
   ></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Address Numbers:</TD>
            <TD style="WIDTH: 15px" width="15"
```

```
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size=4
   value="<%=baddrnum%>" name=baddrnum></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Zip</FONT>:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size=4
   value="<%=bzip%>" name=bzip></TD>
          </TR>
          <tr>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276"
height="1"><b>Shipping:</b></TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Name:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=sname%>"
name=sname
   ></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Address 1:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=saddr1%>"
name=saddr1
   ></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="144" height="1">Address 2:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=saddr2%>"
name=saddr2
   ></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="144" height="1">City:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=scity%>" name=scity
   ></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="144" height="1">Zip:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=szip%>" name=szip
   ></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="144" height="1">State:</TD>
```

```
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=sstate%>"
name=sstate
   ></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Country:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=scountry%>"
name=scountry
   ></TD>
          </TR>
          <!--
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr> -->
          <tr>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1"><b>ITEM:</b></TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">ID:</TD>
            <TD style="WIDTH: 15px" width="15"
```

```
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="123456-A98767" name="id2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Description:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="Logo T-Shirt" name="desc2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Price:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="price2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Quantity:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1" name="qty2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Serial:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
```

```
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="0987654322" name="serial2"></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="276" height="1">Color:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select size="1" name="Color">
              <option value="Red" selected>Red</option>
              <option value="Blue">Blue</option>
            </select></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="276" height="1">Size:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select size="1" name="Size">
              <option value="M">Medium</option>
              <option value="L">Large</option>
              <option value="XL" selected>XLarge</option>
            </select></TD>
        </TR>
        <tr>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="276" height="1"><b>Notes:</b></TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
        </tr>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="276" height="1">Comments:</TD>
          <TD style="WIDTH: 15px" width="15"
```

```
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size=14
   value="<%=comments%>" name=comments></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Referred:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size=14
   value="<%=referred%>" name=referred></TD>
          </TR>
          <TR>
            <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
            <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
            <TD style="WIDTH: 15px; BORDER-BOTTOM-STYLE:
solid" width="15" height="10"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
          </TR>
        </TABLE>
      </div>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'****************************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'*****************************************************************************************



   Dim fDoVoid,scoreMsg,IsPostBack

 fDoVoid = True
 scoreMsg = ""
 IsPostBack = false

 If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
 End if

   If IsPostBack Then
     ' Parse form data
     ParseFormData()
     ' Now we process SALE order
     ProcessOrder()
     ' check LinkShield 'R_Score' value
     If Len(R_Score) = 0 Then
       scoreMsg = "No score was received in SALE transaction. Performing VOID..."
       ' client is not setup for LinkShield
     ElseIf R_Score = "ERR" Then
       scoreMsg = "Error occured in scoring during SALE transaction. Performing VOID..."
       ' scoring error
     Else
       ' get score value from the form
       Dim maxScore,txnScore
       ' set default to fail
       maxScore = CInt(-1)
       'try to parse value from form
       maxScore = CInt(score)
```

```
    ' get score value from transaction result
    txnScore = CInt(R_Score)

    ' check to see if score is acceptable
    If maxScore < txnScore Then
     scoreMsg = "The LinkShield risk score is too high : score=" & txnScore & " ( maxScore=" &
maxScore & "). Performing VOID..."
    Else
     scoreMsg = "The LinkShield risk score is: score=" & txnScore & " ( maxScore=" & maxScore
& ")"
     fDoVoid = False
    End If
   End If

   ' store the scoreMsg
   Session("scoreMsg") = scoreMsg

   ' if we got unacceptable score or didn't get score at all
   ' we run VOID transaction
   If fDoVoid=True AND R_Approved="APPROVED" Then
    ProcessVoid()
   End If

   ' we are done with transaction(s)
   ' go to status page
   Server.Transfer("status_ls1.asp")

  ' end ifPostBack
  Else
   InitFormData()
  End If

 Private Sub ProcessOrder()

  Set order = Server.CreateObject("LpiCom_6_0.LPOrderPart")
  res=order.setPartName("order")
   ' create a part we will use to build the order
  Set op = Server.CreateObject("LpiCom_6_0.LPOrderPart")

  ' Build 'orderoptions'
  res = op.put("ordertype", "SALE")
  res = op.put("result", "GOOD")
  ' add 'orderoptions to order
  res = order.addPart("orderoptions", op)
  ' Build 'transactiondetails'
```

```
res = op.clear()
res = op.put("transactionorigin", "ECI")
' add 'transactiondetails to order
res = order.addPart("transactiondetails", op)
' Build 'merchantinfo'
res = op.clear()
res = op.put("configfile", configfile)
' add 'merchantinfo to order
res = order.addPart("merchantinfo", op)

' Build 'payment'
res = op.clear()
res = op.put("subtotal", subtotal)
res = op.put("tax",tax)
res = op.put("shipping", shipping)
res = op.put("chargetotal", total)
' add 'payment to order
res = order.addPart("payment", op)

' Build 'creditcard'
res = op.clear()
res = op.put("cardnumber", cardnumber)
res = op.put("cardexpmonth", expmonth)
res = op.put("cardexpyear", expyear)
res = op.put("cvmvalue", cvmvalue)
res = op.put("cvmindicator", cvmindicator)
' add 'creditcard to order
res = order.addPart("creditcard", op)

' Build 'billing'
res = op.clear()
res = op.put("name", bname)
res = op.put("company", bcompany)
res = op.put("address1", baddr1)
res = op.put("address2", baddr2)
res = op.put("city", bcity)
res = op.put("state", bstate)
' Required for AVS. If not provided,
' transactions will downgrade.
res = op.put("zip", bzip)
res = op.put("addrnum", baddrnum)
res = op.put("country", bcountry)
res = op.put("phone", bphone)
res = op.put("fax", bfax)
res = op.put("email", bemail)
' add 'billing to order
res = order.addPart("billing", op)

' Build 'shipping'
res = op.clear()
res = op.put("name", sname)
res = op.put("address1", saddr1)
res = op.put("address2", saddr2)
res = op.put("city", scity)
res = op.put("state", sstate)
res = op.put("zip", szip)
res = op.put("country", scountry)

' Create some parts we use to build order itmes
Dim items, item, options
Set items = Server.CreateObject("LpiCom_6_0.LPOrderPart")
Set item = Server.CreateObject("LpiCom_6_0.LPOrderPart")
Set options = Server.CreateObject("LpiCom_6_0.LPOrderPart")


' build 'item'
res = item.put("id", Request.Form("id2"))
res = item.put("description", Request.Form("desc2"))
res = item.put("quantity", Request.Form("qty2"))
res = item.put("price", Request.Form("price2"))
res = item.put("serial", Request.Form("serial2"))
' build item's options
res = op.clear()
res = op.put("name", "Color")
res = op.put("value", Request.Form("Color"))
res = options.addPart("option", op, 1)
res = op.clear()
res = op.put("name", "Size")
res = op.put("value", Request.Form("Size"))
res = options.addPart("option", op, 2)
' add 'options' to item
res = item.addPart("options", options)
' add 'item' to 'items' collection
res = items.addPart("item", item)
' add 'items' to order
res = order.addPart("items", items)
```

```
  ' add notes
  res = op.clear()
  res = op.put("comments", comments)
  res = op.put("referred", referred)
  res = order.addPart("notes", op)

  ' create transaction object
  Set LPTxn = Server.CreateObject("LpiCom_6_0.LinkPointTxn")


  ' get outgoing XML from 'order' object
  Dim outXml,resp


  outXml = order.toXML()

  ' Call LPTxn
  resp = LPTxn.send(keyfile, host, port, outXml)

  ' response is used for next transaction
  ' so we need to parse response
  ParseResponse(resp)

  'Store transaction data on Session
  Session("outXml") = outXml
  Session("resp") = resp

End Sub
Private Sub ProcessVoid()

  ' create order
  Set order = Server.CreateObject("LpiCom_6_0.LPOrderPart")
  res=order.setPartName("order")
  ' create a part we will use to build the order
  Set op = Server.CreateObject("LpiCom_6_0.LPOrderPart")

  ' Build 'orderoptions'
  ' For a test, set result to GOOD, DECLINE, or DUPLICATE
  'res = op.put("result", "GOOD")
  res = op.put("ordertype", "VOID")
  ' add 'orderoptions to order
  res = order.addPart("orderoptions", op)


  ' Build 'merchantinfo'
  res = op.clear()
```

```
    res = op.put("configfile", configfile)
    ' add 'merchantinfo to order
    res = order.addPart("merchantinfo", op)


    ' Build 'creditcard'
    res = op.clear()
    res = op.put("cardnumber", cardnumber)
    res = op.put("cardexpmonth", expmonth)
    res = op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    res = order.addPart("creditcard", op)


    ' Build 'payment'
    res = op.clear()
    res = op.put("chargetotal", total)
    ' add 'payment to order
    res = order.addPart("payment", op)

    ' Add oid
    res = op.clear()
    res = op.put("oid", R_OrderNum)
    ' add 'transactiondetails to order
    res = order.addPart("transactiondetails", op)

    ' create transaction object
    Set LPTxn = Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml
    outXml = order.toXML()

    ' Call LPTxn
    Dim resp
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session
    Session("outXml_2") = outXml
    Session("resp_2") = resp

  End Sub

%>
```

# Sample Code to Calculate Shipping Charges Using ASP and Visual Basic

The code shown below demonstrates how to use the shipping calculator. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=SHIPPING.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>SHIPPING</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
```

```
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="SHIPPING.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><font size="5"><b>CALCULATE
SHIPPING</b></font></p>
      <p align="center">
        Calculate shipping for a dollar amount based upon ship
weight, carrier, and
        other factors passed to the function.</p>
      <div align="center">
        <center>
          <table id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="29" bgcolor="#c0c0c0">
            <tr>
              <td height="1" width="19" style="BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid"> </td>
              <td height="24" width="90" style="BORDER-TOP-
STYLE: solid">Ship State:</td>
              <td height="1" width="44" style="BORDER-TOP-
STYLE: solid"> </td>
              <td height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"><input
id="bstate0" style="WIDTH: 30px; HEIGHT: 22px" size="3"
value="<%=sstate%>" name="sstate"></td>
            </tr>
            <tr>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td>
              <td height="24" width="90">Ship Zip:</td>
              <td height="1" width="44"> </td>
              <td height="1" width="78" style="BORDER-RIGHT-
```

```
STYLE: solid"><input id="bzip1" style="WIDTH: 45px; HEIGHT:
22px" size="4" value="<%=szip%>" name="szip"></td>
      </tr>
      <tr>
        <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td>
        <td height="19" width="90">Ship Country:</td>
        <td height="1" width="44"> </td>
        <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input id="bzip2" style="WIDTH: 28px; HEIGHT:
22px" size="2" value="<%=scountry%>"
name="scountry"></td>
      </tr>
      <tr>
        <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td>
        <td height="1" width="276">Ship Carrier:</td>
        <td height="1" width="44"> </td>
        <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input style="WIDTH: 28px; HEIGHT: 22px"
size="1" value="<%=scarrier%>" name="scarrier"></td>
      </tr>
      <tr>
        <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td>
        <td height="1" width="276">Items:</td>
        <td height="1" width="44"> </td>
        <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input style="WIDTH: 28px; HEIGHT: 22px"
size="1" value="<%=sitems%>" name="sitems"></td>
      </tr>
      <tr>
```

```
        <td height="1" width="19" style="BORDER-LEFT-STYLE: solid"> </td>
        <td height="1" width="276">Weight:</td>
        <td height="1" width="44"> </td>
        <td height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><input style="WIDTH: 28px; HEIGHT: 22px" size="1" value="<%=sweight%>" name="sweight"></td>
       </tr>
       <tr>
        <td height="1" width="19" style="BORDER-LEFT-STYLE: solid"> </td>
        <td height="1" width="276"> </td>
        <td height="1" width="44"> </td>
        <td height="1" width="78" style="BORDER-RIGHT-STYLE: solid"> </td>
       </tr>
       <tr>
        <td height="1" width="19" style="BORDER-LEFT-STYLE: solid; BORDER-BOTTOM-STYLE: solid"> </td>
        <td height="1" width="276" style="BORDER-BOTTOM-STYLE: solid">Total:</td>
        <td height="1" width="44" style="BORDER-BOTTOM-STYLE: solid"> </td>
        <td height="1" width="78" style="BORDER-RIGHT-STYLE: solid; BORDER-BOTTOM-STYLE: solid"><input id="szip1" style="WIDTH: 45px; HEIGHT: 22px" size="4" value="<%=stotal%>" name="stotal"></td>
       </tr>
      </table>
     </center>
    </div>
    <p align="center"><input id="submit" name="Submit"
```

```
type="submit" value="Submit">
      </p>
      <p align="center"><b> NOTE:</b> For Calculate Shipping to work properly, the
        merchant account must be configured with a shipping file. For instructions,
        contact LinkPoint technical support .
      </p>
    </form>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'**********************************************


Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
End if
```

```
    If IsPostBack Then
      ' Parse form data
       ParseFormData()
       ' process order
       ProcessOrder()
       ' redirect to response page
       Server.Transfer("status.asp")
    Else
       InitFormData()
    End If


Sub ProcessOrder()

   ' Create an empty order
    Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
    order.setPartName("order")
  ' Create an empty part
    Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")


    ' Build 'orderoptions'
    res=op.put("ordertype", "CALCSHIPPING")
    ' add 'orderoptions to order
    res=order.addPart("orderoptions", op)

    res=op.clear()
    ' Build 'merchantinfo'
    res=op.put("configfile", configfile)
    ' add 'merchantinfo to order
    res=order.addPart("merchantinfo", op)

    res=op.clear()
    res=op.put("carrier", scarrier)
    res=op.put("weight", sweight)
    res=op.put("total", stotal)
    res=op.put("state", sstate)
    res=op.put("items", sitems)
    res=order.addPart("shipping", op)

    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp


    outXml = order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op    = Nothing
End Sub

%>
```

# Sample Code to Calculate Sales Tax Using ASP and Visual Basic

The code shown below demonstrates how to use the Tax calculator. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<!-- #include file=TAX.vb -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>TAX</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="TAX.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><font size="5"><b>CALCULATE
TAX</b></font></p>
      <p align="center">
        Calculate sales tax for a dollar amount based upon a sales
tax table set up in
        the merchant account. The sales tax table will<br>
        base the sales tax computations upon the Zip Code passed
('Tax Zip') .<br>
            </p>
      <div align="center">
        <center>
          <table id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="26" bgcolor="#c0c0c0">
            <tr>
              <td height="10" width="19" style="BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid"> </td>
              <td height="10" width="276" style="BORDER-TOP-
STYLE: solid"> </td>
              <td height="10" width="44" style="BORDER-TOP-
STYLE: solid"> </td>
              <td height="10" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </td>
            </tr>
            <tr>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td>
              <td height="24" width="90">Tax State:</td>
              <td height="1" width="44"> </td>
              <td height="1" width="78" style="BORDER-RIGHT-
```

```
STYLE: solid"><input style="WIDTH: 30px; HEIGHT: 22px"
size="3" value="<%=sstate%>" name="sstate"></td>
            </tr>
            <tr>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td>
              <td height="24" width="90">Tax Zip:</td>
              <td height="1" width="44"> </td>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=szip%>" name="szip"></td>
            </tr>
            <tr>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td>
              <td height="1" width="276">Subtotal:</td>
              <td height="1" width="44"> </td>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=stotal%>" name="stotal"></td>
            </tr>
            <tr>
              <td height="10" width="19" style="BORDER-LEFT-
STYLE: solid; BORDER-BOTTOM-STYLE: solid"> </td>
              <td height="10" width="276" style="BORDER-
BOTTOM-STYLE: solid"> </td>
              <td height="10" width="44" style="BORDER-BOTTOM-
STYLE: solid"> </td>
              <td height="10" width="78" style="BORDER-RIGHT-
STYLE: solid; BORDER-BOTTOM-STYLE: solid"> </td>
            </tr>
          </table>
```

```
        </center>
      </div>
      <!-- <pre>                            </pre> -->
      <p align="center"><input id="submit" name="Submit"
type="submit" value="Submit"></p>
      <p align="center"><b>NOTE</b>: For Calculate Tax to
work properly, the merchant
        account must be configured with a "TAX LINE". For
instructions, contact
        LinkPoint technical support.
      </p>
    </form>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
<!--#include file="common.inc"-->
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************


Dim IsPostBack
If Request.Form("Submit") = "Submit" Then
  IsPostBack = true
```

```
End if

    If IsPostBack Then
     ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
      ' redirect to response page
      Server.Transfer("status.asp")
    Else
      InitFormData()
    End If


Sub ProcessOrder()

   ' Create an empty order
    Set order =
Server.CreateObject("LpiCom_6_0.LPOrderPart")
    res=order.setPartName("order")
  ' Create an empty part
    Set op =
Server.CreateObject("LpiCom_6_0.LPOrderPart")

    ' Build 'orderoptions'
    res=op.put("ordertype", "CALCTAX")
    ' add 'orderoptions to order
    res=order.addPart("orderoptions", op)

    res=op.clear()
    ' Build 'merchantinfo'
    res=op.put("configfile", configfile)
    ' add 'merchantinfo to order
    res=order.addPart("merchantinfo", op)
    ' Build 'payment'
    res=op.clear()
    res=op.put("subtotal", stotal)
    ' add 'payment to order
    res=order.addPart("payment", op)

    ' Build 'shipping'
    res=op.clear()
    res=op.put("zip", szip)
    res=op.put("total", stotal)
    res=op.put("state", sstate)
    ' add shpping to order
    res=order.addPart("shipping", op)


    ' create transaction object
    Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

    ' get outgoing XML from 'order' object
    Dim outXml, resp

    outXml =order.toXML()

    ' Call LPTxn
    resp = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp

    Set LPTxn = Nothing
    Set order = Nothing
    Set op    = Nothing
```

```
End Sub

%>
```

# Sample Code to View Results with ASP and Visual Basic

The code shown below demonstrates how to view results of a transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **config.inc** file. To view the **config.inc** file, see **Sample Code: Include Files for all ASP/Visual Basic Samples**:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<%@ Language=VBScript%>
<!--#include file="common.inc"-->
<!--#include file="status.vb"-->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN" >
<HTML>
  <HEAD>
    <title>status</title>
    <meta name="GENERATOR" Content="Microsoft Visual Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
<% If ( fIE5 ) Then %>
    <script language="javascript">
    var reqState=0;
    function showReqXML()
    {

     if(reqState == 0)
     {
     document.all.xmlReqData.style.display = "";
     document.all.xmlReq.innerText="Hide Request XML";
     reqState = 1;
     }
     else
     {
     document.all.xmlReqData.style.display = 'none';
     document.all.xmlReq.innerText="Show Request XML";
     reqState = 0;
     }
    }
    var resState=0;
    function showResXML()
    {

     if(resState == 0)
     {
     document.all.xmlResData.style.display = "";
     document.all.xmlRes.innerText="Hide Response XML";
     resState = 1;
     }
     else
     {
```

```
   document.all.xmlResData.style.display = 'none';
   document.all.xmlRes.innerText="Show Response XML";
   resState = 0;
   }
  }
  </script>
<% End If %>
 </HEAD>
 <body MS_POSITIONING="GridLayout">
  <p align="center"><b><font size="5"> TRANSACTION
RESULT</font></b><br>
  </p>
  <div align="center">
   <center>
    <table border="1" cellpadding="0" cellspacing="0" >
     <tr>
      <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px"> SSL API Version:</td>
      <td width="808">  <%=LPTxn.getVersion()%></td>
     </tr>
     <% If(Len(R_Time) > 0) Then %>
     <tr>
      <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  Time:</td>
      <td width="808">  <%=R_Time%></td>
     </tr>
     <% end if
     if (Len(R_Ref) > 0) Then %>
     <tr>
      <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  Reference:</td>
      <td width="808">  <%=R_Ref%></td>
```

```
        </tr>
        <% End If
         if ( Len(R_Approved) > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">  Approval:</td>
          <td width="808">  <%=R_Approved%></td>
        </tr>
        <% End If
         if ( Len(R_Code) > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">  Approval code:</td>
          <td width="808">  <%=R_Code%></td>
        </tr>
        <% End If %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">  Error:</td>
          <td width="808">  <%=R_Error%></td>
        </tr>
        <% if ( Len(R_OrderNum) > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">  Order number:</td>
          <td width="808">  <%=R_OrderNum%></td>
        </tr>
        <% End If
         if ( Len(R_Message) > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">  Message:</td>
          <td width="808">  <%=R_Message%></td>
        </tr>
        <% End If
         if ( Len(R_AVS) > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  AVS:</td>
          <td width="808">  <%=R_AVS%></td>
        </tr>
        <% End If
         if ( Len(R_Score) > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  Score:</td>
          <td width="808">  <%=R_Score%></td>
        </tr>
        <% End If
         if ( Len(R_Tax) > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  Tax:</td>
          <td width="808">  <%=R_Tax%></td>
        </tr>
        <% End If
         if ( Len(R_Shipping) > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  Shipping:</td>
          <td width="808">  <%=R_Shipping%></td>
        </tr>
        <% End If
         if ( Len(R_FraudCode) > 0) Then %>
```

```
     <tr>
      <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  Fraud Code:</td>
      <td width="808">  <%=R_FraudCode%></td>
     </tr>
     <% End If
     if ( Len(R_ESD) > 0) Then %>
     <tr>
      <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  ESD:</td>
      <td width="808">  <%=R_ESD%></td>
     </tr>
     <% End If %>
    </table>
   </center>
  </div>
  <p/>
  <p/>
  <%
  if ( fIE5 ) then
  ' do DHTML
  %>
  <a id="xmlReq" href="javascript:showReqXML()">Show
Request XML</a>
  <div id="xmlReqData" style="display: 'none'">
   <%

   Response.Write("<textarea cols=60 readonly rows=20>" &
xml_order & "</textarea>")
   %>
  </div>
  <br>
  <a id="xmlRes" href="javascript:showResXML()">Show
```

```
Response XML</a>
    <div id="xmlResData" style="display: 'none'">
      <%
      Dim dbgXML
      'dbgXML = (resp.Replace("><",">" & Chr(10) &
"<")).Replace(">" & Chr(10) & "</","></")
      dbgXML = Replace(xml_resp,"><",">" & Chr(10) & "<")
      dbxXml = Replace(dbgXml, ">" & Chr(10) & "</","></")
      Response.Write("<textarea cols=70 readonly rows=14
wrap=off >" & dbgXML & "</textarea>")
    end if
    %>
    </div>
    </p>
  </body>
</HTML>
<% Set LPTxn=Nothing %>
```

## Sample Visual Basic Code

```
<%
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************

   Dim xml_order,xml_resp, fIE5, bc
   xml_order = "<order>NO DATA IN WAS SENT IN THE
ORDER</order>"
   xml_resp = "<r_error>NO DATA IN THE
RESPONSE</r_error>"

     fIE5 = False
  Dim agent,idx, mv
  agent = Request.ServerVariables("HTTP_USER_AGENT")
  idx = InStr(agent,"MSIE")
    If idx > 0 Then
    mv = CInt(Mid(agent,idx+5,1))
    End if
    If mv > 4 Then
    fIE5 = True
    End If

     If Not "" = Session("outXml") Then
        xml_order = Session("outXml")
     End If
     If Not "" = Session("resp") Then
        xml_resp = Session("resp")
     End If

     ParseResponse(xml_resp)
     Set LPTxn =
Server.CreateObject("LpiCom_6_0.LinkPointTxn")

%>
```

# Sample Code to Process a Sale (Minimum Info) Using Java$^{TM}$

The code shown below demonstrates how to process a credit card sale. This example includes only the minimum fields required for a SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //-----------------------------------------------------------------------
--------
  public void Process()
  {
    try {
     JLinkPointTransaction txn = new JLinkPointTransaction();

     String sClientCertPath = "c:/clientcert.p12";

     txn.setClientCertificatePath(sClientCertPath);
     txn.setPassword("12345678");
     txn.setHost("secure.linkpt.net");
     txn.setPort(1129);
     // -- Minimum Required Fields for a Credit Card SALE-->"
     String sXml = "<order>"
                 +  "<merchantinfo>"
                 //-- Replace with your STORE NUMBER or
STORENAME-->"
                 +    "<configfile>1234567</configfile>"
                 +  "</merchantinfo>"
                 +  "<orderoptions>"
                 +    "<ordertype>SALE</ordertype>"
                 //-- For a test, set result to GOOD, DECLINE, or
DUPLICATE -->"
                 +    "<result>LIVE</result>
                   "</orderoptions>"
                 +  "<payment>"
                 +    "<chargetotal>12.99</chargetotal>"
                 +  "</payment>"
                 +  "<creditcard>"
                 +    "<cardnumber>4111-1111-1111-
1111</cardnumber>"
                 +    "<cardexpmonth>03</cardexpmonth>"
                 +    "<cardexpyear>05</cardexpyear>"
                 +  "</creditcard>"
                 +  "<billing>"
                 //-- Required for AVS. If not provided, transactions
```

```
will downgrade.-->"
                  +    "<addrnum>123</addrnum>"
                  +    "<zip>12345</zip>"
                  +  "</billing>"
                  + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //------------------------------------------------------------------------
--------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to Process a Sale (Maximum Info) Using Java$^{TM}$

The code shown below demonstrates how to process a credit card sale. This example includes samples of all the commonly used fields you can use in a SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //------------------------------------------------------------------------
----
  public void Process()
  {
    try {
      JLinkPointTransaction txn = new JLinkPointTransaction();

      String sClientCertPath = "c:/clientcert.p12";

      txn.setClientCertificatePath(sClientCertPath);
      txn.setPassword("12345678");
      txn.setHost("secure.linkpt.net");
      txn.setPort(1129);
     // -- An Example Credit Card SALE with all commonly used fields
included -->"
      String sXml = "<order>"
                  +  "<merchantinfo>"
                  //-- Replace with your STORE NUMBER or STORENAME-
->"
                  +    "<configfile>1234567</configfile>"
                  +  "</merchantinfo>"
                  +  "<orderoptions>"
                  +    "<ordertype>SALE</ordertype>"
                  //-- For test transactions, set to GOOD, DECLINE, or
DUPLICATE -->"
                  +    "<result>LIVE</result>"
                  +  "</orderoptions>"
                  +  "<transactiondetails>"
                  //-- For credit card retail txns, set to RETAIL, for Mail
order/telephone order, set to MOTO, for e-commerce, leave out or
set to ECI -->"
                  +    "<transactionorigin>MOTO</transactionorigin>"
                  //-- Order ID number must be unique. If not set,
gateway will assign one. -->"
                  +    "<oid>12345678-A345</oid>"
                  +    "<ponumber>09876543-Q1234</ponumber>"
                  +    "<taxexempt>N</taxexempt>"
```

```
                +    "<terminaltype>UNSPECIFIED</terminaltype>"
                +    "<ip>123.123.123.123</ip>"
                +  "</transactiondetails>"
                +  "<items>"
                +    "<item>"
                +      "<id>123456-A98765</id>"
                +      "<description>Logo T-Shirt</description>"
                +      "<price>12.99</price>"
                +      "<quantity>1</quantity>"
                +      "<serial>0987654321</serial>"
                +      "<options>"
                +        "<option>"
                +          "<name>Color</name>"
                +          "<value>Red</value>"
                +        </option>"
                +        "<option>"
                +          "<name>Size</name>"
                +          "<value>XL</value>"
                +        </option>"
                +      </options>"
                +    </item>"
                +  "</items>"
                +  "<payment>"
                +    "<subtotal>12.99</subtotal>"
                //-- Replace value with calculated tax -->"
                +    "<tax>0.34</tax>"
                //-- Replace value with calculated shipping charges --
>"
                +    "<shipping>1.45</shipping>"
                +    "<vattax>0.00</vattax>"
                +    "<chargetotal>14.78</chargetotal>"
                +  "</payment>"
                + "<creditcard>"
                +   "<cardnumber>4111-1111-1111-1111</cardnumber>"
                +   "<cardexpmonth>03</cardexpmonth>"
                +   "<cardexpyear>05</cardexpyear>"
                //-- CVM is the three-digit security code usually found on the signature line on the back of the card -->"
                +   "<cvmvalue>123</cvmvalue>"
                +   "<cvmindicator>provided</cvmindicator>"
                + "</creditcard>"
                + "<billing>"
                //-- Required for Address Verification -->"
                +   "<addrnum>123</addrnum>"
                +   "<zip>87123</zip>"
                //-- Billing name and address et al. -->"
                +   "<name>Joe Customer</name>"
                +   "<company>SomeWhere, Inc.</company>"
                +   "<address1>123 Broadway</address1>"
                +   "<address2>Suite 23</address2>"
                +   "<city>Moorpark</city>"
                +   "<state>CA</state>"
                +   "<country>US</country>"
                +   "<phone>8051234567</phone>"
                +   "<fax>8059876543</fax>"
                +   "<email>joe.customer@somewhere.com</email>"
                + "</billing>"
                + "<shipping>"
                //-- Shipping name and address -->"
                +   "<name>Joe Customer</name>"
                +   "<address1>123 Broadway</address1>"
                +   "<address2>Suite 23</address2>"
                +   "<city>Moorpark</city>"
                +    "<state>CA</state>"
                +    "<zip>12345</zip>"
                +    "<country>US</country>"
                //-- Info for shipping calculation-->"
                +    "<weight>1.2</weight>"
                +    "<items>1</items>"
                +    "<carrier>2</carrier>"
                +    "<total>12.99</total>"
                +  "</shipping>"
                +  "<notes>"
                +    "<comments>Repeat customer. Ship 
immediately.</comments>"
                +    "<referred>Saw ad on Web site.</referred>"
                +  "</notes>"
                + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //----------------------------------------------------------------------
----
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to Process a PreAuth Transaction Using Java$^{TM}$

The code shown below demonstrates how to process a PreAuthorization Transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //-----------------------------------------------------------------------
--------
  public void Process()
  {
    try {
      JLinkPointTransaction txn = new JLinkPointTransaction();
```

```
     String sClientCertPath = "c:/clientcert.p12";

     txn.setClientCertificatePath(sClientCertPath);
     txn.setPassword("12345678");
     txn.setHost("secure.linkpt.net");
     txn.setPort(1129);
    // -- Minimum Required Fields for a PreAuth -->
     String sXml = "<order>"
              +  "<merchantinfo>"
              //-- Replace with your STORE NUMBER or
STORENAME-->"
              +    "<configfile>1234567</configfile>"
              +  "</merchantinfo>"
              +  "<orderoptions>"
              +    "<ordertype>PREAUTH</ordertype>"
              +  "</orderoptions>"
              +  "<payment>"
              +    "<chargetotal>12.99</chargetotal>"
              +  "</payment>"
              +  "<creditcard>"
              +    "<cardnumber>4111-1111-1111-
1111</cardnumber>"
              +    "<cardexpmonth>03</cardexpmonth>"
              +    "<cardexpyear>05</cardexpyear>"
              +  "</creditcard>"
              +  "<billing>"
              //-- Required for AVS. If not provided, transactions
will downgrade.-->"
              +    "<addrnum>123</addrnum>"
              +    "<zip>12345</zip>"
              +  "</billing>"
              + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //-----------------------------------------------------------------------
--------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to Process a PostAuth Transaction Using Java$^{TM}$

The code shown below demonstrates how to process a PostAuthorization Transaction (that is, to complete a PreAuthorization with a valid order ID). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //-------------------------------------------------------------------------
  public void Process()
  {
    try {
```

```
    JLinkPointTransaction txn = new JLinkPointTransaction();

    String sClientCertPath = "c:/clientcert.p12";

    txn.setClientCertificatePath(sClientCertPath);
    txn.setPassword("12345678");
    txn.setHost("secure.linkpt.net");
    txn.setPort(1129);
   // -- Minimum Required Fields for a PostAuth -->
    String sXml = "<order>"
            +  "<merchantinfo>"
            //-- Replace with your STORE NUMBER or
STORENAME-->"
            +    "<configfile>1234567</configfile>"
            +  "</merchantinfo>"
            +  "<orderoptions>"
            +    "<ordertype>POSTAUTH</ordertype>"
            +  "</orderoptions>"
            +  "<payment>"
            +    "<chargetotal>12.99</chargetotal>"
            +  "</payment>"
            +  "<creditcard>"
            +    "<cardnumber>4111-1111-1111-
1111</cardnumber>"
            +    "<cardexpmonth>03</cardexpmonth>"
            +    "<cardexpyear>05</cardexpyear>"
            +  "</creditcard>"
            +  "<transactiondetails>"
            //-- Must be a valid order ID from a prior Sale or
PreAuth -->"
            +    "<oid>12345678-A345</oid>"
            +  "</transactiondetails>"
```

```
                  + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //-----------------------------------------------------------------------
--------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code for Using AVS and CVM with Java

The code shown below demonstrates how to process a credit card sale taking advantage of both the AVS and the CVM fraud protection measures. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //--------------------------------------------------------------------------------
  public void Process()
  {
    try {
     JLinkPointTransaction txn = new JLinkPointTransaction();

     String sClientCertPath = "c:/clientcert.p12";

     txn.setClientCertificatePath(sClientCertPath);
     txn.setPassword("12345678");
     txn.setHost("secure.linkpt.net");
     txn.setPort(1129);
    // -- An Example Credit Card SALE With Minimum Fields
required for AVS and Card Code fraud prevention measures-->"
     String sXml = "<order>"
               + "<merchantinfo>"
               //-- Replace with your STORE NUMBER or
STORENAME-->"
               +   "<configfile>1234567</configfile>"
               + "</merchantinfo>"
               + "<orderoptions>"
               +   "<ordertype>SALE</ordertype>"
               + "</orderoptions>"
               + "<payment>"
               +   "<chargetotal>12.99</chargetotal>"
               + "</payment>"
               + "<creditcard>"
               +   "<cardnumber>4111-1111-1111-
1111</cardnumber>"
               +   "<cardexpmonth>03</cardexpmonth>"
               +   "<cardexpyear>05</cardexpyear>"
               //-- CVM is the three-digit security code usually
found on the signature line on the back of the card -->"
               +   "<cvmvalue>123</cvmvalue>"
               +   "<cvmindicator>provided</cvmindicator>"
               + "</creditcard>"
```

```
                + "<billing>"
                //-- Required for Address Verification -->"
                +   "<addrnum>123</addrnum>"
                +   "<zip>87123</zip>"
                + "</billing>"
                + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //------------------------------------------------------------------------
--------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to run a FORCED TICKET Transaction Using Java$^{TM}$

The code shown below demonstrates how to process a PostAuthorization for a Voice Authorization (a Forced Ticket transaction). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //-------------------------------------------------------------------------
  public void Process()
  {
    try {
      JLinkPointTransaction txn = new JLinkPointTransaction();
```

```
     String sClientCertPath = "c:/clientcert.p12";

     txn.setClientCertificatePath(sClientCertPath);
     txn.setPassword("12345678");
     txn.setHost("secure.linkpt.net");
     txn.setPort(1129);
    // -- Minimum Required Fields for a FORCED TICKET Transaction -->"
     String sXml = "<order>"
               +  "<merchantinfo>"
               //-- Replace with your STORE NUMBER or STORENAME-->"
               +    "<configfile>1234567</configfile>"
               +  "</merchantinfo>"
               +  "<orderoptions>"
               +    "<ordertype>POSTAUTH</ordertype>"
               +  "</orderoptions>"
               +  "<payment>"
               +    "<chargetotal>12.99</chargetotal>"
               +  "</payment>"
               +  "<creditcard>"
               +    "<cardnumber>4111-1111-1111-1111</cardnumber>"
               +    "<cardexpmonth>03</cardexpmonth>"
               +    "<cardexpyear>05</cardexpyear>"
               +  "</creditcard>"
               +  "<transactiondetails>"
               //-- The reference number given over the phone.
                 //  Add the word NEW (all caps) before the number to
indicate a forced ticket. -->"
               +    "<reference_number>NEW987654</reference_number>"
               +  "</transactiondetails>"
               + "</order>";
     String sResponse = txn.send(sXml);
```

```
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //------------------------------------------------------------------------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to Process a Return Using Java$^{TM}$

The code shown below demonstrates how to process a credit card return. To perform a return, you must have a valid order ID (**oid**) from a prior SALE or PREAUTH/POSTAUTH. The example uses a hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //-------------------------------------------------------------------------------
  public void Process()
  {
   try {
     JLinkPointTransaction txn = new JLinkPointTransaction();

     String sClientCertPath = "c:/clientcert.p12";

     txn.setClientCertificatePath(sClientCertPath);
     txn.setPassword("12345678");
     txn.setHost("secure.linkpt.net");
     txn.setPort(1129);
    // -- Minimum Required Fields for a Credit Card CREDIT -->"
     String sXml = "<order>"
              +  "<merchantinfo>"
              //-- Replace with your STORE NUMBER or
STORENAME-->"
              +    "<configfile>1234567</configfile>"
              +  "</merchantinfo>"
              +  "<orderoptions>"
              +    "<ordertype>CREDIT</ordertype>"
              +  "</orderoptions>"
              +  "<payment>"
              //-- Amount returned must be less than or equal to
the order amount. If there is more than one return against this
order, make sure the total of the returns doesn't exceed the
original sale amount. -->"
              +    "<chargetotal>12.99</chargetotal>"
              +  "</payment>"
              +  "<creditcard>"
              +    "<cardnumber>4111-1111-1111-
1111</cardnumber>"
              +    "<cardexpmonth>03</cardexpmonth>"
              +    "<cardexpyear>05</cardexpyear>"
              +  "</creditcard>"
```

```
                  + "<transactiondetails>"
                  //-- Must be a valid order ID from a prior Sale or
PreAuth -->"
                  +   "<oid>12345678-A345</oid>"
                  + "</transactiondetails>"
                  + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //--------------------------------------------------------------------------
--------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to perform a Credit Card VOID Transaction Using Java$^{TM}$

The code shown below demonstrates how to process a credit card VOID transaction. You can only void a credit card SALE transaction if the associated credit card batch has not yet been processed (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //-------------------------------------------------------
--------
```

```
  public void Process()
  {
    try {
      JLinkPointTransaction txn = new JLinkPointTransaction();

      String sClientCertPath = "c:/clientcert.p12";

      txn.setClientCertificatePath(sClientCertPath);
      txn.setPassword("12345678");
      txn.setHost("secure.linkpt.net");
      txn.setPort(1129);
      // -- Minimum Required Fields for a Credit Card VOID -->"
      String sXml = "<order>"
          +  "<merchantinfo>"
          //-- Replace with your STORE NUMBER or STORENAME--
>"
          +    "<configfile>1234567</configfile>"
          +  "</merchantinfo>"
          +  "<orderoptions>"
          +    "<ordertype>VOID</ordertype>"
          +  "</orderoptions>"
          +  "<payment>"
          +    "<chargetotal>12.99</chargetotal>"
          +  "</payment>"
          +  "<creditcard>"
          +    "<cardnumber>4111-1111-1111-
1111</cardnumber>"
          +    "<cardexpmonth>03</cardexpmonth>"
          +    "<cardexpyear>05</cardexpyear>"
          +  "</creditcard>"
          +  "<transactiondetails>"
          //-- Must be a valid order ID from a prior Sale or
Postauth -->"
         +    "<oid>12345678-A345</oid>"
         +  "</transactiondetails>"
         + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //-----------------------------------------------------------------------
--------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to run a Credit Card Transaction using Items (Including ESD) with Java

The code shown below demonstrates how to process a Sale using the Items and Options feature. One of the items included in the example is an Electronic Softgood Download (ESD) item. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //------------------------------------------------------------------------------
  public void Process()
  {
    try {
      JLinkPointTransaction txn = new JLinkPointTransaction();

      String sClientCertPath = "c:/clientcert.p12";

      txn.setClientCertificatePath(sClientCertPath);
      txn.setPassword("12345678");
      txn.setHost("secure.linkpt.net");
      txn.setPort(1129);
     // -- Required Fields for an Example Credit Card SALE with
ITEMS-->"
      String sXml = "<order>"
                  +  "<merchantinfo>"
                  //-- Replace with your STORE NUMBER or
STORENAME-->"
                  +    "<configfile>1234567</configfile>"
                  +  "</merchantinfo>"
                  +  "<orderoptions>"
                  +    "<ordertype>SALE</ordertype>"
                  +  "</orderoptions>"
                  +  "<payment>"
                  +    "<subtotal>45.98</subtotal>"
                  +    "<tax>0.32</tax>"
                  +    "<shipping>1.02</shipping>"
                  +    "<chargetotal>47.32</chargetotal>"
                  +  "</payment>"
                  +  "<creditcard>"
                  +    "<cardnumber>4111-1111-1111-
1111</cardnumber>"
                  +    "<cardexpmonth>03</cardexpmonth>"
                  +    "<cardexpyear>05</cardexpyear>"
                  +  "</creditcard>"
```

```
            + "<billing>"
            //-- Required for AVS. If not provided, transactions
will downgrade.-->"
            +   "<addrnum>123</addrnum>"
            +   "<zip>12345</zip>"
            //-- If you use ESD items, name is required -->
               "<name>Joe Customer</name>
              "</billing>"
            + "<items>"
            +   "<item>"
            +     "<id>123456-A98765</id>"
            +     "<description>Logo T-Shirt</description>"
            +     "<price>12.99</price>"
            +     "<quantity>1</quantity>"
            +     "<serial>0987654321</serial>"
            +     "<options>"
            +       "<option>"
            +         "<name>Color</name>"
            +         "<value>Red</value>"
            +       </option>"
            +       "<option>"
            +         "<name>Size</name>"
            +         "<value>XL</value>"
            +       </option>"
            +     </options>"
            +   </item>"
            +   "<item>"
            +     "<id>123456-A98765</id>"
            +     "<description>Blast-Em
Software</description>"
            +     "<price>32.99</price>"
            +     "<quantity>1</quantity>"
```

```
                  +      "<serial>0987654321</serial>"
                  +      "<esdtype>softgood</esdtype>"
                  +      "<softfile>blastemgame.exe</softfile>"
                  +    </item>"
                  +  "</items>"
                  + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //------------------------------------------------------------------------------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to run a Level 2 Purchasing Card Transaction with Java

The code shown below demonstrates how to process a Sale including all the data elements needed for a Level 2 purchasing card transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //----------------------------------------------------------------------
--------
  public void Process()
  {
    try {
```

```
    JLinkPointTransaction txn = new JLinkPointTransaction();

    String sClientCertPath = "c:/clientcert.p12";

    txn.setClientCertificatePath(sClientCertPath);
    txn.setPassword("12345678");
    txn.setHost("secure.linkpt.net");
    txn.setPort(1129);
   // -- An Example Level 2 Purchasing Card SALE -->"
    String sXml = "<order>"
            + "<merchantinfo>"
            //-- Replace with your STORE NUMBER or
STORENAME-->"
            +   "<configfile>1234567</configfile>"
            + "</merchantinfo>"
            + "<orderoptions>"
            +   "<ordertype>SALE</ordertype>"
            + "</orderoptions>"
            + "<payment>"
            //-- Tax is required for purchasing cards. If the tax
is $0.00, pass a value of 0 for tax -->"
            +   "<tax>0.32</tax>"
            +   "<chargetotal>47.32</chargetotal>"
            + "</payment>"
            + "<creditcard>"
            +   "<cardnumber>4111-1111-1111-
1111</cardnumber>"
            +   "<cardexpmonth>03</cardexpmonth>"
            +   "<cardexpyear>05</cardexpyear>"
            + "</creditcard>"
            + "<transactiondetails>"
            //-- If there is no PO Number for this order, pass a
```

```
department code or other value, but make sure the value you
pass is supplied by the customer -->"
                 +    "<ponumber>1203A-G4567</ponumber>"
                 //-- If the purchase is tax exempt, pass a value of Y
for taxexempt-->"
                 +    "<taxexempt>N</taxexempt>"
                 +  "</transactiondetails>"
                 + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //----------------------------------------------------------------------
--------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to Set Up a New Recurring Credit Card Transaction Using Java$^{TM}$

The code shown below demonstrates how to process a Recurring Credit Card Transaction (Periodic Bill). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //------------------------------------------------------------------------------
  public void Process()
  {
    try {
      JLinkPointTransaction txn = new JLinkPointTransaction();
    String sClientCertPath = "c:/clientcert.p12";

    txn.setClientCertificatePath(sClientCertPath);
    txn.setPassword("12345678");
    txn.setHost("secure.linkpt.net");
    txn.setPort(1129);
   // -- Minimum Required Fields for a Recurring Credit Card
Sale (Periodic Bill)-->"
    String sXml = "<order>"
            + "<merchantinfo>"
            //-- Replace with your STORE NUMBER or
STORENAME-->"
            +   "<configfile>1234567</configfile>"
            + "</merchantinfo>"
            + "<orderoptions>"
            +   "<ordertype>SALE</ordertype>"
            + "</orderoptions>"
            + "<payment>"
            +   "<chargetotal>12.99</chargetotal>"
            + "</payment>"
            + "<creditcard>"
            +   "<cardnumber>4111-1111-1111-
1111</cardnumber>"
            +   "<cardexpmonth>03</cardexpmonth>"
            +   "<cardexpyear>05</cardexpyear>"
            + "</creditcard>"
            + "<periodic>"
            //-- Submits a recurring transaction charging the
card 3 times, once a month, starting today -->"
            +   "<action>SUBMIT</action>"
            +   "<installments>3</installments>"
```

```
                  +    "<threshold>3</threshold>"
                  //-- If you don't want it to start today, pass a date
in the format YYYYMMDD -->"
                  +    "<startdate>immediate</startdate>"
                  +    "<periodicity>monthly</periodicity>"
                  +  "</periodic>"
                  +  "<billing>"
                  //-- Required for AVS. If not provided, transactions
will downgrade.-->"
                  +    "<addrnum>123</addrnum>"
                  +    "<zip>12345</zip>"
                  +  "</billing>"
                  + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //------------------------------------------------------------------------
--------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to Modify a Recurring Credit Card Transaction Using Java$^{TM}$

The code shown below demonstrates how to modify a Recurring Credit Card Transaction (Periodic Bill). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //-------------------------------------------------------------------------------
  public void Process()
  {
    try {
      JLinkPointTransaction txn = new JLinkPointTransaction();
```

```
     String sClientCertPath = "c:/clientcert.p12";

     txn.setClientCertificatePath(sClientCertPath);
     txn.setPassword("12345678");
     txn.setHost("secure.linkpt.net");
     txn.setPort(1129);
    // -- Minimum Required Fields to modify a Recurring Credit
Card Sale (Periodic Bill)-->
     String sXml = "<order>"
               +  "<transactiondetails>"
               //-- You MUST pass a valid Order ID for an
EXISTING periodic bill to identify which bill you want to modify --
>"
               +    "<oid>111.456.87.03-O986646-A123</oid>"
               +  "</transactiondetails>"
               +  "<merchantinfo>"
               //-- Replace with your STORE NUMBER or
STORENAME-->"
               +    "<configfile>1234567</configfile>"
               +  "</merchantinfo>"
               +  "<orderoptions>"
               +    "<ordertype>SALE</ordertype>"
               +  "</orderoptions>"
               +  "<payment>"
               +    "<chargetotal>12.99</chargetotal>"
               +  "</payment>"
               +  "<creditcard>"
               +    "<cardnumber>4111-1111-1111-
1111</cardnumber>"
               +    "<cardexpmonth>03</cardexpmonth>"
               +    "<cardexpyear>05</cardexpyear>"
```

```
                 +  "</creditcard>"
                 +  "<periodic>"
                 //-- Set action to MODIFY to modify the periodic
bill. You may modify ONLY the parameters in the periodic entity.
-->"
                 +    "<action>MODIFY</action>"
                 //-- Specifies a recurring transaction charging the
card 5 times, once a month.
                     Change each of the following fields as needed --
>"
                 +    "<installments>5</installments>"
                 +    "<threshold>3</threshold>"
                 //-- Changes will be in effect as of the time
specified. No periodic bills will be sent until the startdate
specified here. If you don't want it to start today, pass a date in
the format YYYYMMDD -->"
                 +    "<startdate>immediate</startdate>"
                 +    "<periodicity>monthly</periodicity>"
                 +  "</periodic>"
                 + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //--------------------------------------------------------------------
--------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
```

```
}
```

# Sample Code to Cancel a Recurring Credit Card Transaction Using Java$^{TM}$

The code shown below demonstrates how to Cancel an existing Recurring Credit Card Transaction (Periodic Bill). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //------------------------------------------------------------------------
--------
  public void Process()
  {
    try {
      JLinkPointTransaction txn = new JLinkPointTransaction();
      String sClientCertPath = "c:/clientcert.p12";

      txn.setClientCertificatePath(sClientCertPath);
      txn.setPassword("12345678");
      txn.setHost("secure.linkpt.net");
      txn.setPort(1129);
     // -- Minimum Required Fields to cancel a Recurring Credit
Card Sale (Periodic Bill)-->"
      String sXml = "<order>"
                  + "<transactiondetails>"
                  //-- You MUST pass a valid Order ID for an
EXISTING periodic bill to identify which bill you want to modify --
>"
                  +   "<oid>111.456.87.03-O986646-A123</oid>"
                  + "</transactiondetails>"
                  + "<merchantinfo>"
                  //-- Replace with your STORE NUMBER or
STORENAME-->"
                  +   "<configfile>1234567</configfile>"
                  + "</merchantinfo>"
                  + "<orderoptions>"
                  +   "<ordertype>SALE</ordertype>"
                  + "</orderoptions>"
                  + "<payment>"
                  +   "<chargetotal>12.99</chargetotal>"
                  + "</payment>"
                  + "<creditcard>"
                  +   "<cardnumber>4111-1111-1111-
1111</cardnumber>"
                  +   "<cardexpmonth>03</cardexpmonth>"
                  +   "<cardexpyear>05</cardexpyear>"
                  +  "</creditcard>"
                  +  "<periodic>"
                  //-- Set action to CANCEL to cancel the recurring
transaction -->"
                  +    "<action>CANCEL</action>"
                  +    "<installments>5</installments>"
                  +    "<threshold>3</threshold>"
                  //-- If you don't want it to start today, pass a date
in the format YYYYMMDD -->"
                  +    "<startdate>immediate</startdate>"
                  +    "<periodicity>monthly</periodicity>"
                  +  "</periodic>"
                  + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //---------------------------------------------------------------
--------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to Process a Retail Swipe Transaction Using Java$^{TM}$

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is swiped with a credit card reader. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //------------------------------------------------------------------------
------
  public void Process()
  {
    try {
     JLinkPointTransaction txn = new JLinkPointTransaction();

     String sClientCertPath = "c:/clientcert.p12";

     txn.setClientCertificatePath(sClientCertPath);
     txn.setPassword("12345678");
     txn.setHost("secure.linkpt.net");
     txn.setPort(1129);
    // -- Minimum Required Fields for a SWIPED Credit Card SALE-->"
     String sXml = "<order>"
               +  "<merchantinfo>"
               //-- Replace with your STORE NUMBER or STORENAME-->"
               +    "<configfile>1234567</configfile>"
               +  "</merchantinfo>"
               +  "<transactiondetails>"
               +    "<transactionorigin>RETAIL</transactionorigin>"
               //-- set terminaltype to POS for an electronic cash register or integrated POS system, STANDALONE for a point-of-sale credit card terminal, UNATTENDED for a self-service station, or UNSPECIFIED for e-commerce or other applications -->"
               +    "<terminaltype>POS</terminaltype>"
               +  "</transactiondetails>"
               +  "<orderoptions>"
               +    "<ordertype>SALE</ordertype>"
               +  "</orderoptions>"
               +  "<payment>"
               +    "<chargetotal>12.99</chargetotal>"
               +  "</payment>"
               +  "<creditcard>"
               +    "<track>1298361023614908</track>"
```

```
                  +  "</creditcard>"
                  +  // -- "<billing>"
                  //  You should not do AVS for a retail swiped transaction, unless it is an UNATTENDED terminaltype.
                  //    billing addrnum and billing zip are not required because we're not doing AVS ...
                  //    "<addrnum>123</addrnum>"
                  //  "<zip>12345</zip>
                  //  "</billing>-->"
                  + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //------------------------------------------------------------------------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to Process a Retail Keyed Transaction Using Java<sup>TM</sup>

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is keyed in. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //--------------------------------------------------------------------------
------
  public void Process()
  {
    try {
     JLinkPointTransaction txn = new JLinkPointTransaction();

     String sClientCertPath = "c:/clientcert.p12";

     txn.setClientCertificatePath(sClientCertPath);
     txn.setPassword("12345678");
     txn.setHost("secure.linkpt.net");
     txn.setPort(1129);
    // -- Minimum Required Fields for a KEYED RETAIL Credit Card
SALE -->"
     String sXml = "<order>"
               +  "<merchantinfo>"
               //-- Replace with your STORE NUMBER or
STORENAME-->"
               +    "<configfile>1234567</configfile>"
               +  "</merchantinfo>"
               +  "<transactiondetails>"
               +    "<transactionorigin>RETAIL</transactionorigin>"
               //-- set terminaltype to POS for an electronic cash
register or integrated POS system, STANDALONE for a point-of-
sale credit card terminal, UNATTENDED for a self-service station,
or UNSPECIFIED for e-commerce or other applications -->"
               +    "<terminaltype>POS</terminaltype>"
               +  "</transactiondetails>"
               +  "<orderoptions>"
               +    "<ordertype>SALE</ordertype>"
               +  "</orderoptions>"
               +  "<payment>"
               +    "<chargetotal>12.99</chargetotal>"
               +  "</payment>"
               +  "<creditcard>"
               +    "<cardnumber>4111-1111-1111-
```

```
1111</cardnumber>"
                    +    "<cardexpmonth>03</cardexpmonth>"
                    +    "<cardexpyear>05</cardexpyear>"
                    +  "</creditcard>"
                    +  // -- "<billing>"
                    //  You should not do AVS for a retail swiped
transaction, unless it is an UNATTENDED terminaltype.
                    //    billing addrnum and billing zip are not required
because we're not doing AVS ...
                    //    "<addrnum>123</addrnum>"
                    //    "<zip>12345</zip>
                    //  "</billing>-->"
                    + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //-----------------------------------------------------------------------
------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to Process a Retail UNATTENDED Transaction Using Java$^{TM}$

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card terminal is unattended (that is, a self-service station such as a gas station or ticket booth). In this case, you should do a partial AVS where you collect the zip code only. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //-------------------------------------------------------------------------------
  public void Process()
  {
   try {
     JLinkPointTransaction txn = new JLinkPointTransaction();

     String sClientCertPath = "c:/clientcert.p12";

     txn.setClientCertificatePath(sClientCertPath);
     txn.setPassword("12345678");
     txn.setHost("secure.linkpt.net");
     txn.setPort(1129);
    // -- Minimum Required Fields for a SWIPED Credit Card SALE
with Partial AVS-->"
     String sXml = "<order>"
                 + "<merchantinfo>"
                 //-- Replace with your STORE NUMBER or
STORENAME-->"
                 +   "<configfile>1234567</configfile>"
                 + "</merchantinfo>"
                 + "<transactiondetails>"
                 +   "<transactionorigin>RETAIL</transactionorigin>"
                 //-- set terminaltype to POS for an electronic cash
register or integrated POS system, STANDALONE for a point-of-
sale credit card terminal, UNATTENDED for a self-service station,
or UNSPECIFIED for e-commerce or other applications -->"
                 +   "<terminaltype>UNATTENDED</terminaltype>"
                 + "</transactiondetails>"
                 + "<orderoptions>"
                 +   "<ordertype>SALE</ordertype>"
                 + "</orderoptions>"
                 + "<payment>"
                 +   "<chargetotal>12.99</chargetotal>"
                 + "</payment>"
                 + "<creditcard>"
```

```
                  +    "<cardnumber>4111-1111-1111-
1111</cardnumber>"
                  +    "<cardexpmonth>03</cardexpmonth>"
                  +    "<cardexpyear>05</cardexpyear>"
                  +  "</creditcard>"
                  +  "<billing>"
                  //-- For an UNATTENDED terminaltype, do a partial
AVS: zip code only.
                    //  "<addrnum>123</addrnum> -->"
                  +    "<zip>12345</zip>
                  +  "</billing>"
                  + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //------------------------------------------------------------------------
------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to perform a VirtualCheck SALE Transaction Using Java$^{TM}$*

The code shown below demonstrates how to process a VirtualCheck SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //----------------------------------------------------------------------------------
  public void Process()
  {
    try {
      JLinkPointTransaction txn = new JLinkPointTransaction();
```

```
     String sClientCertPath = "c:/clientcert.p12";

     txn.setClientCertificatePath(sClientCertPath);
     txn.setPassword("12345678");
     txn.setHost("secure.linkpt.net");
     txn.setPort(1129);
     // -- Minimum Required Fields for a VirtualCheck SALE-->"
     String sXml = "<order>"
             +  "<merchantinfo>"
             //-- Replace with your STORE NUMBER or STORENAME-
->"
             +    "<configfile>1234567</configfile>"
             +  "</merchantinfo>"
             +  "<orderoptions>"
             +    "<ordertype>SALE</ordertype>"
             +  "</orderoptions>"
             +  "<payment>"
             +    "<chargetotal>12.99</chargetotal>"
             +  "</payment>"
             +  "<telecheck>"
             //-- Customer's Driver's license # and DL state.-->"
             +    "<dl>120381698</dl>"
             +    "<dlstate>CA</dlstate>"
             //-- Transit routing number for the customer's bank --
>"
             +    "<routing>123456789</routing>"
             //-- Customer's bank account number -->"
             +    "<account>2139842610</account>"
             //-- Is this a business or consumer (personal) account?
personal = pc, business = bc -->"
             +    "<accounttype>pc</accounttype>"
```

```
                //-- Bank name and 2-letter bank state
                +    "<bankname>MyBank</bankname>"
                +    "<bankstate>CA</bankstate>"
                +  "</telecheck>"
                +  "<billing>"
                +    "<name>Joe Customer</name>"
                +    "<address1>123 Broadway</address1>"
                +    "<city>Moorpark</city>"
                +    "<state>CA</state>"
                +    "<zip>12345</zip>"
                +    "<phone>8051234567</phone>"
                +    "<email>joe.customer@somewhere.com</email>"
                +  "</billing>"
                + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //----------------------------------------------------------------------------
----
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to perform a VirtualCheck VOID Transaction Using Java$^{TM}$*

The code shown below demonstrates how to process a VirtualCheck VOID transaction. You can only void a VirtualCheck SALE transaction if it has not yet been sent for processing (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

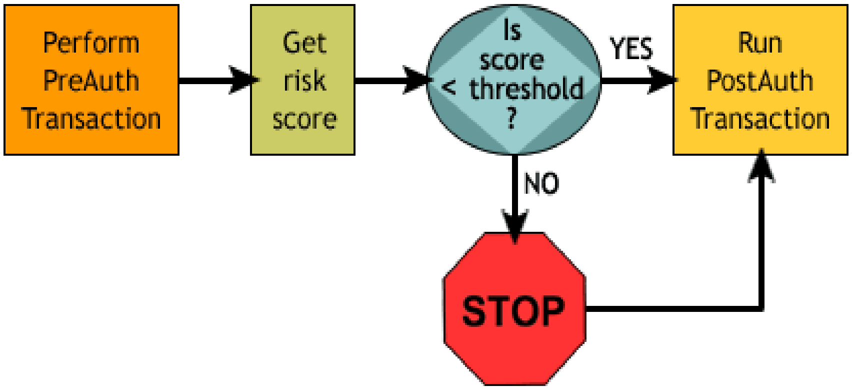
```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //------------------------------------------------------------------------
--------
```

```
 public void Process()
 {
   try {
     JLinkPointTransaction txn = new JLinkPointTransaction();

     String sClientCertPath = "c:/clientcert.p12";

     txn.setClientCertificatePath(sClientCertPath);
     txn.setPassword("12345678");
     txn.setHost("secure.linkpt.net");
     txn.setPort(1129);
     // -- Minimum Required Fields for a VirtualCheck VOID -->"
     String sXml = "<order>"
                +  "<merchantinfo>"
                //-- Replace with your STORE NUMBER or
STORENAME-->"
                +    "<configfile>1234567</configfile>"
                +  "</merchantinfo>"
                +  "<orderoptions>"
                +    "<ordertype>VOID</ordertype>"
                +  "</orderoptions>"
                +  "<payment>"
                +    "<chargetotal>12.99</chargetotal>"
                +  "</payment>"
                +  "<telecheck>"
                //-- Include this tag for a VirtualCheck VOID -->"
                +    "<void>1</void>"
                +  "</telecheck>"
                +  "<transactiondetails>"
                //-- You must have a valid order ID from a previous
VCheck SALE transaction that has not yet been processed -->"
                +    "<oid>0987654321</oid>"
                + "</transactiondetails>"
                + "</order>";
      String sResponse = txn.send(sXml);
      System.out.println(sResponse);
    }
    catch (Exception e) {}
  }

  //-----------------------------------------------------------------------
--------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code Using LinkShield™ with Java™

## PreAuthorization / Postauthorization example

The code shown below demonstrates an example of one way to use LinkShield™ fraud risk scores. This example runs a preauthorization transaction, checks the fraud risk score, then runs a postauthorization if the fraud risk score is considered acceptable. The diagram shown illustrates this example. The fraud risk score used within this sample code is for explanatory purposes only; you should choose the fraud risk score threshold appropriate for your business needs. See the comments within the code for further explanation.



If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/*******************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'*******************************************************************************/
package lp.samples;

/**
*
```

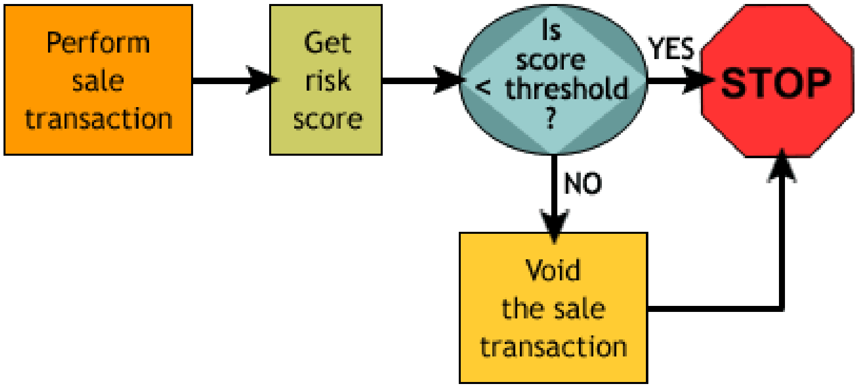
```
Title:

*

Description:

*

Copyright: Copyright (c) 2003

*

Company: LinkPoint International

* @author Sergey Chudnovsky
* @version 1.0
*/

public class LINKSHIELD_PREAUTH_AUTH extends JLinkPointShieldSample {

/*
   This sample first performs a credit card preauth,
   then checks the LinkShield risk score. If the score
   is less then given threshold ( 70 in our sample ),
   then we perform postauth");
*/

   public LINKSHIELD_PREAUTH_AUTH() {
      super("PREAUTH");

   // REPLACE THE VALUE FOR maxScore WITH A VALUE APPROPRIATE
   // FOR YOUR BUSINESS RISK LEVEL.
   maxScore = 70;
   }

   public boolean process()
   {
      System.out.println("\nThis sample first performs a credit card preauth,");
      System.out.println("then checks the LinkShield risk score. If the score");
      System.out.println("is less then given threshold ( 70 in our sample ),");
      System.out.println("then we perform postauth");
```

```
    System.out.println("\n\nperforming PREAUTH .....");

    // Call base class to do actual job
    super.process();
    // If transaction succeeded
    if( R_Error.length() == 0 )
    {
      // Now check to see if score is acceptable
        if( checkScore() )
        {
        // Score is recieved and acceptable
        System.out.println("performing POSTAUTH... ");
        new POSTAUTH(R_OrderNum).process();
        }
        else
        {
        // No score or error in scorring, so we
        // don't run POSTAUTH
        System.out.println("POSTAUTH will not be performed ");
        }
    }
    else
    {
      System.out.println("ERROR PROCESSING TRANSACTION : " + R_Error);
      return false;
    }

  return true;
  }

}
```

# Sample Code Using LinkShield™ with Java™

## Sale / Void example

The code shown below demonstrates an example of one way to use LinkShield™ fraud risk scores. This example runs a sale transaction, checks the fraud risk score, then runs a void if the fraud risk score is considered unacceptable. The diagram shown illustrates this example. The fraud risk score used within this sample code is for explanatory purposes only; you should choose the fraud risk score threshold appropriate for your business needs. See the comments within the code for further explanation.



If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
/*********************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'*********************************************************************************/
package lp.samples;

/**
*
```

```
Title:

*

Description:

*

Copyright: Copyright (c) 2003

*

Company: LinkPoint International

* @author Sergey Chudnovsky
* @version 1.0
*/

public class LINKSHIELD_SALE_VOID extends JLinkPointShieldSample {

/*
   This sample first performs a credit card sale,
   then checks the LinkShield risk score. If the score
   is more then   'maxScore' ( 70 in our sample )
   then we void the previous sale transaction");
*/

   public LINKSHIELD_SALE_VOID() {
      super("SALE");

   // REPLACE THE VALUE FOR maxScore WITH A VALUE APPROPRIATE
   // FOR YOUR BUSINESS RISK LEVEL.
   maxScore = 70;
   }

   public boolean process()
   {
      System.out.println("\nThis sample first performs a credit card sale,");
      System.out.println("then checks the LinkShield risk score. If the score");
      System.out.println("is more then given threshold ( 70 in our sample ),");
      System.out.println("then we void the previous sale transaction");
```

```
    System.out.println("\n\nperforming SALE .....");

    // Call base class to do actual job
    super.process();
    // If transaction succeeded
    if( R_Error.length() == 0 )
    {
      // Now check to see if score is acceptable
        if( checkScore() )
        {
        // Score is recieved and acceptable
        System.out.println("SALE transaction succeeded. ");
        }
        else
        {
        // No score or error in scorring, so we
        // void previous transaction
        System.out.println("VOID previous transaction... ");
        new VOID(R_OrderNum).process();
        }
    }
    else
    {
      System.out.println("ERROR PROCESSING TRANSACTION : " + R_Error);
      return false;
    }

  return true;
  }

}
```

# Sample Code to Calculate Shipping Charges Using Java™

The code shown below demonstrates how to use the shipping calculator. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //-----------------------------------------------------------------------
--------
  public void Process()
  {
    try {
      JLinkPointTransaction txn = new JLinkPointTransaction();
    String sClientCertPath = "c:/clientcert.p12";

    txn.setClientCertificatePath(sClientCertPath);
    txn.setPassword("12345678");
    txn.setHost("secure.linkpt.net");
    txn.setPort(1129);
    // -- An Example shipping calculation -->"
    String sXml = "<order>"
            +  "<merchantinfo>"
            //-- Replace with your STORE NUMBER or
STORENAME-->"
            +    "<configfile>1234567</configfile>"
            +  "</merchantinfo>"
            +  "<orderoptions>"
            +    "<ordertype>CALCSHIPPING</ordertype>"
            +  "</orderoptions>"
            +  "<shipping>"
            //-- Include the fields needed for your shipping
calculation method -->"
            +    "<carrier>2</carrier>"
            +    "<weight>1.2</weight>"
            +    "<items>1</items>"
            +    "<total>12.99</total>"
            +    "<state>CA</state>"
            +  "</shipping>"
            + "</order>";
    String sResponse = txn.send(sXml);
    System.out.println(sResponse);
   }
   catch (Exception e) {}
  }
  //----------------------------------------------------------------------
--------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code to Calculate Sales Tax Using Java$^{TM}$

The code shown below demonstrates how to use the Tax calculator. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
import lp.txn.JLinkPointTransaction;

import java.net.*;
import java.io.*;

public class JLinkPointSample {

  public JLinkPointSample() {}

  //--------------------------------------------------------------------------
  public void Process()
  {
    try {
      JLinkPointTransaction txn = new JLinkPointTransaction();
    String sClientCertPath = "c:/clientcert.p12";

    txn.setClientCertificatePath(sClientCertPath);
    txn.setPassword("12345678");
    txn.setHost("secure.linkpt.net");
    txn.setPort(1129);
    // -- An Example tax calculation -->"
    String sXml = "<order>"
            +  "<merchantinfo>"
            //-- Replace with your STORE NUMBER or
STORENAME-->"
            +    "<configfile>1234567</configfile>"
            +  "</merchantinfo>"
            +  "<orderoptions>"
            +    "<ordertype>CALCTAX</ordertype>"
            +  "</orderoptions>"
            +  "<shipping>"
            //-- Include the fields needed for tax calculation --
>"
            +    "<total>12.99</total>"
            +    "<state>CA</state>"
            +    "<zip>12345</zip>"
            +  "</shipping>"
            +  "<payment>"
            +    "<subtotal>12.99</subtotal>"
            +  "</payment>"
            + "</order>";
    String sResponse = txn.send(sXml);
    System.out.println(sResponse);
   }
   catch (Exception e) {}
```

```
  }

  //-----------------------------------------------------------------------
--------
  public static void main(String[] args)
  {
    JLinkPointSample txn = new JLinkPointSample();
    txn.Process();
  }
}
```

# Sample Code: Files for all .NET/C# Samples

The code shown below are the common files that go with all the .NET/C# samples. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change in the ***Web.config*** file:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Web.config

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <configSections>
    <sectionGroup name="LPAPP_Config">
        <section name="client"
              type="System.Configuration.NameValueSectionHandler,System,
Version=1.0.3300.0, Culture=neutral,
PublicKeyToken=b77a5c561934e089" />
        <section name="opts"
              type="System.Configuration.NameValueSectionHandler,System,
Version=1.0.3300.0, Culture=neutral,
PublicKeyToken=b77a5c561934e089" />


    </sectionGroup>
  </configSections>

<system.web>

    <!-- DYNAMIC DEBUG COMPILATION
          Set compilation debug="true" to enable ASPX debugging. Otherwise, setting this value to
          false will improve runtime performance of this application. 
          Set compilation debug="true" to insert debugging symbols (.pdb information)
          into the compiled page. Because this creates a larger file that executes
          more slowly, you should set this value to true only when debugging and to
          false at all other times. For more information, refer to the documentation about
          debugging ASP .NET files.
    -->
    <compilation 
      defaultLanguage="c#"
      debug="true"
    />

    <!-- CUSTOM ERROR MESSAGES
          Set customError mode values to control the display of user-friendly 
          error messages to users instead of error details (including a stack trace):

          "On" Always display custom (friendly) messages  
          "Off" Always display detailed ASP.NET error information.
          "RemoteOnly" Display custom (friendly) messages only to users not running 
          on the local Web server. This setting is recommended for security
```

```
purposes, so
       that you do not display application detail information to remote
clients.
   -->
   <customErrors
   mode="RemoteOnly"
   />

   <!-- AUTHENTICATION
       This section sets the authentication policies of the application.
Possible modes are "Windows", "Forms",
       "Passport" and "None"
   -->
   <authentication mode="Windows" />

   <!-- APPLICATION-LEVEL TRACE LOGGING
       Application-level tracing enables trace log output for every page
within an application.
       Set trace enabled="true" to enable application trace logging. If
pageOutput="true", the
       trace information will be displayed at the bottom of each page.
Otherwise, you can view the
       application trace log by browsing the "trace.axd" page from your
web application
       root.
   -->
   <trace
     enabled="false"
     requestLimit="10"
     pageOutput="false"
     traceMode="SortByTime"
localOnly="true"
   />
   <!-- SESSION STATE SETTINGS
        By default ASP .NET uses cookies to identify which requests belong
to a particular session.
        If cookies are not available, a session can be tracked by adding a
session identifier to the URL.
        To disable cookies, set sessionState cookieless="true".
   -->
   <sessionState
         mode="InProc"
         stateConnectionString="tcpip=127.0.0.1:42424"
         sqlConnectionString="data source=127.0.0.1;user
id=sa;password="
         cookieless="false"
         timeout="20"
   />

   <!-- GLOBALIZATION
        This section sets the globalization settings of the application.
   -->
   <globalization
         requestEncoding="utf-8"
         responseEncoding="utf-8"
  />

</system.web>

  <LPAPP_Config>
      <client>
       <!-- Change this to your store number -->
       <add key="Configfile" value="1234567" />
       <!-- Change this to the name and location of your certificate file -->
        <add key="Keyfile" value="./YOURCERT.pem" />
        <add key="Host" value="secure.linkpt.net" />
        <add key="Port" value="1129" />
</client>
      <opts>
        <!-- legacy flag - not in use -->
        <add key="dbg" value="false" />
      </opts>
  </LPAPP_Config>

</configuration>
```

## LinkPointTxn_Page.cs

```
" + yr + "");
    }
  }

  public void WriteMonthOpts()
  {
    int mn;
    int cur = Int32.Parse(expmonth);
    string pad="";


    for( mn =1; mn <= 12; mn++)
    {
      pad = mn < 10 ? "0" : "";
      if ( mn == cur )
        Response.Write( "" + mn + "");
      else
        Response.Write ("" + mn + "");
    }

  }

  protected void ParseFormData()
  {
    bname = Request.Form["bname"];
    bcompany = Request.Form["bcompany"];
```

```
baddr1 = Request.Form["baddr1"];
baddr2 = Request.Form["baddr2"];
bstate = Request.Form["bstate"];
bcity = Request.Form["bcity"];
bcountry = Request.Form["bcountry"];
bzip = Request.Form["bzip"];
bemail = Request.Form["bemail"];
bfax = Request.Form["bfax"];
bphone = Request.Form["bphone"];
baddrnum = Request.Form["baddrnum"];

sname = Request.Form["sname"];


saddr1 = Request.Form["saddr1"];
saddr2 = Request.Form["saddr2"];
scity = Request.Form["scity"];
sstate = Request.Form["sstate"];
scountry = Request.Form["scountry"];
szip = Request.Form["szip"];
scarrier = Request.Form["scarrier"];
sweight = Request.Form["sweight"];
sitems = Request.Form["sitems"];
stotal = Request.Form["stotal"];

//phonenumber = Request.Form["phone"];
//faxnumber = Request.Form["fax"];
//emailaddress = Request.Form["emailaddress"];
comments = Request.Form["comments"];

cardnumber = Request.Form["cardnumber"];
expmonth = Request.Form["expmonth"];
expyear = Request.Form["expyear"];
//cvmindicator = Request.Form["cvmindicator"];
cvmvalue = Request.Form["cvmvalue"];


subtotal = Request.Form["subtotal"];
if ( (subtotal == null) || subtotal.Length < 1 ){ subtotal = "0.0"; }
tax = Request.Form["tax"];
if ( (tax==null) || tax.Length < 1 ){ tax = "0.0"; }
shipping = Request.Form["shipping"];
if ( (shipping==null) || shipping.Length < 1 ){ shipping = "0.0"; }
total = Request.Form["total"];
if ( (total==null) || total.Length < 1 ){ total = "0.0"; }
pbthreshold = Request.Form["pbthreshold"];
```

```
  startdate = Request.Form["startdate"];
  periodicity = Request.Form["periodicity"];
  installments = Request.Form["installments"];
  pbcomments = Request.Form["pbcomments"];

  accttype = Request.Form["accttype"];
  micr = Request.Form["micr"];

  accountNbr = Request.Form["accountNbr"];
  routeNbr = Request.Form["routeNbr"];
  bankName = Request.Form["bankName"];
  bankState = Request.Form["bankState"];
  dl = Request.Form["dl"];
  dlState = Request.Form["dlState"];
  ssn = Request.Form["ssn"];
  checkNbr = Request.Form["checkNbr"];

  refnumber = Request.Form["refnumber"];
  tax = Request.Form["tax"];
  taxexempt = Request.Form["taxexempt"];
  oid = Request.Form["oid"];

  comments = Request.Form["comments"];
  referred = Request.Form["referred"];
  result = Request.Form["result"];
  origin = Request.Form["origin"];

  GetConfigParams();
}


protected void ParseResponse( string rsp )
{
  R_Time=ParseTag("r_time",rsp);
  R_Ref=ParseTag("r_ref",rsp);
  R_Approved=ParseTag("r_approved",rsp);
  R_Code=ParseTag("r_code",rsp);
  R_Authresr=ParseTag("r_authresronse",rsp);
  R_Error=ParseTag("r_error",rsp);
  R_OrderNum=ParseTag("r_ordernum",rsp);
  R_Message=ParseTag("r_message",rsp);
  R_Score=ParseTag("r_score",rsp);
  R_TDate=ParseTag("r_tdate",rsp);
  R_AVS=ParseTag("r_avs",rsp);
```

```
      R_Tax=ParseTag("r_tax",rsp);
      R_Shipping=ParseTag("r_shipping",rsp);
      R_FraudCode=ParseTag("r_fraudCode",rsp);
      R_ESD=ParseTag("esd",rsp);
    }

    protected string ParseTag(string tag, string rsp )
    {
      StringBuilder sb = new StringBuilder(256);
      sb.AppendFormat("<{0}>",tag);
      int len = sb.Length;
      int idxSt=-1,idxEnd=-1;
      if( -1 == (idxSt = rsp.IndexOf(sb.ToString())))
      { return ""; }
      idxSt += len;
      sb.Remove(0,len);
      sb.AppendFormat("</{0}>",tag);
      if( -1 == (idxEnd = rsp.IndexOf(sb.ToString(),idxSt)))
      { return ""; }
      return rsp.Substring(idxSt,idxEnd-idxSt);
    }

    void GetConfigParams()
    {
      // get some stuff from app config
      NameValueCollection config =
(NameValueCollection)ConfigurationSettings.GetConfig("LPAPP_Config/client");

      configfile = config["Configfile"];
      keyfile = config["Keyfile"];
      host = config["Host"];
      port = Int32.Parse(config["Port"]);

      config = (NameValueCollection)ConfigurationSettings.GetConfig("LPAPP_Config/opts");
      // not in use anymore
      try{
      dbg = bool.Parse(config["dbg"]);
      }catch(Exception e ){}

    }



// Init value for form fields
// for all samples
protected string bname="Joe Customer";
protected string bcompany="SomeWhere, Inc.";
protected string baddr1="123 Broadway";
protected string baddr2="Suite 23";
protected string bstate="CA";
protected string bcity="Moorpark";
protected string bcountry="US";
protected string bphone="8051234567";
protected string bfax="8059876543";
protected string bemail="joe.customer@somewhere.com";
protected string baddrnum="123";
protected string bzip="87123";


protected string sname="Joe Customer";
protected string saddr1="123 Broadway";
protected string saddr2="Suite 23";
protected string scity="Moorpark";
protected string sstate="CA";
protected string scountry="US";
protected string szip="12345";
protected string semail="joe.customer@somewhere.com";
protected string sfax="8059876543";
protected string saddrnum="123";

protected string sweight="1.2";
protected string sitems="1";
protected string scarrier="2";
protected string stotal="12.99";

protected string comments="Repeat customer. Ship immediately.";
protected string referred="Saw ad on Web site.";


protected string cardnumber="4111-1111-1111-1111";
protected string expmonth="03";
protected string expyear="05";
protected string cvmvalue="123";
protected string cvmindicator="provided";
protected int expyearVal = 2005;

protected string subtotal="12.99";
protected string tax="0.34";
protected string shipping="1.45";
protected string total="14.78";
protected string vattax="0.0";

protected string refnumber="NEW987654";
protected string ponumber="1203A-G4567";
protected string taxexempt="N";
protected string oid="12345768-A345";

  protected string startdate="immediate";
protected string periodicity="monthly";
protected string installments="3";
protected string pbthreshold="3";
protected string pbcomments="";

protected string accttype="pc";

protected string micr="%B4111111111111111^CUSTOMER/JOE ^0503000500000?";
protected string accountNbr="2139842610";
protected string routeNbr="123456789";
protected string bankName="";
protected string bankState="CA";
protected string dl="120381698";
protected string dlState="CA";
protected string ssn="";
protected string checkNbr="";

  protected string result="LIVE";
  protected string origin="MOTO";

// transaction object
  protected LinkPointTxn LPTxn;
  // config params
  protected string configfile;
  protected string keyfile;
  protected string host;
  protected int  port;

  // response holders
  protected string R_Time;
  protected string R_Ref;
  protected string R_Approved;
  protected string R_Code;
  protected string R_Authresr;
  protected string R_Error;
  protected string R_OrderNum;
  protected string R_Message;
  protected string R_Score;
  protected string R_TDate;
  protected string R_AVS;
  protected string R_FraudCode;
  protected string R_ESD;
  protected string R_Tax;
  protected string R_Shipping;



  protected static bool dbg=false;

  }




}
```

```
/////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint
International, Inc.
// Use is subject to license terms.
/////////////////////////////////////////////////////////////////////////////
using System;
using System.Text;
using System.Collections;
using System.Configuration;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Web;
using System.Web.SessionState;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Web.UI.HtmlControls;
using System.Collections.Specialized;
using LinkPointTransaction;


namespace LinkPointAPI_cs
{
  ///
  /// Summary description for LinkPointTxn_Page.
  ///
  public class LinkPointTxn_Page : System.Web.UI.Page
  {
    public LinkPointTxn_Page()
    {
    }

    public void WriteYearOpts()
    {
      int year = DateTime.Now.Year;
      string pad="";
      string sel="";

      try
      {
      expyearVal = Int32.Parse(expyear);
if(expyearVal<10) expyearVal +=2000;
      }
      catch(Exception e)
      {
      expyearVal = year;
      }

      for(int yr = year; yr <= year+5; yr++)
```

```
{
  sel = expyearVal == yr ? " selected " : "";
  pad = (yr-2000) < 10 ? "0" : "";
  Response.Write ("
```

# Sample Code to Process a Sale (Minimum Info) Using .NET and C#

The code shown below demonstrates how to process a credit card sale. This example includes only the minimum fields required for a SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#"
Codebehind="SALE_MININFO.aspx.cs" AutoEventWireup="false"
Inherits="LinkPointAPI_cs.SALE_MININFO" %><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>SALE_MININFO</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript"
content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form ACTION="SALE_MININFO.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1"><br>
      <p align="center"><b><font size="5"> CREDIT CARD
SALE (MINIMUM)</font></b><br><br>
```

```
    </p><br>
    <p align="center">An Example Credit Card SALE
Transaction with Minimum Required <br>
     Fields</p><br>
    <div align="center"><br>
     <center><br>
      <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="238" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 238px"><br>
        <tr><br>
         <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD><br>
         <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD><br>
         <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD><br>
         <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD><br>
        </tr><br>
        <TR><br>
         <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
         <TD height="1" width="276">Order
Type:</TD><br>
         <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
         <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>SALE</b></TD><br>
        <TR><br>
         <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
```

```
          <TD height="1" width="276">Total:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD><br>
        </TR><br>
        <tr><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="276"> </TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
        </tr><br>
        <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="144">Card
Number:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD><br>
        </TR><br>
        <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
```

```
              <TD height="1" width="276">Exp.
Month:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
                <select id="expmonth" name="expmonth"
size="1"><br>
                  <%WriteMonthOpts();%><br>
                </select></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Exp. Year:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
                <select id="expyear" name="expyear"
size="1"><br>
                  <%WriteYearOpts();%><br>
                </select></TD><br>
            </TR><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276"> </TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
```

```
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Address
Numbers<FONT color="red">*</FONT>:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=baddrnum%>"
name="baddrnum"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Zip<FONT
color="red">*</FONT>:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD><br>
            </TR><br>
            <TR><br>
              <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD><br>
              <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD><br>
              <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE:
solid" width="115" height="10"> </TD><br>
              <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
```

```
BOTTOM-STYLE: solid" width="78" height="10"> </TD><br>
            </TR><br>
          </TABLE><br>
        </center><br>
      </div><br>
      <P align="left"><FONT color="red">*</FONT>) If not
provided, transactions will <br>
        downgrade.</P><br>
      <p align="center"><input type="submit" value="Submit"
name="Submit"><br>
    </form><br>
    </P><br>
  </body><br>
</HTML><br>
```

## Sample C# Code

```
/*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'*********************************************/

using System;
using LinkPointTransaction;

namespace LinkPointAPI_cs
{
  /// <summary>
```

```
 /// Summary description for SALE_MININFO.
 /// </summary>
 public class SALE_MININFO : LinkPointTxn_Page
 {
   private void Page_Load(object sender, System.EventArgs e)
   {
     if( IsPostBack )
     {
       // Parse form data
       ParseFormData();
       // process order
       ProcessOrder();
     }
   }

   private void ProcessOrder()
   {
     // create order
     LPOrderPart order =
LPOrderFactory.createOrderPart("order");
     // create a part we will use to build the order
     LPOrderPart op = LPOrderFactory.createOrderPart();

     // Build 'orderoptions'
     op.put("ordertype","SALE");
     // add 'orderoptions to order
     order.addPart("orderoptions", op );

     // Build 'merchantinfo'
     op.clear();
     op.put("configfile",configfile);
     // add 'merchantinfo to order
```

```
order.addPart("merchantinfo", op );

// Build 'billing'
// Required for AVS. If not provided,
// transactions will downgrade.
op.clear();
op.put("zip",bzip);
op.put("addrnum",baddrnum);
// add 'billing to order
order.addPart("billing", op );

// Build 'creditcard'
op.clear();
op.put("cardnumber",cardnumber);
op.put("cardexpmonth",expmonth);
op.put("cardexpyear",expyear);
// add 'creditcard to order
order.addPart("creditcard", op );

// Build 'payment'
op.clear();
op.put("chargetotal",total);
// add 'payment to order
order.addPart("payment", op );

// create transaction object
LinkPointTxn LPTxn = new LinkPointTxn();

// get outgoing XML from the 'order' object
string outXml = order.toXML();

// Call LPTxn
string resp = LPTxn.send(keyfile,host,port, outXml);
```

```
      //Store transaction data on Session and redirect
      Session["outXml"] = outXml;
      Session["resp"] = resp;
      Server.Transfer("status.aspx");

    }




    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web
Form Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to Process a Sale (Maximum Info) Using .NET and C#

The code shown below demonstrates how to process a credit card sale. This example includes samples of all the commonly used fields you can use in a SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#"
Codebehind="SALE_MAXINFO.aspx.cs"
AutoEventWireup="false"
Inherits="LinkPointAPI_cs.SALE_MAXINFO" %><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>SALE_MAXINFO</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript"
content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form ACTION="SALE_MAXINFO.aspx" method="post"
runat="server"><br>
      <p align="center"><b><font size="5"> SALE
```

```
TRANSACTION</font></b><br><br>
      </p><br>
      <p align="center">An Example Credit Card SALE with all
commonly used fields <br>
        included</p><br>
      <div align="center"><br>
        <center><br>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="238" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 238px"><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD><br>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD><br>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD><br>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Order
Type:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>SALE</b></TD><br>
            </TR><br>
            <TR><br>
```

```
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
       <TD height="1" width="276">Result:</TD><br>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
        <select name="result" size="1"><br>
         <option value="LIVE"
selected>LIVE</option><br>
         <option value="GOOD">GOOD</option><br>
         <option value="GOOD">DECLINE</option><br>
         <option value="GOOD">DUPLICATE</option><br>
        </select></TD><br>
      </TR><br>
      <TR><br>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
       <TD height="1" width="276">Origin:</TD><br>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
        <select name="origin" size="1"><br>
         <option value="MOTO"
selected>MOTO</option><br>
         <option value="RETAIL">RETAIL</option><br>
         <option value="ECI">ECI</option><br>
        </select></TD><br>
      </TR><br>
      <tr><br>
       <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD><br>
        <TD height="1"
width="276"><b>Payment:</b></TD><br>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
       </tr><br>
       <TR><br>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
        <TD height="1" width="276">Subtotal:</TD><br>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="subtotal"></TD><br>
       </TR><br>
       <TR><br>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
        <TD height="1" width="276">Tax:</TD><br>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="0.32" name="tax"></TD><br>
       </TR><br>
       <TR><br>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
        <TD height="1" width="276">Shipping:</TD><br>
```

```
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1.02" name="shipping"></TD><br>
         </TR><br>
         <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="276">Total:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="14.33" name="total"></TD><br>
         </TR><br>
         <tr><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="276"><b>Credit
Card:</b></TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
         </tr><br>
         <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="144">Card
Number:</TD><br>
          <TD height="1" width="115" style="WIDTH:
```

```
115px"> </TD><br>
         <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=cardnumber%>"
name="cardnumber" size="17"></TD><br>
        </TR><br>
        <TR><br>
         <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
         <TD height="1" width="276">Exp.
Month:</TD><br>
         <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
         <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
          <select id="expmonth" name="expmonth"
size="1"><br>
           <%WriteMonthOpts();%><br>
          </select></TD><br>
        </TR><br>
        <TR><br>
         <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
         <TD height="1" width="276">Exp. Year:</TD><br>
         <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
         <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
          <select id="expyear" name="expyear"
size="1"><br>
           <%WriteYearOpts();%><br>
          </select></TD><br>
        </TR><br>
```

```
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">CVM:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=cvmvalue%>"
name="cvmvalue"></TD><br>
            </TR><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1"
width="276"><b>Billing:</b></TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="144">Name:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bname%>" name="bname"
size="17"></TD><br>
            </TR><br>
            <TR><br>
```

```
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="144">Company:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcompany%>"
name="bcompany" size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="144">Address 1:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=baddr1%>"
name="baddr1" size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="144">Address 2:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=baddr2%>"
name="baddr2" size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
```

```
              <TD height="1" width="144">City:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcity%>" name="bcity"
size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="144">State:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bstate%>" name="bstate"
size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="144">Country:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcountry%>"
name="bcountry" size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="144">Phone:</TD><br>
              <TD height="1" width="115" style="WIDTH:
```

```
115px"> </TD><br>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bphone%>"
name="bphone" size="17"></TD><br>
        </TR><br>
        <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="144">Email:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bemail%>" name="bemail"
size="17"></TD><br>
        </TR><br>
        <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="276">Address
Numbers:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=baddrnum%>"
name="baddrnum"></TD><br>
        </TR><br>
        <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1"
width="276">Zip</FONT>:</TD><br>
```

```
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD><br>
        </TR><br>
        <tr><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1"
width="276"><b>Shipping:</b></TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
        </tr><br>
        <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="144">Name:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=sname%>" name="sname"
size="17"></TD><br>
        </TR><br>
        <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="144">Address 1:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
```

```
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=saddr1%>" name="saddr1"
size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="144">Address 2:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=saddr2%>" name="saddr2"
size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="144">City:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=scity%>" name="scity"
size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="144">Zip:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=szip%>" name="szip"
```

```
size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="144">State:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=sstate%>" name="sstate"
size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="144">Country:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=scountry%>"
name="scountry" size="17"></TD><br>
            </TR><br>
            <!--<br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276"> </TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
            </tr> --><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1"
width="276"><b>ITEM:</b></TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">ID:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="123456-A98767" name="id2"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1"
width="276">Description:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="Logo T-Shirt" name="desc2"></TD><br>
            </TR><br>
            <TR><br>
```

```
               <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
               <TD height="1" width="276">Price:</TD><br>
               <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
               <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="price2"></TD><br>
             </TR><br>
             <TR><br>
               <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
               <TD height="1" width="276">Quantity:</TD><br>
               <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
               <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1" name="qty2"></TD><br>
             </TR><br>
             <TR><br>
               <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
               <TD height="1" width="276">Serial:</TD><br>
               <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
               <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="0987654322" name="serial2"></TD><br>
             </TR><br>
             <TR><br>
               <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
```

```
          <TD height="1" width="276">Color:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
            <select name="Color" size="1"><br>
              <option value="Red" selected>Red</option><br>
              <option value="Blue">Blue</option><br>
            </select></TD><br>
        </TR><br>
        <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="276">Size:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
            <select name="Size" size="1"><br>
              <option value="M">Medium</option><br>
              <option value="L">Large</option><br>
              <option value="XL"
selected>XLarge</option><br>
            </select></TD><br>
        </TR><br>
        <tr><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1"
width="276"><b>Notes:</b></TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
```

```
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
        </tr><br>
        <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="276">Comments:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="<%=comments%>"
name="comments"></TD><br>
        </TR><br>
        <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="276">Referred:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="<%=referred%>"
name="referred"></TD><br>
        </TR><br>
        <TR><br>
          <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD><br>
          <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD><br>
          <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE:
solid" width="115" height="10"> </TD><br>
```

```
              <TD style="BORDER-RIGHT-STYLE: solid;BORDER-BOTTOM-STYLE: solid" width="78" height="10"> </TD><br>
            </TR><br>
          </TABLE><br>
        </center><br>
      </div><br>
      <p align="center"><input type="submit" value="Submit" name="Submit"><br>
    </form><br>
    </P><br>
  </body><br>
</HTML><br>
```

## Sample C# Code

```
/*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'**********************************************/

using System;
using LinkPointTransaction;


namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for SALE_MAXINFO.
  /// </summary>
  public class SALE_MAXINFO : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      if( IsPostBack )
      {
        // Parse form data
        ParseFormData();
        // process order
        ProcessOrder();
      }
    }

    private void ProcessOrder()
    {
      // create order
      LPOrderPart order =
LPOrderFactory.createOrderPart("order");
      // create a part we will use to build the order
      LPOrderPart op = LPOrderFactory.createOrderPart();

      // Build 'orderoptions'
      op.put("ordertype","SALE");
      // set transaction result
      op.put("result", Request.Form["result"]);
      // add 'orderoptions to order
      order.addPart("orderoptions", op );
      // Build 'transactiondetails'
      op.clear();
      op.put("transactionorigin",Request.Form["origin"] );
        // add 'transactiondetails to order
        order.addPart("transactiondetails", op);
```

```
// Build 'merchantinfo'
op.clear();
op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );

// Build 'payment'
op.clear();
op.put("subtotal",Request.Form["subtotal"]);
op.put("tax",Request.Form["tax"]);
op.put("shipping",Request.Form["shipping"]);
op.put("chargetotal",Request.Form["total"]);
// add 'payment to order
order.addPart("payment", op );

// Build 'creditcard'
op.clear();
op.put("cardnumber",cardnumber);
op.put("cardexpmonth",expmonth);
op.put("cardexpyear",expyear);
op.put("cvmvalue",cvmvalue);
op.put("cvmindicator",cvmindicator);
// add 'creditcard to order
order.addPart("creditcard", op );

// Build 'billing'
op.clear();
op.put("name",bname);
op.put("company",bcompany);
op.put("address1",baddr1);
op.put("address2",baddr2);
op.put("city",bcity);
op.put("state",bstate);
```

```
// Required for AVS. If not provided,
// transactions will downgrade.
op.put("zip",bzip);
op.put("addrnum",baddrnum);
op.put("country",bcountry);
op.put("phone",bphone);
op.put("fax",bfax);
op.put("email",bemail);
// add 'billing to order
order.addPart("billing", op );

// Build 'shipping'
op.clear();
op.put("name",sname);
op.put("address1",saddr1);
op.put("address2",saddr2);
op.put("city",scity);
op.put("state",sstate);
op.put("zip",szip);
op.put("country",scountry);

// Create some parts we use to build order itmes
LPOrderPart items = LPOrderFactory.createOrderPart();
LPOrderPart item = LPOrderFactory.createOrderPart();
LPOrderPart options = LPOrderFactory.createOrderPart();

// build 'item'
item.put("id",Request.Form["id2"]);
item.put("description",Request.Form["desc2"]);
item.put("quantity",Request.Form["qty2"]);
item.put("price",Request.Form["price2"]);
item.put("serial",Request.Form["serial2"]);
// build item's options
```

```
op.clear();
op.put("name","Color");
op.put("value",Request.Form["Color"]);
options.addPart("option",op,1);
op.clear();
op.put("name","Size");
op.put("value",Request.Form["Size"]);
options.addPart("option",op,2);
// add 'options' to item
item.addPart("options", options );
// add 'item' to 'items' collection
items.addPart("item", item);
// add 'items' to order
order.addPart("items", items );

// add notes
op.clear();
op.put("comments",comments);
op.put("referred",referred);
order.addPart("notes",op);

// create transaction object
LinkPointTxn LPTxn = new LinkPointTxn();

// get outgoing XML from the 'order' object
string outXml = order.toXML();

// Call LPTxn
string resp = LPTxn.send(keyfile,host,port, outXml);

//Store transaction data on Session and redirect
Session["outXml"] = outXml;
Session["resp"] = resp;
```

```
      Server.Transfer("status.aspx");

    }


    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to Process a PreAuth Transaction Using .NET and C#

The code shown below demonstrates how to process a PreAuthorization Transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## preauth.aspx

```
<%@ Page language="c#" Codebehind="PREAUTH.aspx.cs"
AutoEventWireup="false" Inherits="LinkPointAPI_cs.PREAUTH" %><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>PREAUTH</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual Studio
7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript" content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form ACTION="PREAUTH.aspx" METHOD="post" NAME="SaleForm"
runat="server" ID="Form1"><br>
      <p align="center"><b><font size="5"> CREDIT CARD PREAUTH
TRANSACTION</font></b><br><br>
      </p><br>
      <p align="center">An Example Credit Card PreAuth Transaction with
Minimum Required <br>
        Fields</p><br>
    <div align="center"><br>
      <center><br>
        <TABLE id="TABLE1" cellSpacing="0" cellPadding="0" width="356" border="0" height="238" bgcolor="#c0c0c0" style="WIDTH: 356px; HEIGHT: 238px"><br>
          <tr><br>
            <TD height="1" width="103" style="WIDTH: 103px; BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE: solid"> </TD><br>
            <TD height="1" width="276" style="BORDER-TOP-STYLE: solid"> </TD><br>
            <TD height="1" width="115" style="WIDTH: 115px; BORDER-TOP-STYLE: solid"> </TD><br>
            <TD height="1" width="78" style="BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD><br>
          </tr><br>
          <TR><br>
            <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD><br>
            <TD height="1" width="276">Order Type:</TD><br>
            <TD height="1" width="115" style="WIDTH: 115px"> </TD><br>
            <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><b>PREAUTH</b></TD><br>
          <TR><br>
            <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD><br>
            <TD height="1" width="276">Total:</TD><br>
            <TD height="1" width="115" style="WIDTH: 115px"> </TD><br>
            <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px" size="6" value="<%=subtotal%>" name="total"></TD><br>
            </TR><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-
LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276"> </TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE:
solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-
LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="144">Card Number:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="199" style="BORDER-RIGHT-STYLE:
solid"><INPUT id="emailaddress1" value="<%=cardnumber%>"
name="cardnumber" size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-
LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Exp. Month:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE:
solid"><br>
                <select id="expmonth" name="expmonth" size="1"><br>
                  <%WriteMonthOpts();%><br>
                </select></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-
LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Exp. Year:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE:
solid"><br>
                <select id="expyear" name="expyear" size="1"><br>
                  <%WriteYearOpts();%><br>
                </select></TD><br>
            </TR><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-
LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276"> </TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE:
solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-
LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Address Numbers<FONT
color="red">*</FONT>:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE:
solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px" size="4"
value="<%=baddrnum%>" name="baddrnum"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-
LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Zip<FONT
color="red">*</FONT>:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE:
solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px" size="4"
value="<%=bzip%>" name="bzip"></TD><br>
            </TR><br>
            <TR><br>
              <TD style="BORDER-LEFT-STYLE: solid; BORDER-BOTTOM-STYLE:
solid" width="103" height="10"> </TD><br>
              <TD style="BORDER-BOTTOM-STYLE: solid" width="276"
height="10"> </TD><br>
              <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE: solid"
width="115" height="10"> </TD><br>
              <TD style="BORDER-RIGHT-STYLE: solid;BORDER-BOTTOM-
STYLE: solid" width="78" height="10"> </TD><br>
            </TR><br>
          </TABLE><br>
        </center><br>
      </div><br>
      <P align="left"><FONT color="red">*</FONT>) If not provided,
transactions will <br>
        downgrade.</P><br>
      <p align="center"><input type="submit" value="Submit"
name="Submit"><br>
    </form><br>
    </P><br>
  </body><br>
```

```
</HTML><br>
```

## preauth.aspx.cs

```
////////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint International,
Inc.
// Use is subject to license terms.
////////////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;

namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for PREAUTH.
  /// </summary>
  public class PREAUTH : LinkPointTxn_Page
  {

    private void Page_Load(object sender, System.EventArgs e)
    {
      if( IsPostBack )
      {
        // Parse form data
        ParseFormData();
        // process order
        ProcessOrder();
      }
    }
```

```
private void ProcessOrder()
{
  // create order
  LPOrderPart order = LPOrderFactory.createOrderPart("order");
  // create a part we will use to build the order
  LPOrderPart op = LPOrderFactory.createOrderPart();

  // Build 'orderoptions'
  // For a test, set result to GOOD, DECLINE, or DUPLICATE
  op.put("result","GOOD");
  op.put("ordertype","PREAUTH");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );


  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );

  // Build 'creditcard'
  op.clear();
  op.put("cardnumber",cardnumber);
  op.put("cardexpmonth",expmonth);
  op.put("cardexpyear",expyear);
  // add 'creditcard to order
  order.addPart("creditcard", op );

  // Build 'billing'
  op.clear();
  op.put("addrnum",baddrnum);
```

```
    op.put("zip",bzip);
    // add 'billing to order
    order.addPart("billing", op );

    // Build 'payment'
    op.clear();
    op.put("chargetotal",total);
    // add 'payment to order
    order.addPart("payment", op );



    // create transaction object
    LinkPointTxn LPTxn = new LinkPointTxn();

    // get outgoing XML from the 'order' object
    string outXml = order.toXML();

    // Call LPTxn
    string resp = LPTxn.send(keyfile,host,port, outXml);

    //Store transaction data on Session and redirect
    Session["outXml"] = outXml;
    Session["resp"] = resp;
    Server.Transfer("status.aspx");

  }

  #region Web Form Designer generated code
  override protected void OnInit(EventArgs e)
  {
    //
    // CODEGEN: This call is required by the ASP.NET Web Form Designer.
    //
```

```
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to Process a PostAuth Transaction Using .NET and C#

The code shown below demonstrates how to process a PostAuthorization Transaction (that is, to complete a PreAuthorization with a valid order ID). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#" Codebehind="POSTAUTH.aspx.cs"
AutoEventWireup="false" Inherits="LinkPointAPI_cs.POSTAUTH"
%><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>POSTAUTH</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript"
content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form ACTION="POSTAUTH.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1"><br>
      <p align="center"><b><font size="5"> CREDIT CARD
POSTAUTH TRANSACTION</font></b><br><br>
```

```
      </p><br>
      <p align="center">An Example Credit Card PostAuth
Transaction with Minimum Required <br>
        Fields</p><br>
      <div align="center"><br>
        <center><br>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="396" border="0" height="233" bgcolor="#c0c0c0"
style="WIDTH: 396px; HEIGHT: 233px"><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD><br>
              <TD height="1" width="242" style="WIDTH: 242px;
BORDER-TOP-STYLE: solid"> </TD><br>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD><br>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE:
solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="242" style="WIDTH:
242px">Order Type:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><b>POSTAUTH</b></TD><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="242" style="WIDTH:
242px">Total:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD><br>
        </TR><br>
        <tr><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="242" style="WIDTH:
242px"> </TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"> </TD><br>
        </tr><br>
        <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="242" style="WIDTH:
242px">Card Number:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD><br>
        </TR><br>
```

```
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="242" style="WIDTH:
242px">Exp. Month:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><br>
                <select id="expmonth" name="expmonth"
size="1"><br>
                  <%WriteMonthOpts();%><br>
                </select></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="242" style="WIDTH:
242px">Exp. Year:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><br>
                <select id="expyear" name="expyear"
size="1"><br>
                  <%WriteYearOpts();%><br>
                </select></TD><br>
            </TR><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="242" style="WIDTH:
```

```
242px"> </TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="242" style="WIDTH:
242px">Order ID<FONT color="red">*</FONT>:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 213px;
HEIGHT: 22px" size="30" value="<%=oid%>"
name="oid"></TD><br>
            </TR><br>
            <TR><br>
              <TD style="BORDER-LEFT-STYLE: solid; HEIGHT:
8px; BORDER-BOTTOM-STYLE: solid" width="103"
height="8"> </TD><br>
              <TD style="WIDTH: 242px; HEIGHT: 8px; BORDER-
BOTTOM-STYLE: solid" width="242" height="8"> </TD><br>
              <TD style="WIDTH: 115px; HEIGHT: 8px; BORDER-
BOTTOM-STYLE: solid" width="115" height="8"> </TD><br>
              <TD style="WIDTH: 357px;BORDER-RIGHT-STYLE:
solid;HEIGHT: 8px;BORDER-BOTTOM-STYLE: solid"
width="357" height="8"> </TD><br>
            </TR><br>
          </TABLE><br>
        </center><br>
```

```
      </div><br>
      <P align="left"><FONT color="red">*</FONT>) Must be a
valid order ID from a prior <br>
       PreAuth</P><br>
      <p align="center"><input type="submit" value="Submit"
name="Submit"><br>
    </form><br>
    </P><br>
  </body><br>
</HTML><br>
```

## Sample C# Code

```
////////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint
International, Inc.
// Use is subject to license terms.
////////////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;

namespace LinkPointAPI_cs
{
/// <summary>
/// Summary description for POSTAUTH.
/// </summary>
public class POSTAUTH : LinkPointTxn_Page
{
private void Page_Load(object sender, System.EventArgs e)
{
```

```
if( IsPostBack )
{
// Parse form data
ParseFormData();
// process order
ProcessOrder();
}
}

private void ProcessOrder()
{
// create order
LPOrderPart order = LPOrderFactory.createOrderPart("order");
// create a part we will use to build the order
LPOrderPart op = LPOrderFactory.createOrderPart();

// Build 'orderoptions'
// For a test, set result to GOOD, DECLINE, or DUPLICATE
op.put("result","GOOD");
op.put("ordertype","POSTAUTH");
// add 'orderoptions to order
order.addPart("orderoptions", op );


// Build 'merchantinfo'
op.clear();
op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );


// Build 'creditcard'
op.clear();
op.put("cardnumber",cardnumber);
op.put("cardexpmonth",expmonth);
op.put("cardexpyear",expyear);
// add 'creditcard to order
order.addPart("creditcard", op );


// Build 'payment'
op.clear();
op.put("chargetotal",total);
// add 'payment to order
order.addPart("payment", op );

// Add oid
op.clear();
op.put("oid",oid);
// add 'transactiondetails to order
order.addPart("transactiondetails", op );

// create transaction object
LinkPointTxn LPTxn = new LinkPointTxn();

// get outgoing XML from the 'order' object
string outXml = order.toXML();

// Call LPTxn
string resp = LPTxn.send(keyfile,host,port, outXml);

//Store transaction data on Session and redirect
Session["outXml"] = outXml;
Session["resp"] = resp;
Server.Transfer("status.aspx");

}

#region Web Form Designer generated code
```

```
override protected void OnInit(EventArgs e)
{
//
// CODEGEN: This call is required by the ASP.NET Web Form Designer.
//
InitializeComponent();
base.OnInit(e);
}

/// <summary>
/// Required method for Designer support - do not modify
/// the contents of this method with the code editor.
/// </summary>
private void InitializeComponent()
{
this.Load += new System.EventHandler(this.Page_Load);
}
#endregion
}
}
```

# Sample Code for Using AVS and CVM with .NET and C#

The code shown below demonstrates how to process a credit card sale taking advantage of both the AVS and the CVM fraud protection measures. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#" Codebehind="AVS_CVM.aspx.cs"
AutoEventWireup="false" Inherits="LinkPointAPI_cs.AVS_CVM"
%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>AVS_CVM</title>
    <meta name="vs_showGrid" content="True">
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="AVS_CVM.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> CREDIT CARD
SALE WITH AVS/CVM</font></b><br>
```

```
        </p>
        <p align="left">
          An Example Credit Card SALE With Minimum Fields
required for AVS and Card Code
          fraud prevention measures</p>
        <div align="center">
          <center>
            <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="29" bgcolor="#c0c0c0">
              <tr>
                <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
                <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
                <TD height="1" width="9" style="WIDTH: 9px;
BORDER-TOP-STYLE: solid"> </TD>
                <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
              </tr>
              <TR>
                <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
                <TD height="1" width="276">Total:</TD>
                <TD height="1" width="9" style="WIDTH:
9px"> </TD>
                <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="subtotal"></TD>
              </TR>
              <tr>
```

```
         <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
         <TD height="1" width="276"> </TD>
         <TD height="1" width="9" style="WIDTH:
9px"> </TD>
         <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
        </tr>
        <TR>
         <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
         <TD height="1" width="144">Card Number:</TD>
         <TD height="1" width="9" style="WIDTH:
9px"> </TD>
         <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
        </TR>
        <TR>
         <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
         <TD height="1" width="276">Exp. Month:</TD>
         <TD height="1" width="9" style="WIDTH:
9px"> </TD>
         <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
          <select id="expmonth" name="expmonth"
size="1">
           <%WriteMonthOpts();%>
          </select></TD>
        </TR>
```

```
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Year:</TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts();%>
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">CVM:</TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=cvmvalue%>" name="cvmvalue"></TD>
            </TR>
            <TR>
```

```
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Address
Numbers:</TD>
          <TD height="1" width="9" style="WIDTH:
9px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=baddrnum%>"
name="baddrnum"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Zip:</TD>
          <TD height="1" width="9" style="WIDTH:
9px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD>
        </TR>
        <TR>
          <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
          <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
          <TD style="WIDTH: 9px; BORDER-BOTTOM-STYLE:
solid" width="9" height="10"> </TD>
          <TD style="BORDER-BOTTOM-STYLE: solid;BORDER-
RIGHT-STYLE: solid; " width="78" height="10"> </TD>
        </TR>
      </TABLE>
```

```
        </center>
      </div>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample C# Code

```
//////////////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint
International, Inc.
// Use is subject to license terms.
//////////////////////////////////////////////////////////////////////////////////////

using System;
using LinkPointTransaction;


namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for AVS_CVM.
  /// </summary>
  public class AVS_CVM : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      if( IsPostBack )
  {
    // Parse form data
    ParseFormData();
    // process order
    ProcessOrder();
  }

}



private void ProcessOrder()
{
  // create order
  LPOrderPart order = LPOrderFactory.createOrderPart("order");
  // create a part we will use to build the order
  LPOrderPart op = LPOrderFactory.createOrderPart();

  // Build 'orderoptions'
  op.put("ordertype","SALE");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );

  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );

  // Build 'billing'
  op.clear();
  op.put("zip",bzip);
  op.put("addrnum",baddrnum);
```

```
    // add 'billing to order
    order.addPart("billing", op );

    // Build 'creditcard'
    op.clear();
    op.put("cardnumber",cardnumber);
    op.put("cardexpmonth",expmonth);
    op.put("cardexpyear",expyear);
    op.put("cvmvalue",cvmvalue);
    op.put("cvmindicator",cvmindicator);
    // add 'creditcard to order
    order.addPart("creditcard", op );

    // Build 'payment'
    op.clear();
    op.put("chargetotal",subtotal);
    // add 'payment to order
    order.addPart("payment", op );


    // create transaction object
    LinkPointTxn LPTxn = new LinkPointTxn();

    // get outgoing XML from 'order' object
    string outXml = order.toXML();

    // Call LPTxn
    string resp = LPTxn.send(keyfile,host,port, outXml);


    //Store transaction data on Session and redirect
    Session["outXml"] = outXml;
    Session["resp"] = resp;
     Server.Transfer("status.aspx");


  }
```

```
    #region Web Form Designer generated code
  override protected void OnInit(EventArgs e)
{
  //
  // CODEGEN: This call is required by the ASP.NET Web Form
Designer.
  //
  InitializeComponent();
  base.OnInit(e);
}

  /// <summary>
  /// Required method for Designer support - do not modify
  /// the contents of this method with the code editor.
  /// </summary>
  private void InitializeComponent()
{
  this.Load += new System.EventHandler(this.Page_Load);
}
    #endregion
  }
}
```

# Sample Code to run a FORCED TICKET Transaction using .NET and C#

The code shown below demonstrates how to process a PostAuthorization for a Voice Authorization (a Forced Ticket transaction). The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page language="c#"
Codebehind="FORCED_TICKET.aspx.cs"
AutoEventWireup="false"
Inherits="LinkPointAPI_cs.FORCED_TICKET" %>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>FORCED_TICKET</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="FORCED_TICKET.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> FORCED TICKET
TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example of a FORCED TICKET
Transaction with Minimum Required
        Fields
      </p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="29" bgcolor="#c0c0c0">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="9" style="WIDTH: 9px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Total:</TD>
          <TD height="1" width="9" style="WIDTH:
9px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD>
        </TR>
        <tr>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276"> </TD>
          <TD height="1" width="9" style="WIDTH:
9px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
        </tr>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="144">Card Number:</TD>
          <TD height="1" width="9" style="WIDTH:
9px"> </TD>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Exp. Month:</TD>
          <TD height="1" width="9" style="WIDTH:
```

```
9px"> </TD>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
          <select id="expmonth" name="expmonth"
size="1">
            <%WriteMonthOpts();%>
          </select></TD>
      </TR>
      <TR>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1" width="276">Exp. Year:</TD>
        <TD height="1" width="9" style="WIDTH:
9px"> </TD>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
          <select id="expyear" name="expyear" size="1">
            <%WriteYearOpts();%>
          </select></TD>
      </TR>
      <tr>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1" width="276"> </TD>
        <TD height="1" width="9" style="WIDTH:
9px"> </TD>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
      </tr>
      <TR>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
       <TD height="1" width="276">Reference
Number:</TD>
       <TD height="1" width="9" style="WIDTH:
9px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="17" value="<%=refnumber%>"
name="refnumber"></TD>
      </TR>
      <TR>
       <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
       <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
       <TD style="WIDTH: 9px; BORDER-BOTTOM-STYLE:
solid" width="9" height="10"> </TD>
       <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
      </TR>
     </TABLE>
    </center>
   </div>
   <p align="center"><input type="submit" value="Submit"
name="Submit">
  </form>
  </P>
 </body>
</HTML>
```

## Sample C# Code

```
////////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint
International, Inc.
// Use is subject to license terms.
////////////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;


namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for FORCED_TICKET.
  /// </summary>
  public class FORCED_TICKET : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      if( IsPostBack )
      {
        // Parse form data
        ParseFormData();
        // process order
        ProcessOrder();
      }
    }



    private void ProcessOrder()
    {
```

```
// create order
LPOrderPart order = LPOrderFactory.createOrderPart("order");
// create a part we will use to build the order
LPOrderPart op = LPOrderFactory.createOrderPart();

// Build 'orderoptions'
op.put("ordertype","POSTAUTH");
// add 'orderoptions to order
order.addPart("orderoptions", op );

// Build 'merchantinfo'
op.clear();
op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );

// Build 'transactiondetails'
op.clear();
op.put("reference_number",refnumber);
// add 'billing to order
order.addPart("transactiondetails", op );

// Build 'creditcard'
op.clear();
op.put("cardnumber",cardnumber);
op.put("cardexpmonth",expmonth);
op.put("cardexpyear",expyear);
// add 'creditcard to order
order.addPart("creditcard", op );

// Build 'payment'
op.clear();
op.put("chargetotal",total);
```

```
      // add 'payment to order
      order.addPart("payment", op );


      // create transaction object
      LinkPointTxn LPTxn = new LinkPointTxn();

      // get outgoing XML from the 'order' object
      string outXml = order.toXML();

      // Call LPTxn
      string resp = LPTxn.send(keyfile,host,port, outXml);

      //Store transaction data on Session and redirect
      Session["outXml"] = outXml;
      Session["resp"] = resp;
      Server.Transfer("status.aspx");

    }

    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to Process a Return Using .NET and C#

The code shown below demonstrates how to process a credit card return. To perform a return, you must have a valid order ID (**oid**) from a prior SALE or PREAUTH/POSTAUTH. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#" Codebehind="RETURN.aspx.cs"
AutoEventWireup="false" Inherits="LinkPointAPI_cs.RETURN"
%><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>RETURN</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript"
content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form ACTION="RETURN.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1"><br>
      <p align="center"><b><font size="5"> CREDIT CARD
CREDIT TRANSACTION</font></b><br><br>
```

```
      </p><br>
      <p align="center">An Example of Credit Card CREDIT
Transaction With Minimum <br>
        Required Fields<br>
      </p><br>
      <div align="center"><br>
        <center><br>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="29" bgcolor="#c0c0c0"><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD><br>
              <TD height="1" width="110" style="WIDTH: 110px;
BORDER-TOP-STYLE: solid"> </TD><br>
              <TD height="1" width="9" style="WIDTH: 9px;
BORDER-TOP-STYLE: solid"> </TD><br>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="110" style="WIDTH:
110px">Total:</TD><br>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="<%=subtotal%>" name="total"></TD><br>
            </TR><br>
            <tr><br>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
        <TD height="1" width="110" style="WIDTH:
110px"> </TD><br>
        <TD height="1" width="9" style="WIDTH:
9px"> </TD><br>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
       </tr><br>
       <TR><br>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
        <TD height="1" width="110" style="WIDTH:
110px">Card Number:</TD><br>
        <TD height="1" width="9" style="WIDTH:
9px"> </TD><br>
        <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=cardnumber%>"
name="cardnumber" size="17"></TD><br>
       </TR><br>
       <TR><br>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
        <TD height="1" width="110" style="WIDTH:
110px">Exp. Month:</TD><br>
        <TD height="1" width="9" style="WIDTH:
9px"> </TD><br>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
         <select name="expmonth" size="1"><br>
          <%WriteMonthOpts();%><br>
         </select></TD><br>
```

```
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="110" style="WIDTH:
110px">Exp. Year:</TD><br>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
                <select name="expyear" size="1"><br>
                  <%WriteYearOpts();%><br>
                </select></TD><br>
            </TR><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="110" style="WIDTH:
110px"> </TD><br>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="36" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid; HEIGHT: 36px"> </TD><br>
              <TD height="36" width="110" style="WIDTH: 110px;
HEIGHT: 36px">Order ID <FONT color="red">*</FONT><br>
                :</TD><br>
              <TD height="36" width="9" style="WIDTH: 9px;
HEIGHT: 36px"></TD><br>
```

```
       <TD height="36" width="78" style="BORDER-RIGHT-STYLE: solid; HEIGHT: 36px"><INPUT style="WIDTH: 150px; HEIGHT: 22px" size="60" value="<%=oid%>" name="oid"> </TD><br>
      </TR><br>
      <TR><br>
       <TD style="BORDER-LEFT-STYLE: solid; BORDER-BOTTOM-STYLE: solid" width="103" height="10"> </TD><br>
       <TD style="WIDTH: 110px; BORDER-BOTTOM-STYLE: solid" width="110" height="10"> </TD><br>
       <TD style="WIDTH: 9px; BORDER-BOTTOM-STYLE: solid" width="9" height="10"> </TD><br>
       <TD style="BORDER-RIGHT-STYLE: solid;BORDER-BOTTOM-STYLE: solid" width="78" height="10"> </TD><br>
      </TR><br>
     </TABLE><br>
    </center><br>
   </div><br>
   <P align="left"><FONT color="red">*</FONT>) The 'Order ID' field must be a valid <br>
    order ID from a prior Sale or PreAuth</P><br>
   <p align="center"><input type="submit" value="Submit" name="Submit"><br>
  </form><br>
  </P><br>
 </body><br>
</HTML><br>
```

## Sample C# Code

```
///////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint International, Inc.
// Use is subject to license terms.
///////////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;

namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for RETURN.
  /// </summary>
  public class RETURN : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      if( IsPostBack )
      {
        // Parse form data
        ParseFormData();
        // process order
        ProcessOrder();
      }
    }

    private void ProcessOrder()
    {
      // create order
      LPOrderPart order = LPOrderFactory.createOrderPart("order");
```

```
// create a part we will use to build the order
LPOrderPart op = LPOrderFactory.createOrderPart();

// Build 'orderoptions'
// For a test, set result to GOOD, DECLINE, or DUPLICATE
op.put("result","GOOD");
op.put("ordertype","CREDIT");
// add 'orderoptions to order
order.addPart("orderoptions", op );


// Build 'merchantinfo'
op.clear();
op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );

// Build 'creditcard'
op.clear();
op.put("cardnumber",cardnumber);
op.put("cardexpmonth",expmonth);
op.put("cardexpyear",expyear);
// add 'creditcard to order
order.addPart("creditcard", op );


// Build 'payment'
op.clear();
op.put("chargetotal",total);
// add 'payment to order
order.addPart("payment", op );

// Add oid
```

```
      op.clear();
      op.put("oid",oid);
      // add 'transactiondetails to order
      order.addPart("transactiondetails", op );

      // create transaction object
      LinkPointTxn LPTxn = new LinkPointTxn();

      // get outgoing XML from the 'order' object
      string outXml = order.toXML();

      // Call LPTxn
      string resp = LPTxn.send(keyfile,host,port, outXml);

      //Store transaction data on Session and redirect
      Session["outXml"] = outXml;
      Session["resp"] = resp;
      Server.Transfer("status.aspx");

    }


    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form
Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }
    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to perform a Credit Card VOID Transaction Using .NET and C#

The code shown below demonstrates how to process a credit card VOID transaction. You can only void a credit card SALE transaction if the associated credit card batch has not yet been processed (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#" Codebehind="VOID.aspx.cs" AutoEventWireup="false" Inherits="LinkPointAPI_cs.VOID" %><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>VOID</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual Studio 7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript" content="JavaScript"><br>
    <meta name="vs_targetSchema" content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form ACTION="VOID.aspx" METHOD="post"
```

```
NAME="SaleForm" runat="server" ID="Form1"><br>
      <p align="center"><b><font size="5"> CREDIT CARD
VOID TRANSACTION</font></b><br><br>
      </p><br>
      <p align="center">An Example Credit Card Void
Transaction with Minimum Required <br>
        Fields</p><br>
      <div align="center"><br>
        <center><br>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="396" border="0" height="233" bgcolor="#c0c0c0"
style="WIDTH: 396px; HEIGHT: 233px"><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD><br>
              <TD height="1" width="242" style="WIDTH: 242px;
BORDER-TOP-STYLE: solid"> </TD><br>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD><br>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE:
solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="242" style="WIDTH:
242px">Order Type:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="357" style="WIDTH: 357px;
```

```
BORDER-RIGHT-STYLE: solid"><b>VOID</b></TD><br>
          <TR><br>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
            <TD height="1" width="242" style="WIDTH:
242px">Total:</TD><br>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
            <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD><br>
          </TR><br>
          <tr><br>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
            <TD height="1" width="242" style="WIDTH:
242px"> </TD><br>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
            <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"> </TD><br>
          </tr><br>
          <TR><br>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
            <TD height="1" width="242" style="WIDTH:
242px">Card Number:</TD><br>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
            <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT id="emailaddress1"
```

```
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="242" style="WIDTH:
242px">Exp. Month:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><br>
                <select id="expmonth" name="expmonth"
size="1"><br>
                  <%WriteMonthOpts();%><br>
                </select></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="242" style="WIDTH:
242px">Exp. Year:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><br>
                <select id="expyear" name="expyear"
size="1"><br>
                  <%WriteYearOpts();%><br>
                </select></TD><br>
            </TR><br>
            <tr><br>
```

```
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="242" style="WIDTH:
242px"> </TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"> </TD><br>
         </tr><br>
         <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="242" style="WIDTH:
242px">Order ID<FONT color="red">*</FONT>:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 213px;
HEIGHT: 22px" size="30" value="<%=oid%>"
name="oid"></TD><br>
         </TR><br>
         <TR><br>
          <TD style="BORDER-LEFT-STYLE: solid; HEIGHT:
8px; BORDER-BOTTOM-STYLE: solid" width="103"
height="8"> </TD><br>
          <TD style="WIDTH: 242px; HEIGHT: 8px; BORDER-
BOTTOM-STYLE: solid" width="242" height="8"> </TD><br>
          <TD style="WIDTH: 115px; HEIGHT: 8px; BORDER-
BOTTOM-STYLE: solid" width="115" height="8"> </TD><br>
          <TD style="WIDTH: 357px;BORDER-RIGHT-STYLE:
solid;HEIGHT: 8px;BORDER-BOTTOM-STYLE: solid"
width="357" height="8"> </TD><br>
```

```
            </TR><br>
          </TABLE><br>
        </center><br>
      </div><br>
      <P align="left"><FONT color="red">*</FONT>) Must be a valid order ID from a prior <br>
        PostAuth or Sale</P><br>
      <p align="center"><input type="submit" value="Submit" name="Submit"><br>
    </form><br>
    </P>  </body><br>
</HTML><br>
```

## Sample C# Code

```
/////////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint International, Inc.
// Use is subject to license terms.
/////////////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;

namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for VOID.
  /// </summary>
  public class VOID : LinkPointTxn_Page
  {
```

```
private void Page_Load(object sender, System.EventArgs e)
{
  if( IsPostBack )
  {
    // Parse form data
    ParseFormData();
    // process order
    ProcessOrder();
  }
}

private void ProcessOrder()
{
  // create order
  LPOrderPart order = LPOrderFactory.createOrderPart("order");
  // create a part we will use to build the order
  LPOrderPart op = LPOrderFactory.createOrderPart();

  // Build 'orderoptions'
  // For a test, set result to GOOD, DECLINE, or DUPLICATE
  op.put("result","GOOD");
  op.put("ordertype","VOID");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );



  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );
```

```
// Build 'creditcard'
op.clear();
op.put("cardnumber",cardnumber);
op.put("cardexpmonth",expmonth);
op.put("cardexpyear",expyear);
// add 'creditcard to order
order.addPart("creditcard", op );


// Build 'payment'
op.clear();
op.put("chargetotal",total);
// add 'payment to order
order.addPart("payment", op );

// Add oid
op.clear();
op.put("oid",oid);
// add 'transactiondetails to order
order.addPart("transactiondetails", op );

// create transaction object
LinkPointTxn LPTxn = new LinkPointTxn();

// get outgoing XML from the 'order' object
string outXml = order.toXML();

// Call LPTxn
string resp = LPTxn.send(keyfile,host,port, outXml);

//Store transaction data on Session and redirect
Session["outXml"] = outXml;
Session["resp"] = resp;
Server.Transfer("status.aspx");
```

```
    }

    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form
Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to run a Credit Card Transaction using Items (Including ESD) with .NET and C#

The code shown below demonstrates how to process a Sale using the Items and Options feature. One of the items included in the example is an Electronic Softgood Download (ESD) item. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#" Codebehind="ITEM_W_ESD.aspx.cs"
AutoEventWireup="false"
Inherits="LinkPointAPI_cs.ITEM_W_ESD" %><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>ITEM_W_ESD</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript"
content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form id="ITEM_W_ESD" method="post"
runat="server"><br>
```

```
      <p align="center"><b><font size="5"> ITEM WITH ESD
TRANSACTION</font></b><br><br>
      </p><br>
      <p align="center">An Example Credit Card SALE
Transaction with ESD item</p><br>
      <div align="center"><br>
        <center><br>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="238" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 238px"><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD><br>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD><br>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD><br>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Order
Type:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>SALE</b></TD><br>
            </TR><br>
            <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="276">Subtotal:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="45.98" name="subtotal"></TD><br>
        </TR><br>
        <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="276">Tax:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="0.32" name="tax"></TD><br>
        </TR><br>
        <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="276">Shipping:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1.02" name="shipping"></TD><br>
        </TR><br>
        <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
```

```
          <TD height="1" width="276">Total:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="47.32" name="total"></TD><br>
         </TR><br>
         <tr><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="276"> </TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
         </tr><br>
         <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="144">Name:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bname%>" name="bname"
size="17"></TD><br>
         </TR><br>
         <TR><br>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="144">Card
Number:</TD><br>
          <TD height="1" width="115" style="WIDTH:
```

```
115px"> </TD><br>
           <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=cardnumber%>"
name="cardnumber" size="17"></TD><br>
          </TR><br>
          <TR><br>
           <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
           <TD height="1" width="276">Exp.
Month:</TD><br>
           <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
           <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
             <select id="expmonth" name="expmonth"
size="1"><br>
               <%WriteMonthOpts();%><br>
             </select></TD><br>
          </TR><br>
          <TR><br>
           <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
           <TD height="1" width="276">Exp. Year:</TD><br>
           <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
           <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
             <select id="expyear" name="expyear"
size="1"><br>
               <%WriteYearOpts();%><br>
             </select></TD><br>
          </TR><br>
```

```
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Address
Numbers:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=baddrnum%>"
name="baddrnum"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1"
width="276">Zip</FONT>:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD><br>
            </TR><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276"> </TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
            </tr><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276"><b>ITEM 1
(ESD):</b></TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">ID:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="123456-A98765" name="id1"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1"
width="276">Description:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="Blast-Em Software"
name="desc1"></TD><br>
            </TR><br>
```

```
       <TR><br>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
        <TD height="1" width="276">Price:</TD><br>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="32.99" name="price1"></TD><br>
       </TR><br>
       <TR><br>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
        <TD height="1" width="276">Quantity:</TD><br>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1" name="qty1"></TD><br>
       </TR><br>
       <TR><br>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
        <TD height="1" width="276">Serial:</TD><br>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="0987654321" name="serial1"></TD><br>
       </TR><br>
       <TR><br>
        <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD><br>
       <TD height="1" width="276">ESD type:</TD><br>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
        <select name="esdtype" size="1"><br>
         <option value="softgood"
selected>softgood</option><br>
         <option value="key">key</option><br>
        </select></TD><br>
      </TR><br>
      <TR><br>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
       <TD height="1" width="276">File Name:</TD><br>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="blastemgame.exe"
name="softfile1"></TD><br>
      </TR><br>
      <tr><br>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
       <TD height="1" width="276"><b>ITEM
2:</b></TD><br>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
```

```
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">ID:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="123456-A98767" name="id2"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1"
width="276">Description:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="Logo T-Shirt" name="desc2"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Price:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="price2"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Quantity:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1" name="qty2"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Serial:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="0987654322" name="serial2"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Color:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
                <select name="Color" size="1"><br>
                  <option value="Red" selected>Red</option><br>
                  <option value="Blue">Blue</option><br>
                </select></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Size:</TD><br>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><br>
                <select name="Size" size="1"><br>
                  <option value="M">Medium</option><br>
                  <option value="L">Large</option><br>
                  <option value="XL" selected>XLarge</option><br>
                </select></TD><br>
            </TR><br>
            <TR><br>
              <TD style="BORDER-LEFT-STYLE: solid; BORDER-BOTTOM-STYLE: solid" width="103" height="10"> </TD><br>
              <TD style="BORDER-BOTTOM-STYLE: solid" width="276" height="10"> </TD><br>
              <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE: solid" width="115" height="10"> </TD><br>
              <TD style="BORDER-RIGHT-STYLE: solid;BORDER-BOTTOM-STYLE: solid" width="78" height="10"> </TD><br>
            </TR><br>
          </TABLE><br>
        </center><br>
      </div><br>
      <p align="center"><input type="submit" value="Submit" name="Submit"><br>
    </form><br>
    </P><br>
  </body><br>
</HTML><br>
```

## Sample C# Code

```
////////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint International, Inc.
// Use is subject to license terms.
////////////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;


namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for ITEM_W_ESD.
  /// </summary>
  public class ITEM_W_ESD : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      if( IsPostBack )
      {
        // Parse form data
        ParseFormData();
        // process order
        ProcessOrder();
      }
```

```
}

private void ProcessOrder()
{
  // create order
  LPOrderPart order = LPOrderFactory.createOrderPart("order");
  // create a part we will use to build the order
  LPOrderPart op = LPOrderFactory.createOrderPart();
  // Build 'orderoptions'
  op.put("ordertype","SALE");
  // live transaction
  op.put("result","LIVE");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );

  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );


  // Build 'creditcard'
  op.clear();
  op.put("cardnumber",cardnumber);
  op.put("cardexpmonth",expmonth);
  op.put("cardexpyear",expyear);
  // add 'creditcard to order
  order.addPart("creditcard", op );

  // Build 'payment'
  op.clear();
  op.put("subtotal",Request.Form["subtotal"]);
op.put("tax",Request.Form["tax"]);
op.put("shipping",Request.Form["shipping"]);
op.put("chargetotal",Request.Form["total"]);
// add 'payment to order
order.addPart("payment", op );

// Build 'billing'
// Required for AVS. If not provided,
// transactions will downgrade.
op.clear();
op.put("zip",bzip);
op.put("addrnum",baddrnum);
// When using ESD items - name must present
op.put("name",bname);
// add 'billing to order
order.addPart("billing", op );


// Create some parts we use to build order itmes
LPOrderPart items = LPOrderFactory.createOrderPart();
LPOrderPart item  = LPOrderFactory.createOrderPart();
LPOrderPart options = LPOrderFactory.createOrderPart();

// build 'item1' (ESD)
item.put("id",Request.Form["id1"]);
item.put("description",Request.Form["desc1"]);
item.put("quantity",Request.Form["qty1"]);
item.put("price",Request.Form["price1"]);
item.put("serial",Request.Form["serial1"]);
item.put("esdtype",Request.Form["esdtype"]);
item.put("softfile",Request.Form["softfile1"]);

// add 'item' to 'items' collection
items.addPart("item", item, 1 );
```

```
// build 'item2'
item.clear();
item.put("id",Request.Form["id2"]);
item.put("description",Request.Form["desc2"]);
item.put("quantity",Request.Form["qty2"]);
item.put("price",Request.Form["price2"]);
item.put("serial",Request.Form["serial2"]);

// build item's options
op.clear();
op.put("name","Color");
op.put("value",Request.Form["Color"]);
options.addPart("option",op,1);
op.clear();
op.put("name","Size");
op.put("value",Request.Form["Size"]);
options.addPart("option",op,2);

// add 'options' to item
item.addPart("options", options );
// add 'item' to 'items' collection
items.addPart("item", item, 2 );


// add 'items' to order
order.addPart("items", items );



// create transaction object
LinkPointTxn LPTxn = new LinkPointTxn();

// get outgoing XML from the 'order' object
string outXml = order.toXML();
```

```
      // Call LPTxn
      string resp = LPTxn.send(keyfile,host,port, outXml);

      //Store transaction data on Session and redirect
      Session["outXml"] = outXml;
      Session["resp"] = resp;
      Server.Transfer("status.aspx");

    }

    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to run a Level 2 Purchasing Card Transaction with .NET and C#

The code shown below demonstrates how to process a Sale including all the data elements needed for a Level 2 purchasing card transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#"
Codebehind="L2PURCHASING_CARD.aspx.cs"
AutoEventWireup="false"
Inherits="LinkPointAPI_cs.L2PURCHASING_CARD" %><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>L2PURCHASING_CARD</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript"
content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form ACTION="L2PURCHASING_CARD.aspx"
METHOD="post" NAME="SaleForm" runat="server"
ID="Form1"><br>
```

```
      <p align="center"><b><font size="5"> PURCHASING
CARD SALE TRANSACTION</font></b><br><br>
      </p><br>
      <p align="center">An Example Level 2 Purchasing Card
SALE With Minimum Required <br>
       Fields</p><br>
      <div align="center"><br>
       <center><br>
         <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="29" bgcolor="#c0c0c0"><br>
           <tr><br>
             <TD height="1" width="19" style="WIDTH: 19px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD><br>
             <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD><br>
             <TD height="1" width="9" style="WIDTH: 9px;
BORDER-TOP-STYLE: solid"> </TD><br>
             <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD><br>
           </tr><br>
           <TR><br>
             <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD><br>
             <TD height="1" width="276">Total:</TD><br>
             <TD height="1" width="9" style="WIDTH:
9px"> </TD><br>
             <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD><br>
           </TR><br>
```

```
            <tr><br>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276"> </TD><br>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="144">Card
Number:</TD><br>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD><br>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=cardnumber%>"
name="cardnumber" size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Exp.
Month:</TD><br>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
                <select id="expmonth" name="expmonth"
size="1"><br>
                  <%WriteMonthOpts();%><br>
                </select></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Exp. Year:</TD><br>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
                <select id="expyear" name="expyear"
size="1"><br>
                  <%WriteYearOpts();%><br>
                </select></TD><br>
            </TR><br>
            <tr><br>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276"> </TD><br>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">PO
Number:</TD><br>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
```

```
STYLE: solid"><INPUT style="HEIGHT: 22px" size="17"
value="<%=ponumber%>" name="ponumber"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Tax Exempt
(Y/N):</TD><br>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="2" value="<%=taxexempt%>"
name="taxexempt"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Tax:</TD><br>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="2" value="<%=tax%>" name="tax"></TD><br>
            </TR><br>
            <TR><br>
              <TD style="WIDTH: 19px; BORDER-LEFT-STYLE:
solid; BORDER-BOTTOM-STYLE: solid" width="19"
height="10"> </TD><br>
              <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD><br>
              <TD style="WIDTH: 9px; BORDER-BOTTOM-STYLE:
```

```
solid" width="9" height="10"> </TD><br>
              <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD><br>
            </TR><br>
          </TABLE><br>
        </center><br>
      </div><br>
      <p align="center"><input type="submit" value="Submit"
name="Submit"><br>
    </form><br>
    </P><br>
  </body><br>
</HTML><br>
```

## Sample C# Code

```
//////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint
International, Inc.
// Use is subject to license terms.
//////////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;

namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for L2PURCHASING_CARD.
  /// </summary>
  public class L2PURCHASING_CARD : LinkPointTxn_Page
```

```
{
  private void Page_Load(object sender, System.EventArgs e)
  {
    if( IsPostBack )
    {
      // Parse form data
      ParseFormData();
      // process order
      ProcessOrder();
    }
  }



  private void ProcessOrder()
  {
    // create order
    LPOrderPart order = LPOrderFactory.createOrderPart("order");
    // create a part we will use to build the order
    LPOrderPart op = LPOrderFactory.createOrderPart();

    // Build 'orderoptions'
    op.put("ordertype","SALE");
    // add 'orderoptions to order
    order.addPart("orderoptions", op );

    // Build 'merchantinfo'
    op.clear();
    op.put("configfile",configfile);
    // add 'merchantinfo to order
    order.addPart("merchantinfo", op );

    // Build 'transactiondetails'
```

```
     op.clear();
     // If there is no PO Number for this order,
     // pass a department code or other value, but make sure the
value you pass is supplied by the customer
     op.put("ponumber",ponumber);
     // If the purchase is tax exempt,
     // pass a value of Y for taxexempt
     op.put("taxexempt",taxexempt);
     // add 'billing to order
     order.addPart("transactiondetails", op );

     // Build 'creditcard'
     op.clear();
     op.put("cardnumber",cardnumber);
     op.put("cardexpmonth",expmonth);
     op.put("cardexpyear",expyear);
     // add 'creditcard to order
     order.addPart("creditcard", op );

     // Build 'payment'
     op.clear();
     op.put("chargetotal",total);
     // Tax is required for purchasing cards.
     // If the tax is $0.00, pass a value of 0 for tax
     op.put("tax",tax);

     // add 'payment to order
     order.addPart("payment", op );



     // create transaction object
     LinkPointTxn LPTxn = new LinkPointTxn();

     // get outgoing XML from the 'order' object
```

```
      string outXml = order.toXML();

      // Call LPTxn
      string resp = LPTxn.send(keyfile,host,port, outXml);

      //Store transaction data on Session and redirect
      Session["outXml"] = outXml;
      Session["resp"] = resp;
      Server.Transfer("status.aspx");

    }

    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
```

```
}
```

# Sample Code to Set Up a New Recurring Credit Card Transaction Using .NET and C#

The code shown below demonstrates how to process a Recurring Credit Card Transaction (Periodic Bill). The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#" Codebehind="PB_NEW.aspx.cs"
AutoEventWireup="false" Inherits="LinkPointAPI_cs.PB_NEW"
%><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>PB_NEW</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript"
content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form ACTION="PB_NEW.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1"><br>
      <p align="center"><b><font size="5"> PERIODIC BILLING
(NEW)</font></b><br><br>
```

```
      </p><br>
      <p align="center">An Example of New Periodic Billing
Transaction with Minimum <br>
       Required Fields</p><br>
      <div align="center"><br>
       <center><br>
         <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="368" border="0" height="249" bgcolor="#c0c0c0"
style="WIDTH: 368px; HEIGHT: 249px"><br>
           <tr><br>
             <TD height="1" width="30" style="WIDTH: 30px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD><br>
             <TD height="1" width="220" style="WIDTH: 220px;
BORDER-TOP-STYLE: solid"> </TD><br>
             <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD><br>
             <TD height="1" width="249" style="WIDTH: 249px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE:
solid"> </TD><br>
           </tr><br>
           <TR><br>
             <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
             <TD height="1" width="220" style="WIDTH:
220px">Total:</TD><br>
             <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
             <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="szip3"
style="WIDTH: 45px; HEIGHT: 22px" size="6"
value="<%=subtotal%>" name="total"></TD><br>
```

```
            </TR><br>
            <!--         <br>
            <tr><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="220" style="WIDTH:
220px"> </TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD><br>
            </tr><br>
--><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="220" style="WIDTH:
220px">Card Number:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="220" style="WIDTH:
220px">Exp. Month:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
```

```
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><br>
                <select id="expmonth" name="expmonth"
size="1"><br>
                  <%WriteMonthOpts();%><br>
                </select></TD><br>
            </TR><br>
            <TR><br>
              <TD height="28" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid; HEIGHT: 28px"> </TD><br>
              <TD height="28" width="220" style="WIDTH: 220px;
HEIGHT: 28px">Exp. Year:</TD><br>
              <TD height="28" width="115" style="WIDTH: 115px;
HEIGHT: 28px"></TD><br>
              <TD height="28" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid; HEIGHT: 28px"><br>
                <select id="expyear" name="expyear"
size="1"><br>
                  <%WriteYearOpts();%><br>
                </select></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="220" style="WIDTH:
220px">Address Numbers<FONT
color="red">*</FONT>:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=baddrnum%>"
```

```
name="baddrnum"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="220" style="WIDTH:
220px">Zip<FONT color="red">*</FONT>:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=bzip%>"
name="bzip"></TD><br>
            </TR><br>
            <tr><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="220" style="WIDTH:
220px"> </TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="220" style="WIDTH:
220px">Action:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
```

```
BORDER-RIGHT-STYLE: solid"><b>SUBMIT</b></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="220" style="WIDTH:
220px">Start Date:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=startdate%>"
name="startdate"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="220" style="WIDTH:
220px">Periodicity:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=periodicity%>"
name="periodicity"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="220" style="WIDTH:
220px">Installments:</TD><br>
              <TD height="1" width="115" style="WIDTH:
```

```
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=installments%>"
name="installments"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="220" style="WIDTH:
220px">Threshold:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=pbthreshold%>"
name="pbthreshold"></TD><br>
            </TR><br>
            <TR><br>
              <TD style="WIDTH: 30px; BORDER-LEFT-STYLE:
solid; HEIGHT: 23px; BORDER-BOTTOM-STYLE: solid"
width="30" height="23"> </TD><br>
              <TD style="WIDTH: 220px; HEIGHT: 23px; BORDER-
BOTTOM-STYLE: solid" width="220" height="23"> </TD><br>
              <TD style="WIDTH: 115px; HEIGHT: 23px; BORDER-
BOTTOM-STYLE: solid" width="115" height="23"> </TD><br>
              <TD style="WIDTH: 249px;BORDER-RIGHT-STYLE:
solid;HEIGHT: 23px;BORDER-BOTTOM-STYLE: solid"
width="249" height="23"> </TD><br>
            </TR><br>
          </TABLE><br>
        </center><br>
```

```
      <p align="center"><input type="submit" value="Submit"
name="Submit"></p><br>
     </div><br>
     <P align="left"><FONT color="red">*</FONT>) If not
provided, transactions will <br>
      downgrade.<br>
     </P><br>
   </form><br>
  </body><br>
</HTML><br>
```

## Sample C# Code

```
////////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint
International, Inc.
// Use is subject to license terms.
////////////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;

namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for PB_NEW.
  /// </summary>
  public class PB_NEW : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
```

```
  if( IsPostBack )
  {
    // Parse form data
    ParseFormData();
    // process order
    ProcessOrder();
  }
}

private void ProcessOrder()
{
  // create order
  LPOrderPart order = LPOrderFactory.createOrderPart("order");
  // create a part we will use to build the order
  LPOrderPart op = LPOrderFactory.createOrderPart();

  // Build 'orderoptions'
  op.put("ordertype","SALE");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );

  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );

  // Build 'billing'
  // Required for AVS. If not provided,
  // transactions will downgrade.
  op.clear();
  op.put("zip",bzip);
  op.put("addrnum",baddrnum);
```

```
// add 'billing to order
order.addPart("billing", op );

// Build 'creditcard'
op.clear();
op.put("cardnumber",cardnumber);
op.put("cardexpmonth",expmonth);
op.put("cardexpyear",expyear);
// add 'creditcard to order
order.addPart("creditcard", op );

// Build 'payment'
op.clear();
op.put("chargetotal",total);
// add 'payment to order
order.addPart("payment", op );

// build 'periodic' part
op.clear();
op.put("action","SUBMIT");
op.put("startdate",startdate);
op.put("periodicity",periodicity);
op.put("installments",installments);
op.put("threshold",pbthreshold);
// add 'periodic' to order
order.addPart("periodic", op );

// create transaction object
LinkPointTxn LPTxn = new LinkPointTxn();

// get outgoing XML from the 'order' object
string outXml = order.toXML();

// Call LPTxn
```

```
      string resp = LPTxn.send(keyfile,host,port, outXml);

      //Store transaction data on Session and redirect
      Session["outXml"] = outXml;
      Session["resp"] = resp;
      Server.Transfer("status.aspx");

    }


    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form
Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to Modify a Recurring Credit Card Transaction Using .NET and C#

The code shown below demonstrates how to modify a Recurring Credit Card Transaction (Periodic Bill). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#" Codebehind="PB_MODIFY.aspx.cs"
AutoEventWireup="false"
Inherits="LinkPointAPI_cs.PB_MODIFY" %><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>PB_MODIFY</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript"
content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form ACTION="PB_MODIFY.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1"><br>
      <p align="center"><b><font size="5"> PERIODIC BILLING
(MODIFY)</font></b><br><br>
      </p><br>
      <p align="center">An Example of Periodic Billing Modify
Transaction with Minimum <br>
        Required Fields</p><br>
      <div align="center"><br>
        <center><br>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="368" border="0" height="249" bgcolor="#c0c0c0"
style="WIDTH: 368px; HEIGHT: 249px"><br>
            <tr><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH: 184px;
BORDER-TOP-STYLE: solid"> </TD><br>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE:
solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH:
184px">Total:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="szip3"
style="WIDTH: 45px; HEIGHT: 22px" size="6"
value="<%=subtotal%>" name="total"></TD><br>
            </TR><br>
            <!--           <br>
            <tr><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="220" style="WIDTH:
220px"> </TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD><br>
            </tr><br>
--><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH:
184px">Card Number:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH:
184px">Exp. Month:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
```

```
BORDER-RIGHT-STYLE: solid"><br>
                <select id="expmonth" name="expmonth"
size="1"><br>
                  <%WriteMonthOpts();%><br>
                </select></TD><br>
            </TR><br>
            <TR><br>
              <TD height="28" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid; HEIGHT: 28px"> </TD><br>
              <TD height="28" width="184" style="WIDTH: 184px;
HEIGHT: 28px">Exp. Year:</TD><br>
              <TD height="28" width="115" style="WIDTH: 115px;
HEIGHT: 28px"></TD><br>
              <TD height="28" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid; HEIGHT: 28px"><br>
                <select id="expyear" name="expyear"
size="1"><br>
                  <%WriteYearOpts();%><br>
                </select></TD><br>
            </TR><br>
            <tr><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH:
184px"> </TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
```

```
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="184" style="WIDTH:
184px">Action:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
          <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><b>MODIFY</b></TD><br>
        </TR><br>
        <TR><br>
          <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="184" style="WIDTH:
184px">Start Date:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
          <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=startdate%>"
name="startdate"></TD><br>
        </TR><br>
        <TR><br>
          <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="184" style="WIDTH:
184px">Periodicity:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
          <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=periodicity%>"
name="periodicity"></TD><br>
        </TR><br>
```

```
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH:
184px">Installments:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=installments%>"
name="installments"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH:
184px">Threshold:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=pbthreshold%>"
name="pbthreshold"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH:
184px">Order ID<FONT color="red">*</FONT>:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
```

```
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="22" value="<%=oid%>" name="oid"></TD><br>
            </TR><br>
            <TR><br>
              <TD style="WIDTH: 30px; BORDER-LEFT-STYLE:
solid; HEIGHT: 23px; BORDER-BOTTOM-STYLE: solid"
width="30" height="23"> </TD><br>
              <TD style="WIDTH: 184px; HEIGHT: 23px; BORDER-
BOTTOM-STYLE: solid" width="184" height="23"> </TD><br>
              <TD style="WIDTH: 115px; HEIGHT: 23px; BORDER-
BOTTOM-STYLE: solid" width="115" height="23"> </TD><br>
              <TD style="WIDTH: 249px;BORDER-RIGHT-STYLE:
solid;HEIGHT: 23px;BORDER-BOTTOM-STYLE: solid"
width="249" height="23"> </TD><br>
            </TR><br>
          </TABLE><br>
        </center><br>
        <p align="center"><input type="submit" value="Submit"
name="Submit"></p><br>
      </div><br>
      <P align="left"><FONT color="red">*</FONT>) You MUST
pass a valid Order ID for an <br>
        EXISTING periodic bill to identify which bill you want to
cancel.<br>
      </P><br>
    </form><br>
  </body><br>
</HTML><br>
```

## Sample C# Code

```
////////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint International, Inc.
// Use is subject to license terms.
////////////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;


namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for PB_MODIFY.
  /// </summary>
  public class PB_MODIFY : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      if( IsPostBack )
      {
        // Parse form data
        ParseFormData();
        // process order
        ProcessOrder();
      }
    }

    private void ProcessOrder()
    {
      // create order
      LPOrderPart order = LPOrderFactory.createOrderPart("order");
```

```
// create a part we will use to build the order
LPOrderPart op = LPOrderFactory.createOrderPart();

// Build 'orderoptions'
op.put("ordertype","SALE");
// add 'orderoptions to order
order.addPart("orderoptions", op );

// Build 'merchantinfo'
op.clear();
op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );

// Build 'creditcard'
op.clear();
op.put("cardnumber",cardnumber);
op.put("cardexpmonth",expmonth);
op.put("cardexpyear",expyear);
// add 'creditcard to order
order.addPart("creditcard", op );

// Build 'payment'
op.clear();
op.put("chargetotal",total);
// add 'payment to order
order.addPart("payment", op );

// build 'periodic' part
op.clear();
op.put("action","MODIFY");
op.put("startdate",startdate);
op.put("periodicity",periodicity);
```

```
    op.put("installments",installments);
    op.put("threshold",pbthreshold);
    // add 'periodic' to order
    order.addPart("periodic", op );

    // Add oid
    op.clear();
    op.put("oid",oid);
    // add 'transactiondetails to order
    order.addPart("transactiondetails", op );

    // create transaction object
    LinkPointTxn LPTxn = new LinkPointTxn();

    // get outgoing XML from the 'order' object
    string outXml = order.toXML();

    // Call LPTxn
    string resp = LPTxn.send(keyfile,host,port, outXml);


    //Store transaction data on Session and redirect
    Session["outXml"] = outXml;
    Session["resp"] = resp;
    Server.Transfer("status.aspx");


  }
      #region Web Form Designer generated code
  override protected void OnInit(EventArgs e)
  {
    //
    // CODEGEN: This call is required by the ASP.NET Web Form
Designer.
    //
    InitializeComponent();
```

```
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to Cancel a Recurring Credit Card Transaction Using .NET and C#

The code shown below demonstrates how to Cancel an existing Recurring Credit Card Transaction (Periodic Bill). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#" Codebehind="PB_CANCEL.aspx.cs"
AutoEventWireup="false"
Inherits="LinkPointAPI_cs.PB_CANCEL" %><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>PB_CANCEL</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript"
content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form ACTION="PB_CANCEL.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1"><br>
      <p align="center"><b><font size="5"> PERIODIC BILLING
(CANCEL)</font></b><br><br>
      </p><br>
      <p align="center">An Example of Periodic Billing Cancel
Transaction with Minimum <br>
        Required Fields</p><br>
      <div align="center"><br>
        <center><br>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="368" border="0" height="249" bgcolor="#c0c0c0"
style="WIDTH: 368px; HEIGHT: 249px"><br>
            <tr><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH: 184px;
BORDER-TOP-STYLE: solid"> </TD><br>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE:
solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH:
184px">Total:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="szip3"
style="WIDTH: 45px; HEIGHT: 22px" size="6"
value="<%=subtotal%>" name="total"></TD><br>
            </TR><br>
            <!--          <br>
            <tr><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="220" style="WIDTH:
220px"> </TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD><br>
            </tr><br>
--><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH:
184px">Card Number:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH:
184px">Exp. Month:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
```

```
BORDER-RIGHT-STYLE: solid"><br>
                <select id="expmonth" name="expmonth"
size="1"><br>
                  <%WriteMonthOpts();%><br>
                </select></TD><br>
            </TR><br>
            <TR><br>
              <TD height="28" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid; HEIGHT: 28px"> </TD><br>
              <TD height="28" width="184" style="WIDTH: 184px;
HEIGHT: 28px">Exp. Year:</TD><br>
              <TD height="28" width="115" style="WIDTH: 115px;
HEIGHT: 28px"></TD><br>
              <TD height="28" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid; HEIGHT: 28px"><br>
                <select id="expyear" name="expyear"
size="1"><br>
                  <%WriteYearOpts();%><br>
                </select></TD><br>
            </TR><br>
            <tr><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH:
184px"> </TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
```

```
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="184" style="WIDTH:
184px">Action:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
          <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><b>CANCEL</b></TD><br>
        </TR><br>
        <TR><br>
          <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="184" style="WIDTH:
184px">Start Date:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
          <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=startdate%>"
name="startdate"></TD><br>
        </TR><br>
        <TR><br>
          <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
          <TD height="1" width="184" style="WIDTH:
184px">Periodicity:</TD><br>
          <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
          <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=periodicity%>"
name="periodicity"></TD><br>
        </TR><br>
```

```
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH:
184px">Installments:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=installments%>"
name="installments"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH:
184px">Threshold:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=pbthreshold%>"
name="pbthreshold"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="184" style="WIDTH:
184px">Order ID<FONT color="red">*</FONT>:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"></TD><br>
              <TD height="1" width="249" style="WIDTH: 249px;
```

```
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="22" value="<%=oid%>" name="oid"></TD><br>
      </TR><br>
      <TR><br>
       <TD style="WIDTH: 30px; BORDER-LEFT-STYLE:
solid; HEIGHT: 23px; BORDER-BOTTOM-STYLE: solid"
width="30" height="23"> </TD><br>
       <TD style="WIDTH: 184px; HEIGHT: 23px; BORDER-
BOTTOM-STYLE: solid" width="184" height="23"> </TD><br>
       <TD style="WIDTH: 115px; HEIGHT: 23px; BORDER-
BOTTOM-STYLE: solid" width="115" height="23"> </TD><br>
       <TD style="WIDTH: 249px;BORDER-RIGHT-STYLE:
solid;HEIGHT: 23px;BORDER-BOTTOM-STYLE: solid"
width="249" height="23"> </TD><br>
      </TR><br>
     </TABLE><br>
    </center><br>
    <p align="center"><input type="submit" value="Submit"
name="Submit"></p><br>
   </div><br>
   <P align="left"><FONT color="red">*</FONT>) You MUST
pass a valid Order ID for an <br>
    EXISTING periodic bill to identify which bill you want to
modify.<br>
   </P><br>
  </form><br>
 </body><br>
</HTML><br>
```

## Sample C# Code

```
///////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint
International, Inc.
// Use is subject to license terms.
///////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;


namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for PB_CANCEL.
  /// </summary>
  public class PB_CANCEL : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      if( IsPostBack )
      {
        // Parse form data
        ParseFormData();
        // process order
        ProcessOrder();
      }
    }

    private void ProcessOrder()
    {
      // create order
      LPOrderPart order = LPOrderFactory.createOrderPart("order");
```

```
// create a part we will use to build the order
LPOrderPart op = LPOrderFactory.createOrderPart();

// Build 'orderoptions'
op.put("ordertype","SALE");
// add 'orderoptions to order
order.addPart("orderoptions", op );

// Build 'merchantinfo'
op.clear();
op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );

// Build 'creditcard'
op.clear();
op.put("cardnumber",cardnumber);
op.put("cardexpmonth",expmonth);
op.put("cardexpyear",expyear);
// add 'creditcard to order
order.addPart("creditcard", op );

// Build 'payment'
op.clear();
op.put("chargetotal",total);
// add 'payment to order
order.addPart("payment", op );

// build 'periodic' part
op.clear();
op.put("action","CANCEL");
op.put("startdate",startdate);
op.put("periodicity",periodicity);
```

```
      op.put("installments",installments);
      op.put("threshold",pbthreshold);
      // add 'periodic' to order
      order.addPart("periodic", op );

      // Add oid
      op.clear();
      op.put("oid",oid);
      // add 'transactiondetails to order
      order.addPart("transactiondetails", op );

      // create transaction object
      LinkPointTxn LPTxn = new LinkPointTxn();

      // get outgoing XML from the 'order' object
      string outXml = order.toXML();

      // Call LPTxn
      string resp = LPTxn.send(keyfile,host,port, outXml);


      //Store transaction data on Session and redirect
      Session["outXml"] = outXml;
      Session["resp"] = resp;
      Server.Transfer("status.aspx");


    }
    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form
Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to Process a Retail Swipe Transaction Using .NET and C#

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is swiped with a credit card reader. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#"
Codebehind="RETAIL_SWIPE.aspx.cs" AutoEventWireup="false"
Inherits="LinkPointAPI_cs.RETAIL_SWIPE" %><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>RETAIL_SWIPE</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript"
content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form ACTION="RETAIL_SWIPE.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1"><br>
      <p align="center"><b><font size="5"> RETAIL SWIPE
TRANSACTION </font></b><br>
```

```
        <br><br>
      </p><br>
      <p align="center">An Example Credit Card SALE
Transaction with Minimum Required <br>
        Fields</p><br>
      <div align="center"><br>
        <center><br>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="461" border="0" height="167" bgcolor="#c0c0c0"
style="WIDTH: 461px; HEIGHT: 167px"><br>
            <tr><br>
              <TD height="14" width="12" style="WIDTH: 12px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE: solid;
HEIGHT: 14px"> </TD><br>
              <TD height="14" width="326" style="WIDTH: 326px;
BORDER-TOP-STYLE: solid; HEIGHT: 14px"> </TD><br>
              <TD height="14" width="2" style="WIDTH: 2px;
BORDER-TOP-STYLE: solid; HEIGHT: 14px"> </TD><br>
              <TD height="14" width="468" style="WIDTH: 468px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE: solid;
HEIGHT: 14px"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="29" width="12" style="WIDTH: 12px;
BORDER-LEFT-STYLE: solid; HEIGHT: 29px"> </TD><br>
              <TD height="29" width="326" style="WIDTH: 326px;
HEIGHT: 29px">Order Type:</TD><br>
              <TD height="29" width="2" style="WIDTH: 2px;
HEIGHT: 29px"></TD><br>
              <TD height="29" width="468" style="WIDTH: 468px;
BORDER-RIGHT-STYLE: solid; HEIGHT:
29px"><b>SALE</b></TD><br>
```

```
            </TR><br>
            <TR><br>
              <TD height="1" width="12" style="WIDTH: 12px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="326" style="WIDTH:
326px">Terminal Type<FONT
color="red">*</FONT>:</TD><br>
              <TD height="1" width="2" style="WIDTH:
2px"> </TD><br>
              <TD height="1" width="468" style="WIDTH: 468px;
BORDER-RIGHT-STYLE: solid"><b>POS</b></TD><br>
            </TR><br>
            <TR><br>
              <TD height="33" width="12" style="WIDTH: 12px;
BORDER-LEFT-STYLE: solid; HEIGHT: 33px"> </TD><br>
              <TD height="33" width="326" style="WIDTH: 326px;
HEIGHT: 33px">Total:</TD><br>
              <TD height="33" width="2" style="WIDTH: 2px;
HEIGHT: 33px"> </TD><br>
              <TD height="33" width="468" style="WIDTH: 468px;
BORDER-RIGHT-STYLE: solid; HEIGHT: 33px"><INPUT
id="szip3" style="WIDTH: 45px; HEIGHT: 22px" size="6"
value="<%=subtotal%>" name="total"></TD><br>
            </TR><br>
            <!--<br>
            <tr><br>
              <TD height="2" width="12" style="WIDTH: 12px;
BORDER-LEFT-STYLE: solid; HEIGHT: 2px"></TD><br>
              <TD height="2" width="326" style="WIDTH: 326px;
HEIGHT: 2px"></TD><br>
              <TD height="2" width="2" style="WIDTH: 2px;
HEIGHT: 2px"> </TD><br>
```

```
                <TD height="2" width="468" style="WIDTH: 468px;
BORDER-RIGHT-STYLE: solid; HEIGHT: 2px"> </TD><br>
              </tr><br>
              --><br>
              <TR><br>
                <TD height="1" width="12" style="WIDTH: 12px;
BORDER-LEFT-STYLE: solid"> </TD><br>
                <TD height="1" width="326" style="WIDTH:
326px">Card Track:</TD><br>
                <TD height="1" width="2" style="WIDTH:
2px"> </TD><br>
                <TD height="1" width="468" style="WIDTH: 468px;
BORDER-RIGHT-STYLE: solid"><INPUT value="<%=micr%>"
name="micr" size="46" style="WIDTH: 313px; HEIGHT:
22px"></TD><br>
              </TR><br>
              <TR><br>
                <TD style="WIDTH: 12px; BORDER-LEFT-STYLE:
solid; HEIGHT: 18px; BORDER-BOTTOM-STYLE: solid"
width="12" height="18"> </TD><br>
                <TD style="WIDTH: 326px; HEIGHT: 18px; BORDER-
BOTTOM-STYLE: solid" width="326" height="18"> </TD><br>
                <TD style="WIDTH: 2px; HEIGHT: 18px; BORDER-
BOTTOM-STYLE: solid" width="2" height="18"> </TD><br>
                <TD style="WIDTH: 468px;BORDER-RIGHT-STYLE:
solid;HEIGHT: 18px;BORDER-BOTTOM-STYLE: solid"
width="468" height="18"> </TD><br>
              </TR><br>
            </TABLE><br>
          </center><br>
        </div><br>
        <P align="left"><FONT color="red">*</FONT>)Set
```

```
Terminal Type to POS for an <br>
       electronic cash register or integrated POS system,
STANDALONE for a <br>
       point-of-sale credit card terminal, UNATTENDED for a self-
service station, or <br>
       UNSPECIFIED for e-commerce or other
applications</P><br>
     <p align="center"><input type="submit" value="Submit"
name="Submit"><br>
    </form><br>
    </P><br>
  </body><br>
</HTML><br>
```

## Sample C# Code

```
////////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint
International, Inc.
// Use is subject to license terms.
////////////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;

namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for RETAIL_SWIPE.
  /// </summary>
  public class RETAIL_SWIPE : LinkPointTxn_Page
```

```
{
  private void Page_Load(object sender, System.EventArgs e)
  {
    if( IsPostBack )
    {
      // Parse form data
      ParseFormData();
      // process order
      ProcessOrder();
    }
  }

  private void ProcessOrder()
  {
    // create order
    LPOrderPart order = LPOrderFactory.createOrderPart("order");
    // create a part we will use to build the order
    LPOrderPart op = LPOrderFactory.createOrderPart();

    // Build 'orderoptions'
    // For a test, set result to GOOD, DECLINE, or DUPLICATE
    op.put("result","GOOD");
    op.put("ordertype","PREAUTH");
    // add 'orderoptions to order
    order.addPart("orderoptions", op );


    // Build 'merchantinfo'
    op.clear();
    op.put("configfile",configfile);
    // add 'merchantinfo to order
    order.addPart("merchantinfo", op );
```

```
// Build 'transactiondetails'
op.clear();
// set terminaltype to POS for an electronic
// cash register or integrated POS system,
// STANDALONE for a point-of-sale credit card terminal,
// UNATTENDED for a self-service station, or
// UNSPECIFIED for e-commerce or other applications
op.put("terminaltype","POS");
op.put("transactionorigin","RETAIL");
// add 'transactiondetails to order
order.addPart("transactiondetails", op );

// Build 'creditcard'
op.clear();
op.put("track",micr);
// add 'creditcard to order
order.addPart("creditcard", op );


// Build 'payment'
op.clear();
op.put("chargetotal",total);
// add 'payment to order
order.addPart("payment", op );



// create transaction object
LinkPointTxn LPTxn = new LinkPointTxn();

// get outgoing XML from the 'order' object
string outXml = order.toXML();
```

```
      // Call LPTxn
      string resp = LPTxn.send(keyfile,host,port, outXml);

      //Store transaction data on Session and redirect
        Session["outXml"] = outXml;
      Session["resp"] = resp;
      Server.Transfer("status.aspx");

    }


    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form
Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to Process a Retail Keyed Transaction Using .NET and C#

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is keyed in. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#"
Codebehind="RETAIL_KEYED.aspx.cs" AutoEventWireup="false"
Inherits="LinkPointAPI_cs.RETAIL_KEYED" %><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>RETAIL_KEYED</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript"
content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form ACTION="RETAIL_KEYED.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1"><br>
      <p align="center"><b><font size="5"> RETAIL KEYED
TRANSACTION </font></b><br>
```

```
        <br><br>
      </p><br>
      <p align="center">An Example Credit Card SALE
Transaction with Minimum Required <br>
        Fields</p><br>
      <div align="center"><br>
        <center><br>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="238" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 238px"><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD><br>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD><br>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD><br>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Order
Type:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>SALE</b></TD><br>
            </TR><br>
            <TR><br>
```

```
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Terminal Type<FONT
color="red">*</FONT>:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>POS</b></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Total:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD><br>
            </TR><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276"> </TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
```

```
                <TD height="1" width="144">Card
Number:</TD><br>
                <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
                <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD><br>
              </TR><br>
              <TR><br>
                <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
                <TD height="1" width="276">Exp.
Month:</TD><br>
                <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
                <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
                  <select id="expmonth" name="expmonth"
size="1"><br>
                    <%WriteMonthOpts();%><br>
                  </select></TD><br>
              </TR><br>
              <TR><br>
                <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
                <TD height="1" width="276">Exp. Year:</TD><br>
                <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
                <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
                  <select id="expyear" name="expyear"
```

```
size="1"><br>
         <%WriteYearOpts();%><br>
        </select></TD><br>
      </TR><br>
      <TR><br>
       <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD><br>
       <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD><br>
       <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE:
solid" width="115" height="10"> </TD><br>
       <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD><br>
      </TR><br>
     </TABLE><br>
    </center><br>
   </div><br>
   <P align="left"><FONT color="red">*</FONT>)Set
Terminal Type to POS for an <br>
    electronic cash register or integrated POS system,
STANDALONE for a <br>
    point-of-sale credit card terminal, UNATTENDED for a self-
service station, or <br>
    UNSPECIFIED for e-commerce or other
applications</P><br>
   <p align="center"><input type="submit" value="Submit"
name="Submit"><br>
  </form><br>
  </P><br>
 </body><br>
</HTML><br>
```

## Sample C# Code

```
////////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint International, Inc.
// Use is subject to license terms.
////////////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;

namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for RETAIL_KEYED.
  /// </summary>
  public class RETAIL_KEYED : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      if( IsPostBack )
      {
        // Parse form data
        ParseFormData();
        // process order
        ProcessOrder();
      }
    }

    private void ProcessOrder()
    {
      // create order
```

```
LPOrderPart order = LPOrderFactory.createOrderPart("order");
// create a part we will use to build the order
LPOrderPart op = LPOrderFactory.createOrderPart();

// Build 'orderoptions'
op.put("ordertype","SALE");
// add 'orderoptions to order
order.addPart("orderoptions", op );



// Build 'merchantinfo'
op.clear();
op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );

// Build 'transactiondetails'
op.clear();
// set terminaltype to POS for an electronic
// cash register or integrated POS system,
// STANDALONE for a point-of-sale credit card terminal,
// UNATTENDED for a self-service station, or
// UNSPECIFIED for e-commerce or other applications
op.put("terminaltype","POS");
op.put("transactionorigin","RETAIL");
// add 'transactiondetails to order
order.addPart("transactiondetails", op );


// Build 'creditcard'
op.clear();
op.put("cardnumber",cardnumber);
op.put("cardexpmonth",expmonth);
```

```
      op.put("cardexpyear",expyear);
      // add 'creditcard to order
      order.addPart("creditcard", op );

      // Build 'payment'
      op.clear();
      op.put("chargetotal",total);
      // add 'payment to order
      order.addPart("payment", op );


      // create transaction object
      LinkPointTxn LPTxn = new LinkPointTxn();

      // get outgoing XML from the 'order' object
      string outXml = order.toXML();

      // Call LPTxn
      string resp = LPTxn.send(keyfile,host,port, outXml);


      //Store transaction data on Session and redirect
      Session["outXml"] = outXml;
      Session["resp"] = resp;
      Server.Transfer("status.aspx");


    }

    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form
Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to Process a Retail UNATTENDED Transaction Using .NET and C#

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card terminal is unattended (that is, a self-service station such as a gas station or ticket booth). In this case, you should do a partial AVS where you collect the zip code only. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#"
Codebehind="RETAIL_PARTIAL_AVS.aspx.cs"
AutoEventWireup="false"
Inherits="LinkPointAPI_cs.RETAIL_PARTIAL_AVS" %><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>RETAIL_PARTIAL_AVS</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript"
content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form ACTION="RETAIL_PARTIAL_AVS.aspx"
```

```
METHOD="post" NAME="SaleForm" runat="server"
ID="Form1"><br>
      <p align="center"><b><font size="5"> RETAIL PARTIAL
AVS TRANSACTION </font></b><br>
      </p><br>
      <p align="center">An Example Credit Card SALE
Transaction with Minimum Required <br>
        Fields</p><br>
      <div align="center"><br>
        <center><br>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="210" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 210px"><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD><br>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD><br>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD><br>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Order
Type:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
```

```
STYLE: solid"><b>SALE</b></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Terminal Type<FONT
color="red">*</FONT>:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>UNATTENDED</b></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Total:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD><br>
            </TR><br>
            <tr><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276"> </TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD><br>
            </tr><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="144">Card
Number:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Exp.
Month:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
                <select id="expmonth" name="expmonth"
size="1"><br>
                  <%WriteMonthOpts();%><br>
                </select></TD><br>
            </TR><br>
            <TR><br>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
              <TD height="1" width="276">Exp. Year:</TD><br>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
```

```
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><br>
        <select id="expyear" name="expyear"
size="1"><br>
         <%WriteYearOpts();%><br>
        </select></TD><br>
      </TR><br>
      <TR><br>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD><br>
       <TD height="1" width="276">Zip<FONT
color="red">**</FONT>:</TD><br>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD><br>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD><br>
      </TR><br>
      <TR><br>
       <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD><br>
       <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD><br>
       <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE:
solid" width="115" height="10"> </TD><br>
       <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD><br>
      </TR><br>
     </TABLE><br>
    </center><br>
   </div><br>
   <P align="left"><FONT color="red">*</FONT> )Set
```

```
terminaltype to POS for an <br>
        electronic cash register or integrated POS system,
STANDALONE for a <br>
        point-of-sale credit card terminal, UNATTENDED for a self-
service station, or <br>
        UNSPECIFIED for e-commerce or other
applications</P><br>
      <P align="left"><FONT color="red">**</FONT><br>
      )You should not do AVS for a retail swiped transaction,
unless it is an <br>
      UNATTENDED terminaltype.For an UNATTENDED
terminaltype, do a partial AVS: zip <br>
      code only.<br>
      <P></P><br>
      <p align="center"><input type="submit" value="Submit"
name="Submit"><br>
    </form><br>
    </P><br>
  </body><br>
</HTML><br>
```

## Sample C# Code

```
//////////////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint
International, Inc.
// Use is subject to license terms.
//////////////////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;
```

```
namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for RETAIL_PARTIAL_AVS.
  /// </summary>
  public class RETAIL_PARTIAL_AVS : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      if( IsPostBack )
      {
        // Parse form data
        ParseFormData();
        // process order
        ProcessOrder();
      }
    }

    private void ProcessOrder()
    {
      // create order
      LPOrderPart order = LPOrderFactory.createOrderPart("order");
      // create a part we will use to build the order
      LPOrderPart op = LPOrderFactory.createOrderPart();

      // Build 'orderoptions'
      op.put("ordertype","SALE");
      // add 'orderoptions to order
      order.addPart("orderoptions", op );



      // Build 'merchantinfo'
```

```
op.clear();
op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );

// Build 'transactiondetails'
op.clear();
// set terminaltype to POS for an electronic
// cash register or integrated POS system,
// STANDALONE for a point-of-sale credit card terminal,
// UNATTENDED for a self-service station, or
// UNSPECIFIED for e-commerce or other applications
op.put("terminaltype","UNATTENDED");
op.put("transactionorigin","RETAIL");
// add 'transactiondetails to order
order.addPart("transactiondetails", op );

// Build 'billing'
op.clear();
//For an UNATTENDED terminaltype,
// do a partial AVS: zip code only.
op.put("zip",bzip);
// add 'billing to order
order.addPart("billing", op );


// Build 'creditcard'
op.clear();
op.put("cardnumber",cardnumber);
op.put("cardexpmonth",expmonth);
op.put("cardexpyear",expyear);
// add 'creditcard to order
order.addPart("creditcard", op );
```

```
      // Build 'payment'
      op.clear();
      op.put("chargetotal",total);
      // add 'payment to order
      order.addPart("payment", op );

      // create transaction object
      LinkPointTxn LPTxn = new LinkPointTxn();

      // get outgoing XML from the 'order' object
      string outXml = order.toXML();

      // Call LPTxn
      string resp = LPTxn.send(keyfile,host,port, outXml);

      //Store transaction data on Session and redirect
      Session["outXml"] = outXml;
      Session["resp"] = resp;
      Server.Transfer("status.aspx");

    }

    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form
Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }
    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to perform a VirtualCheck SALE Transaction Using .NET and C#*

The code shown below demonstrates how to process a VirtualCheck SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#"
Codebehind="VCHECK_SALE.aspx.cs" AutoEventWireup="false"
Inherits="LinkPointAPI_cs.VCHECK_SALE" %>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>VCHECK_SALE</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="VCHECK_SALE.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><font size="5"><label><b>VIRTUAL
CHECK SALE TRANSACTION </b></label></font>
      </p>
      <p align="center">An Example of a Virtual Check SALE
      </p>
      <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="367" border="0" align="left" bgcolor="#c0c0c0"
style="WIDTH: 367px; HEIGHT: 311px">
        <TR>
          <TD height="25" width="44" bgcolor="#ffffff">  </TD>
          <TD height="25" width="16" style="BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid">  </TD>
          <TD height="25" width="90" style="BORDER-TOP-
STYLE: solid"><FONT>Name</FONT>:</TD>
          <TD height="25" width="54" style="BORDER-TOP-
STYLE: solid">  </TD>
          <TD height="25" width="173" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"><INPUT
value="<%=bname%>" name="bname"></TD>
        </TR>
        <TR>
          <TD height="25" width="44" bgcolor="#ffffff">  </TD>
          <TD height="25" width="16" style="BORDER-LEFT-
STYLE: solid">  </TD>
          <TD height="25" width="90">Company:</TD>
          <TD height="25" width="54">  </TD>
          <TD height="25" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcompany%>"
name="bcompany"></TD>
        </TR>
        <TR>
          <TD height="25" width="44" bgcolor="#ffffff">  </TD>
          <TD height="25" width="16" style="BORDER-LEFT-
STYLE: solid">  </TD>
          <TD height="25" width="90">Address 1:</TD>
          <TD height="25" width="54">  </TD>
          <TD height="25" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=baddr1%>"
name="baddr1"></TD>
        </TR>
        <TR>
          <TD height="26" width="44" bgcolor="#ffffff">  </TD>
          <TD height="26" width="16" style="BORDER-LEFT-
STYLE: solid">  </TD>
          <TD height="26" width="90">Address 2:</TD>
          <TD height="26" width="54">  </TD>
          <TD height="26" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=baddr2%>"
name="baddr2"></TD>
        </TR>
        <TR>
          <TD height="25" width="44" bgcolor="#ffffff">  </TD>
          <TD height="25" width="16" style="BORDER-LEFT-
STYLE: solid">  </TD>
          <TD height="25" width="90">City:</TD>
          <TD height="25" width="54">  </TD>
          <TD height="25" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcity%>"
name="bcity"></TD>
        </TR>
        <TR>
          <TD height="24" width="44" bgcolor="#ffffff">
          </TD>
          <TD height="24" width="16" style="BORDER-LEFT-
STYLE: solid">
          </TD>
          <TD height="24" width="90">State:
          </TD>
          <TD height="24" width="54">  </TD>
          <TD height="24" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 30px; HEIGHT: 22px"
size="3" value="<%=bstate%>" name="bstate"></TD>
        </TR>
        <TR>
          <TD height="24" width="44" bgcolor="#ffffff">  </TD>
          <TD height="24" width="16" style="BORDER-LEFT-
STYLE: solid">  </TD>
          <TD height="24" width="90">Zip:</TD>
          <TD height="24" width="54">  </TD>
          <TD height="24" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD>
        </TR>
        <tr>
          <TD height="19" width="44" bgcolor="#ffffff">  </TD>
          <TD height="19" width="16" style="BORDER-LEFT-
STYLE: solid">  </TD>
          <TD height="19" width="90">Country:</TD>
          <TD height="19" width="54">  </TD>
          <TD height="19" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 28px; HEIGHT: 22px"
size="2" value="<%=bcountry%>" name="bcountry"></TD>
        </tr>
        <tr>
          <TD height="1" width="44" bgcolor="#ffffff">  </TD>
          <TD height="1" width="16" style="BORDER-LEFT-
STYLE: solid">  </TD>
          <TD height="1" width="78">e-mail:</TD>
          <TD height="1" width="7">  </TD>
          <TD height="1" width="56" style="BORDER-RIGHT-
```

```
STYLE: solid"><INPUT value="<%=bemail%>"
name="bemail"></TD>
        </tr>
        <tr>
          <TD height="25" width="44" bgcolor="#ffffff">  </TD>
          <TD height="25" width="16" style="BORDER-LEFT-
STYLE: solid">  </TD>
          <TD height="25" width="78">Phone:</TD>
          <TD height="25" width="7">  </TD>
          <TD height="25" width="56" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bphone%>"
name="bphone" size="20"></TD>
        </tr>
        <tr>
          <TD height="40" width="44" bgcolor="#ffffff"
style="HEIGHT: 40px">  </TD>
          <TD height="40" width="16" style="BORDER-LEFT-
STYLE: solid; HEIGHT: 40px; BORDER-BOTTOM-STYLE:
solid">  </TD>
          <TD height="40" width="78" style="HEIGHT: 40px;
BORDER-BOTTOM-STYLE: solid">Fax:</TD>
          <TD height="40" width="7" style="HEIGHT: 40px;
BORDER-BOTTOM-STYLE: solid">  </TD>
          <TD height="40" width="56" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 40px; BORDER-BOTTOM-STYLE:
solid"><INPUT value="<%=bfax%>" name="bfax"
size="20"></TD>
        </tr>
      </TABLE>
      <TABLE id="TABLE2" cellSpacing="0" cellPadding="0"
width="353" border="0" align="left" height="290"
bgcolor="#c0c0c0" style="WIDTH: 353px; HEIGHT: 290px">
```

```
        <TR>
          <TD height="24" width="13" bgcolor="#ffffff"
style="WIDTH: 13px; HEIGHT: 24px">  </TD>
          <TD height="24" width="19" style="BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid; HEIGHT:
24px">  </TD>
          <TD height="24" width="276" style="BORDER-TOP-
STYLE: solid; HEIGHT: 24px">Total:</TD>
          <TD height="24" width="44" style="BORDER-TOP-
STYLE: solid; HEIGHT: 24px">  </TD>
          <TD height="24" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid; HEIGHT:
24px"><INPUT style="WIDTH: 45px; HEIGHT: 22px" size="4"
value="<%=subtotal%>" name="total"></TD>
        </TR>
        <TR>
          <TD height="19" width="13" bgcolor="#ffffff"
style="WIDTH: 13px; HEIGHT: 19px">  </TD>
          <TD height="19" width="19" style="BORDER-LEFT-
STYLE: solid; HEIGHT: 19px">  </TD>
          <TD height="19" width="294" style="HEIGHT:
19px">  </TD>
          <TD height="19" width="13" style="HEIGHT:
19px">  </TD>
          <TD height="19" width="151" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 19px">  </TD>
        </TR>
        <TR>
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px">  </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid">  </TD>
```

```
          <TD height="1" width="294">Transit Routing:</TD>
          <TD height="1" width="13">  </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="routeNbr" value="<%=routeNbr%>"></TD>
        </TR>
        <TR>
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px">  </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid">  </TD>
          <TD height="1" width="294">Account Number:</TD>
          <TD height="1" width="13">  </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="accountNbr"
value="<%=accountNbr%>"></TD>
        </TR>
        <TR>
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px">  </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid">  </TD>
          <TD height="1" width="294">Check Number
(optional):</TD>
          <TD height="1" width="13">  </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="checkNbr"
value="<%=checkNbr%>"></TD>
        </TR>
        <TR>
```

```
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px">  </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid">  </TD>
          <TD height="1" width="294">Account Type
(pc/bc):</TD>
          <TD height="1" width="13">  </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="accttype" value="<%=accttype%>"></TD>
        </TR>
        <TR>
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px">  </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid">  </TD>
          <TD height="1" width="294">Bank Name :</TD>
          <TD height="1" width="13">  </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="bankName"
value="<%=bankName%>"></TD>
        </TR>
        <TR>
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px">  </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid">  </TD>
          <TD height="1" width="294">Bank State :</TD>
          <TD height="1" width="13">  </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 28px; HEIGHT: 22px"
```

```
size="2" name="bankState"
value="<%=bankState%>"></TD>
        </TR>
        <tr>
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px">  </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid">  </TD>
          <TD height="1" width="294">SSN (optional) :</TD>
          <TD height="1" width="13">  </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="ssn" value="<%=ssn%>"></TD>
        </tr>
        <TR>
          <TD height="21" width="13" bgcolor="#ffffff"
style="WIDTH: 13px">  </TD>
          <TD height="21" width="19" style="BORDER-LEFT-
STYLE: solid">  </TD>
          <TD height="21" width="294">Driver License :</TD>
          <TD height="21" width="13">  </TD>
          <TD height="21" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="dl" value="<%=dl%>"></TD>
        </TR>
        <TR>
          <TD height="29" width="13" bgcolor="#ffffff"
style="WIDTH: 13px; HEIGHT: 29px">  </TD>
          <TD height="29" width="19" style="BORDER-LEFT-
STYLE: solid; HEIGHT: 29px">  </TD>
          <TD height="29" width="294" style="HEIGHT:
29px">DL State :</TD>
```

```
          <TD height="29" width="7" style="HEIGHT:
29px">  </TD>
          <TD height="29" width="151" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 29px"><INPUT id="startdate"
style="WIDTH: 28px; HEIGHT: 19px" size="1" name="dlState"
value="<%=dlState%>"></TD>
        </TR>
        <tr>
          <TD colspan="5" align="middle"
bgcolor="#ffffff">  </TD>
        </tr>
        <tr>
          <TD colspan="5" align="middle" bgcolor="#ffffff"
style="HEIGHT: 7px"><INPUT name='Submit' type="submit"
value='Submit'></TD>
        </tr>
      </TABLE>
    </form>
  </body>
</HTML>
```

## Sample C# Code

```
///////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint
International, Inc.
// Use is subject to license terms.
///////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;
```

```
namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for VCHECK_SALE.
  /// </summary>
  public class VCHECK_SALE : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      if( IsPostBack )
      {
        // Parse form data
        ParseFormData();
        // process order
        ProcessOrder();
      }
    }

    private void ProcessOrder()
    {
      // create order
      LPOrderPart order = LPOrderFactory.createOrderPart("order");
      // create a part we will use to build the order
      LPOrderPart op = LPOrderFactory.createOrderPart();

      // Build 'orderoptions'
      op.put("result","LIVE");
      op.put("ordertype","SALE");
      // add 'orderoptions to order
      order.addPart("orderoptions", op );
    // Build 'merchantinfo'
    op.clear();
    op.put("configfile",configfile);
    // add 'merchantinfo to order
    order.addPart("merchantinfo", op );

    // Build 'billing'
    op.clear();
    op.put("name",bname);
    op.put("address1",baddr1);
    op.put("address2",baddr2);
    op.put("state",bstate);
    op.put("city",bcity);
    op.put("zip",bzip);
    op.put("phone",bphone);
    op.put("email",bemail);
    op.put("fax",bfax);
    // add 'billing to order
    order.addPart("billing", op );

    // Build 'telecheck' part
    op.clear();
    op.put("routing",routeNbr);
    op.put("account",accountNbr);
    op.put("checknumber",checkNbr);
    op.put("accounttype",accttype);
    op.put("dl",dl);
    op.put("ssn",ssn);
    op.put("dlstate",dlState);
    op.put("bankname",bankName);
    op.put("bankstate",bankState);
```

```
      // add 'telecheck' to order
      order.addPart("telecheck", op );


      // Build 'payment'
      op.clear();
      op.put("chargetotal",total);
      // add 'payment to order
      order.addPart("payment", op );

      // create transaction object
      LinkPointTxn LPTxn = new LinkPointTxn();

      // get outgoing XML from the 'order' object
      string outXml = order.toXML();

      // Call LPTxn
      string resp = LPTxn.send(keyfile,host,port, outXml);

      //Store transaction data on Session and redirect
      Session["outXml"] = outXml;
      Session["resp"] = resp;
      Server.Transfer("status.aspx");

    }


    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

*As of 12 March 2004, VirtualCheck and Verified by Visa®/Mastercard® SecureCode™ are in beta test and will be available to the general merchant population upon completion of testing. Please contact your product manager for further information..

# Sample Code to perform a VirtualCheck VOID Transaction Using .NET and C#*

The code shown below demonstrates how to process a VirtualCheck VOID transaction. You can only void a VirtualCheck SALE transaction if it has not yet been sent for processing (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#"
Codebehind="VCHECK_VOID.aspx.cs" AutoEventWireup="false"
Inherits="LinkPointAPI_cs.VCHECK_VOID" %>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>VCHECK_VOID</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="VCHECK_VOID.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
```

```
    <p align="center"><font size="5"><b>VIRTUAL CHECK
VOID TRANSACTION </b></font>
    </p>
    <p align="center">An Example of a Virtual Check
VOID</p>
    <TABLE id="TABLE2" align="center" cellSpacing="0"
cellPadding="0" width="313" border="0" height="159"
bgcolor="#c0c0c0" style="WIDTH: 313px; HEIGHT: 159px">
      <TR>
        <TD height="24" width="19" style="BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid; HEIGHT:
24px">  </TD>
        <TD height="24" width="276" style="BORDER-TOP-
STYLE: solid; HEIGHT: 24px">  </TD>
        <TD height="24" width="44" style="BORDER-TOP-
STYLE: solid; HEIGHT: 24px">  </TD>
        <TD height="24" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid; HEIGHT:
24px">  </TD>
      </TR>
      <TR>
        <TD height="24" width="19" style="BORDER-LEFT-
STYLE: solid; HEIGHT: 24px">  </TD>
        <TD height="24" width="276" style="HEIGHT:
24px">Total:</TD>
        <TD height="24" width="44" style="HEIGHT:
24px">  </TD>
        <TD height="24" width="78" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 24px"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=subtotal%>"
name="total"></TD>
      </TR>
```

```
        <TR>
          <TD height="19" width="19" style="BORDER-LEFT-
STYLE: solid; HEIGHT: 19px">  </TD>
          <TD height="19" width="294" style="HEIGHT:
19px">  </TD>
          <TD height="19" width="13" style="HEIGHT:
19px">  </TD>
          <TD height="19" width="151" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 19px">  </TD>
        </TR>
        <TR>
          <TD height="36" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid; HEIGHT: 36px">  </TD>
          <TD height="36" width="110" style="WIDTH: 110px;
HEIGHT: 36px">Order ID  <FONT color="red">*</FONT>
            :</TD>
          <TD height="36" width="9" style="WIDTH: 9px;
HEIGHT: 36px"></TD>
          <TD height="36" width="78" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 36px"><INPUT style="WIDTH: 150px;
HEIGHT: 22px" size="60" value="<%=oid%>"
name="oid">  </TD>
        </TR>
        <TR>
          <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10">  </TD>
          <TD style="WIDTH: 110px; BORDER-BOTTOM-STYLE:
solid" width="110" height="10">  </TD>
          <TD style="WIDTH: 9px; BORDER-BOTTOM-STYLE:
solid" width="9" height="10">  </TD>
          <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10">  </TD>
```

```
        </TR>
      </TABLE>
      <P align="left"><FONT color="red">*</FONT>) The 'Order
ID' field must be a valid
        order ID from a prior Virtual Check Sale</P>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    <br>
    </P>
    <DIV style="Z-INDEX: 101; LEFT: 7px; WIDTH: 533px;
POSITION: absolute; TOP: 442px; HEIGHT: 19px"
ms_positioning="FlowLayout">
      <P align="left"><FONT color="red">*</FONT>) The 'Order
ID' field must be a valid
        order ID from a prior Virtual Check Sale
      </P>
    </DIV>
  </body>
</HTML>
```

## Sample C# Code

```
////////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint
International, Inc.
// Use is subject to license terms.
////////////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;
```

```
namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for VCHECK_VOID.
  /// </summary>
  public class VCHECK_VOID : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      if( IsPostBack )
      {
        // Parse form data
        ParseFormData();
        // process order
        ProcessOrder();
      }
    }

    private void ProcessOrder()
    {
      // create order
      LPOrderPart order = LPOrderFactory.createOrderPart("order");
      // create a part we will use to build the order
      LPOrderPart op = LPOrderFactory.createOrderPart();

      // Build 'orderoptions'
      op.put("result","LIVE");
      op.put("ordertype","VOID");
      // add 'orderoptions to order
      order.addPart("orderoptions", op );

      // Build 'merchantinfo'
```

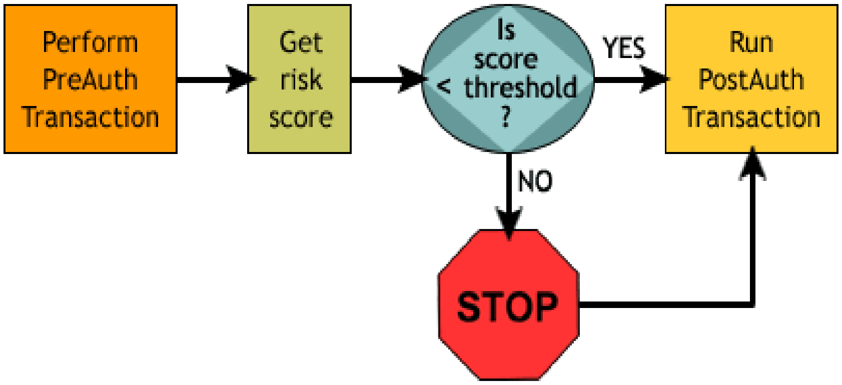
```
op.clear();
op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );

// Build 'telecheck' part
op.clear();
op.put("void","1");
// add 'telecheck' to order
order.addPart("telecheck", op );


// Build 'payment'
op.clear();
op.put("chargetotal",total);
// add 'payment to order
order.addPart("payment", op );

// Add oid
op.clear();
op.put("oid",oid);
// add 'transactiondetails to order
order.addPart("transactiondetails", op );

// create transaction object
LinkPointTxn LPTxn = new LinkPointTxn();

// get outgoing XML from the 'order' object
string outXml = order.toXML();

// Call LPTxn
string resp = LPTxn.send(keyfile,host,port, outXml);


//Store transaction data on Session and redirect
Session["outXml"] = outXml;
```

```
      Session["resp"] = resp;
      Server.Transfer("status.aspx");

    }


    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);

    }
    #endregion
  }
}
```

# Sample Code Using LinkShield™ with .NET and C#

## PreAuthorization / Postauthorization example

The code shown below demonstrates an example of one way to use LinkShield™ fraud risk scores. This example runs a preauthorization transaction, checks the fraud risk score, then runs a postauthorization if the fraud risk score is considered acceptable. The diagram shown illustrates this example. The fraud risk score used within this sample code is for explanatory purposes only; you should choose the fraud risk score threshold appropriate for your business needs. See the comments within the code for further explanation.



If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#"
Codebehind="LINKSHIELD_PREAUTH_POSTAUTH.aspx.cs"
AutoEventWireup="false"
Inherits="LinkPointAPI_cs.LINKSHIELD_PREAUTH_POSTAUTH"
%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>LINKSHIELD_SALE_VOID</title>
    <meta content="Microsoft Visual Studio 7.0"
name="GENERATOR">
    <meta content="C#" name="CODE_LANGUAGE">
    <meta content="JavaScript" name="vs_defaultClientScript">
    <meta
content="http://schemas.microsoft.com/intellisense/ie5"
name="vs_targetSchema">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form id="Form1"
action="LINKSHIELD_PREAUTH_POSTAUTH.aspx"
method="post" runat="server">
      <p align="center"><b><font size="4"> LinkShield
PREAUTH/POSTAUTH TRANSACTION</font></b></p>
      <p align="center">An Example Credit Card
Preauth/Postauth with score rating
       (LinkShield). This sample first performs a credit card
PREAUTH,then checks the
       LinkShield risk score. If the score is less then given
threshold then we
       perform POSTAUTH transaction
      </p>
      <FONT color="red">*</FONT>)Replace the value for
<b>MaxScore</b> with a value
      appropriate for your business risk level.
      <div align="center">
       <TABLE id="TABLE1" style="WIDTH: 356px; HEIGHT:
238px" height="238" cellSpacing="0" cellPadding="0"
width="356" bgColor="#c0c0c0" border="0">
         <tr>
          <TD style="WIDTH: 103px; BORDER-TOP-STYLE: solid;
BORDER-LEFT-STYLE: solid" width="103" height="1"> </TD>
          <TD style="BORDER-TOP-STYLE: solid" width="276"
height="1"> </TD>
          <TD style="WIDTH: 15px; BORDER-TOP-STYLE: solid"
width="15" height="1"> </TD>
          <TD style="BORDER-TOP-STYLE: solid; BORDER-RIGHT-
STYLE: solid" width="78" height="1"> </TD>
         </tr>
         <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 17px" width="103" height="17"> </TD>
          <TD style="HEIGHT: 17px" width="276"
height="17">Subtotal:</TD>
          <TD style="WIDTH: 15px; HEIGHT: 17px" width="15"
height="17"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
17px" width="78" height="17"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="12.99"
name="subtotal"></TD>
```

```
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 18px" width="103" height="18"> </TD>
          <TD style="HEIGHT: 18px" width="276"
height="18">Tax:</TD>
          <TD style="WIDTH: 15px; HEIGHT: 18px" width="15"
height="18"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
18px" width="78" height="18"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="0.32" name="tax"></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 11px" width="103" height="11"> </TD>
          <TD style="HEIGHT: 11px" width="276"
height="11">Shipping:</TD>
          <TD style="WIDTH: 15px; HEIGHT: 11px" width="15"
height="11"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
11px" width="78" height="11"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="1.02"
name="shipping"></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 2px" width="103" height="2"> </TD>
          <TD style="HEIGHT: 2px" width="276"
height="2">Total:</TD>
          <TD style="WIDTH: 15px; HEIGHT: 2px" width="15"
height="2"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
2px" width="78" height="2"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="14.33" name="total"></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 23px" width="103" height="23"> </TD>
          <TD style="HEIGHT: 23px" width="276"
height="23"><b>MaxScore <FONT color="red">*</FONT>
              :</b></TD>
          <TD style="WIDTH: 15px; HEIGHT: 23px" width="15"
```

```
height="23"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
23px" width="78" height="23"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size=6
value="<%=score%>" name=score></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Card Number:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=cardnumber%>"
name=cardnumber></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Exp. Month:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select id="expmonth" size="1"
name="expmonth">
                <%WriteMonthOpts();%>
              </select></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Exp. Year:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select id="expyear" size="1" name="expyear">
                <%WriteYearOpts();%>
              </select></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
```

```
            <TD width="276" height="1">CVM:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size=4
value="<%=cvmvalue%>" name=cvmvalue></TD>
          </TR>
          <tr>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1"><b>Billing:</b></TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Name:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bname%>"
name=bname
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Company:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bcompany%>"
name=bcompany
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
```

```
            <TD width="144" height="1">Address 1:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=baddr1%>"
name=baddr1
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Address 2:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=baddr2%>"
name=baddr2
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">City:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bcity%>"
name=bcity
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">State:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bstate%>"
name=bstate
></TD>
          </TR>
          <TR>
```

```
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="144" height="1">Country:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bcountry%>"
name=bcountry
></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="144" height="1">Phone:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bphone%>"
name=bphone
></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="144" height="1">Email:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bemail%>"
name=bemail
></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="276" height="1">Address Numbers:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size=4
```

```
value="<%=baddrnum%>" name=baddrnum></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Zip</FONT>:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size=4
value="<%=bzip%>" name=bzip></TD>
          </TR>
          <tr>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276"
height="1"><b>Shipping:</b></TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Name:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=sname%>"
name=sname
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Address 1:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=saddr1%>"
```

```
name=saddr1
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Address 2:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=saddr2%>"
name=saddr2
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">City:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=scity%>" name=scity
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Zip:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=szip%>" name=szip
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">State:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=sstate%>"
```

```
name=sstate
></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="144" height="1">Country:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=scountry%>"
name=scountry
></TD>
        </TR>
        <!--
          <tr>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276"> </TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
          </tr> -->
        <tr>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="276" height="1"><b>ITEM:</b></TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
        </tr>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="276" height="1">ID:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="123456-A98767" name="id2"></TD>
```

```
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Description:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="Logo T-Shirt" name="desc2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Price:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="price2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Quantity:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1" name="qty2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Serial:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="0987654322" name="serial2"></TD>
          </TR>
          <TR>
```

```
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Color:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select size="1" name="Color">
                <option value="Red" selected>Red</option>
                <option value="Blue">Blue</option>
              </select></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Size:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select size="1" name="Size">
                <option value="M">Medium</option>
                <option value="L">Large</option>
                <option value="XL" selected>XLarge</option>
              </select></TD>
          </TR>
          <tr>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1"><b>Notes:</b></TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Comments:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size=14
```

```
value="<%=comments%>" name=comments></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Referred:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size=14
value="<%=referred%>" name=referred></TD>
          </TR>
          <TR>
            <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
            <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
            <TD style="WIDTH: 15px; BORDER-BOTTOM-STYLE:
solid" width="15" height="10"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
          </TR>
        </TABLE>
      </div>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample C# Code

```
/********************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'********************************************************************************/

using System;
using LinkPointTransaction;

namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for LINKSHIELD_PREAUTH_POSTAUTH.
  /// </summary>
  public class LINKSHIELD_PREAUTH_POSTAUTH : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      bool fDoPostAuth = false;
      string scoreMsg="";

      if( IsPostBack )
      {
        // Parse form data
        ParseFormData();
        // Now we process SALE order
        ProcessOrder();
        // check LinkShield 'R_Score' value
        if( R_Score.Length == 0 )
        {
          scoreMsg="No score was received in SALE transaction";
          // client is not setup for LinkShield
        }
        else if( R_Score.CompareTo("ERR") == 0 )
        {
          scoreMsg="Error occured in scoring during SALE transaction";
          // scoring error
        }
        else
        {
// get score value from the form
```

```
        int maxScore = -1;
        //try to parse value from form
          try
          {
            maxScore = Int32.Parse(score);
          }
          catch( Exception ex ){}
        // get score value from transaction result
int txnScore = Int32.Parse(R_Score);

          // check to see if score is acceptable
          if( maxScore < txnScore )
          {
          scoreMsg = "The LinkShield risk score is too high : score="+txnScore;
}
          else
          {
          scoreMsg = "The LinkShield risk score is: score="+txnScore;
          fDoPostAuth = true;
          }
        }

        // store the scoreMsg
Session["scoreMsg"] = scoreMsg;

        // if we got acceptable score
        // we run POSTAUTH transaction
        if( fDoPostAuth )
        {
        ProcessPostAuth();
        }

      // we are done with transaction(s)
      // go to status page
      Server.Transfer("status_ls2.aspx");

     } // end ifPostBack


    }

    private void ProcessOrder()
    {
```

```
// create order
LPOrderPart order = LPOrderFactory.createOrderPart("order");
// create a part we will use to build the order
LPOrderPart op = LPOrderFactory.createOrderPart();

// Build 'orderoptions'
op.put("ordertype","PREAUTH");
// set transaction result
op.put("result","GOOD");
// add 'orderoptions to order
order.addPart("orderoptions", op );
// Build 'transactiondetails'
op.clear();
op.put("transactionorigin",Request.Form["origin"] );
// add 'transactiondetails to order
order.addPart("transactiondetails", op);
// Build 'merchantinfo'
op.clear();
op.put("configfile",configfile);
// add 'merchantinfo to order
order.addPart("merchantinfo", op );

// Build 'payment'
op.clear();
op.put("subtotal",Request.Form["subtotal"]);
op.put("tax",Request.Form["tax"]);
op.put("shipping",Request.Form["shipping"]);
op.put("chargetotal",Request.Form["total"]);
// add 'payment to order
order.addPart("payment", op );

// Build 'creditcard'
op.clear();
op.put("cardnumber",cardnumber);
op.put("cardexpmonth",expmonth);
op.put("cardexpyear",expyear);
op.put("cvmvalue",cvmvalue);
op.put("cvmindicator",cvmindicator);
// add 'creditcard to order
order.addPart("creditcard", op );

// Build 'billing'
op.clear();
op.put("name",bname);
op.put("company",bcompany);
op.put("address1",baddr1);
op.put("address2",baddr2);
op.put("city",bcity);
op.put("state",bstate);
// Required for AVS. If not provided,
// transactions will downgrade.
op.put("zip",bzip);
op.put("addrnum",baddrnum);
op.put("country",bcountry);
op.put("phone",bphone);
op.put("fax",bfax);
op.put("email",bemail);
// add 'billing to order
order.addPart("billing", op );

// Build 'shipping'
op.clear();
op.put("name",sname);
op.put("address1",saddr1);
op.put("address2",saddr2);
op.put("city",scity);
op.put("state",sstate);
op.put("zip",szip);
op.put("country",scountry);

// Create some parts we use to build order itmes
LPOrderPart items = LPOrderFactory.createOrderPart();
LPOrderPart item = LPOrderFactory.createOrderPart();
LPOrderPart options = LPOrderFactory.createOrderPart();

// build 'item'
item.put("id",Request.Form["id2"]);
item.put("description",Request.Form["desc2"]);
item.put("quantity",Request.Form["qty2"]);
item.put("price",Request.Form["price2"]);
item.put("serial",Request.Form["serial2"]);
// build item's options
op.clear();
op.put("name","Color");
op.put("value",Request.Form["Color"]);
options.addPart("option",op,1);
```

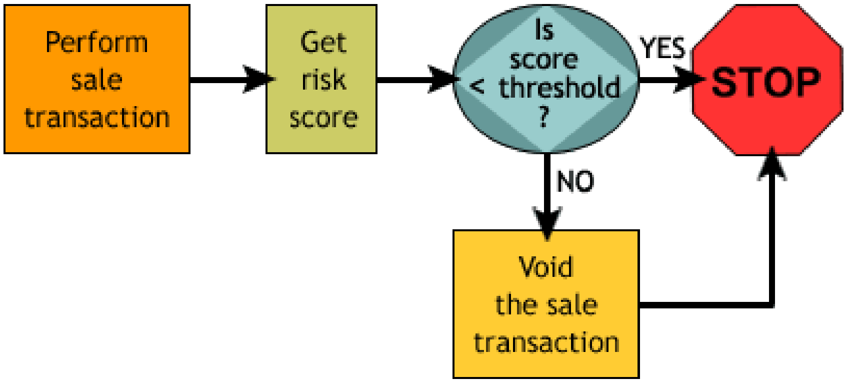
```
  op.clear();
  op.put("name","Size");
  op.put("value",Request.Form["Size"]);
  options.addPart("option",op,2);
  // add 'options' to item
  item.addPart("options", options );
  // add 'item' to 'items' collection
  items.addPart("item", item);
  // add 'items' to order
  order.addPart("items", items );

  // add notes
  op.clear();
  op.put("comments",comments);
  op.put("referred",referred);
  order.addPart("notes",op);

  // create transaction object
  LinkPointTxn LPTxn = new LinkPointTxn();

  // get outgoing XML from the 'order' object
  string outXml = order.toXML();

  // Call LPTxn
  string resp = LPTxn.send(keyfile,host,port, outXml);

  // parse response
  ParseResponse(resp);

  //Store transaction data on Session and redirect
  Session["outXml"] = outXml;
  Session["resp"] = resp;
}
private void ProcessPostAuth()
{
  // create order
  LPOrderPart order = LPOrderFactory.createOrderPart("order");
  // create a part we will use to build the order
  LPOrderPart op = LPOrderFactory.createOrderPart();

  // Build 'orderoptions'
  // For a test, set result to GOOD, DECLINE, or DUPLICATE
  op.put("result","GOOD");
  op.put("ordertype","POSTAUTH");
  // add 'orderoptions to order
  order.addPart("orderoptions", op );

  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );

  // Build 'creditcard'
  op.clear();
  op.put("cardnumber",cardnumber);
  op.put("cardexpmonth",expmonth);
  op.put("cardexpyear",expyear);
  // add 'creditcard to order
  order.addPart("creditcard", op );


  // Build 'payment'
  op.clear();
  op.put("chargetotal",total);
  // add 'payment to order
  order.addPart("payment", op );

  // Add oid
  op.clear();
  op.put("oid",R_OrderNum);
  // add 'transactiondetails to order
  order.addPart("transactiondetails", op );

  // create transaction object
  LinkPointTxn LPTxn = new LinkPointTxn();

  // get outgoing XML from the 'order' object
  string outXml = order.toXML();

  // Call LPTxn
  string resp = LPTxn.send(keyfile,host,port, outXml);

  //Store transaction data on Session and redirect
  Session["outXml_2"] = outXml;
  Session["resp_2"] = resp;
```

```
    }

    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code Using LinkShield™ with .NET and C#

## Sale / Void example

The code shown below demonstrates an example of one way to use LinkShield™ fraud risk scores. This example runs a sale transaction, checks the fraud risk score, then runs a void if the fraud risk score is considered unacceptable. The diagram shown illustrates this example. The fraud risk score used within this sample code is for explanatory purposes only; you should choose the fraud risk score threshold appropriate for your business needs. See the comments within the code for further explanation.



If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#"
Codebehind="LINKSHIELD_SALE_VOID.aspx.cs"
AutoEventWireup="false"
Inherits="LinkPointAPI_cs.LINKSHIELD_SALE_VOID" %>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>LINKSHIELD_SALE_VOID</title>
    <meta content="Microsoft Visual Studio 7.0"
name="GENERATOR">
    <meta content="C#" name="CODE_LANGUAGE">
    <meta content="JavaScript" name="vs_defaultClientScript">
    <meta
content="http://schemas.microsoft.com/intellisense/ie5"
name="vs_targetSchema">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
```

```
    <form id="Form1" action="LINKSHIELD_SALE_VOID.aspx"
method="post" runat="server">
      <p align="center"><b><font size="5"> LinkShield SALE
TRANSACTION</font></b></p>
      <p align="center">An Example Credit Card SALE with score
rating (LinkShield). This
        sample first performs a credit card sale,then checks the
LinkShield risk score.
        If the score is more then given threshold then we void the
previous sale
        transaction
      </p>
      <FONT color="red">*</FONT>)Replace the value for
<b>MaxScore</b> with a value
      appropriate for your business risk level.
      <div align="center">
        <TABLE id="TABLE1" style="WIDTH: 356px; HEIGHT:
238px" height="238" cellSpacing="0" cellPadding="0"
width="356" bgColor="#c0c0c0" border="0">
          <tr>
            <TD style="WIDTH: 103px; BORDER-TOP-STYLE: solid;
BORDER-LEFT-STYLE: solid" width="103" height="1"> </TD>
            <TD style="BORDER-TOP-STYLE: solid" width="276"
height="1"> </TD>
            <TD style="WIDTH: 15px; BORDER-TOP-STYLE: solid"
width="15" height="1"> </TD>
            <TD style="BORDER-TOP-STYLE: solid; BORDER-RIGHT-
STYLE: solid" width="78" height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Order Type:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><b>SALE</b></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 17px" width="103" height="17"> </TD>
            <TD style="HEIGHT: 17px" width="276"
```

```
height="17">Subtotal:</TD>
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name="subtotal"></TD>
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height="18">Tax:</TD>
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height="11"> </TD>
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height="2"> </TD>
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HEIGHT: 22px" size="6" value="14.33" name="total"></TD>
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```

```
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                :</b></TD>
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height="23"> </TD>
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HEIGHT: 22px" size=6
value="<%=score%>" name=score></TD>
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            <TD width="144" height="1">Card Number:</TD>
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height="1"> </TD>
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name=cardnumber></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
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            <TD width="276" height="1">Exp. Month:</TD>
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name="expmonth">
                <%WriteMonthOpts();%>
              </select></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Exp. Year:</TD>
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height="1"> </TD>
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```

```
height="1"><select id="expyear" size="1" name="expyear">
                <%WriteYearOpts();%>
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value="<%=cvmvalue%>" name=cvmvalue></TD>
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name=bname
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            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
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            <TD width="144" height="1">Company:</TD>
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```

```
height="1"><INPUT size=17 value="<%=bcompany%>"
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        <TR>
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></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
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          <TD width="144" height="1">Address 2:</TD>
          <TD style="WIDTH: 15px" width="15"
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          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
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          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
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name=bcity
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          <TD width="144" height="1">State:</TD>
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```

```
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
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        </TR>
        <TR>
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          <TD width="144" height="1">Country:</TD>
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          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
```

```
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```

```
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          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
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            <TD width="144" height="1">City:</TD>
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          </TR>
          <TR>
```

```
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name=sstate
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            <TD width="144" height="1">Country:</TD>
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name=scountry
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              <TD height="1" width="276"> </TD>
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```

```
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            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
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          </TR>
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                <option value="Blue">Blue</option>
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                <option value="M">Medium</option>
                <option value="L">Large</option>
                <option value="XL" selected>XLarge</option>
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          <tr>
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            <TD width="276" height="1"><b>Notes:</b></TD>
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```

```
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     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
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      <TD width="276" height="1">Referred:</TD>
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value="<%=referred%>" name=referred></TD>
     </TR>
     <TR>
      <TD style="BORDER-LEFT-STYLE: solid; BORDER-
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solid" width="15" height="10"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
     </TR>
    </TABLE>
    <CENTER></CENTER>
   </div>
   <p align="center"><input type="submit" value="Submit"
name="Submit">
  </form>
  </P>
 </body>
</HTML>
```

## Sample C# Code

```
/***********************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'***********************************************************************************/

using System;
using LinkPointTransaction;

namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for LINKSHIELD_SALE_VOID.
  /// </summary>
  public class LINKSHIELD_SALE_VOID : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      bool fDoVoid = false;
      string scoreMsg="";

      if( IsPostBack )
      {
        // Parse form data
        ParseFormData();
        // Now we process SALE order
        ProcessOrder();
        // check LinkShield 'R_Score' value
        if( R_Score.Length == 0 )
        {
          scoreMsg="No score was received in SALE transaction";
          // client is not setup for LinkShield
          fDoVoid = true;
        }
        else if( R_Score.CompareTo("ERR") == 0 )
        {
          scoreMsg="Error occured in scoring during SALE transaction";
          // scoring error
          fDoVoid = true;
        }
        else
        {
// get score value from the form
        int maxScore = -1;
        //try to parse value from form
          try
          {
            maxScore = Int32.Parse(score);
          }
          catch( Exception ex ){}
        // get score value from transaction result
int txnScore = Int32.Parse(R_Score);

          // check to see if score is acceptable
          if( maxScore < txnScore )
          {
          scoreMsg = "The LinkShield risk score is too high : score="+txnScore;
fDoVoid = true;
          }
          else
          {
          scoreMsg = "The LinkShield risk score is: score="+txnScore;
          }
        }

        // store the scoreMsg
Session["scoreMsg"] = scoreMsg;

        // if we didn't get acceptable score
        // we VOID previous transaction
        if( fDoVoid)
        {
        ProcessVoid();
        }

      // we are done with transaction(s)
      // go to status page
      Server.Transfer("status_ls1.aspx");


     } // end ifPostBack


    }
```

```
private void ProcessOrder()
{
  // create order
  LPOrderPart order = LPOrderFactory.createOrderPart("order");
  // create a part we will use to build the order
  LPOrderPart op = LPOrderFactory.createOrderPart();

  // Build 'orderoptions'
  op.put("ordertype","SALE");
  // set transaction result
  op.put("result", Request.Form["result"]);
  // add 'orderoptions to order
  order.addPart("orderoptions", op );
  // Build 'transactiondetails'
  op.clear();
  op.put("transactionorigin",Request.Form["origin"] );
  // add 'transactiondetails to order
  order.addPart("transactiondetails", op);
  // Build 'merchantinfo'
  op.clear();
  op.put("configfile",configfile);
  // add 'merchantinfo to order
  order.addPart("merchantinfo", op );

  // Build 'payment'
  op.clear();
  op.put("subtotal",Request.Form["subtotal"]);
  op.put("tax",Request.Form["tax"]);
  op.put("shipping",Request.Form["shipping"]);
  op.put("chargetotal",Request.Form["total"]);
  // add 'payment to order
  order.addPart("payment", op );

  // Build 'creditcard'
  op.clear();
  op.put("cardnumber",cardnumber);
  op.put("cardexpmonth",expmonth);
  op.put("cardexpyear",expyear);
  op.put("cvmvalue",cvmvalue);
  op.put("cvmindicator",cvmindicator);
  // add 'creditcard to order
  order.addPart("creditcard", op );
```

```
// Build 'billing'
op.clear();
op.put("name",bname);
op.put("company",bcompany);
op.put("address1",baddr1);
op.put("address2",baddr2);
op.put("city",bcity);
op.put("state",bstate);
// Required for AVS. If not provided,
// transactions will downgrade.
op.put("zip",bzip);
op.put("addrnum",baddrnum);
op.put("country",bcountry);
op.put("phone",bphone);
op.put("fax",bfax);
op.put("email",bemail);
// add 'billing to order
order.addPart("billing", op );

// Build 'shipping'
op.clear();
op.put("name",sname);
op.put("address1",saddr1);
op.put("address2",saddr2);
op.put("city",scity);
op.put("state",sstate);
op.put("zip",szip);
op.put("country",scountry);

// Create some parts we use to build order itmes
LPOrderPart items = LPOrderFactory.createOrderPart();
LPOrderPart item = LPOrderFactory.createOrderPart();
LPOrderPart options = LPOrderFactory.createOrderPart();

// build 'item'
item.put("id",Request.Form["id2"]);
item.put("description",Request.Form["desc2"]);
item.put("quantity",Request.Form["qty2"]);
item.put("price",Request.Form["price2"]);
item.put("serial",Request.Form["serial2"]);
// build item's options
op.clear();
op.put("name","Color");
```

```
    op.put("value",Request.Form["Color"]);
    options.addPart("option",op,1);
    op.clear();
    op.put("name","Size");
    op.put("value",Request.Form["Size"]);
    options.addPart("option",op,2);
    // add 'options' to item
    item.addPart("options", options );
    // add 'item' to 'items' collection
    items.addPart("item", item);
    // add 'items' to order
    order.addPart("items", items );

    // add notes
    op.clear();
    op.put("comments",comments);
    op.put("referred",referred);
    order.addPart("notes",op);

    // create transaction object
    LinkPointTxn LPTxn = new LinkPointTxn();

    // get outgoing XML from the 'order' object
    string outXml = order.toXML();

    // Call LPTxn
    string resp = LPTxn.send(keyfile,host,port, outXml);

    // parse response
    ParseResponse(resp);

    //Store transaction data on Session and redirect
    Session["outXml"] = outXml;
    Session["resp"] = resp;
  }
  private void ProcessVoid()
  {
    // create order
    LPOrderPart order = LPOrderFactory.createOrderPart("order");
    // create a part we will use to build the order
    LPOrderPart op = LPOrderFactory.createOrderPart();

    // Build 'orderoptions'
    op.put("ordertype","VOID");
    // add 'orderoptions to order
    order.addPart("orderoptions", op );

    // Build 'merchantinfo'
    op.clear();
    op.put("configfile",configfile);
    // add 'merchantinfo to order
    order.addPart("merchantinfo", op );


    // Build 'creditcard'
    op.clear();
    op.put("cardnumber",cardnumber);
    op.put("cardexpmonth",expmonth);
    op.put("cardexpyear",expyear);
    // add 'creditcard to order
    order.addPart("creditcard", op );


    // Build 'payment'
    op.clear();
    op.put("chargetotal",total);
    // add 'payment to order
    order.addPart("payment", op );

    // Add oid
    op.clear();
    op.put("oid",R_OrderNum);
    // add 'transactiondetails to order
    order.addPart("transactiondetails", op );

    // create transaction object
    LinkPointTxn LPTxn = new LinkPointTxn();

    // get outgoing XML from the 'order' object
    string outXml = order.toXML();

    // Call LPTxn
    string resp = LPTxn.send(keyfile,host,port, outXml);

    //Store transaction data on Session and redirect
    Session["outXml_2"] = outXml;
    Session["resp_2"] = resp;
    }



    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to Calculate Shipping Charges Using .NET and C#

The code shown below demonstrates how to use the shipping calculator. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#" Codebehind="SHIPPING.aspx.cs"
AutoEventWireup="false" Inherits="LinkPointAPI_cs.SHIPPING"
%><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>SHIPPING</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript"
content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form ACTION="SHIPPING.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1"><br>
      <p align="center"><font size="5"><b>CALCULATE
SHIPPING</b></font></p><br>
      <p align="center"><br>
```

```
        Calculate shipping for a dollar amount based upon ship
weight, carrier, and <br>
        other factors passed to the function.</p><br>
      <div align="center"><br>
        <center><br>
          <table id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="29" bgcolor="#c0c0c0"><br>
            <tr><br>
              <td height="1" width="19" style="BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid"> </td><br>
              <td height="24" width="90" style="BORDER-TOP-
STYLE: solid">Ship State:</td><br>
              <td height="1" width="44" style="BORDER-TOP-
STYLE: solid"> </td><br>
              <td height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"><input
id="bstate0" style="WIDTH: 30px; HEIGHT: 22px" size="3"
value="<%=sstate%>" name="sstate"></td><br>
            </tr><br>
            <tr><br>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td><br>
              <td height="24" width="90">Ship Zip:</td><br>
              <td height="1" width="44"> </td><br>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input id="bzip1" style="WIDTH: 45px; HEIGHT:
22px" size="4" value="<%=szip%>" name="szip"></td><br>
            </tr><br>
            <tr><br>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td><br>
              <td height="19" width="90">Ship
```

```
Country:</td><br>
              <td height="1" width="44"> </td><br>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input id="bzip2" style="WIDTH: 28px; HEIGHT:
22px" size="2" value="<%=scountry%>"
name="scountry"></td><br>
            </tr><br>
            <tr><br>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td><br>
              <td height="1" width="276">Ship Carrier:</td><br>
              <td height="1" width="44"> </td><br>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input style="WIDTH: 28px; HEIGHT: 22px"
size="1" value="<%=scarrier%>"
name="scarrier"></td><br>
            </tr><br>
            <tr><br>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td><br>
              <td height="1" width="276">Items:</td><br>
              <td height="1" width="44"> </td><br>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input style="WIDTH: 28px; HEIGHT: 22px"
size="1" value="<%=sitems%>" name="sitems"></td><br>
            </tr>             <br>
            <tr><br>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td><br>
              <td height="1" width="276">Weight:</td><br>
              <td height="1" width="44"> </td><br>
              <td height="1" width="78" style="BORDER-RIGHT-
```

```
STYLE: solid"><input style="WIDTH: 28px; HEIGHT: 22px"
size="1" value="<%=sweight%>"
name="sweight"></td><br>
            </tr>          <br>
            <tr><br>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td><br>
              <td height="1" width="276"> </td><br>
              <td height="1" width="44"> </td><br>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </td><br>
            </tr><br>
            <tr><br>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid; BORDER-BOTTOM-STYLE: solid"> </td><br>
              <td height="1" width="276" style="BORDER-BOTTOM-
STYLE: solid">Total:</td><br>
              <td height="1" width="44" style="BORDER-BOTTOM-
STYLE: solid"> </td><br>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid; BORDER-BOTTOM-STYLE: solid"><input
id="szip1" style="WIDTH: 45px; HEIGHT: 22px" size="4"
value="<%=stotal%>" name="stotal"></td><br>
            </tr><br>
          </table><br>
        </center><br>
      </div><br>
      <p align="center"><input id="submit" name="Submit"
type="submit" value="Submit"><br>
      </p><br>
      <p align="center"><b> NOTE:</b> For Calculate Shipping
to work properly, the <br>
```

```
        merchant account must be configured with a shipping file.
For instructions, <br>
        contact LinkPoint technical support .<br>
      </p><br>
    </form><br>
  </body><br>
</HTML><br>
```

## Sample C# Code

```
////////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint
International, Inc.
// Use is subject to license terms.
////////////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;

namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for SHIPPING.
  /// </summary>
  public class SHIPPING : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      if( IsPostBack )
      {
        // Parse form data
    ParseFormData();
    // process order
    ProcessOrder();
   }
  }

  private void ProcessOrder()
  {
   // create order
   LPOrderPart order = LPOrderFactory.createOrderPart("order");
   // create a part we will use to build the order
   LPOrderPart op = LPOrderFactory.createOrderPart();

   // Build 'orderoptions'
   op.put("ordertype","CALCSHIPPING");
   // add 'orderoptions to order
   order.addPart("orderoptions", op );

   op.clear();
   // Build 'merchantinfo'
   op.put("configfile",configfile);
   // add 'merchantinfo to order
   order.addPart("merchantinfo", op );

   op.clear();
   op.put("carrier",scarrier);
   op.put("weight",sweight);
   op.put("total",stotal);
   op.put("state",sstate);
   op.put("items",sitems);
   order.addPart("shipping",op);
```

```
      // create transaction object
      LinkPointTxn LPTxn = new LinkPointTxn();

      // get outgoing XML from the 'order' object
      string outXml = order.toXML();

      // Call LPTxn
      string resp = LPTxn.send(keyfile,host,port, outXml);


      //Store transaction data on Session and redirect
      Session["outXml"] = outXml;
      Session["resp"] = resp;
      Server.Transfer("status.aspx");


    }




    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form
Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to Calculate Sales Tax Using .NET and C#

The code shown below demonstrates how to use the Tax calculator. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#" Codebehind="TAX.aspx.cs"
AutoEventWireup="false" Inherits="LinkPointAPI_cs.TAX"
%><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" ><br>
<HTML><br>
  <HEAD><br>
    <title>TAX</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript"
content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <form ACTION="TAX.asp" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1"><br>
      <p align="center"><font size="5"><b>CALCULATE
TAX</b></font></p><br>
      <p align="center"><br>
```

```
        Calculate sales tax for a dollar amount based upon a sales
tax table set up in <br>
        the merchant account. The sales tax table will<br><br>
        base the sales tax computations upon the Zip Code passed
('Tax Zip') .<br><br>
            </p><br>
      <div align="center"><br>
        <center><br>
          <table id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="26" bgcolor="#c0c0c0"><br>
            <tr><br>
              <td height="10" width="19" style="BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid"> </td><br>
              <td height="10" width="276" style="BORDER-TOP-
STYLE: solid"> </td><br>
              <td height="10" width="44" style="BORDER-TOP-
STYLE: solid"> </td><br>
              <td height="10" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </td><br>
            </tr><br>
            <tr><br>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td><br>
              <td height="24" width="90">Tax State:</td><br>
              <td height="1" width="44"> </td><br>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input style="WIDTH: 30px; HEIGHT: 22px"
size="3" value="<%=sstate%>" name="sstate"></td><br>
            </tr><br>
            <tr><br>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td><br>
```

```
              <td height="24" width="90">Tax Zip:</td><br>
              <td height="1" width="44"> </td><br>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=szip%>" name="szip"></td><br>
            </tr><br>
            <tr><br>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td><br>
              <td height="1" width="276">Subtotal:</td><br>
              <td height="1" width="44"> </td><br>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=stotal%>" name="stotal"></td><br>
            </tr><br>
            <tr><br>
              <td height="10" width="19" style="BORDER-LEFT-
STYLE: solid; BORDER-BOTTOM-STYLE: solid"> </td><br>
              <td height="10" width="276" style="BORDER-
BOTTOM-STYLE: solid"> </td><br>
              <td height="10" width="44" style="BORDER-BOTTOM-
STYLE: solid"> </td><br>
              <td height="10" width="78" style="BORDER-RIGHT-
STYLE: solid; BORDER-BOTTOM-STYLE: solid"> </td><br>
            </tr><br>
          </table><br>
        </center><br>
      </div><br>
      <!-- <pre>                            </pre> --><br>
      <p align="center"><input id="submit" name="Submit"
type="submit" value="Submit"></p><br>
      <p align="center"><b>NOTE</b>: For Calculate Tax to
```

```
work properly, the merchant <br>
        account must be configured with a "TAX LINE". For
instructions, contact <br>
        LinkPoint technical support.<br>
      </p><br>
    </form><br>
  </body><br>
</HTML><br>
```

## Sample C# Code

```
////////////////////////////////////////////////////////////////////////////////
// Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
//
// This software is the proprietary information of LinkPoint
International, Inc.
// Use is subject to license terms.
////////////////////////////////////////////////////////////////////////////////
using System;
using LinkPointTransaction;


namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for TAX.
  /// </summary>
  public class TAX : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      if( IsPostBack )
      {
```

```
      // Parse form data
      ParseFormData();
      // process order
      ProcessOrder();
    }
  }

  private void ProcessOrder()
  {
    // create order
    LPOrderPart order = LPOrderFactory.createOrderPart("order");
    // create a part we will use to build the order
    LPOrderPart op = LPOrderFactory.createOrderPart();

    // Build 'orderoptions'
    op.put("ordertype","CALCTAX");
    // add 'orderoptions to order
    order.addPart("orderoptions", op );

    op.clear();
    // Build 'merchantinfo'
    op.put("configfile",configfile);
    // add 'merchantinfo to order
    order.addPart("merchantinfo", op );

    // Build 'payment'
    op.clear();
    op.put("subtotal",stotal);
    // add 'payment to order
    order.addPart("payment", op );

    // Build 'shipping'
    op.clear();
```

```
      op.put("zip",szip);
      op.put("total",stotal);
      op.put("state",sstate);
      // add shpping to order
      order.addPart("shipping", op );


      // create transaction object
      LinkPointTxn LPTxn = new LinkPointTxn();

      // get outgoing XML from the 'order' object
      string outXml = order.toXML();

      // Call LPTxn
      string resp = LPTxn.send(keyfile,host,port, outXml);

      //Store transaction data on Session and redirect
      Session["outXml"] = outXml;
      Session["resp"] = resp;
      Server.Transfer("status.aspx");

    }

    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web Form
Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }
    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion
  }
}
```

# Sample Code to View Results with .NET and C#

The code shown below demonstrates how to view results of a transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store.

## Sample ASPX Code

```
<%@ Page language="c#" Codebehind="status.aspx.cs"
AutoEventWireup="false" Inherits="LinkPointAPI_cs.status" %><br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN"
><br>
<HTML><br>
  <HEAD><br>
    <title>status</title><br>
    <meta name="GENERATOR" Content="Microsoft Visual Studio
7.0"><br>
    <meta name="CODE_LANGUAGE" Content="C#"><br>
    <meta name="vs_defaultClientScript" content="JavaScript"><br>
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5"><br>
<% if( fIE5 ){ %><br>
    <script language="javascript"><br>
    var reqState=0;<br>
    function showReqXML(){<br>
     if(reqState == 0){<br>
     document.all.xmlReqData.style.display = "";<br>
     document.all.xmlReq.innerText="Hide Request XML";<br>
     reqState = 1;<br>
     }else{<br>
     document.all.xmlReqData.style.display = 'none';<br>
     document.all.xmlReq.innerText="Show Request XML";<br>
     reqState = 0;<br>
     }<br>
    }<br>
    var resState=0;<br>
    function showResXML(){<br>
     if(resState == 0){<br>
     document.all.xmlResData.style.display = "";<br>
     document.all.xmlRes.innerText="Hide Response XML";<br>
     resState = 1;<br>
     } else {<br>
     document.all.xmlResData.style.display = 'none';<br>
     document.all.xmlRes.innerText="Show Response XML";<br>
     resState = 0;<br>
     }<br>
    }     <br>
    </script><br>
<%}%>        <br>
  </HEAD><br>
  <body MS_POSITIONING="GridLayout"><br>
    <p align="center"><b><font size="5"> TRANSACTION
RESULT</font></b><br><br>
    </p><br>
    <div align="center"><br>
      <center><br>
        <table border="1" cellpadding="0" cellspacing="0"><br>
          <tr><br>
            <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px"> SSL API Version:</td><br>
            <td width="808">  <%=LPTxn.getVersion()%></td><br>
          </tr><br>
        <% if (R_Time.Length > 0) { %><br>
        <tr><br>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">
Time:</td><br>
          <td width="808">  <%=R_Time%></td><br>
        </tr><br>
        <% } if (R_Ref.Length > 0) { %><br>
        <tr><br>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">
Reference:</td><br>
          <td width="808">  <%=R_Ref%></td><br>
        </tr><br>
        <% } if (R_Approved.Length > 0) { %><br>
        <tr><br>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">
Approval:</td><br>
          <td width="808">  <%=R_Approved%></td><br>
        </tr><br>
        <% } if (R_Code.Length > 0) { %><br>
        <tr><br>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">
Approval code:</td><br>
          <td width="808">  <%=R_Code%></td><br>
        </tr><br>
        <% } %><br>
        <tr><br>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">
Error:</td><br>
          <td width="808">  <%=R_Error%></td><br>
        </tr><br>
        <% if (R_OrderNum.Length > 0) { %><br>
        <tr><br>
```

```
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">
Order number:</td><br>
          <td width="808">  <%=R_OrderNum%></td><br>
        </tr><br>
        <% } if (R_Message.Length > 0) { %><br>
        <tr><br>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">
Message:</td><br>
          <td width="808">  <%=R_Message%></td><br>
        </tr><br>
        <% } if (R_AVS.Length > 0) { %><br>
        <tr><br>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">
AVS:</td><br>
          <td width="808">  <%=R_AVS%></td><br>
        </tr><br>
        <% } if (R_Score.Length > 0) { %><br>
        <tr><br>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">
Score:</td><br>
          <td width="808">  <%=R_Score%></td><br>
        </tr><br>
        <% } if (R_Tax.Length > 0) { %><br>
        <tr><br>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">
Tax:</td><br>
          <td width="808">  <%=R_Tax%></td><br>
        </tr><br>
        <% } if (R_Shipping.Length > 0) { %><br>
        <tr><br>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px">
Shipping:</td><br>
```

```
      <td width="808">  <%=R_Shipping%></td><br>
     </tr><br>
     <% } if (R_FraudCode.Length > 0) { %><br>
     <tr><br>
      <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px"> Fraud Code:</td><br>
      <td width="808">  <%=R_FraudCode%></td><br>
     </tr><br>
     <% } if (R_ESD.Length > 0) { %><br>
     <tr><br>
      <td width="279" bgcolor="#c0c0c0" style="WIDTH: 279px"> ESD:</td><br>
      <td width="808">  <%=R_ESD%></td><br>
     </tr><br>
     <% } %><br>
    </table><br>
   </center><br>
  </div><br>
  <p /><br>
  <p /><br>
  <% <br>
  if ( fIE5 ) {<br>
  // do DHTML  <br>
  %><br>
  <a id="xmlReq" href="javascript:showReqXML()">Show Request XML</a><br>
  <div id="xmlReqData" style="display: 'none'"><br>
   <% <br>
   <br>
   Response.Write("<textarea cols=60 readonly rows=20>" + order + "</textarea>"); <br>
   %><br>
```

```
    </div><br>
    <br><br>
    <a id="xmlRes" href="javascript:showResXML()">Show Response
XML</a><br>
    <div id="xmlResData" style="display: 'none'"><br>
      <%<br>
      string dbgXML;<br>
      dbgXML =
(resp.Replace("><",">\r\n<")).Replace(">\r\n</","></");<br>
      Response.Write("<textarea cols=70 readonly rows=14 wrap=off >"
+ dbgXML + "</textarea>") ;<br>
    }<br>
    %><br>
    </div><br>
    <% <br>
      /*<br>
      if( dbg )<br>
      {<br>
      String dbgXML =
((order.Replace("<","<")).Replace(">",">")).Replace("\n","<BR>");<br>
      Response.Write("SUBMITTED XML:" + dbgXML);<br>
      dbgXML =
((resp.Replace("<","<")).Replace(">",">")).Replace("\n","<BR>");<br>
      Response.Write("<br>SERVER RESPONSE XML:" + dbgXML);<br>
      }<br>
      */<br>
    %><br>
    </p><br>
  </body><br>
</HTML><br>
```

## Sample C# Code

```
using System;
using System.Web;
using LinkPointTransaction;

namespace LinkPointAPI_cs
{
  /// <summary>
  /// Summary description for status.
  /// </summary>
  public class status : LinkPointTxn_Page
  {
    private void Page_Load(object sender, System.EventArgs e)
    {
      // Put user code to initialize the page here

      HttpBrowserCapabilities bc = Request.Browser;
      fIE5 = ( bc.Browser=="IE" && bc.MajorVersion > 4 );


        order   = (string) Session["outXml"];
        resp   = (string) Session["resp"];
          ParseResponse(resp);
         LPTxn = new LinkPointTxn();
    }


    #region Web Form Designer generated code
    override protected void OnInit(EventArgs e)
    {
      //
      // CODEGEN: This call is required by the ASP.NET Web
Form Designer.
      //
      InitializeComponent();
      base.OnInit(e);
    }

    /// <summary>
    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    /// </summary>
    private void InitializeComponent()
    {
      this.Load += new System.EventHandler(this.Page_Load);
    }
    #endregion

  protected string order;
  protected string resp;
  protected bool  fIE5;
  }
}
```

- API FAQs
- Getting LinkPoint Support
- View the Privacy Policy

# Sample Code to Process a Sale (Minimum Info) Using ColdFusion®

The code shown below demonstrates how to process a credit card sale. This example includes only the minimum fields required for a SALE transaction. See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "SALE">
<CFSET transactionorigin = "RETAIL">
<CFSET terminaltype = "UNATTENDED">
<!---Set terminaltype to :
POS for an electronic cash register or integrated POS system,
STANDALONE for a point-of-sale credit card terminal,
UNATTENDED for a self-service station,
UNSPECIFIED for e-commerce or other applications--->

<CFSET chargetotal = "12.99">
<CFSET cardnumber = "4111-1111-1111-1111">
<CFSET cardexpmonth = "04">
<CFSET cardexpyear = "06">

<CFSET zip = "12345"> <!--- #For an UNATTENDED
terminaltype, do a partial AVS: zip code only, no addrnum --->


<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">



<!--- DISPLAY THE ORDER REULTS --->
```

```
<!--- This include file contains a formated table for readable
output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to Process a Sale (Maximum Info) Using ColdFusion®

The code shown below demonstrates how to process a credit card sale. This example includes samples of all the commonly used fields you can use in a SALE transaction. See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "SALE">
<CFSET cardnumber = "4111-1111-1111-1111">
<CFSET cardexpmonth = "05">
<CFSET cardexpyear = "08">
<CFSET oid = "09032000MWDLMHB1"> <!--- MUST BE
UNIQUE. IF NOT SET GATEWAY WILL ASSIGN ONE --->
<CFSET ponumber = "0987654321-A123">
<CFSET taxexempt = "N">
<CFSET terminaltype = "UNSPECIFIED">
<CFSET ip = "123.123.123.123">
<CFSET subtotal = "12.99">
<CFSET tax = "0.34">
<CFSET shipping = "1.45">
<CFSET vattax = "0.00">
<CFSET chargetotal = "14.78">

<!--- BILLING INFO --->
<CFSET name = "Joe Customer">
<CFSET company = "Joe's Garage">
<CFSET address1 = "1234 Broadway">
<CFSET address2 = "Suite 23c">
<CFSET city = "Moorpark">
<CFSET state = "CA">
```

```
<CFSET country = "US">
<CFSET phone = "8051234567">
<CFSET fax = "8059876543">
<CFSET email = "joe.customer@somewhere.com">
<CFSET addrnum = "1234"> <!--- Required for AVS. If not
provided, transactions will downgrade. --->
<CFSET zip = "12345"> <!--- Required for AVS. If not
provided, transactions will downgrade. --->


<!--- SHIPPING INFO --->
<CFSET sname = "Joe Customer">
<CFSET saddress1 = "6548 Main Ave.">
<CFSET saddress2 = "Floor 2">
<CFSET scity = "Simi Valley">
<CFSET sstate = "CA">
<CFSET szip = "65445">
<cfset scountry = "US">

<!--- ADDITIONAL INFO --->
<CFSET comments = "No Comments Today">
<CFSET referred = "Saw an ad in the newspaper">


<!--- ITEMS --->
<!--- SET ITEMS, APPEND A '2', '3', '4', ETC FOR ADDITIONAL
ITEMS--->
<!--- FIRST ITEM --->
<CFSET item_id = "123456">
<CFSET item_description = "Logo">
<CFSET item_quantity = "1">
<CFSET item_price = "12.99">
<CFSET item_serial = "0987654321">
```

```
<!--- EXAMPLE OF ADDING A SECOND ITEM --->
<CFSET item_id2 = "A98765">
<CFSET item_description2 = "T-Shirt">
<CFSET item_quantity2 = "11">
<CFSET item_price2 = "13.99">
<CFSET item_serial2 = "123456789">


<!--- CREATE THE ARRAY --->
<CFSET items = ArrayNew(2)>


<!--- ADD ITEMS TO THE ARRAY --->


<!--- FIRST ITEM --->
<CFSET items[1][1] = "#item_id#"> <!--- ITEM ID --->
<CFSET items[1][2] = "#item_description#"> <!--- ITEM DESCRIPTION --->
<CFSET items[1][3] = "#item_quantity#"> <!--- ITEM QUANTITY --->
<CFSET items[1][4] = "#item_price#"> <!--- ITEM PRICE --->
<CFSET items[1][5] = "#item_serial#"> <!--- SERIAL NUMBER --->


<!--- EXAMPLE OF SECOND ITEM --->
<CFSET items[2][1] = "#item_id2#"> <!--- ITEM ID --->
<CFSET items[2][2] = "#item_description2#"> <!--- ITEM DESCRIPTION --->
<CFSET items[2][3] = "#item_quantity2#"> <!--- ITEM QUANTITY --->
<CFSET items[2][4] = "#item_price2#"> <!--- ITEM PRICE --->
<CFSET items[2][5] = "#item_serial2#"> <!--- SERIAL
```

```
NUMBER --->




<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">



<!--- DISPLAY THE ORDER REULTS --->
<!--- This include file contains a formated table for readable
output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to Process a PreAuth Transaction Using ColdFusion®

The code shown below demonstrates how to process a PreAuthorization Transaction. See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "PREAUTH">
<CFSET chargetotal = "12.89">
<CFSET cardnumber = "4111-1111-1111-1111">
<CFSET cardexpmonth = "04">
<CFSET cardexpyear = "05">
<CFSET cvmindicator = "PROVIDED">
<CFSET cvmvalue = "123"> <!--- CVM is the three-digit security code usually found on the signature line on the back of the card--->
<CFSET addrnum = "1234"> <!--- Numerical portion of the billing address. Required for AVS. If not provided, transactions will downgrade --->
<CFSET zip = "12345"> <!--- Required for AVS. If not provided, transactions will downgrade. --->



<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">



<!--- DISPLAY THE ORDER REULTS --->
```

```
<!--- This include file contains a formated table for readable
output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to Process a PostAuth Transaction Using ColdFusion®

The code shown below demonstrates how to process a PostAuthorization Transaction (that is, to complete a PreAuthorization with a valid order ID). See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "POSTAUTH">
<CFSET chargetotal = "12.89">
<CFSET cardnumber = "4111-1111-1111-1111">
<CFSET cardexpmonth = "04">
<CFSET cardexpyear = "05">
<CFSET oID = "63.173.127.195-1072741801-822-780450-1">
<!--- Must be a valid order ID from a prior Sale or PreAuth --->



<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">



<!--- DISPLAY THE ORDER REULTS --->

<!--- This include file contains a formated table for readable
output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code for Using AVS and CVM with ColdFusion®

The code shown below demonstrates how to process a credit card sale taking advantage of both the AVS and the CVM fraud protection measures. See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "SALE">
<CFSET chargetotal = "12.99">
<CFSET cardnumber = "4111-1111-1111-1111">
<CFSET cardexpmonth = "04">
<CFSET cardexpyear = "06">
<CFSET cvmindicator = "PROVIDED">
<CFSET cvmvalue = "123"> <!--- CVM is the three-digit security code usually found on the signature line on the back of the card--->
<CFSET addrnum = "1234"> <!--- Numerical portion of the billing address. Required for AVS. If not provided, transactions will downgrade --->
<CFSET zip = "12345"> <!--- Required for AVS. If not provided, transactions will downgrade. --->


<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">


<!--- DISPLAY THE ORDER REULTS --->

<!--- This include file contains a formated table for readable
```

```
output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to run a FORCED TICKET Using ColdFusion®

## Sample Code

```
<CFSET ordertype = "POSTAUTH">
<CFSET chargetotal = "12.99">
<CFSET cardnumber = "4111-1111-1111-1111">
<CFSET cardexpmonth = "04">
<CFSET cardexpyear = "06">
<CFSET reference_number = "NEW987654">



<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">


<!--- DISPLAY THE ORDER REULTS --->

<!--- This include file contains a formated table for readable output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to Process a Return Using ColdFusion®

The code shown below demonstrates how to process a credit card return. To perform a return, you must have a valid order ID (**oid**) from a prior SALE or PREAUTH/POSTAUTH. The example uses a hash table. See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "CREDIT">
<!---Amount returned must be less than or equal to the order
amount. If there is more than one return against this order,
make sure the total of the returns doesn't exceed the original
sale amount.
--->
<CFSET chargetotal = "12.79">
<CFSET cardnumber = "4111-1111-1111-1111">
<CFSET cardexpmonth = "04">
<CFSET cardexpyear = "06">
<CFSET oid = "09032000MWDLMHB"> <!--- MUST BE A VALID
OID FROM A PRIOR ORDER --->

<!--- You should not do AVS for a retail swiped transaction,
unless it is an UNATTENDED terminaltype. Billing addrnum and
billing zip are not required because we're not doing AVS --->



<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">
```

```
<!--- DISPLAY THE ORDER REULTS --->

<!--- This include file contains a formated table for readable output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to perform a Credit Card VOID Transaction Using ColdFusion®

The code shown below demonstrates how to process a credit card VOID transaction. You can only void a credit card SALE transaction if the associated credit card batch has not yet been processed (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "VOID">
<CFSET chargetotal = "14.78"> <!---You must match previous
transaction amount--->
<CFSET oid = "63.173.127.195-1072741801-822-780450-1
"> <!--- You must have a valid order ID from a previous sale or
preauth --->
<CFSET cardnumber = "4111-1111-1111-1111">
<CFSET cardexpmonth = "05">
<CFSET cardexpyear = "08">




<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">



<!--- DISPLAY THE ORDER REULTS --->
<!--- This include file contains a formated table for readable
```

```
output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to run a Credit Card Transaction using Items (Including ESD) with ColdFusion®

The code shown below demonstrates how to process a Sale using the Items and Options feature. One of the items included in the example is an Electronic Softgood Download (ESD) item. See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "SALE">
<CFSET chargetotal = "12.89">
<CFSET cardnumber = "4111-1111-1111-1111">
<CFSET cardexpmonth = "05">
<CFSET cardexpyear = "06">
<CFSET addrnum = "1234"> <!--- Numerical portion of the billing address. Required for AVS. If not provided, transactions will downgrade --->
<CFSET zip = "12345"> <!--- Required for AVS. If not provided, transactions will downgrade. --->
<CFSET name = "Joe Customer">


<!--- SET ITEMS, APPEND A '2', '3', '4', ETC FOR ADDITIONAL ITEMS TO THE VARIABLE NAME--->
<!--- FIRST ITEM --->
<CFSET item_id = "123456">
<CFSET item_description = "Logo">
<CFSET item_quantity = "1">
<CFSET item_price = "12.99">
<CFSET item_serial = "0987654321">
```

```
<!--- EXAMPLE OF ADDING A SECOND ITEM --->
<CFSET item_id2 = "A98765">
<CFSET item_description2 = "T-Shirt">
<CFSET item_quantity2 = "11">
<CFSET item_price2 = "13.99">
<CFSET item_serial2 = "123456789">


<!--- CREATE THE ARRAY --->
<CFSET items = ArrayNew(2)>


<!--- ADD ITEMS TO THE ARRAY --->


<!--- FIRST ITEM --->
<CFSET items[1][1] = "#item_id#"> <!--- ITEM ID --->
<CFSET items[1][2] = "#item_description#"> <!--- ITEM DESCRIPTION --->
<CFSET items[1][3] = "#item_quantity#"> <!--- ITEM QUANTITY --->
<CFSET items[1][4] = "#item_price#"> <!--- ITEM PRICE --->
<CFSET items[1][5] = "#item_serial#"> <!--- SERIAL NUMBER --->


<!--- EXAMPLE OF SECOND ITEM --->
<CFSET items[2][1] = "#item_id2#"> <!--- ITEM ID --->
<CFSET items[2][2] = "#item_description2#"> <!--- ITEM DESCRIPTION --->
<CFSET items[2][3] = "#item_quantity2#"> <!--- ITEM QUANTITY --->
<CFSET items[2][4] = "#item_price2#"> <!--- ITEM PRICE --->
<CFSET items[2][5] = "#item_serial2#"> <!--- SERIAL
```

```
NUMBER --->



<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">



<!--- DISPLAY THE ORDER REULTS --->
<!--- This include file contains a formated table for readable output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to Set Up a New Recurring Credit Card Transaction Using ColdFusion®

The code shown below demonstrates how to process a Recurring Credit Card Transaction (Periodic Bill). See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "SALE">
<CFSET chargetotal = "12.89">
<CFSET cardnumber = "4111-1111-1111-1111">
<CFSET cardexpmonth = "04">
<CFSET cardexpyear = "06">
<CFSET cvmindicator = "PROVIDED">
<CFSET cvmvalue = "123"> <!--- CVM is the three-digit security code usually found on the signature line on the back of the card--->
<CFSET addrnum = "1234"> <!--- Numerical portion of the billing address. Required for AVS. If not provided, transactions will downgrade --->
<CFSET zip = "12345"> <!--- Required for AVS. If not provided, transactions will downgrade. --->


<!--- PERIODIC FIELDS --->

<CFSET action = "submit">
<CFSET startdate = "immediate"> <!--- Changes will be in effect as of the time specified. No periodic bills will be sent until the startdate specified here.
# If you don't want it to start today, pass a date in the format YYYYMMDD --->
```

```
<CFSET installments = "5"> <!--- SPECIFIES HOW MANY TIMES
TO BILL THE CARD DURING THE LIFE OF THE PERIDIC BILL ---
>
<CFSET threshold = "3"> <!--- IF THE TRANSACTIONS SHOULD
DECLINE, HOW MANY TIMES SHOULD IT TRY AGAIN BEFORE
YOU ARE NOTIFIED VIA EMAIL. THE TRANSACTION WILL
CONTINUE TO ATTEMPT EVEN AFTER THE THRESHOLD. TO
STOP IT FROM TRYING, MODIFY IT OR CANCEL IT --->
<CFSET periodicity = "monthly">
<!---<CFSET oid = "09032000MWDLMHB">---> <!--- YOU
MUST PASS A VALID OID FOR AN EXISTING PB TO IEDENTIFY
WHICH YOU WANT TO CANCEL OR MODIFY. FOR PB_NEW,
LEAVE OID BLANK IF YOU WANT THE GATEWAY TO ASSIGN AN
ORDER NUMBER FOR YOU --->



<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">



<!--- DISPLAY THE ORDER REULTS --->
<!--- This include file contains a formated table for readable
output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to Modify a Recurring Credit Card Transaction Using ColdFusion®

The code shown below demonstrates how to modify an existing Recurring Credit Card Transaction (Periodic Bill). See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "SALE">
<CFSET chargetotal = "12.89">
<CFSET cardnumber = "4111-1111-1111-1111">
<CFSET cardexpmonth = "04">
<CFSET cardexpyear = "06">

<!--- PERIODIC FIELDS --->

<CFSET action = "MODIFY"> <!--- SET ACTION TO MODIFY TO MODIFY THE RECURRING
TRANSACTION --->
<CFSET startdate = "immediate"> <!--- Changes will be in effect as of the time specified.
No periodic bills will be sent until the startdate specified here.
# If you don't want it to start today, pass a date in the format YYYYMMDD --->
<CFSET installments = "5"> <!--- SPECIFIES HOW MANY TIMES TO BILL THE CARD
DURING THE LIFE OF THE PERIDIC BILL --->
<CFSET threshold = "3"> <!--- IF THE TRANSACTIONS SHOULD DECLINE, HOW MANY
TIMES SHOULD IT TRY AGAIN BEFORE YOU ARE NOTIFIED VIA EMAIL. THE TRANSACTION
WILL CONTINUE TO ATTEMPT EVEN AFTER THE THRESHOLD. TO STOP IT FROM TRYING,
MODIFY IT OR CANCEL IT --->
<CFSET periodicity = "monthly">
<CFSET oid = "63.173.127.195-1072741010-480-021417-1"> <!--- YOU MUST PASS A
VALID OID FOR AN EXISTING PB TO IDENTIFY WHICH YOU WANT TO CANCEL OR MODIFY
--->



<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">
```

```
<!--- DISPLAY THE ORDER REULTS --->
<!--- This include file contains a formated table for readable output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to Cancel a Recurring Credit Card Transaction Using ColdFusion®

The code shown below demonstrates how to Cancel an existing Recurring Credit Card Transaction (Periodic Bill). See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "SALE">
<CFSET chargetotal = "12.89">
<CFSET cardnumber = "4111-1111-1111-1111">
<CFSET cardexpmonth = "04">
<CFSET cardexpyear = "06">

<!--- PERIODIC FIELDS --->

<CFSET action = "CANCEL"> <!--- SET ACTION TO 'CANCEL' TO CANCEL THE RECURRING
TRANSACTION --->
<CFSET startdate = "immediate"> <!--- Changes will be in effect as of the time specified.
No periodic bills will be sent until the startdate specified here. If you don't want it to start
today, pass a date in the format YYYYMMDD --->
<CFSET installments = "5"> <!--- SPECIFIES HOW MANY TIMES TO BILL THE CARD
DURING THE LIFE OF THE PERIDIC BILL --->
<CFSET threshold = "3"> <!--- IF THE TRANSACTIONS SHOULD DECLINE, HOW MANY
TIMES SHOULD IT TRY AGAIN BEFORE YOU ARE NOTIFIED VIA EMAIL. THE TRANSACTION
WILL CONTINUE TO ATTEMPT EVEN AFTER THE THRESHOLD. TO STOP IT FROM TRYING,
MODIFY IT OR CANCEL IT --->
<CFSET periodicity = "monthly">
<CFSET oid = "09032000MWDLMHB"> <!--- YOU MUST PASS A VALID OID FOR AN
EXISTING PB TO IEDENTIFY WHICH YOU WANT TO CANCEL OR MODIFY --->



<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">



<!--- DISPLAY THE ORDER REULTS --->
```

```
<!--- This include file contains a formated table for readable output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to Process a Retail Swipe Transaction Using ColdFusion®

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is swiped with a credit card reader. See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "SALE">
<CFSET transactionorigin = "RETAIL">
<CFSET terminaltype = "POS"> <!---Set terminaltype to :
POS for an electronic cash register or integrated POS system,
STANDALONE for a point-of-sale credit card terminal,
UNATTENDED for a self-service station,
UNSPECIFIED for e-commerce or other applications--->
<CFSET chargetotal = "12.99">
<CFSET track = "1298361023614908">

<!--- You should not do AVS for a retail swiped transaction,
unless it is an UNATTENDED terminaltype. Billing addrnum and
billing zip are not required because we're not doing AVS --->



<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">


<!--- DISPLAY THE ORDER REULTS --->

<!--- This include file contains a formated table for readable
output --->
```

```
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to Process a Retail Keyed Transaction Using ColdFusion®

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is keyed in. See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "SALE">
<CFSET transactionorigin = "RETAIL">
<CFSET terminaltype = "POS"> <!---Set terminaltype to :
POS for an electronic cash register or integrated POS system,
STANDALONE for a point-of-sale credit card terminal,
UNATTENDED for a self-service station,
UNSPECIFIED for e-commerce or other applications--->
<CFSET chargetotal = "12.89">
<CFSET cardnumber = "4111-1111-1111-1111">
<CFSET cardexpmonth = "04">
<CFSET cardexpyear = "06">
<CFSET cvmindicator = "PROVIDED">
<CFSET cvmvalue = "123"> <!--- CVM is the three-digit
security code usually found on the signature line on the back of
the card--->
<CFSET addrnum = "1234"> <!--- Numerical portion of the
billing address. Required for AVS. If not provided, transactions
will downgrade --->
<CFSET zip = "12345"> <!--- Required for AVS. If not
provided, transactions will downgrade. --->


<!--- BUILD THE ORDER TO SEND --->
```

```
<CFINCLUDE TEMPLATE = "lpcfm.cfm">



<!--- DISPLAY THE ORDER REULTS --->
<!--- This include file contains a formated table for readable output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to Process a Retail UNATTENDED Transaction Using ColdFusion®

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card terminal is unattended (that is, a self-service station such as a gas station or ticket booth). In this case, you should do a partial AVS where you collect the zip code only. See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "SALE">
<CFSET transactionorigin = "RETAIL">
<CFSET terminaltype = "UNATTENDED">
<!---Set terminaltype to :
POS for an electronic cash register or integrated POS system,
STANDALONE for a point-of-sale credit card terminal,
UNATTENDED for a self-service station,
UNSPECIFIED for e-commerce or other applications--->

<CFSET chargetotal = "12.99">
<CFSET cardnumber = "4111-1111-1111-1111">
<CFSET cardexpmonth = "04">
<CFSET cardexpyear = "06">

<CFSET zip = "12345"> <!--- #For an UNATTENDED
terminaltype, do a partial AVS: zip code only, no addrnum --->


<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">
```

```
<!--- DISPLAY THE ORDER REULTS --->
<!--- This include file contains a formated table for readable
output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to perform a VirtualCheck SALE Transaction Using ColdFusion®*

The code shown below demonstrates how to process a VirtualCheck SALE transaction. See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "SALE">
<CFSET chargetotal = "0.02">

<!--- CHECK FIELDS --->
<!--- Customer's Driver License Number and State --->
<CFSET dl = "A12345678">
<CFSET dlstate = "CA">

<!--- Transit Routing number and Account Number for the
customers bank --->
<CFSET routing = "121000248">
<CFSET account = "4758368880">

<!--- Is it a personal or business account. Personal = pc,
Business = bc --->
<CFSET accounttype = "bc">

<!--- Bank name and 2-letter bank state --->
<CFSET bankname = "Wells Fargo">
<CFSET bankstate = "CA">

<!--- Additional required fields for check transaction --->
<CFSET name = "Chuck Gebert">
<CFSET address1 = "6101 Condor Dr">
<CFSET city = "Moorpark">
```

```
<CFSET state = "CA">
<CFSET zip = "93021">
<CFSET phone = "800-456-5989">
<!--- Email is optional --->
<CFSET email = "cgebert@linkpoint.com">




<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">



<!--- DISPLAY THE ORDER REULTS --->
<!--- This include file contains a formated table for readable
output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to perform a VirtualCheck VOID Transaction Using ColdFusion®*

The code shown below demonstrates how to process a VirtualCheck VOID transaction. You can only void a VirtualCheck SALE transaction if it has not yet been sent for processing (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "VOID">
<CFSET chargetotal = "14.78"> <!---You must match previous transaction amount--->
<CFSET oid = "09032000MWDLMHB"> <!--- You must have a valid order ID from a previous VCheck SALE transaction that has not yet been processed --->
<CFSET voidcheck = "true">



<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">



<!--- DISPLAY THE ORDER REULTS --->
<!--- This include file contains a formated table for readable output --->
<CFINCLUDE TEMPLATE="FormatOutput.cfm">
```

# Sample Code to Calculate Shipping Charges Using ColdFusion®

The code shown below demonstrates how to use the shipping calculator. See the comments within the code for further explanation.

## Sample Code

```
<CFSET ordertype = "CALCSHIPPING">

<!--- Shipping fields --->
<CFSET scarrier = "2">
<CFSET sweight = "1.2">
<CFSET sitems = "1">
<CFSET stotal = "1s2.99">
<CFSET sstate = "CA">


<!--- BUILD THE ORDER TO SEND --->

<CFINCLUDE TEMPLATE = "lpcfm.cfm">



<!--- DISPLAY THE ORDER REULTS --->

<CFOUTPUT>
<b>Shipping: </b>#R_SHIPPING#<br>

</CFOUTPUT>
```

# Sample Code: Files for all .NET/Visual Basic Samples

The code shown below are the common files that go with all the .NET/VB samples. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, in the **Web.config** file, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Web.config

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <configSections>
    <sectionGroup name="LPAPP_Config">
        <section name="client"
              type="System.Configuration.NameValueSectionHandler,System,
Version=1.0.3300.0, Culture=neutral,
PublicKeyToken=b77a5c561934e089" />
        <section name="opts"
              type="System.Configuration.NameValueSectionHandler,System,
Version=1.0.3300.0, Culture=neutral,
PublicKeyToken=b77a5c561934e089" />
    </sectionGroup>
  </configSections>
<system.web>

   <!-- DYNAMIC DEBUG COMPILATION
        Set compilation debug="true" to insert debugging symbols (.pdb information)
        into the compiled page. Because this creates a larger file that executes
        more slowly, you should set this value to true only when debugging and to
        false at all other times. For more information, refer to the documentation about
        debugging ASP.NET files.
   -->
   <compilation defaultLanguage="vb" debug="true" />

   <!-- CUSTOM ERROR MESSAGES
        Set customErrors mode="On" or "RemoteOnly" to enable custom error messages, "Off" to disable.
        Add <error> tags for each of the errors you want to handle.
   -->
   <customErrors mode="RemoteOnly" />

   <!-- AUTHENTICATION
        This section sets the authentication policies of the application. Possible modes are "Windows",
        "Forms", "Passport" and "None"
   -->
   <authentication mode="Windows" />


   <!-- AUTHORIZATION
        This section sets the authorization policies of the application. You can allow or deny access
```

```
      to application resources by user or role. Wildcards: "*" mean everyone, "?" means anonymous
      (unauthenticated) users.
  -->
  <authorization>
    <allow users="*" /> <!-- Allow all users -->

       <!-- <allow   users="[comma separated list of users]"
               roles="[comma separated list of roles]"/>
          <deny    users="[comma separated list of users]"
               roles="[comma separated list of roles]"/>
       -->
  </authorization>

  <!-- APPLICATION-LEVEL TRACE LOGGING
      Application-level tracing enables trace log output for every page within an application.
      Set trace enabled="true" to enable application trace logging. If pageOutput="true", the
      trace information will be displayed at the bottom of each page. Otherwise, you can view the
      application trace log by browsing the "trace.axd" page from your web application
      root.
  -->
  <trace enabled="false" requestLimit="10" pageOutput="false" traceMode="SortByTime" localOnly="true" />


  <!-- SESSION STATE SETTINGS
      By default ASP.NET uses cookies to identify which requests belong to a particular session.
      If cookies are not available, a session can be tracked by adding a session identifier to the URL.
```

```
       To disable cookies, set sessionState cookieless="true".
    -->
    <sessionState
         mode="InProc"
         stateConnectionString="tcpip=127.0.0.1:42424"
         sqlConnectionString="data source=127.0.0.1;user
id=sa;password="
         cookieless="false"
         timeout="20"
    />

    <!-- GLOBALIZATION
       This section sets the globalization settings of the application.
    -->
    <globalization requestEncoding="utf-8" responseEncoding="utf-8" />

</system.web>
  <LPAPP_Config>
      <client>
       <!-- Change this to your store number -->
       <add key="Configfile" value="1234567" />
       <!-- Change this to the name and location of your certificate file -->
        <add key="Keyfile" value="./YOURCERT.pem" />
        <add key="Host" value="secure.linkpt.net" />
        <add key="Port" value="1129" />
</client>
      <opts>
        <!-- legacy flag - not in use -->
        <add key="dbg" value="false" />
      </opts>
  </LPAPP_Config>

</configuration>
```

## Styles.css

```
/* Default CSS Stylesheet for a new Web Application project */

BODY
{
  BACKGROUND-COLOR: white;
  FONT-FAMILY: Verdana, Helvetica, sans-serif;
  FONT-SIZE: .8em;
  FONT-WEIGHT: normal;
  LETTER-SPACING: normal;
  TEXT-TRANSFORM: none;
  WORD-SPACING: normal
}

H1, H2, H3, H4, H5, TH, THEAD, TFOOT
{
  COLOR: #003366;
}
H1  {
  font-family: Verdana, Arial, Helvetica, sans-serif;
  font-size:  2em;
  font-weight:  700;
  font-style:  normal;
  text-decoration:  none;
  word-spacing:  normal;
  letter-spacing:  normal;
  text-transform:  none;
  }


H2  {
 font-family: Verdana, Arial, Helvetica, sans-serif;
 font-size:  1.75em;
 font-weight:  700;
 font-style:  normal;
 text-decoration:  none;
 word-spacing:  normal;
 letter-spacing:  normal;
 text-transform:  none;
 }

H3  {
 font-family: Verdana, Arial, Helvetica, sans-serif;
 font-size:  1.58em;
 font-weight:  500;
 font-style:  normal;
 text-decoration:  none;
 word-spacing:  normal;
 letter-spacing:  normal;
 text-transform:  none;
 }

H4  {
 font-family: Verdana, Arial, Helvetica, sans-serif;
 font-size:  1.33em;
 font-weight:  500;
 text-decoration:  none;
 word-spacing:  normal;
 letter-spacing:  normal;
 text-transform:  none;
 }

H5, DT  {
 font-family: Verdana, Arial, Helvetica, sans-serif;
 font-size:  1em;
 font-weight:  700;
 font-style:  normal;
 text-decoration:  none;
 word-spacing:  normal;
 letter-spacing:  normal;
 text-transform:  none;
 }

H6  {
 font-family: Verdana, Arial, Helvetica, sans-serif;
 font-size:  .8em;
 font-weight:  700;
 font-style:  normal;
 text-decoration:  none;
 word-spacing:  normal;
 letter-spacing:  normal;
 text-transform:  none;
 }

TFOOT, THEAD  {
 font-size:  1em;
 word-spacing:  normal;
 letter-spacing:  normal;
 text-transform:  none;
 font-family: Arial, Helvetica, sans-serif;
 }

TH  {
 vertical-align:  baseline;
 font-size:  1em;
 font-weight:  bold;
 word-spacing:  normal;
 letter-spacing:  normal;
 text-transform:  none;
 font-family: Arial, Helvetica, sans-serif;
 }


A:link  {
 text-decoration:  none;
 color:  #3333cc;
 }

A:visited  {
 text-decoration:  none;
 color:  #333399;
 }

A:active  {
 text-decoration:  none;
 color:  #333399;
 }

A:hover  {
 text-decoration:  underline;
 color:  #3333cc;
 }

SMALL  {
 font-size:  .7em;
 }

BIG  {
  font-size:  1.17em;
  }

BLOCKQUOTE, PRE  {
  font-family:  Courier New, monospace;
  }



UL LI  {
  list-style-type:  square ;
  }

UL LI LI  {
  list-style-type:  disc;
  }

UL LI LI LI  {
  list-style-type:  circle;
  }


OL LI  {
  list-style-type:  decimal;
  }

OL OL LI  {
  list-style-type:  lower-alpha;
  }

OL OL OL LI  {
  list-style-type:  lower-roman;
  }

IMG   {
  margin-top: 5px;
  margin-left: 10px;
  margin-right: 10px;
  }
```

## LinkPointTxn_Page.vb

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class LinkPointTxn_Page
  Inherits System.Web.UI.Page


  Public Sub WriteYearOpts()
    Dim year, yr As Integer
    Dim pad, sel As String
    year = Now().Year

    For yr = year To year + 5
      sel = ""
      If expyearVal = yr Then
        sel = " selected "
      End If
      pad = ""
      If (yr - 2000) < 10 Then
        pad = "0"
      End If
      Response.Write("<option value=" & pad & (yr - 2000) & sel & ">" & yr & "</option>")
    Next

  End Sub


  Public Sub WriteMonthOpts()
    Dim mn, cur As Integer
    Dim pad As String
    cur = Int32.Parse(expmonth)

    For mn = 1 To 12
      pad = ""
      If mn < 10 Then
        pad = "0"
      End If

      If mn = cur Then
        Response.Write("<option value=" & pad & mn & " selected>" & mn & "</option>")
      Else
        Response.Write("<option value=" & pad & mn & ">" & mn & "</option>")
      End If
    Next
  End Sub


  Public Function LeadingZero(ByVal InpStr) As String
    If Len(InpStr) = 1 Then
      Return ("0" & InpStr)
    Else
      Return InpStr
    End If
```

```
End Function

Protected Sub ParseFormData()
  bname = Request.Form("bname")
  bcompany = Request.Form("bcompany")
  baddr1 = Request.Form("baddr1")
  baddr2 = Request.Form("baddr2")
  bstate = Request.Form("bstate")
  bcity = Request.Form("bcity")
  bcountry = Request.Form("bcountry")
  bzip = Request.Form("bzip")
  bemail = Request.Form("bemail")
  bfax = Request.Form("bfax")
  bphone = Request.Form("bphone")
  baddrnum = Request.Form("baddrnum")

  sname = Request.Form("sname")
  saddr1 = Request.Form("saddr1")
  saddr2 = Request.Form("saddr2")
  scity = Request.Form("scity")
  sstate = Request.Form("sstate")
  scountry = Request.Form("scountry")
  szip = Request.Form("szip")
  scarrier = Request.Form("scarrier")
  sweight = Request.Form("sweight")
  sitems = Request.Form("sitems")
  stotal = Request.Form("stotal")
  comments = Request.Form("comments")

  cardnumber = Request.Form("cardnumber")
  expmonth = Request.Form("expmonth")
  expyear = Request.Form("expyear")
  'cvmindicator = Request.Form("cvmindicator")
```

```
cvmvalue = Request.Form("cvmvalue")

subtotal = Request.Form("subtotal")
If Len(subtotal) < 1 Then
  subtotal = 0.0
End If
tax = Request.Form("tax")
If Len(tax) < 1 Then
  tax = 0.0
End If
shipping = Request.Form("shipping")
If Len(shipping) < 1 Then
  shipping = 0.0
End If
total = Request.Form("total")
If Len(total) < 1 Then
  total = 0.0
End If

pbthreshold = Request.Form("pbthreshold")
startdate = Request.Form("startdate")
periodicity = Request.Form("periodicity")
installments = Request.Form("installments")
pbcomments = Request.Form("pbcomments")

accttype = Request.Form("accttype")
micr = Request.Form("micr")

accountNbr = Request.Form("accountNbr")
routeNbr = Request.Form("routeNbr")
bankName = Request.Form("bankName")
bankState = Request.Form("bankState")
dl = Request.Form("dl")
dlState = Request.Form("dlState")
```

```
    ssn = Request.Form("ssn")
    checkNbr = Request.Form("checkNbr")

    refnumber = Request.Form("refnumber")
    tax = Request.Form("tax")
    taxexempt = Request.Form("taxexempt")
    oid = Request.Form("oid")

    GetConfigParams()
  End Sub

  Protected Sub GetConfigParams()
    ' get client connection params from app config
    Dim config As
System.Collections.Specialized.NameValueCollection = _
     ConfigurationSettings.GetConfig("LPAPP_Config/client")

    configfile = config("Configfile")
    keyfile = config("Keyfile")
    host = config("Host")
    port = Int32.Parse(config("Port"))

    config =
ConfigurationSettings.GetConfig("LPAPP_Config/opts")
    dbg = Boolean.Parse(config("dbg"))
  End Sub


  Protected Sub ParseResponse(ByVal rsp)
    R_Time = ParseTag("r_time", rsp)
    R_Ref = ParseTag("r_ref", rsp)
    R_Approved = ParseTag("r_approved", rsp)
    R_Code = ParseTag("r_code", rsp)
    R_Authresr = ParseTag("r_authresronse", rsp)
    R_Error = ParseTag("r_error", rsp)
    R_OrderNum = ParseTag("r_ordernum", rsp)
    R_Message = ParseTag("r_message", rsp)
    R_Score = ParseTag("r_score", rsp)
    R_TDate = ParseTag("r_tdate", rsp)
    R_AVS = ParseTag("r_avs", rsp)
    R_Tax = ParseTag("r_tax", rsp)
    R_Shipping = ParseTag("r_shipping", rsp)
    R_FraudCode = ParseTag("r_fraudCode", rsp)
    R_ESD = ParseTag("esd", rsp)
  End Sub

  Protected Function ParseTag(ByVal tag As String, ByVal rsp As String) As String
    Dim sb As String
    Dim idxSt, idxEnd As Integer

    sb = "<" & tag & ">"
    idxSt = -1
    idxEnd = -1

    idxSt = rsp.IndexOf(sb)
    If -1 = idxSt Then
      Return ""
    End If

    idxSt += sb.Length
    sb = "</" & tag & ">"
    idxEnd = rsp.IndexOf(sb, idxSt)

    If -1 = idxEnd Then
      Return ""
    End If
    Return rsp.Substring(idxSt, idxEnd - idxSt)

  End Function


  ' Declarations for form fields
  Protected bname As String = "Joe Customer"
  Protected bcompany As String = "SomeWhere, Inc."
  Protected baddr1 As String = "123 Broadway"
  Protected baddr2 As String = "Suite 23"
  Protected bstate As String = "CA"
  Protected bcity As String = "Moorpark"
  Protected bcountry As String = "US"
  Protected bphone As String = "8051234567"
  Protected bfax As String = "8059876543"
  Protected bemail As String = "joe.customer@somewhere.com"
  Protected baddrnum As String = "123"
  Protected bzip As String = "87123"

  Protected sname As String = "Joe Customer"
  Protected saddr1 As String = "123 Broadway"
  Protected saddr2 As String = "Suite 23"
  Protected scity As String = "Moorpark"
  Protected sstate As String = "CA"
  Protected scountry As String = "US"
  Protected szip As String = "12345"
  Protected semail As String = "joe.customer@somewhere.com"
  Protected sfax As String = "8059876543"
  Protected saddrnum As String = "123"

  Protected sweight As String = "1.2"
  Protected sitems As String = "1"
  Protected scarrier As String = "2"
  Protected stotal As String = "12.99"
```

```
  Protected comments As String = "Repeat customer. Ship
immediately."
  Protected referred As String = "Saw ad on Web site."

  Protected cardnumber As String = "4111-1111-1111-1111"
  Protected expmonth As String = "03"
  Protected expyear As String = "05"
  Protected cvmvalue As String = "123"
  Protected cvmindicator As String = "provided"
  Protected expyearVal As Int16 = 2005

  Protected subtotal As String = "12.99"
  Protected tax As String = "0.34"
  Protected shipping As String = "1.45"
  Protected total As String = "14.78"
  Protected vattax As String = "0.0"

  Protected refnumber As String = "NEW987654"
  Protected ponumber As String = "1203A-G4567"
  Protected taxexempt As String = "N"
  Protected oid As String = "9090018-A345"

  Protected startdate As String = "immediate"
  Protected periodicity As String = "monthly"
  Protected installments As String = "3"
  Protected pbthreshold As String = "3"
  Protected pbcomments As String = ""

  Protected accttype As String = "pc"

  Protected micr As String =
"%B4111111111111111^CUSTOMER/JOE
^0503000500000?"
  Protected accountNbr As String = "2139842610"
Protected routeNbr As String = "123456789"
Protected bankName As String = ""
Protected bankState As String = "CA"
Protected dl As String = "120381698"
Protected dlState As String = "CA"
Protected ssn As String = ""
Protected checkNbr As String = ""

' transaction object
Protected LPTxn As LinkPointTransaction.LinkPointTxn

' connection params
Protected configfile As String
Protected keyfile As String
Protected host As String
Protected port As Integer

' response holders
Protected R_Time As String
Protected R_Ref As String
Protected R_Approved As String
Protected R_Code As String
Protected R_Authresr As String
Protected R_Error As String
Protected R_OrderNum As String
Protected R_Message As String
Protected R_Score As String
Protected R_TDate As String
Protected R_AVS As String
Protected R_FraudCode As String
Protected R_ESD As String
Protected R_Tax As String
Protected R_Shipping As String
```

```
  Protected Shared dbg As Boolean = False

End Class
```

## AssemblyInfo.vb

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class VOID
  Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub
InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form
Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order = LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' Build 'orderoptions'
    ' For a test, set result to GOOD, DECLINE, or DUPLICATE
    op.put("result", "GOOD")
    op.put("ordertype", "VOID")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)
```

```
' Build 'merchantinfo'
op.clear()
op.put("configfile", configfile)
' add 'merchantinfo to order
order.addPart("merchantinfo", op)


' Build 'creditcard'
op.clear()
op.put("cardnumber", cardnumber)
op.put("cardexpmonth", expmonth)
op.put("cardexpyear", expyear)
' add 'creditcard to order
order.addPart("creditcard", op)


' Build 'payment'
op.clear()
op.put("chargetotal", total)
' add 'payment to order
order.addPart("payment", op)

' Add oid
op.clear()
op.put("oid", oid)
' add 'transactiondetails to order
order.addPart("transactiondetails", op)

' create transaction object
LPTxn = New LinkPointTransaction.LinkPointTxn()

' get outgoing XML from 'order' object
Dim outXml As String = order.toXML()
```

```
    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub


End Class
```

# Sample Code to Process a Sale (Minimum Info) Using .NET and Visual Basic

The code shown below demonstrates how to process a credit card sale. This example includes only the minimum fields required for a SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="SALE_MININFO.aspx.vb"
Inherits="LinkPointAPI_vb.SALE_MININFO"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>SALE_MININFO</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="SALE_MININFO.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> CREDIT CARD
SALE (MINIMUM)</font></b><br>
      </p>
      <p align="center">An Example Credit Card SALE
Transaction with Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="238" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 238px">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
              <TD height="1" width="276">Order Type:</TD>
              <TD height="1" width="115" style="WIDTH: 
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>SALE</b></TD>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; 
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Total:</TD>
              <TD height="1" width="115" style="WIDTH: 
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px; 
HEIGHT: 22px" size="6" value="<%=subtotal%>" 
name="total"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px; 
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH: 
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; 
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Card Number:</TD>
              <TD height="1" width="115" style="WIDTH: 
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
```

```
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expmonth" name="expmonth"
size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Year:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Address
Numbers<FONT color="red">*</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=baddrnum%>"
name="baddrnum"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Zip<FONT
color="red">*</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD>
            </TR>
            <TR>
              <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
```

```
              <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
              <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE:
solid" width="115" height="10"> </TD>
              <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
            </TR>
          </TABLE>
        </center>
      </div>
      <P align="left"><FONT color="red">*</FONT>) If not
provided, transactions will
        downgrade.</P>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```

'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************

```

```vb
Public Class SALE_MININFO
  Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()
```

```
    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order =
LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' Build 'orderoptions'
    op.put("ordertype", "SALE")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)

    ' Build 'merchantinfo'
    op.clear()
    op.put("configfile", configfile)
    ' add 'merchantinfo to order
    order.addPart("merchantinfo", op)

    ' Build 'billing'
    ' Required for AVS. If not provided,
    ' transactions will downgrade.
    op.clear()
    op.put("zip", bzip)
    op.put("addrnum", baddrnum)
    ' add 'billing to order
    order.addPart("billing", op)

    ' Build 'creditcard'
    op.clear()
    op.put("cardnumber", cardnumber)
    op.put("cardexpmonth", expmonth)
    op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    order.addPart("creditcard", op)

    ' Build 'payment'
    op.clear()
    op.put("chargetotal", total)
    ' add 'payment to order
    order.addPart("payment", op)

    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub

End Class
```

# Sample Code to Process a Sale (Maximum Info) Using .NET and Visual Basic

The code shown below demonstrates how to process a credit card sale. This example includes samples of all the commonly used fields you can use in a SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="SALE_MAXINFO.aspx.vb"
Inherits="LinkPointAPI_vb.SALE_MAXINFO"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>SALE_MAXINFO</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="vs_defaultClientScript" content="JavaScript">
  <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
 </HEAD>
 <body MS_POSITIONING="GridLayout">
  <form ACTION="SALE_MAXINFO.aspx" method="post"
runat="server" ID="Form1">
   <p align="center"><b><font size="5"> SALE
TRANSACTION</font></b><br>
   </p>
   <p align="center">An Example Credit Card SALE with all
commonly used fields
    included</p>
   <div align="center">
    <center>
     <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="238" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 238px">
      <tr>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
       <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
       <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
       <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
      </tr>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Order Type:</TD>
```

```
        <TD height="1" width="115" style="WIDTH: 115px"> </TD>
        <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><b>SALE</b></TD>
       </TR>
       <TR>
        <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1" width="276">Result:</TD>
        <TD height="1" width="115" style="WIDTH: 115px"> </TD>
        <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid">
         <select name="result" size="1">
          <option value="LIVE" selected>LIVE</option>
          <option value="GOOD">GOOD</option>
          <option value="GOOD">DECLINE</option>
          <option value="GOOD">DUPLICATE</option>
         </select></TD>
       </TR>
       <TR>
        <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1" width="276">Origin:</TD>
        <TD height="1" width="115" style="WIDTH: 115px"> </TD>
        <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid">
         <select name="origin" size="1">
          <option value="MOTO" selected>MOTO</option>
          <option value="RETAIL">RETAIL</option>
          <option value="ECI">ECI</option>
```

```
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1"
width="276"><b>Payment:</b></TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Subtotal:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="subtotal"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Tax:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="0.32" name="tax"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Shipping:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1.02" name="shipping"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Total:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="14.33" name="total"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"><b>Credit
Card:</b></TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="144">Card Number:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=cardnumber%>"
name="cardnumber" size="17"></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Exp. Month:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select id="expmonth" name="expmonth"
size="1">
         <%WriteMonthOpts()%>
        </select></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Exp. Year:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select id="expyear" name="expyear" size="1">
         <%WriteYearOpts()%>
        </select></TD>
```

```
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">CVM:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=cvmvalue%>" name="cvmvalue"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"><b>Billing:</b></TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Name:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bname%>" name="bname"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="144">Company:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcompany%>"
name="bcompany" size="17"></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="144">Address 1:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=baddr1%>"
name="baddr1" size="17"></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="144">Address 2:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=baddr2%>"
name="baddr2" size="17"></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="144">City:</TD>
```

```
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcity%>" name="bcity"
size="17"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="144">State:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bstate%>" name="bstate"
size="17"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="144">Country:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bcountry%>"
name="bcountry" size="17"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="144">Phone:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
```

```
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bphone%>"
name="bphone" size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Email:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bemail%>" name="bemail"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Address
Numbers:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=baddrnum%>"
name="baddrnum"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Zip</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
```

```
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD>
       </TR>
       <tr>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1"
width="276"><b>Shipping:</b></TD>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
       </tr>
       <TR>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1" width="144">Name:</TD>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD>
        <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=sname%>" name="sname"
size="17"></TD>
       </TR>
       <TR>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1" width="144">Address 1:</TD>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD>
        <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=saddr1%>" name="saddr1"
```

```
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Address 2:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=saddr2%>" name="saddr2"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">City:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=scity%>" name="scity"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Zip:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=szip%>" name="szip"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">State:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-STYLE: solid"><INPUT value="<%=sstate%>" name="sstate" size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Country:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-STYLE: solid"><INPUT value="<%=scountry%>" name="scountry" size="17"></TD>
            </TR>
            <!--
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid"> </TD>
            </tr> -->
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"><b>ITEM:</b></TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">ID:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="123456-A98767" name="id2"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Description:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="Logo T-Shirt" name="desc2"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Price:</TD>
              <TD height="1" width="115" style="WIDTH:
```

```
115px"> </TD>
           <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="price2"></TD>
         </TR>
         <TR>
           <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
           <TD height="1" width="276">Quantity:</TD>
           <TD height="1" width="115" style="WIDTH:
115px"> </TD>
           <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1" name="qty2"></TD>
         </TR>
         <TR>
           <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
           <TD height="1" width="276">Serial:</TD>
           <TD height="1" width="115" style="WIDTH:
115px"> </TD>
           <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="0987654322" name="serial2"></TD>
         </TR>
         <TR>
           <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
           <TD height="1" width="276">Color:</TD>
           <TD height="1" width="115" style="WIDTH:
115px"> </TD>
           <TD height="1" width="78" style="BORDER-RIGHT-
```

```
STYLE: solid">
                <select name="Color" size="1">
                  <option value="Red" selected>Red</option>
                  <option value="Blue">Blue</option>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Size:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select name="Size" size="1">
                  <option value="M">Medium</option>
                  <option value="L">Large</option>
                  <option value="XL" selected>XLarge</option>
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"><b>Notes:</b></TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
            <TD height="1" width="276">Comments:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="<%=comments%>"
name="comments"></TD>
          </TR>
          <TR>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276">Referred:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="<%=referred%>" name="referred"></TD>
          </TR>
          <TR>
            <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
            <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
            <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE:
solid" width="115" height="10"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
          </TR>
        </TABLE>
      </center>
    </div>
    <p align="center"><input type="submit" value="Submit"
```

```
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class SALE_MAXINFO
  Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub
InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form
Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order = LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' Build 'orderoptions'
    op.put("ordertype", "SALE")
    ' set transaction result
    op.put("result", Request.Form("result"))
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)
    ' Build 'transactiondetails'
```

```
op.clear()
op.put("transactionorigin", Request.Form("origin"))
' add 'transactiondetails to order
order.addPart("transactiondetails", op)
' Build 'merchantinfo'
op.clear()
op.put("configfile", configfile)
' add 'merchantinfo to order
order.addPart("merchantinfo", op)

' Build 'payment'
op.clear()
op.put("subtotal", Request.Form("subtotal"))
op.put("tax", Request.Form("tax"))
op.put("shipping", Request.Form("shipping"))
op.put("chargetotal", Request.Form("total"))
' add 'payment to order
order.addPart("payment", op)

' Build 'creditcard'
op.clear()
op.put("cardnumber", cardnumber)
op.put("cardexpmonth", expmonth)
op.put("cardexpyear", expyear)
op.put("cvmvalue", cvmvalue)
op.put("cvmindicator", cvmindicator)
' add 'creditcard to order
order.addPart("creditcard", op)

' Build 'billing'
op.clear()
op.put("name", bname)
op.put("company", bcompany)
```

```
    op.put("address1", baddr1)
    op.put("address2", baddr2)
    op.put("city", bcity)
    op.put("state", bstate)
    ' Required for AVS. If not provided,
    ' transactions will downgrade.
    op.put("zip", bzip)
    op.put("addrnum", baddrnum)
    op.put("country", bcountry)
    op.put("phone", bphone)
    op.put("fax", bfax)
    op.put("email", bemail)
    ' add 'billing to order
    order.addPart("billing", op)

    ' Build 'shipping'
    op.clear()
    op.put("name", sname)
    op.put("address1", saddr1)
    op.put("address2", saddr2)
    op.put("city", scity)
    op.put("state", sstate)
    op.put("zip", szip)
    op.put("country", scountry)

    ' Create some parts we use to build order itmes
    ' Create some parts we use to build order itmes
    Dim items, item, options As LinkPointTransaction.LPOrderPart
    items =
LinkPointTransaction.LPOrderFactory.createOrderPart()
    item =
LinkPointTransaction.LPOrderFactory.createOrderPart()
    options =
LinkPointTransaction.LPOrderFactory.createOrderPart()
    ' build 'item'
    item.put("id", Request.Form("id2"))
    item.put("description", Request.Form("desc2"))
    item.put("quantity", Request.Form("qty2"))
    item.put("price", Request.Form("price2"))
    item.put("serial", Request.Form("serial2"))
    ' build item's options
    op.clear()
    op.put("name", "Color")
    op.put("value", Request.Form("Color"))
    options.addPart("option", op, 1)
    op.clear()
    op.put("name", "Size")
    op.put("value", Request.Form("Size"))
    options.addPart("option", op, 2)
    ' add 'options' to item
    item.addPart("options", options)
    ' add 'item' to 'items' collection
    items.addPart("item", item)
    ' add 'items' to order
    order.addPart("items", items)

    ' add notes
    op.clear()
    op.put("comments", comments)
    op.put("referred", referred)
    order.addPart("notes", op)

    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub

End Class
```

# Sample Code to Process a PreAuth Transaction Using .NET and Visual Basic

The code shown below demonstrates how to process a PreAuthorization Transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="PREAUTH.aspx.vb"
Inherits="LinkPointAPI_vb.PREAUTH"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>PREAUTH</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="PREAUTH.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> CREDIT CARD
PREAUTH TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example Credit Card PreAuth
Transaction with Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="238" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 238px">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Order Type:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>PREAUTH</b></TD>
          <TR>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276">Total:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="<%=subtotal%>" name="total"></TD>
          </TR>
          <tr>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="276"> </TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
          </tr>
          <TR>
            <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
            <TD height="1" width="144">Card Number:</TD>
            <TD height="1" width="115" style="WIDTH:
115px"> </TD>
            <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
```

```
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expmonth" name="expmonth"
size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Year:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH:
```

```
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Address
Numbers<FONT color="red">*</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=baddrnum%>"
name="baddrnum"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Zip<FONT
color="red">*</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD>
            </TR>
            <TR>
              <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
              <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
```

```
              <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE:
solid" width="115" height="10"> </TD>
              <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
            </TR>
          </TABLE>
        </center>
      </div>
      <P align="left"><FONT color="red">*</FONT>) If not
provided, transactions will
        downgrade.</P>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class PREAUTH
  Inherits LinkPointTxn_Page
```

```
#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub
InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form
Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal
e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order =
LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' Build 'orderoptions'
    ' For a test, set result to GOOD, DECLINE, or DUPLICATE
    op.put("result", "GOOD")
    op.put("ordertype", "PREAUTH")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)


    ' Build 'merchantinfo'
    op.clear()
    op.put("configfile", configfile)
    ' add 'merchantinfo to order
    order.addPart("merchantinfo", op)


    ' Build 'creditcard'
    op.clear()
    op.put("cardnumber", cardnumber)
    op.put("cardexpmonth", expmonth)
    op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    order.addPart("creditcard", op)

    ' Build 'billing'
    op.clear()
    op.put("addrnum", baddrnum)
    op.put("zip", bzip)
    ' add 'billing to order
    order.addPart("billing", op)

    ' Build 'payment'
    op.clear()
    op.put("chargetotal", total)
    ' add 'payment to order
    order.addPart("payment", op)


    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub

End Class
```

# Sample Code to Process a PostAuth Transaction Using .NET and Visual Basic

The code shown below demonstrates how to process a PostAuthorization Transaction (that is, to complete a PreAuthorization with a valid order ID). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="POSTAUTH.aspx.vb"
Inherits="LinkPointAPI_vb.POSTAUTH"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>POSTAUTH</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="POSTAUTH.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> CREDIT CARD
POSTAUTH TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example Credit Card PostAuth
Transaction with Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="396" border="0" height="233" bgcolor="#c0c0c0"
style="WIDTH: 396px; HEIGHT: 233px">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="242" style="WIDTH: 242px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE:
solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="242" style="WIDTH:
242px">Order Type:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><b>POSTAUTH</b></TD>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="242" style="WIDTH:
242px">Total:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD>
      </TR>
      <tr>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="242" style="WIDTH:
242px"> </TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"> </TD>
      </tr>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
              <TD height="1" width="242" style="WIDTH: 
242px">Card Number:</TD>
              <TD height="1" width="115" style="WIDTH: 
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px; 
BORDER-RIGHT-STYLE: solid"><INPUT id="emailaddress1" 
value="<%=cardnumber%>" name="cardnumber" 
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; 
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH: 
242px">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH: 
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px; 
BORDER-RIGHT-STYLE: solid">
                <select id="expmonth" name="expmonth" 
size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; 
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH: 
242px">Exp. Year:</TD>
              <TD height="1" width="115" style="WIDTH: 
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px; 
BORDER-RIGHT-STYLE: solid">
```

```
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px">Order ID<FONT color="red">*</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 213px;
HEIGHT: 22px" size="30" value="<%=oid%>"
name="oid"></TD>
            </TR>
            <TR>
              <TD style="BORDER-LEFT-STYLE: solid; HEIGHT:
8px; BORDER-BOTTOM-STYLE: solid" width="103"
height="8"> </TD>
              <TD style="WIDTH: 242px; HEIGHT: 8px; BORDER-
BOTTOM-STYLE: solid" width="242" height="8"> </TD>
```

```
              <TD style="WIDTH: 115px; HEIGHT: 8px; BORDER-
BOTTOM-STYLE: solid" width="115" height="8"> </TD>
              <TD style="WIDTH: 357px;BORDER-RIGHT-STYLE:
solid;HEIGHT: 8px;BORDER-BOTTOM-STYLE: solid"
width="357" height="8"> </TD>
            </TR>
          </TABLE>
        </center>
      </div>
      <P align="left"><FONT color="red">*</FONT>) Must be a
valid order ID from a prior
        PreAuth</P>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```

'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class POSTAUTH

```

```
  Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order =
LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()
    ' Build 'orderoptions'
    ' For a test, set result to GOOD, DECLINE, or DUPLICATE
    op.put("result", "GOOD")
    op.put("ordertype", "POSTAUTH")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)


    ' Build 'merchantinfo'
    op.clear()
    op.put("configfile", configfile)
    ' add 'merchantinfo to order
    order.addPart("merchantinfo", op)


    ' Build 'creditcard'
    op.clear()
    op.put("cardnumber", cardnumber)
    op.put("cardexpmonth", expmonth)
    op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    order.addPart("creditcard", op)


    ' Build 'payment'
    op.clear()
    op.put("chargetotal", total)
    ' add 'payment to order
    order.addPart("payment", op)

    ' Add oid
    op.clear()
    op.put("oid", oid)
    ' add 'transactiondetails to order
    order.addPart("transactiondetails", op)

    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub

End Class
```

# Sample Code for Using AVS and CVM with .NET and Visual Basic

The code shown below demonstrates how to process a credit card sale taking advantage of both the AVS and the CVM fraud protection measures. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="AVS_CVM.aspx.vb"
Inherits="LinkPointAPI_vb.AVS_CVM"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>AVS_CVM</title>
    <meta name="vs_showGrid" content="True">
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
```

```
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="AVS_CVM.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> CREDIT CARD
SALE WITH AVS/CVM</font></b><br>
      </p>
      <p align="left">
        An Example Credit Card SALE With Minimum Fields
required for AVS and Card Code
        fraud prevention measures</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="29" bgcolor="#c0c0c0">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="9" style="WIDTH: 9px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
             <TD height="1" width="276">Total:</TD>
             <TD height="1" width="9" style="WIDTH:
9px"> </TD>
             <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="subtotal"></TD>
           </TR>
           <tr>
             <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
             <TD height="1" width="276"> </TD>
             <TD height="1" width="9" style="WIDTH:
9px"> </TD>
             <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
           </tr>
           <TR>
             <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
             <TD height="1" width="144">Card Number:</TD>
             <TD height="1" width="9" style="WIDTH:
9px"> </TD>
             <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
           </TR>
           <TR>
             <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
        <TD height="1" width="276">Exp. Month:</TD>
        <TD height="1" width="9" style="WIDTH:
9px"> </TD>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
         <select id="expmonth" name="expmonth"
size="1">
          <%WriteMonthOpts()%>
         </select></TD>
       </TR>
       <TR>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1" width="276">Exp. Year:</TD>
        <TD height="1" width="9" style="WIDTH:
9px"> </TD>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
         <select id="expyear" name="expyear" size="1">
          <%WriteYearOpts()%>
         </select></TD>
       </TR>
       <tr>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1" width="276"> </TD>
        <TD height="1" width="9" style="WIDTH:
9px"> </TD>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
       </tr>
       <TR>
```

```
                <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
                <TD height="1" width="276">CVM:</TD>
                <TD height="1" width="9" style="WIDTH:
9px"> </TD>
                <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=cvmvalue%>" name="cvmvalue"></TD>
              </TR>
              <TR>
                <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
                <TD height="1" width="276">Address
Numbers:</TD>
                <TD height="1" width="9" style="WIDTH:
9px"> </TD>
                <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=baddrnum%>"
name="baddrnum"></TD>
              </TR>
              <TR>
                <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
                <TD height="1" width="276">Zip:</TD>
                <TD height="1" width="9" style="WIDTH:
9px"> </TD>
                <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD>
              </TR>
              <TR>
```

```
       <TD style="BORDER-LEFT-STYLE: solid; BORDER-BOTTOM-STYLE: solid" width="103" height="10"> </TD>
       <TD style="BORDER-BOTTOM-STYLE: solid" width="276" height="10"> </TD>
       <TD style="WIDTH: 9px; BORDER-BOTTOM-STYLE: solid" width="9" height="10"> </TD>
       <TD style="BORDER-RIGHT-STYLE: solid;BORDER-BOTTOM-STYLE: solid" width="78" height="10"> </TD>
      </TR>
     </TABLE>
    </center>
   </div>
   <p align="center"><input type="submit" value="Submit" name="Submit">
  </form>
  </P>
 </body>
</HTML>
```

## Sample Visual Basic Code

```
Public Class AVS_CVM
 Inherits LinkPointTxn_Page

 Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
  'Put user code to initialize the page here
  If IsPostBack Then
   ' Parse form data
   ParseFormData()
   ' process order
   ProcessOrder()
```

```
    End If

  End Sub

  Private Sub ProcessOrder()
    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order =
LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' Build 'orderoptions'
    op.put("ordertype", "SALE")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)

    ' Build 'merchantinfo'
    op.clear()
    op.put("configfile", configfile)
    ' add 'merchantinfo to order
    order.addPart("merchantinfo", op)

    ' Build 'billing'
    op.clear()
    op.put("zip", bzip)
    op.put("addrnum", baddrnum)
    ' add 'billing to order
    order.addPart("billing", op)

    ' Build 'creditcard'
    op.clear()
    op.put("cardnumber", cardnumber)
    op.put("cardexpmonth", expmonth)
    op.put("cardexpyear", expyear)
    op.put("cvmvalue", cvmvalue)
    op.put("cvmindicator", cvmindicator)
    ' add 'creditcard to order
    order.addPart("creditcard", op)

    ' Build 'payment'
    op.clear()
    op.put("chargetotal", subtotal)
    ' add 'payment to order
    order.addPart("payment", op)

    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub

#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub
InitializeComponent()

  End Sub
  Private Sub Page_Init(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form
Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region


End Class
```

# Sample Code to run a FORCED TICKET Transaction using .NET and Visual Basic

The code shown below demonstrates how to process a PostAuthorization for a Voice Authorization (a Forced Ticket transaction). The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="FORCED_TICKET.aspx.vb"
Inherits="LinkPointAPI_vb.FORCED_TICKET"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN">
<HTML>
  <HEAD>
    <title>FORCED_TICKET</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="FORCED_TICKET.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> FORCED TICKET
TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example of a FORCED TICKET
Transaction with Minimum Required
        Fields
      </p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="29" bgcolor="#c0c0c0">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="9" style="WIDTH: 9px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
                <TD height="1" width="276">Total:</TD>
                <TD height="1" width="9" style="WIDTH:
9px"> </TD>
                <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD>
              </TR>
              <tr>
                <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
                <TD height="1" width="276"> </TD>
                <TD height="1" width="9" style="WIDTH:
9px"> </TD>
                <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
              </tr>
              <TR>
                <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
                <TD height="1" width="144">Card Number:</TD>
                <TD height="1" width="9" style="WIDTH:
9px"> </TD>
                <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
              </TR>
              <TR>
                <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
                <TD height="1" width="276">Exp. Month:</TD>
```

```
       <TD height="1" width="9" style="WIDTH:
9px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select id="expmonth" name="expmonth"
size="1">
         <%WriteMonthOpts()%>
        </select></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Exp. Year:</TD>
       <TD height="1" width="9" style="WIDTH:
9px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select id="expyear" name="expyear" size="1">
         <%WriteYearOpts()%>
        </select></TD>
      </TR>
      <tr>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276"> </TD>
       <TD height="1" width="9" style="WIDTH:
9px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
      </tr>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Reference
Number:</TD>
       <TD height="1" width="9" style="WIDTH:
9px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="17" value="<%=refnumber%>"
name="refnumber"></TD>
      </TR>
      <TR>
       <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
       <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
       <TD style="WIDTH: 9px; BORDER-BOTTOM-STYLE:
solid" width="9" height="10"> </TD>
       <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
      </TR>
     </TABLE>
    </center>
   </div>
   <p align="center"><input type="submit" value="Submit"
name="Submit">
  </form>
  </P>
 </body>
</HTML>
```

## Sample Visual Basic Code

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class FORCED_TICKET
  Inherits LinkPointTxn_Page

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order = LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
```

```
op = LinkPointTransaction.LPOrderFactory.createOrderPart()

' Build 'orderoptions'
op.put("ordertype", "POSTAUTH")
' add 'orderoptions to order
order.addPart("orderoptions", op)

' Build 'merchantinfo'
op.clear()
op.put("configfile", configfile)
' add 'merchantinfo to order
order.addPart("merchantinfo", op)

' Build 'transactiondetails'
op.clear()
op.put("reference_number", refnumber)
' add 'billing to order
order.addPart("transactiondetails", op)

' Build 'creditcard'
op.clear()
op.put("cardnumber", cardnumber)
op.put("cardexpmonth", expmonth)
op.put("cardexpyear", expyear)
' add 'creditcard to order
order.addPart("creditcard", op)

' Build 'payment'
op.clear()
op.put("chargetotal", total)
' add 'payment to order
order.addPart("payment", op)

' create transaction object
```

```
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub

End Class
```

# Sample Code to Process a Return Using .NET and Visual Basic

The code shown below demonstrates how to process a credit card return. To perform a return, you must have a valid order ID (**oid**) from a prior SALE or PREAUTH/POSTAUTH. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="RETURN.aspx.vb"
Inherits="LinkPointAPI_vb._RETURN"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>RETURN</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="RETURN.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> CREDIT CARD
CREDIT TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example of Credit Card CREDIT
Transaction With Minimum
        Required Fields
      </p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="29" bgcolor="#c0c0c0">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="110" style="WIDTH: 110px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="9" style="WIDTH: 9px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
          <TD height="1" width="110" style="WIDTH:
110px">Total:</TD>
          <TD height="1" width="9" style="WIDTH:
9px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="<%=subtotal%>" name="total"></TD>
        </TR>
        <tr>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="110" style="WIDTH:
110px"> </TD>
          <TD height="1" width="9" style="WIDTH:
9px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
        </tr>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="110" style="WIDTH:
110px">Card Number:</TD>
          <TD height="1" width="9" style="WIDTH:
9px"> </TD>
          <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=cardnumber%>"
name="cardnumber" size="17"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
              <TD height="1" width="110" style="WIDTH:
110px">Exp. Month:</TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select name="expmonth" size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="110" style="WIDTH:
110px">Exp. Year:</TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="110" style="WIDTH:
110px"> </TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
```

```
            </tr>
            <TR>
              <TD height="36" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid; HEIGHT: 36px"> </TD>
              <TD height="36" width="110" style="WIDTH: 110px;
HEIGHT: 36px">Order ID <FONT color="red">*</FONT>
                :</TD>
              <TD height="36" width="9" style="WIDTH: 9px;
HEIGHT: 36px"></TD>
              <TD height="36" width="78" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 36px"><INPUT style="WIDTH: 150px;
HEIGHT: 22px" size="60" value="<%=oid%>"
name="oid"> </TD>
            </TR>
            <TR>
              <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
              <TD style="WIDTH: 110px; BORDER-BOTTOM-STYLE:
solid" width="110" height="10"> </TD>
              <TD style="WIDTH: 9px; BORDER-BOTTOM-STYLE:
solid" width="9" height="10"> </TD>
              <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
            </TR>
          </TABLE>
        </center>
      </div>
      <P align="left"><FONT color="red">*</FONT>) The 'Order
ID' field must be a valid
        order ID from a prior Sale or PreAuth</P>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
```

```
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class _RETURN
  Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order = LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' Build 'orderoptions'
    ' For a test, set result to GOOD, DECLINE, or DUPLICATE
    op.put("result", "GOOD")
    op.put("ordertype", "CREDIT")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)
```

```
' Build 'merchantinfo'
op.clear()
op.put("configfile", configfile)
' add 'merchantinfo to order
order.addPart("merchantinfo", op)


' Build 'creditcard'
op.clear()
op.put("cardnumber", cardnumber)
op.put("cardexpmonth", expmonth)
op.put("cardexpyear", expyear)
' add 'creditcard to order
order.addPart("creditcard", op)


' Build 'payment'
op.clear()
op.put("chargetotal", total)
' add 'payment to order
order.addPart("payment", op)

' Add oid
op.clear()
op.put("oid", oid)
' add 'transactiondetails to order
order.addPart("transactiondetails", op)

' create transaction object
LPTxn = New LinkPointTransaction.LinkPointTxn()

' get outgoing XML from 'order' object
Dim outXml As String = order.toXML()

' Call LPTxn
```

```
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub


End Class
```

# Sample Code to perform a Credit Card VOID Transaction Using .NET and Visual Basic

The code shown below demonstrates how to process a credit card VOID transaction. You can only void a credit card SALE transaction if the associated credit card batch has not yet been processed (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="VOID.aspx.vb"
Inherits="LinkPointAPI_vb.VOID"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>VOID</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="VOID.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> CREDIT CARD
VOID TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example Credit Card Void
Transaction with Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="396" border="0" height="233" bgcolor="#c0c0c0"
style="WIDTH: 396px; HEIGHT: 233px">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
```

```
solid"> </TD>
          <TD height="1" width="242" style="WIDTH: 242px;
BORDER-TOP-STYLE: solid"> </TD>
          <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
          <TD height="1" width="357" style="WIDTH: 357px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE:
solid"> </TD>
        </tr>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="242" style="WIDTH:
242px">Order Type:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><b>VOID</b></TD>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="242" style="WIDTH:
242px">Total:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD>
        </TR>
        <tr>
          <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px">Card Number:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid">
                <select id="expmonth" name="expmonth"
size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px">Exp. Year:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="242" style="WIDTH:
242px">Order ID<FONT color="red">*</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
```

```
              <TD height="1" width="357" style="WIDTH: 357px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 213px;
HEIGHT: 22px" size="30" value="<%=oid%>"
name="oid"></TD>
            </TR>
            <TR>
              <TD style="BORDER-LEFT-STYLE: solid; HEIGHT:
8px; BORDER-BOTTOM-STYLE: solid" width="103"
height="8"> </TD>
              <TD style="WIDTH: 242px; HEIGHT: 8px; BORDER-
BOTTOM-STYLE: solid" width="242" height="8"> </TD>
              <TD style="WIDTH: 115px; HEIGHT: 8px; BORDER-
BOTTOM-STYLE: solid" width="115" height="8"> </TD>
              <TD style="WIDTH: 357px;BORDER-RIGHT-STYLE:
solid;HEIGHT: 8px;BORDER-BOTTOM-STYLE: solid"
width="357" height="8"> </TD>
            </TR>
          </TABLE>
        </center>
      </div>
      <P align="left"><FONT color="red">*</FONT>) Must be a
valid order ID from a prior
        PostAuth or Sale</P>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class VOID
  Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order =
LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' Build 'orderoptions'
    ' For a test, set result to GOOD, DECLINE, or DUPLICATE
    op.put("result", "GOOD")
    op.put("ordertype", "VOID")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)


    ' Build 'merchantinfo'
    op.clear()
    op.put("configfile", configfile)
    ' add 'merchantinfo to order
    order.addPart("merchantinfo", op)
    ' Build 'creditcard'
    op.clear()
    op.put("cardnumber", cardnumber)
    op.put("cardexpmonth", expmonth)
    op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    order.addPart("creditcard", op)


    ' Build 'payment'
    op.clear()
    op.put("chargetotal", total)
    ' add 'payment to order
    order.addPart("payment", op)

    ' Add oid
    op.clear()
    op.put("oid", oid)
    ' add 'transactiondetails to order
    order.addPart("transactiondetails", op)

    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub
  End Class
```

# Sample Code to run a Credit Card Transaction using Items (Including ESD) with .NET and Visual Basic

The code shown below demonstrates how to process a Sale using the Items and Options feature. One of the items included in the example is an Electronic Softgood Download (ESD) item. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="ITEM_W_ESD.aspx.vb"
Inherits="LinkPointAPI_vb.ITEM_W_ESD"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>ITEM_W_ESD</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
```

```
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form id="ITEM_W_ESD" method="post" runat="server">
      <p align="center"><b><font size="5"> ITEM WITH ESD
TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example Credit Card SALE
Transaction with ESD item</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="238" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 238px">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Order Type:</TD>
```

```
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>SALE</b></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Subtotal:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="45.98" name="subtotal"></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Tax:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="0.32" name="tax"></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Shipping:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
```

```
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1.02" name="shipping"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Total:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="47.32" name="total"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Name:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bname%>" name="bname"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Card Number:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=cardnumber%>"
name="cardnumber" size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expmonth" name="expmonth"
size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Year:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Address
Numbers:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=baddrnum%>"
name="baddrnum"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Zip</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
```

```
STYLE: solid"> </TD>
            </tr>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"><b>ITEM 1
(ESD):</b></TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">ID:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="123456-A98765" name="id1"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Description:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="Blast-Em Software" name="desc1"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Price:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px" size="6" value="32.99" name="price1"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Quantity:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px" size="6" value="1" name="qty1"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Serial:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px" size="14" value="0987654321" name="serial1"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">ESD type:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
            <select name="esdtype" size="1">
              <option value="softgood"
selected>softgood</option>
              <option value="key">key</option>
            </select></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">File Name:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="blastemgame.exe" name="softfile1"></TD>
        </TR>
        <tr>
          <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276"><b>ITEM
2:</b></TD>
          <TD height="1" width="115" style="WIDTH:
115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
        </tr>
```

```
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">ID:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="123456-A98767" name="id2"></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Description:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="Logo T-Shirt" name="desc2"></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Price:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="price2"></TD>
      </TR>
      <TR>
       <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Quantity:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1" name="qty2"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Serial:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="0987654322" name="serial2"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Color:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select name="Color" size="1">
                  <option value="Red" selected>Red</option>
                  <option value="Blue">Blue</option>
                </select></TD>
            </TR>
            <TR>
```

```
       <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
       <TD height="1" width="276">Size:</TD>
       <TD height="1" width="115" style="WIDTH:
115px"> </TD>
       <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
        <select name="Size" size="1">
         <option value="M">Medium</option>
         <option value="L">Large</option>
         <option value="XL" selected>XLarge</option>
        </select></TD>
      </TR>
      <TR>
       <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
       <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
       <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE:
solid" width="115" height="10"> </TD>
       <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
      </TR>
     </TABLE>
    </center>
   </div>
   <p align="center"><input type="submit" value="Submit"
name="Submit">
  </form>
  </P>
 </body>
</HTML>
```

# Sample Visual Basic Code

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class ITEM_W_ESD
  Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal
e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order =
LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' Build 'orderoptions'
    op.put("ordertype", "SALE")
    ' live transaction
    op.put("result", "LIVE")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)

    ' Build 'merchantinfo'
    op.clear()
    op.put("configfile", configfile)
    ' add 'merchantinfo to order
    order.addPart("merchantinfo", op)
```

```
' Build 'creditcard'
op.clear()
op.put("cardnumber", cardnumber)
op.put("cardexpmonth", expmonth)
op.put("cardexpyear", expyear)
' add 'creditcard to order
order.addPart("creditcard", op)

' Build 'payment'
op.clear()
op.put("subtotal", Request.Form("subtotal"))
op.put("tax", Request.Form("tax"))
op.put("shipping", Request.Form("shipping"))
op.put("chargetotal", Request.Form("total"))
' add 'payment to order
order.addPart("payment", op)

' Build 'billing'
' Required for AVS. If not provided,
' transactions will downgrade.
op.clear()
op.put("zip", bzip)
op.put("addrnum", baddrnum)
' When using ESD items - name must present
op.put("name", bname)
' add 'billing to order
order.addPart("billing", op)


' Create some parts we use to build order itmes
Dim items, item, options As LinkPointTransaction.LPOrderPart
items =
LinkPointTransaction.LPOrderFactory.createOrderPart()
    item =
LinkPointTransaction.LPOrderFactory.createOrderPart()
    options =
LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' build 'item1' (ESD)
    item.put("id", Request.Form("id1"))
    item.put("description", Request.Form("desc1"))
    item.put("quantity", Request.Form("qty1"))
    item.put("price", Request.Form("price1"))
    item.put("serial", Request.Form("serial1"))
    item.put("esdtype", Request.Form("esdtype"))
    item.put("softfile", Request.Form("softfile1"))

    ' add 'item' to 'items' collection
    items.addPart("item", item, 1)

    ' build 'item2'
    item.clear()
    item.put("id", Request.Form("id2"))
    item.put("description", Request.Form("desc2"))
    item.put("quantity", Request.Form("qty2"))
    item.put("price", Request.Form("price2"))
    item.put("serial", Request.Form("serial2"))

    ' build item's options
    op.clear()
    op.put("name", "Color")
    op.put("value", Request.Form("Color"))
    options.addPart("option", op, 1)
    op.clear()
    op.put("name", "Size")
    op.put("value", Request.Form("Size"))
    options.addPart("option", op, 2)

    ' add 'options' to item
    item.addPart("options", options)
    ' add 'item' to 'items' collection
    items.addPart("item", item, 2)

    ' add 'items' to order
    order.addPart("items", items)

    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub


End Class
```

# Sample Code to run a Level 2 Purchasing Card Transaction with .NET and Visual Basic

The code shown below demonstrates how to process a Sale including all the data elements needed for a Level 2 purchasing card transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="L2PURCHASING_CARD.aspx.vb"
Inherits="LinkPointAPI_vb.L2PURCHASING_CARD"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>L2PURCHASING_CARD</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="L2PURCHASING_CARD.aspx"
METHOD="post" NAME="SaleForm" runat="server"
ID="Form1">
      <p align="center"><b><font size="5"> PURCHASING
CARD SALE TRANSACTION</font></b><br>
      </p>
      <p align="center">An Example Level 2 Purchasing Card
SALE With Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="29" bgcolor="#c0c0c0">
            <tr>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="9" style="WIDTH: 9px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
              <TD height="1" width="276">Total:</TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD>
            </TR>
            <tr>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Card Number:</TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=cardnumber%>"
name="cardnumber" size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Month:</TD>
              <TD height="1" width="9" style="WIDTH:
```

```
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expmonth" name="expmonth"
size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Year:</TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="9" style="WIDTH:
9px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
               <TD height="1" width="276">PO Number:</TD>
               <TD height="1" width="9" style="WIDTH:
9px"> </TD>
               <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="HEIGHT: 22px" size="17"
value="<%=ponumber%>" name="ponumber"></TD>
             </TR>
             <TR>
               <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
               <TD height="1" width="276">Tax Exempt
(Y/N):</TD>
               <TD height="1" width="9" style="WIDTH:
9px"> </TD>
               <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="2" value="<%=taxexempt%>"
name="taxexempt"></TD>
             </TR>
             <TR>
               <TD height="1" width="19" style="WIDTH: 19px;
BORDER-LEFT-STYLE: solid"> </TD>
               <TD height="1" width="276">Tax:</TD>
               <TD height="1" width="9" style="WIDTH:
9px"> </TD>
               <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="2" value="<%=tax%>" name="tax"></TD>
             </TR>
             <TR>
               <TD style="WIDTH: 19px; BORDER-LEFT-STYLE:
solid; BORDER-BOTTOM-STYLE: solid" width="19"
```

```
height="10"> </TD>
              <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
              <TD style="WIDTH: 9px; BORDER-BOTTOM-STYLE:
solid" width="9" height="10"> </TD>
              <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
            </TR>
          </TABLE>
        </center>
      </div>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class L2PURCHASING_CARD
  Inherits LinkPointTxn_Page
  Private Sub Page_Load(ByVal sender As System.Object, ByVal
e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order =
LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' Build 'orderoptions'
    op.put("ordertype", "SALE")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)

    ' Build 'merchantinfo'
    op.clear()
    op.put("configfile", configfile)
    ' add 'merchantinfo to order
    order.addPart("merchantinfo", op)
```

```
   ' Build 'transactiondetails'
   op.clear()
   ' If there is no PO Number for this order,
   ' pass a department code or other value, but make sure the value you pass is supplied by the customer
   op.put("ponumber", ponumber)
   ' If the purchase is tax exempt,
   ' pass a value of Y for taxexempt
   op.put("taxexempt", taxexempt)
   ' add 'billing to order
   order.addPart("transactiondetails", op)

   ' Build 'creditcard'
   op.clear()
   op.put("cardnumber", cardnumber)
   op.put("cardexpmonth", expmonth)
   op.put("cardexpyear", expyear)
   ' add 'creditcard to order
   order.addPart("creditcard", op)

   ' Build 'payment'
   op.clear()
   op.put("chargetotal", total)
   ' Tax is required for purchasing cards.
   ' If the tax is $0.00, pass a value of 0 for tax
   op.put("tax", tax)

   ' add 'payment to order
   order.addPart("payment", op)


   ' create transaction object
   LPTxn = New LinkPointTransaction.LinkPointTxn()
```

```
    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub

#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub
InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form
Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

End Class
```

# Sample Code to Set Up a New Recurring Credit Card Transaction Using .NET and Visual Basic

The code shown below demonstrates how to process a Recurring Credit Card Transaction (Periodic Bill). The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="PB_NEW.aspx.vb"
Inherits="LinkPointAPI_vb.PB_NEW"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>PB_NEW</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
```

```
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="PB_NEW.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> PERIODIC BILLING
(NEW)</font></b><br>
      </p>
      <p align="center">An Example of New Periodic Billing
Transaction with Minimum
        Required Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="368" border="0" height="249" bgcolor="#c0c0c0"
style="WIDTH: 368px; HEIGHT: 249px">
            <tr>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="220" style="WIDTH: 220px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE:
solid"> </TD>
            </tr>
            <TR>
```

```
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px">Total:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="szip3"
style="WIDTH: 45px; HEIGHT: 22px" size="6"
value="<%=subtotal%>" name="total"></TD>
            </TR>
            <!--
            <tr>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
-->
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px">Card Number:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="emailaddress1"
```

```
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid">
                <select id="expmonth" name="expmonth"
size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="28" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid; HEIGHT: 28px"> </TD>
              <TD height="28" width="220" style="WIDTH: 220px;
HEIGHT: 28px">Exp. Year:</TD>
              <TD height="28" width="115" style="WIDTH: 115px;
HEIGHT: 28px"></TD>
              <TD height="28" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid; HEIGHT: 28px">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="220" style="WIDTH:
220px">Address Numbers<FONT
color="red">*</FONT>:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"></TD>
          <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=baddrnum%>"
name="baddrnum"></TD>
        </TR>
        <TR>
          <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="220" style="WIDTH:
220px">Zip<FONT color="red">*</FONT>:</TD>
          <TD height="1" width="115" style="WIDTH:
115px"></TD>
          <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=bzip%>"
name="bzip"></TD>
        </TR>
        <tr>
          <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="220" style="WIDTH:
220px"> </TD>
          <TD height="1" width="115" style="WIDTH:
115px"></TD>
          <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD>
```

```
            </tr>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px">Action:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><b>SUBMIT</b></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px">Start Date:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=startdate%>" name="startdate"></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px">Periodicity:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=periodicity%>"
```

```
name="periodicity"></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px">Installments:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=installments%>"
name="installments"></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px">Threshold:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=pbthreshold%>"
name="pbthreshold"></TD>
            </TR>
            <TR>
              <TD style="WIDTH: 30px; BORDER-LEFT-STYLE:
solid; HEIGHT: 23px; BORDER-BOTTOM-STYLE: solid"
width="30" height="23"> </TD>
              <TD style="WIDTH: 220px; HEIGHT: 23px; BORDER-
BOTTOM-STYLE: solid" width="220" height="23"> </TD>
```

```
              <TD style="WIDTH: 115px; HEIGHT: 23px; BORDER-BOTTOM-STYLE: solid" width="115" height="23"> </TD>
              <TD style="WIDTH: 249px;BORDER-RIGHT-STYLE: solid;HEIGHT: 23px;BORDER-BOTTOM-STYLE: solid" width="249" height="23"> </TD>
            </TR>
          </TABLE>
        </center>
        <p align="center"><input type="submit" value="Submit" name="Submit"></p>
      </div>
      <P align="left"><FONT color="red">*</FONT>) If not provided, transactions will
        downgrade.
      </P>
    </form>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class PB_NEW
```

```
  Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order =
LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' Build 'orderoptions'
    op.put("ordertype", "SALE")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)

    ' Build 'merchantinfo'
    op.clear()
    op.put("configfile", configfile)
    ' add 'merchantinfo to order
    order.addPart("merchantinfo", op)

    ' Build 'billing'
    ' Required for AVS. If not provided,
    ' transactions will downgrade.
    op.clear()
    op.put("zip", bzip)
    op.put("addrnum", baddrnum)
    ' add 'billing to order
    order.addPart("billing", op)

    ' Build 'creditcard'
    op.clear()
    op.put("cardnumber", cardnumber)
    op.put("cardexpmonth", expmonth)
    op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    order.addPart("creditcard", op)

    ' Build 'payment'
    op.clear()
    op.put("chargetotal", total)
    ' add 'payment to order
    order.addPart("payment", op)

    ' build 'periodic' part
    op.clear()
    op.put("action", "SUBMIT")
    op.put("startdate", startdate)
    op.put("periodicity", periodicity)
    op.put("installments", installments)
    op.put("threshold", pbthreshold)
    ' add 'periodic' to order
    order.addPart("periodic", op)

    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub

End Class
```

# Sample Code to Cancel a Recurring Credit Card Transaction Using .NET and Visual Basic

The code shown below demonstrates how to Cancel an existing Recurring Credit Card Transaction (Periodic Bill). See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="PB_CANCEL.aspx.vb"
Inherits="LinkPointAPI_vb.PB_CANCEL"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>PB_CANCEL</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="PB_CANCEL.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> PERIODIC BILLING
(CANCEL)</font></b><br>
      </p>
      <p align="center">An Example of Periodic Billing Cancel
Transaction with Minimum
        Required Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="368" border="0" height="249" bgcolor="#c0c0c0"
style="WIDTH: 368px; HEIGHT: 249px">
            <tr>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="184" style="WIDTH: 184px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE:
solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="184" style="WIDTH:
184px">Total:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="szip3"
style="WIDTH: 45px; HEIGHT: 22px" size="6"
value="<%=subtotal%>" name="total"></TD>
            </TR>
            <!--
            <tr>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="220" style="WIDTH:
220px"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
-->
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="184" style="WIDTH:
184px">Card Number:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
```

```
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="184" style="WIDTH:
184px">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid">
                <select id="expmonth" name="expmonth"
size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="28" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid; HEIGHT: 28px"> </TD>
              <TD height="28" width="184" style="WIDTH: 184px;
HEIGHT: 28px">Exp. Year:</TD>
              <TD height="28" width="115" style="WIDTH: 115px;
HEIGHT: 28px"></TD>
              <TD height="28" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid; HEIGHT: 28px">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <tr>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
```

```
             <TD height="1" width="184" style="WIDTH:
184px"> </TD>
             <TD height="1" width="115" style="WIDTH:
115px"></TD>
             <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"> </TD>
           </tr>
           <TR>
             <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
             <TD height="1" width="184" style="WIDTH:
184px">Action:</TD>
             <TD height="1" width="115" style="WIDTH:
115px"></TD>
             <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><b>CANCEL</b></TD>
           </TR>
           <TR>
             <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
             <TD height="1" width="184" style="WIDTH:
184px">Start Date:</TD>
             <TD height="1" width="115" style="WIDTH:
115px"></TD>
             <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=startdate%>" name="startdate"></TD>
           </TR>
           <TR>
             <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
             <TD height="1" width="184" style="WIDTH:
```

```
184px">Periodicity:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="10" value="<%=periodicity%>"
name="periodicity"></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid">  </TD>
              <TD height="1" width="184" style="WIDTH:
184px">Installments:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=installments%>"
name="installments"></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid">  </TD>
              <TD height="1" width="184" style="WIDTH:
184px">Threshold:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=pbthreshold%>"
name="pbthreshold"></TD>
            </TR>
            <TR>
              <TD height="1" width="30" style="WIDTH: 30px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="184" style="WIDTH:
184px">Order ID<FONT color="red">*</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"></TD>
              <TD height="1" width="249" style="WIDTH: 249px;
BORDER-RIGHT-STYLE: solid"><INPUT style=" HEIGHT: 22px"
size="22" value="<%=oid%>" name="oid"></TD>
            </TR>
            <TR>
              <TD style="WIDTH: 30px; BORDER-LEFT-STYLE:
solid; HEIGHT: 23px; BORDER-BOTTOM-STYLE: solid"
width="30" height="23"> </TD>
              <TD style="WIDTH: 184px; HEIGHT: 23px; BORDER-
BOTTOM-STYLE: solid" width="184" height="23"> </TD>
              <TD style="WIDTH: 115px; HEIGHT: 23px; BORDER-
BOTTOM-STYLE: solid" width="115" height="23"> </TD>
              <TD style="WIDTH: 249px;BORDER-RIGHT-STYLE:
solid;HEIGHT: 23px;BORDER-BOTTOM-STYLE: solid"
width="249" height="23"> </TD>
            </TR>
          </TABLE>
        </center>
        <p align="center"><input type="submit" value="Submit"
name="Submit"></p>
      </div>
      <P align="left"><FONT color="red">*</FONT>) You MUST
pass a valid Order ID for an
        EXISTING periodic bill to identify which bill you want to
modify.
```

```
      </P>
    </form>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
''*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class PB_CANCEL
  Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form Designer
    'Do not modify it using the code editor.
    InitializeComponent()

  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order = LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()


    ' Build 'orderoptions'
    op.put("ordertype", "SALE")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)

    ' Build 'merchantinfo'
    op.clear()
op.put("configfile", configfile)
' add 'merchantinfo to order
order.addPart("merchantinfo", op)

' Build 'creditcard'
op.clear()
op.put("cardnumber", cardnumber)
op.put("cardexpmonth", expmonth)
op.put("cardexpyear", expyear)
' add 'creditcard to order
order.addPart("creditcard", op)

' Build 'payment'
op.clear()
op.put("chargetotal", total)
' add 'payment to order
order.addPart("payment", op)

' build 'periodic' part
op.clear()
op.put("action", "CANCEL")
op.put("startdate", startdate)
op.put("periodicity", periodicity)
op.put("installments", installments)
op.put("threshold", pbthreshold)
' add 'periodic' to order
order.addPart("periodic", op)

' Add oid
op.clear()
op.put("oid", oid)
' add 'transactiondetails to order
order.addPart("transactiondetails", op)
```

```
    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub


End Class
```

# Sample Code to Process a Retail Swipe Transaction Using .NET and Visual Basic

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is swiped with a credit card reader. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="RETAIL_SWIPE.aspx.vb"
Inherits="LinkPointAPI_vb.RETAIL_SWIPE"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>RETAIL_SWIPE</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="RETAIL_SWIPE.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> RETAIL SWIPE
TRANSACTION </font></b>
        <br>
      </p>
      <p align="center">An Example Credit Card SALE
Transaction with Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="461" border="0" height="167" bgcolor="#c0c0c0"
style="WIDTH: 461px; HEIGHT: 167px">
            <tr>
              <TD height="14" width="12" style="WIDTH: 12px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE: solid;
HEIGHT: 14px"> </TD>
              <TD height="14" width="326" style="WIDTH: 326px;
BORDER-TOP-STYLE: solid; HEIGHT: 14px"> </TD>
              <TD height="14" width="2" style="WIDTH: 2px;
BORDER-TOP-STYLE: solid; HEIGHT: 14px"> </TD>
              <TD height="14" width="468" style="WIDTH: 468px;
BORDER-TOP-STYLE: solid; BORDER-RIGHT-STYLE: solid;
HEIGHT: 14px"> </TD>
            </tr>
            <TR>
```

```
                <TD height="29" width="12" style="WIDTH: 12px;
BORDER-LEFT-STYLE: solid; HEIGHT: 29px"> </TD>
                <TD height="29" width="326" style="WIDTH: 326px;
HEIGHT: 29px">Order Type:</TD>
                <TD height="29" width="2" style="WIDTH: 2px;
HEIGHT: 29px"></TD>
                <TD height="29" width="468" style="WIDTH: 468px;
BORDER-RIGHT-STYLE: solid; HEIGHT:
29px"><b>SALE</b></TD>
              </TR>
              <TR>
                <TD height="1" width="12" style="WIDTH: 12px;
BORDER-LEFT-STYLE: solid"> </TD>
                <TD height="1" width="326" style="WIDTH:
326px">Terminal Type<FONT color="red">*</FONT>:</TD>
                <TD height="1" width="2" style="WIDTH:
2px"> </TD>
                <TD height="1" width="468" style="WIDTH: 468px;
BORDER-RIGHT-STYLE: solid"><b>POS</b></TD>
              </TR>
              <TR>
                <TD height="33" width="12" style="WIDTH: 12px;
BORDER-LEFT-STYLE: solid; HEIGHT: 33px"> </TD>
                <TD height="33" width="326" style="WIDTH: 326px;
HEIGHT: 33px">Total:</TD>
                <TD height="33" width="2" style="WIDTH: 2px;
HEIGHT: 33px"> </TD>
                <TD height="33" width="468" style="WIDTH: 468px;
BORDER-RIGHT-STYLE: solid; HEIGHT: 33px"><INPUT
id="szip3" style="WIDTH: 45px; HEIGHT: 22px" size="6"
value="<%=subtotal%>" name="total"></TD>
              </TR>
```

```
            <!--
            <tr>
              <TD height="2" width="12" style="WIDTH: 12px;
BORDER-LEFT-STYLE: solid; HEIGHT: 2px"></TD>
              <TD height="2" width="326" style="WIDTH: 326px;
HEIGHT: 2px"></TD>
              <TD height="2" width="2" style="WIDTH: 2px;
HEIGHT: 2px"> </TD>
              <TD height="2" width="468" style="WIDTH: 468px;
BORDER-RIGHT-STYLE: solid; HEIGHT: 2px"> </TD>
            </tr>
            -->
            <TR>
              <TD height="1" width="12" style="WIDTH: 12px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="326" style="WIDTH:
326px">Card Track:</TD>
              <TD height="1" width="2" style="WIDTH:
2px"> </TD>
              <TD height="1" width="468" style="WIDTH: 468px;
BORDER-RIGHT-STYLE: solid"><INPUT value="<%=micr%>"
name="micr" size="46" style="WIDTH: 313px; HEIGHT:
22px"></TD>
            </TR>
            <TR>
              <TD style="WIDTH: 12px; BORDER-LEFT-STYLE:
solid; HEIGHT: 18px; BORDER-BOTTOM-STYLE: solid"
width="12" height="18"> </TD>
              <TD style="WIDTH: 326px; HEIGHT: 18px; BORDER-
BOTTOM-STYLE: solid" width="326" height="18"> </TD>
              <TD style="WIDTH: 2px; HEIGHT: 18px; BORDER-
BOTTOM-STYLE: solid" width="2" height="18"> </TD>
```

```
              <TD style="WIDTH: 468px;BORDER-RIGHT-STYLE:
solid;HEIGHT: 18px;BORDER-BOTTOM-STYLE: solid"
width="468" height="18"> </TD>
            </TR>
          </TABLE>
        </center>
      </div>
      <P align="left"><FONT color="red">*</FONT>)Set
Terminal Type to POS for an
        electronic cash register or integrated POS system,
STANDALONE for a
        point-of-sale credit card terminal, UNATTENDED for a self-
service station, or
        UNSPECIFIED for e-commerce or other applications</P>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
```

```
'**********************************************
Public Class RETAIL_SWIPE
  Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub 
InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e 
As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form 
Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal 
e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()
```

```
    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order =
LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' Build 'orderoptions'
    ' For a test, set result to GOOD, DECLINE, or DUPLICATE
    op.put("result", "GOOD")
    op.put("ordertype", "PREAUTH")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)


    ' Build 'merchantinfo'
    op.clear()
    op.put("configfile", configfile)
    ' add 'merchantinfo to order
    order.addPart("merchantinfo", op)

    ' Build 'transactiondetails'
    op.clear()
    ' set terminaltype to POS for an electronic
    ' cash register or integrated POS system,
    ' STANDALONE for a point-of-sale credit card terminal,
    ' UNATTENDED for a self-service station, or
    ' UNSPECIFIED for e-commerce or other applications
    op.put("terminaltype", "POS")
    op.put("transactionorigin", "RETAIL")
    ' add 'transactiondetails to order
    order.addPart("transactiondetails", op)


    ' Build 'creditcard'
    op.clear()
    op.put("track", micr)
    ' add 'creditcard to order
    order.addPart("creditcard", op)


    ' Build 'payment'
    op.clear()
    op.put("chargetotal", total)
    ' add 'payment to order
    order.addPart("payment", op)

    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub

End Class
```

# Sample Code to Process a Retail Keyed Transaction Using .NET and Visual Basic

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is keyed in. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASP Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="RETAIL_KEYED.aspx.vb"
Inherits="LinkPointAPI_vb.RETAIL_KEYED"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN" >
<HTML>
  <HEAD>
    <title>RETAIL_KEYED</title>
    <meta name="GENERATOR" Content="Microsoft Visual Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
```

```
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="RETAIL_KEYED.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><b><font size="5"> RETAIL KEYED TRANSACTION
</font></b>
        <br>
      </p>
      <p align="center">An Example Credit Card SALE Transaction with
Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0" width="356"
border="0" height="238" bgcolor="#c0c0c0" style="WIDTH: 356px;
HEIGHT: 238px">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-STYLE:
solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px; BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-STYLE: solid;
BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-
LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Order Type:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
```

```
         <TD height="1" width="78" style="BORDER-RIGHT-STYLE:
solid"><b>SALE</b></TD>
        </TR>
        <TR>
         <TD height="1" width="103" style="WIDTH: 103px; BORDER-
LEFT-STYLE: solid"> </TD>
         <TD height="1" width="276">Terminal Type<FONT
color="red">*</FONT>:</TD>
         <TD height="1" width="115" style="WIDTH: 115px"> </TD>
         <TD height="1" width="78" style="BORDER-RIGHT-STYLE:
solid"><b>POS</b></TD>
        </TR>
        <TR>
         <TD height="1" width="103" style="WIDTH: 103px; BORDER-
LEFT-STYLE: solid"> </TD>
         <TD height="1" width="276">Total:</TD>
         <TD height="1" width="115" style="WIDTH: 115px"> </TD>
         <TD height="1" width="78" style="BORDER-RIGHT-STYLE:
solid"><INPUT id="szip3" style="WIDTH: 45px; HEIGHT: 22px" size="6"
value="<%=subtotal%>" name="total"></TD>
        </TR>
        <tr>
         <TD height="1" width="103" style="WIDTH: 103px; BORDER-
LEFT-STYLE: solid"> </TD>
         <TD height="1" width="276"> </TD>
         <TD height="1" width="115" style="WIDTH: 115px"> </TD>
         <TD height="1" width="78" style="BORDER-RIGHT-STYLE:
solid"> </TD>
        </tr>
        <TR>
         <TD height="1" width="103" style="WIDTH: 103px; BORDER-
LEFT-STYLE: solid"> </TD>
```

```
          <TD height="1" width="144">Card Number:</TD>
          <TD height="1" width="115" style="WIDTH: 115px"> </TD>
          <TD height="1" width="199" style="BORDER-RIGHT-STYLE:
solid"><INPUT id="emailaddress1" value="<%=cardnumber%>"
name="cardnumber" size="17"></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px; BORDER-
LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Exp. Month:</TD>
          <TD height="1" width="115" style="WIDTH: 115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-STYLE:
solid">
            <select id="expmonth" name="expmonth" size="1">
              <%WriteMonthOpts()%>
            </select></TD>
        </TR>
        <TR>
          <TD height="1" width="103" style="WIDTH: 103px; BORDER-
LEFT-STYLE: solid"> </TD>
          <TD height="1" width="276">Exp. Year:</TD>
          <TD height="1" width="115" style="WIDTH: 115px"> </TD>
          <TD height="1" width="78" style="BORDER-RIGHT-STYLE:
solid">
            <select id="expyear" name="expyear" size="1">
              <%WriteYearOpts()%>
            </select></TD>
        </TR>
        <TR>
          <TD style="BORDER-LEFT-STYLE: solid; BORDER-BOTTOM-STYLE:
solid" width="103" height="10"> </TD>
          <TD style="BORDER-BOTTOM-STYLE: solid" width="276"
```

```
height="10"> </TD>
              <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE: solid"
width="115" height="10"> </TD>
              <TD style="BORDER-RIGHT-STYLE: solid;BORDER-BOTTOM-
STYLE: solid" width="78" height="10"> </TD>
            </TR>
          </TABLE>
        </center>
      </div>
      <P align="left"><FONT color="red">*</FONT>)Set Terminal Type to
POS for an
        electronic cash register or integrated POS system, STANDALONE for a
        point-of-sale credit card terminal, UNATTENDED for a self-service
station, or
        UNSPECIFIED for e-commerce or other applications</P>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class RETAIL_KEYED
  Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order =
LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()
    ' Build 'orderoptions'
    op.put("ordertype", "SALE")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)


    ' Build 'merchantinfo'
    op.clear()
    op.put("configfile", configfile)
    ' add 'merchantinfo to order
    order.addPart("merchantinfo", op)

    ' Build 'transactiondetails'
    op.clear()
    ' set terminaltype to POS for an electronic
    ' cash register or integrated POS system,
    ' STANDALONE for a point-of-sale credit card terminal,
    ' UNATTENDED for a self-service station, or
    ' UNSPECIFIED for e-commerce or other applications
    op.put("terminaltype", "POS")
    op.put("transactionorigin", "RETAIL")
    ' add 'transactiondetails to order
    order.addPart("transactiondetails", op)


    ' Build 'creditcard'
    op.clear()
    op.put("cardnumber", cardnumber)
    op.put("cardexpmonth", expmonth)
    op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    order.addPart("creditcard", op)

    ' Build 'payment'
    op.clear()
    op.put("chargetotal", total)
    ' add 'payment to order
    order.addPart("payment", op)

    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
```

```
    Server.Transfer("status.aspx")
  End Sub

End Class
```

# Sample Code to Process a Retail UNATTENDED Transaction Using .NET and Visual Basic

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card terminal is unattended (that is, a self-service station such as a gas station or ticket booth). In this case, you should do a partial AVS where you collect the zip code only. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="RETAIL_PARTIAL_AVS.aspx.vb"
Inherits="LinkPointAPI_vb.RETAIL_PARTIAL_AVS"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>RETAIL_PARTIAL_AVS</title>
    <meta name="GENERATOR" Content="Microsoft Visual
```

```
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="RETAIL_PARTIAL_AVS.aspx"
METHOD="post" NAME="SaleForm" runat="server"
ID="Form1">
      <p align="center"><b><font size="5"> RETAIL PARTIAL
AVS TRANSACTION </font></b>
      </p>
      <p align="center">An Example Credit Card SALE
Transaction with Minimum Required
        Fields</p>
      <div align="center">
        <center>
          <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="356" border="0" height="210" bgcolor="#c0c0c0"
style="WIDTH: 356px; HEIGHT: 210px">
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-TOP-STYLE: solid; BORDER-LEFT-STYLE:
solid"> </TD>
              <TD height="1" width="276" style="BORDER-TOP-
STYLE: solid"> </TD>
              <TD height="1" width="115" style="WIDTH: 115px;
BORDER-TOP-STYLE: solid"> </TD>
              <TD height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Order Type:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>SALE</b></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Terminal Type<FONT
color="red">*</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><b>UNATTENDED</b></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Total:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="szip3" style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="<%=subtotal%>"
name="total"></TD>
            </TR>
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
```

```
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="144">Card Number:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="199" style="BORDER-RIGHT-
STYLE: solid"><INPUT id="emailaddress1"
value="<%=cardnumber%>" name="cardnumber"
size="17"></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Month:</TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid">
                <select id="expmonth" name="expmonth"
size="1">
                  <%WriteMonthOpts()%>
                </select></TD>
            </TR>
            <TR>
```

```
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Exp. Year:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid">
                <select id="expyear" name="expyear" size="1">
                  <%WriteYearOpts()%>
                </select></TD>
            </TR>
            <TR>
              <TD height="1" width="103" style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276">Zip<FONT color="red">**</FONT>:</TD>
              <TD height="1" width="115" style="WIDTH: 115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px" size="4" value="<%=bzip%>" name="bzip"></TD>
            </TR>
            <TR>
              <TD style="BORDER-LEFT-STYLE: solid; BORDER-BOTTOM-STYLE: solid" width="103" height="10"> </TD>
              <TD style="BORDER-BOTTOM-STYLE: solid" width="276" height="10"> </TD>
              <TD style="WIDTH: 115px; BORDER-BOTTOM-STYLE: solid" width="115" height="10"> </TD>
              <TD style="BORDER-RIGHT-STYLE: solid;BORDER-BOTTOM-STYLE: solid" width="78" height="10"> </TD>
            </TR>
```

```
          </TABLE>
        </center>
      </div>
      <P align="left"><FONT color="red">*</FONT> )Set
terminaltype to POS for an
        electronic cash register or integrated POS system,
STANDALONE for a
        point-of-sale credit card terminal, UNATTENDED for a self-
service station, or
        UNSPECIFIED for e-commerce or other applications</P>
      <P align="left"><FONT color="red">**</FONT>
      )You should not do AVS for a retail swiped transaction,
unless it is an
      UNATTENDED terminaltype.For an UNATTENDED
terminaltype, do a partial AVS: zip
      code only.
      <P></P>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class RETAIL_PARTIAL_AVS
  Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
```

```
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order =
LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' Build 'orderoptions'
    op.put("ordertype", "SALE")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)


    ' Build 'merchantinfo'
    op.clear()
    op.put("configfile", configfile)
    ' add 'merchantinfo to order
    order.addPart("merchantinfo", op)

    ' Build 'transactiondetails'
    op.clear()
    ' set terminaltype to POS for an electronic
    ' cash register or integrated POS system,
    ' STANDALONE for a point-of-sale credit card terminal,
    ' UNATTENDED for a self-service station, or
    ' UNSPECIFIED for e-commerce or other applications
    op.put("terminaltype", "UNATTENDED")
    op.put("transactionorigin", "RETAIL")
    ' add 'transactiondetails to order
    order.addPart("transactiondetails", op)

    ' Build 'billing'
    op.clear()
    'For an UNATTENDED terminaltype,
    ' do a partial AVS: zip code only.
    op.put("zip", bzip)
    ' add 'billing to order
    order.addPart("billing", op)


    ' Build 'creditcard'
    op.clear()
    op.put("cardnumber", cardnumber)
    op.put("cardexpmonth", expmonth)
    op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    order.addPart("creditcard", op)

    ' Build 'payment'
    op.clear()
    op.put("chargetotal", total)
    ' add 'payment to order
    order.addPart("payment", op)

    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()
```

```
    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub

End Class
```

# Sample Code to perform a VirtualCheck SALE Transaction Using .NET and Visual Basic*

The code shown below demonstrates how to process a VirtualCheck SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="VCHECK_SALE.aspx.vb"
Inherits="LinkPointAPI_vb.VCHECK_SALE"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>VCHECK_SALE</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="VCHECK_SALE.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><font size="5"><label><b>VIRTUAL
CHECK SALE TRANSACTION </b></label></font>
      </p>
      <p align="center">An Example of a Virtual Check SALE
      </p>
      <TABLE id="TABLE1" cellSpacing="0" cellPadding="0"
width="367" border="0" align="left" bgcolor="#c0c0c0"
style="WIDTH: 367px; HEIGHT: 311px">
        <TR>
          <TD height="25" width="44" bgcolor="#ffffff"> </TD>
          <TD height="25" width="16" style="BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="25" width="90" style="BORDER-TOP-
STYLE: solid"><FONT>Name</FONT>:</TD>
          <TD height="25" width="54" style="BORDER-TOP-
STYLE: solid"> </TD>
          <TD height="25" width="173" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"><INPUT
value="<%=bname%>" name="bname"></TD>
        </TR>
        <TR>
          <TD height="25" width="44" bgcolor="#ffffff"> </TD>
          <TD height="25" width="16" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="25" width="90">Company:</TD>
          <TD height="25" width="54"> </TD>
          <TD height="25" width="173" style="BORDER-RIGHT-STYLE: solid"><INPUT value="<%=bcompany%>" name="bcompany"></TD>
        </TR>
        <TR>
          <TD height="25" width="44" bgcolor="#ffffff"> </TD>
          <TD height="25" width="16" style="BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="25" width="90">Address 1:</TD>
          <TD height="25" width="54"> </TD>
          <TD height="25" width="173" style="BORDER-RIGHT-STYLE: solid"><INPUT value="<%=baddr1%>" name="baddr1"></TD>
        </TR>
        <TR>
          <TD height="26" width="44" bgcolor="#ffffff"> </TD>
          <TD height="26" width="16" style="BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="26" width="90">Address 2:</TD>
          <TD height="26" width="54"> </TD>
          <TD height="26" width="173" style="BORDER-RIGHT-STYLE: solid"><INPUT value="<%=baddr2%>" name="baddr2"></TD>
        </TR>
        <TR>
          <TD height="25" width="44" bgcolor="#ffffff"> </TD>
          <TD height="25" width="16" style="BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="25" width="90">City:</TD>
          <TD height="25" width="54"> </TD>
          <TD height="25" width="173" style="BORDER-RIGHT-STYLE: solid"><INPUT value="<%=bcity%>"
```

```
name="bcity"></TD>
        </TR>
        <TR>
          <TD height="24" width="44" bgcolor="#ffffff">
          </TD>
          <TD height="24" width="16" style="BORDER-LEFT-
STYLE: solid">
          </TD>
          <TD height="24" width="90">State:
          </TD>
          <TD height="24" width="54"> </TD>
          <TD height="24" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 30px; HEIGHT: 22px"
size="3" value="<%=bstate%>" name="bstate"></TD>
        </TR>
        <TR>
          <TD height="24" width="44" bgcolor="#ffffff"> </TD>
          <TD height="24" width="16" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="24" width="90">Zip:</TD>
          <TD height="24" width="54"> </TD>
          <TD height="24" width="173" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="4" value="<%=bzip%>" name="bzip"></TD>
        </TR>
        <tr>
          <TD height="19" width="44" bgcolor="#ffffff"> </TD>
          <TD height="19" width="16" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="19" width="90">Country:</TD>
          <TD height="19" width="54"> </TD>
          <TD height="19" width="173" style="BORDER-RIGHT-
```

```
STYLE: solid"><INPUT style="WIDTH: 28px; HEIGHT: 22px"
size="2" value="<%=bcountry%>" name="bcountry"></TD>
        </tr>
        <tr>
          <TD height="1" width="44" bgcolor="#ffffff"> </TD>
          <TD height="1" width="16" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="1" width="78">e-mail:</TD>
          <TD height="1" width="7"> </TD>
          <TD height="1" width="56" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bemail%>"
name="bemail"></TD>
        </tr>
        <tr>
          <TD height="25" width="44" bgcolor="#ffffff"> </TD>
          <TD height="25" width="16" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="25" width="78">Phone:</TD>
          <TD height="25" width="7"> </TD>
          <TD height="25" width="56" style="BORDER-RIGHT-
STYLE: solid"><INPUT value="<%=bphone%>"
name="bphone" size="20"></TD>
        </tr>
        <tr>
          <TD height="40" width="44" bgcolor="#ffffff"
style="HEIGHT: 40px"> </TD>
          <TD height="40" width="16" style="BORDER-LEFT-
STYLE: solid; HEIGHT: 40px; BORDER-BOTTOM-STYLE:
solid"> </TD>
          <TD height="40" width="78" style="HEIGHT: 40px;
BORDER-BOTTOM-STYLE: solid">Fax:</TD>
          <TD height="40" width="7" style="HEIGHT: 40px;
```

```
BORDER-BOTTOM-STYLE: solid"> </TD>
          <TD height="40" width="56" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 40px; BORDER-BOTTOM-STYLE:
solid"><INPUT value="<%=bfax%>" name="bfax"
size="20"></TD>
        </tr>
      </TABLE>
      <TABLE id="TABLE2" cellSpacing="0" cellPadding="0"
width="353" border="0" align="left" height="290"
bgcolor="#c0c0c0" style="WIDTH: 353px; HEIGHT: 290px">
        <TR>
          <TD height="24" width="13" bgcolor="#ffffff"
style="WIDTH: 13px; HEIGHT: 24px"> </TD>
          <TD height="24" width="19" style="BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid; HEIGHT:
24px"> </TD>
          <TD height="24" width="276" style="BORDER-TOP-
STYLE: solid; HEIGHT: 24px">Total:</TD>
          <TD height="24" width="44" style="BORDER-TOP-
STYLE: solid; HEIGHT: 24px"> </TD>
          <TD height="24" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid; HEIGHT:
24px"><INPUT style="WIDTH: 45px; HEIGHT: 22px" size="4"
value="<%=subtotal%>" name="total"></TD>
        </TR>
        <TR>
          <TD height="19" width="13" bgcolor="#ffffff"
style="WIDTH: 13px; HEIGHT: 19px"> </TD>
          <TD height="19" width="19" style="BORDER-LEFT-
STYLE: solid; HEIGHT: 19px"> </TD>
          <TD height="19" width="294" style="HEIGHT:
19px"> </TD>
```

```
          <TD height="19" width="13" style="HEIGHT: 19px"> </TD>
          <TD height="19" width="151" style="BORDER-RIGHT-STYLE: solid; HEIGHT: 19px"> </TD>
        </TR>
        <TR>
          <TD height="1" width="13" bgcolor="#ffffff" style="WIDTH: 13px"> </TD>
          <TD height="1" width="19" style="BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="294">Transit Routing:</TD>
          <TD height="1" width="13"> </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px" size="10" name="routeNbr" value="<%=routeNbr%>"></TD>
        </TR>
        <TR>
          <TD height="1" width="13" bgcolor="#ffffff" style="WIDTH: 13px"> </TD>
          <TD height="1" width="19" style="BORDER-LEFT-STYLE: solid"> </TD>
          <TD height="1" width="294">Account Number:</TD>
          <TD height="1" width="13"> </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px" size="10" name="accountNbr" value="<%=accountNbr%>"></TD>
        </TR>
        <TR>
          <TD height="1" width="13" bgcolor="#ffffff" style="WIDTH: 13px"> </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
```

```
STYLE: solid"> </TD>
     <TD height="1" width="294">Check Number
(optional):</TD>
     <TD height="1" width="13"> </TD>
     <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="checkNbr"
value="<%=checkNbr%>"></TD>
    </TR>
    <TR>
     <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px"> </TD>
     <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </TD>
     <TD height="1" width="294">Account Type
(pc/bc):</TD>
     <TD height="1" width="13"> </TD>
     <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="accttype" value="<%=accttype%>"></TD>
    </TR>
    <TR>
     <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px"> </TD>
     <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </TD>
     <TD height="1" width="294">Bank Name :</TD>
     <TD height="1" width="13"> </TD>
     <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="bankName"
value="<%=bankName%>"></TD>
```

```
        </TR>
        <TR>
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px"> </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="1" width="294">Bank State :</TD>
          <TD height="1" width="13"> </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 28px; HEIGHT: 22px"
size="2" name="bankState"
value="<%=bankState%>"></TD>
        </TR>
        <tr>
          <TD height="1" width="13" bgcolor="#ffffff"
style="WIDTH: 13px"> </TD>
          <TD height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="1" width="294">SSN (optional):</TD>
          <TD height="1" width="13"> </TD>
          <TD height="1" width="151" style="BORDER-RIGHT-
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="ssn" value="<%=ssn%>"></TD>
        </tr>
        <TR>
          <TD height="21" width="13" bgcolor="#ffffff"
style="WIDTH: 13px"> </TD>
          <TD height="21" width="19" style="BORDER-LEFT-
STYLE: solid"> </TD>
          <TD height="21" width="294">Driver License :</TD>
          <TD height="21" width="13"> </TD>
          <TD height="21" width="151" style="BORDER-RIGHT-
```

```
STYLE: solid"><INPUT style="WIDTH: 128px; HEIGHT: 22px"
size="10" name="dl" value="<%=dl%>"></TD>
    </TR>
    <TR>
     <TD height="29" width="13" bgcolor="#ffffff"
style="WIDTH: 13px; HEIGHT: 29px"> </TD>
     <TD height="29" width="19" style="BORDER-LEFT-
STYLE: solid; HEIGHT: 29px"> </TD>
     <TD height="29" width="294" style="HEIGHT:
29px">DL State :</TD>
     <TD height="29" width="7" style="HEIGHT:
29px"> </TD>
     <TD height="29" width="151" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 29px"><INPUT id="startdate"
style="WIDTH: 28px; HEIGHT: 19px" size="1" name="dlState"
value="<%=dlState%>"></TD>
    </TR>
    <tr>
     <TD colspan="5" align="middle"
bgcolor="#ffffff"> </TD>
    </tr>
    <tr>
     <TD colspan="5" align="middle" bgcolor="#ffffff"
style="HEIGHT: 7px"><INPUT name='Submit' type="submit"
value='Submit'></TD>
    </tr>
   </TABLE>
  </form>
 </body>
</HTML>
```

## Sample Visual Basic Code

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class VCHECK_SALE
  Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order = LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' Build 'orderoptions'
    op.put("result", "LIVE")
    op.put("ordertype", "SALE")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)


    ' Build 'merchantinfo'
    op.clear()
    op.put("configfile", configfile)
    ' add 'merchantinfo to order
    order.addPart("merchantinfo", op)


    ' Build 'billing'
```

```
op.clear()
op.put("name", bname)
op.put("address1", baddr1)
op.put("address2", baddr2)
op.put("state", bstate)
op.put("city", bcity)
op.put("zip", bzip)
op.put("phone", bphone)
op.put("email", bemail)
op.put("fax", bfax)
' add 'billing to order
order.addPart("billing", op)

' Build 'telecheck' part
op.clear()
op.put("routing", routeNbr)
op.put("account", accountNbr)
op.put("checknumber", checkNbr)
op.put("accounttype", accttype)
op.put("dl", dl)
op.put("ssn", ssn)
op.put("dlstate", dlState)
op.put("bankname", bankName)
op.put("bankstate", bankState)
' add 'telecheck' to order
order.addPart("telecheck", op)

' Build 'payment'
op.clear()
op.put("chargetotal", total)
' add 'payment to order
order.addPart("payment", op)
```

```
    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub


End Class
```

# Sample Code to perform a VirtualCheck VOID Transaction Using .NET and Visual Basic*

The code shown below demonstrates how to process a VirtualCheck VOID transaction. You can only void a VirtualCheck SALE transaction if it has not yet been sent for processing (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="VCHECK_VOID.aspx.vb"
Inherits="LinkPointAPI_vb.VCHECK_VOID"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>VCHECK_VOID</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="VCHECK_VOID.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><font size="5"><b>VIRTUAL CHECK
VOID TRANSACTION </b></font>
      </p>
      <p align="center">An Example of a Virtual Check
VOID</p>
      <TABLE id="TABLE2" align="center" cellSpacing="0"
cellPadding="0" width="313" border="0" height="159"
bgcolor="#c0c0c0" style="WIDTH: 313px; HEIGHT: 159px">
        <TR>
          <TD height="24" width="19" style="BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid; HEIGHT:
24px"> </TD>
          <TD height="24" width="276" style="BORDER-TOP-
STYLE: solid; HEIGHT: 24px"> </TD>
```

```
          <TD height="24" width="44" style="BORDER-TOP-
STYLE: solid; HEIGHT: 24px"> </TD>
          <TD height="24" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid; HEIGHT:
24px"> </TD>
        </TR>
        <TR>
          <TD height="24" width="19" style="BORDER-LEFT-
STYLE: solid; HEIGHT: 24px"> </TD>
          <TD height="24" width="276" style="HEIGHT:
24px">Total:</TD>
          <TD height="24" width="44" style="HEIGHT:
24px"> </TD>
          <TD height="24" width="78" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 24px"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="4" value="<%=subtotal%>"
name="total"></TD>
        </TR>
        <TR>
          <TD height="19" width="19" style="BORDER-LEFT-
STYLE: solid; HEIGHT: 19px"> </TD>
          <TD height="19" width="294" style="HEIGHT:
19px"> </TD>
          <TD height="19" width="13" style="HEIGHT:
19px"> </TD>
          <TD height="19" width="151" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 19px"> </TD>
        </TR>
        <TR>
          <TD height="36" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid; HEIGHT: 36px"> </TD>
          <TD height="36" width="110" style="WIDTH: 110px;
```

```
HEIGHT: 36px">Order ID <FONT color="red">*</FONT>
      :</TD>
     <TD height="36" width="9" style="WIDTH: 9px;
HEIGHT: 36px"></TD>
     <TD height="36" width="78" style="BORDER-RIGHT-
STYLE: solid; HEIGHT: 36px"><INPUT style="WIDTH: 150px;
HEIGHT: 22px" size="60" value="<%=oid%>"
name="oid"> </TD>
    </TR>
    <TR>
     <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
     <TD style="WIDTH: 110px; BORDER-BOTTOM-STYLE:
solid" width="110" height="10"> </TD>
     <TD style="WIDTH: 9px; BORDER-BOTTOM-STYLE:
solid" width="9" height="10"> </TD>
     <TD style="BORDER-RIGHT-STYLE: solid;BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
    </TR>
   </TABLE>
   <P align="left"><FONT color="red">*</FONT>) The 'Order
ID' field must be a valid
    order ID from a prior Virtual Check Sale</P>
   <p align="center"><input type="submit" value="Submit"
name="Submit">
  </form>
  <br>
  </P>
  <DIV style="Z-INDEX: 101; LEFT: 7px; WIDTH: 533px;
POSITION: absolute; TOP: 442px; HEIGHT: 19px"
ms_positioning="FlowLayout">
   <P align="left"><FONT color="red">*</FONT>) The 'Order
```

```
ID' field must be a valid
        order ID from a prior Virtual Check Sale
      </P>
    </DIV>
  </body>
</HTML>
```

## Sample Visual Basic Code

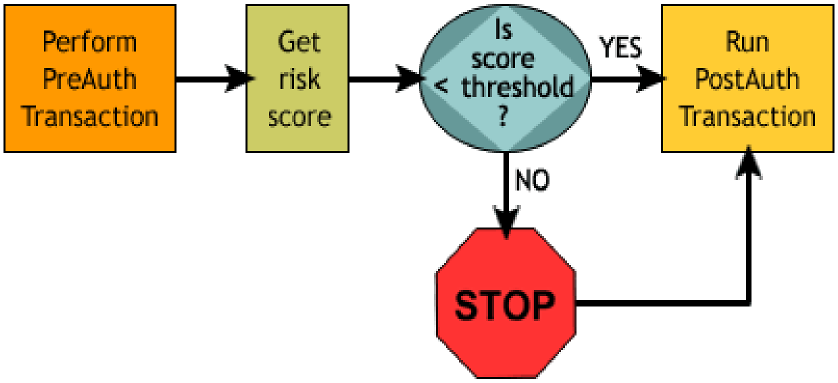
```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class VCHECK_VOID
   Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "

   'This call is required by the Web Form Designer.
   <System.Diagnostics.DebuggerStepThrough()> Private Sub
InitializeComponent()

   End Sub

   Private Sub Page_Init(ByVal sender As System.Object, ByVal
e As System.EventArgs) Handles MyBase.Init
     'CODEGEN: This method call is required by the Web Form
Designer
```

```
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart

    order = LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' Build 'orderoptions'
    op.put("result", "LIVE")
    op.put("ordertype", "VOID")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)
    ' Build 'merchantinfo'
    op.clear()
    op.put("configfile", configfile)
    ' add 'merchantinfo to order
    order.addPart("merchantinfo", op)

    ' Build 'telecheck' part
    op.clear()
    op.put("void", "1")
    ' add 'telecheck' to order
    order.addPart("telecheck", op)


    ' Build 'payment'
    op.clear()
    op.put("chargetotal", total)
    ' add 'payment to order
    order.addPart("payment", op)

    ' Add oid
    op.clear()
    op.put("oid", oid)
    ' add 'transactiondetails to order
    order.addPart("transactiondetails", op)

    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub

End Class
```

# Sample Code Using LinkShield™ with .NET and Visual Basic

## PreAuthorization / Postauthorization example

The code shown below demonstrates an example of one way to use LinkShield™ fraud risk scores. This example runs a preauthorization transaction, checks the fraud risk score, then runs a postauthorization if the fraud risk score is considered acceptable. The diagram shown illustrates this example. The fraud risk score used within this sample code is for explanatory purposes only; you should choose the fraud risk score threshold appropriate for your business needs. See the comments within the code for further explanation.



If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="LINKSHIELD_PREAUTH_POSTAUTH.aspx.vb"
Inherits="LinkPointAPI_vb.LINKSHIELD_PREAUTH_POSTAUTH"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>LINKSHIELD_SALE_VOID</title>
    <meta content="Microsoft Visual Studio 7.0"
name="GENERATOR">
    <meta content="C#" name="CODE_LANGUAGE">
    <meta content="JavaScript" name="vs_defaultClientScript">
    <meta
content="http://schemas.microsoft.com/intellisense/ie5"
name="vs_targetSchema">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form id="Form1"
action="LINKSHIELD_PREAUTH_POSTAUTH.aspx" method="post"
runat="server">
      <p align="center"><b><font size="4"> LinkShield
PREAUTH/POSTAUTH TRANSACTION</font></b></p>
      <p align="center">An Example Credit Card Preauth/Postauth
with score rating
        (LinkShield). This sample first performs a credit card
PREAUTH,then checks the
        LinkShield risk score. If the score is less then given
threshold then we
        perform POSTAUTH transaction
      </p>
      <FONT color="red">*</FONT>)Replace the value for
<b>MaxScore</b> with a value
      appropriate for your business risk level.
      <div align="center">
        <TABLE id="TABLE1" style="WIDTH: 356px; HEIGHT:
238px" height="238" cellSpacing="0" cellPadding="0"
width="356" bgColor="#c0c0c0" border="0">
          <tr>
            <TD style="WIDTH: 103px; BORDER-TOP-STYLE: solid;
BORDER-LEFT-STYLE: solid" width="103" height="1"> </TD>
            <TD style="BORDER-TOP-STYLE: solid" width="276"
height="1"> </TD>
            <TD style="WIDTH: 15px; BORDER-TOP-STYLE: solid"
width="15" height="1"> </TD>
            <TD style="BORDER-TOP-STYLE: solid; BORDER-RIGHT-
STYLE: solid" width="78" height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid;
HEIGHT: 17px" width="103" height="17"> </TD>
            <TD style="HEIGHT: 17px" width="276"
height="17">Subtotal:</TD>
            <TD style="WIDTH: 15px; HEIGHT: 17px" width="15"
```

```
height="17"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT: 17px"
width="78" height="17"><INPUT style="WIDTH: 45px; HEIGHT:
22px" size="6" value="12.99" name="subtotal"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid;
HEIGHT: 18px" width="103" height="18"> </TD>
            <TD style="HEIGHT: 18px" width="276"
height="18">Tax:</TD>
            <TD style="WIDTH: 15px; HEIGHT: 18px" width="15"
height="18"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT: 18px"
width="78" height="18"><INPUT style="WIDTH: 45px; HEIGHT:
22px" size="6" value="0.32" name="tax"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid;
HEIGHT: 11px" width="103" height="11"> </TD>
            <TD style="HEIGHT: 11px" width="276"
height="11">Shipping:</TD>
            <TD style="WIDTH: 15px; HEIGHT: 11px" width="15"
height="11"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT: 11px"
width="78" height="11"><INPUT style="WIDTH: 45px; HEIGHT:
22px" size="6" value="1.02" name="shipping"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid;
HEIGHT: 2px" width="103" height="2"> </TD>
            <TD style="HEIGHT: 2px" width="276"
height="2">Total:</TD>
            <TD style="WIDTH: 15px; HEIGHT: 2px" width="15"
height="2"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT: 2px"
width="78" height="2"><INPUT style="WIDTH: 45px; HEIGHT:
22px" size="6" value="14.33" name="total"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid;
HEIGHT: 23px" width="103" height="23"> </TD>
            <TD style="HEIGHT: 23px" width="276"
```

```
height="23"><b>MaxScore <FONT color="red">*</FONT>
                :</b></TD>
            <TD style="WIDTH: 15px; HEIGHT: 23px" width="15"
height="23"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT: 23px"
width="78" height="23"><INPUT style="WIDTH: 45px; HEIGHT:
22px" size=6
value="<%=score%>" name=score></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="144" height="1">Card Number:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=cardnumber%>"
name=cardnumber></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="276" height="1">Exp. Month:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select id="expmonth" size="1" name="expmonth">
                <%WriteMonthOpts()%>
              </select></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="276" height="1">Exp. Year:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select id="expyear" size="1" name="expyear">
                <%WriteYearOpts()%>
              </select></TD>
          </TR>
          <TR>
```

```
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="276" height="1">CVM:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px" size=4
value="<%=cvmvalue%>" name=cvmvalue></TD>
          </TR>
          <tr>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="276" height="1"><b>Billing:</b></TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="144" height="1">Name:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bname%>"
name=bname
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="144" height="1">Company:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bcompany%>"
name=bcompany
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
```

```
width="103" height="1"> </TD>
          <TD width="144" height="1">Address 1:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=baddr1%>"
name=baddr1
></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
          <TD width="144" height="1">Address 2:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=baddr2%>"
name=baddr2
></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
          <TD width="144" height="1">City:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bcity%>" name=bcity
></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
          <TD width="144" height="1">State:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bstate%>"
name=bstate
></TD>
        </TR>
        <TR>
```

```
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="144" height="1">Country:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bcountry%>"
name=bcountry
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="144" height="1">Phone:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bphone%>"
name=bphone
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="144" height="1">Email:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bemail%>"
name=bemail
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="276" height="1">Address Numbers:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px" size=4
value="<%=baddrnum%>" name=baddrnum></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid" 
width="103" height="1"> </TD>
            <TD width="276" height="1">Zip</FONT>:</TD>
            <TD style="WIDTH: 15px" width="15" 
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78" 
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px" size=4 
value="<%=bzip%>" name=bzip></TD>
          </TR>
          <tr>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid" 
width="103" height="1"> </TD>
            <TD width="276" height="1"><b>Shipping:</b></TD>
            <TD style="WIDTH: 15px" width="15" 
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78" 
height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid" 
width="103" height="1"> </TD>
            <TD width="144" height="1">Name:</TD>
            <TD style="WIDTH: 15px" width="15" 
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199" 
height="1"><INPUT size=17 value="<%=sname%>" 
name=sname 
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid" 
width="103" height="1"> </TD>
            <TD width="144" height="1">Address 1:</TD>
            <TD style="WIDTH: 15px" width="15" 
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199" 
height="1"><INPUT size=17 value="<%=saddr1%>" 
name=saddr1 
></TD>
          </TR>
          <TR>
```

```
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
      <TD width="144" height="1">Address 2:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=saddr2%>"
name=saddr2
></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
      <TD width="144" height="1">City:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=scity%>" name=scity
></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
      <TD width="144" height="1">Zip:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=szip%>" name=szip
></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
      <TD width="144" height="1">State:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=sstate%>"
name=sstate
></TD>
     </TR>
     <TR>
```

```
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="144" height="1">Country:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=scountry%>"
name=scountry
></TD>
          </TR>
          <!--
            <tr>
              <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
              <TD height="1" width="276"> </TD>
              <TD height="1" width="115" style="WIDTH:
115px"> </TD>
              <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
            </tr> -->
          <tr>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="276" height="1"><b>ITEM:</b></TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="276" height="1">ID:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="123456-A98767" name="id2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
```

```
            <TD width="276" height="1">Description:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="Logo T-Shirt" name="desc2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="276" height="1">Price:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="price2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="276" height="1">Quantity:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1" name="qty2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="276" height="1">Serial:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="0987654322" name="serial2"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="276" height="1">Color:</TD>
            <TD style="WIDTH: 15px" width="15"
```

```
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select size="1" name="Color">
                <option value="Red" selected>Red</option>
                <option value="Blue">Blue</option>
              </select></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="276" height="1">Size:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select size="1" name="Size">
                <option value="M">Medium</option>
                <option value="L">Large</option>
                <option value="XL" selected>XLarge</option>
              </select></TD>
          </TR>
          <tr>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="276" height="1"><b>Notes:</b></TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
width="103" height="1"> </TD>
            <TD width="276" height="1">Comments:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size=14
value="<%=comments%>" name=comments></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: solid"
```

```
width="103" height="1"> </TD>
            <TD width="276" height="1">Referred:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size=14
value="<%=referred%>" name=referred></TD>
          </TR>
          <TR>
            <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
            <TD style="BORDER-BOTTOM-STYLE: solid" width="276"
height="10"> </TD>
            <TD style="WIDTH: 15px; BORDER-BOTTOM-STYLE:
solid" width="15" height="10"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
          </TR>
        </TABLE>
      </div>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
'*************************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'**************************************************************************************
Public Class LINKSHIELD_PREAUTH_POSTAUTH
  Inherits LinkPointTxn_Page


  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
```

```
MyBase.Load
  Dim fDoPostAuth As Boolean = False
  Dim scoreMsg As String = ""

  If IsPostBack Then
   ' Parse form data
   ParseFormData()
   ' Now we process SALE order
   ProcessOrder()
   ' check LinkShield 'R_Score' value
   If R_Score.Length = 0 Then
    scoreMsg = "No score was received in PREAUTH transaction"
    ' client is not setup for LinkShield
   ElseIf R_Score.CompareTo("ERR") = 0 Then
    scoreMsg = "Error occured in scoring during PREAUTH transaction"
    ' scoring error
   Else
    ' get score value from the form
    Dim maxScore As Int32 = -1
    'try to parse value from form
    Try
     maxScore = Int32.Parse(score)
    Catch ex As Exception
    End Try

    ' get score value from transaction result
    Dim txnScore As Int32 = Int32.Parse(R_Score)

    ' check to see if score is acceptable
    If maxScore < txnScore Then
     scoreMsg = "The LinkShield risk score is too high : score=" & txnScore & " ( maxScore=" &
maxScore & ")."
    Else
     scoreMsg = "The LinkShield risk score is: score=" & txnScore & " ( maxScore=" & maxScore
& "). Performing POSTAUTH ..."
     fDoPostAuth = True
    End If
   End If

   ' store the scoreMsg
   Session("scoreMsg") = scoreMsg

   ' if we got acceptable score
   ' we run POSTAUTH transaction
```

```
    If fDoPostAuth Then
      ProcessPostAuth()
    End If

    ' we are done with transaction(s)
    ' go to status page
    Server.Transfer("status_ls2.aspx")

  End If ' end ifPostBack

End Sub

Private Sub ProcessOrder()

  ' create order
  Dim op As LinkPointTransaction.LPOrderPart
  Dim order As LinkPointTransaction.LPOrderPart

  order = LinkPointTransaction.LPOrderFactory.createOrderPart("order")
  ' create a part we will use to build the order
  op = LinkPointTransaction.LPOrderFactory.createOrderPart()

  ' Build 'orderoptions'
  op.put("ordertype", "PREAUTH")
  ' For a test, set result to GOOD, DECLINE, or DUPLICATE
  op.put("result", "GOOD")
  ' add 'orderoptions to order
  order.addPart("orderoptions", op)
  ' Build 'transactiondetails'
  op.clear()
  op.put("transactionorigin", Request.Form("origin"))
  ' add 'transactiondetails to order
  order.addPart("transactiondetails", op)
  ' Build 'merchantinfo'
  op.clear()
  op.put("configfile", configfile)
  ' add 'merchantinfo to order
  order.addPart("merchantinfo", op)

  ' Build 'payment'
  op.clear()
  op.put("subtotal", Request.Form("subtotal"))
  op.put("tax", Request.Form("tax"))
  op.put("shipping", Request.Form("shipping"))
op.put("chargetotal", Request.Form("total"))
' add 'payment to order
order.addPart("payment", op)

' Build 'creditcard'
op.clear()
op.put("cardnumber", cardnumber)
op.put("cardexpmonth", expmonth)
op.put("cardexpyear", expyear)
op.put("cvmvalue", cvmvalue)
op.put("cvmindicator", cvmindicator)
' add 'creditcard to order
order.addPart("creditcard", op)

' Build 'billing'
op.clear()
op.put("name", bname)
op.put("company", bcompany)
op.put("address1", baddr1)
op.put("address2", baddr2)
op.put("city", bcity)
op.put("state", bstate)
' Required for AVS. If not provided,
' transactions will downgrade.
op.put("zip", bzip)
op.put("addrnum", baddrnum)
op.put("country", bcountry)
op.put("phone", bphone)
op.put("fax", bfax)
op.put("email", bemail)
' add 'billing to order
order.addPart("billing", op)

' Build 'shipping'
op.clear()
op.put("name", sname)
op.put("address1", saddr1)
op.put("address2", saddr2)
op.put("city", scity)
op.put("state", sstate)
op.put("zip", szip)
op.put("country", scountry)
```

```
' Create some parts we use to build order itmes
' Create some parts we use to build order itmes
Dim items, item, options As LinkPointTransaction.LPOrderPart
items = LinkPointTransaction.LPOrderFactory.createOrderPart()
item = LinkPointTransaction.LPOrderFactory.createOrderPart()
options = LinkPointTransaction.LPOrderFactory.createOrderPart()
' build 'item'
item.put("id", Request.Form("id2"))
item.put("description", Request.Form("desc2"))
item.put("quantity", Request.Form("qty2"))
item.put("price", Request.Form("price2"))
item.put("serial", Request.Form("serial2"))
' build item's options
op.clear()
op.put("name", "Color")
op.put("value", Request.Form("Color"))
options.addPart("option", op, 1)
op.clear()
op.put("name", "Size")
op.put("value", Request.Form("Size"))
options.addPart("option", op, 2)
' add 'options' to item
item.addPart("options", options)
' add 'item' to 'items' collection
items.addPart("item", item)
' add 'items' to order
order.addPart("items", items)

' add notes
op.clear()
op.put("comments", comments)
op.put("referred", referred)
order.addPart("notes", op)

' create transaction object
LPTxn = New LinkPointTransaction.LinkPointTxn()

' get outgoing XML from 'order' object
Dim outXml As String = order.toXML()

' Call LPTxn
Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

' response is used for next transaction
```

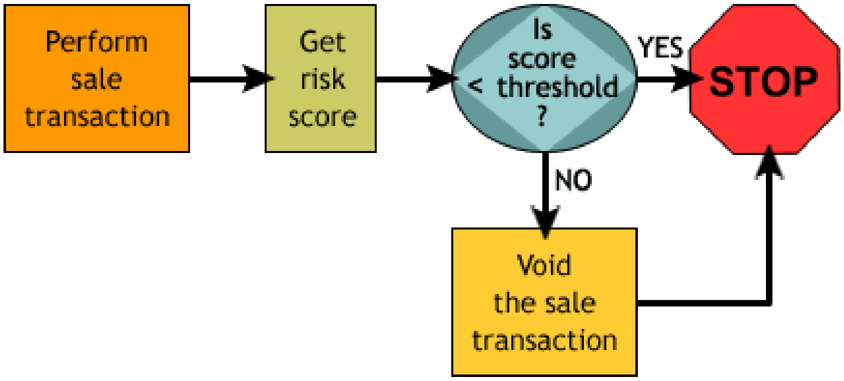
```
  ' so we need to parse response
  ParseResponse(resp)

  'Store transaction data on Session and redirect
  Session("outXml") = outXml
  Session("resp") = resp

End Sub
Private Sub ProcessPostAuth()

  ' create order
  Dim op As LinkPointTransaction.LPOrderPart
  Dim order As LinkPointTransaction.LPOrderPart

  order = LinkPointTransaction.LPOrderFactory.createOrderPart("order")
  ' create a part we will use to build the order
  op = LinkPointTransaction.LPOrderFactory.createOrderPart()
  ' Build 'orderoptions'
  ' For a test, set result to GOOD, DECLINE, or DUPLICATE
  op.put("result", "GOOD")
  op.put("ordertype", "POSTAUTH")
  ' add 'orderoptions to order
  order.addPart("orderoptions", op)


  ' Build 'merchantinfo'
  op.clear()
  op.put("configfile", configfile)
  ' add 'merchantinfo to order
  order.addPart("merchantinfo", op)


  ' Build 'creditcard'
  op.clear()
  op.put("cardnumber", cardnumber)
  op.put("cardexpmonth", expmonth)
  op.put("cardexpyear", expyear)
  ' add 'creditcard to order
  order.addPart("creditcard", op)


  ' Build 'payment'
  op.clear()
  op.put("chargetotal", total)
  ' add 'payment to order
```

```
    order.addPart("payment", op)

    ' Add oid
    op.clear()
    op.put("oid", R_OrderNum)
    ' add 'transactiondetails to order
    order.addPart("transactiondetails", op)

    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session
    Session("outXml_2") = outXml
    Session("resp_2") = resp

  End Sub


#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
   Private Sub InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
MyBase.Init
    'CODEGEN: This method call is required by the Web Form Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region
End Class
```

# Sample Code Using LinkShield™ with .NET and Visual Basic

## Sale / Void example

The code shown below demonstrates an example of one way to use LinkShield$^{TM}$ fraud risk scores. This example runs a sale transaction, checks the fraud risk score, then runs a void if the fraud risk score is considered unacceptable. The diagram shown illustrates this example. The fraud risk score used within this sample code is for explanatory purposes only; you should choose the fraud risk score threshold appropriate for your business needs. See the comments within the code for further explanation.



If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="LINKSHIELD_SALE_VOID.aspx.vb"
Inherits="LinkPointAPI_vb.LINKSHIELD_SALE_VOID"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>LINKSHIELD_SALE_VOID</title>
    <meta content="Microsoft Visual Studio 7.0"
name="GENERATOR">
    <meta content="C#" name="CODE_LANGUAGE">
    <meta content="JavaScript" name="vs_defaultClientScript">
    <meta
content="http://schemas.microsoft.com/intellisense/ie5"
name="vs_targetSchema">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form id="Form1" action="LINKSHIELD_SALE_VOID.aspx"
method="post" runat="server">
      <p align="center"><b><font size="5"> LinkShield SALE
TRANSACTION</font></b></p>
      <p align="center">An Example Credit Card SALE with score
rating (LinkShield). This
        sample first performs a credit card sale,then checks the
LinkShield risk score.
        If the score is more then given threshold then we void the
previous sale
        transaction
      </p>
      <FONT color="red">*</FONT>)Replace the value for
<b>MaxScore</b> with a value
      appropriate for your business risk level.
      <div align="center">
        <TABLE id="TABLE1" style="WIDTH: 356px; HEIGHT:
238px" height="238" cellSpacing="0" cellPadding="0"
width="356" bgColor="#c0c0c0" border="0">
          <tr>
            <TD style="WIDTH: 103px; BORDER-TOP-STYLE: solid;
BORDER-LEFT-STYLE: solid" width="103" height="1"> </TD>
            <TD style="BORDER-TOP-STYLE: solid" width="276"
height="1"> </TD>
            <TD style="WIDTH: 15px; BORDER-TOP-STYLE: solid"
width="15" height="1"> </TD>
            <TD style="BORDER-TOP-STYLE: solid; BORDER-RIGHT-
STYLE: solid" width="78" height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Order Type:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
```

```
height="1"><b>SALE</b></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 17px" width="103" height="17"> </TD>
            <TD style="HEIGHT: 17px" width="276"
height="17">Subtotal:</TD>
            <TD style="WIDTH: 15px; HEIGHT: 17px" width="15"
height="17"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
17px" width="78" height="17"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="12.99"
name="subtotal"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 18px" width="103" height="18"> </TD>
            <TD style="HEIGHT: 18px" width="276"
height="18">Tax:</TD>
            <TD style="WIDTH: 15px; HEIGHT: 18px" width="15"
height="18"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
18px" width="78" height="18"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="0.32" name="tax"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 11px" width="103" height="11"> </TD>
            <TD style="HEIGHT: 11px" width="276"
height="11">Shipping:</TD>
            <TD style="WIDTH: 15px; HEIGHT: 11px" width="15"
height="11"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
11px" width="78" height="11"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="1.02"
name="shipping"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 2px" width="103" height="2"> </TD>
            <TD style="HEIGHT: 2px" width="276"
height="2">Total:</TD>
```

```
            <TD style="WIDTH: 15px; HEIGHT: 2px" width="15"
height="2"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
2px" width="78" height="2"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size="6" value="14.33" name="total"></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid; HEIGHT: 23px" width="103" height="23"> </TD>
            <TD style="HEIGHT: 23px" width="276"
height="23"><b>MaxScore <FONT color="red">*</FONT>
                :</b></TD>
            <TD style="WIDTH: 15px; HEIGHT: 23px" width="15"
height="23"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; HEIGHT:
23px" width="78" height="23"><INPUT style="WIDTH: 45px;
HEIGHT: 22px" size=6
value="<%=score%>" name=score></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Card Number:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=cardnumber%>"
name=cardnumber></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Exp. Month:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select id="expmonth" size="1"
name="expmonth">
                <%WriteMonthOpts()%>
              </select></TD>
          </TR>
          <TR>
```

```
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Exp. Year:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select id="expyear" size="1" name="expyear">
                <%WriteYearOpts()%>
              </select></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">CVM:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size=4
value="<%=cvmvalue%>" name=cvmvalue></TD>
          </TR>
          <tr>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1"><b>Billing:</b></TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Name:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bname%>"
name=bname
></TD>
          </TR>
          <TR>
```

```
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Company:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bcompany%>"
name=bcompany
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Address 1:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=baddr1%>"
name=baddr1
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">Address 2:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=baddr2%>"
name=baddr2
></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="144" height="1">City:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=bcity%>"
name=bcity
></TD>
```

```
         </TR>
         <TR>
           <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: 
solid" width="103" height="1"> </TD>
           <TD width="144" height="1">State:</TD>
           <TD style="WIDTH: 15px" width="15" 
height="1"> </TD>
           <TD style="BORDER-RIGHT-STYLE: solid" width="199" 
height="1"><INPUT size=17 value="<%=bstate%>" 
name=bstate
></TD>
         </TR>
         <TR>
           <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: 
solid" width="103" height="1"> </TD>
           <TD width="144" height="1">Country:</TD>
           <TD style="WIDTH: 15px" width="15" 
height="1"> </TD>
           <TD style="BORDER-RIGHT-STYLE: solid" width="199" 
height="1"><INPUT size=17 value="<%=bcountry%>" 
name=bcountry
></TD>
         </TR>
         <TR>
           <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: 
solid" width="103" height="1"> </TD>
           <TD width="144" height="1">Phone:</TD>
           <TD style="WIDTH: 15px" width="15" 
height="1"> </TD>
           <TD style="BORDER-RIGHT-STYLE: solid" width="199" 
height="1"><INPUT size=17 value="<%=bphone%>" 
name=bphone
></TD>
         </TR>
         <TR>
           <TD style="WIDTH: 103px; BORDER-LEFT-STYLE: 
solid" width="103" height="1"> </TD>
           <TD width="144" height="1">Email:</TD>
           <TD style="WIDTH: 15px" width="15" 
height="1"> </TD>
           <TD style="BORDER-RIGHT-STYLE: solid" width="199" 
height="1"><INPUT size=17 value="<%=bemail%>"
```

```
name=bemail
></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="276" height="1">Address Numbers:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size=4
value="<%=baddrnum%>" name=baddrnum></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="276" height="1">Zip</FONT>:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size=4
value="<%=bzip%>" name=bzip></TD>
        </TR>
        <tr>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="276"
height="1"><b>Shipping:</b></TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
        </tr>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="144" height="1">Name:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
```

```
height="1"><INPUT size=17 value="<%=sname%>"
name=sname
></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="144" height="1">Address 1:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=saddr1%>"
name=saddr1
></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="144" height="1">Address 2:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=saddr2%>"
name=saddr2
></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="144" height="1">City:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=scity%>" name=scity
></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="144" height="1">Zip:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
```

```
      <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=szip%>" name=szip
></TD>
    </TR>
    <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="144" height="1">State:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=sstate%>"
name=sstate
></TD>
    </TR>
    <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="144" height="1">Country:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="199"
height="1"><INPUT size=17 value="<%=scountry%>"
name=scountry
></TD>
    </TR>
    <!--
      <tr>
        <TD height="1" width="103" style="WIDTH: 103px;
BORDER-LEFT-STYLE: solid"> </TD>
        <TD height="1" width="276"> </TD>
        <TD height="1" width="115" style="WIDTH:
115px"> </TD>
        <TD height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </TD>
      </tr> -->
    <tr>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="276" height="1"><b>ITEM:</b></TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
```

```
      <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
     </tr>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="276" height="1">ID:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="123456-A98767" name="id2"></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="276" height="1">Description:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="Logo T-Shirt" name="desc2"></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="276" height="1">Price:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="12.99" name="price2"></TD>
     </TR>
     <TR>
      <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
      <TD width="276" height="1">Quantity:</TD>
      <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
      <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 45px; HEIGHT: 22px"
size="6" value="1" name="qty2"></TD>
```

```
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="276" height="1">Serial:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size="14" value="0987654322" name="serial2"></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="276" height="1">Color:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select size="1" name="Color">
              <option value="Red" selected>Red</option>
              <option value="Blue">Blue</option>
            </select></TD>
        </TR>
        <TR>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="276" height="1">Size:</TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
          <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><select size="1" name="Size">
              <option value="M">Medium</option>
              <option value="L">Large</option>
              <option value="XL" selected>XLarge</option>
            </select></TD>
        </TR>
        <tr>
          <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
          <TD width="276" height="1"><b>Notes:</b></TD>
          <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
```

```
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"> </TD>
          </tr>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Comments:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size=14
value="<%=comments%>" name=comments></TD>
          </TR>
          <TR>
            <TD style="WIDTH: 103px; BORDER-LEFT-STYLE:
solid" width="103" height="1"> </TD>
            <TD width="276" height="1">Referred:</TD>
            <TD style="WIDTH: 15px" width="15"
height="1"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid" width="78"
height="1"><INPUT style="WIDTH: 145px; HEIGHT: 22px"
size=14
value="<%=referred%>" name=referred></TD>
          </TR>
          <TR>
            <TD style="BORDER-LEFT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="103" height="10"> </TD>
            <TD style="BORDER-BOTTOM-STYLE: solid"
width="276" height="10"> </TD>
            <TD style="WIDTH: 15px; BORDER-BOTTOM-STYLE:
solid" width="15" height="10"> </TD>
            <TD style="BORDER-RIGHT-STYLE: solid; BORDER-
BOTTOM-STYLE: solid" width="78" height="10"> </TD>
          </TR>
        </TABLE>
      </div>
      <p align="center"><input type="submit" value="Submit"
name="Submit">
    </form>
    </P>
  </body>
```

```
</HTML>
```

## Sample Visual Basic Code

```
'***********************************************************************************
' Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
'
' This software is the proprietary information of LinkPoint International, Inc.
' Use is subject to license terms.
'
'************************************************************************************
Public Class LINKSHIELD_SALE_VOID
  Inherits LinkPointTxn_Page


  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
MyBase.Load
    Dim fDoVoid As Boolean = True
    Dim scoreMsg As String = ""

    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' Now we process SALE order
      ProcessOrder()
      ' check LinkShield 'R_Score' value
      If R_Score.Length = 0 Then
        scoreMsg = "No score was received in SALE transaction. Performing VOID..."
        ' client is not setup for LinkShield
      ElseIf R_Score.CompareTo("ERR") = 0 Then
        scoreMsg = "Error occured in scoring during SALE transaction. Performing VOID..."
        ' scoring error
      Else
        ' get score value from the form
        Dim maxScore As Int32 = -1
        'try to parse value from form
        Try
          maxScore = Int32.Parse(score)
        Catch ex As Exception
        End Try

        ' get score value from transaction result
        Dim txnScore As Int32 = Int32.Parse(R_Score)
    ' check to see if score is acceptable
    If maxScore < txnScore Then
     scoreMsg = "The LinkShield risk score is too high : score=" & txnScore & " ( maxScore=" & maxScore & "). Performing VOID..."
    Else
     scoreMsg = "The LinkShield risk score is: score=" & txnScore & " ( maxScore=" & maxScore & ")"
     fDoVoid = False
    End If
   End If

   ' store the scoreMsg
   Session("scoreMsg") = scoreMsg

   ' if we got unacceptable score or didn't get score at all
   ' we run VOID transaction
   If fDoVoid Then
    ProcessVoid()
   End If

   ' we are done with transaction(s)
   ' go to status page
   Server.Transfer("status_ls1.aspx")

  End If ' end ifPostBack

 End Sub

 Private Sub ProcessOrder()

  ' create order
  Dim op As LinkPointTransaction.LPOrderPart
  Dim order As LinkPointTransaction.LPOrderPart

  order = LinkPointTransaction.LPOrderFactory.createOrderPart("order")
  ' create a part we will use to build the order
  op = LinkPointTransaction.LPOrderFactory.createOrderPart()

  ' Build 'orderoptions'
  op.put("ordertype", "SALE")
  ' add 'orderoptions to order
  order.addPart("orderoptions", op)
  ' Build 'transactiondetails'
  op.clear()
```

```
op.put("transactionorigin", Request.Form("origin"))
' add 'transactiondetails to order
order.addPart("transactiondetails", op)
' Build 'merchantinfo'
op.clear()
op.put("configfile", configfile)
' add 'merchantinfo to order
order.addPart("merchantinfo", op)

' Build 'payment'
op.clear()
op.put("subtotal", Request.Form("subtotal"))
op.put("tax", Request.Form("tax"))
op.put("shipping", Request.Form("shipping"))
op.put("chargetotal", Request.Form("total"))
' add 'payment to order
order.addPart("payment", op)

' Build 'creditcard'
op.clear()
op.put("cardnumber", cardnumber)
op.put("cardexpmonth", expmonth)
op.put("cardexpyear", expyear)
op.put("cvmvalue", cvmvalue)
op.put("cvmindicator", cvmindicator)
' add 'creditcard to order
order.addPart("creditcard", op)

' Build 'billing'
op.clear()
op.put("name", bname)
op.put("company", bcompany)
op.put("address1", baddr1)
op.put("address2", baddr2)
op.put("city", bcity)
op.put("state", bstate)
' Required for AVS. If not provided,
' transactions will downgrade.
op.put("zip", bzip)
op.put("addrnum", baddrnum)
op.put("country", bcountry)
op.put("phone", bphone)
op.put("fax", bfax)
op.put("email", bemail)
' add 'billing to order
order.addPart("billing", op)

' Build 'shipping'
op.clear()
op.put("name", sname)
op.put("address1", saddr1)
op.put("address2", saddr2)
op.put("city", scity)
op.put("state", sstate)
op.put("zip", szip)
op.put("country", scountry)

' Create some parts we use to build order itmes
' Create some parts we use to build order itmes
Dim items, item, options As LinkPointTransaction.LPOrderPart
items = LinkPointTransaction.LPOrderFactory.createOrderPart()
item = LinkPointTransaction.LPOrderFactory.createOrderPart()
options = LinkPointTransaction.LPOrderFactory.createOrderPart()
' build 'item'
item.put("id", Request.Form("id2"))
item.put("description", Request.Form("desc2"))
item.put("quantity", Request.Form("qty2"))
item.put("price", Request.Form("price2"))
item.put("serial", Request.Form("serial2"))
' build item's options
op.clear()
op.put("name", "Color")
op.put("value", Request.Form("Color"))
options.addPart("option", op, 1)
op.clear()
op.put("name", "Size")
op.put("value", Request.Form("Size"))
options.addPart("option", op, 2)
' add 'options' to item
item.addPart("options", options)
' add 'item' to 'items' collection
items.addPart("item", item)
' add 'items' to order
order.addPart("items", items)

' add notes
```

```
  op.clear()
  op.put("comments", comments)
  op.put("referred", referred)
  order.addPart("notes", op)

  ' create transaction object
  LPTxn = New LinkPointTransaction.LinkPointTxn()

  ' get outgoing XML from 'order' object
  Dim outXml As String = order.toXML()

  ' Call LPTxn
  Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

  ' response is used for next transaction
  ' so we need to parse response
  ParseResponse(resp)

  'Store transaction data on Session and redirect
  Session("outXml") = outXml
  Session("resp") = resp

End Sub
Private Sub ProcessVoid()

  ' create order
  Dim op As LinkPointTransaction.LPOrderPart
  Dim order As LinkPointTransaction.LPOrderPart

  order = LinkPointTransaction.LPOrderFactory.createOrderPart("order")
  ' create a part we will use to build the order
  op = LinkPointTransaction.LPOrderFactory.createOrderPart()

  ' Build 'orderoptions'
  ' For a test, set result to GOOD, DECLINE, or DUPLICATE
  'op.put("result", "GOOD")
  op.put("ordertype", "VOID")
  ' add 'orderoptions to order
  order.addPart("orderoptions", op)


  ' Build 'merchantinfo'
  op.clear()
  op.put("configfile", configfile)
  ' add 'merchantinfo to order
  order.addPart("merchantinfo", op)
```

```
    ' Build 'creditcard'
    op.clear()
    op.put("cardnumber", cardnumber)
    op.put("cardexpmonth", expmonth)
    op.put("cardexpyear", expyear)
    ' add 'creditcard to order
    order.addPart("creditcard", op)


    ' Build 'payment'
    op.clear()
    op.put("chargetotal", total)
    ' add 'payment to order
    order.addPart("payment", op)

    ' Add oid
    op.clear()
    op.put("oid", R_OrderNum)
    ' add 'transactiondetails to order
    order.addPart("transactiondetails", op)

    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml_2") = outXml
    Session("resp_2") = resp

  End Sub


#Region " Web Form Designer Generated Code "

  'This call is required by the Web Form Designer.
   Private Sub InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
```

```
MyBase.Init
    'CODEGEN: This method call is required by the Web Form Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

 #End Region
End Class
```

# Sample Code to Calculate Shipping Charges Using .NET and Visual Basic

The code shown below demonstrates how to use the shipping calculator. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="SHIPPING.aspx.vb"
Inherits="LinkPointAPI_vb.SHIPPING"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN">
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>SHIPPING</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
```

```
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="SHIPPING.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><font size="5"><b>CALCULATE
SHIPPING</b></font></p>
      <p align="center">
        Calculate shipping for a dollar amount based upon ship
weight, carrier, and
        other factors passed to the function.</p>
      <div align="center">
        <center>
          <table id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="29" bgcolor="#c0c0c0">
            <tr>
              <td height="1" width="19" style="BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid"> </td>
              <td height="24" width="90" style="BORDER-TOP-
STYLE: solid">Ship State:</td>
              <td height="1" width="44" style="BORDER-TOP-
STYLE: solid"> </td>
              <td height="1" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"><input
id="bstate0" style="WIDTH: 30px; HEIGHT: 22px" size="3"
value="<%=sstate%>" name="sstate"></td>
            </tr>
            <tr>
              <td height="1" width="19" style="BORDER-LEFT-
```

```
STYLE: solid"> </td>
              <td height="24" width="90">Ship Zip:</td>
              <td height="1" width="44"> </td>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input id="bzip1" style="WIDTH: 45px; HEIGHT:
22px" size="4" value="<%=szip%>" name="szip"></td>
            </tr>
            <tr>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td>
              <td height="19" width="90">Ship Country:</td>
              <td height="1" width="44"> </td>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input id="bzip2" style="WIDTH: 28px; HEIGHT:
22px" size="2" value="<%=scountry%>"
name="scountry"></td>
            </tr>
            <tr>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td>
              <td height="1" width="276">Ship Carrier:</td>
              <td height="1" width="44"> </td>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input style="WIDTH: 28px; HEIGHT: 22px"
size="1" value="<%=scarrier%>" name="scarrier"></td>
            </tr>
            <tr>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td>
              <td height="1" width="276">Items:</td>
              <td height="1" width="44"> </td>
              <td height="1" width="78" style="BORDER-RIGHT-
```

```
STYLE: solid"><input style="WIDTH: 28px; HEIGHT: 22px"
size="1" value="<%=sitems%>" name="sitems"></td>
            </tr>
            <tr>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td>
              <td height="1" width="276">Weight:</td>
              <td height="1" width="44"> </td>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"><input style="WIDTH: 28px; HEIGHT: 22px"
size="1" value="<%=sweight%>" name="sweight"></td>
            </tr>
            <tr>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td>
              <td height="1" width="276"> </td>
              <td height="1" width="44"> </td>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid"> </td>
            </tr>
            <tr>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid; BORDER-BOTTOM-STYLE: solid"> </td>
              <td height="1" width="276" style="BORDER-BOTTOM-
STYLE: solid">Total:</td>
              <td height="1" width="44" style="BORDER-BOTTOM-
STYLE: solid"> </td>
              <td height="1" width="78" style="BORDER-RIGHT-
STYLE: solid; BORDER-BOTTOM-STYLE: solid"><input
id="szip1" style="WIDTH: 45px; HEIGHT: 22px" size="4"
value="<%=stotal%>" name="stotal"></td>
            </tr>
```

```
          </table>
        </center>
      </div>
      <p align="center"><input id="submit" name="Submit" 
type="submit" value="Submit">
      </p>
      <p align="center"><b> NOTE:</b> For Calculate Shipping 
to work properly, the
        merchant account must be configured with a shipping file. 
For instructions,
        contact LinkPoint technical support .
      </p>
    </form>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights 
Reserved.
'
' This software is the proprietary information of LinkPoint 
International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class SHIPPING
  Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "
```

```
  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart
    order = LinkPointTransaction.LPOrderFactory.createOrderPart("order")
    ' create a part we will use to build the order
    op = LinkPointTransaction.LPOrderFactory.createOrderPart()

    ' Build 'orderoptions'
    op.put("ordertype", "CALCSHIPPING")
    ' add 'orderoptions to order
    order.addPart("orderoptions", op)

    op.clear()
    ' Build 'merchantinfo'
    op.put("configfile", configfile)
    ' add 'merchantinfo to order
    order.addPart("merchantinfo", op)

    op.clear()
    op.put("carrier", scarrier)
    op.put("weight", sweight)
    op.put("total", stotal)
    op.put("state", sstate)
    op.put("items", sitems)
    order.addPart("shipping", op)

    ' create transaction object
    LPTxn = New LinkPointTransaction.LinkPointTxn()

    ' get outgoing XML from 'order' object
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub

End Class
```

# Sample Code to Calculate Sales Tax Using .NET and Visual Basic

The code shown below demonstrates how to use the Tax calculator. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false" Codebehind="TAX.aspx.vb" Inherits="LinkPointAPI_vb.TAX"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN" >
<HTML>
  <HEAD>
    <title>TAX</title>
    <meta name="GENERATOR" Content="Microsoft Visual Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
```

```
content="http://schemas.microsoft.com/intellisense/ie5">
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <form ACTION="TAX.aspx" METHOD="post"
NAME="SaleForm" runat="server" ID="Form1">
      <p align="center"><font size="5"><b>CALCULATE
TAX</b></font></p>
      <p align="center">
        Calculate sales tax for a dollar amount based upon a sales
tax table set up in
        the merchant account. The sales tax table will<br>
        base the sales tax computations upon the Zip Code passed
('Tax Zip') .<br>
            </p>
      <div align="center">
        <center>
          <table id="TABLE1" cellSpacing="0" cellPadding="0"
width="318" border="0" height="26" bgcolor="#c0c0c0">
            <tr>
              <td height="10" width="19" style="BORDER-TOP-
STYLE: solid; BORDER-LEFT-STYLE: solid"> </td>
              <td height="10" width="276" style="BORDER-TOP-
STYLE: solid"> </td>
              <td height="10" width="44" style="BORDER-TOP-
STYLE: solid"> </td>
              <td height="10" width="78" style="BORDER-TOP-
STYLE: solid; BORDER-RIGHT-STYLE: solid"> </td>
            </tr>
            <tr>
              <td height="1" width="19" style="BORDER-LEFT-
STYLE: solid"> </td>
              <td height="24" width="90">Tax State:</td>
              <td height="1" width="44"> </td>
              <td height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><input style="WIDTH: 30px; HEIGHT: 22px" size="3" value="<%=sstate%>" name="sstate"></td>
            </tr>
            <tr>
              <td height="1" width="19" style="BORDER-LEFT-STYLE: solid"> </td>
              <td height="24" width="90">Tax Zip:</td>
              <td height="1" width="44"> </td>
              <td height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><input style="WIDTH: 45px; HEIGHT: 22px" size="4" value="<%=szip%>" name="szip"></td>
            </tr>
            <tr>
              <td height="1" width="19" style="BORDER-LEFT-STYLE: solid"> </td>
              <td height="1" width="276">Subtotal:</td>
              <td height="1" width="44"> </td>
              <td height="1" width="78" style="BORDER-RIGHT-STYLE: solid"><input style="WIDTH: 45px; HEIGHT: 22px" size="4" value="<%=stotal%>" name="stotal"></td>
            </tr>
            <tr>
              <td height="10" width="19" style="BORDER-LEFT-STYLE: solid; BORDER-BOTTOM-STYLE: solid"> </td>
              <td height="10" width="276" style="BORDER-BOTTOM-STYLE: solid"> </td>
              <td height="10" width="44" style="BORDER-BOTTOM-STYLE: solid"> </td>
              <td height="10" width="78" style="BORDER-RIGHT-STYLE: solid; BORDER-BOTTOM-STYLE: solid"> </td>
```

```
            </tr>
          </table>
        </center>
      </div>
      <!-- <pre>                           </pre> -->
      <p align="center"><input id="submit" name="Submit"
type="submit" value="Submit"></p>
      <p align="center"><b>NOTE</b>: For Calculate Tax to
work properly, the merchant
        account must be configured with a "TAX LINE". For
instructions, contact
        LinkPoint technical support.
      </p>
    </form>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
'*********************************************
' Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************
Public Class TAX
  Inherits LinkPointTxn_Page

#Region " Web Form Designer Generated Code "
```

```
  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    If IsPostBack Then
      ' Parse form data
      ParseFormData()
      ' process order
      ProcessOrder()
    End If

  End Sub

  Private Sub ProcessOrder()

    ' create order
    Dim op As LinkPointTransaction.LPOrderPart
    Dim order As LinkPointTransaction.LPOrderPart
```

```
   order =
LinkPointTransaction.LPOrderFactory.createOrderPart("order")
   ' create a part we will use to build the order
   op = LinkPointTransaction.LPOrderFactory.createOrderPart()

   ' Build 'orderoptions'
   op.put("ordertype", "CALCTAX")
   ' add 'orderoptions to order
   order.addPart("orderoptions", op)

   op.clear()
   ' Build 'merchantinfo'
   op.put("configfile", configfile)
   ' add 'merchantinfo to order
   order.addPart("merchantinfo", op)

   ' Build 'payment'
   op.clear()
   op.put("subtotal", stotal)
   ' add 'payment to order
   order.addPart("payment", op)

   ' Build 'shipping'
   op.clear()
   op.put("zip", szip)
   op.put("total", stotal)
   op.put("state", sstate)
   ' add shpping to order
   order.addPart("shipping", op)

   ' create transaction object
   LPTxn = New LinkPointTransaction.LinkPointTxn()

   ' get outgoing XML from 'order' object
```

```
    Dim outXml As String = order.toXML()

    ' Call LPTxn
    Dim resp As String = LPTxn.send(keyfile, host, port, outXml)

    'Store transaction data on Session and redirect
    Session("outXml") = outXml
    Session("resp") = resp
    Server.Transfer("status.aspx")
  End Sub

End Class
```

# Sample Code to View Results with .NET and Visual Basic

The code shown below demonstrates how to view results of a transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change the following in the **Web.config** file. (See **Sample Code Common Files for all .NET/VB Samples** to view the **Web.config** file.)

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if a change is needed), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample ASPX Code

```
<%@ Page Language="vb" AutoEventWireup="false"
Codebehind="status.aspx.vb"
Inherits="LinkPointAPI_vb.status"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0
Transitional//EN" >
<HTML>
  <HEAD>
    <title>status</title>
    <meta name="GENERATOR" Content="Microsoft Visual
Studio 7.0">
    <meta name="CODE_LANGUAGE" Content="C#">
    <meta name="vs_defaultClientScript" content="JavaScript">
    <meta name="vs_targetSchema"
content="http://schemas.microsoft.com/intellisense/ie5">
<% If ( fIE5 ) Then %>
    <script language="javascript">
    var reqState=0;
    function showReqXML()
    {

     if(reqState == 0)
     {
     document.all.xmlReqData.style.display = "";
     document.all.xmlReq.innerText="Hide Request XML";
     reqState = 1;
     }
     else
     {
     document.all.xmlReqData.style.display = 'none';
     document.all.xmlReq.innerText="Show Request XML";
     reqState = 0;
     }
    }
    var resState=0;
    function showResXML()
    {

     if(resState == 0)
     {
     document.all.xmlResData.style.display = "";
     document.all.xmlRes.innerText="Hide Response XML";
     resState = 1;
     }
     else
     {
     document.all.xmlResData.style.display = 'none';
     document.all.xmlRes.innerText="Show Response XML";
     resState = 0;
     }
    }
    </script>
<% End If %>
  </HEAD>
  <body MS_POSITIONING="GridLayout">
    <p align="center"><b><font size="5"> TRANSACTION
RESULT</font></b><br>
    </p>
    <div align="center">
      <center>
        <table border="1" cellpadding="0" cellspacing="0">
          <tr>
            <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px"> SSL API Version:</td>
            <td width="808">  <%=LPTxn.getVersion()%></td>
          </tr>
          <% If(R_Time.Length > 0) Then %>
          <tr>
            <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  Time:</td>
            <td width="808">  <%=R_Time%></td>
          </tr>
          <% end if
           if (R_Ref.Length > 0) Then %>
          <tr>
            <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  Reference:</td>
```

```
          <td width="808">  <%=R_Ref%></td>
        </tr>
        <% End If
         if (R_Approved.Length > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  Approval:</td>
          <td width="808">  <%=R_Approved%></td>
        </tr>
        <% End If
         if (R_Code.Length > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  Approval code:</td>
          <td width="808">  <%=R_Code%></td>
        </tr>
        <% End If %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  Error:</td>
          <td width="808">  <%=R_Error%></td>
        </tr>
        <% if (R_OrderNum.Length > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  Order number:</td>
          <td width="808">  <%=R_OrderNum%></td>
        </tr>
        <% End If
         if (R_Message.Length > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH:
```

```
279px"> Message:</td>
          <td width="808"> <%=R_Message%></td>
        </tr>
        <% End If
         if (R_AVS.Length > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px"> AVS:</td>
          <td width="808"> <%=R_AVS%></td>
        </tr>
        <% End If
         if (R_Score.Length > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px"> Score:</td>
          <td width="808"> <%=R_Score%></td>
        </tr>
        <% End If
         if (R_Tax.Length > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px"> Tax:</td>
          <td width="808"> <%=R_Tax%></td>
        </tr>
        <% End If
         if (R_Shipping.Length > 0) Then %>
        <tr>
          <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px"> Shipping:</td>
          <td width="808"> <%=R_Shipping%></td>
        </tr>
        <% End If
```

```
     if (R_FraudCode.Length > 0) Then %>
     <tr>
      <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  Fraud Code:</td>
      <td width="808">  <%=R_FraudCode%></td>
     </tr>
     <% End If
     if (R_ESD.Length > 0) Then %>
     <tr>
      <td width="279" bgcolor="#c0c0c0" style="WIDTH:
279px">  ESD:</td>
      <td width="808">  <%=R_ESD%></td>
     </tr>
     <% End If %>
    </table>
   </center>
  </div>
  <p />
  <p />
  <%
  if ( fIE5 ) then
  ' do DHTML
  %>
  <a id="xmlReq" href="javascript:showReqXML()">Show
Request XML</a>
  <div id="xmlReqData" style="display: 'none'">
   <%

   Response.Write("<textarea cols=60 readonly rows=20>" &
order & "</textarea>")
   %>
  </div>
```

```
    <br>
    <a id="xmlRes" href="javascript:showResXML()">Show
Response XML</a>
    <div id="xmlResData" style="display: 'none'">
      <%
      Dim dbgXML As String
      dbgXML = (resp.Replace("><",">" & Chr(10) &
"<")).Replace(">" & Chr(10) & "</","></")
      Response.Write("<textarea cols=70 readonly rows=14
wrap=off >" & dbgXML & "</textarea>")
    end if
    %>
    </div>
  </body>
</HTML>
```

## Sample Visual Basic Code

```
'*********************************************
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Reserved.
'
' This software is the proprietary information of LinkPoint
International, Inc.
' Use is subject to license terms.
'
'**********************************************

Public Class status
  Inherits LinkPointTxn_Page

 #Region " Web Form Designer Generated Code "
```

```
  'This call is required by the Web Form Designer.
  <System.Diagnostics.DebuggerStepThrough()> Private Sub InitializeComponent()

  End Sub

  Private Sub Page_Init(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Init
    'CODEGEN: This method call is required by the Web Form Designer
    'Do not modify it using the code editor.
    InitializeComponent()
  End Sub

#End Region

  Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    'Put user code to initialize the page here
    Dim bc As HttpBrowserCapabilities = Request.Browser
    If (bc.Browser = "IE" And bc.MajorVersion > 4) Then
      fIE5 = True
    End If

    If Not Nothing = Session("outXml") Then
      order = Session("outXml")
    End If
    If Not Nothing = Session("resp") Then
      resp = Session("resp")
    End If

    ParseResponse(resp)
    LPTxn = New LinkPointTransaction.LinkPointTxn()
  End Sub

  Protected order As String = "<order>NO DATA IN WAS SENT IN THE ORDER</order>"
  Protected resp As String = "<r_error>NO DATA IN THE RESPONSE</r_error>"
  Protected fIE5 As Boolean = False
End Class
```

# Sample Code to Pass XML to the PHP Module

The code shown below demonstrates how to process a Sale by passing an XML stream to the Gateway. The transaction shown is a credit card sale, but the same method is applicable to any type of transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php

# PASS_XML.pl - example of how to send and recieve an XML
string
#
# In this sample, the merchant would be doing their own XML
encoding/decoding
#
# This sample does only a minimal SALE transaction, but it can
be
# used as an example of passing in larger XML strings for more
complex
# transactions. Any of the included LinkPoint XML sample files
could be
```

```
# passed in as an XML string here.
#
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Reserved.
#
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International, Inc.
# Use is subject to license terms.


  include"lphp.php";
  $mylphp=new lphp;


/*  The formatting of the XML in this sample is only for example
  purposes and human-readability; in real life it would typically
  be all one long unbroken line. */
  $xml ="
  <order>
    <orderoptions>
      <result>GOOD</result>
      <ordertype>SALE</ordertype>
    </orderoptions>
    <merchantinfo>
      <configfile>1234567</configfile> <!-- CHANGE THIS TO
YOUR STORE NUMBER -->
    </merchantinfo>
    <creditcard>
      <cardnumber>4111111111111111</cardnumber>
      <cardexpmonth>12</cardexpmonth>
      <cardexpyear>08</cardexpyear>
    </creditcard>
    <payment>
```

```
      <chargetotal>1.03</chargetotal>
    </payment>
  </order>";

  $myorder["host"]    = "secure.linkpt.net";
  $myorder["port"]    = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # change this to
the name and location of your certificate file
  $myorder["xml"]     = $xml;
// $myorder["debugging"] = "true"; # for development only;
not intended for production use


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder);     # use shared
library model
  $result = $mylphp->curl_process($myorder); # use curl
methods

  if (strlen($result) < 2)  # no response
  {
    $result = "<r_error>Could not execute curl.</r_error>";
  }
  echo "Response: $result\n";

  # Process the XML from here....



  # Or OPTIONALLY - you could convert XML response to a
readable array
  preg_match_all ("/<(.*?)>(.*?)\</", $result, $outarr,
PREG_SET_ORDER);
```

```
  $n = 0;
  while (isset($outarr[$n]))
  {
    $retarr[$outarr[$n][1]] = strip_tags($outarr[$n][0]);
    $n++;
  }

  # and then look at it like this
  while (list($key, $value) = each($retarr))
    echo "$key = $value \n";
  # and use the hash elements that you need
?>
```

# Sample Code to Pass XML Directly to the PHP Module

The code shown below demonstrates how to process a Sale by passing an XML stream to the Gateway. The transaction shown is a credit card sale, but the same method is applicable to any type of transaction. This sample demonstrates bypassing the LPHP.PHP module that is used by most of the PHP samples, and sending an XML string DIRECTLY to the shared library LIBLPHP.SO which then uses LIBLPSSL.SO to communicate with the Gateway. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/php

<?php

# PASS_XML_LIB.php - example of how to send and recieve an XML string
#
# In this sample, the merchant would be doing their own XML encoding/decoding
#
```

```
# This sample demonstrates bypassing the LPHP.PHP module that is used
# by most of the LinkPoint PHP samples, and sending an XML string DIRECTLY
# to the shared library LIBLPHP.SO which then uses LIBLPSSL.SO to communicate
# with LSGS.
#
# An appropriate use of this code would be in a PHP installation where the
# merchant wants to do their own XML encoding/decoding and the server's PHP
# installation does not support the built-in CURL methods.
#
# This sample does only a minimal SALE transaction, but it can be
# used as an example of passing in larger XML strings for more complex
# transactions. Any of the included LinkPoint XML sample files could be
# passed in as an XML string here.
#
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#
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# Use is subject to license terms.


# If the library is at loaded at startup in PHP.INI, we don't need this call
  dl("liblphp.so");
  $xml ="
<order>
<orderoptions>
<result>GOOD</result>
<ordertype>SALE</ordertype>
</orderoptions>
<merchantinfo>
<configfile>123456</configfile> <!-- CHANGE THIS TO YOUR STORE NUMBER -->
</merchantinfo>
<creditcard>
<cardnumber>4111111111111111</cardnumber>
<cardexpmonth>12</cardexpmonth>
<cardexpyear>08</cardexpyear>
</creditcard>
<payment>
<chargetotal>1.03</chargetotal>
</payment>
</order>";

  $cert  = "./123456.pem"; # change this to the name and location of your certificate file
  $host  = "secure.linkpt.net";
  $port  = 1129;

  // send transaction to liblphp.so
  $retstg = send_stg($xml, $cert, $host, $port);

  # look at the xml that comes back
  print ("response: $retstg\n\n");

  if (strlen($retstg) < 2) # no response
  {
    $retstg = "<r_error>Could not execute curl.</r_error>";
  }

  # Process the XML from here



  # Or OPTIONALLY - you could convert XML to a readable array
  preg_match_all ("/<(.*?)>(.*?)\</", $retstg, $outarr,
PREG_SET_ORDER);

  $n = 0;
  while (isset($outarr[$n]))
  {
    $retarr[$outarr[$n][1]] = strip_tags($outarr[$n][0]);
    $n++;
  }

  # and then look at it like this
  while (list($key, $value) = each($retarr))
    echo "$key = $value \n";
  # and use the hash elements that you need


?>
```

# Sample Code to Pass XML Directly to the PHP Module

The code shown below demonstrates how to process a Sale by passing an XML stream to the Gateway. The transaction shown is a credit card sale, but the same method is applicable to any type of transaction. This sample demonstrates using the PHP built-in cURL methods to send an XML string DIRECTLY to the Gateway, bypassing lphp.php, liblphp.so and liblpssl.so. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php

# PASS_XML_DIRECT.php - example of how to send and recieve an XML string
# directly to LSGS
#
# This sample demonstrates using the PHP built-in CURL methods to send an
# XML string DIRECTLY from this sample program to LSGS, bypassing lphp.php,
# liblphp.so and liblpssl.so.
#
```

```
# We assume that PHP has been compiled to support the CURL methods.
# To see if your server's PHP supports CURL methods, enter the command
# "php -m" to see a listing of supported modules.
#
# In this program, the merchant would be doing their own XML encoding/decoding
#
# This sample does only a minimal SALE transaction, but it can be
# used as an example of passing in larger XML strings for more complex
# transactions. Any of the included LinkPoint XML sample files could be
# passed in as an XML string here.
#
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#
# This software is the proprietary information of LinkPoint International, Inc.
# Use is subject to license terms.



# Build a simple transaction XML string
# This XML formatting is for human readability only
# (In real life, this would be all one long unbroken string)
 $xml ="
<order>
<orderoptions>
<result>GOOD</result>
```

```
<ordertype>SALE</ordertype>
</orderoptions>
<merchantinfo>
<configfile>123456</configfile> <!-- CHANGE THIS TO YOUR STORE NUMBER -->
</merchantinfo>
<creditcard>
<cardnumber>4111111111111111</cardnumber>
<cardexpmonth>12</cardexpmonth>
<cardexpyear>08</cardexpyear>
</creditcard>
<payment>
<chargetotal>1.03</chargetotal>
</payment>
</order>";

  $host  = "secure.linkpt.net";
  $port  = 1129;
  $cert  = "./YOURCERT.pem"; # change this to the name and location of your certificate file



  $hoststring = "https://".$host.":".$port."/LSGSXML";

  # use PHP built-in curl functions
  $ch = curl_init ();
  curl_setopt ($ch, CURLOPT_URL,$hoststring);
  curl_setopt ($ch, CURLOPT_POST, 1);
  curl_setopt ($ch, CURLOPT_POSTFIELDS, $xml); # the string we built above
  curl_setopt ($ch, CURLOPT_SSLCERT, $cert);
  curl_setopt ($ch, CURLOPT_RETURNTRANSFER, 1);
```

```
#   curl_setopt ($ch, CURLOPT_SSL_VERIFYHOST, 0);
#   curl_setopt ($ch, CURLOPT_SSL_VERIFYPEER, 0);

//  curl_setopt ($ch, CURLOPT_VERBOSE, 1);  // optional -
verbose debug output
                        // not for production use

  # send the string to LSGS
  $result = curl_exec ($ch);

  if (strlen($result) < 2) # no response
  {
    $result = "<r_error>Could not execute curl.</r_error>";
  }



  # look at the xml that comes back
  print ("response: $result\n\n");

  # Process the XML from here....



  # Or OPTIONALLY - you could convert XML to an array
  preg_match_all ("/<(.*?)>(.*?)\</", $result, $outarr,
PREG_SET_ORDER);

  $n = 0;
  while (isset($outarr[$n]))
  {
    $retarr[$outarr[$n][1]] = strip_tags($outarr[$n][0]);
    $n++;
  }
  # and then look at it like this
  while (list($key, $value) = each($retarr))
    echo "$key = $value \n";
  # and use the hash elements that you need

?>
```

# Sample Forms for the PHP Module

To help you with your Web site development, we have included two demonstration forms. **PHP_FORM_MIN.html** sends a post to the **PHP_FORM_MIN.php** script, which sends transactions to the Gateway. **PHP_FORM_MAX.html** posts to the **PHP_FORM_MAX.php** script. Both of these scripts call functions in the lpPHP.pm module.

Depending on your server setup, the scripts that process this form, PHP_FORM_MAX.php and PHP_FORM_MIN.php and the PHP module may need to be located in a cgi-bin directory, and the path in the "action" method of the HTML forms will need to be adjusted accordingly.

The form fields have been pre-filled with test data only for convenience.

If you copy this code for your own use, .phpease make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if ap.phpicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## PHP_FORM_MIN.html

```
<!---------------------------------------------------------------------------
* PHP_FORM_MIN.html - A form processing example showing the minimum
* number of possible fields for a credit card SALE transaction.
*
* This page passes form data passed to the script PHP_FORM_MIN.php.
*
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* Use is subject to license terms.
*


<html><head><title>PHP_FORM_MIN.html sample
program</title></head><body>

<br>
<form name="form1" method="post" action="PHP_FORM_MIN.php">

<br><br>
<table>
  <tr>
    <td align="right">ordertype</td>
    <td><input name="ordertype" value="SALE"></td>
  </tr>
  <tr>
    <td align="right">amount</td>
    <td><input name="chargetotal" value="9.99"></td>
  </tr>
  <tr>
    <td align="right">cardnumber</td>
    <td><input name="cardnumber" value="4111111111111111"></td>
  </tr>
  <tr>
    <td align="right">cardexpmonth</td>
    <td><input name="cardexpmonth" value="01"></td>
  </tr>
  <tr>
    <td align="right">cardexpyear</td>
    <td><input name="cardexpyear" value="05"></td>
  </tr>
  <tr>
    <td align="right"> debugging</td>
    <td><input type=checkbox name="debugging"></td>
  </tr>
  <tr>
    <td align="right"> verbose output</td>
    <td><input type=checkbox name="verbose"></td>
  </tr>
  <tr>
    <td> </td>
    <td> <input type="submit"></td>
  </tr>
</table>
</form>

</font></body></html>
```

## PHP_FORM_MIN.php

```
<?
echo"<html><head><title>PHP_FORM_MIN.php LinkPoint Sample
</title></head><body><br>";

/*
<!---------------------------------------------------------------------------
* PHP_FORM_MIN.php - A form processing example showing the minimum
* number of possible fields for a credit card SALE transaction.
*
* This script processes form data passed in from PHP_FORM_MIN.html
*
*
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*
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*

    This program is based on the sample SALE_MININFO.php

    Depending on your server setup, this script may need to
    be placed in the cgi-bin directory, and the path in the
    calling file PHP_FORM_MIN.html may need to be adjusted
    accordingly.

    NOTE: older versions of PHP and in cases where the PHP.INI
    entry is NOT "register_globals = Off", form data can be
    accessed simply by using the form-field name as a varaible
    name, eg. $myorder["host"] = $host, instead of using the
    global $_POST[] array as we do here. Passing form fields
    as demonstrated here provides a higher level of security.

-----------------------------------------------------------------------------
```

```
>
*/
 include"lphp.php";
 $mylphp=new lphp;

  # constants
 $myorder["host"] = "secure.linkpt.net";
 $myorder["port"] = "1129";
 $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and
location of your certificate file
 $myorder["configfile"] = "1234567"; # Change this to your store number

  # form data
 $myorder["cardnumber"] = $_POST["cardnumber"];
 $myorder["cardexpmonth"] = $_POST["cardexpmonth"];
 $myorder["cardexpyear"] = $_POST["cardexpyear"];
 $myorder["chargetotal"] = $_POST["chargetotal"];
 $myorder["ordertype"] = $_POST["ordertype"];

 if ($_POST["debugging"])
   $myorder["debugging"]="true";

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder); # use shared library model
%response = $lperl->curl_process($myorder); # or use curl methods

 if ($result["r_approved"] != "APPROVED") // transaction failed, print the
reason
  {
   print "Status: $result[r_approved]<br>\n";
   print "Error: $result[r_error]<br><br>\n";
  }
  else  // success
  {
    print "Status: $result[r_approved]<br>\n";
    print "Transaction Code: $result[r_code]<br><br>\n";
  }

# if verbose output has been checked,
# print complete server response to a table
  if ($_POST["verbose"])
  {
    echo "<table border=1>";

    while (list($key, $value) = each($result))
    {
      # print the returned hash
      echo "<tr>";
      echo "<td>" . htmlspecialchars($key) . "</td>";
      echo "<td><b>" . htmlspecialchars($value) . "</b></td>";
      echo "</tr>";
    }


    echo "</TABLE><br>\n";
  }
?>

</body></html>
```

## PHP_FORM_MAX.html

```
<!---------------------------------------------------------------------
* php_form_max.html - A form processing example showing many of the
possible fields
*
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*
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* Use is subject to license terms.
*

    This program is based on the sample SALE_MAXINFO.php
    See comments in that file for many field descriptions.

    Depending on your server setup, this script may need to
    be placed in the cgi-bin directory, and the path in the
    calling file PHP_FORM_MAX.html may need to be adjusted
    accordingly.

    NOTE: older versions of PHP and in cases where the PHP.INI
    entry is NOT "register_globals = Off", form data can be
    accessed simply by using the form-field name as a varaible
    name, eg. $myorder["host"] = $host, instead of using the
    global $_POST[] array as we do here. Passing form fields
    as demonstrated here provides a higher level of security.


---------------------------------------------------------------------
>


<html><head><title>PHP_FORM_MAX.php LinkPoint
Sample</title></head><body>
<br>
<form name="form1" method="post" action="PHP_FORM_MAX.php">
```

```
<table>
  <tr>
    <td>
      <table>
      <tr>  <th colspan=2>Transaction Details</th></tr>

      <tr>
        <td align="right">ordertype</td>
        <td><input name="ordertype" value="SALE"></td>
      </tr>
      <tr>
        <td align="right">result</td>
        <td><input name="result" value="LIVE"></td>
      </tr>
      <tr>
        <td align="right">transactionorigin</td>
        <td><input name="transactionorigin" value="ECI"></td>
      </tr>
      <tr>
        <td align="right">oid</td>
        <td><input name="oid" value="12345678-A345"></td>
      </tr>
      <tr>
        <td align="right">ponumber</td>
        <td><input name="ponumber" value="09876543-Q1234"></td>
      </tr>

      <tr>
        <td align="right">taxexempt</td>
        <td><input name="taxexempt" value="NO"></td>
      </tr>
      <tr>
      <td align="right">terminaltype</td>
      <td><input name="terminaltype" value="UNSPECIFIED"></td>
    </tr>

    <tr>
      <td align="right">ip</td>
      <td><input name="ip" value="123.123.123.123"></td>
    </tr>

    <tr> <th colspan=2>Totals</th> </tr>

    <tr>
      <td align="right">subtotal</td>
      <td><input name="subtotal" value="12.99"></td>
    </tr>
    <tr>
      <td align="right">tax</td>
      <td><input name="tax" value="0.34"></td>
    </tr>
    <tr>
      <td align="right">shipping</td>
      <td><input name="shipping" value="1.45"></td>
    </tr>
    <tr>
      <td align="right">vattax</td>
      <td><input name="vattax" value="0.00"></td>
    </tr>
    <tr>
      <td align="right">chargetotal</td>
      <td><input name="chargetotal" value="14.78"> </td>
    </tr>

    <tr><th colspan=2>Card Info.</th></tr>
    <tr>
      <td align="right">cardnumber</td>
      <td><input name="cardnumber" value="4111111111111111"></td>
    </tr>
    <tr>
      <td align="right">cardexpmonth</td>
      <td><input name="cardexpmonth" value="01"></td>
    </tr>
    <tr>
      <td align="right">cardexpyear</td>
      <td><input name="cardexpyear" value="04"></td>
    </tr>
    <tr>
      <td align="right">cvmindicator</td>
      <td><input name="cvmindicator" value="provided"></td>
    </tr>
    <tr>
      <td align="right">cvmvalue</td>
      <td><input name="cvmvalue" value="123"></td>
    </tr>

    <tr> <th colspan=2>Item & Options</th></tr>

    <tr>
      <td align="center" colspan=2>Item 1</td>
    </tr>
    <tr>
      <td align="right">id</td>
      <td><input name="id" value="123456-A98765"></td>
    </tr>
    <tr>
      <td align="right">description</td>
      <td><input name="description" value="Logo T-Shirt"></td>
    </tr>
    <tr>
      <td align="right">quantity</td>
      <td><input name="quantity" value="1"></td>
    </tr>
    <tr>
      <td align="right">price</td>
      <td><input name="price" value="12.99"></td>
    </tr>
    <tr>
      <td align="center" colspan=2>Item 1 - Option 1</td>
    </tr>
    <tr>
      <td align="right">name</td>
      <td><input name="name1" value="Color"></td>
    </tr>
    <tr>
      <td align="right">value</td>
      <td><input name="value1" value="Red"></td>
    </tr>

    <tr>
      <td align="center" colspan=2>Item 1 - Option 2</td>
    </tr>
    <tr>
      <td align="right">name</td>
      <td><input name="name2" value="Size"></td>
    </tr>
    <tr>
      <td align="right">value</td>
      <td><input name="value2" value="XL"></td>
    </tr>
```

```
</table>
</td>

<td>        </td>

<td>
  <table>
  <tr> <th colspan=2>Billing Info.</th></tr>
  <tr>
    <td align="right">name</td>
    <td><input name="name" value="Joe Customer"></td>
  </tr>
  <tr>
    <td align="right">company</td>
    <td><input name="company" value="SomeWhere, Inc."></td>
  </tr>
  <tr>
    <td align="right">address1</td>
    <td><input name="address1" value="123 Broadway"></td>
  </tr>
  <tr>
    <td align="right">address2</td>
    <td><input name="address2" value="Suite 23"></td>
  </tr>
  <tr>
    <td align="right">city</td>
    <td><input name="city" value="Moorpark"></td>
  </tr>
  <tr>
    <td align="right">state</td>
    <td><input name="state" value="CA"></td>
  </tr>
  <tr>
```

```
        <td align="right">country</td>
        <td><input name="country" value="US"></td>
      </tr>
      <tr>
        <td align="right">phone</td>
        <td><input name="phone" value="8051234567"></td>
      </tr>
      <tr>
        <td align="right">fax</td>
        <td><input name="fax" value="8059876543"></td>
      </tr>
      <tr>
        <td align="right">email</td>
        <td><input name="email"
value="joe.customer@somewhere.com"></td>
      </tr>
      <tr>
        <td align="right">zip</td>
        <td><input name="zip" value="87123"></td>
      </tr>
      <tr>
        <td align="right">addrnum</td>
        <td><input name="addrnum" value="123"></td>
      </tr>

      <tr> <th colspan=2>Shipping Info.</th></tr>
      <tr>
        <td align="right">sname</td>
        <td><input name="sname" value="Joe Customer"></td>
      </tr>
      <tr>
        <td align="right">saddress1</td>
        <td><input name="saddress1" value="123 Broadway"></td>
```

```
    </tr>
    <tr>
      <td align="right">saddress2</td>
      <td><input name="saddress2" value="Suite 23"></td>
    </tr>
    <tr>
      <td align="right">scity</td>
      <td><input name="scity" value="Moorpark"></td>
    </tr>
    <tr>
      <td align="right">sstate</td>
      <td><input name="sstate" value="CA"></td>
    </tr>
    <tr>
      <td align="right">szip</td>
      <td><input name="szip" value="12345"></td>
    </tr>
    <tr>
      <td align="right">scountry</td>
      <td><input name="scountry" value="US"></td>
    </tr>

    <tr> <th colspan=2>Misc.</th></tr>

    <tr>
      <td colspan=2>comments<br><textarea name="comments">Repeat customer. Ship immediately.</textarea></td>
    </tr>

    <tr>
      <td colspan=2>referred<br><textarea name="referred">Saw ad on Web site.</textarea></td>
    </tr>
```

```
   <tr><td> </td></tr>
   <tr><td> </td></tr>

   <tr>
    <td align="right"><input type=checkbox name="verbose"></td>
    <td> verbose output </td>
   </tr>
   <tr>
    <td align="right"><input type=checkbox name="debugging"></td>
    <td> debugging </td>
   </tr>


   <tr><td> </td></tr>
   <tr><td> </td></tr>

   </table>
  </td>
 </tr>

 <tr>
  <td colspan=3 align="middle"> <input type="submit" ></td>
 </tr>
</table>

</body></html>
```

## PHP_FORM_MAX.php

```
<?
echo"<html><head><title>PHP_FORM_MIN.php LinkPoint Sample
</title></head><body><br>";
/*

<!---------------------------------------------------------------------------------
* PHP_FORM_MAX.php - A form processing example showing many of the
possible fields
*
* This script processes form data passed in from PHP_FORM_MAX.html
*
*
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*
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*

    This program is based on the sample SALE_MAXINFO.php
    See comments in that file for many field descriptions.

    Depending on your server setup, this script may need to
    be placed in the cgi-bin directory, and the path in the
    calling file PHP_FORM_MAX.html may need to be adjusted
    accordingly.

    NOTE: older versions of PHP and in cases where the PHP.INI
    entry is NOT "register_globals = Off", form data can be
    accessed simply by using the form-field name as a varaible
    name, eg. $myorder["host"] = $host, instead of using the
    global $_POST[] array as we do here. Passing form fields
    as demonstrated here provides a higher level of security.
```

```
------------------------------------------------------------------------
>
*/
 include"lphp.php";
 $mylphp=new lphp;

 # constants
 $myorder["host"] = "secure.linkpt.net";
 $myorder["port"] = "1129";
 $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of your certificate file
 $myorder["configfile"] = "1234567"; # Change this to your store number

 # transaction details
 $myorder["ordertype"] = $_POST["ordertype"];
 $myorder["result"] = $_POST["result"];
 $myorder["transactionorigin"] = $_POST["transactionorigin"];
 $myorder["oid"] = $_POST["oid"];
 $myorder["ponumber"] = $_POST["ponumber"];
 $myorder["taxexempt"] = $_POST["taxexempt"];
 $myorder["terminaltype"] = $_POST["terminaltype"];
 $myorder["ip"] = $_POST["ip"];

 # totals
 $myorder["subtotal"] = $_POST["subtotal"];
 $myorder["tax"] = $_POST["tax"];
 $myorder["shipping"] = $_POST["shipping"];
 $myorder["vattax"] = $_POST["vattax"];
 $myorder["chargetotal"] = $_POST["chargetotal"];

 # card info
 $myorder["cardnumber"] = $_POST["cardnumber"];
 $myorder["cardexpmonth"] = $_POST["cardexpmonth"];
 $myorder["cardexpyear"] = $_POST["cardexpyear"];
```

```
$myorder["cvmindicator"] = $_POST["cvmindicator"];
$myorder["cvmvalue"] = $_POST["cvmvalue"];

# BILLING INFO
$myorder["name"] = $_POST["name"];
$myorder["company"] = $_POST["company"];
$myorder["address1"] = $_POST["address1"];
$myorder["address2"] = $_POST["address2"];
$myorder["city"] = $_POST["city"];
$myorder["state"] = $_POST["state"];
$myorder["country"] = $_POST["country"];
$myorder["phone"] = $_POST["phone"];
$myorder["fax"] = $_POST["fax"];
$myorder["email"] = $_POST["email"];
$myorder["addrnum"] = $_POST["addrnum"];
$myorder["zip"] = $_POST["zip"];

# SHIPPING INFO
$myorder["sname"] = $_POST["sname"];
$myorder["saddress1"] = $_POST["saddress1"];
$myorder["saddress2"] = $_POST["saddress2"];
$myorder["scity"] = $_POST["scity"];
$myorder["sstate"] = $_POST["sstate"];
$myorder["szip"] = $_POST["szip"];
$myorder["scountry"] = $_POST["scountry"];
# SHIPPING CALCULATION
$myorder["sweight"] = $_POST["sweight"];
$myorder["sitems"] = $_POST["sitems"];
$myorder["scarrier"] = $_POST["scarrier"];
$myorder["stotal"] = $_POST["stotal"];

# MISC
$myorder["comments"] = $_POST["comments"];
```

```
  $myorder["referred"] = $_POST["referred"];

  # ITEMS AND OPTIONS
  # there are several ways to pass items and options; see sample SALE_MAXINFO.php

  $myorder["items"][item1]["id"] = $_POST["id"];
  $myorder["items"][item1]["description"] = $_POST["description"];
  $myorder["items"][item1]["quantity"] = $_POST["quantity"];
  $myorder["items"][item1]["price"] = $_POST["price"];

  $myorder["items"][item1]["option1"]["name"] = $_POST["name1"];
  $myorder["items"][item1]["option1"]["value"] = $_POST["value1"];
  $myorder["items"][item1]["option2"]["name"] = $_POST["name2"];
  $myorder["items"][item1]["option2"]["value"] = $_POST["value2"];

  if ($_POST["debugging"])
    $myorder["debugging"]="true";


# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder); # use shared library model
%response = $lperl->curl_process($myorder); # or use curl methods


  if ($result["r_approved"] != "APPROVED") // transaction failed, print the reason
  {
    print "Status: $result[r_approved]<br>\n";
    print "Error: $result[r_error]<br><br>\n";
  }
  else  // success
  {
    print "Status: $result[r_approved]<br>\n";
    print "Transaction Code: $result[r_code]<br><br>\n";
  }

# if verbose output has been checked,
# print complete server response to a table
  if ($_POST["verbose"])
  {
    echo "<table border=1>";

    while (list($key, $value) = each($result))
    {
      # print the returned hash
      echo "<tr>";
      echo "<td>" . htmlspecialchars($key) . "</td>";
      echo "<td><b>" . htmlspecialchars($value) . "</b></td>";
      echo "</tr>";
    }

    echo "</table><br>\n";
  }
?>

</body></html>
```

# Sample Code to Process a Sale (Minimum Info) Using PHP

The code shown below demonstrates how to process a credit card sale. This example includes only the minimum fields required for a SALE transaction. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php

/***********************************************************************\

  SALE_MININFO.php - Minimum Required Fields for a Credit Card SALE


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\************************************************************************/


  include"lphp.php";
  $mylphp=new lphp;

  $myorder["host"] = "secure.linkpt.net";
  $myorder["port"] = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of 
your certificate file
  $myorder["configfile"] = "1234567"; # Change this to your store number
  $myorder["ordertype"] = "SALE";
  $myorder["result"] = "LIVE"; # For a test, set result to GOOD, DECLINE, or DUPLICATE
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "01";
  $myorder["cardexpyear"] = "05";
  $myorder["chargetotal"] = "9.99";

  $myorder["addrnum"] = "123"; # Required for AVS. If not provided, transactions will downgrade.
  $myorder["zip"] = "12345"; # Required for AVS. If not provided, transactions will downgrade.
//  $myorder["debugging"] = "true"; # for development only - not intended for production use


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder);     # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods



  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {  // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  // Look at returned hash & use the elements you need //
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  #if you're in web space, look at response like this:
    echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
*/
?>
```

# Sample Code to Process a Sale (Maximum Info) Using PHP

The code shown below demonstrates how to process a credit card sale. This example includes samples of all the commonly used fields you can use in a SALE transaction. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php

/***********************************************************************\

  SALE_MININFO.php - Minimum Required Fields for a Credit Card SALE


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  Use is subject to license terms.

\***********************************************************************/


  include"lphp.php";
  $mylphp=new lphp;

  $myorder["host"] = "secure.linkpt.net";
  $myorder["port"] = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of
your certificate file
```

```
  $myorder["configfile"] = "1234567"; # Change this to your store number

  $myorder["ordertype"] = "SALE";
  $myorder["result"] = "LIVE"; # For test transactions, set to GOOD, DECLINE, or DUPLICATE
  $myorder["transactionorigin"] = "MOTO"; # For credit card retail txns, set to RETAIL, for Mail order/telephone order, set to MOTO, for e-commerce, leave out or set to ECI
  $myorder["oid"] = "12345678-A345"; # Order ID number must be unique. If not set, gateway will assign one.
  $myorder["ponumber"] = "09876543-Q1234";
  $myorder["taxexempt"] = "N";
  $myorder["terminaltype"] = "UNSPECIFIED"; # Set terminaltype to POS for an electronic cash register or integrated POS system, STANDALONE for a point-of-sale credit card terminal, UNATTENDED for a self-service station, or UNSPECIFIED for e-commerce or other applications
  $myorder["ip"] = "123.123.123.123";

  $myorder["subtotal"] = "12.99";
  $myorder["tax"] = "0.34";
  $myorder["shipping"] = "1.45";
  $myorder["vattax"] = "0.00";
  $myorder["chargetotal"] = "14.78";

  # CARD INFO
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "01";
  $myorder["cardexpyear"] = "05";
  $myorder["cvmindicator"] = "provided";
  $myorder["cvmvalue"] = "123";

  # BILLING INFO
  $myorder["name"] = "Joe Customer";
  $myorder["company"] = "123 Broadway";
  $myorder["address1"] = "Suite 23v";
  $myorder["address2"] = "";
  $myorder["city"] = "Moorpark";
  $myorder["state"] = "CA";
  $myorder["country"] = "US";
  $myorder["phone"] = "8051234567";
```

```
 $myorder["fax"] = "8059876543";
 $myorder["email"] = "joe.customer@somewhere.com";
 $myorder["addrnum"] = "123"; # Required for AVS. If not provided, transactions will
downgrade.
 $myorder["zip"] = "87123"; # Required for AVS. If not provided, transactions will
downgrade.

 # SHIPPING INFO
 $myorder["sname"] = "Joe Customer";
 $myorder["saddress1"] = "123 Broadway";
 $myorder["saddress2"] = "'Suite 23";
 $myorder["scity"] = "Moorpark";
 $myorder["sstate"] = "CA";
 $myorder["szip"] = "12345";
 $myorder["scountry"] = "US";

 # ITEMS AND OPTIONS
 $items = array (
   'id'        => '123456-A98765',
   'description'   => 'Logo T-Shirt',
   'quantity'     => '1',
   'price'      => '12.99',
   'options' => array
        (
        'name' => 'Color',
        'value'=> 'Red'
        ),
   'options2' => array
       (
       'name' => 'Size',
       'value' => 'XL'
       )
   );

 $myorder["items"][0] = $items; # put array of items into hash

 # you could also submit this same item w/ options like this:
/*
 $myorder["items"][item1]["id"] = "123456-A98765";
```

```
  $myorder["items"][item1]["description"] = "Logo T-Shirt";
  $myorder["items"][item1]["quantity"] = "1";
  $myorder["items"][item1]["price"] = "12.99";

    # pass options in like this:
    $myorder["items"][item1]["option1"]["name"] = "Color";
    $myorder["items"][item1]["option1"]["value"] = "Red";
    $myorder["items"][item1]["option2"]["name"] = "Size";
    $myorder["items"][item1]["option2"]["value"] = "XL";

    # or you could alternately pass the same options in like this:
#    $myorder["items"][item1][0]["name"] = "Color";
#    $myorder["items"][item1][0]["value"] = "Red";
#    $myorder["items"][item1][1]["name"] = "Size";
#    $myorder["items"][item1][1]["value"] = "XL";
*/


   # MISC
  $myorder["comments"] = "Repeat customer. Ship immediately.";
  $myorder["referred"] = "Saw ad on Web site.";
//  $myorder["debugging"] = "true"; # for development only - not intended for production use


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {          // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  # (if you're in web space, look at response like this):
     echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
*/
?>
```

# Sample Code to Process a PreAuth Transaction Using PHP

The code shown below demonstrates how to process a PreAuthorization Transaction. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/*********************************************************************\

  PREAUTH.php - Minimum Required Fields for a PreAuth

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\*********************************************************************/


  include"lphp.php";
  $mylphp=new lphp;

  $myorder["host"] = "secure.linkpt.net";
  $myorder["port"] = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of your certificate file
  $myorder["configfile"] = "1234567"; # Change this to your store number

  $myorder["ordertype"] = "PREAUTH";
  $myorder["chargetotal"] = "12.99";
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "03";
  $myorder["cardexpyear"] = "05";
  $myorder["addrnum"] = "123"; # Required for AVS. If not provided, transactions will downgrade.
  $myorder["zip"] = "12345";  # Required for AVS. If not provided, transactions will downgrade.


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {          // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  #if you're in web space, look at response like this:
     echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
*/
?>
```

# Sample Code to Process a PostAuth Transaction Using PHP

The code shown below demonstrates how to process a PostAuthorization Transaction (that is, to complete a PreAuthorization with a valid order ID). The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/************************************************************************\

 POSTAUTH.php - Minimum Required Fields for a PostAuth

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\*************************************************************************/


 include"lphp.php";
 $mylphp=new lphp;

 $myorder["host"] = "secure.linkpt.net";
 $myorder["port"] = "1129";
 $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of
your certificate file
 $myorder["configfile"] = "1234567"; # Change this to your store number
```

```
  $myorder["ordertype"] = "POSTAUTH";
  $myorder["chargetotal"] = "12.99";
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "03";
  $myorder["cardexpyear"] = "05";
  $myorder["oid"] = "12345678-A345"; # Must be a valid order ID from a prior Sale or PreAuth


 # Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {          // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  #if you're in web space, look at response like this:
     echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
*/
?>
```

# Sample Code for Using AVS and CVM with PHP

The code shown below demonstrates how to process a credit card sale taking advantage of both the AVS and the CVM fraud protection measures. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/*********************************************************************\

  AVS_CVM.php - An Example Credit Card SALE With Minimum Fields required for AVS and Card Code fraud prevention measures

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\*********************************************************************/


  include"lphp.php";
  $mylphp=new lphp;

  $myorder["host"] = "secure.linkpt.net";
  $myorder["port"] = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of your certificate file
  $myorder["configfile"] = "1234567"; # Change this to your store number

$myorder["ordertype"] = "SALE";
```

```
  $myorder["chargetotal"] = "12.99";
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "03";
  $myorder["cardexpyear"] = "05";
  $myorder["cvmindicator"] = "provided";
  $myorder["cvmvalue"] = "123";  # CVM is the three-digit security code usually found on
the signature line on the back of the card
  $myorder["addrnum"] = "123"; # Required for AVS. If not provided, transactions will
downgrade.
  $myorder["zip"] = "12345";  # Required for AVS. If not provided, transactions will
downgrade.


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {          // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  #if you're in web space, look at response like this:
     echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
*/
```

```
?>
```

# Sample Code to run a FORCED TICKET Transaction using PHP

The code shown below demonstrates how to process a PostAuthorization for a Voice Authorization (a Forced Ticket transaction). The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/*************************************************************************\

  FORCED_TICKET.php - Minimum Required Fields for a FORCED TICKET Transaction

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\*************************************************************************/


  include"lphp.php";
  $mylphp=new lphp;

  $myorder["host"] = "secure.linkpt.net";
  $myorder["port"] = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of
your certificate file
  $myorder["configfile"] = "1234567"; # Change this to your store number
  $myorder["ordertype"] = "POSTAUTH";
  $myorder["chargetotal"] = "12.99";
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "03";
  $myorder["cardexpyear"] = "05";
  $myorder["reference_number"] = "NEW987654"; # The reference number given over
the phone


 # Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {          // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  #if you're in web space, look at response like this:
     echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
*/
?>
```

# Sample Code to Process a Return Using PHP

The code shown below demonstrates how to process a credit card return. To perform a return, you must have a valid order ID (**oid**) from a prior SALE or PREAUTH/POSTAUTH. The example uses a hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/**********************************************************************\

 RETURN.php - Minimum Required Fields for a Credit Card CREDIT

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\**********************************************************************/


 include"lphp.php";
 $mylphp=new lphp;

 $myorder["host"] = "secure.linkpt.net";
 $myorder["port"] = "1129";
 $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of your certificate file
 $myorder["configfile"] = "1234567"; # Change this to your store number
```

```
  # Amount returned must be less than or equal to the order amount.
  # If there is more than one return against this order, make sure
  #the total of the returns doesn't exceed the original sale amount.
  $myorder["chargetotal"] = "12.99";
  $myorder["ordertype"] = "CREDIT";
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "03";
  $myorder["cardexpyear"] = "05";
  #Must be a valid order ID from a prior Sale
  $myorder["oid"] = "12345678-A345";


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {          // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  #if you're in web space, look at response like this:
     echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
    }
*/
?>
```

# Sample Code to perform a Credit Card VOID Transaction Using PHP

The code shown below demonstrates how to process a credit card VOID transaction. You can only void a credit card SALE transaction if the associated credit card batch has not yet been processed (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/*********************************************************************\

 VOID.php - Minimum Required Fields for a Credit Card VOID

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\*********************************************************************/


 include"lphp.php";
 $mylphp=new lphp;

 $myorder["host"] = "secure.linkpt.net";
 $myorder["port"] = "1129";
```

```
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of your certificate file
  $myorder["configfile"] = "1234567"; # Change this to your store number

  $myorder["ordertype"] = "VOID";
  $myorder["chargetotal"] = "12.99";
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "03";
  $myorder["cardexpyear"] = "05";
  #Must be a valid order ID from a prior Sale or PreAuth
  $myorder["oid"] = "12345678-A345";


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {          // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  #if you're in web space, look at response like this:
     echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
```

```
   }
*/
?>
```

# Sample Code to run a Credit Card Transaction using Items (Including ESD) with PHP

The code shown below demonstrates how to process a Sale using the Items and Options feature. One of the items included in the example is an Electronic Softgood Download (ESD) item. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php

/**************************************************************************************\

 ITEMS_W_ESD.php - Required Fields for an Example Credit Card SALE with ITEMS

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\**************************************************************************************/


 include"lphp.php";
 $mylphp=new lphp;

 $myorder["host"] = "secure.linkpt.net";
 $myorder["port"] = "1129";
 $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of your
certificate file
 $myorder["configfile"] = "1234567"; # Change this to your store number

 $myorder["ordertype"] = "SALE";
 $myorder["subtotal"] = "45.98";
 $myorder["tax"] = "0.32";
 $myorder["shipping"] = "1.02";
 $myorder["chargetotal"] = "47.32";
 $myorder["cardnumber"] = "4111-1111-1111-1111";
 $myorder["cardexpmonth"] = "01";
 $myorder["cardexpyear"] = "05";
 $myorder["name"] = "Joe Customer"; # If you use ESD items, name is required
 $myorder["addrnum"] = "123"; # Required for AVS. If not provided, transactions will downgrade.
 $myorder["zip"] = "87123"; # Required for AVS. If not provided, transactions will downgrade.


 # ITEMS AND OPTIONS
 $item0 = array (
   'id'        => '123456-A98765',
   'description'   => 'Logo T-Shirt',
   'quantity'     => '1',
   'price'       => '12.99',
   'serial'     => '0987654321',
   'options' => array
        (
        'name' => 'Color',
        'value'=> 'Red'
        ),
   'options2' => array
       (
       'name' => 'Size',
       'value' => 'XL'
       )
   );

 $myorder["items"][0] = $item0; # put array of items/options into hash

 # ITEM w/ ESD
$item1 = array (
   'id'        => '123456-B98765',
   'description'   => 'Blast-Em Software',
   'quantity'     => '1',
   'price'       => '12.99',
   'serial'     => '0987654321',
'esdtype' => 'Esdtype_Softgood',
'softfile' => 'blastemgame.exe',
   );

 $myorder["items"][1] = $item1; # put item array into hash


 # you could also submit the same item w/options like this:
```

```
/*
  $myorder["items"][item1]["id"] = "123456-A98765";
  $myorder["items"][item1]["description"] = "Logo T-Shirt";
  $myorder["items"][item1]["quantity"] = "1";
  $myorder["items"][item1]["price"] = "12.99";

    # pass options in like this:
    $myorder["items"][item1]["option1"]["name"] = "Color";
    $myorder["items"][item1]["option1"]["value"] = "Red";
    $myorder["items"][item1]["option2"]["name"] = "Size";
    $myorder["items"][item1]["option2"]["value"] = "XL";

    # or you could alternately build arrays like this:
#     $myorder["items"][item1][0]["name"] = "Color";
#     $myorder["items"][item1][0]["value"] = "Red";
#     $myorder["items"][item1][1]["name"] = "Size";
#     $myorder["items"][item1][1]["value"] = "XL";
*/


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {           // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  # (if you're in web space, look at response like this):
     echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
```

```
*/
?>
```

# Sample Code to run a Level 2 Purchasing Card Transaction with PHP

The code shown below demonstrates how to process a Sale including all the data elements needed for a Level 2 purchasing card transaction. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php


/**********************************************************************\

 L2PURCHASING_CARD.php - An Example Level 2 Purchasing Card SALE


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\***********************************************************************/


 include"lphp.php";
 $mylphp=new lphp;

 $myorder["host"] = "secure.linkpt.net";
 $myorder["port"] = "1129";
 $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of
your certificate file
```

```
  $myorder["configfile"] = "1234567"; # Change this to your store number

  $myorder["ordertype"] = "SALE";
  $myorder["tax"] = "0.32";
  $myorder["chargetotal"] = "47.32";
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "01";
  $myorder["cardexpyear"] = "05";
  $myorder["chargetotal"] = "9.99";
  $myorder["ponumber"] = "1203A-G4567";
  $myorder["taxexempt"] = "N";


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {          // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  #if you're in web space, look at response like this:
     echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
*/
?>
```

# Sample Code to run a Batch of Transactions using PHP

The code shown below demonstrates how to send multiple credit card transactions to the Gateway for processing. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php

/************************************************************************\

# MULTIPLE.php - Sample of multiple processing
#
# This sample demonstrates running an array of PREAUTH transactions.
#
# This could equally well be a series of POSTAUTHS or RETURNS if the
# OIDs match those previously approved.

Note: if you are using the shared object LIBLPHP.SO and are getting
PHP warings "Function registration failed..." while processing batches,
you can add this entry to your php.ini file:
     extension=liblphp.so
and then comment out the lines to load the library at LIBLPHP.PHP
module at about line # 57.

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\****************************************************************************/


  include"lphp.php";
  $mylphp=new lphp;

  $myorder["host"] = "secure.linkpt.net";
  $myorder["port"] = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of
your certificate file
  $myorder["configfile"] = "1234567"; # Change this to your store number

  $myorder["ordertype"] = "PREAUTH";
  $myorder["result"] = "good"; # For a test, set result to GOOD, DECLINE, or DUPLICATE
//  $myorder["debugging"] = "true";


  # build array of individual orders
  $order0 = array (
    'chargetotal' => '1.11',
    'cardnumber' => '4111-1111-1111-1111',
    'cardexpmonth' => '01',
    'cardexpyear' => '04',
    'addrnum' => '123', # Required for AVS. If not provided, transactions will downgrade.
    'zip' => '12345', # Required for AVS. If not provided, transactions will downgrade.
#    'oid' => '12345678-A1'
    );

  $myorder["orders"][0] = $order0; # put array into hash

  $order1 = array (
    'chargetotal' => '2.22',
    'cardnumber' => '4111-1111-1111-1111',
    'cardexpmonth' => '01',
    'cardexpyear' => '02',
    'addrnum' => '123', # Required for AVS. If not provided, transactions will downgrade.
    'zip' => '23456', # Required for AVS. If not provided, transactions will downgrade.
#    'oid' => '12345678-B2'
    );
```

```
 $myorder["orders"][1] = $order1; # put array into hash

 $order2 = array (
   'chargetotal' => '3.33',
   'cardnumber' => '4111-1111-1111-1111',
   'cardexpmonth' => '01',
   'cardexpyear' => '04',
   'addrnum' => '123', # Required for AVS. If not provided, transactions will downgrade.
   'zip' => '34567', # Required for AVS. If not provided, transactions will downgrade.
#    'oid' => '12345678-C3'
   );

 $myorder["orders"][2] = $order2; # put array into hash


 # PROCESS ORDERS ARRAYS #


 while (list ($key, $val) = each ($myorder))
 {
   if (is_array($val))
   {
     $orders_array = $val;

     while (list ($akey, $aval) = each ( $orders_array))
     {
       $oa2 = $aval;

       # CONSTANTS
       $txn["host"] = $myorder["host"];
       $txn["port"] = $myorder["port"];
       $txn["keyfile"] = $myorder["keyfile"];
       $txn["configfile"] = $myorder["configfile"];
       $txn["debugging"] = $myorder["debugging"];

       # INDIVIDUAL ORDER ELEMENTS
       $txn["chargetotal"] = $oa2[chargetotal];
       $txn["cardnumber"] = $oa2[cardnumber];
       $txn["cardexpmonth"] = $oa2[cardexpmonth];
       $txn["cardexpyear"] = $oa2[cardexpyear];
```

```
        $txn["addrnum"] = $oa2[addrnum];
        $txn["zip"] = $oa2[zip];
        $txn["oid"] = $oa2[oid];

       # Send transaction. Use one of two possible methods #
        $result = $mylphp->process($txn);    # use shared library model
      //  $result = $mylphp->curl_process($txn); # use curl methods

        if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
        {
          print "Status: $result[r_approved]\n";
          print "Error: $result[r_error]\n";
        }
        else
        {  // success
          print "Status: $result[r_approved]\n";
          print "Code: $result[r_code]\n";
          print "OID: $result[r_ordernum]\n";
        }
      }
    }
  }
?>
```

# Sample Code to Set Up a New Recurring Credit Card Transaction Using PHP

The code shown below demonstrates how to process a Recurring Credit Card Transaction (Periodic Bill). The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/*********************************************************************\

  PB_NEW.php - Minimum Required Fields for a Recurring Credit Card Sale (Periodic Bill)

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\*********************************************************************/


  include"lphp.php";
  $mylphp=new lphp;

  $myorder["host"] = "secure.linkpt.net";
  $myorder["port"] = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of your certificate file
  $myorder["configfile"] = "1234567"; # Change this to your store number

  $myorder["ordertype"] = "SALE";
  $myorder["chargetotal"] = "9.99";
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "01";
  $myorder["cardexpyear"] = "05";
  $myorder["addrnum"] = "123"; # Required for AVS. If not provided, transactions will downgrade.
  $myorder["zip"] = "12345"; # Required for AVS. If not provided, transactions will downgrade.
  $myorder["debugging"] = "true"; # for development only - not intended for production use

  # periodic fields
  $myorder["action"] = "SUBMIT";
  $myorder["installments"] = "3";
  $myorder["threshold"] = "3";
  $myorder["startdate"] = "immediate";
  $myorder["periodicity"] = "monthly";


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {           // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  #if you're in web space, look at response like this:
    echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
*/
?>
```

# Sample Code to Modify a Recurring Credit Card Transaction Using PHP

The code shown below demonstrates how to modify a Recurring Credit Card Transaction (Periodic Bill). The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/*********************************************************************\

  PB_MODIFY.php - Minimum Required Fields to Modify a Recurring Credit Card Sale (Periodic Bill)

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\*********************************************************************/


  include"lphp.php";
  $mylphp=new lphp;

  $myorder["host"] = "secure.linkpt.net";
  $myorder["port"] = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of your certificate file
  $myorder["configfile"] = "1234567"; # Change this to your store number
  $myorder["ordertype"] = "SALE";
  $myorder["chargetotal"] = "12.99";
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "01";
  $myorder["cardexpyear"] = "05";

  # PERIODIC FIELDS

  # Set action to MODIFY to modify the periodic bill. You may modify ONLY the parameters in the periodic entity
  $myorder["action"] = "MODIFY";
  # Changes will be in effect as of the time specified. No periodic bills will be sent until the startdate specified here. If you don't want it to start today, pass a date in the format YYYYMMDD
  $myorder["startdate"] = "immediate";
  # Specifies a recurring transaction charging the card 5 times, once a month.
  $myorder["installments"] = "5";
  $myorder["threshold"] = "3";
  $myorder["periodicity"] = "monthly";
  # You MUST pass a valid Order ID for an EXISTING periodic bill to identify which bill you want to modify -->
  $myorder["oid"] = "111.456.87.03-O986646-A123";


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {          // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }
```

```
/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  #if you're in web space, look at response like this:
     echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
*/
?>
```

# Sample Code to Cancel a Recurring Credit Card Transaction Using PHP

The code shown below demonstrates how to Cancel an existing Recurring Credit Card Transaction (Periodic Bill). The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/***************************************************************************\

  PB_CANCEL.php - Minimum Required Fields to Cancel a Recurring Credit Card Sale (Periodic Bill)

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\***************************************************************************/


  include"lphp.php";
  $mylphp=new lphp;

  $myorder["host"] = "secure.linkpt.net";
  $myorder["port"] = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of your certificate file
  $myorder["configfile"] = "1234567"; # Change this to your store number
  $myorder["ordertype"] = "SALE";
  $myorder["chargetotal"] = "12.99";
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "01";
  $myorder["cardexpyear"] = "05";

  # periodic fields
   # Set action to CANCEL to cancel the recurring transaction
  $myorder["action"] = "CANCEL";
  # Changes will be in effect as of the time specified. No periodic bills will be sent until the
startdate specified here.
  # If you don't want it to start today, pass a date in the format YYYYMMDD
$myorder["startdate"] = "immediate";
  # Specifies a recurring transaction charging the card 5 times, once a month.
  $myorder["installments"] = "5";
  $myorder["threshold"] = "3";
  $myorder["periodicity"] = "monthly";
  # You MUST pass a valid Order ID for an EXISTING periodic bill to identify which bill you
want to modify -->
  $myorder["oid"] = "111.456.87.03-O986646-A123";


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {          // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }
```

```
/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  #if you're in web space, look at response like this:
     echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
*/
?>
```

# Sample Code to Process a Retail Swipe Transaction Using PHP

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is swiped with a credit card reader. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/************************************************************************\

 RETAIL_SWIPE.php - Minimum Required Fields for a Credit Card SALE

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\************************************************************************/


 include"lphp.php";
 $mylphp=new lphp;

 $myorder["host"] = "secure.linkpt.net";
 $myorder["port"] = "1129";
 $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of your certificate file
 $myorder["configfile"] = "1234567"; # Change this to your store number
```

```
  $myorder["ordertype"] = "SALE";
  $myorder["transactionorigin"] = "RETAIL";
  # Set terminaltype to POS for an electronic cash register or integrated POS system,
  # STANDALONE for a point-of-sale credit card terminal,
  # UNATTENDED for a self-service station,
  # or UNSPECIFIED for e-commerce or other applications
  $myorder["terminaltype"] = "POS";
  $myorder["chargetotal"] = "12.99";
  $myorder["track"] = "1298361023614908";

  # You should not do AVS for a retail swiped transaction, unless it is an UNATTENDED terminaltype.
  # billing addrnum and billing zip are not required because we're not doing AVS
  #$myorder["addrnum"] = "123"; # Required for AVS. If not provided, transactions will downgrade.
  #$myorder["zip"] = "12345";  # Required for AVS. If not provided, transactions will downgrade.


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {          // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  #if you're in web space, look at response like this:
     echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
*/
?>
```

# Sample Code to Process a Retail Keyed Transaction Using PHP

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is keyed in. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/***********************************************************************\

  RETAIL_KEYED.php - Minimum Required Fields for a Credit Card SALE

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\***********************************************************************/


  include"lphp.php";
  $mylphp=new lphp;

  $myorder["host"] = "secure.linkpt.net";
  $myorder["port"] = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of
your certificate file
  $myorder["configfile"] = "1234567"; # Change this to your store number
  $myorder["ordertype"] = "SALE";
  $myorder["transactionorigin"] = "RETAIL";
  # Set terminaltype to POS for an electronic cash register or integrated POS system,
  # STANDALONE for a point-of-sale credit card terminal,
  # UNATTENDED for a self-service station,
  # or UNSPECIFIED for e-commerce or other applications
  $myorder["terminaltype"] = "POS";
  $myorder["chargetotal"] = "12.99";
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "01";
  $myorder["cardexpyear"] = "05";

  # You should not do AVS for a retail swiped transaction, unless it is an UNATTENDED terminaltype.
  # billing addrnum and billing zip are not required because we're not doing AVS
  #$myorder["addrnum"] = "123"; # Required for AVS. If not provided, transactions will downgrade.
  #$myorder["zip"] = "12345";  # Required for AVS. If not provided, transactions will downgrade.


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {          // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  #if you're in web space, look at response like this:
     echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
*/
?>
```

# Sample Code to Process a Retail UNATTENDED Transaction Using PHP

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card terminal is unattended (that is, a self-service station such as a gas station or ticket booth). In this case, you should do a partial AVS where you collect the zip code only. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/**************************************************************************\

 RETAIL_PARTIAL_AVS.php - Minimum Required Fields for a Credit Card SALE

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\***************************************************************************/


 include"lphp.php";
 $mylphp=new lphp;

 $myorder["host"] = "secure.linkpt.net";
 $myorder["port"] = "1129";
 $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of
your certificate file
 $myorder["configfile"] = "1234567"; # Change this to your store number
```

```
  $myorder["ordertype"] = "SALE";
  $myorder["chargetotal"] = "12.99";
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "03";
  $myorder["cardexpyear"] = "05";
  $myorder["chargetotal"] = "12.99";

  $myorder["transactionorigin"] = "RETAIL";
  # Set terminaltype to POS for an electronic cash register or integrated POS system,
  # STANDALONE for a point-of-sale credit card terminal,
  # UNATTENDED for a self-service station,
  # or UNSPECIFIED for e-commerce or other applications
  $myorder["terminaltype"] = "UNATTENDED";

  #For an UNATTENDED terminaltype, do a partial AVS: zip code only, no addrnum
  $myorder["zip"] = "12345";


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {          // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";
  #if you're in web space, look at response like this:
    echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
*/
?>
```

# Sample Code to perform a VirtualCheck SALE Transaction Using PHP*

The code shown below demonstrates how to process a VirtualCheck SALE transaction. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/*********************************************************************\

  VCHECK_SALE.php - Minimum Required Fields for a VirtualCheck SALE

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\*********************************************************************/


  include"lphp.php";
  $mylphp=new lphp;

  $myorder["host"] = "secure.linkpt.net";
  $myorder["port"] = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of
your certificate file
  $myorder["configfile"] = "1234567"; # Change this to your store number

  $myorder["ordertype"] = "SALE";
  $myorder["chargetotal"] = "9.99";

   # Customer's Driver's license # and DL state
  $myorder["dl"] = "120381698";
  $myorder["dlstate"] = "CA";

   # Transit routing number for the customer's bank
  $myorder["routing"] = "123456789";

   # Customer's bank account number
  $myorder["account"] = "2139842610";

   # Is this a business or personal account? personal = pc, business = bc
  $myorder["accounttype"] = "pc";


# Bank name and 2-letter bank state
  $myorder["bankname"] = "MyBank";
  $myorder["bankstate"] = "CA";

   # Additional required VCHECK fields
  $myorder["name"] = "Joe Customer";
  $myorder["address1"] = "123 Broadway";
  $myorder["city"] = "Moorpark";
  $myorder["state"] = "CA";
  $myorder["zip"] = "12345";
  $myorder["phone"] = "8051234567";
  $myorder["email"] = "joe.customer@somewhere.com";   # optional field


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods


  if ($result["r_approved"] != "SUBMITTED")  // transaction failed, print the reason
  {
    print "Approved: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else // success
  {
    print "Approved: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  #if you're in web space, look at response like this:
     echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
*/
?>
```

# Sample Code to perform a VirtualCheck VOID Transaction Using PHP*

The code shown below demonstrates how to process a VirtualCheck VOID transaction. You can only void a VirtualCheck SALE transaction if it has not yet been sent for processing (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/*************************************************************************\

 VCHECK_VOID.php - Minimum Required Fields for a VirtualCheck VOID

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\*************************************************************************/


 include"lphp.php";
 $mylphp=new lphp;

 $myorder["host"] = "secure.linkpt.net";
 $myorder["port"] = "1129";
 $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of
your certificate file
```
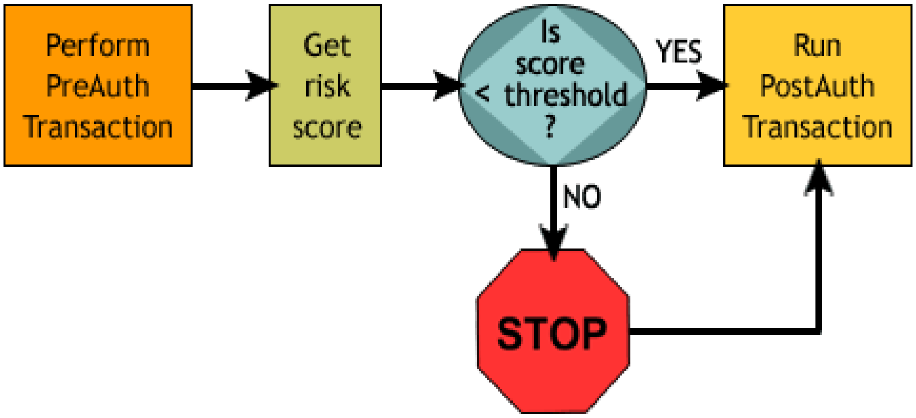

```
  $myorder["configfile"] = "1234567"; # Change this to your store number

  $myorder["ordertype"] = "VOID";
  $myorder["chargetotal"] = "12.99"; # You must match previous transaction amount
  $myorder["oid"] = "0987654321"; # You must have a valid order ID from a previous
VCheck SALE transaction that has not yet been processed
  $myorder["voidcheck"] = "true";


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods

  if ($result["r_approved"] != "SUBMITTED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else
  {          // success
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n\n";
  }

/*
  # Look at returned hash & use the elements you need #
  while (list($key, $value) = each($result))
  {
    echo "$key = $value\n";

  #if you're in web space, look at response like this:
     echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<BR>\n";
  }
*/
?>
```

# Sample Code Using LinkShield™ with PHP

## PreAuthorization / Postauthorization example

The code shown below demonstrates an example of one way to use LinkShield$^{TM}$ fraud risk scores. This example runs a preauthorization transaction, checks the fraud risk score, then runs a postauthorization if the fraud risk score is considered acceptable. The diagram shown illustrates this example. The fraud risk score used within this sample code is for explanatory purposes only; you should choose the fraud risk score threshold appropriate for your business needs. See the comments within the code for further explanation.



The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php

/***********************************************************************\

 LINKSHIELD_PREAUTH_POSTAUTH.php

 Sample code to run a preauth, check the fraud score, and submit a
 postauth if the score falls in an acceptable range.

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\************************************************************************/


 include"lphp.php";
 $mylphp=new lphp;

 $myorder["host"] = "secure.linkpt.net";
 $myorder["port"] = "1129";
 $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of your certificate file
 $myorder["configfile"] = "1234567"; # Change this to your store number

 $myorder["ordertype"] = "PREAUTH";
 $myorder["result"] = "GOOD";    # For test transactions, set to GOOD, DECLINE, or DUPLICATE
 $myorder["transactionorigin"] = "ECI";    # For credit card retail txns, set to RETAIL, for Mail order/telephone order, set to MOTO, for e-commerce, leave out or set to ECI

 $myorder["oid"] = "12345678-A345";  # Order ID number must be unique. If not set, gateway will assign one.
 $myorder["ponumber"] = "09876543-Q1234";
 $myorder["taxexempt"] = "N";
 $myorder["terminaltype"] = "UNSPECIFIED";    # Set terminaltype to POS for an electronic cash register or integrated POS system, STANDALONE for a point-of-sale credit card terminal, UNATTENDED for a self-service station, or UNSPECIFIED for e-commerce or other applications
 $myorder["ip"] = "123.123.123.123";
```
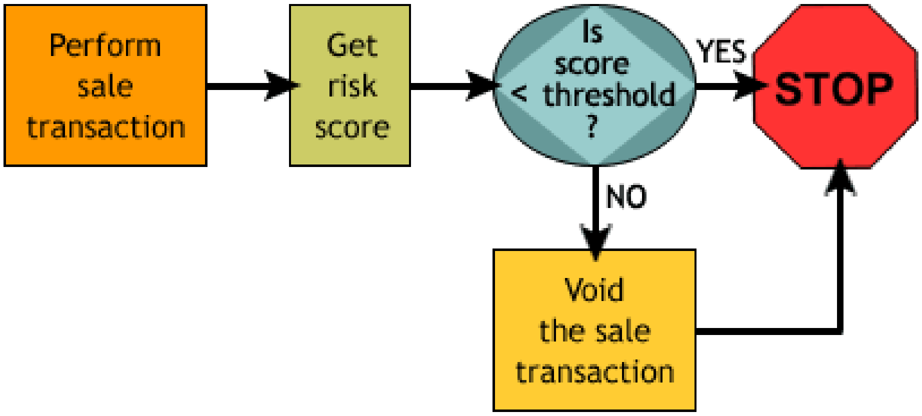

```
  $myorder["subtotal"] = "12.99";
  $myorder["tax"] = "0.34";
  $myorder["shipping"] = "1.45";
  $myorder["vattax"] = "0.00";
  $myorder["chargetotal"] = "14.78";

  # CARD INFO
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "01";
  $myorder["cardexpyear"] = "05";
  $myorder["cvmindicator"] = "provided";
  $myorder["cvmvalue"] = "123";

  # BILLING INFO
  $myorder["name"] = "Joe Customer";
  $myorder["company"] = "123 Broadway";
  $myorder["address1"] = "Suite 23v";
  $myorder["address2"] = "";
  $myorder["city"] = "Moorpark";
  $myorder["state"] = "CA";
  $myorder["country"] = "US";
  $myorder["phone"] = "8051234567";
  $myorder["fax"] = "8059876543";
  $myorder["email"] = "joe.customer@somewhere.com";
  $myorder["addrnum"] = "123";   # Required for AVS. If not provided, transactions will downgrade.
  $myorder["zip"] = "87123";   # Required for AVS. If not provided, transactions will downgrade.

  # MISC
  $myorder["comments"] = "Repeat customer. Ship immediately.";
  $myorder["referred"] = "Saw ad on Web site.";

# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods

  if ($result[r_approved] != "APPROVED")  // transaction failed, print the reason
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
    print "Preauth failed, cannot continue\n";
    exit();
  }
  else    // success
  {
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n";
    print "Score: $result[r_score]\n\n";
  }

  //Evaluate returning fraud score
  $score = (int)$result[r_score];
  print "Fraud score $score";

  if ($score < 70) // Replace the value '70' with a value appropriate for your business risk level
  {
    print " is in acctable range, submitting POSTAUTH...\n";

    $postorder["ordertype"] = "POSTAUTH";
    $postorder["result"]   = "GOOD";   # For test transactions, set to GOOD, DECLINE, or DUPLICATE

    // the other required fields are the same as before
    $postorder["oid"]       = $myorder["oid"];
    $postorder["host"]   = $myorder["host"];
    $postorder["port"]   = $myorder["port"];
    $postorder["keyfile"]   = $myorder["keyfile"];
    $postorder["configfile"]   = $myorder["configfile"];

    $postorder["chargetotal"] = $myorder["chargetotal"];
    $postorder["cardnumber"] = $myorder["cardnumber"];
    $postorder["cardexpmonth"] = $myorder["cardexpmonth"];
    $postorder["cardexpyear"] = $myorder["cardexpyear"];

   # Send transaction. Use one of two possible methods #
  $postresult = $mylphp->process($postorder); # use shared library model
 //  $postresult = $mylphp->curl_process($postorder); # use curl methods

  if ($postresult["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
   print "Postauth Status: $postresult[r_approved]\n";
   print "Postauth Error: $postresult[r_error]\n";
  }
  else    // success
  {
   print "Postauth Status: $postresult[r_approved]\n";
   print "Postauth Code: $postresult[r_code]\n";
   print "Postauth OID: $postresult[r_ordernum]\n\n";
  }
 }
 else
 {
  print "is not within acceptable range\n";
  print "Not proceeding with postauth \n";
 }
?>
```

# Sample Code Using LinkShield™ with PHP

## SALE / VOID example

The code shown below demonstrates an example of one way to use LinkShield™ fraud risk scores. This example runs a sale transaction, checks the fraud risk score, then runs a void if the fraud risk score is considered unacceptable. The diagram shown illustrates this example. The fraud risk score used within this sample code is for explanatory purposes only; you should choose the fraud risk score threshold appropriate for your business needs. See the comments within the code for further explanation.



See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php

/*************************************************************************\

  LINKSHIELD_SALE_VOID.php

  Sample code to do a SALE transaction, check the fraud score, and
  then VOID the previous transaction if the fraud score exceeds a
  predetermined value.


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\*************************************************************************/


  include"lphp.php";
  $mylphp=new lphp;

  $myorder["host"] = "secure.linkpt.net";
  $myorder["port"] = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of your certificate file
  $myorder["configfile"] = "1234567"; # Change this to your store number

  $myorder["ordertype"] = "SALE";
  $myorder["result"] = "LIVE";    # For test transactions, set to GOOD, DECLINE, or DUPLICATE
  $myorder["transactionorigin"] = "ECI";          # For credit card retail txns, set to RETAIL, for Mail order/telephone order, set to MOTO, for e-commerce, leave out or set to ECI
  $myorder["oid"] = "12345678-A345"; # Order ID number must be unique. If not set, gateway will assign one.
  $myorder["ponumber"] = "09876543-Q1234";
  $myorder["taxexempt"] = "N";
  $myorder["terminaltype"] = "UNSPECIFIED";     # Set terminaltype to POS for an electronic cash register or integrated POS system, STANDALONE for a point-of-sale credit card terminal, UNATTENDED for a self-service station, or UNSPECIFIED for e-commerce or other applications
```

```
 $myorder["ip"] = "123.123.123.123";

 $myorder["subtotal"] = "12.99";
 $myorder["tax"] = "0.34";
 $myorder["shipping"] = "1.45";
 $myorder["vattax"] = "0.00";
 $myorder["chargetotal"] = "14.78";

 # CARD INFO
 $myorder["cardnumber"] = "4111-1111-1111-1111";
 $myorder["cardexpmonth"] = "01";
 $myorder["cardexpyear"] = "05";
 $myorder["cvmindicator"] = "provided";
 $myorder["cvmvalue"] = "123";

 # BILLING INFO
 $myorder["name"] = "Joe Customer";
 $myorder["company"] = "123 Broadway";
 $myorder["address1"] = "Suite 23v";
 $myorder["address2"] = "";
 $myorder["city"] = "Moorpark";
 $myorder["state"] = "CA";
 $myorder["country"] = "US";
 $myorder["phone"] = "8051234567";
 $myorder["fax"] = "8059876543";
 $myorder["email"] = "joe.customer@somewhere.com";
 $myorder["addrnum"] = "123";   # Required for AVS. If not provided, transactions will
downgrade.
 $myorder["zip"] = "87123";   # Required for AVS. If not provided, transactions will
downgrade.

 # MISC
 $myorder["comments"] = "Repeat customer. Ship immediately.";
 $myorder["referred"] = "Saw ad on Web site.";

# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
 $result = $mylphp->curl_process($myorder); # use curl methods

 if ($result[r_approved] != "APPROVED")  // transaction failed, print the reason
```

```
  {
    print "Status: $result[r_approved]\n";
    print "Error: $result[r_error]\n";
  }
  else // success
  {
    print "Status: $result[r_approved]\n";
    print "Code: $result[r_code]\n";
    print "OID: $result[r_ordernum]\n";
    print "Score: $result[r_score]\n\n";
  }

  //Evaluate returning fraud score
  $score = (int)$result[r_score];
  print "Fraud score $score ";

  if ($score >= 70) // Replace the value '70' with a value appropriate for your business risk
level
  {
    print "too high, voiding transaction...\n";

    $voidrder["oid"] = $result[r_ordernum];    // result from previous; could also resubmit
the orignal
    $voidorder["ordertype"] = "VOID";
    $voidorder["chargetotal"] = $myorder["chargetotal"];  // same as before

    // the other required fields are the same as before
    $voidorder["host"]   = $myorder["host"];
    $voidorder["port"]   = $myorder["port"];
    $voidorder["keyfile"]   = $myorder["keyfile"];
    $voidorder["configfile"]   = $myorder["configfile"];

    $voidorder["cardnumber"] = $myorder["cardnumber"];
    $voidorder["cardexpmonth"] = $myorder["cardexpmonth"];
    $voidorder["cardexpyear"] = $myorder["cardexpyear"];

   # Send transaction. Use one of two possible methods #
  //  $voidresult = $mylphp->process($voidorder); # use shared library model
```

```
    $voidresult = $mylphp->curl_process($voidorder); # use curl methods

    if ($voidresult["r_approved"] != "APPROVED")  // transaction failed, print the reason
    {
      print "Void Status: $voidresult[r_approved]\n";
      print "Void Error: $voidresult[r_error]\n";
    }
    else
    {          // success
      print "Void Status: $voidresult[r_approved]\n";
      print "Void Code: $voidresult[r_code]\n";
      print "Void OID: $voidresult[r_ordernum]\n\n";
    }
  }
  else
  {
    print "is within acceptable range\n";
    print "Transaction successful\n\n";
  }
?>
```

# Sample Code to Calculate Shipping Charges Using PHP

The code shown below demonstrates how to use the shipping calculator. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/*************************************************************************\

  SHIPPING.php - An Example shipping calculation

  NOTE: your store must be explicitly set up before doing shipping calculations

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\***************************************************************************/


  include"lphp.php";
  $mylphp=new lphp;

  $myorder["host"] = "secure.linkpt.net";
  $myorder["port"] = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of
your certificate file
  $myorder["configfile"] = "1234567"; # Change this to your store number
  $myorder["ordertype"] = "CALCSHIPPING";

   # Shipping fields
  $myorder["scarrier"] = "2";
  $myorder["sweight"] = "1.2";
  $myorder["sitems"] = "1";
  $myorder["stotal"] = "12.99";
  $myorder["sstate"] = "CA";


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods

  if ($result["r_shipping"])
  {
    print "Shipping: $result[r_shipping]\n";
  }
  else
  {
    print "Error: $result[r_error]\n";
  }
?>
```

# Sample Code to Calculate Sales Tax Using PHP

The code shown below demonstrates how to use the Tax calculator. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
<?php
/*****************************************************************************\

  TAX.php - An Example tax calculation

  NOTE: your store must be explicitly set up before doing tax calculations

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\*****************************************************************************/


  include"lphp.php";
  $mylphp=new lphp;

  $myorder["host"] = "secure.linkpt.net";
  $myorder["port"] = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of
your certificate file
  $myorder["configfile"] = "1234567"; # Change this to your store number

  $myorder["ordertype"] = "CALCTAX";
  $myorder["subtotal"] = "12.99";

  # Shipping fields
  $myorder["stotal"] = "12.99";
  $myorder["sstate"] = "CA";
  $myorder["szip"] = "91367";


# Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder); # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods

  if ($result["r_tax"])
  {
    print "Tax: $result[r_tax]\n";
  }
  else
  {
    print "Error: $result[r_error]\n";
  }
?>
```

## Sample Code to Process a Sale (with extra arguments) Using PHP

The code shown below demonstrates how to process a credit card sale. This example demonstrates various optional arguments that can passed into the PHP module.. The example uses a PHP hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

### Sample Code

```
<?php

/************************************************************************\

  XTRA_ARGS.php - Simple SALE transaction demonstrating various optional
  arguments that can passed into the LPHP.PHP module

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\************************************************************************/


  include"lphp.php";
  $mylphp=new lphp;

  $myorder["host"] = "secure.linkpt.net";
  $myorder["port"] = "1129";
  $myorder["keyfile"] = "./YOURCERT.pem"; # Change this to the name and location of your certificate file
  $myorder["configfile"] = "1234567"; # Change this to your store number

  $myorder["ordertype"] = "SALE";
  $myorder["result"] = "GOOD"; # For a test, set result to GOOD, DECLINE, or DUPLICATE
  $myorder["cardnumber"] = "4111-1111-1111-1111";
  $myorder["cardexpmonth"] = "01";
  $myorder["cardexpyear"] = "05";
  $myorder["chargetotal"] = "9.99";


/* FIELD NAME:    cbin - Curl Binary
DEFAULT VALUE:    false
EXPLANATION:    Curl binary - tells the module to use curl binary executable, as opposed to the
         PHP built-in curl methods. This should be used only when (often older)
         PHP version does not support curl directly so we have to shell out.
EXAMPLE USAGE:     */
  $myorder["cbin"] = "true";


/* FIELD NAME:    cpath - Curl Path
DEFAULT VALUE: /usr/bin/curl
EXPLANATION: Use this if curl binary executable is in a nonstandard location
          Only to be used in conjunction with "cbin" argument.
EXAMPLE USAGE:     */
//  $myorder["cpath"] = "/usr/local/bin/curl";


/* FIELD NAME:    cargs - Curl Arguments
DEFAULT VALUE:    -m 300 -s -S
EXPLANATION:    Curl arguments - only if using binary curl ( cbin above).
          You need to enter the complete string if you over-ride the default.
          For more info: http://curl.haxx.se/docs/manpage.html.
Note: *don't use this field unless you have a specific reason and
          know exactly what you're doing*
EXAMPLE USAGE:     To decrease the timeout to 2 minutes (-m) and disable certificate
          verification (-k) use this string:*/
  $myorder["cargs"] = "-m 120 -k -s -S";


/* FIELD NAME:    xml - use XML processing
DEFAULT VALUE:    none
EXPLANATION:    If this field is present, we are passing an xml string directly
          into lphp.php and the server response will also be in xml format.
          Hash values passed in will be ignored, except for host, port and keyfile.
EXAMPLE USAGE:     See the LinkPoint sample "PASS_XML.php" for example usage. */
//  $myorder["xml"] =
"<order><orderoptions><result>GOOD</result><ordertype>SALE</ordertype></orderoptions><merchantinfo><configfile>909001</configfile></merchantinfo><creditcard><cardnumber>4111111111111111</cardnumber><cardexpmonth>12</cardexpmonth><cardexpyear>08</cardexpyear></creditcard><payment><chargetotal>1.03</chargetotal></payment></order>";


/* FIELD NAME:    debugging
DEFAULT VALUE:    false
EXPLANATION:    Prints values as they are processed by module. It also turns on
          verbose connection output if curl methods are being used.
          Debugging is for development only - not intended for production use
EXAMPLE USAGE:     */
  $myorder["debugging"] = "true";


/* FIELD NAME:    webspace
DEFAULT VALUE:    true
EXPLANATION:    When viewing PHP output through a web browser, all xml tags are
          removed. This PHP call allows you to view debugging output with XML tag
          names. If running PHP directly from the command line (not in browser),
          set this field to false so as to see complete xml output.
EXAMPLE USAGE:     */
//  $myorder["webspace"] = "false";


 # Send transaction. Use one of two possible methods #
//  $result = $mylphp->process($myorder);    # use shared library model
  $result = $mylphp->curl_process($myorder); # use curl methods
 if ($myorder["xml"])  // we're processing xml string response
 {
  # break it into array
  preg_match_all ("/<(.*?)>(.*?)\</", $result, $outarr, PREG_SET_ORDER);

  $n = 0;
  while (isset($outarr[$n]))
  {
   $retarr[$outarr[$n][1]] = strip_tags($outarr[$n][0]);
   $n++;
  }

  # and then look at it like this
  while (list($key, $value) = each($retarr))
  {
   if($myorder["htmlspecialchars"] == "false")
   {
    echo "$key = $value\n";
   }
   else
   {
    echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<br>\n";
   }
  }
 }
 else    // we're processing a hash response
 {
  if ($result["r_approved"] != "APPROVED")  // transaction failed, print the reason
  {
   print "Approved: $result[r_approved]\n";
   print "Error: $result[r_error]\n";
  }
  else
  {  // success
   print "Approved: $result[r_approved]\n";
   print "Code: $result[r_code]\n";
   print "OID: $result[r_ordernum]\n\n";
  }

  // Look at returned hash & use the elements you need //
/*    while (list($key, $value) = each($result))
  {
   if(!$myorder["webspace"]){
    echo "$key = $value\n";}
   else{
    echo htmlspecialchars($key) . " = " . htmlspecialchars($value) . "<br>\n";}
  }
*/
 }
?>
```

# Sample Code to Pass XML to the PERL Module

The code shown below demonstrates how to process a Sale by passing an XML stream to the Gateway. The transaction shown is a credit card sale, but the same method is applicable to any type of transaction. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# PASS_XML.pl - example of how to send and recieve an XML string
#
# In this sample, the merchant would be doing their own XML encoding/decoding
#
# This sample does only a minimal SALE transaction, but it can be
# used as an example of passing in larger XML strings for more complex
# transactions. Any of the included LinkPoint XML sample files could be
# passed in as an XML string here.
#
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  use lpperl;
  $lperl = new LPPERL();

# Build a simple transaction XML string
# This XML formatting is for human readability only
# In real life, this would be all one long unbroken string
  $xml = "
  <order>
    <orderoptions>
      <result>GOOD</result>
      <ordertype>SALE</ordertype>
    </orderoptions>

    <merchantinfo>
      <configfile>1234567</configfile> <!-- CHANGE THIS TO YOUR STORE NUMBER -->
    </merchantinfo>

    <creditcard>
      <cardnumber>4111111111111111</cardnumber>
      <cardexpmonth>12</cardexpmonth>
      <cardexpyear>08</cardexpyear>
    </creditcard>

    <payment>
      <chargetotal>1.03</chargetotal>
    </payment>
  </order>";


# Build transaction hash
  $myorder = {
    host      => 'secure.linkpt.net',
    port      => '1129',
    keyfile   => './YOURCERT.pem', # change this to the name
and location of your certificate file
    xml       => $xml, # the string we built above
#   debugging  => 'true', # for development only - not intended
for production use
# cpath => 'c:/curl/curl.exe', # Windows users will need to set
cpath. See sample EXTRA_ARGS.pl for usage details.
  };

# Send transaction. Use one of two possible methods
# $response = $lperl->process($myorder);     # use shared
library model
  $response = $lperl->curl_process($myorder);  # or use curl
methods


# NB - sending xml returns a string, not an array as in the
other samples

# Print XML server response
  print "Response: $response\n\n";
```

```
 #OPTIONAL - break XML string into readable hash
 while ($response =~ /<(.*?)>(.*?)<\x2f\1>/gi)
 {
   $results{$1} = $2;
 }

 print "\ndecoded xml:\n";
 while(my($key, $value) = each %results){
    print "$key = $value\n";}

#end
```

# Sample Code to Process a Sale Using PERL in a Windows 32 Environment

The code shown below demonstrates how to process a credit card sale using PERL on a Web server with a Windows 32 operating system. This example includes only the minimum fields required for a SALE transaction. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# SALE_WIN32.pl - Demonstrates using binary curl and Windows PERL
# This has been tested on Active State 5.8.0.804 and perl 5.6.1-cygwin-multi
#
# Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
#
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use lpperl;
$lperl = new LPPERL();


# Build transaction hash
$myorder = {
host => 'secure.linkpt.net',
port => '1129',
keyfile => 'c:\certs\YOURCERT.pem', #change this to the name and location of your certificate file
configfile => '1234567', #change this to your store number

ordertype => 'SALE',
result => 'LIVE', # For a test, set result to GOOD, DECLINE, or DUPLICATE
chargetotal => '12.99',
cardnumber => '4111-1111-1111-1111',
cardexpmonth => '03',
cardexpyear => '05',
addrnum => '123', # Required for AVS. If not provided, transactions will downgrade.
zip => '12345', # Required for AVS. If not provided, transactions will downgrade.

cpath => 'c:/curl/curl.exe', # set this to the location of curl
# cargs => '-s -S -k', # only needed if you need to override default of "-m 300 -s -S"
# webspace => 'false', # only needed if you are NOT outputting to a browser
# debugging => 'true', # for development only; not for production use
};

# Send transaction. Only binary curl method is supported under Win32
%response = $lperl->curl_process($myorder);

# Evaluate response
if ($response{'r_approved'} eq "APPROVED")
{
print "Status: $response{'r_approved'}<br>\n";
print "Code: $response{'r_code'}<br>\n";
}
else
{
print "Status: $response{'r_approved'}<br>\n";
print "Error: $response{'r_error'}<br>\n";
}

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
# print "$key = $value<br>\n";}

#end
```

# Sample Forms for the PERL Module

To help you with your Web site development, we have included two demonstration forms. **PERL_FORM_MIN.html** sends a post to the **PERL_FORM_MIN.pl** script, which sends transactions to the Gateway. **PERL_FORM_MAX.html** posts to the **PERL_FORM_MAX.pl** script. Both of these scripts call functions in the lpperl.pm module.

Depending on your server setup, the scripts that process this form, PERL_FORM_MAX.pl and PERL_FORM_MIN.pl and the PERL module may need to be located in a cgi-bin directory, and the path in the "action" method of the HTML forms will need to be adjusted accordingly.

The form fields have been pre-filled with test data only for convenience.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## PERL_FORM_MIN.html

```
<!-----------------------------------------------------------------------------
* PERL_FORM_MIN.html - A form processing example showing many of the
possible fields
*
* Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
*
* This software is the proprietary information of LinkPoint International, Inc.
* Use is subject to license terms.
*

NOTE:  Depending on your server setup, the scripts PERL_FORM_MIN.pl
    and lperl.pm that processes this form may need to be placed in
    the cgi-bin directory, and the path in the "action" method
    of this form may need to be adjusted accordingly.

-----------------------------------------------------------------------------
>


<html><head><title>PERL_FORM_MIN.html sample
program</title></head><body>

<br>

<form name="form1" method="post" action="../../cgi-
bin/PERL_FORM_MIN.pl">
<br><br>
<table>
  <tr>
    <td align="right">ordertype</td>
    <td><input name="ordertype" value="SALE"></td>
  </tr>
  <tr>
    <td align="right">amount</td>
    <td><input name="chargetotal" value="9.99"></td>
  </tr>
  <tr>
    <td align="right">cardnumber</td>
    <td><input name="cardnumber" value="4111111111111111"></td>
  </tr>
  <tr>
    <td align="right">cardexpmonth</td>
    <td><input name="cardexpmonth" value="01"></td>
  </tr>
  <tr>
    <td align="right">cardexpyear</td>
    <td><input name="cardexpyear" value="05"></td>
  </tr>
  <tr>
    <td align="right"> debugging</td>
    <td><input type=checkbox name="debugging"></td>
  </tr>
  <tr>
    <td align="right"> detailed output</td>
    <td><input type=checkbox name="verbose"></td>
  </tr>
  <tr>
    <td> </td>
    <td> <input type="submit"></td>
  </tr>
</table>
</form>

</font></body></html>
```

## PERL_FORM_MAX.pl

```
#!/usr/bin/perl

#PERL_FORM_MIN.pl - A form processing example showing many of the
possible fields
#
# Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
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#

#NOTE: Depending on your server setup, the scripts PERL_FORM_MIN.pl
#    and lperl.pm that processes this form may need to be placed in
#    the cgi-bin directory, and the path in the "action" method
#    of PERL_FORM_MIN.html may need to be adjusted accordingly.

  print "Content-type: text/html\n\n";
  print "<html><head></head><body><br>\n\n";

  use lpperl;
  $lperl = new LPPERL();

  &ParseForm;

  if (%values->{'debugging'} eq "on"){
$dbug = "true";}

  $txn_hash = {
   host       => 'secure.linkpt.net',
   port       => '1129',
   keyfile      => './YOURCERT.pem', #change this to the name and location
of your certificate file
   configfile    => '1234567',     #change this to your store number
cardnumber => %values->{'cardnumber'},
cardexpmonth => %values->{'cardexpmonth'},
cardexpyear => %values->{'cardexpyear'},
ordertype => %values->{'ordertype'},
chargetotal => %values->{'chargetotal'},
debugging => $dbug,
  };

  %response = $lperl->process($txn_hash);

  if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>";
    print "Code: $response{'r_code'}<br>";
  }
  else
  {
print "Status: $response{'r_approved'}<br>";
   print "Error: $response{'r_error'}<br>";
  }


#print response pairs to table
  if (%values->{'verbose'} eq "on")
  {
      $response =~ s/<(([^>]|\n)*)>/<$1>/g;

      print "<table border=1>";

      while(my($key, $value) = each %response){
          print "<tr><td> $key </td> <td> $value </td></tr>";}

      print "</table>";
  }
```

```
 sub ParseForm
 {
  local ($fileds, $name, $value, $data);

  read(STDIN, $data, $ENV{'CONTENT_LENGTH'});
  @fields = split(/&/, $data);

  foreach $item (@fields)
  {
  ($name, $value) = split (/=/, $item);
  $values{$name} = $value;
  }
 }
```

## PERL_FORM_MAX.html

```
<!-----------------------------------------------------------------------------------
* PERL_FORM_MAX.html - A form processing example showing many of the
possible fields
*
* Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
*
* This software is the proprietary information of LinkPoint International, Inc.
* Use is subject to license terms.
*

NOTE:  Depending on your server setup, the scripts PERL_FORM_MAX.pl
    and lperl.pm that processes this form may need to be placed in
    the cgi-bin directory, and the path in the "action" method
    of this form may need to be adjusted accordingly.
```

```
------------------------------------------------------------------------------
>


<html><head><title>LinkPoint PERL_FORM_MAX.pl Perl sample
program</title></head><body>
<br>

<form name="form1" method="post" action="../../cgi-
bin/PERL_FORM_MAX.pl">

<table>
  <tr>
    <td>
      <table>
      <tr> <th colspan=2>Transaction Details</th></tr>

      <tr>
        <td align="right">ordertype</td>
        <td><input name="ordertype" value="SALE"></td>
      </tr>
      <tr>
        <td align="right">result</td>
        <td><input name="result" value="LIVE"></td>
      </tr>
      <tr>
        <td align="right">transactionorigin</td>
        <td><input name="transactionorigin" value="ECI"></td>
      </tr>
      <tr>
        <td align="right">oid</td>
        <td><input name="oid" value="12345678-A345"></td>
      </tr>
```

```
<tr>
  <td align="right">ponumber</td>
  <td><input name="ponumber" value="09876543-Q1234"></td>
</tr>

<tr>
  <td align="right">taxexempt</td>
  <td><input name="taxexempt" value="NO"></td>
</tr>
<tr>
  <td align="right">terminaltype</td>
  <td><input name="terminaltype" value="UNSPECIFIED"></td>
</tr>

<tr>
  <td align="right">ip</td>
  <td><input name="ip" value="123.123.123.123"></td>
</tr>

<tr> <th colspan=2>Totals</th> </tr>

<tr>
  <td align="right">subtotal</td>
  <td><input name="subtotal" value="12.99"></td>
</tr>
<tr>
  <td align="right">tax</td>
  <td><input name="tax" value="0.34"></td>
</tr>
<tr>
  <td align="right">shipping</td>
  <td><input name="shipping" value="1.45"></td>
</tr>
```

```
<tr>
  <td align="right">vattax</td>
  <td><input name="vattax" value="0.00"></td>
</tr>
<tr>
  <td align="right">chargetotal</td>
  <td><input name="chargetotal" value="14.78">  </td>
</tr>

<tr><th colspan=2>Card Info.</th></tr>

<tr>
  <td align="right">cardnumber</td>
  <td><input name="cardnumber" value="4111111111111111"></td>
</tr>
<tr>
  <td align="right">cardexpmonth</td>
  <td><input name="cardexpmonth" value="01"></td>
</tr>
<tr>
  <td align="right">cardexpyear</td>
  <td><input name="cardexpyear" value="04"></td>
</tr>
<tr>
  <td align="right">cvmindicator</td>
  <td><input name="cvmindicator" value="provided"></td>
</tr>
<tr>
  <td align="right">cvmvalue</td>
  <td><input name="cvmvalue" value="123"></td>
</tr>

<tr> <th colspan=2>Item & Options</th></tr>
```

```
<tr>
  <td align="center" colspan=2>Item 1</td>
</tr>
<tr>
  <td align="right">id</td>
  <td><input name="id" value="123456-A98765"></td>
</tr>
<tr>
  <td align="right">description</td>
  <td><input name="description" value="Logo T-Shirt"></td>
</tr>
<tr>
  <td align="right">quantity</td>
  <td><input name="quantity" value="1"></td>
</tr>
<tr>
  <td align="right">price</td>
  <td><input name="price" value="12.99"></td>
</tr>
<tr>
  <td align="center" colspan=2>Item 1 - Option 1</td>
</tr>
<tr>
  <td align="right">name</td>
  <td><input name="name1" value="Color"></td>
</tr>
<tr>
  <td align="right">value</td>
  <td><input name="value1" value="Red"></td>
</tr>

<tr>
```

```
      <td align="center" colspan=2>Item 1 - Option 2</td>
    </tr>
    <tr>
      <td align="right">name</td>
      <td><input name="name2" value="Size"></td>
    </tr>
    <tr>
      <td align="right">value</td>
      <td><input name="value2" value="XL"></td>
    </tr>

     <tr><td>   </td></tr>

    <tr>
      <td align="right"><input type=checkbox name="verbose"></td>
      <td> detailed output </td>
    </tr>
    <tr>
      <td align="right"><input type=checkbox name="debugging"></td>
      <td> debugging </td>
    </tr>
  </table>
  </td>

  <td>                </td>

  <td>
    <table>
    <tr> <th colspan=2>Billing Info.</th></tr>
    <tr>
      <td align="right">name</td>
      <td><input name="name" value="Joe Customer"></td>
    </tr>
    <tr>
```

```
      <td align="right">company</td>
      <td><input name="company" value="SomeWhere, Inc."></td>
    </tr>
    <tr>
      <td align="right">address1</td>
      <td><input name="address1" value="123 Broadway"></td>
    </tr>
    <tr>
      <td align="right">address2</td>
      <td><input name="address2" value="Suite 23"></td>
    </tr>
    <tr>
      <td align="right">city</td>
      <td><input name="city" value="Moorpark"></td>
    </tr>
    <tr>
      <td align="right">state</td>
      <td><input name="state" value="CA"></td>
    </tr>
    <tr>
      <td align="right">country</td>
      <td><input name="country" value="US"></td>
    </tr>
    <tr>
      <td align="right">phone</td>
      <td><input name="phone" value="8051234567"></td>
    </tr>
    <tr>
      <td align="right">fax</td>
      <td><input name="fax" value="8059876543"></td>
    </tr>
    <tr>
```

```
      <td align="right">email</td>
      <td><input name="email"
value="joe.customer@somewhere.com"></td>
    </tr>
    <tr>
      <td align="right">zip</td>
      <td><input name="zip" value="87123"></td>
    </tr>
    <tr>
      <td align="right">addrnum</td>
      <td><input name="addrnum" value="123"></td>
    </tr>

    <tr> <th colspan=2>Shipping Info.</th></tr>
    <tr>
      <td align="right">sname</td>
      <td><input name="sname" value="Joe Customer"></td>
    </tr>
    <tr>
      <td align="right">saddress1</td>
      <td><input name="saddress1" value="123 Broadway"></td>
    </tr>
    <tr>
      <td align="right">saddress2</td>
      <td><input name="saddress2" value="Suite 23"></td>
    </tr>
    <tr>
      <td align="right">scity</td>
      <td><input name="scity" value="Moorpark"></td>
    </tr>
    <tr>
      <td align="right">sstate</td>
      <td><input name="sstate" value="CA"></td>
```

```
</tr>
<tr>
  <td align="right">szip</td>
  <td><input name="szip" value="12345"></td>
</tr>
<tr>
  <td align="right">scountry</td>
  <td><input name="scountry" value="US"></td>
</tr>

<tr> <th colspan=2>Shipping Calculation</th></tr>

<tr>
  <td align="right">sweight</td>
  <td><input name="sweight" value="1.2"></td>
</tr>
<tr>
  <td align="right">sitems</td>
  <td><input name="sitems" value="1"></td>
</tr>
<tr>
  <td align="right">scarrier</td>
  <td><input name="scarrier" value="2"></td>
</tr>
<tr>
  <td align="right">stotal</td>
  <td><input name="stotal" value="12.99"></td>
</tr>

<tr><td> </td></tr>

<tr> <th colspan=2>Misc.</th></tr>

<tr>
```

```
    <td colspan=2>comments<br><textarea name="comments">Repeat customer. Ship immediately.</textarea></td>
   </tr>

   <tr>
    <td colspan=2>referred<br><textarea name="referred">Saw ad on Web site.</textarea></td>
   </tr>

   <tr><td> </td></tr>
   <tr><td> </td></tr>
   <tr><td> </td></tr>
   <tr><td> </td></tr>

   </table>
  </td>
 </tr>

 <tr>
  <td colspan=3 align="middle"> <input type="submit" ></td>
 </tr>
</table>

</body></html>
```

## PERL_FORM_MAX.pl

```
#!/usr/bin/perl

#PERL_FORM_MAX.pl - A form processing example showing many of the possible fields
#
# Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
#
# This software is the proprietary information of LinkPoint International, Inc.
# Use is subject to license terms.
#

#NOTE: Depending on your server setup, the scripts PERL_FORM_MAX.pl
#   and lperl.pm that processes this form may need to be placed in
#   the cgi-bin directory, and the path in the "action" method
#   of PERL_FORM_MAX.html may need to be adjusted accordingly.

  print "Content-type: text/html\n\n";
  print "<html><head></head><body><br>\n\n";

  use lpperl;
  $lperl = new LPPERL();

  &ParseForm;

  if (%values->{'debugging'} eq "on"){
  $dbug = "true";}

  $txn_hash = {
     host       => 'secure.linkpt.net',
     port       => '1129',
     keyfile      => './YOURCERT.pem', #change this to the name and location of your certificate file
     configfile   => '1234567',    #change this to your store number

   # transaction details
  ordertype     => %values->{'ordertype'},
  result      => %values->{'result'},
  transactionorigin => %values->{'transactionorigin'},
  oid       => %values->{'oid'},
  ponumber     => %values->{'ponumber'},
  taxexempt     => %values->{'taxexempt'},
  ip        => %values->{'ip'},

  # totals
  subtotal  => %values->{'subtotal'},
  tax     => %values->{'tax'},
  shipping  => %values->{'shipping'},
  vattax   => %values->{'vattax'},
  chargetotal => %values->{'chargetotal'},

  # card info
cardnumber  => %values->{'cardnumber'},
cardexpmonth  => %values->{'cardexpmonth'},
cardexpyear  => %values->{'cardexpyear'},
  cvmindicator => %values->{'cvmindicator'},
  cvmvalue => %values->{'cvmvalue'},

 # BILLING INFO
  name   => %values->{'name'},
  company => %values->{'company'},
  address1 => %values->{'address1'},
  address2 => %values->{'address2'},
  city   => %values->{'city'},
  state  => %values->{'state'},
  country => %values->{'country'},
  phone  => %values->{'phone'},
  fax   => %values->{'fax'},
  email  => %values->{'email'},
  addrnum => %values->{'addrnum'},
  zip    => %values->{'zip'},

  # SHIPPING INFO
  sname    => %values->{'sname'},
  saddress1 => %values->{'saddress1'},
  saddress2 => %values->{'saddress2'},
  scity    => %values->{'scity'},
  sstate   => %values->{'sstate'},
  szip     => %values->{'szip'},
  scountry => %values->{'scountry'},

 # MISC
  comments => %values->{'comments'},
  referred => %values->{'referred'},

  # ITEMS AND OPTIONS
  items => ([
   {
   id      => %values->{'id'},
   description => %values->{'description'},
   quantity   => %values->{'quantity'},
   price    => %values->{'price'},
   },
   {
    options => ([
    {
      name => %values->{'name1'},
      value => %values->{'value1'},
    },
    {
      name => %values->{'name2'},
      value => %values->{'value2'},
      }
      ])
     }
    ]),

  debugging => $dbug,
  };

  %response = $lperl->process($txn_hash);

  if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>";
    print "Code: $response{'r_code'}<br>";
  }
  else
  {
  print "Status: $response{'r_approved'}<br>";
    print "Error: $response{'r_error'}<br>";
  }


#print response pairs to table
  if (%values->{'verbose'} eq "on")
  {
      $response =~ s/<(([^>]|\n)*)>/<$1>/g;


      print "<table border=1>";

      while(my($key, $value) = each %response){
          print "<tr><td> $key </td> <td> $value </td></tr>";}


      print "</table>";
  }
```

```
sub ParseForm
{
  local ($fileds, $name, $value, $data);

  read(STDIN, $data, $ENV{'CONTENT_LENGTH'});
  @fields = split(/&/, $data);

  foreach $item (@fields)
  {
    ($name, $value) = split (/=/, $item);
    $values{$name} = $value;
        ### print "$name = $value <br>\n";
  }
}
```

# Sample Code to Process a Sale (Minimum Info) Using PERL

The code shown below demonstrates how to process a credit card sale. This example includes only the minimum fields required for a SALE transaction. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# SALE_MININFO.pl - Minimum Required Fields for a Credit Card SALE
#
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#
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# Use is subject to license terms.
```

```
  use lpperl;
  $lperl = new LPPERL();

# Build transaction hash
  $myorder = {
    host     => 'secure.linkpt.net',
    port     => '1129',
    keyfile   => './YOURCERT.pem', #change this to the name and location of your certificate file
    configfile => '1234567', #change this to your store number

    ordertype  => 'SALE',
    result   => 'LIVE', # For a test, set result to GOOD, DECLINE, or DUPLICATE
    chargetotal => '12.99',
    cardnumber => '4111-1111-1111-1111',
    cardexpmonth => '03',
    cardexpyear => '05',
    addrnum   => '123', # Required for AVS. If not provided, transactions will downgrade.
    zip     => '12345', # Required for AVS. If not provided, transactions will downgrade.
#   debugging  => 'true', # for development only - not intended for production use
# cpath => 'c:/curl/curl.exe', # Windows users will need to set cpath. See sample EXTRA_ARGS.pl for usage details.
  };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared library model
  %response = $lperl->curl_process($myorder);  # or use curl methods
```

```
# Evaluate response
 if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#    print "$key = $value<br>\n";}

#end
```

# Sample Code to Process a Sale (Maximum Info) Using PERL

The code shown below demonstrates how to process a credit card sale. This example includes samples of all the commonly used fields you can use in a SALE transaction. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# SALE_MAXINFO.pl - An Example Credit Card SALE with all commonly used fields included
#
# Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
#
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# Use is subject to license terms.
```

```
  use lpperl;
  $lperl = new LPPERL();

# Build transaction hash
  $myorder = {
    host    => 'secure.linkpt.net',
    port    => '1129',
    keyfile   => './YOURCERT.pem',    # change this to the name
and location of your certificate file
    configfile => '1234567',        # change this to your store
number


    ordertype      => 'SALE',
    result       => 'LIVE',      # For test transactions, set to GOOD,
DECLINE, or DUPLICATE
    transactionorigin => 'MOTO',      # For credit card retail txns,
set to RETAIL, for Mail order/telephone order, set to MOTO, for
e-commerce, leave out or set to ECI
    oid        => '12345678-A345', # Order ID number must be
unique. If not set, gateway will assign one.
    ponumber      => '09876543-Q1234',
    taxexempt      => 'N',
    terminaltype    => 'UNSPECIFIED', # Set terminaltype to POS
for an electronic cash register or integrated POS system,
STANDALONE for a point-of-sale credit card terminal,
UNATTENDED for a self-service station, or UNSPECIFIED for e-
commerce or other applications
    ip         => '123.123.123.123',

    subtotal  => '12.99',
    tax      => '0.34', # Replace value with calculated tax
    shipping  => '1.45', # Replace value with calculated shipping
charges
```

```
    vattax   => '0.00',
    chargetotal => '14.78',

    # CARD INFO
    cardnumber => '4111-1111-1111-1111',
    cardexpmonth => '03',
    cardexpyear => '05',
    cvmvalue   => '123', # CVM is the three-digit security code
usually found on the signature line on the back of the card
    cvmindicator => 'provided',

    # BILLING INFO
    name   => 'Joe Customer',
    company => 'SomeWhere, Inc.',
    address1 => '123 Broadway',
    address2 => 'Suite 23',
    city   => 'Moorpark',
    state  => 'CA',
    country => 'US',
    phone  => '8051234567',
    fax   => '8059876543',
    email  => 'joe.customer@somewhere.com',
    zip   => '87123', # Required for Address Verification
    addrnum => '123', # Required for Address Verification

    # SHIPPING INFO
    sname   => 'Joe Customer',
    saddress1 => '123 Broadway',
    saddress2 => 'Suite 23',
    scity   => 'Moorpark',
    sstate  => 'CA',
    szip   => '12345',
    scountry => 'US',
    # ITEMS AND OPTIONS
    items => ([
     {
     id      => '123456-A98765',
     description => 'Logo T-Shirt',
     quantity    => '1',
     price     => '12.99',
     },
     {
      options => ([
      {
        name => 'Color',
        value => 'Red',
      },
      {
        name => 'Size',
        value => 'XL'
      }
      ])
     }
    ]),

    # MISC
    comments => 'Repeat customer. Ship immediately.',
    referred => 'Saw ad on Web site.',
#    debugging => 'true', # for development only - not intended
for production use
# cpath => 'c:/curl/curl.exe', # Windows users will need to set
cpath. See sample EXTRA_ARGS.pl for usage details.
  };

# Send transaction. Use only one of two possible methods
# %response = $lperl->process($myorder);     # use shared library methods
  %response = $lperl->curl_process($myorder);  # or use curl methods


# Evaluate response
 if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#   print "$key = $value<br>\n";}

# end
```

# Sample Code to Process a PreAuth Transaction Using PERL

The code shown below demonstrates how to process a PreAuthorization Transaction. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# PREAUTH.pl - Minimum Required Fields for a PreAuth
#
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#
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  use lpperl;
  $lperl = new LPPERL();

# Build transaction hash
  $myorder = {
    host      => 'secure.linkpt.net',
    port      => '1129',
    keyfile   => './YOURCERT.pem', # change this to the name and location of your certificate file
    configfile => '1234567',    # change this to your store number

    ordertype  => 'PREAUTH',
    chargetotal => '12.99',
    cardnumber => '4111-1111-1111-1111',
    cardexpmonth => '03',
    cardexpyear => '05',
    addrnum   => '123', # Required for AVS. If not provided, transactions will downgrade.
    zip      => '12345', # Required for AVS. If not provided, transactions will downgrade.
# cpath => 'c:/curl/curl.exe', # Windows users will need to set cpath. See sample EXTRA_ARGS.pl for usage details.
  };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared library model
  %response = $lperl->curl_process($myorder);  # or use curl methods


# Evaluate response
  if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need

# while(my($key, $value) = each %response){
#    print "$key = $value<br>\n";}

#end
```

# Sample Code to Process a PostAuth Transaction Using PERL

The code shown below demonstrates how to process a PostAuthorization Transaction (that is, to complete a PreAuthorization with a valid order ID). The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# POSTAUTH.pl - Minimum Required Fields for a PostAuth
#
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Reserved.
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International, Inc.
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  use lpperl;
```

```
 $lperl = new LPPERL();

# Build transaction hash
 $myorder = {
   host      => 'secure.linkpt.net',
   port      => '1129',
   keyfile   => './YOURCERT.pem', # change this to the name and location of your certificate file
   configfile => '1234567',    # change this to your store number

   ordertype  => 'POSTAUTH',
   chargetotal => '12.99',
   cardnumber => '4111-1111-1111-1111',
   cardexpmonth => '03',
   cardexpyear => '05',
   oid      => '12345678-A345', # Must be a valid order ID from a prior Sale or PreAuth
# cpath => 'c:/curl/curl.exe', # Windows users will need to set cpath. See sample EXTRA_ARGS.pl for usage details.
 };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared library model
 %response = $lperl->curl_process($myorder);  # or use curl methods


# Evaluate response
 if ($response{'r_approved'} eq "APPROVED")
 {
   print "Status: $response{'r_approved'}<br>\n";
   print "Code: $response{'r_code'}<br>\n";
```

```
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#   print "$key = $value<br>\n";}

#end
```

# Sample Code for Using AVS and CVM with PERL

The code shown below demonstrates how to process a credit card sale taking advantage of both the AVS and the CVM fraud protection measures. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# AVS_CVM.pl - An Example Credit Card SALE With Minimum Fields required for AVS and Card Code fraud prevention measures
#
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#
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# Use is subject to license terms.
```

```
  use lpperl;
  $lperl = new LPPERL();

# Build transaction hash
  $myorder = {
    host      => 'secure.linkpt.net',
    port      => '1129',
    keyfile    => './YOURCERT.pem', # change this to the name
and location of your certificate file
    configfile => '1234567',    # change this to your store
number

    ordertype  => 'SALE',
    chargetotal => '12.99',
    cardnumber => '4111-1111-1111-1111',
    cardexpmonth => '03',
    cardexpyear => '05',
    cvmvalue    => '123', # CVM is the three-digit security code
usually found on the signature line on the back of the card
    cvmindicator => 'provided',
    addrnum    => '123', # required for Address Verification
    zip       => '87123', # required for Address Verification
# cpath => 'c:/curl/curl.exe', # Windows users will need to set
cpath. See sample EXTRA_ARGS.pl for usage details.
  };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared
library model
  %response = $lperl->curl_process($myorder);  # or use curl
methods
```

```
# Evaluate response
  if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#   print "$key = $value<br>\n";}

#end
```

# Sample Code to run a FORCED TICKET Transaction using PERL

The code shown below demonstrates how to process a PostAuthorization for a Voice Authorization (a Forced Ticket transaction). The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# FORCED_TICKET.pl - Minimum Required Fields for a FORCED
TICKET Transaction
#
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International, Inc.
# Use is subject to license terms.
```

```
  use lpperl;
  $lperl = new LPPERL();

# Build transaction hash
  $myorder = {
    host   => 'secure.linkpt.net',
    port   => '1129',
    keyfile  => './YOURCERT.pem', # change this to the name and location of your certificate file
    configfile => '1234567',    # change this to your store number

    ordertype    => 'POSTAUTH',
    chargetotal   => '12.99',
    cardnumber   => '4111-1111-1111-1111',
    cardexpmonth   => '03',
    cardexpyear   => '05',
    reference_number => 'NEW987654', # the reference number given over the phone
# cpath => 'c:/curl/curl.exe', # Windows users will need to set cpath. See sample EXTRA_ARGS.pl for usage details.
  };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared library model
  %response = $lperl->curl_process($myorder);  # or use curl methods


# Evaluate response
  if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#    print "$key = $value<br>\n";}

#end
```

# Sample Code to Process a Return Using PERL

The code shown below demonstrates how to process a credit card return. To perform a return, you must have a valid order ID (**oid**) from a prior SALE or PREAUTH/POSTAUTH. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# RETURN.pl - Minimum Required Fields for a Credit Card CREDIT
#
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#
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# Use is subject to license terms.

```

```
  use lpperl;
  $lperl = new LPPERL();

# Build transaction hash
  $myorder = {
    host      => 'secure.linkpt.net',
    port      => '1129',
    keyfile    => './YOURCERT.pem', # change this to the name
and location of your certificate file
    configfile => '1234567',     # change this to your store
number

    ordertype  => 'CREDIT',
    cardnumber => '4111-1111-1111-1111',
    cardexpmonth => '03',
    cardexpyear => '05',

    # Amount returned must be less than or equal to the order
amount.
    # If there is more than one return against this order,
    # make sure the total of the returns doesn't exceed the
original sale amount.
    chargetotal => '12.99',

    # Must be a valid order ID from a prior Sale
    oid => '12345678-A345',
# cpath => 'c:/curl/curl.exe', # Windows users will need to set
cpath. See sample EXTRA_ARGS.pl for usage details.
  };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);      # use shared
library model
```

```
  %response = $lperl->curl_process($myorder);  # or use curl methods


# Evaluate response
 if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#    print "$key = $value<br>\n";}

#end
```

# Sample Code to perform a Credit Card VOID Transaction Using PERL

The code shown below demonstrates how to process a credit card VOID transaction. You can only void a credit card SALE transaction if the associated credit card batch has not yet been processed (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# VOID.pl - Minimum Required Fields for a Credit Card VOID
#
# Copyright 2003 LinkPoint International, Inc. All Rights
Reserved.
#
# This software is the proprietary information of LinkPoint
International, Inc.
```

```
# Use is subject to license terms.


  use lpperl;
  $lperl = new LPPERL();

# Build transaction hash
  $myorder = {
    host      => 'secure.linkpt.net',
    port      => '1129',
    keyfile   => './YOURCERT.pem', # change this to the name and location of your certificate file
    configfile => '1234567',     # change this to your store number

    ordertype  => 'VOID',
    chargetotal => '12.99',
    cardnumber => '4111-1111-1111-1111',
    cardexpmonth => '03',
    cardexpyear => '05',

    oid => '12345678-A345', # must be a valid order ID from a prior Sale or PreAuth
# cpath => 'c:/curl/curl.exe', # Windows users will need to set cpath. See sample EXTRA_ARGS.pl for usage details.
  };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);      # use shared library model
  %response = $lperl->curl_process($myorder);  # or use curl methods


# Evaluate response
```

```
  if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#   print "$key = $value<br>\n";}

#end
```

# Sample Code to run a Credit Card Transaction using Items (Including ESD) with PERL

The code shown below demonstrates how to process a Sale using the Items and Options feature. One of the items included in the example is an Electronic Softgood Download (ESD) item. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# ITEMS_W_ESD.pl - Required Fields for an Example Credit Card SALE with ITEMS
#
# Copyright 2003 LinkPoint International, Inc. All Rights Reserved.
#
# This software is the proprietary information of LinkPoint International, Inc.
# Use is subject to license terms.

  use lpperl;
  $lperl = new LPPERL();

# Build transaction hash
  $myorder = {
    host     => 'secure.linkpt.net',
    port     => '1129',
    keyfile  => './YOURCERT.pem', # Change this to the name
and location of your certificate file
    configfile => '1234567',     # Change this to your store
number

    ordertype   => 'SALE',
    subtotal    => '45.98',
    tax         => '0.32', # Replace value with calculated tax
    shipping    => '1.02', # Replace value with calculated
shipping charges
    chargetotal => '47.32',
    cardnumber => '4111-1111-1111-1111',
    cardexpmonth => '03',
    cardexpyear => '05',
    addrnum     => '123', # Required for AVS. If not provided,
transactions will downgrade.
    zip         => '87123', # Required for AVS. If not provided,
transactions will downgrade.

    # ITEMS AND OPTIONS
    items => ([
     {
      id        => '123456-A98765',
      description => 'Logo T-Shirt',
      quantity   => '1',
     price    => '12.99',
     serial   => '0987654321',
    },
    {
     options => ([
     {
      name => 'Color',
      value => 'Red',
     },
     {
      name => 'Size',
      value => 'XL'
     }
     ])
    },
    # item 2
    {
     id     => '123456-A98765',
     description => 'Blast-Em Software',
     price    => '32.99',
     quantity  => '1',
     serial   => '0987654321',
     esdtype   => 'Esdtype_Softgood',
     softfile  => 'blastemgame.exe',
    },
    {options   =>'()',}, # indicate no options
   ]),
# cpath => 'c:/curl/curl.exe', # Windows users will need to set
cpath. See sample EXTRA_ARGS.pl for usage details.
  };


# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared library methods
  %response = $lperl->curl_process($myorder);  # or use curl methods


# Evaluate response
  if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#    print "$key = $value<br>\n";}

# end
```

# Sample Code to run a Level 2 Purchasing Card Transaction with PERL

The code shown below demonstrates how to process a Sale including all the data elements needed for a Level 2 purchasing card transaction. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# L2PURCHASING_CARD.pl - An Example Level 2 Purchasing Card SALE
#
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```

```
  use lpperl;
  $lperl = new LPPERL();

# Build transaction hash
  $myorder = {
    host     => 'secure.linkpt.net',
    port     => '1129',
    keyfile   => './YOURCERT.pem', # change this to the name and location of your certificate file
    configfile => '1234567',    # change this to your store number

    ordertype  => 'SALE',
    tax     => '0.32',    # Tax is required for purchasing cards. If the tax is $0.00, pass a value of 0 for tax
    chargetotal => '47.32',
    cardnumber => '4111-1111-1111-1111',
    cardexpmonth => '03',
    cardexpyear => '05',
    ponumber   => '1203A-G4567', # if there is no PO Number for this order, pass a department code or other value, but make sure the value you pass is supplied by the customer
    taxexempt  => 'N',     # if the purchase is tax exempt, pass a value of Y for taxexempt
# cpath => 'c:/curl/curl.exe', # Windows users will need to set cpath. See sample EXTRA_ARGS.pl for usage details.
  };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared library model
  %response = $lperl->curl_process($myorder);  # or use curl methods
```

```
# Evaluate response
  if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#   print "$key = $value<br>\n";}

#end
```

# Sample Code to run Multiple Transactions using PERL

The code shown below demonstrates how to send multiple credit card transactions to the Gateway for processing. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# MULTIPLE.pl - Sample of multiple transactions processing
#
# This sample demonstrates running an array of PREAUTH
transactions.
#
# This could equally well be a series of POSTAUTHS or RETURNS
if the
# OIDs match those previously approved.
#
#
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```

```
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use lpperl;
$lperl = new LPPERL();

  $txnhash = {
    # constant host and store data
    host    => 'secure.linkpt.net',
    port    => 1129,
    keyfile  => './YOURCERT.pem', # change this to the name
and location of your certificate file
    configfile => '12345671',   # change this to your store
number
    result   => 'GOOD',      # TEST mode
    ordertype => 'PREAUTH',
# cpath => 'c:/curl/curl.exe', # Windows users will need to set
cpath. See sample EXTRA_ARGS.pl for usage details.

    orders     => ([  # array of individual orders
    {
      chargetotal => "1.11",
      cardnumber => "4111-1111-1111-1111",
      cardexpmonth => "01",
      cardexpyear => "04",
      addrnum    => '123',   # Required for AVS. If not provided,
transactions will downgrade.
      zip     => '12345',   # Required for AVS. If not provided,
transactions will downgrade.
```

```
    oid      => '12345678-A1',
   },
   {
    chargetotal => "2.22",
    cardnumber => "4111-1111-1111-1111",
    cardexpmonth => "02",
    cardexpyear => "02",
    addrnum    => '123',
    zip      => '12345',
    oid      => '12345678-B2',
   },
   {
    chargetotal => "3.33",
    cardnumber => "4111-1111-1111-1111",
    cardexpmonth => "03",
    cardexpyear => "05",
    addrnum    => '123',
    zip      => '12345',
    oid      => '12345678-C3',
   }, # etc., etc.
   ]),
  };

 my $orders;
 my $order;
 my $n = 1;

 undef $orders;
 undef $order;

 $orders = $txnhash->{'orders'};

 foreach $order ( @{$orders} )
```

```
  {
    # constant fields
    $$txn{'host'}    = $txnhash->{'host'};
    $$txn{'port'}    = $txnhash->{'port'};
    $$txn{'configfile'} = $txnhash->{'configfile'};
    $$txn{'keyfile'}  = $txnhash->{'keyfile'};
    $$txn{'result'}   = $txnhash->{'result'};
    $$txn{'ordertype'} = $txnhash->{'ordertype'};

    #individual orders
    $$txn{'chargetotal'} = $order->{'chargetotal'};
    $$txn{'cardnumber'} = $order->{'cardnumber'};
    $$txn{'cardexpmonth'} = $order->{'cardexpmonth'};
    $$txn{'cardexpyear'} = $order->{'cardexpyear'};
    $$txn{'addrnum'}   = $order->{'addrnum'};
    $$txn{'zip'}      = $order->{'zip'};
    $$txn{'oid'}      = $order->{'oid'};
#   $$txn{'debugging'} = 'true'; # for development only - not
intended for production use

    my %response;
    undef %response;

  # Send transaction. Use one of two possible methods #
#   %response = $lperl->curl_process($txn);
    %response = $lperl->process($txn);

    if ($response{'r_approved'} eq "APPROVED")
    {
      print "Txn $n Status: $response{'r_approved'}\n";
      print "Txn $n Code: $response{'r_code'}\n\n";
    }
    else
    {
```

```
   print "Txn $n Status: $response{'r_approved'}\n";
   print "Txn $n Error: $response{'r_error'}\n\n";
  }

  $n++;

 # Look at entire return hash and use the elements you need #
#   while(my($key, $value) = each %response){
#     print "$key = $value<br>\n";}


 # You may want to write txn results to file here #

 }
1;
# end
```

# Sample Code to Set Up a New Recurring Credit Card Transaction Using PERL

The code shown below demonstrates how to process a Recurring Credit Card Transaction (Periodic Bill). The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# PB_NEW.pl - Minimum Required Fields for a Recurring Credit
Card Sale (Periodic Bill)
#
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```

```
 use lpperl;
 $lperl = new LPPERL();

# Build transaction hash
 $myorder = {
   host     => 'secure.linkpt.net',
   port     => '1129',
   keyfile   => './YOURCERT.pem', # Change this to the name
and location of your certificate file
   configfile => '1234567',    # Change this to your store
number


   ordertype  => 'SALE',
   chargetotal => '12.99',
   cardnumber => '4111-1111-1111-1111',
   cardexpmonth => '03',
   cardexpyear => '05',
   action   => 'SUBMIT',  # Submits a recurring transaction
charging the card 3 times, once a month, starting today
   installments => '3',
   threshold  => '3',
   startdate  => 'immediate', # If you don't want it to start
today, pass a date in the format YYYYMMDD
   periodicity => 'monthly',
   addrnum   => '123',   # Required for AVS. If not provided,
transactions will downgrade.
   zip     => '12345',   # Required for AVS. If not provided,
transactions will downgrade.
# cpath => 'c:/curl/curl.exe', # Windows users will need to set
cpath. See sample EXTRA_ARGS.pl for usage details.
 };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared library model
 %response = $lperl->curl_process($myorder);  # or use curl methods


# Evaluate response
 if ($response{'r_approved'} eq "APPROVED")
 {
   print "Status: $response{'r_approved'}<br>\n";
   print "Code: $response{'r_code'}<br>\n";
 }
 else
 {
   print "Status: $response{'r_approved'}<br>\n";
   print "Error: $response{'r_error'}<br>\n";
 }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#    print "$key = $value<br>\n";}

#end
```

# Sample Code to Modify a Recurring Credit Card Transaction Using PERL

The code shown below demonstrates how to modify a Recurring Credit Card Transaction (Periodic Bill). The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# PB_MODIFY.pl - Required Fields to MODIFY a Recurring Credit Card Sale (Periodic Bill)
#
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```

```
  use lpperl;
  $lperl = new LPPERL();

# Build transaction hash
  $myorder = {
    host     => 'secure.linkpt.net',
    port     => '1129',
    keyfile   => './YOURCERT.pem', # change this to the name and location of your certificate file
    configfile => '1234567',    # change this to your store number


    ordertype  => 'SALE',
    chargetotal => '12.99',
    cardnumber => '4111-1111-1111-1111',
    cardexpmonth => '03',
    cardexpyear => '05',
    action   => 'MODIFY',
    startdate  => 'immediate',
    installments => '3',
    threshold  => '3',
    periodicity => 'monthly',
    # You MUST pass a valid Order ID for an EXISTING periodic bill to identify which bill you want to modify
    oid     => '111.456.87.03-O986646-A123',
# cpath => 'c:/curl/curl.exe', # Windows users will need to set cpath. See sample EXTRA_ARGS.pl for usage details.
  };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared library model
  %response = $lperl->curl_process($myorder);  # or use curl
```

```
methods


# Evaluate response
 if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#    print "$key = $value<br>\n";}

#end
```

# Sample Code to Cancel a Recurring Credit Card Transaction Using PERL

The code shown below demonstrates how to Cancel an existing Recurring Credit Card Transaction (Periodic Bill). The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# PB_CANCEL.pl - Required Fields to CANCEL a Recurring Credit Card Sale (Periodic Bill)
#
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```

```
 use lpperl;
 $lperl = new LPPERL();

# Build transaction hash
 $myorder = {
   host     => 'secure.linkpt.net',
   port     => '1129',
   keyfile   => './YOURCERT.pem', #change this to the name
and location of your certificate file
   configfile => '1234567', #change this to your store number

   ordertype  => 'SALE',
   chargetotal => '12.99',
   cardnumber => '4111-1111-1111-1111',
   cardexpmonth => '03',
   cardexpyear => '05',
   action   => 'CANCEL',
   startdate  => 'immediate',
   installments => '3',
   threshold  => '3',
   periodicity => 'monthly',
   # You MUST pass a valid Order ID for an EXISTING periodic
bill to identify which bill you want to modify
   oid     => '111.456.87.03-O986646-A123',
# cpath => 'c:/curl/curl.exe', # Windows users will need to set
cpath. See sample EXTRA_ARGS.pl for usage details.
 };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared
library model
 %response = $lperl->curl_process($myorder);  # or use curl
methods
```

```
# Evaluate response
 if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#    print "$key = $value<br>\n";}

#end
```

# Sample Code to Process a Retail Swipe Transaction Using PERL

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is swiped with a credit card reader. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# RETAIL_SWIPE.pl - Minimum Required Fields for a Credit Card SALE
#
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```

```
  use lpperl;
  $lperl = new LPPERL();

# Build transaction hash
  $myorder = {
    host   => 'secure.linkpt.net',
    port   => '1129',
    keyfile  => './YOURCERT.pem', # change this to the name and location of your certificate file
    configfile => '1234567',    # change this to your store number

    ordertype     => 'SALE',
    chargetotal   => '12.99',
    track       => '1298361023614908',
    transactionorigin => 'RETAIL',

    # set terminaltype to POS for an electronic cash register or integrated POS system,
    # STANDALONE for a point-of-sale credit card terminal,
    # UNATTENDED for a self-service station,
    # or UNSPECIFIED for e-commerce or other applications
    terminaltype   => 'POS',

# You should not do AVS for a retail swiped transaction, unless it is an UNATTENDED terminaltype.
# billing addrnum and billing zip are not required because we're not doing AVS ...
# addrnum => '123',
# zip   => '12345',
# cpath => 'c:/curl/curl.exe', # Windows users will need to set cpath. See sample EXTRA_ARGS.pl for usage details.
  };
```

```
# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared library model
  %response = $lperl->curl_process($myorder);  # or use curl methods


# Evaluate response
  if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#    print "$key = $value<br>\n";}

#end
```

# Sample Code to Process a Retail Keyed Transaction Using PERL

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card information is keyed in. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# RETAIL_KEYED.pl - Minimum Required Fields for a Credit Card
SALE-
#
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#
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International, Inc.
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```

```
 use lpperl;
 $lperl = new LPPERL();

# Build transaction hash
 $myorder = {
   host     => 'secure.linkpt.net',
   port     => '1129',
   keyfile   => './YOURCERT.pem', # change this to the name
and location of your certificate file
   configfile => '1234567',    # change this to your store
number


   ordertype  => 'SALE',
   chargetotal => '12.99',
   cardnumber => '4111-1111-1111-1111',
   cardexpmonth => '03',
   cardexpyear => '05',

   # set terminaltype to POS for an electronic cash register or
integrated POS system,
   # STANDALONE for a point-of-sale credit card terminal,
   # UNATTENDED for a self-service station,
   # or UNSPECIFIED for e-commerce or other applications
   terminaltype   => 'POS',
   transactionorigin => 'RETAIL',

# You should not do AVS for a retail swiped transaction, unless
it is an UNATTENDED terminaltype.
# billing addrnum and billing zip are not required because we're
not doing AVS ...
# addrnum => '123',
# zip   => '12345',
# cpath => 'c:/curl/curl.exe', # Windows users will need to set
cpath. See sample EXTRA_ARGS.pl for usage details.
  };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared
library model
  %response = $lperl->curl_process($myorder);  # or use curl
methods


# Evaluate response
  if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#    print "$key = $value<br>\n";}

#end
```

# Sample Code to Process a Retail UNATTENDED Transaction Using PERL

The code shown below demonstrates how to process a Retail SALE Transaction where the credit card terminal is unattended (that is, a self-service station such as a gas station or ticket booth). In this case, you should do a partial AVS where you collect the zip code only. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# RETAIL_PARTIAL_AVS.pl - Minimum Required Fields for a Credit Card SALE with partial AVS
#
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# Use is subject to license terms.
```

```
  use lpperl;
  $lperl = new LPPERL();

# Build transaction hash
  $myorder = {
    host    => 'secure.linkpt.net',
    port    => '1129',
    keyfile  => './YOURCERT.pem', # change this to the name
and location of your certificate file
    configfile => '1234567',    # change this to your store
number


    ordertype     => 'SALE',
    chargetotal   => '12.99',
    cardnumber    => '4111-1111-1111-1111',
    cardexpmonth   => '03',
cardexpyear   => '05',
    transactionorigin => 'RETAIL',

    # set terminaltype to POS for an electronic cash register or
integrated POS system,
    # STANDALONE for a point-of-sale credit card terminal,
    # UNATTENDED for a self-service station,
    # or UNSPECIFIED for e-commerce or other applications
    terminaltype   => 'UNATTENDED',

    # For an UNATTENDED terminaltype, do a partial AVS: zip
code only.
    zip   => '12345',
    # addrnum => '123',  # not submitted
# cpath => 'c:/curl/curl.exe', # Windows users will need to set
cpath. See sample EXTRA_ARGS.pl for usage details.
```

```
  };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared library model
  %response = $lperl->curl_process($myorder);  # or use curl methods


# Evaluate response
 if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#   print "$key = $value<br>\n";}

#end
```

# Sample Code to perform a VirtualCheck SALE Transaction Using PERL*

The code shown below demonstrates how to process a VirtualCheck SALE transaction. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# VCHECK_SALE.pl - Minimum Required Fields for a VirtualCheck SALE
#
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#
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```

```
 use lpperl;
 $lperl = new LPPERL();

# Build transaction hash
 $myorder = {
   host     => 'secure.linkpt.net',
   port     => '1129',
   keyfile   => './YOURCERT.pem', # Change this to the name
and location of your certificate file
   configfile => '1234567',     # Change this to your store
number


   ordertype => 'SALE',
   chargetotal => '12.99',
   dl      => '120381698', # Customer's Driver's license # and
DL state
   dlstate   => 'CA',
   routing   => '123456789', # Transit routing number for the
customer's bank
   account   => '2139842610',
   accounttype => 'pc',     # Is this a business or personal
account? personal = pc, business = bc
   bankname  => 'MyBank',  # Bank name and 2-letter bank
state
   bankstate => 'CA',
   name     => 'Joe Customer',
   address1  => '123 Broadway',
   city     => 'Moorpark',
   state    => 'CA',
   zip      => '12345',
   phone    => '8051234567',
   email    => 'joe.customer@somewhere.com',
# cpath => 'c:/curl/curl.exe', # Windows users will need to set
cpath. See sample EXTRA_ARGS.pl for usage details.
  };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared
library model
  %response = $lperl->curl_process($myorder);  # or use curl
methods


# Evaluate response
 if ($response{'r_approved'} eq "SUBMITTED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#   print "$key = $value<br>\n";}

#end
```

# Sample Code to perform a VirtualCheck VOID Transaction Using PERL*

The code shown below demonstrates how to process a VirtualCheck VOID transaction. You can only void a VirtualCheck SALE transaction if it has not yet been sent for processing (that is, the SALE was performed the same day as the VOID. VirtualCheck transactions are automatically sent to the banking system at the end of each day. No VOIDs are allowed once the transaction is in the banking system.) You will need the Order ID (**oid**) from the SALE transaction. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# VCHECK_VOID.pl - Minimum Required Fields for a VirtualCheck VOID
#
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#
# This software is the proprietary information of LinkPoint
```
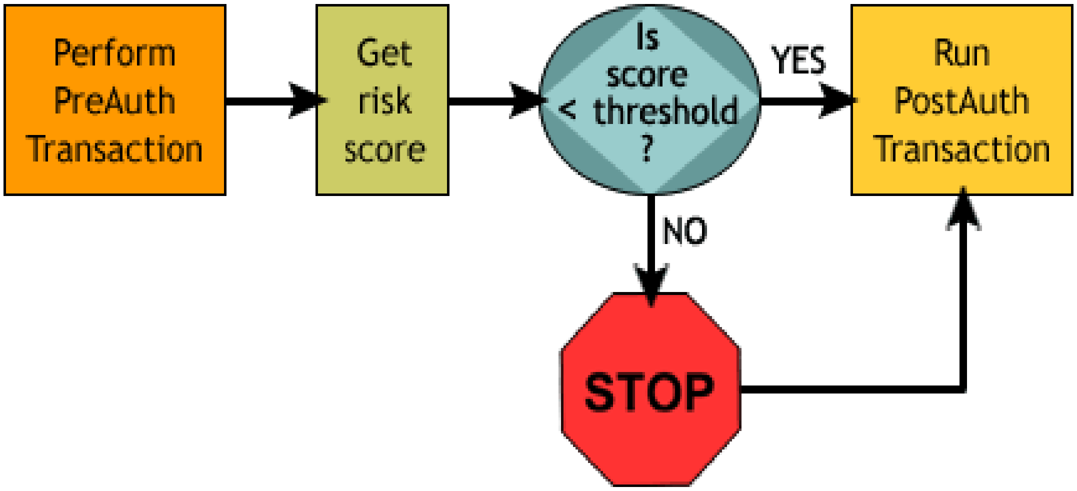

```
International, Inc.
# Use is subject to license terms.


 use lpperl;
 $lperl = new LPPERL();

# Build transaction hash
 $myorder = {
   host      => 'secure.linkpt.net',
   port      => '1129',
   keyfile    => './YOURCERT.pem', # Change this to the name
and location of your certificate file
   configfile => '1234567',     # Change this to your store
number


   ordertype  => 'VOID',
   chargetotal => '9.99',      # You must match previous
transaction amount
   oid      => '0987654321',   # You must have a valid order ID
from a previous VCheck SALE transaction that has not yet been
processed
   voidcheck  => 'true',
  };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);      # use shared
library model
 %response = $lperl->curl_process($myorder);  # or use curl
methods


# Evaluate response
 if ($response{'r_approved'} eq "SUBMITTED")
```

```
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }

# Look at entire return hash & use the elements you need
# while(my($key, $value) = each %response){
#    print "$key = $value<br>\n";}

#end
```

# Sample Code Using LinkShield™ with PERL

## PreAuthorization / Postauthorization example

The code shown below demonstrates an example of one way to use LinkShield™ fraud risk scores. This example runs a preauthorization transaction, checks the fraud risk score, then runs a postauthorization if the fraud risk score is considered acceptable. The diagram shown illustrates this example. The fraud risk score used within this sample code is for explanatory purposes only; you should choose the fraud risk score threshold appropriate for your business needs. See the comments within the code for further explanation.



See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

# Sample Code

```
#!/usr/bin/perl


# LINKSHIELD_PREAUTH_POSTAUTH.php
#
# Sample code to run a preauth, check the fraud score, and
submit a
# postauth if the score falls in an acceptable range.
#
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Reserved.
#
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International, Inc.
# Use is subject to license terms.


  use lpperl;
  $lperl = new LPPERL();

# Build transaction hash
  $myorder = {
    host    => 'secure.linkpt.net',
    port    => '1129',
    keyfile  => './YOURCERT.pem',    # change this to the name
and location of your certificate file
    configfile => '1234567',       # change this to your store
number

    ordertype     => 'PREAUTH',    # set transaction type
    result      => 'GOOD',      # For test transactions, set to
GOOD, DECLINE, or DUPLICATE
```
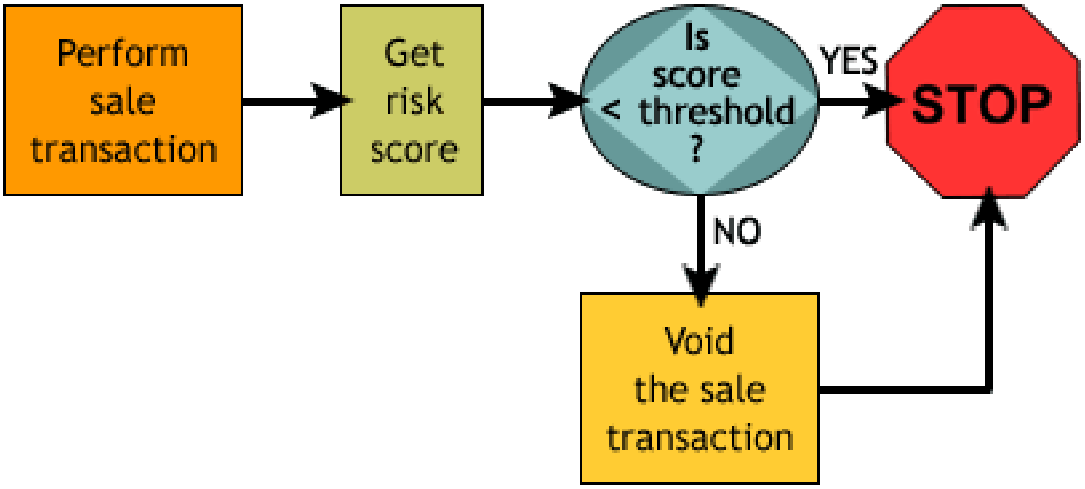

```
    transactionorigin => 'ECI',      # For credit card retail txns, set to RETAIL, for Mail order/telephone order, set to MOTO, for e-commerce, leave out or set to ECI
    oid        => '12345678-A345', # Order ID number must be unique. If not set, gateway will assign one.
    ponumber     => '09876543-Q1234',
    taxexempt     => 'N',
    terminaltype   => 'UNSPECIFIED', # Set terminaltype to POS for an electronic cash register or integrated POS system, STANDALONE for a point-of-sale credit card terminal, UNATTENDED for a self-service station, or UNSPECIFIED for e-commerce or other applications
    ip        => '123.123.123.123',

    subtotal  => '12.99',
    tax      => '0.34', # Replace value with calculated tax
    shipping  => '1.45', # Replace value with calculated shipping charges
    vattax   => '0.00',
    chargetotal => '14.78',

    # CARD INFO
    cardnumber => '4111-1111-1111-1111',
    cardexpmonth => '03',
    cardexpyear => '05',
    cvmvalue   => '123', # CVM is the three-digit security code usually found on the signature line on the back of the card
    cvmindicator => 'provided',

    # BILLING INFO
    name   => 'Joe Customer',
    company => 'SomeWhere, Inc.',
    address1 => '123 Broadway',
    address2 => 'Suite 23',
    city    => 'Moorpark',
    state   => 'CA',
    country => 'US',
    phone   => '8051234567',
    fax     => '8059876543',
    email   => 'joe.customer@somewhere.com',
    zip     => '87123', # Required for Address Verification
    addrnum => '123', # Required for Address Verification

    # SHIPPING INFO
    sname     => 'Joe Customer',
    saddress1 => '123 Broadway',
    saddress2 => 'Suite 23',
    scity     => 'Moorpark',
    sstate   => 'CA',
    szip     => '12345',
    scountry => 'US',

    # MISC
    comments => 'Repeat customer. Ship immediately.',
    referred => 'Saw ad on Web site.',
#   debug => 'true', # for development only - not intended for
production use
  };

# Send transaction. Use only one of two possible methods
# %response = $lperl->process($myorder);      # use shared
library methods
  %response = $lperl->curl_process($myorder);  # or use curl
methods


# Evaluate response
```

```
  if ($response{'r_approved'} eq "APPROVED") # success
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
    print "Score: $response{'r_score'}<br>\n";
  }
  else  # failure
  {
    print "Error: $response{'r_error'}<br>\n";
    exit; # transaction failed, cannot continue
  }

#  while(my($key, $value) = each %response){
#   print "$key = $value<br>\n";}


# Evaluate fraud score that comes back
  $score = $response{'r_score'};
  print "Fraud score $score ";

  if ($score lt 70) # Replace the value '70' with a value appropriate for your business risk level
  {
    print "is in acctable range, submitting POSTAUTH...\n";

    $postorder = {
      oid     => $response{'r_ordernum'},  # will also be the same as $myorder->{'oid'}
      ordertype  => 'POSTAUTH',         # set transaction type

      chargetotal => $myorder->{'chargetotal'}, # everything else same as before
      result   => $myorder->{'result'},
      host     => $myorder->{'host'},
      port     => $myorder->{'port'},
      keyfile   => $myorder->{'keyfile'},
      configfile => $myorder->{'configfile'},
      cardnumber => $myorder->{'cardnumber'},
      cardexpmonth => $myorder->{'cardexpmonth'},
      cardexpyear => $myorder->{'cardexpyear'},
      };

  # Send transaction. Use only one of two possible methods
  # %response = $lperl->process($postorder);     # use shared library methods
    %postresult = $lperl->curl_process($postorder);  # or use curl methods


  # Evaluate response
    if ($postresult{'r_approved'} eq "APPROVED")  # success
    {
      print "Status: $postresult{'r_approved'}<br>\n";
      print "Transaction has been postauthed <br>\n";
    }
    else  # failure, print the reason
    {
      print "Status: $postresult{'r_approved'}<br>\n";
      print "Error: $postresult{'r_error'}<br>\n";
      print "Transaction void was unsuccessful <br>\n";
    }

  #  while(my($key, $value) = each %postresult){
  #   print "$key = $value<br>\n";}

  }

  else  # score too high
  {
     print "is not within acceptable range<br>\n";
     print "Not proceeding with postauth <br>\n";
  }

# end
```

# Sample Code Using LinkShield™ with PERL

## SALE / VOID example

The code shown below demonstrates an example of one way to use LinkShield™ fraud risk scores. This example runs a sale transaction, checks the fraud risk score, then runs a void if the fraud risk score is considered unacceptable. The diagram shown illustrates this example. The fraud risk score used within this sample code is for explanatory purposes only; you should choose the fraud risk score threshold appropriate for your business needs. See the comments within the code for further explanation.



See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# LINKSHIELD_SALE_VOID.pl
#
# Sample code to do a SALE transaction, check the fraud score, and
# then VOID the previous transaction if the fraud score exceeds a
# predetermined value.
#
#
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#
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# Use is subject to license terms.

  use lpperl;
  $lperl = new LPPERL();

# Build transaction hash
  $myorder = {
    host    => 'secure.linkpt.net',
    port    => '1129',
    keyfile   => './YOURCERT.pem',    # change this to the name and location of your certificate file
    configfile => '1234567',        # change this to your store number

    ordertype     => 'SALE',
    result       => 'LIVE',      # For test transactions, set to GOOD, DECLINE, or DUPLICATE
    transactionorigin => 'ECI',      # For credit card retail txns, set to RETAIL, for Mail order/telephone order, set to MOTO, for e-commerce, leave out or set to ECI

    oid        => '12345678-A345', # Order ID number must be unique. If not set, gateway will assign one.
    ponumber      => '09876543-Q1234',
    taxexempt      => 'N',
    terminaltype    => 'UNSPECIFIED', # Set terminaltype to POS for an electronic cash register or integrated POS system, STANDALONE for a point-of-sale credit card terminal, UNATTENDED for a self-service station, or UNSPECIFIED for e-commerce or other applications
    ip         => '123.123.123.123',

    subtotal  => '12.99',
    tax      => '0.34', # Replace value with calculated tax
    shipping  => '1.45', # Replace value with calculated shipping charges
    vattax   => '0.00',
    chargetotal => '14.78',

    # CARD INFO
    cardnumber => '4111-1111-1111-1111',
    cardexpmonth => '03',
    cardexpyear => '05',
    cvmvalue   => '123', # CVM is the three-digit security code usually found on the signature line on the back of the card
    cvmindicator => 'provided',

    # BILLING INFO
    name   => 'Joe Customer',
    company => 'SomeWhere, Inc.',
    address1 => '123 Broadway',
    address2 => 'Suite 23',
    city    => 'Moorpark',
    state   => 'CA',
    country => 'US',
    phone   => '8051234567',
    fax     => '8059876543',
    email   => 'joe.customer@somewhere.com',
    zip     => '87123', # Required for Address Verification
    addrnum => '123', # Required for Address Verification

    # SHIPPING INFO
    sname    => 'Joe Customer',
    saddress1 => '123 Broadway',
    saddress2 => 'Suite 23',
    scity    => 'Moorpark',
    sstate   => 'CA',
    szip     => '12345',
    scountry => 'US',

    # MISC
    comments => 'Repeat customer. Ship immediately.',
    referred => 'Saw ad on Web site.',
  };

# Send transaction. Use only one of two possible methods
# %response = $lperl->process($myorder);     # use shared
library methods
  %response = $lperl->curl_process($myorder);  # or use curl
methods


# Evaluate response
```

```
  if ($response{'r_approved'} eq "APPROVED") # success
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
    exit; # transaction failed, cannot continue
  }

# Evaluate fraud score that comes back
  $score = $response{'r_score'};
  print "Fraud score $score ";

  if ($score gt 70) # Replace the value '70' with a value
appropriate for your business risk level
  {
    print "too high, voiding transaction...<br>\n";

    $voidorder = {
      oid      => $response{'r_ordernum'},  # will also be the
same as $myorder->{'oid'}
      ordertype  => 'VOID',


      chargetotal => $myorder->{'chargetotal'}, # everything
else same as before
      host      => $myorder->{'host'},
      port      => $myorder->{'port'},
      keyfile    => $myorder->{'keyfile'},
      configfile => $myorder->{'configfile'},
      cardnumber => $myorder->{'cardnumber'},
    cardexpmonth => $myorder->{'cardexpmonth'},
    cardexpyear => $myorder->{'cardexpyear'},
    };

  # Send transaction. Use only one of two possible methods
  # %response = $lperl->process($voidorder);      # use shared library methods
   %voidresult = $lperl->curl_process($voidorder);  # or use curl methods


  # Evaluate response
   if ($voidresult{'r_approved'} eq "APPROVED")
   {
     print "Status: $voidresult{'r_approved'}<br>\n";
     print "Transaction has been voided <br>\n";
   }
   else
   {
     print "Status: $voidresult{'r_approved'}<br>\n";
     print "Error: $voidresult{'r_error'}<br>\n";
     print "Transaction void was unsuccessful <br>\n";
   }

  #  while(my($key, $value) = each %voidresult){
  #   print "$key = $value<br>\n";}
  }
  else
  {
   print "is with acceptable range<br>\n";
   print "Transaction successful <br>\n";
  }
  # end
```

# Sample Code to Calculate Shipping Charges Using PERL

The code shown below demonstrates how to use the shipping calculator. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# SHIPPING.pl - An Example shipping calculation
#
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#
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# Use is subject to license terms.


  use lpperl;
  $lperl = new LPPERL();
```

```
# Build transaction hash
  $myorder = {
    host    => 'secure.linkpt.net',
    port    => '1129',
    keyfile  => './YOURCERT.pem', # change this to the name and location of your certificate file
    configfile => '1234567',    # change this to your store number

    ordertype => 'CALCSHIPPING',
    scarrier => '2',
    sweight  => '1.2',
    sitems   => '1',
    stotal   => '12.99',
    sstate   => 'CA',
# cpath => 'c:/curl/curl.exe', # Windows users will need to set cpath. See sample EXTRA_ARGS.pl for usage details.
  };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared library model
  %response = $lperl->curl_process($myorder);  # or use curl methods


# Evaluate response
  if ($response{'r_shipping'})
  {
    print "\nShipping: $response{'r_shipping'}\n";
  }
  else
  {
    print "\nError: $response{'r_error'}\n\n";
  }

#end
```

# Sample Code to Calculate Sales Tax Using PERL

The code shown below demonstrates how to use the Tax calculator. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl


# TAX.pl - An Example tax calculation
#
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# Use is subject to license terms.


  use lpperl;
  $lperl = new LPPERL();
```

```
# Build transaction hash
  $myorder = {
    host    => 'secure.linkpt.net',
    port    => '1129',
    keyfile  => './YOURCERT.pem', # change this to the name and location of your certificate file
    configfile => '1234567',     # change this to your store number

    ordertype => 'CALCTAX',
    stotal   => '12.99',
    sstate    => 'CA',
    szip    => '12345',
    subtotal => '12.99',
# cpath => 'c:/curl/curl.exe', # Windows users will need to set cpath. See sample EXTRA_ARGS.pl for usage details.
  };

# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);      # use shared library model
  %response = $lperl->curl_process($myorder);  # or use curl methods


# Evaluate response
  if ($response{'r_tax'})
  {
    print "\nTax: $response{'r_tax'}\n";
  }
  else
  {
    print "\nError: $response{'r_error'}\n\n";
  }

#end
```

# Sample Code to Process a Sale (with extra arguments) Using PERL

The code shown below demonstrates how to process a credit card sale. This example demonstrates various optional arguments that can passed into the PERL module.. The example uses a PERL hash table. See the comments within the code for further explanation.

If you copy this code for your own use, please make sure you change the values to be specific to your merchant store. That is, at a minimum, make sure you change:

1. "**1234567**" to your merchant store number (or storename) as specified in the merchant's Welcome e-mail,
2. "**secure.linkpt.net**" to the host name specified in your Welcome e-mail (if applicable), and
3. "**./YOURCERT.pem**" to the location and file name of the digital certificate, which should be saved on your Web server with a ***.pem*** extension.

## Sample Code

```
#!/usr/bin/perl

# XTRA_ARGS.pl - Simple SALE transaction demonstrating various optional
# arguments that can passed into the LinkPoint lpperl.pm perl module
#
#
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#
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# Use is subject to license terms.


  use lpperl;
  $lperl = new LPPERL();

# Build transaction hash
  $myorder = {
    host      => 'secure.linkpt.net',
    port      => '1129',
    keyfile   => './YOURCERT.pem', #change this to the name and location of your certificate
file
    configfile => '1234567',     #change this to your store number
    ordertype  => 'SALE',
    result   => 'GOOD', # For a test, set result to GOOD, DECLINE, or DUPLICATE
    chargetotal => '12.99',
    cardnumber => '4111-1111-1111-1111',
    cardexpmonth => '03',
    cardexpyear => '05',

#  FIELD NAME:  cpath - Curl Path
# DEFAULT VALUE:  /usr/bin/curl
# EXPLANATION:  Curl path: Use this if curl binary executable is in a nonstandard location
# EXAMPLE USAGE:
   cpath => '/usr/local/bin/curl',

#  FIELD NAME:  cargs - Curl Arguments
# DEFAULT VALUE:  '-m 300 -s -S' -m = timeout value (seconds), -s = silent, -S = show
errors
# EXPLANATION:  Curl arguments - You need to enter the complete string if you over-ride
the default.
#          For more info see http://curl.haxx.se/docs/manpage.html.
#          This field can normally be omitted.
# EXAMPLE USAGE:
   cargs => '-k -m 300 -s -S',

#  FIELD NAME:  xml - use XML processing
# DEFAULT VALUE:  none
# EXPLANATION:  If this field is present, we are passing an xml string directly
#          into lpperl.pm and the server response will then also be in xml format.
#          Hash values passed in will be ignored, except for host, port and keyfile.
#          See the LinkPoint sample "PASS_XML.pl" for example usage of this field.
# EXAMPLE USAGE:
    xml => '<order> <orderoptions> <result>GOOD</result>
<ordertype>SALE</ordertype> </orderoptions> <merchantinfo>
<configfile>1234567</configfile> </merchantinfo> <creditcard>
<cardnumber>4111111111111111</cardnumber> <cardexpmonth>12</cardexpmonth>
<cardexpyear>08</cardexpyear> </creditcard> <payment>
<chargetotal>1.03</chargetotal> </payment> </order>',
# FIELD NAME: cpath - Curl Path
# DEFAULT VALUE: /usr/bin/curl
# EXPLANATION: Curl path: Note If you are using the binary curl methods and the
# curl executable is located in a non-standard location, you will
# need to set the 'capth' variable. Windows users will need to set this.
# If the 'cpath' variable has not been explicitly set, the default
# curl search path is '/usr/bin/curl'.
# EXAMPLE USAGE:
# cpath => 'c:/curl/curl.exe', # Win32
# cpath => '/usr/local/bin/curl', #  *NIX


#  FIELD NAME:  debugging
# DEFAULT VALUE:  false
# EXPLANATION:  Prints values as they are processed by module. It also turns on verbose
curl output
#        Debugging is for development only - not intended for production use
# EXAMPLE USAGE:
  debugging => 'true',


#  FIELD NAME:  webspace
# DEFAULT VALUE:  true
# EXPLANATION:  When viewing perl output through a web browser, all xml tags are
#        removed, so we must escape them to view xml output. This is on
#        by default. If running perl from the command line (or not through a
#        browser), set this value to false. Otherwise this field is not needed.
# EXAMPLE USAGE:
   webspace => 'false',

# cpath => 'c:/curl/curl.exe', # Windows users will need to set cpath. See sample
EXTRA_ARGS.pl for usage details.
  };


# Send transaction. Use one of two possible methods
# %response = $lperl->process($myorder);     # use shared library model
  %response = $lperl->curl_process($myorder);  # or use curl methods


## NOTE: if passing in an XML string, as demonstrated above, the LinkPoint PERL
# module will return an XML STRING instead of a hash, as is expected here. See
# the sample 'PASS_XML.pl' for an example of how to parse an XML response.
# The following will NOT work to process an XML response. ##


# Evaluate response
  if ($response{'r_approved'} eq "APPROVED")
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Code: $response{'r_code'}<br>\n";
  }
  else
  {
    print "Status: $response{'r_approved'}<br>\n";
    print "Error: $response{'r_error'}<br>\n";
  }


##########################################################
# Look at entire return hash & use the elements you need
# (This will not work if passed XML using the 'xml' argument)
#
# while(my($key, $value) = each %response){
#   print "$key = $value<br>\n";}

#end
```

# API Frequently Asked Questions (FAQs)

- **What is the API?**
- **How does the API work?**
- **What security measures are used?**
- **What do I need to know to use the API software?**
- **How do I get the API and/or wrapper software?**
- **Do you offer a Software Development Kit (SDK)?**

- **What fraud protection measures are included?**
- **How can I change my fraud protection settings?**
- **Is there a way for me to review transaction activity for my store?**
- **What is included in the welcome e-mail?**
- **What if I lose my welcome e-mail?**

- **How do I get a pem file?**
- **How do I create my pem file?**
- **What is a digital certificate? How do I get mine? Is that the only certificate I need for my store?**
- **Can you send me the digital certificate?**
- **How do I install the digital certificate?**
- **I'm using Java$^{TM}$ and I've saved my certificate as a PEM file, but it's not working. What do I do?**

- **Which shopping carts are integrated with the API solution?**
- **What if I lose my password?**
- **How can I test my store before going live?**
- **Can I set up recurring payments using API software? How about payments in installments?**

- **How do I do API tax calculations?**
- **How do I do API shipping calculations?**
- **What are the absolute 'required' fields for API?**
- **We want to be taken off of test mode and set to live mode? How do we handle this?**

- **What does AVS stand for?**
- **How do I set up AVS?**
- **What is CVV2? CVC2? CID?**
- **How do I set up CVV? CVC2? CID?**

- **Is there a sample credit card number that I can use to test with my store?**
- **How do I use the LinkPoint Select API electronic softgood downloads (ESD) module?**
- **Is there a size limit on ESD files?**
- **How do I get access to LinkPoint Central?**
- **Our Web server has moved. Do you need to update your records with our new IP address?**
- **Which credit cards can I accept with the API solution?**
- **Is there any way to check authorization of a credit card without having those funds reserved?**

- **What computer platforms are supported?**
- **How do I run a test transaction?**
- **How do I compile the libraries? Are there any special switches?**
- **What compilers do you recommend?**

## How to troubleshoot the following errors:

- **Unable to open merchant configuration file.**
- **Unable to open/parse client certificate file.**
- **Unable to authorize payment: Unable to connect to SSL server.**
- **N: socket write error (Time out waiting for response)**
- **Not an ELF account: (cannot authorize transaction)**
- **Unable to open shipping configuration file**
- **Request context must be allocated**
- **Invalid contact name in merchant certificate**

## What is the API?

The API is a tool for the merchant that needs a custom commerce solution. It is an application programming interface (API) used by merchants to build complex Web sites or other custom systems that process payments. There are also tax and shipping calculators and an Electronic Softgood Download module available for use with the API. The API enables full-featured, highly secure and reliable e-commerce Web sites and custom retail implementations. The API includes LinkPoint Central for comprehensive store management.

**Top**

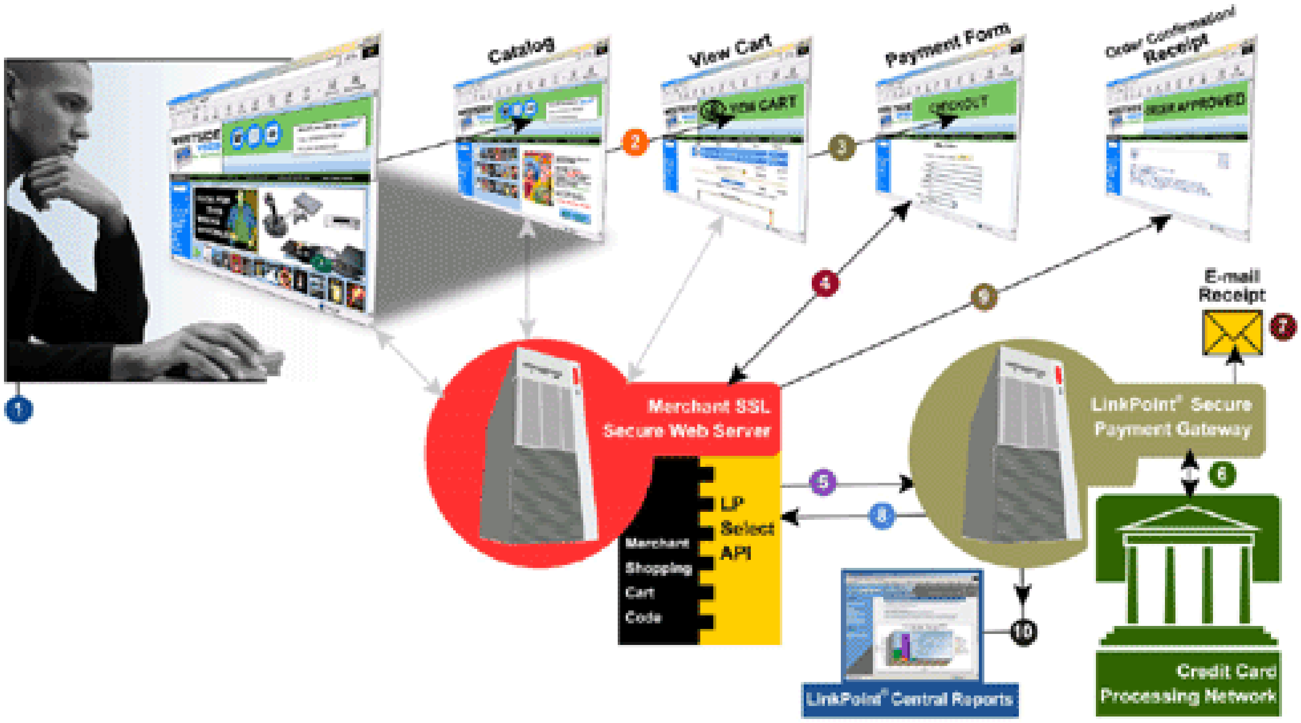
## How does the API work?

A merchant uses the API software modules to build the payment solution that fits the merchant's unique needs. Modules offered are:

- The payment module
- The shipping calculator module
- The tax calculator module
- The ESD module
- The VirtualCheck module
- The Recurring payments module

Merchants can pick and choose modules as needed. For credit card payments, all of the interactions with credit card processors and financial institutions are resolved and managed through the API payment module. For electronic check payments, all of the interactions with financial institutions are resolved and managed through the API VirtualCheck module.

Once a merchant has integrated the API payment module into a Web site, a customer can purchase items on the merchant's Web site and all payment details are processed automatically. Merchants can then review transaction activity by visiting LinkPoint Central. Let's follow a simple transaction as it travels from the customer's order to approval.


Catalog
View Cart
VIEW CART
Payment Form
CHECKOUT
Order Confirmation/ Receipt
ORDER APPROVED
1
2
3
4
5
6
7
8
9
10
E-mail Receipt
Merchant SSL Secure Web Server
LP Select API
Merchant Shopping Cart Code
LinkPoint® Secure Payment Gateway
Credit Card Processing Network
LinkPoint® Central Reports

1. A customer selects items for purchase from a merchant's online store over the Internet.
2. The customer clicks on the **View Cart** button and finalizes the order.
3. The customer clicks on the **Check Out** button and proceeds to the merchant's payment page.
4. The ordering information is received by the merchant's CSP or by the merchant's own server (self-hosting).
5. The merchant's customized software receives the information, uses the tax and shipping calculators as needed, calculates the order total and passes relevant order and payment information to the API payment module. The API payment module funnels the order data through the secure sockets layer (SSL) pipeline to the LinkPoint Secure Payment Gateway.
6. The LinkPoint Secure Payment Gateway calls and transmits the data through a

dedicated, secure frame relay system to the banking network. (Once the transaction is approved and settled, funds are withdrawn from the credit card-issuing bank and deposited into the merchant bank.)

7. A confirmation e-mail is sent to the merchant and the purchaser when the transaction is completed.
8. The merchant's Web server receives the transaction response information. This generally happens within six seconds.
9. The merchant's Web server displays the transaction results to the customer.
10. The merchant uses LinkPoint Central reports to review transactions and mark items as shipped (e.g., ready for settlement).

**Top**

## What security measures are used?

The Gateway provides data encryption, server authentication, message integrity and optional client authentication for a TCP/IP connection by the Secure Sockets Layer (SSL) protocol. SSL is a protocol developed by Netscape® to provide secure transmission of private information that is sent over the Internet. This protocol uses public and private key pairs to encrypt data. The public and private keys are dissimilar and each pair is unique; therefore, the keys possessed verify the sender's identity. The public key is distributed to the merchant, ISP or CSP in the form of a digital certificate, which contains information that can verify the key holder identity and the key validity. The private key is kept confidential and remains on the Payment Gateway. If data is encrypted with the private key, only the public key can decrypt it. If data is encrypted with the public key, only the private key can decrypt it. This process prevents the data from being compromised while in transit.

**Top**

## What do I need to know to use the API?

You need to have some programming skills to use the API. Any of the following languages can be used to invoke the API:

- C/C++
- C#
- ASP, Visual Basic, or VBScript
- PERL
- PHP
- .Net
- XML
- Java$^{TM}$

**Top**

## How do I get the API and/or wrapper software?

All the LinkPoint software and related documentation is downloadable from the downloads section of **http://www.linkpoint.com**. You will need a live merchant account with a LinkPoint-compatible merchant service provider or a LinkPoint test account before you can use the LinkPoint software.

**Top**

## Do you offer a Software Development Kit (SDK)?

We do not offer SDKs, but we offer the software modules in many different programming languages.

**Top**

## What fraud protection measures are included?

Fraud protection measures included with all LinkPoint payment services are:

- Address Verification System (AVS)
- Card verification schemes (CVV2 and CVC2)
- Merchant-configurable fraud protection. Merchants can block customer names, IP or class C addresses, domain names, and specific credit card numbers. Merchants can also set automatic lockout times. These are set in the **Admin** section of LinkPoint Central.

For more information on each of these fraud protection capabilities, please refer to the **LinkPoint Central Help files** or the LPC user manual.

**Top**

## How can I change my fraud protection settings?

Log into **https://www.linkpointcentral.com**. Click on **Admin**, then on **Fraud Settings**. Please refer to the **LinkPoint Central Help files** or user manual for further instructions.

**Top**

## Is there a way for me to review transaction activity for my store?

Yes. Log into **https://www.linkpointcentral.com**. Click on **Reports** and choose your preferred report. Please refer to the **LinkPoint Central Help files** or user manual for further instructions.

**Top**

## What is included in the welcome e-mail?

When your application is approved, you will receive an introductory e-mail titled "Welcome to LinkPoint Select API". The following information is included in this e-mail:

- your DBA store name
- your store number (represented by a 10-Digit number) which is required to obtain your password
- your User ID number
- your secure Host Name and Port Number
- your digital certificate (embedded in text within the e-mail or at a URL to which you are directed).
- contact information for questions or problems

**Top**

## What if I lose my welcome e-mail?

Welcome e-mails can be resent if the original e-mails are lost. Please contact **support@linkpoint.com** to resend your welcome e-mail.

**Top**

## How do I get a pem file?

The owner of the account should have recieved a Welcome e-mail when the mercahnt account was opened. You must have a LinkPoint Select API account in order to recieve this e-mail. If you lost this e-mail, you will have to call your merchant account provider to have the e-mail resent at 1-800 456-5989 X4100 (human interaction is a security requirement). At the very end of the message (embedded in the e-mail text) will be the digital certificate, which is your pem file. Follow the instructions given in the e-mail exactly to save the digital certificate into a file on your Web server with a ***.pem*** extension. Note the location (path) to the pem file.

**Top**

## How do I create my pem file?

At the bottom of the Welcome e-mail is a copy of your digital certificate. If you are using an ISP, a copy of this e-mail should have been e-mailed to your ISP. This certificate should be saved as a file on your Web server with a .pem extension. Copy all characters beginning with the line that states, "-----BEGIN RSA PRIVATE KEY-----" through the end of this e-mail where it states, "-----END CERTIFICATE-----" into a file with a ***.pem*** extension onto your Web server. Note the path to the pem file.

**Top**

## What is a digital certificate? How do I get mine? Is that the only certificate I need for my store?

A digital certificate is a key used on the Internet to identify a company or organization and secure transactions between two parties. When you sign up for the LinkPoint Select API service, you receive a digital certificate. The LinkPoint Select API software uses this certificate to send SSL-secured payment transactions to the LinkPoint Secure Payment Gateway.

The certificate you receive with the LinkPoint Select API solution is used ONLY for LinkPoint Select API purposes--it does not make your Web server secure. You will need to obtain a digital certificate from a certificate authority in order to secure your Web server. Your Web server should be properly secured whenever collecting sensitive information from your customers.

**Top**

## Can you send me the digital certificate?

The digital certificate is sent in the Welcome e-mail to the merchant and the merchant's ISP or CSP. The Welcome e-mail can be resent upon request. For security purposes, we can only send the certificate to those parties authorized on the merchant account. If you are a developer working for a merchant and have not received the digital certificate, you should ask the merchant to forward the "Welcome to LinkPoint Select API" e-mail to you. Make sure you ask the merchant to send the message as an attachment to ensure that no extra characters are inserted into the digital certificate.

**Top**

## How do I install the digital certificate?

While the installation is fairly simple, it varies depending on the scenario. Basically, you need to copy the digital certificate on the welcome letter as a whole; do not break up the RSA and the Certificate-copy it in one piece.

Follow these instructions carefully:

- Start copying exactly at the first dash of -------Begin RSA and end exactly after the last dash of END CERTIFICATE----- with no extra spaces included.
- Paste it in a text utility and save the file with a .Pem extension. We recommend you use the store number.pem; e.g., 1234123456.pem.
- Review the file name to ensure it has a .pem extension. Make sure you computer view displays all file extensions with no hidden extensions (1234123456.pem.txt will not work). In the Windows® operating system, under My Computer, select View-Options-View (tab) Hidden files -mark the Show all files and uncheck the box for Hide file Extensions for known file types).
- If you have a hosted site, you will need to find out from your Web hosting company the directory and folder to which you must upload the file via FTP. Some hosts have an area located in the shopping cart where you copy and paste the file instead of using FTP.
- If you host a site on your own Web server, then the file needs to go in the file system where your Web server can access it.

**Top**

## I'm using Java™ and I've saved my certificate as a PEM file, but it's not working. What do I do?

Java requires the PEM file to be in pkcs12 format. To convert your PEM file to pkcs12 format, run the following from a command prompt:

```
openssl pkcs12 -export -in YOURPEM.pem -inkey YOURPEM.pem -out YOURPEM.p12 -passout pass:YOURPASS -name "YOURNAME"
```

Where:

- YOURPEM - the name of your PEM file
- YOURPASS - any password
- YOURNAME - any arbitrary name

For example:

```
openssl pkcs12 -export -in 1234567.pem -inkey 1234567.pem -out 1234567.p12 -passout pass:987654321 -name "LinkPoint"
```

The output *.p12 file and the password are used to pass as parameters for JLinkPointTransaction object If you have a problem converting your PEM file, please contact support.

**Top**

## Which shopping carts are integrated with the LinkPoint Select API solution?

Please see the list of shopping carts on **http://www.linkpoint.com** for the latest list of shopping carts. If you do not see the cart you want on the list, please contact us at

**apisupport@linkpoint.com**. New carts are not added to the list until they have completed the certification process-your cart may already have been integrated, but not yet added to the list.

**Top**

## What if I lose my password?

If you lose or forget your password, please contact us at 1 (877) 229-8739 or at **support@linkpoint.com** to reset your password.

**Top**

## How can I test my store before going live?

There is a test server available for merchant testing purposes. Please go to **https://staging.linkpt.net/cgi-bin/teststore** to request a test store. Test accounts are completely separate from your live LinkPoint accounts. If you have any questions about test stores, please e-mail **teststore@linkpoint.com**.

**Top**

## Can I set up recurring payments using LinkPoint Select API software? How about payments in installments?

Yes, you can use the LinkPoint Select API periodic billing module to set up daily, weekly, monthly, or annual payments and/or payments made at regular intervals in equal installments. You need to pass the fields in the **periodic** entity to set up a recurring payment.

**Top**

## How do I do API tax calculations?

To use the tax calculator module, you must first create a fulltax line and send it to us for loading to the server. See **Using the Tax Calculator** for instructions on creating the fulltax line. Please save the file in text format and send it to **support@linkpoint.com**.

**Top**

## How do I do API shipping calculations?

To use the shipping calculator module, you must create a shipping and carrier file to be housed on the LinkPoint Secure Payment Gateway. The shipping calculator matches the addressing and shipping carrier information from the shipping context with the appropriate pricing data as defined in your shipping file. Please save the file in text format and send it to **support@linkpoint.com**. See **Using the Shipping Calculator** for further instructions.

**Top**

## What are the absolute 'required' fields for LinkPoint Select API?

The required fields vary by the type of transaction you wish to perform. Please see the ***Minimum Required Fields*** section that applies to the type of transaction you need.

**Top**

## We want to be taken off of test mode and set to live mode? How do we handle this?

If you have been testing with a "live" store, then set the **result** field in the **orderoptions** entity to ***LIVE***. If you have been testing with a test store, you need to apply for a live API store and set the result parameter to ***LIVE***. You will also need to change your host name from the staging server host name to the production server host name. You will need to replace your test store number with your live store number. Please refer to the Welcome e-mail for the live store for the production host name and store number.

**Top**

## What does AVS stand for?

The LinkPoint Secure Payment Gateway gives you Address Verification System (AVS) codes to help protect you from costly chargebacks and fraud. Whenever you perform a credit card Sale or Authorize Only transaction, the Gateway verifies the customer's address you entered on the Point of Sale page against the address that the card-issuing bank has on file for the customer. The AVS code tells you how well the two addresses match. If the transaction is approved, you will find the 3-digit alphabetic AVS code in the Approval Code (following the approval number and the reference number) on your Transaction Result page. A typical transaction result code might look like this. The AVS code is highlighted.

0097820000019564:**YNA**M:12345678901234567890123:

AVS compares the numeric portion of the street address and the zip code. If both the zip code and street address match, the 3-digit AVS code will begin with a Y. If they do not match, the AVS code will begin with an N. An N indicates a higher probability of fraud. The second character of the code will tell you more about the AVS results (see the table below). You will only get an AVS code if the transaction was approved, regardless of whether the addresses match. If you get an AVS code indicating that the address and/or zip code do not match, it is up to you to decide whether you wish to accept the risk and ship the goods to the customer to complete the transaction.

| AVS Code | DESCRIPTION |
|---|---|
| YY* | Address matches, zip code matches |
| YN* | Address matches, zip code does not match |
| YX* | Address matches, zip code comparison not available |
| NY* | Address does not match, zip code matches |
| XY* | Address comparison not available, zip code matches |
| NN* | Address comparison does not match, zip code does not match |
| NX* | Address does not match, zip code comparison not available |
| XN* | Address comparison not available, zip code does not match |
| XX* | Address comparisons not available, zip code comparison not available |

(*) -- This is the one character response code sent by the authorizing bank and it varies by card type (e.g., Y,Z,A,N,U,R,S,E,G are valid responses for Visa®; Y,Z,A,N,X,W,U,R,S are valid for MasterCard®; Y,Z,A,N,U,R,S are valid for American Express® and A,Z,Y,N,W,U are valid for Discover®).

Top

## How do I set up AVS?

You don't need to do anything to set up AVS other than to send the following fields in the

**billing** entity. The AVS response will be automatically included in the transaction response code (as described above).

- addrnum
- zip

**Top**

## What is CVV2? CVC2? Discover® CID?

To help reduce fraud in the card-not-present environment, credit card companies have introduced a card code program. Visa® calls this code Card Verification Value (CVV); MasterCard® calls it Card Validation Code (CVC); Discover® calls it Card ID (CID). The card code is a three- or four- digit security code that is printed on the back of cards. The number typically appears at the end of the signature panel. This helps validate that a genuine card is being used during a transaction, especially in situations like mail orders, telephone orders or Internet orders where the card is not present. All MasterCard cards, both credit and debit, were required to contain CVC2 by January 1, 1997; all Visa cards must contain CVV2 by January 1, 2001. Beginning in October 2003, Discover requires the card code for all Discover transactions. By using the card code results along with the Address Verification Service (AVS), you can make more informed decisions about whether to accept transactions.

A typical transaction result code might look like this. The card code result is highlighted.

0097820000019564:YNA**M**:12345678901234567890123:

The last alphabetic character in the middle (M) is a code indicating whether the card code matched the card-issuing bank's code. An "M" indicates that the code matched. This code may or may not be present, depending on whether the card code was passed and the service was available for the type of card used. Below is a table showing all the possible return codes and their meanings.

| Value | Meaning |
|---|---|
| M | Card Code Match |
| N | Card code does not match |
| P | Not processed |
| S | Merchant has indicated that the card code is not present on the card |
| U | Issuer is not certified and/or has not provided encryption keys |
| | A blank response should indicate that no code was sent and that there was no indication that the code was not present on the card. |

Top

## How do I set up CVV? CVC? CID?

You don't need to do anything to set up the card code other than to send the following fields in the **creditcard** entity. The card code response will be automatically included in the transaction response code (as described above).

- cvmvalue
- cvmindicator

Top

## Is there a sample credit card number that I can use to test with my store?

Yes. There are several:

- Visa: 4111111111111 (begin with 4 and 13 digits long total)
- MasterCard: 5111111111111111 (begin with 5 and 16 digits long total)
- MasterCard: 5419840000000003 (begin with 5 and 16 digits long total)
- Amex: 371111111111111 (begin with 37 and 15 digits long total)
- Discover: 6011111111111111 (begin with 60 and 16 digits long total)
- JCB®: 311111111111111 (begin with 3 and 15 digits long total)

**Top**

## How do I use the LinkPoint Select API electronic softgood downloads (ESD) module?

You need to send us the file that will be downloaded after purchase. We take that file and post it on the LinkPoint Secure Payment Gateway. Please include all required information necessary, including Store Number. We will send you confirmation when it has been posted. Send files to **support@linkpoint.com**. Please allow 72 hours for posting ESD files. See the ESD chapter for further instructions.

**Top**

## Is there a size limit on ESD files?

There is no size limit at this time. However, if you are sending very large files, please contact **support@linkpoint.com** to arrange an alternate method of file transfer.

**Top**

## How do I get access to LinkPoint Central?

When you sign up for a LinkPoint Basic or LinkPoint Select API account, you will automatically get access to the LinkPoint Central service. Log in at **https://www.LinkPointCentral.com** with your store number, user ID and password.

**Top**

## Our Web server has moved. Do you need to update your records with our new IP address?

Your IP address change does not affect your API account, so we do not need to update our records.

**Top**

## Which credit cards can I accept with the LinkPoint Select API solution?

Visa, MasterCard, Discover, American Express, JCB, and Diner's Club®

**Top**

## Is there any way to check authorization of a credit card without having those funds reserved?

No, but depending on the bank, the funds are only reserved for 3-10 days.

**Top**

## What computer platforms are supported?

It depends on the specific language you are using, but, in general, the following platforms are supported.

- Windows NT® (Versions 4.0)
- BSDI® (Versions 3.1 & 3.3 & 4.0)
- FreeBsd® (Versions 3.1 & 3.3)
- SUN Solaris® (Versions 2.6 &2.7)
- HP-UX® (Versions 10.2 & 11.0)
- Linux® (Versions 5.2 & 6.x)

**Top**

## How do I run a test transaction?

Run a transaction with the **result** field in the **orderoptions** entity set to "GOOD", "DECLINE", or "DUPLICATE".

**Top**

# Troubleshooting

Potential reasons for each error are listed under the error message below.

**Top**

## Unable to open merchant configuration file.

Potential reasons for this error:

- The store number or storename is incorrect. (This is where the store number from the Welcome e-mail should appear.)
- The store number is not present. (Make sure the store number is in the correct place.)
- The host name is wrong. (The host name should be "secure.linkpt.net" or the host name EXACTLY as specified in your Welcome e-mail.)
- The configuration file is missing on the gateway. To test this, we need a copy of your .pem file. Send your questions and .pem file to **support@linkpoint.com**.

**Top**

## Unable to open/parse client certificate file.

Potential reasons/fixes for this error:

- Make sure the .PEM file is in the correct location.
- Make sure that everything in the .PEM file (from ----RSA KEY--- to ---End Certificate---) was copied correctly.
- The certificate file could be on an unsupported platform.
- Check the host name (the correct server name is "secure.linkpt.net" or the host name EXACTLY as specified in your Welcome e-mail).
- Check port (the correct port is "1129").
- Check the permissions on the file. Make sure the file is not set to "READ ONLY".

**Top**

## Unable to authorize payment: Unable to connect to SSL server.

Potential reasons/fixes for this error:

- Make sure port 1129 is not blocked in the firewall or router.
- Make sure the secure server is set to the host name specified in your Welcome e-mail and is on port 1129.
- Check to see if our port requires unblocking because the Web server is blocking our port.

**Top**

## N: socket write error (Time out waiting for response)

Potential reasons/fixes for this error:

- Unable to get out of the firewall.
- Make sure that port 1129 is open.
- Your server or our server may be down.

**Top**

## Not an ELF account: (cannot authorize transaction)

Make sure that your operating system is supported. **Unsupported systems include BSDI 4.01 and Digital UNIX.**

**Top**

## Unable to open shipping configuration file

The shipping calculator is an optional module that requires a little extra configuration from your side. Once you have created this file, e-mail it to us at **support@linkpoint.com** and we can have it put on the server. Until this file is in place, you will be unable to use the shipping calculator. See **Using the Shipping Calculator** for further instructions.

**Top**

## Request context must be allocated

You may getting this error because you are passing a 4-digit year (e.g., "2005"). You need to pass a 2-digit month and year (MM & YY) for the card expiration date.

**Top**

## Invalid contact name in merchant certificate

This error is caused when the certificate/pemfile does not match the copy on our side. Please check the following:

1. Be sure you are using the correct certificate/pemfile assigned for your merchant account. If you have more then one merchant account, or a even a test account, please verify you are using the correct certificate. If you do not have a pem file, please see **How do I get a pem file?**.
2. Make sure you are using the correct configfile/storename. If you use the incorrect storename the certificate/pemfile will not match.
3. Be sure you have created the pemfile correctly. Refer to **How do I create my pem file?**.
4. Check with your merchant provider that your account is still active.
5. If all the above information is correct, you will want to send a copy of your certificate/pemfile to LinkPoint support (**support@linkpoint.com**), who can verify whether the certificate is good.

**Top**

# Getting LinkPoint Support

LinkPoint has a variety of support options for our products, including searchable online help files, user manuals, frequently asked questions (FAQs), e-mail and telephone support. We recommend you look through our help files, FAQs, and user documentation to see if the answer to your question is answered there.

If you have questions about your merchant account, please contact your merchant account provider.

If you would like to purchase LinkPoint products or services, please contact one of our authorized resellers. For a list of authorized resellers, please visit www.linkpoint.com.

If you are experiencing issues with your gateway account, please consult the Gateway Status page at **http://www.linkpoint.com/gatewaystatus.html** to see if your issue is already being worked.

If you have consulted the help files and documentation and/or the Gateway Status page and still cannot find the answer to your question, we recommend e-mailing our support group for a response typically within 48 hours. If you need immediate assistance, use telephone support.

| :: Type | :: LinkPoint Product Support |
|---|---|
| **E-mail Support** | **apisupport@linkpoint.com** |
| **Telephone Support** | (888) 477-3611 |

**Support Hours:** Monday through Friday, 8 a.m. to 5 p.m., Pacific standard time (PST).

# :: OUR COMMITMENT TO PRIVACY

LinkPoint International, Inc.

Online Privacy Statement

**Effective Date: March 1, 2004**

**Our Commitment to Privacy**

Protecting your privacy is very important to us. Our Online Privacy Statement is designed to inform you about our online collection and use of personal information. From time to time, LinkPoint International, Inc. (referred to in this policy as "LinkPoint") may modify this Online Privacy Statement. LinkPoint also has a group of products and services which are provided under the name "YourPay." There is a separate YourPay web site but we are guided by the same Online Privacy Statement whether you are at the LinkPoint web site or the YourPay web site. This online Privacy Statement reflects the LinkPoint policies covering personal information collected by us, either through this web site, the YourPay web site, or otherwise, on or after the effective date shown above.

The Online Privacy Statement is available on the homepage of this web site and the YourPay web site as well as at the bottom of every page of both web sites, so it is available at every point where you provide us with personal information. From time to time, you may click to other web sites or pages that have different privacy policies. When this happens, you can review those privacy policies that relate to those pages or sites.

**The Only Personal Information We Collect Online is that Information You Voluntarily Provide to Us.**

The only information we collect about you online is information that you voluntarily provide to us either because you have requested us to process financial transactions for you or because you are seeking information or support from us. We primarily receive personal information as a result of consumers' financial transactions with LinkPoint or with LinkPoint business customers. Generally, LinkPoint does not obtain personal information directly from consumers and we encourage our business customers, who do obtain personal data from consumers, to provide a timely and complete privacy notice. However, when LinkPoint collects information directly from consumers, we will obtain only the information that is needed to provide our goods or services, to provide customer service and to fulfill any legal or regulatory requirements. When we obtain information about consumers from third parties, we use reputable sources, including public repositories. The information we collect may include, but is not limited to, your name, account numbers, billing and shipping address, or e-mail address, and other bankcard information. If you supply us with personal information on this web site, you will only be contacted so that we can provide you with the service or information you have requested or to occasionally send you other information about LinkPoint and products or services that we believe you would find interesting.

**When You Browse the LinkPoint or YourPay Web Site, You Do So Without Revealing Your Identity.**

Some LinkPoint and YourPay services use cookies - which are identification files that track your web browsing activity - only to track your user session so that you can leave the Web site and return without having to log in again. This information is erased at the end of your session. Personal information, such as your e-mail address, is not collected, unless you provide it to us. LinkPoint does not disclose domain name or aggregate information to third parties other than vendors who assist us with our web site and who are under strict confidentiality requirements.

**We Are Committed to Protecting the Confidentiality of Your Information.**

LinkPoint policies limit access to personal user information that is collected from this web site to only those employees of LinkPoint and its affiliates or contractors who need the information to complete the transaction or otherwise provide the service to you or fulfill their business responsibilities, such as credit reporting, verification, and risk management.

We will disclose information in response to a lawful request issued by a court, government agency or regulatory authority with the jurisdiction to make that request. Otherwise, we will only disclose information to those who need to know, as described above, and all communications of your personal data will either be encrypted at the highest available levels of security or transmitted over a dedicated, secured lease line. Vendors and other outside contractors we engage are subject to our contractual requirements to ensure that sensitive personal information is safeguarded.

Employees must adhere to the LinkPoint Online Privacy Statement in addition to the First Data Corporation's Privacy Principles described below. Employees violating the LinkPoint Online Privacy Statement or the Privacy Principles are subject to disciplinary action, up to and including dismissal.

**We Strive to Give Consumers Choices About How Their Data Will be Used.**

If we obtain personal information as part of a direct relationship with consumers, we will use this information only to provide products and services; to facilitate and complete consumer-initiated or authorized transactions and service requests; to comply with federal, state and local laws, including credit reporting laws and card association rules; to combat fraud or identity theft; or to offer products and services that LinkPoint believes may be of interest to its customers. In the event that LinkPoint expands the scope of its marketing efforts such that it would like to disclose personal information to third parties for expanded marketing purposes, we will first give customers an opportunity to opt-out of these types of disclosures.

**We Use Appropriate Security Safeguards.**

At LinkPoint, security is a priority. LinkPoint employs appropriate measures, including advanced technology, to protect personal information collected online against unauthorized access, disclosure, alteration or destruction. These may include, among others, encryption, physical access security, dedicated lines, computer firewalls and other appropriate technologies. LinkPoint reviews and enhances its security systems as necessary.

**The LinkPoint and YourPay Web sites May Be Linked to Other Web sites.**

LinkPoint may create links to third-party web sites. LinkPoint is not responsible for the content or privacy practices employed by web sites that are linked to our web site.

**The LinkPoint and YourPay Web sites are Not Directed at Children Under the Age of 18.**

Our web site is not directed at children under the age of 18. Children under the age of 18 are not allowed to use LinkPoint or YourPay services.

**We Hold Ourselves Accountable Under Our Privacy Principles.**

LinkPoint is committed to meeting the highest standards for our privacy program. Our parent company, First Data Corporation, also takes privacy very seriously. A senior First Data Corporation official serves as the company-wide privacy officer with responsibility for administering the First Data Corporation privacy program, including communicating and enforcing its Privacy Principles with its, and its subsidiaries' (including LinkPoint), employees and contractors. For more information, please read First Data Corporation's Privacy Principles.

To complement First Data Corporation's privacy program, LinkPoint has appointed a senior official to work in conjunction with First Data Corporation's privacy officer and is responsible for:

- Overseeing employee privacy training and employee compliance related to the Online Privacy

Statement;

- Conducting periodic assessments of compliance with this Online Privacy Statement, as well as specific implementation policies and procedures; and
- Ensuring that LinkPoint actively participates in appropriate privacy activities, including self-regulatory initiatives.

If you have any questions or comments about the LinkPoint Online Privacy Statement or for some reason believe we have not adhered to our statement, please contact us at LinkPoint Customer Service at privacyofficer@linkpoint.com or write to: LinkPoint International, P.O. Box 2048, Simi Valley, CA 93062.

This online privacy statement is currently applicable only to our web site customers and visitors in the United States.

### Account Number

The account number for a checking or savings account is a unique number that identifies the customer's account. The account number will show on the bottom of the check, usually after (but sometimes before) the transit routing number. You may also see the check number on the bottom of the check--the two are usually separated by a non-alphabetic, non-numeric symbol.

### ACH

ACH is an abbreviation for Automated Clearing House. ACH allows merchants to accept payments from a consumer's checking or savings account.

### Acquiring Bank

The financial institution that settles card transactions for a merchant.

### Address Verification Service (AVS)

A system that compares the numeric portion of the customer's street address and the zip code against the information on file with the card- issuing bank. The Gateway provides an AVS code in each approved transaction result code that tells you how well the two addresses match. If they match, there is a lower probability of fraud. If there is a discrepancy in either the address or zip code, the probability of fraud is higher. Merchants can use AVS codes to help protect themselves from chargebacks and fraud.

### Antivirus

Antivirus (or \"anti-virus\") software is a class of program that searches your Software hard drive and floppy disks for any known or potential viruses. Because of the risk of computer viruses doing harm to your computer files, antivirus software is recommended for all Internet users.

### Authorization

Reserves funds on a customer's credit card. Authorization does not charge the card until you perform a Ticket Only transaction and/or confirm shipment of the order. Authorization reserves funds for varying periods, depending on the card-issuing bank's policy. The period may be as little as three days or as long as several months.

### Authorize Only

The transaction type that reserves funds on a customer's credit card (performs an authorization). See also Authorization.

### Batch

A group of credit card or check transactions that are submitted together to the Gateway for settlement. On the gateway, batches are submitted automatically once a day.

### Browser

Short for Web browser, a software application used to locate and display Web pages. The two most popular browsers are Netscape® and Microsoft® Internet Explorer®. Both of these are graphical browsers, which means that they can display graphics as well as text. In addition, most modern browsers can present multimedia information, including sound and video, though they require plug-ins for some formats.

### Cable Modem

A means for consumers and businesses to access the Internet by connecting their computers to a TV cable network through a device called a cable modem. This type of service is widely available and does not tie up a separate phone line; however, if the cable network is shared with many other Internet subscribers, Internet access speed may go down.

**Card-issuing Bank**
The financial institution or bank that issues a credit or purchasing card to a business or consumer.

**Card Code**
To help reduce fraud in the card-not-present environment, credit card companies have introduced a card code program. Visa calls this code Card Verification Value (CVV)-MasterCard calls it Card Validation Code (CVC)). The card code is a three- or four- digit security code that is printed on the back of cards. The number typically appears at the end of the signature panel. This program helps validate that a genuine card is being used during a transaction. To help combat fraud, card-not-present merchants should always enter a card code (if on the card) when processing an authorization. The Gateway will compare the card code against the code on file with the card-issuing bank. Results of this comparison will show in the transaction approval code. By using the card code results along with the Address Verification Service (AVS), you can make more informed decisions about whether to accept transactions.

**Chargeback**
A chargeback is a forced refund to the customer via the merchant's bank account. Chargebacks can occur with any type of business, but it is more prevalent for Internet businesses because the card is not present, so there is an increased chance for fraud. Each fraudulent credit card transaction usually results in a chargeback. Credit card associations penalize merchant banks for chargebacks. Naturally, the bank passes the fines on to the responsible merchant, and these penalties can be severe.

**Check Number**
The check number simply gives a unique number to each check. The check number is always found in the upper right hand corner of the check. With Internet check acceptance, the check number may be reused by the consumer. The check number is only provided as a reference to process the ACH transaction.

**CID**
Card ID (CID). To help reduce fraud in the card-not-present environment, credit card companies have introduced a card code program. Visa calls this code Card Verification Value (CVV); MasterCard calls it Card Validation Code (CVC); Discover calls it Card ID (CID). The card code is a three- or four- digit security code that is printed on the back of cards. The number typically appears at the end of the signature panel. This program helps validate that a genuine card is being used during a transaction. To help combat fraud, card-not-present merchants should always enter a card code (if on the card) when processing an authorization. The Gateway will compare the card code against the code on file with the card-issuing bank. Results of this comparison will show in the transaction approval code. By using the card code results along with the Address Verification Service (AVS), you can make more informed decisions about whether to accept transactions.

**Credit Card**
MasterCard®, Visa®, or other formal organization or network that sets rules, association protocols, etc., that allow for merchants to accept credit cards and for financial instutitions to offer credit cards to individuals and corporations.

**CSP**
Commerce Service Provider. CSPs supply businesses with the tools and services they need to buy and sell

products and services over the Internet and manage their online enterprises. CSPs can generally host a secure Web site that could be connected to a secure payment gateway for selling products or services over the Web.

**CVC2**

To help reduce fraud in the card-not-present environment, credit card companies have introduced a card code program. Visa calls this code Card Verification Value (CVV); MasterCard calls it Card Validation Code (CVC); Discover calls it Card ID (CID). The card code is a three- or four- digit security code that is printed on the back of cards. The number typically appears at the end of the signature panel. This program helps validate that a genuine card is being used during a transaction. To help combat fraud, card-not-present merchants should always enter a card code (if on the card) when processing an authorization. The Gateway will compare the card code against the code on file with the card-issuing bank. Results of this comparison will show in the transaction approval code. By using the card code results along with the Address Verification Service (AVS), you can make more informed decisions about whether to accept transactions.

**CVM**

Common term used to refer to the Card Code feature. To help reduce fraud in the card-not-present environment, credit card companies have introduced a card code program. Visa calls this code Card Verification Value (CVV); MasterCard calls it Card Validation Code (CVC); Discover calls it Card ID (CID). The card code is a three- or four- digit security code that is printed on the back of cards. The number typically appears at the end of the signature panel. This program helps validate that a genuine card is being used during a transaction. To help combat fraud, card-not-present merchants should always enter a card code (if on the card) when processing an authorization. The Gateway will compare the card code against the code on file with the card-issuing bank. Results of this comparison will show in the transaction approval code. By using the card code results along with the Address Verification Service (AVS), you can make more informed decisions about whether to accept transactions.

**CVV2**

To help reduce fraud in the card-not-present environment, credit card companies have introduced a card code program. Visa calls this code Card Verification Value (CVV); MasterCard calls it Card Validation Code (CVC); Discover calls it Card ID (CID). The card code is a three- or four- digit security code that is printed on the back of cards. The number typically appears at the end of the signature panel. This program helps validate that a genuine card is being used during a transaction. To help combat fraud, card-not-present merchants should always enter a card code (if on the card) when processing an authorization. The Gateway will compare the card code against the code on file with the card-issuing bank. Results of this comparison will show in the transaction approval code. By using the card code results along with the Address Verification Service (AVS), you can make more informed decisions about whether to accept transactions.

**Data field**

A field is a named area on a Web form or software application that has a purpose and usually a fixed size. In a form that you fill out on a Web site, each box that asks you for information is a text entry field.

**DDA Number**

The account number for a particular bank account.

**Dial Up Connection**

A means of accessing the Internet by using a computer modem and telephone line. The speed of dial up connections is usually slower than other Internet access options.

### Digital Certificate

A digital certificate is an electronic means that establishes the merchant's credentials when doing business on the Web. It is an encrypted set of information issued by an Internet certification authority such as Thawte. Digital certificates are required for merchants who choose to use the API. For other products, the merchant does not need a digital certificate.

### Domain Name

A name that identifies one or more IP addresses. For example, the domain name microsoft.com represents about a dozen IP addresses. Domain names are used in URLs to identify particular Web pages. For example, in the URL http://www.linkpoint.com/index.html, the domain name is linkpoint.com.

### DSL

DSL (Digital Subscriber Line) is a technology for bringing fast Internet service to homes and small businesses over ordinary copper telephone lines.

### E-Commerce

Electronic commerce. The term commonly used for conducting business online (buying and selling products or services over the Internet).

### ECA

Electronic Check Acceptance. Offered with some POS terminals, but not available with Gateway accounts. The Gateway uses Internet Check Acceptance (see ICA), not ECA. With ECA, the check is electronically submitted as a check. The check is no longer usable and the paper check must be voided. The customer signs and receives a paper receipt. ECA services may include a check guarantee service. ECA is used for retail payments only.

### Electronic Check Acceptance (ECA)

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### Field

A field is a named area on a Web form or software application that has a purpose and usually a fixed size. In a form that you fill out on a Web site, each box that asks you for information is a text entry field.

### Firewall

A firewall is a set of related programs, located at a network gateway server, that protects the resources of a private network from users of other networks.

### Forced Ticket

A forced post authorization transaction. This transaction type is used similarly to a Ticket Only transaction, except it is specifically for authorizations you obtained over the phone. It requires a reference number (or approval code) that you should have received when you did the phone authorization.

### Gateway

A payment gateway is a system that enables payments over the Internet. When a customer orders something from a merchant, the merchant has the order information, the customer has the payment information, and each of them have their own accounts with banking institutions. The gateway collects all the information and sends it to the right places to enable the payment to go from the customer's credit card of bank account to the merchant's account. You can think of a payment gateway as a messenger that sends information between the consumer, the merchant, the acquirer (e.g., the merchant's bank), and the consumer's bank (i.e., for credit card payments, the card-issuing bank).

**HTML**

Short for HyperText Markup Language, a markup language used to structure text and multimedia documents and to set up hypertext links between documents, used extensively on the World Wide Web. Other than manually entering transactions using the virtual POS terminal, HTML is the simplest way to send payment transactions to the Gateway.

**HTTP**

Short for HyperText Transfer Protocol, the underlying protocol, or computer language, used by the World Wide Web. HTTP defines how messages are formatted and transmitted, and tells Web servers and browsers what to do when a user clicks on something. For example, when you enter a URL in your browser, this actually sends an HTTP command to the Web server directing it to fetch and transmit the requested Web page.

**Hyperlink**

An element in a document (or Web page) that links to another place in the same page or to an entirely different page. Typically, you click on the hyperlink to follow the link. Hyperlinks are the most essential ingredient of the World Wide Web.

**ICA**

Internet Check Acceptance. This is the type of check service provided on the Gateway. ICA uses the Automated Clearing House (ACH) to debit the consumer’s account. The account information is entered in an online payment form, and no check is used (i.e., the check is still usable). The customer may or may not sign a payment form. In either case, the merchant needs a documented record of the customer's authorization to debit the account. ICA includes an electronic receipt (via e-mail). There is no check guarantee service with ICA. Typically used for mail order/telephone order (MO/TO) or e-commerce transactions, but may also be used for retail.

**Input**

The information provided to a computer system for processing. When you enter information into a Web form, you are providing input. Gateway products require input to process a transaction.

**Internet**

The Internet is a massive network of networks, a networking infrastructure. It connects millions of computers together globally, forming a network in which any computer can communicate with any other computer as long as they are both connected to the Internet. Information that travels over the Internet does so via a variety of computer languages known as protocols.

**Internet Check Acceptance (ICA)**

This is the type of check service provided on the Gateway. ICA uses the Automated Clearing House (ACH) to debit the consumer’s account. The account information is entered in an online payment form, and no check is used (i.e., the check is still usable). The customer may or may not sign a payment form. In either case, the merchant needs a documented record of the customer's authorization to debit the account. ICA includes an electronic receipt (via e-mail). There is no check guarantee service with ICA. Typically used for mail order/telephone order (MO/TO) or e-commerce transactions, but may also be used for retail.

### IP address

Short for Internet Protocol address. An IP address is a number that is used to identify a specific computer on a network or on the Internet. The format of an IP address is written as four numbers separated by periods. Each number can be zero to 255. For example, 1.160.10.240 could be an IP address.

### ISP

Internet Service Provider, a company that provides access to the Internet. For a monthly fee, the service provider gives you a software package, username, password and access phone number. Equipped with a modem, you can then log on to the Internet and browse the World Wide Web, and send and receive e-mail. In addition to serving individuals, ISPs also serve large companies, providing a direct connection from the company's networks to the Internet. An ISP may also host a company's or person's Web site.

### Issuing Bank

The financial institution or bank that issues a credit or purchasing card to a business or consumer.

### LAN

Local Area Network. A computer network that spans a relatively small area. Most LANs are confined to a single building or group of buildings. However, one LAN can be connected to other LANs over any distance via telephone lines and radio waves. A system of LANs connected in this way is called a wide-area network (WAN).

### Log In

To enter into a computer the information required to begin a session. Also sometimes referred to as Log On. Users log into Gateway reports by going to the login URL and entering their store name, user ID, and password. Once they've logged in, they have secure access to the virtual point-of-sale terminal, as well as gateway reports, customization, and admin features.

### Log Off

To enter into a computer the command to end a session or leave the current application. Also referred to as Log Out. To log out of the Gateway reports/admin/customization, merchants should click on the Log Out button on the Main Menu Bar. To prevent unauthorized users from accessing their account, merchants should always log off and close the browser window when they are done using the Gateway functions.

### Network

A group of two or more computer systems linked together.

### Password

A sequence of characters that you must enter to gain access to a file, application, or computer system. Users must enter a password in a Web form to access Gateway reports, admin, and customization functions. We recommend that users change their password frequently and do not share it with anyone to prevent unauthorized access to their Gateway accounts.

### PDF File

An Adobe® Acrobat® file, commonly used for text and graphic files transmitted over the Internet. Internet users need an Adobe Acrobat viewer to open a PDF file, which can be downloaded for free at http://www.adobe.com. Gateway user manuals are available as PDF files.

### Periodic Billing

The capability to charge customers on a recurring basis according to merchant-defined rules. Gateway products allow a merchant to charge a customer's card in exchange for products and services one or more times every day, week, month, or year.

### Plug-In

A hardware or software module that adds a specific feature or service to a larger system. For example, there are number of plug-ins for the Netscape Navigator browser that enable it to display different types of audio or video files.

### POS

Point of Sale. The time at which the consumer is purchasing the product from the merchant and the merchant is processing the payment transaction. Point of sale is commonly used to refer to the payment terminals or software that merchants use to process the payment transaction. The Gateway offers a virtual POS terminal for merchant use at the point of sale.

### Protocol

A language used for computers to talk to one another. There are several different protocols. HTTP is the protocol used on the Web.

### Purchasing Card

A purchasing card is a corporate card used by some companies for their business purchases. When a customer pays for goods or services using a purchasing card, the following information must be included with the order information. This information is optional for a regular credit card transaction: An indication of whether the order is tax exempt. + The amount of tax applied to the order. If the order is tax exempt, the tax amount should be zero. + A purchase order number associated with this order. One purchase order can apply to several individual orders, to allow for delivery of goods over time. If there isn't a purchase order associated with this order, the customer must supply some value for this field-the value could be a department number, expense code, project number, etc.

### r

### Recurring

To occur at a stated interval, or according to some regular rule. Our Internet products allow a merchant to charge a customer's card on recurring intervals. Merchants can set up charges for goods or services one or more times every day, week, month, or year.

### Recurring Payment

The capability to charge customers on a recurring basis according to merchant-defined rules. Gateway products allow a merchant to charge a customer's card in exchange for products and services one or more times every day, week, month, or year.

### Return

A return transaction gives back funds to a customer's credit card against an existing order on the Gateway system. To perform a return, you need the order number (which you can find in your Reports). If you perform a Return of the full order amount, the order will appear in your Reports with a transaction amount of 0.00.

### Sale

A sale transaction immediately charges a customer's credit card when the batch of transactions is closed.

### Settlement

The completion of a payment transaction. When a transaction is settled, it has been funded and the funds deposited in the merchant account.

### SSH

Secure Shell (SSH) is a secure means to move files from one machine to another. It provides secure communications over insecure channels. SSH protects a network from attacks. An attacker who has managed to take over a network can only force SSH to disconnect. He or she cannot play back the traffic or hijack the connection when encryption is enabled.

### SSL

Secure Sockets Layer, a protocol (or language) for transmitting secure information (such as credit card data) via the Internet. SSL works by encrypting the data that's transferred over the connection. Both Netscape Navigator and Internet Explorer support SSL, and many Web sites use the protocol to obtain confidential user information, such as credit card numbers. By convention, URLs that require an SSL connection start with https: instead of http:

### Store Name

Also called storename or Store Number. A six- to ten-digit number that is needed to identify the merchant. The store name (store number) is given to the merchant in the Welcome E-mail. Merchants need the store name (number), user ID and password to access the virtual point-of-sale terminal, as well as reports, admin, and customization functions. The store name is also needed for using the API and other Gateway products.

### Submit

To send information to a system. On a Web form, you submit the form (send the information) by clicking on a button at the bottom of the form.

### Ticket Only

A post authorization. Captures the funds from an Authorize Only transaction, reserving funds on the customer's card for the amount specified. Funds are transferred when your batch of transactions is settled.

### Transit Routing Number

The transit routing number is a number to identify at which bank the customer has the account. As you see on the Point of Sale page when you click on Pay by Check, you can easily locate the transit routing number between the two :| symbols.

### URL

Uniform Resource Locator, the address for documents and other pages on the World Wide Web. The first part of the address indicates what protocol to use, and the second part specifies the IP address or the domain name where the resource is located.

### User ID

On Gateway accounts where there are multiple users, each individual user will be assigned a User ID. The user will need this User ID, along with the store name and password, to log into reports, admin, and customization functions and to access the virtual point-of-sale terminal.

### Virtual

Not a tangible object you can pick up and hold in your hands. The term virtual is often used on the Web to denote a Web-based program that functions similarly to a physical device or system. For example, a virtual point-of-sale terminal is a Web-based computer program that performs the same functions as a real point-of-sale terminal.

### Void

To cancel a payment transaction. Merchants can void transactions prior to settlement. Once the transaction has settled, the merchant has to perform a return or credit to reverse the charges and credit the customer's card.

### WAN

A computer network that spans a relatively large geographical area. Typically, a WAN consists of two or more local-area networks (LANs). Computers connected to a wide-area network are often connected through public networks, such as the telephone system. They can also be connected through leased lines or satellites. The largest WAN in existence is the Internet.

### Web

The World Wide Web, or simply Web, is a way of accessing information over the medium of the Internet. It is an information-sharing model that is built on top of the Internet. The Web uses the HTTP protocol, one of the computer languages spoken over the Internet, to transmit data. Web services, which use HTTP to allow applications to communicate in order to exchange business logic, use the Web to share information. The Web also uses browsers, such as Internet Explorer or Netscape, to access Web documents called Web pages that are linked to each other via hyperlinks. Web documents can also contain graphics, sounds, text and video.

### Web Server

At its core, a Web server is a computer with specialized software installed that serves content (or Web pages) to a Web browser by loading a file from a disk and serving it across the network to a user's Web browser. The browser and server talk to each other using HTTP.

### XML

XML is the Extensible Markup Language, which is a universal format for the representation of documents and data. It is designed to improve the functionality of the Web and software applications by providing a more flexible and adaptable way to identify information. It is considered extensible because it is not a fixed format, but is actually a 'meta-language' — a language for describing other languages. XML follows the standards set in the ISO 8879 document—the international standard describing meta-languages. XML documents are hierarchical in nature and are made up of entities or nodes, meaning that an XML entity may contain data or other entities.