



Raktajino-Packagemanager

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1) The scenario (getting the idea)

You are an administrator of a Windows Server that functions as a web server on the internet (virtual, dedicated server from a hosting provider or your own box). When it comes to bring functionality /software onto the machine you either need money, expertise, good readme's, friends or all of them to help you identify the right frameworks, scripting languages, database services, tools, web applications, etc. This all takes time - searching - reading through manuals - downloading - installing and troubleshooting, especially when you are new to this domain!

Wouldn't it be nice to have an open source tool that could help you ease this pain?

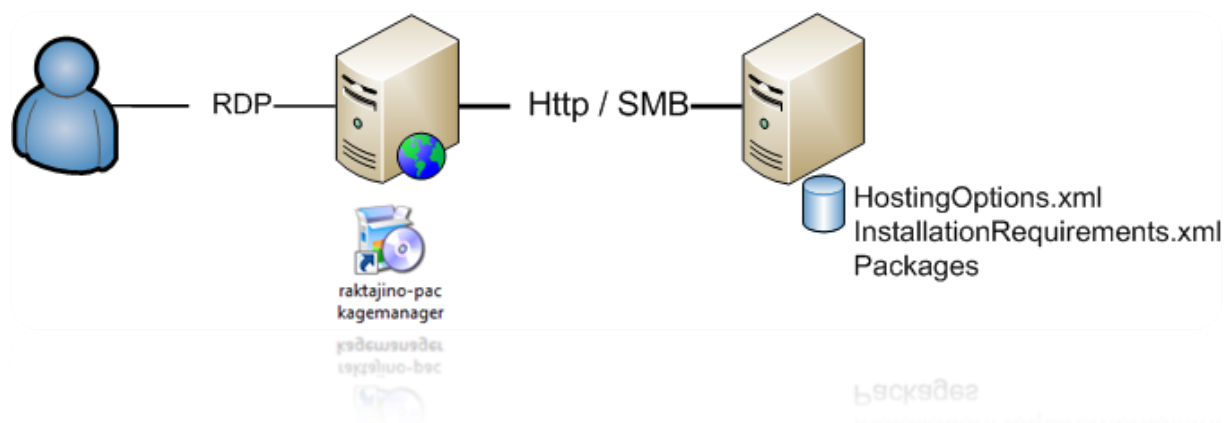
This is the idea of the Raktajino-Packagemanager, it should help you to:

- ease and accelerate the searching and installing of web server software.
- show you possible dependencies and requirements amongst the software packages you are about to install.
- install the software in a consistent way.
- be in command what to install.

The tool is an easy to use winform applicaton (written in C#) that can be fed with packages that are available by Microsoft, other software companies or by the packages you create.

"A package management system is a collection of tools to automate the process of installing, upgrading, configuring, and removing software packages from a computer...." [Wikipedia, http://en.wikipedia.org/wiki/Package_manager]

The following picture explains the usage scenario:



Picture 1: Usage scenario – The where is what or an overview of the setup.

You as the administrator are on the left, connecting to your web server ("the client") via Remote Desktop connection (RDP). On the web server you install and start the package manager tool. The tool connects to a package server (right) by using http or the SMB protocol. The package server contains a list of the available packages defined in a XML file called "HostingOptions.xml". The HostingOptions.xml describes the packages e.g. name, description, location, dependencies, what to do to install.

Note: It is important to note that the HostingOptions.xml for each OS are different as e.g. the steps to install features for IIS7 on Windows Server 2008 are different than to add features to an IIS6 on Windows Server 2003.

The packages can be hosted on the package server itself or at an alternative internet location (public http download location) specified in the HostingOptions.xml using an URI. Another XML file “InstallationRequirements.xml” contains the information on what to check on your machine if a package has already been installed (also OS dependant)

2) What to do on the web server (i.e. “the client”)

a) Installing the Raktajino-Packagemanager

Requirements:

- Windows Server 2003, Windows Vista or Windows Server 2008
- Microsoft .net framework 2.0
- Administrative privileges to use the tool

Note: Keep in mind that although the tool installs and works on the advertised platforms the list of packages that can be installed on each OS will probably differ.

Supported languages (currently):

EN, DE, CZ, RU

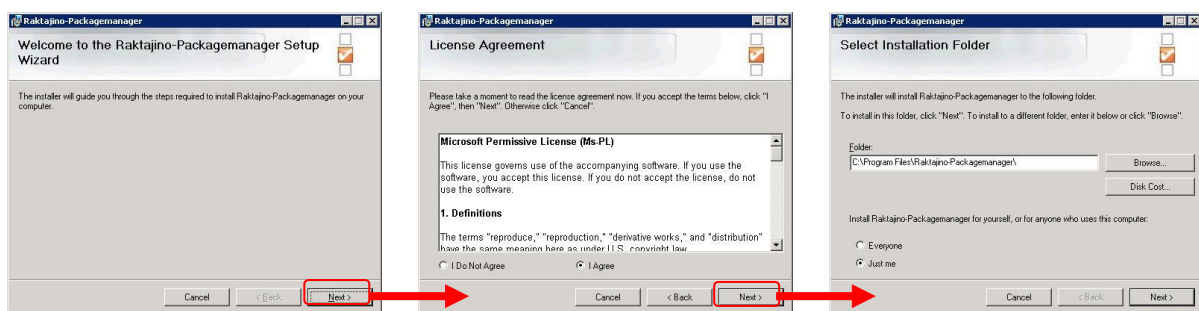
Note: Please refer to section “Miscellaneous” for setting the language.

Download location of the Raktajino-Packagemanager:

The package manager’s website can be found on [codeplex](#). And [here](#) is the download location.

Manual – user interface install.

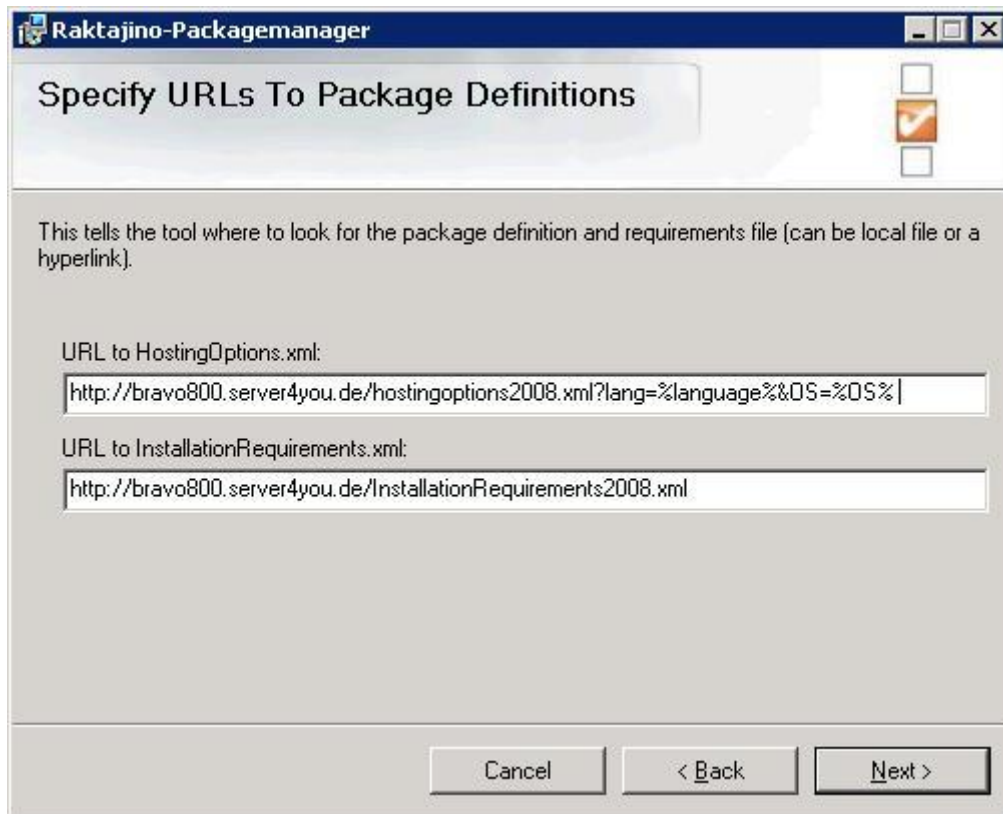
Download the RaktajinoSetup.msi from the location described above and launch the installer. Accept the Eula and choose an installation folder.



Picture 2: Installing the Raktajino-Packagemanager first steps.

In the next dialog you tell the tool where to look for list of packages to install. This can be either a file or an URI style location. If you leave the defaults the tool will take the sample hostingoptions2008.xml and installationrequirements.xml that are located in your installation folder you selected in the previous dialog.

Important: The defaults are only sample files – they contain only a few packages. You should use a URI that holds a package list that fits your OS. Ask your service provider if he has an URL for you or go to the [codeplex site to get the URL](#).



I used:

<http://bravo800.server4you.de/hostingoptions2008.xml?lang=%language%&OS=%OS%|>

as URL to HostingOptions.xml and

<http://bravo800.server4you.de/InstallationRequirements2008.xml>

as URL for the InstallationRequirements.xml

Picture 3: The most important dialog. You tell the tool where to look for the packages.

Note: Do you see the query parameter in the URL ("?lang=%language%&OS=%OS%")? Why this? Because it gives you the option to tell the package server holding the hostingoptions.xml on the other end which language and version the OS on the client (web server) is. When you start the tool %language% gets translated to "en-US" if using an English system. This may become useful if you dynamically want to decide on the package server what package list to send back to the client (web server).

Once the installation is finished you will notice a new icon on the desktop.



Picture 4: After the installation you should see this icon on your desktop.

Unattended installation

Hosting providers might want to automate the installation. Here is the command that gives you the option to install without UI from the command line:

```
msiexec.exe /Package RaktajinoSetup.msi /qn  
HOSTINGOPTIONSURL="http://87.106.240.152/hostingoptions_2003_64bit.xml"  
INSTALLATIONREQUIREMENTSURL="http://87.106.240.152/InstallationRequirements  
.xml" CULTURE="cs-CZ"  
UPDATEURL="http://87.106.240.152/raktajino/update/version.xml"  
VERSIONCHECKINTERVAL=5000 /log %temp%\raktajino.log
```

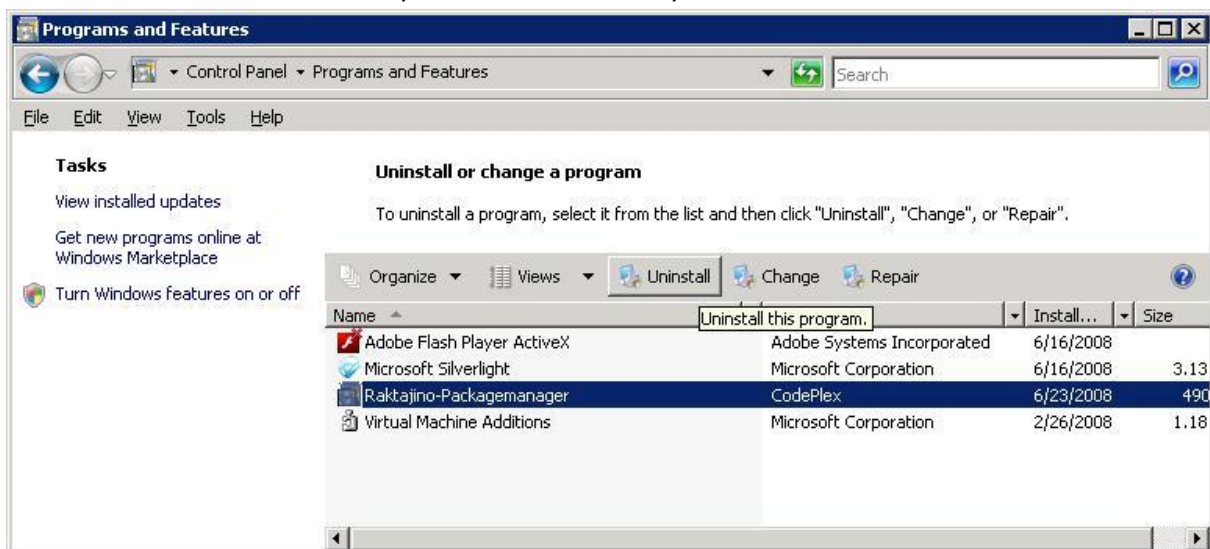
This command does an unattended installation of the tool and tells it to use the package list (HostingOptions2008.xml) from <http://bravo800.server4you.de/hostingoptions2008.xml> and to use this <http://bravo800.server4you.de/InstallationRequirements.xml> file for checking the installation requirements. Additionally it configures the tool to use Czech as language - specifies where to check for downloads of new versions and writes an installation log into the temp folder with the name raktajino.log.

Note: for languages use:

German	de-DE
English (US) – default	en-US
Czech	cs-CZ
Russian	ru-RU
Spanish	fr-FR
French	es-ES

Uninstalling

For de-installing the tool simply use „Add/Remove Software” or “Programs and Features” from the “Control Panel” – once launched you should see an entry like this:



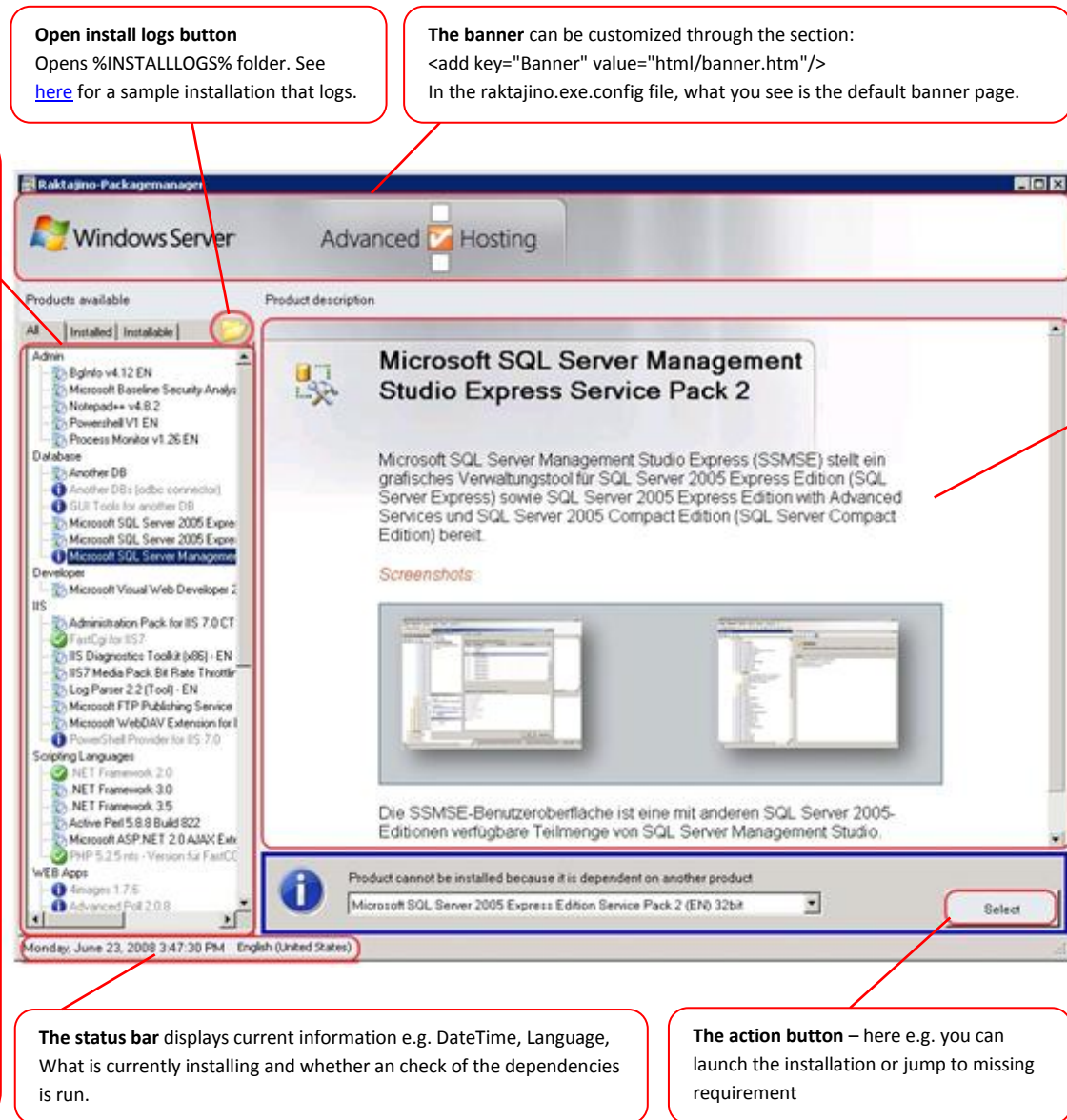
Picture 5: “Programs and Features” dialog launched from the “Control Panel” on Windows Server 2008.

Click on uninstall and the tool will be removed.

Note: During the usage of the tool (e.g. after the installation of a package) a folder “installlogs” gets created. The de-installation does not automatically remove this folder. You may want to remove this folder manually (see the Miscellaneous section on where to find this folder). Secondly manual deletion of the program folder might become necessary if you created your own files there (i.e. only the files installed should be removed not the ones you possibly created)

b) How to use the tool

Let me describe the UI with a picture:



Picture 6: The Raktajino-Packagemanager tool.

The usage of the tool is very simple. You select what you are interested in on the left in the treeview, a description of the package should come up on the right browser window. If the package is that what you need click on the install button on the lower right corner (or jump the required packages to install them first). To see it in action watch this [video](#) (or [here](#)).

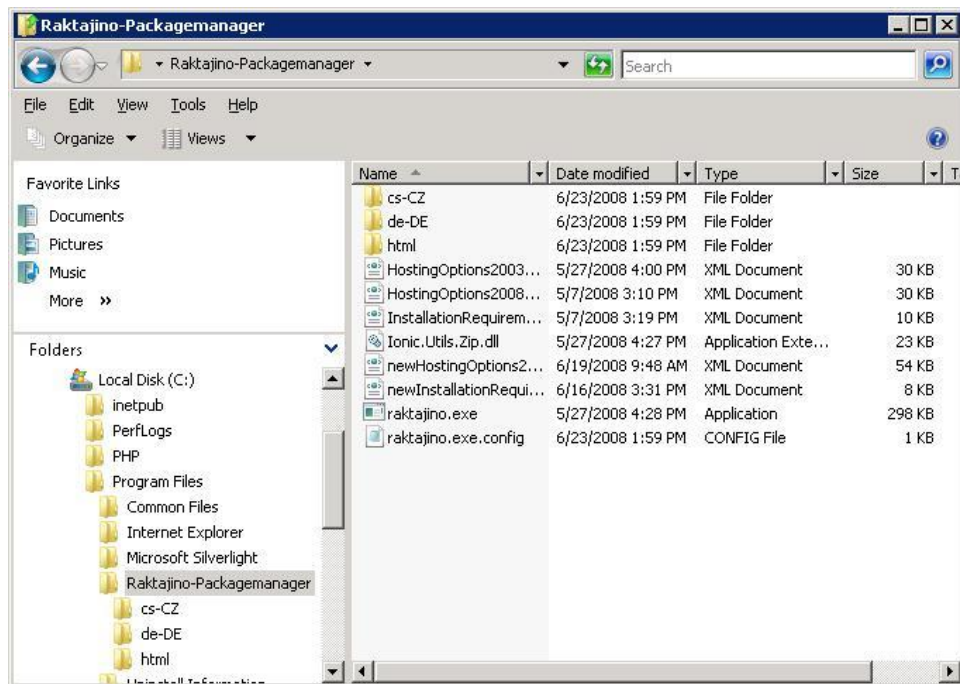
c) Miscellaneous

Now let's go a bit more into details.

The tool uses the following folders on the client (web server):

Program Folder

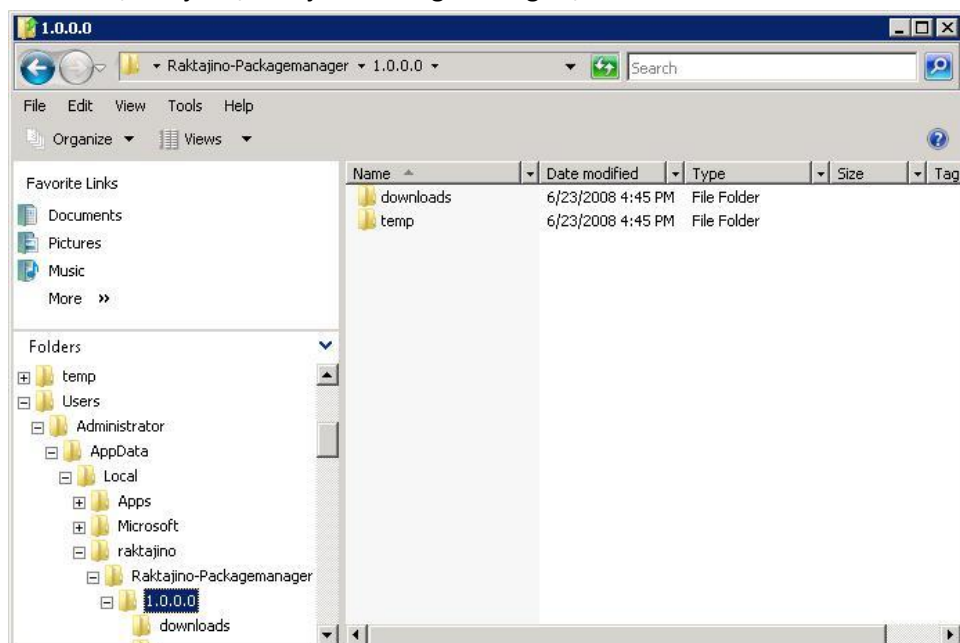
By default the tool installs itself into the %ProgramFiles%\Raktajino-Packagemanager folder. This folder should look like this:



Picture 7: Installation folder of the Raktajino-Packagemanager.

Temp Folder (please don't touch)

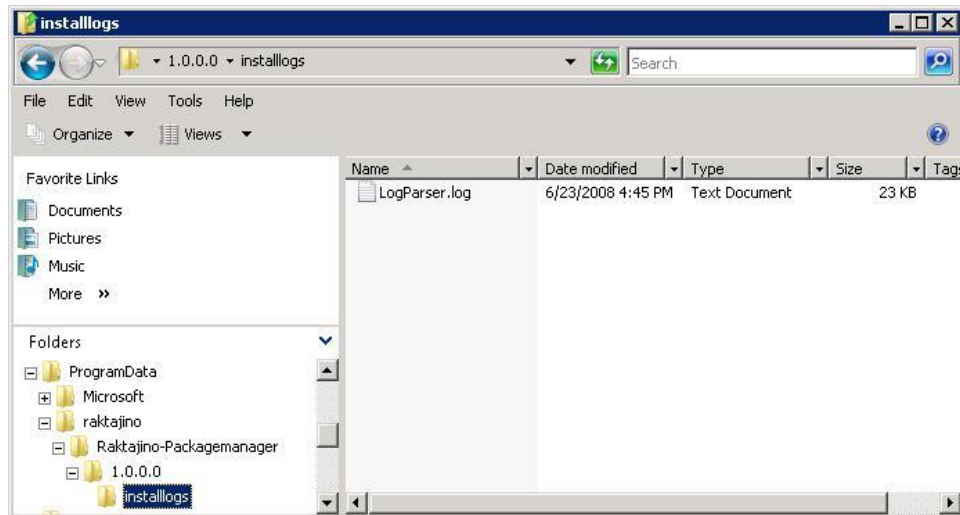
The tool uses a temp folder to store downloaded files and other temporary data – this folder gets deleted automatically when you close the tool. This folder is in the %LOCALAPPDATA%\raktajino\Raktajino-Packagemanager\1.0.0.0 folder



Picture 8: Temp folder in %LOCALAPPDATA%

Logs Folder (for troubleshooting package installations)

The tool has a logs folder that can be used during the installation of a package for logging. The following path is used %ProgramData%\raktajino\Raktajino-Packagemanager\1.0.0.0\installlogs:



Picture 9: The logs folder.

Modifying the tool's settings after installation...

is done through a config file called raktajino.exe.config. You will find this file in the installation folder. Here is an example:


```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <appSettings>
    <add key="HostingOptionsURL"
value="http://bravo800.server4you.de/hostingoptions2008.xml?lang=%language%&OS=%OS%" />
    <add key="InstallationRequirementsURL"
value="http://bravo800.server4you.de/InstallationRequirements2008.xml" />
    <add key="Banner" value="html/banner.htm" />
    <add key="ProductDescriptionURL" value="html/default.htm" />
    <add key="BackgroundInstallCheck" value="true" />
    <add key="SortProductTreeView" value="true" />
    <add key="DisableTabControlDuringInstall" value="true" />
    <add key="Culture" value="en-US" />
  </appSettings>
</configuration>
```

Modify the **HostingOptionsURL** key e.g. when you want to use a different package list.

Note: If you work with query parameters you need to escape the '&' (ampersand) here.

When you modify **HostingOptionsURL** you probably need to modify the **InstallationRequirementsURL** as well which defines where to look for the installationrequirements.xml file.

To modify the banner edit the **Banner** key and point it to a html ressource of your wish. The **ProductDescriptionURL** is the welcome page when the tool is started (simple html page).

BackgroundInstallCheck set this to false and you don't get these icons  in the treeview control (faster but not so nice ;-))

SortProductTreeView by default the packages in the treeview are sorted (alphabetical) – if you don't like this set this to "false"

DisableTabControlDuringInstall by default when you are installing a packet you cannot select another package set this to "false" let's you do this.

Change the **Culture** key if you want to use a different language:

German	de-DE
English (US) – default	en-US
Czech	cs-CZ

<i>Russian</i>	<i>ru-RU</i>
<i>Spanish</i>	<i>fr-FR</i>
<i>French</i>	<i>es-ES</i>

Note: When using notepad to change the values in the config file make sure that you run notepad "Run as administrator" on Windows Vista, otherwise User Account Control (UAC) may prevent settings from taking effect. Additionally make sure that the file is saved using the UTF-8 file format (as specified in the <?xml version="1.0" encoding="utf-8"?> section). Restart the tool to pick up the changes.

3) Want to build your own package list? - Working with HostingOptions.xml and InstallationRequirements.xml

The tool supports the installation (we call it "actions") with the following file types:
Windows installer files (*.msi), zip, exe and cmd.

a) The workflow:

1. You decide which packet you would like to have in the list
2. Define the hostingoptions <product> section
3. Install the package onto a test system
 - a. note cmd switches you might want to use (e.g. /quiet)
 - b. what requirements are needed
4. Refine the hostingoptions <product> section
5. Define installation requirements for the new <product>
6. Bringing it together.

b) A Sample:

The program Notepad++ (<http://notepad-plus.sourceforge.net/uk/site.htm>) is a free source code editor and can be installed via an exe file that can be downloaded from [sourceforge](http://sourceforge.net). We now want notepad++ to be in the package list. What do I need to do?

- 1) Done – we want Notepad++

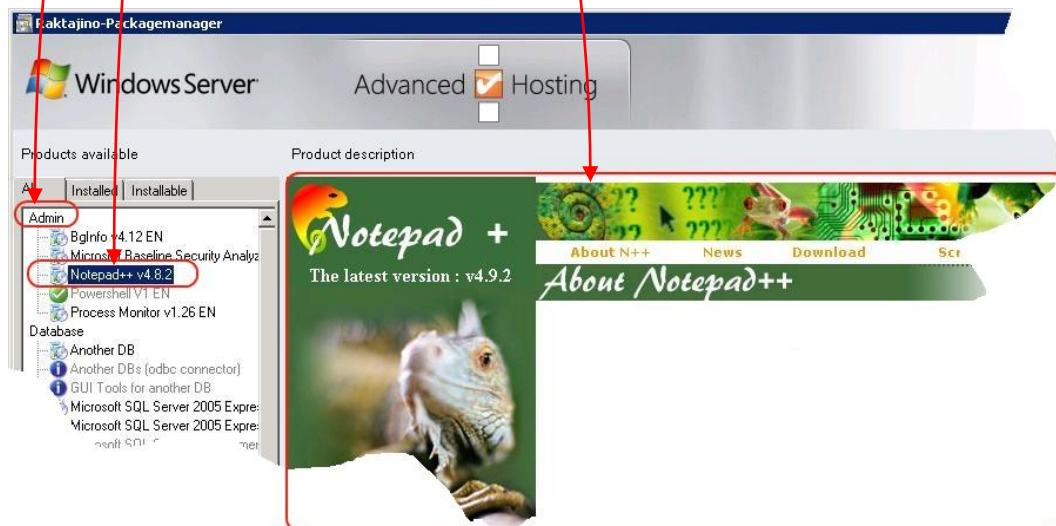
2) Defining the products section for the hostingoptions.xml:

```
<Product>
  <Title>Notepad++ v4.8.2</Title>
  <DescriptionUrl>http://notepad-plus.sourceforge.net/uk/site.htm</DescriptionUrl>
  <Categories>
    <Category>Admin</Category>
  </Categories>
  <InstallURL>< [CDATA[http://surfnet.dl.sourceforge.net/sourceforge/notepad-plus/npp.4.8.2.Installer.exe]] </InstallURL>
  <Requirements>
    <SelfCheck>
      <Requirement>Notepad++ v4.8.2 installed</Requirement>
    </SelfCheck>
  </Requirements>
  <Action>
    <Type>exe</Type>
    <Command>%InstallPath%\npp.4.8.2.Installer.exe</Command>
    <Parameters>
      <Parameter>
    </Parameter>
    </Parameters>
  </Action>
</Product>
```

Steps to do to install.
Note:
%InstallPath% gets you to the location where the file has been downloaded to

download URL. During install the packagemanager downloads npp.4.8.2.Installer.exe from sourceforge to the %InstallPath% folder which is mapped to %LOCALAPPDATA%\raktajino\Raktajino-Packagemanager\1.0.0.0\downloads

Notepad++ should not be installable when already installed. In this line you tell the package manager what to check to determine if the tool is installed or not. The tool looks in InstallationRequirements.xml for a section like "<RegistryCheck Property='Notepad++ v4.8.2 installed' ..."



Picture 10: What influences what.

3) We install npp.4.8.2.Installer.exe manually onto a test system

4) We run the installation as is, i.e. no cmd switches for e.g. unattended install etc.

5) Defining Requirements:

Notepad++ installs just fine, i.e. nothing needs to be installed before we can run

npp.4.8.2.Installer.exe. The next step is to define what is being checked to determine if Notepad++ is already installed or not. We don't want to allow multiple installs as we have the section:

```
<SelfCheck>
  <Requirement>Notepad++ v4.8.2 installed</Requirement>
</SelfCheck>
```

In the HostingOptions.xml. Now we need to tell the tool what to do when it checks for "Notepad++ v4.8.2 installed". This is done by making an entry in the InstallationRequirements.xml. This looks like:

```
<RegistryCheck Property="Notepad++ v4.8.2 installed"
Key="HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\Notepad++" Value="DisplayName">
<Compare ValueType="String" Method="ValueEqualTo">Notepad++</Compare>
</RegistryCheck>
```

As you can imagine a registry check is done to determine if Notepad++ is already installed. For some packages a simple registry check is enough, for others a script or a command needs to be run. The tool support the following checking methods:

MsiProductCheck, Examines the Registry key

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall and tries to find the GUID as specified in the MsiProductCheck-section. (fast)

RegistryCheck, does a check in the registry and sees if a value is there (fast)

FileCheck, tries to find a file, if it is there the check is succesful. (fast)

ExternalCheck, gives you the possibility to run an *.exe and parse the stdout for a search string. (slower)

It might be a bit of a practise to figure out the best way to determine whether an application is installed.

Note: For further samples see the appendix.

6) Bringing it together

Copy the whole `<Product>` section into your hostingoptions.xml and the corresponding `<RegistryCheck>` into your InstallationRequirements.xml

Your HostingOptions.xml now should look like this:

```
<?xml version="1.0" encoding="utf-8" ?>
<HostingOptions>
  <Product>
    <Title>Notepad++ v4.8.2</Title>
    <DescriptionUrl>http://notepad-plus.sourceforge.net/uk/site.htm</DescriptionUrl>
    <Categories>
      <Category>Admin</Category>
    </Categories>
    <InstallURL><![CDATA[http://surfnet.dl.sourceforge.net/sourceforge/notepad-
plus/npp.4.8.2.Installer.exe]]></InstallURL>
    <Requirements>
      <SelfCheck>
        <Requirement>Notepad++ v4.8.2 installed</Requirement>
      </SelfCheck>
    </Requirements>
    <Action>
      <Type>exe</Type>
      <Command>%InstallPath%\npp.4.8.2.Installer.exe</Command>
      <Parameters>
        <Parameter/>
      </Parameters>
    </Action>
  </Product>
  <!-- add other entries here -->
</HostingOptions>
```

And your InstallationRequirements.xml like this:

```
<?xml version="1.0" encoding="utf-8" ?>
<Requirements>
  <RegistryCheck Property="Notepad++ v4.8.2 installed"
Key="HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\Notepad++"
Value="DisplayName">
    <Compare ValueType="String" Method="ValueEqualTo">Notepad++</Compare>
  </RegistryCheck>
  <!-- add other entries here -->
</Requirements>
```

Important: Save the file in UTF-8 file format as specified in the `<?xml version="1.0" encoding="utf-8" ?>`. And make sure that your Packagemanager uses your files. You might need to change the `raktajino.exe.config` file.

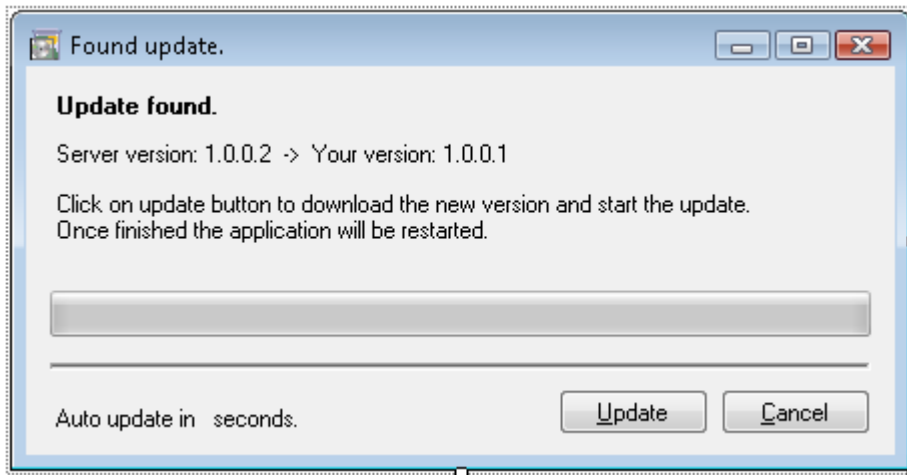
c) Things that get parsed

Sometimes it's useful to have the tool dynamically get environment variables, temp directories, system info or a timestamp. You may have seen escaping's (e.g. "%INSTALLPATH%") before in the HostingOptions.xml. Here is a complete escape list, where to use them and what the result will look like.

What	File	Which section or sample usage	Sample value
%INSTALLPATH%	HostingOptions.xml	<code><Command>%InstallPath%\DatabasePublishingWizard.msi</Command></code>	C:\Users\bfrank\AppData\Local\raktajino\Raktajino-Packagemanager\1.0.0.0\downloads
%TEMPSUBDIRECTORY%	HostingOptions.xml	<code><Command>, <Parameter></code>	C:\Users\bfrank\AppData\Local\raktajino\Raktajino-Packagemanager\1.0.0.0\temp
%TMP% or %TEMP%	HostingOptions.xml	<code><Command>, <Parameter></code>	C:\Users\bfrank\AppData\Local\Temp
%INSTALLLOGS%	HostingOptions.xml	<code><Parameter><![CDATA[/qn /log "%INSTALLLOGS%\DatabasePublishingWizard.log"]]></Parameter></code>	C:\ProgramData\raktajino\Raktajino-Packagemanager\1.0.0.0\installlogs
%SYSTEMDRIVE%	HostingOptions.xml	<code><Command>, <Parameter></code>	C:
%WINDIR% or %SYSTEMROOT%	HostingOptions.xml	<code><Command>, <Parameter></code>	C:\Windows
%SYSTEM32%	HostingOptions.xml	<code><Command>, <Parameter></code>	C:\windows\system32
%PROGRAMFILES%	HostingOptions.xml	<code><Command>, <Parameter></code>	C:\Program Files
%USERPROFILE%	HostingOptions.xml	<code><Command>, <Parameter></code>	C:\Users\bfrank
%TIMESTAMP%	HostingOptions.xml	<code><Parameter><![CDATA[add backup "%timestamp%beforeUmbracoInstall"]]></Parameter></code>	„20080624T13207“ (= 24.06.2008 13:20:07)
%LANGUAGE%	raktajino.exe.config	<code><add key="HostingOptionsURL" value="http://bravo800.server4you.de/hostingoptions2008.xml?lang=%language%"/></code>	„en-US“ (System.Globalization.CultureInfo.InstalledUICulture.Name)
%CULTURE%	raktajino.exe.config	<code><add key="ProductDescriptionURL" value="html/%culture%/default.htm"/></code>	„en-US“ takes the value from <code><add key="Culture" value="en-US"/></code> - gives you the possibility to display a language specific welcome page
%OS%	raktajino.exe.config	<code><add key="HostingOptionsURL" value="http://bravo800.server4you.de/hostingoptions2008.xml?OS=%OS%"/></code>	„6.0.6001.65536“ (vista SP1)
%OSNAME%	raktajino.exe.config	<code><add key="HostingOptionsURL" value="http://bravo800.server4you.de/hostingoptions2008.xml? OSName =% OSName %"/></code>	„Microsoft+Windows+Web+Server+2008“ (does a WMI query: “SELECT Caption FROM Win32_OperatingSystem” + removes special chars)
%ADDRESSWIDTH%	raktajino.exe.config	<code><add key="HostingOptionsURL" value="http://bravo800.server4you.de/hostingoptions2008.xml?Bit=%ADDRESSWIDTH%"/></code>	„32“, „64“ or „unknown“ (does a WMI query: “SELECT AddressWidth FROM Win32_Processor”)

4) AutoUpdate Feature

With the version 1.0.2.3 comes this feature:



This feature is controlled through the following keys in the application.config file:

```
<add key="UpdateURL" value="http://87.106.240.152/raktajino/update/version.xml"/>
<add key="VersionCheckInterval" value="86400"/>
```

Let me now in brief explain these 2 keys and their function:

1. `<!-- url to the server to check for updates -->`
`<add key="UpdateURL" value="http://87.106.240.152/raktajino/update/version.xml"/>`

Tells the tool to look for an xml file that can be examined to determine whether there is and where to find the update. If you place a bad (e.g. non existing url) into this field no update checking will be done. Here is a sample of the version.xml file the client expects to find:

```
<?xml version="1.0" encoding="utf-8" ?>
<UpdateConfig xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <ServerVersion>1.0.2.4</ServerVersion>
  <DownloadUrl>
    <![CDATA[http://87.106.240.152/raktajino/update/RaktajinoSetup.msi]]>
  </DownloadUrl>
  <AutoUpdateCountdown>300</AutoUpdateCountdown>
  <UpdateCommand>
    <![CDATA[/qn REINSTALL=ALL REINSTALLMODE=vomus]]>
  </UpdateCommand>
</UpdateConfig>
```

ServerVersion

The version of the tool that can be downloaded from the server. The client compares its version with this one and displays the update dialog if the server version is higher.

DownloadUrl

Tells the client where to download the update.

AutoUpdateCountdown

If the update dialog is displayed to the user - and the user does neither Update nor Cancel the update will be applied automatically after the number of seconds specified here.

UpdateCommand

Some additional windows installer (msiexec.exe) options.


```

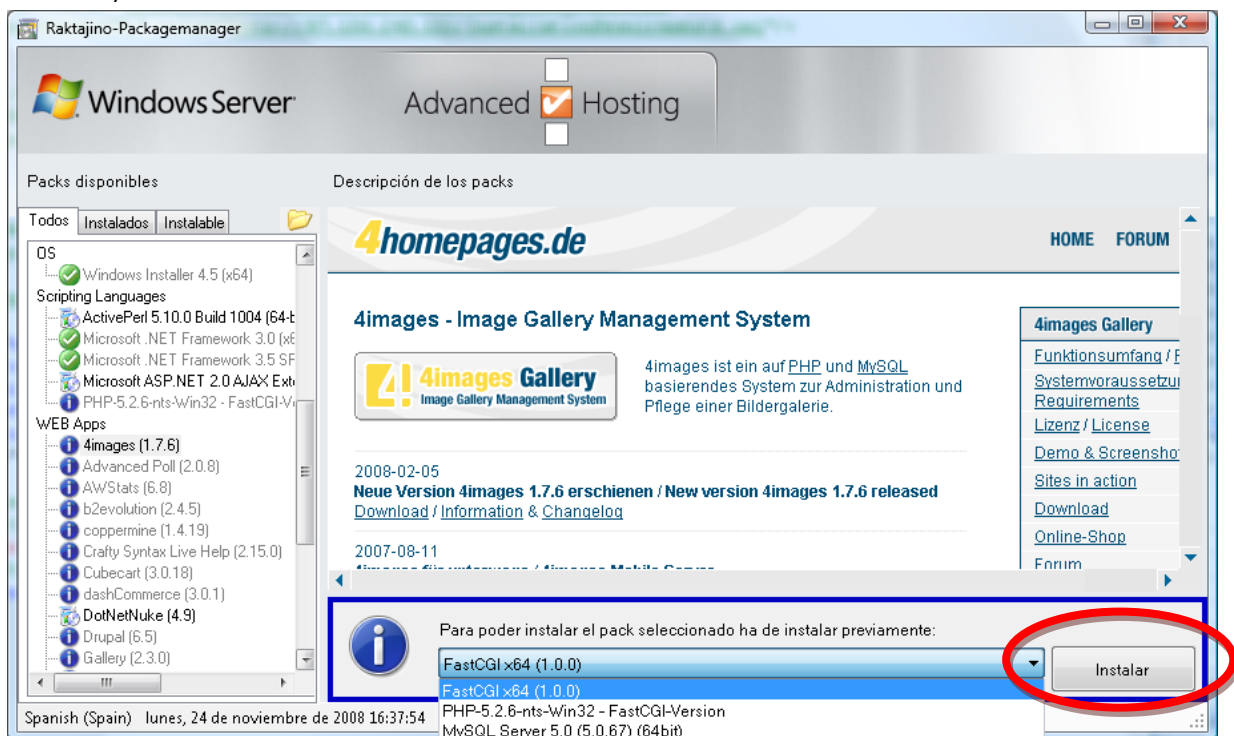
2. <!-- time in seconds after which the tool checks if an updated version of the tool
exists (0 disables checking for updates)-->
<add key="VersionCheckInterval" value="86400"/>

```

The tool checks for an update right after start and each time after the `VersionCheckInterval` has elapsed (time in seconds, in this sample once in a day). If you set this value to 0 no update checking will be done.

5) Install All Feature

In versions of the tool prior to 1.0.2.3 if you click onto a package with an icon of type  you are notified that there are missing requirements you need to install first before you can the selected package. With the new version you can launch the installations of the prerequisites as well as the selected product with a single click on the install button (you will be still shown what needs to be installed.).



Note: The list of packages that are installed step come from the check of the installation requirements. E.g. let's assume we want to install a package that requires:

```

<Requirements>
<InstallRequirements>
  <Requirement>IIS Version greater 6</Requirement>
  <Requirement>IIS 6 Management Compatibility installed</Requirement>
  <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
  <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
  <Requirement>IIS 7 Web-Scripting-Tools installed</Requirement>
  <Requirement>MySQL Server 5.0 (5.0.67) (64bit)</Requirement>
  <Requirement>MySQL Connector/ODBC 5.1 (5.1.5)</Requirement>
</InstallRequirements>

```

From the above dialog we see that the following requirements are missing

```

FastCGI Extension for IIS7.0 installed
IIS7 configured with FastCGI for PHP

```


The other requirements are found on the machine. When clicking the install button the 3 missing packages will be installed before the final selected application (in this case 4images) will install. Important the tool does currently not do recursive installation requirement checking for the 3 missing requirements, i.e. if e.g. FastCGI requires something to be installed before it can install this bundle installation will not work. Workaround: enter everything in the [<InstallRequirements>](#) that the 4images package will need like it would on a clean machine.

6) Changelog

Version	Date	Author	Comments
1.0	24.07.2008	Bernhard Frank	Created this documentation Upload of latest version
1.0.0.1	08.07.2008	Bernhard Frank	updated doc. 20 sec. timeout when downloading the package list user-agent: Raktajino-Packagemanager pragma:no-cache extended localization.
1.0.0.2	14.07.2008	Bernhard Frank	added %culture% parsing + added language specific welcome page cleaned up display logic added "open logs folder" button added error handling when installationrequirementsurl is missing or wrong
1.0.0.3	04.09.2008	Bernhard Frank	better 64bit support (especially for MSIPRODUCTCHECK) added %ADDRESSWIDTH% parsing
1.0.0.4	05.09.2008	Bernhard Frank	implemented caching of installation requirements check.
1.0.0.5	08.10.2008	Bernhard Frank	Set application UI culture if set in config file during startup added French (fr-FR) and Spanish (es-ES) as language
1.0.2.3	24.11.2008	Bernhard Frank	implemented 2 new features: <ul style="list-style-type: none"> - autoupdate feature (see section 4) - install all button (see section 5)

1.0.2.5**09.12.2008****Bernhard Frank**

fixed bug in “install all” feature.
Changed splashscreen to “windows server advanced hosting”
ordered domains windows-server-advanced-hosting.de and wired this links in the tool

7) An appeal at the end

Thanks for reading so far. As working on this tool for almost a year now from the beginning I might be missing relevant information for you to work with it. If you have suggestions, ideas, feedback of any kind please let me know – if you dare to write an email to bfrank@microsoft.com ☺

8) Appendix

a) Another more complex sample package:

The tool should install the PHP Scripting language onto a Windows Web Server 2008.

We want the php to run with Internet Information Server 7 FastCGI, therefore we use the PHP 5.2.6 Non-thread-safe zip package from <http://www.php.net/get/php-5.2.6-nts-Win32.zip/from/a/mirror>

We are not using the php installer provided from PHP.net but compress the files into a zip file.

- 1) Download php-5.2.6-nts-Win32.zip. from PHP.net – edit php.ini (temp, session folder, etc.)
- 2) Create a HostingOptions.xml <product> entry:

```
<Product>
  <Title><![CDATA[PHP 5.2.6 nts - Version für FastCGI]]></Title>
  <Description>
    <![CDATA[
      <h1>PHP on Windows</h1>
      <hr>This package installs the php 5.2.6. version in conjunction with IIS7
    ]]>
    <!-- cool I can write html here when I use <Description> rather than <DescriptionUrl>
-->
  </Description>
  <Categories>
    <Category>Scripting Languages</Category>
    <!-- I can add further categories if I want -->
  </Categories>
  <InstallURL>http://localhost:8080/PHP/php-5.2.5-nts-Win32.zip</InstallURL>
  <!-- this could also be a path or share name -->
  <Requirements>
    <InstallRequirements>
      <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
      <!-- I can add further requirements here -->
      <!-- if all requirement checks (defined here) return false -> the package cannot be
installed, the package is displayed with a ❶ in the treeview -->
    </InstallRequirements>
    <SelfCheck>
      <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
      <!-- checks if the package is already installed -->
      <!-- if this check results to true ❷ is displayed and the package cannot be
installed again-->
      <!-- if this check results to false and all InstallRequirements are true ❸ is
displayed and the package can be installed-->
```

```

        <!-- currently only 1 selfcheck is allowed -->
    </SelfCheck>
</Requirements>
<!-- Note that I can have multiple actions for installing a package -->
<Action>
    <!-- as the <InstallURL> points to a .zip file we download that and unzip it first
into the c:\php folder-->
    <Type>UNZIP</Type>
    <Command />
    <Parameters>
        <Parameter>%InstallPath%\php-5.2.5-nts-Win32.zip</Parameter>
        <Parameter>C:\PHP</Parameter>
    </Parameters>
</Action>
<Action>
    <!-- next action is a command line command to create the PHP session folder -->
    <Type>CMD</Type>
    <Command>if</Command>
    <Parameters>
        <Parameter>not exist c:\temp\php_session mkdir c:\temp\php_session</Parameter>
    </Parameters>
</Action>
<Action>
    <!-- and give the required permissions to the IIS7 users group -->
    <Type>CMD</Type>
    <Command>cacls</Command>
    <Parameters>
        <Parameter>c:\temp\php_session /E /G IIS_IUSRS:F</Parameter>
    </Parameters>
</Action>
<Action>
    <!-- creates the php temp folder - you should also make the change in the php.ini file
to tell php to use this folder -->
    <Type>CMD</Type>
    <Command>if</Command>
    <Parameters>
        <Parameter>not exist c:\temp\php_temp mkdir c:\temp\php_temp</Parameter>
    </Parameters>
</Action>
<Action>
    <Type>CMD</Type>
    <Command>icacls</Command>
    <Parameters>
        <Parameter>c:\temp\php_temp /grant:r "BUILTIN\IIS_IUSRS":(OI)(CI)(Rc,S,RD) "NT
AUTHORITY\IUSR":(OI)(CI)(R)</Parameter>
    </Parameters>
</Action>
<Action>
    <!-- Tells the IIS7 configuration to use PHP-cgi.exe with FastCgi -->
    <Type>EXE</Type>
    <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
    <Parameters>
        <Parameter><![CDATA[set config /section:system.webServer/fastCgi
/+[fullPath='c:\PHP\php-cgi.exe']]></Parameter>
    </Parameters>
</Action>
<Action>
    <!-- Tells the IIS7 configuration to use FastCgi for requests that end with *.php -->
    <Type>EXE</Type>
    <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
    <Parameters>
        <Parameter><![CDATA[set config /section:system.webServer/handlers /+[name='PHP-
FastCGI',path='*.php',verb='*',modules='FastCgiModule',scriptProcessor='C:\PHP\php-
cgi.exe',resourceType='Either']]></Parameter>
    </Parameters>
</Action>
</Product>

```

3) Defining Requirements:

With this package we defined 2 requirements (hostingoptions.xml):

```

<Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
<Requirement>IIS7 configured with FastCGI for PHP</Requirement>

```

So what do we do to check if “FastCGI Extension for IIS7.0 installed”? We run the “General purpose IIS command line administration tool” and drill into the config:

```

C:\Windows>cd %systemroot%\system32\inetsrv

C:\Windows\System32\inetsrv>appcmd.exe list module FastCgiModule
MODULE "FastCgiModule" ( native, preCondition: )

```

Ok, so the FastCgiModule is installed. (If it wouldn't be there result would be an empty string.)

And what do we do to check if "IIS7 configured with FastCGI for PHP"?

```
C:\Windows\System32\inetsrv>appcmd.exe list config -section:fastcgi
<system.webServer>
  <fastCgi>
  </fastCgi>
</system.webServer>
```

The section is there but no entries have been specified, i.e. PHP is not configured with IIS7 FastCgi.

If it would be there the output would be something like:

```
<system.webServer>
  <fastCgi>
    <application fullPath="c:\PHP\php-cgi.exe">
      <environmentVariables>
      </environmentVariables>
    </application>
  </fastCgi>
</system.webServer>
```

Here are the 2 requirements that do the above tests they go into the InstallationRequirements.xml:

```
<ExternalCheck Property="FastCGI Extension for IIS7.0 installed" SpecialFolder="%SystemRoot%"
SearchPath="system32\inetsrv" CheckFile="appcmd.exe" Arguments="list module FastCgiModule" >
  <Compare Method="ValueContains">FastCgiModule</Compare>
</ExternalCheck>

<ExternalCheck Property="IIS7 configured with FastCGI for PHP" SpecialFolder="%SystemRoot%"
SearchPath="system32\inetsrv" CheckFile="appcmd.exe" Arguments="list config -section:fastcgi"
>
  <Compare Method="ValueContains">php-cgi</Compare>
</ExternalCheck>
```

I hope this sample gives you the idea on how to create your product and requirement definitions. See below for a sample hostingoptions.xml and installationrequirements.xml I created for Windows Web Server 2008. Please use at your own risk ☺

b) A sample HostingOptions.xml file:

```
<?xml version="1.0" encoding="utf-8" ?>
<HostingOptions>
  <Product>
    <Title>.NET Framework 2.0</Title>
    <DescriptionUrl>http://localhost:8080/dotnetfx/html/default.htm</DescriptionUrl>
    <Categories>
      <Category>Scripting Languages</Category>
    </Categories>
    <InstallURL></InstallURL>
    <Requirements>
      <SelfCheck>
        <Requirement>ASP.NET version 2.0</Requirement>
      </SelfCheck>
    </Requirements>
    <Action>
      <Type>CMD</Type>
      <Command>start</Command>
      <Parameters>
        <Parameter><![CDATA[/w pkgmgr /iu:IIS-ASPNET /l:"%INSTALLLOGS%\IIS-
ASPNET.log"]]></Parameter>
      </Parameters>
    </Action>
  </Product>
</HostingOptions>
```

```

    </Action>
</Product>

<Product>
  <Title>.NET Framework 3.0</Title>
  <DescriptionUrl>http://localhost:8080/dotnetfx3setup/html/default.htm</DescriptionUrl>
  <Categories>
    <Category>Scripting Languages</Category>
  </Categories>
  <InstallURL></InstallURL>
  <Requirements>
    <SelfCheck>
      <Requirement>.NET Framework 3.0 installed</Requirement>
    </SelfCheck>
  </Requirements>
  <Action>
    <Type>EXE</Type>
    <Command>%SYSTEMDRIVE%\windows\system32\servermanagercmd.exe</Command>
    <Parameters>
      <Parameter><![CDATA[-install NET-Framework -logPath "%INSTALLLOGS%\NET-
Framework3.0.log"]]></Parameter>
    </Parameters>
  </Action>
</Product>
<Product>
  <Title>Microsoft ASP.NET 2.0 AJAX Extensions 1.0</Title>
  <DescriptionUrl>http://localhost:8080/ASPAXExtSetup/html/default.htm</DescriptionUrl>
  <Categories>
    <Category>Scripting Languages</Category>
  </Categories>
  <InstallURL>http://localhost:8080/ASPAXExtSetup/ASPAXExtSetup.msi</InstallURL>
  <EulaUrl>http://localhost:8080/ASPAXExtSetup/eula.rtf</EulaUrl>
  <Requirements>
    <InstallRequirements>
      <Requirement>ASP.NET version 2.0</Requirement>
    </InstallRequirements>
    <SelfCheck>
      <Requirement>ASP.NET AJAX 1.0 installed</Requirement>
      <Requirement>.NET 3.5 Framework installed</Requirement>
    </SelfCheck>
  </Requirements>
  <Action>
    <Type>MSI</Type>
    <Command>%InstallPath%\ASPAXExtSetup.msi</Command>
    <Parameters>
      <Parameter><![CDATA[/qn /log "%INSTALLLOGS%\ASPnetAjaxInstall.log"]]></Parameter>
    </Parameters>
  </Action>
</Product>
<Product>
  <Title>.NET Framework 3.5</Title>
  <DescriptionUrl>http://msdn.microsoft.com/de-de/library/bb332048.aspx</DescriptionUrl>
  <Categories>
    <Category>Scripting Languages</Category>
  </Categories>
  <InstallURL>http://localhost:8080/dotnetfx/dotNetFx35setup.exe</InstallURL>
  <Requirements>
    <SelfCheck>
      <Requirement>.NET 3.5 Framework installed</Requirement>
    </SelfCheck>
  </Requirements>
  <Action>
    <Type>EXE</Type>
    <Command>%InstallPath%\dotNetFx35setup.exe</Command>
    <Parameters>
      <Parameter />
    </Parameters>
  </Action>
</Product>

<Product>
  <Title>Microsoft Visual Web Developer 2008 Express Edition</Title>
  <DescriptionUrl>http://www.microsoft.com/express/default.aspx</DescriptionUrl>
  <Categories>
    <Category>Developer</Category>
  </Categories>
  <InstallURL>http://download.microsoft.com/download/d/c/3/dc3439e7-5533-4f4c-9ba0-
8577685b6e7e/vnssetup.exe</InstallURL>

```

```

        <Requirements>
        <SelfCheck>
        <Requirement>Microsoft Visual Web Developer 2008 Express Edition
installed</Requirement>
        </SelfCheck>
        </Requirements>
        <Action>
        <Type>EXE</Type>
        <Command>%InstallPath%\vnssetup.exe</Command>
        <Parameters>
        <Parameter/>
        </Parameters>
        </Action>
    </Product>

    <Product>
        <Title>Log Parser 2.2 (Tool) - EN</Title>
        <DescriptionUrl>http://localhost:8080/LogParser/html/default.htm</DescriptionUrl>
        <Categories>
        <Category>IIS</Category>
        </Categories>
        <InstallURL>http://localhost:8080/LogParser/LogParser.msi</InstallURL>
        <EulaUrl>http://localhost:8080/LogParser/Eula.rtf</EulaUrl>
        <Requirements>
        <SelfCheck>
        <Requirement>Log Parser 2.2 (Tool) - EN installed</Requirement>
        </SelfCheck>
        </Requirements>
        <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\LogParser.msi</Command>
        <Parameters>
        <Parameter><![CDATA[/qn /log "%INSTALLLOGS%\LogParser.log"]]></Parameter>
        </Parameters>
        </Action>
    </Product>

    <Product>
        <Title>Powershell V1 EN</Title>
        <DescriptionUrl>http://localhost:8080/Powershell/html/default.htm</DescriptionUrl>
        <Categories>
        <Category>Admin</Category>
        </Categories>
        <InstallURL></InstallURL>
        <Requirements>
        <SelfCheck>
        <Requirement>Powershell.exe V1 file exists</Requirement>
        </SelfCheck>
        </Requirements>
        <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\servermanagercmd.exe</Command>
        <Parameters>
        <Parameter><![CDATA[-install powershell -logPath
"%INSTALLLOGS%\PowershellV1Install.log"]]></Parameter>
        </Parameters>
        </Action>
    </Product>

    <Product>
        <Title>Microsoft SQL Server 2005 Express Edition Service Pack 2 (EN) 32bit</Title>
        <DescriptionUrl>http://localhost:8080/SQL
Server/MSSQLServer/html/default.htm</DescriptionUrl>
        <Categories>
        <Category>Database</Category>
        </Categories>
        <InstallURL>http://localhost:8080/SQL Server/MSSQLServer/SQLEXPR32.EXE</InstallURL>
        <Requirements>
        <SelfCheck>
        <Requirement>MSSQL service found</Requirement>
        </SelfCheck>
        </Requirements>
        <Action>
        <Type>EXE</Type>
        <Command>%InstallPath%\SQLEXPR32.EXE</Command>
        <Parameters>
        <Parameter>reboot=ReallySuppress ADDLOCAL=All INSTANCENAME=SQLExpress ERRORREPORTING=0
SQMREPORTING=0 ENABLERANU=1 SQLAUTOSTART=1
SQLCOLLATION=SQL_Latin1_General_CP1_CI_AS</Parameter>
        <Parameter>SECURITYMODE=SQL</Parameter>

```

```

        <Parameter><![CDATA[LOGNAME="%INSTALLLOGS%\SQLEXP32_setup.cab"]]></Parameter>
    </Parameters>
</Action>
</Product>
<Product>
    <Title>Microsoft SQL Server 2005 Express Edition with Advanced Services Service Pack
2</Title>

<DescriptionUrl>http://www.microsoft.com/sql/editions/express/comparison.msp</DescriptionUrl>
    <Categories>
        <Category>Database</Category>
    </Categories>
    <InstallURL>http://localhost:8080/SQL Server/MSSQLServer/SQLEXP32_ADV.EXE</InstallURL>
    <Requirements>
        <SelfCheck>
            <Requirement>SQL Server FullText Search service found</Requirement>
        </SelfCheck>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%InstallPath%\SQLEXP32_ADV.EXE</Command>
        <Parameters>
            <Parameter><![CDATA[reboot=ReallySuppress ADDLOCAL=All
REMOVE=SQL_Replication,RS_Server,RS_Server,RS_Web_Interface,SDK INSTANCENAME=SQLExpress
ERRORREPORTING=0 SQMREPORTING=0 ENABLERANU=1 SQLAUTOSTART=1
SQLCOLLATION=SQL_Latin1_General_CP1_CI_AS]]></Parameter>
            <Parameter>SECURITYMODE=SQL</Parameter>
            <Parameter><![CDATA[LOGNAME="%INSTALLLOGS%\SQLEXP32_ADV_setup.cab"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>Microsoft SQL Server Management Studio Express Service Pack 2 (EN)</Title>
    <DescriptionUrl>http://localhost:8080/SQL
Server/MSSQLServerManagementStudioExpress/html/default.htm</DescriptionUrl>
    <Categories>
        <Category>Database</Category>
    </Categories>
    <InstallURL>http://localhost:8080/SQL
Server/MSSQLServerManagementStudioExpress/SQLServer2005_SSMSEE.msi</InstallURL>
    <EulaUrl>http://localhost:8080/SQL
Server/MSSQLServerManagementStudioExpress/eula.txt</EulaUrl>
    <Requirements>
        <InstallRequirements>
            <Requirement>MSSQL service found</Requirement>
        </InstallRequirements>
        <SelfCheck>
            <Requirement>Microsoft SQL Server Management Studio Express Service Pack 2 (EN)
installed</Requirement>
        </SelfCheck>
    </Requirements>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\SQLServer2005_SSMSEE.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/qn /log "%INSTALLLOGS%\SQLServer2005_SSMSEE.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>FastCgi for IIS7</Title>

<DescriptionUrl><![CDATA[http://www.iis.net/downloads/default.aspx?tabid=34&i=1299&g=6]]></Des
criptionUrl>
    <Categories>
        <Category>IIS</Category>
    </Categories>
    <Requirements>
        <SelfCheck>
            <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
        </SelfCheck>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\servermanagercmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[-install Web-CGI]]></Parameter>
        </Parameters>

```



```

    </Action>
  </Product>
  <Product>
    <Title>IIS Diagnostics Toolkit (x86) - EN</Title>
    <DescriptionUrl>http://localhost:8080/IIS/iisdiag/html/default.htm</DescriptionUrl>
    <Categories>
      <Category>IIS</Category>
    </Categories>
    <InstallURL>http://localhost:8080/IIS/iisdiag/iisdiag.zip</InstallURL>
    <EulaUrl>http://localhost:8080/IIS/iisdiag/eula.rtf</EulaUrl>
    <Requirements>
      <InstallRequirements>
        <Requirement>IIS Version greater 4</Requirement>
      </InstallRequirements>
      <SelfCheck>
        <Requirement>IIS Diagnostics Toolkit (x86) - EN installed</Requirement>
      </SelfCheck>
    </Requirements>
    <Action>
      <Type>UNZIP</Type>
      <Command />
      <Parameters>
        <Parameter>%InstallPath%\iisdiag.zip</Parameter>
        <Parameter>%TempSubDirectory%\</Parameter>
      </Parameters>
    </Action>
    <Action>
      <Type>MSI</Type>
      <Command>%TempSubDirectory%\iisdiag.msi</Command>
      <Parameters>
        <Parameter><![CDATA[/qn
ADDLOCAL=Feature_iis_32_resources_0,Feature_authdiag_1,Feature_binaries_80,Feature_documentati
on_107,Feature_plugins_134,Feature_samples_161,Feature_smtpdiag_187,Feature_ssldiag_213,Featur
e_tracediag_239,Feature_wfetch_265 /log "%INSTALLLOGS%\iisdiag.log"]]></Parameter>
      </Parameters>
    </Action>
    <Action>
      <Type>MSI</Type>
      <Command>%TempSubDirectory%\DebugDiag.msi</Command>
      <Parameters>
        <Parameter><![CDATA[/qn /log "%INSTALLLOGS%\DebugDiag.log"]]></Parameter>
      </Parameters>
    </Action>
  </Product>
  <Product>
    <Title>Microsoft WebDAV Extension for IIS 7.0</Title>

    <DescriptionUrl><![CDATA[http://www.iis.net/downloads/default.aspx?tabid=34&i=1621&g=6]]></Des
criptionUrl>
    <Categories>
      <Category>IIS</Category>
    </Categories>
    <InstallURL>http://localhost:8080/IIS/WebDAV/webdav_x86_rtw.msi</InstallURL>
    <Requirements>
      <SelfCheck>
        <Requirement>Microsoft WebDAV Extension for IIS 7.0 installed</Requirement>
      </SelfCheck>
    </Requirements>
    <Action>
      <Type>MSI</Type>
      <Command>%InstallPath%\webdav_x86_rtw.msi</Command>
      <Parameters>
        <Parameter><![CDATA[/log "%INSTALLLOGS%\webdav_x86_rtw.log"]]></Parameter>
      </Parameters>
    </Action>
  </Product>
  <Product>
    <Title>Microsoft FTP Publishing Service for IIS 7.0</Title>

    <DescriptionUrl><![CDATA[http://www.iis.net/downloads/default.aspx?tabid=34&g=6&i=1619]]></Des
criptionUrl>
    <Categories>
      <Category>IIS</Category>
    </Categories>
    <InstallURL>http://localhost:8080/IIS/FTP7/ftp7_x86_rtw.msi</InstallURL>
    <Requirements>
      <SelfCheck>
        <Requirement>Microsoft FTP Publishing Service for IIS 7.0 installed</Requirement>

```

```

        </SelfCheck>
    </Requirements>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\ftp7_x86_rtw.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\ftp7_x86_rtw.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>IIS7 Media Pack Bit Rate Throttling Module</Title>

<DescriptionUrl><![CDATA[http://www.iis.net/downloads/default.aspx?tabid=34&i=1640&g=6]]></DescriptionUrl>
    <Categories>
        <Category>IIS</Category>
    </Categories>

<InstallURL>http://localhost:8080/IIS/MediaPackBitRateThrottlingModule/bitrate32.msi</InstallURL>
    <Requirements>
        <SelfCheck>
            <Requirement>IIS7 Media Pack Bit Rate Throttling Module installed</Requirement>
        </SelfCheck>
    </Requirements>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\bitrate32.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\bitrate32.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>PowerShell Provider for IIS 7.0</Title>

<DescriptionUrl><![CDATA[http://www.iis.net/downloads/default.aspx?tabid=34&g=6&i=1664]]></DescriptionUrl>
    <Categories>
        <Category>IIS</Category>
    </Categories>
<InstallURL>http://localhost:8080/IIS/IIS7psprov/iis7psprov_x86_tp1.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>Powershell.exe V1 file exists</Requirement>
        </InstallRequirements>
        <SelfCheck>
            <Requirement>PowerShell Provider for IIS 7.0 installed</Requirement>
        </SelfCheck>
    </Requirements>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\iis7psprov_x86_tp1.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\iis7psprov_x86_tp1.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>Administration Pack for IIS 7.0 CTP2 (x86)</Title>

<DescriptionUrl><![CDATA[http://www.iis.net/downloads/default.aspx?tabid=34&g=6&i=1682]]></DescriptionUrl>
    <Categories>
        <Category>IIS</Category>
    </Categories>
<InstallURL>http://localhost:8080/IIS/AdminPack/AdminPack_x86.msi</InstallURL>
    <Requirements>
        <SelfCheck>
            <Requirement>Administration Pack for IIS 7.0 CTP2 (x86) installed</Requirement>
        </SelfCheck>
    </Requirements>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\AdminPack_x86.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\AdminPack_x86.log"]]></Parameter>

```

```

        </Parameters>
    </Action>
</Product>

<Product>
    <Title>Windows Media Services 2008 for Windows Server 2008</Title>

    <DescriptionUrl><![CDATA[http://www.iis.net/downloads/default.aspx?tabid=34&i=1612&g=6]]></DescriptionUrl>
    <Categories>
        <Category>Windows Media Services</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WindowsMediaServices/Windows6.0-KB934518-x86-Server.msu</InstallURL>
    <Requirements>
        <SelfCheck>
            <Requirement>Windows Media Services 2008 for Windows Server 2008 installed</Requirement>
        </SelfCheck>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\wusa.exe</Command>
        <Parameters>
            <Parameter><![CDATA["%InstallPath%\Windows6.0-KB934518-x86-Server.msu"/log:"%INSTALLLOGS%\WindowsMediaServiceInstallpart1.log"]]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\servermanagercmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[-install WMS -logPath "%INSTALLLOGS%\WindowsMediaServiceInstallpart2.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>

<Product>
    <Title>Process Monitor v1.26 EN</Title>
    <DescriptionUrl>http://technet.microsoft.com/en-us/sysinternals/bb896645.aspx</DescriptionUrl>
    <Categories>
        <Category>Admin</Category>
    </Categories>
    <InstallURL>http://download.sysinternals.com/Files/ProcessMonitor.zip</InstallURL>
    <Requirements>
        <SelfCheck>
            <Requirement>Process Monitor v1.26 EN installed</Requirement>
        </SelfCheck>
    </Requirements>
    <Action>
        <Type>UNZIP</Type>
        <Command />
        <Parameters>
            <Parameter>%InstallPath%\ProcessMonitor.zip</Parameter>
            <Parameter>%ProgramFiles%\Process Monitor</Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>CMD</Type>
        <Command>mklink</Command>
        <Parameters>
            <Parameter><![CDATA[/D "%USERPROFILE%\Desktop\Process Monitor" "%ProgramFiles%\Process Monitor"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>BgInfo v4.12 EN</Title>
    <DescriptionUrl>http://technet.microsoft.com/en-us/sysinternals/bb897557.aspx</DescriptionUrl>
    <Categories>
        <Category>Admin</Category>
    </Categories>
    <InstallURL>http://download.sysinternals.com/Files/BgInfo.zip</InstallURL>
    <Requirements>

```

```

        <SelfCheck>
        <Requirement>BgInfo v4.12 EN installed</Requirement>
    </SelfCheck>
</Requirements>
<Action>
    <Type>UNZIP</Type>
    <Command />
    <Parameters>
        <Parameter>%InstallPath%\BgInfo.zip</Parameter>
        <Parameter>%ProgramFiles%\BgInfo</Parameter>
    </Parameters>
</Action>
<Action>
    <Type>CMD</Type>
    <Command>mklink</Command>
    <Parameters>
        <Parameter><![CDATA[/D "%USERPROFILE%\Desktop\BgInfo"
"%ProgramFiles%\BgInfo"]]></Parameter>
    </Parameters>
</Action>
</Product>
<Product>
    <Title>Notepad++ v4.8.2</Title>
    <DescriptionUrl>http://notepad-plus.sourceforge.net/uk/site.htm</DescriptionUrl>
    <Categories>
        <Category>Admin</Category>
    </Categories>
    <InstallURL><![CDATA[http://surfnet.dl.sourceforge.net/sourceforge/notepad-
plus/npp.4.8.2.Installer.exe]]></InstallURL>
    <Requirements>
        <SelfCheck>
        <Requirement>Notepad++ v4.8.2 installed</Requirement>
    </SelfCheck>
    </Requirements>
    <Action>
        <Type>exe</Type>
        <Command>%InstallPath%\npp.4.8.2.Installer.exe</Command>
        <Parameters>
            <Parameter/>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>Microsoft Baseline Security Analyzer 2.1</Title>
    <DescriptionUrl>http://www.microsoft.com/technet/security/tools/mpsa.mspx</DescriptionUrl>
    <Categories>
        <Category>Admin</Category>
    </Categories>
    <InstallURL><![CDATA[http://localhost:8080/Admin/MBSASetup-x86-EN.msi]]></InstallURL>
    <Requirements>
        <SelfCheck>
        <Requirement>Microsoft Baseline Security Analyzer 2.1 installed</Requirement>
    </SelfCheck>
    </Requirements>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\MBSASetup-x86-EN.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\MBSASetup-x86-EN.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>

<Product>
    <Title>Another DB</Title>
    <DescriptionUrl>http://localhost:8080/MySQL/MySQL/html/default.htm</DescriptionUrl>
    <Categories>
        <Category>Database</Category>
    </Categories>
    <InstallURL>http://localhost:8080/MySQL/MySQL/mysql-essential-5.0.45-
win32.msi</InstallURL>
    <Requirements>
        <SelfCheck>
        <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
    </SelfCheck>
    </Requirements>
    <Action>

```

```

        <Type>MSI</Type>
        <Command>%InstallPath%\mysql-essential-5.0.45-win32.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\mysql-essential-5.0.45-
win32.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title><![CDATA[Another DBs (odbc connector)]]></Title>

    <DescriptionUrl>http://localhost:8080/MySQL/MySQLConnectorODBC351/html/default.htm</Descriptio
nUrl>
    <Categories>
        <Category>Database</Category>
    </Categories>
    <InstallURL>http://localhost:8080/MySQL/MySQLConnectorODBC351/mysql-connector-odbc-
3.51.21-win32.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
        </InstallRequirements>
        <SelfCheck>
            <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
        </SelfCheck>
    </Requirements>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\mysql-connector-odbc-3.51.21-win32.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/qn /log "%INSTALLLOGS%\mysql-connector-odbc-3.51.21-
win32.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title><![CDATA[GUI Tools for another DB]]></Title>

    <DescriptionUrl>http://localhost:8080/MySQL/MySQLGuiTools/html/default.htm</DescriptionUrl>
    <Categories>
        <Category>Database</Category>
    </Categories>
    <InstallURL>http://localhost:8080/MySQL/MySQLGuiTools/mysql-gui-tools-5.0-r12-
win32.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
        </InstallRequirements>
        <SelfCheck>
            <Requirement>MySQL Tools for 5.0 installed</Requirement>
        </SelfCheck>
    </Requirements>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\mysql-gui-tools-5.0-r12-win32.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\mysql-gui-tools-5.0-r12-
win32.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>Active Perl 5.8.8 Build 822</Title>
    <DescriptionUrl>http://localhost:8080/Perl/html/default.htm</DescriptionUrl>
    <Categories>
        <Category>Scripting Languages</Category>
    </Categories>
    <InstallURL>http://localhost:8080/Perl/ActivePerl-5.8.8.822-MSWin32-x86-
280952.msi</InstallURL>
    <Requirements>
        <SelfCheck>
            <Requirement>ActivePerl 5.8.8 Build 822 installed</Requirement>
        </SelfCheck>
    </Requirements>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\ActivePerl-5.8.8.822-MSWin32-x86-280952.msi</Command>
        <Parameters>

```

```

        <Parameter><![CDATA[/log "%INSTALLLOGS%\ActivePerl-5.8.8.822-MSWin32-x86-
280952.log"]]></Parameter>
    </Parameters>
</Action>
</Product>

<Product>
    <Title><![CDATA[PHP 5.2.5 nts - Version für FastCGI]]></Title>
    <DescriptionUrl>http://localhost:8080/php/html/default.htm</DescriptionUrl>
    <Categories>
        <Category>Scripting Languages</Category>
    </Categories>
    <InstallURL>http://localhost:8080/PHP/php-5.2.5-nts-Win32.zip</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
        </InstallRequirements>
        <SelfCheck>
            <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
        </SelfCheck>
    </Requirements>
    <Action>
        <Type>UNZIP</Type>
        <Command />
        <Parameters>
            <Parameter>%InstallPath%\php-5.2.5-nts-Win32.zip</Parameter>
            <Parameter>C:\PHP</Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>CMD</Type>
        <Command>if</Command>
        <Parameters>
            <Parameter>not exist c:\temp\php_session mkdir c:\temp\php_session</Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>CMD</Type>
        <Command>cacls</Command>
        <Parameters>
            <Parameter>c:\temp\php_session /E /G IIS_IUSRS:F</Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>CMD</Type>
        <Command>if</Command>
        <Parameters>
            <Parameter>not exist c:\temp\php_temp mkdir c:\temp\php_temp</Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>CMD</Type>
        <Command>icaccls</Command>
        <Parameters>
            <Parameter>c:\temp\php_temp /grant:r "BUILTIN\IIS_IUSRS":(OI)(CI)(Rc,S,RD) "NT
AUTHORITY\IUSR":(OI)(CI)(R)</Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[set config /section:system.webServer/fastCgi
/+[fullPath='c:\PHP\php-cgi.exe']]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[set config /section:system.webServer/handlers /+[name='PHP-
FastCGI',path='*.php',verb='*',modules='FastCgiModule',scriptProcessor='C:\PHP\php-
cgi.exe',resourceType='Either']]></Parameter>
        </Parameters>
    </Action>
</Product>
</Product>

```

```

<Title>AWStats</Title>
<DescriptionUrl>http://awstats.sourceforge.net/</DescriptionUrl>
<Categories>
  <Category>WEB Apps</Category>
</Categories>
<InstallURL>http://localhost:8080/WebApps/AWStats.msi</InstallURL>
<Requirements>
  <InstallRequirements>
    <Requirement>IIS Version greater 4</Requirement>
    <Requirement>ActivePerl 5.8.8 Build 822 installed</Requirement>
  </InstallRequirements>
</Requirements>
<Action>
  <Type>EXE</Type>
  <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
  <Parameters>
    <Parameter><![CDATA[add backup "%timestamp%beforeAWStatsInstall"]]></Parameter>
  </Parameters>
</Action>
<Action>
  <Type>MSI</Type>
  <Command>%InstallPath%\AWStats.msi</Command>
  <Parameters>
    <Parameter><![CDATA[/log "%INSTALLLOGS%\AWStatsInstall.log"]]></Parameter>
  </Parameters>
</Action>
</Product>
<Product>
  <Title>b2Evolution</Title>
  <DescriptionUrl>http://b2evolution.net/</DescriptionUrl>
  <Categories>
    <Category>WEB Apps</Category>
  </Categories>
  <InstallURL>http://localhost:8080/WebApps/b2Evolution.msi</InstallURL>
  <Requirements>
    <InstallRequirements>
      <Requirement>IIS Version greater 4</Requirement>
      <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
      <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
      <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
      <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
    </InstallRequirements>
  </Requirements>
  <Action>
    <Type>EXE</Type>
    <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
    <Parameters>
      <Parameter><![CDATA[add backup "%timestamp%beforeb2EvolutionInstall"]]></Parameter>
    </Parameters>
  </Action>
  <Action>
    <Type>MSI</Type>
    <Command>%InstallPath%\b2evolution.msi</Command>
    <Parameters>
      <Parameter><![CDATA[/log "%INSTALLLOGS%\b2evolution.log"]]></Parameter>
    </Parameters>
  </Action>
</Product>
<Product>
  <Title>CraftySyntax</Title>
  <DescriptionUrl>http://www.craftysyntax.com/</DescriptionUrl>
  <Categories>
    <Category>WEB Apps</Category>
  </Categories>
  <InstallURL>http://localhost:8080/WebApps/CraftySyntax.msi</InstallURL>
  <Requirements>
    <InstallRequirements>
      <Requirement>IIS Version greater 4</Requirement>
      <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
      <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
      <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
      <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
    </InstallRequirements>
  </Requirements>
  <Action>
    <Type>EXE</Type>
    <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
    <Parameters>

```



```

        <Parameter><![CDATA[add backup "%timestamp%beforeCraftySyntaxInstall"]]></Parameter>
    </Parameters>
</Action>
<Action>
    <Type>MSI</Type>
    <Command>%InstallPath%\craftysyntax.msi</Command>
    <Parameters>
        <Parameter><![CDATA[/log "%INSTALLLOGS%\craftysyntax.log"]]></Parameter>
    </Parameters>
</Action>
</Product>
<Product>
    <Title>DotNetNuke 4.7</Title>
    <DescriptionUrl>http://localhost:8080/WebApps/DotNetNuke/html/default.htm</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/DotNetNuke/DotNetNuke.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>IIS Version greater 4</Requirement>
            <Requirement>MSSQL service found</Requirement>
        </InstallRequirements>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[add backup "%timestamp%beforeDotNetNukeInstall"]]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\DotNetNuke.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\DotNetNukeInstall.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>Mambo</Title>
    <DescriptionUrl>http://mambo-foundation.org/</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/Mambo.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>IIS Version greater 4</Requirement>
            <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
            <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
            <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
            <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
        </InstallRequirements>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[add backup "%timestamp%beforeMamboInstall"]]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\Mambo.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\Mambo.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>Umbraco v 3.03</Title>
    <DescriptionUrl>http://localhost:8080/WebApps/umbraco_v303/html/default.htm</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/umbraco_v303/umbraco_v303.msi</InstallURL>

```

```

<Requirements>
  <InstallRequirements>
    <Requirement>IIS Version greater 4</Requirement>
    <Requirement>ASP.NET version 2.0</Requirement>
    <Requirement>MSSQL service found</Requirement>
    <Requirement>ASP.NET AJAX 1.0 installed</Requirement>
  </InstallRequirements>
</Requirements>
<Action>
  <Type>EXE</Type>
  <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
  <Parameters>
    <Parameter><![CDATA[add backup "%timestamp%beforeUmbracoInstall"]]></Parameter>
  </Parameters>
</Action>
<Action>
  <Type>MSI</Type>
  <Command>%InstallPath%\umbraco_v303.msi</Command>
  <Parameters>
    <Parameter><![CDATA[/log "%INSTALLLOGS%\umbraco_v303.log"]]></Parameter>
  </Parameters>
</Action>
</Product>
<Product>
  <Title>XOOPS</Title>
  <DescriptionUrl>http://www.xoops.org/</DescriptionUrl>
  <Categories>
    <Category>WEB Apps</Category>
  </Categories>
  <InstallURL>http://localhost:8080/WebApps/XOOPS.msi</InstallURL>
  <Requirements>
    <InstallRequirements>
      <Requirement>IIS Version greater 4</Requirement>
      <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
      <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
      <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
      <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
    </InstallRequirements>
  </Requirements>
  <Action>
    <Type>EXE</Type>
    <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
    <Parameters>
      <Parameter><![CDATA[add backup "%timestamp%beforeXOOPSInstall"]]></Parameter>
    </Parameters>
  </Action>
  <Action>
    <Type>MSI</Type>
    <Command>%InstallPath%\xoops.msi</Command>
    <Parameters>
      <Parameter><![CDATA[/log "%INSTALLLOGS%\xoops.log"]]></Parameter>
    </Parameters>
  </Action>
</Product>
<Product>
  <Title>Advanced Poll 2.0.8</Title>
  <DescriptionUrl>http://www.proxy2.de/scripts.php</DescriptionUrl>
  <Categories>
    <Category>WEB Apps</Category>
  </Categories>
  <InstallURL>http://localhost:8080/WebApps/advancedPoll.msi</InstallURL>
  <Requirements>
    <InstallRequirements>
      <Requirement>IIS Version greater 4</Requirement>
      <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
      <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
      <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
      <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
    </InstallRequirements>
  </Requirements>
  <Action>
    <Type>EXE</Type>
    <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
    <Parameters>
      <Parameter><![CDATA[add backup "%timestamp%beforeadvancedPollInstall"]]></Parameter>
    </Parameters>
  </Action>
</Action>

```

```

        <Type>MSI</Type>
        <Command>%InstallPath%\advancedPoll.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\advancedPoll.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>Coppermine 1.4.18</Title>
    <DescriptionUrl>http://coppermine-gallery.net/</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/coppermine.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>IIS Version greater 4</Requirement>
            <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
            <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
            <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
            <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
        </InstallRequirements>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[add backup "%timestamp%beforecoppermineInstall"]]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\coppermine.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\coppermine.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>Cubecart 3.0.18</Title>
    <DescriptionUrl>http://www.cubecart.com/</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/Cubecart.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>IIS Version greater 4</Requirement>
            <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
            <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
            <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
            <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
        </InstallRequirements>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[add backup "%timestamp%beforeCubecartInstall"]]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\Cubecart.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\Cubecart.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>Drupal 6.1</Title>
    <DescriptionUrl>http://drupal.org/</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/Drupal.msi</InstallURL>
    <Requirements>
        <InstallRequirements>

```

```

        <Requirement>IIS Version greater 4</Requirement>
        <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
        <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
        <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
        <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
    </InstallRequirements>
</Requirements>
<Action>
    <Type>EXE</Type>
    <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
    <Parameters>
        <Parameter><![CDATA[add backup "%timestamp%beforeDrupalInstall"]]></Parameter>
    </Parameters>
</Action>
<Action>
    <Type>MSI</Type>
    <Command>%InstallPath%\Drupal.msi</Command>
    <Parameters>
        <Parameter><![CDATA[/log "%INSTALLLOGS%\Drupal.log"]]></Parameter>
    </Parameters>
</Action>
</Product>
<Product>
    <Title>Gallery 2.2.4</Title>
    <DescriptionUrl>http://gallery.menalto.com/</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/Gallery.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>IIS Version greater 4</Requirement>
            <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
            <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
            <Requirement>MSSQL service found</Requirement>
        </InstallRequirements>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[add backup "%timestamp%beforeGalleryInstall"]]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\Gallery.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\Gallery.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>Joomla! 1.5.3</Title>
    <DescriptionUrl>http://www.joomla.org/</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/joomla.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>IIS Version greater 4</Requirement>
            <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
            <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
            <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
            <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
        </InstallRequirements>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[add backup "%timestamp%beforejoomlaInstall"]]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\joomla.msi</Command>

```

```

        <Parameters>
        <Parameter><![CDATA[/log "%INSTALLLOGS%\joomla.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>MediaWiki 1.12.0</Title>

<DescriptionUrl><![CDATA[http://www.mediawiki.org/wiki/Manual:What_is_MediaWiki%3F]]></DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/mediawiki.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>IIS Version greater 4</Requirement>
            <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
            <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
            <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
            <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
        </InstallRequirements>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[add backup "%timestamp%beforemediawikiInstall"]]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\mediawiki.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\mediawiki.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>osCommerce 2.2</Title>
    <DescriptionUrl>http://www.oscommerce.com/</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/osCommerce.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>IIS Version greater 4</Requirement>
            <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
            <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
            <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
            <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
        </InstallRequirements>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[add backup "%timestamp%beforeosCommerceInstall"]]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\osCommerce.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\osCommerce.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>PHP-Nuke 8.0</Title>
    <DescriptionUrl>http://www.phpnuke.org/</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/phpnuke.msi</InstallURL>
    <Requirements>
        <InstallRequirements>

```

```

        <Requirement>IIS Version greater 4</Requirement>
        <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
        <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
        <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
        <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
    </InstallRequirements>
</Requirements>
<Action>
    <Type>EXE</Type>
    <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
    <Parameters>
        <Parameter><![CDATA[add backup "%timestamp%beforephpnukeInstall"]]></Parameter>
    </Parameters>
</Action>
<Action>
    <Type>MSI</Type>
    <Command>%InstallPath%\phpnuke.msi</Command>
    <Parameters>
        <Parameter><![CDATA[/log "%INSTALLLOGS%\phpnuke.log"]]></Parameter>
    </Parameters>
</Action>
</Product>
<Product>
    <Title>phpBB 3.0.1</Title>
    <DescriptionUrl>http://www.phpbb.com/</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/phpBB.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>IIS Version greater 4</Requirement>
            <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
            <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
            <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
            <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
        </InstallRequirements>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[add backup "%timestamp%beforephpBBInstall"]]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\phpBB.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\phpBB.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>TYPO3 4.2.0</Title>
    <DescriptionUrl>http://typo3.org/</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/typo3.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>IIS Version greater 4</Requirement>
            <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
            <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
            <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
            <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
        </InstallRequirements>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[add backup "%timestamp%beforetypo3Install"]]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>MSI</Type>

```

```

        <Command>%InstallPath%\typo3.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\typo3.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>zen cart 1.3.8</Title>
    <DescriptionUrl>http://www.zen-cart.com/</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/zencart.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>IIS Version greater 4</Requirement>
            <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
            <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
            <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
            <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
        </InstallRequirements>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[add backup "%timestamp%beforezencartInstall"]]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\zencart.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\zencart.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>4images 1.7.6</Title>
    <DescriptionUrl>http://www.4homepages.de/</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/4images.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>IIS Version greater 4</Requirement>
            <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
            <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
            <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
            <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
        </InstallRequirements>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[add backup "%timestamp%before4imagesInstall"]]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\4images.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\4images.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>phpMyVisites 2.3</Title>
    <DescriptionUrl>http://www.phpmyvisites.us/</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/phpMyVisites.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>IIS Version greater 4</Requirement>

```



```

        <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
        <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
        <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
        <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
    </InstallRequirements>
</Requirements>
<Action>
    <Type>EXE</Type>
    <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
    <Parameters>
        <Parameter><![CDATA[add backup "%timestamp%beforephpMyVisitesInstall"]]></Parameter>
    </Parameters>
</Action>
<Action>
    <Type>MSI</Type>
    <Command>%InstallPath%\phpMyVisites.msi</Command>
    <Parameters>
        <Parameter><![CDATA[/log "%INSTALLLOGS%\phpMyVisites.log"]]></Parameter>
    </Parameters>
</Action>
</Product>
<Product>
    <Title>OpenX 2.4.6</Title>
    <DescriptionUrl>http://www.openx.org/</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/openx.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>IIS Version greater 4</Requirement>
            <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
            <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
            <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
            <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
        </InstallRequirements>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[add backup "%timestamp%beforeopenxInstall"]]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\openx.msi</Command>
        <Parameters>
            <Parameter><![CDATA[/log "%INSTALLLOGS%\openx.log"]]></Parameter>
        </Parameters>
    </Action>
</Product>
<Product>
    <Title>LimeSurvey 1.70</Title>
    <DescriptionUrl>http://www.limesurvey.org/</DescriptionUrl>
    <Categories>
        <Category>WEB Apps</Category>
    </Categories>
    <InstallURL>http://localhost:8080/WebApps/limesurvey.msi</InstallURL>
    <Requirements>
        <InstallRequirements>
            <Requirement>IIS Version greater 4</Requirement>
            <Requirement>FastCGI Extension for IIS7.0 installed</Requirement>
            <Requirement>IIS7 configured with FastCGI for PHP</Requirement>
            <Requirement>MySQL Server 5.0.45 (Community Server) installed</Requirement>
            <Requirement>MySQL Connector/ODBC 3.51 installed</Requirement>
        </InstallRequirements>
    </Requirements>
    <Action>
        <Type>EXE</Type>
        <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
        <Parameters>
            <Parameter><![CDATA[add backup "%timestamp%beforelimesurveyInstall"]]></Parameter>
        </Parameters>
    </Action>
    <Action>
        <Type>MSI</Type>
        <Command>%InstallPath%\limesurvey.msi</Command>

```

```

        <Parameters>
          <Parameter><![CDATA[/log "%INSTALLLOGS%\limesurvey.log"]]></Parameter>
        </Parameters>
      </Action>
    </Product>
  </Product>
  <Title>dashCommerce 3.0.0</Title>
  <DescriptionUrl>http://dashcommerce.org</DescriptionUrl>
  <Categories>
    <Category>WEB Apps</Category>
  </Categories>
  <InstallURL>http://localhost:8080/WebApps/dashCommerce.msi</InstallURL>
  <Requirements>
    <InstallRequirements>
      <Requirement>IIS Version greater 4</Requirement>
      <Requirement>ASP.NET version 2.0</Requirement>
      <Requirement>SQL Server FullText Search service found</Requirement>
      <Requirement>MSSQL service found</Requirement>
      <Requirement>ASP.NET AJAX 1.0 installed</Requirement>
    </InstallRequirements>
  </Requirements>
  <Action>
    <Type>EXE</Type>
    <Command>%SYSTEMDRIVE%\windows\system32\inetsrv\appcmd.exe</Command>
    <Parameters>
      <Parameter><![CDATA[add backup "%timestamp%beforedashCommerceInstall"]]></Parameter>
    </Parameters>
  </Action>
  <Action>
    <Type>MSI</Type>
    <Command>%InstallPath%\dashCommerce.msi</Command>
    <Parameters>
      <Parameter><![CDATA[/log "%INSTALLLOGS%\dashCommerce.log"]]></Parameter>
    </Parameters>
  </Action>
</Product>
</HostingOptions>

```

c) A sample InstallationRequirements.xml file:

```

<?xml version="1.0" encoding="utf-8" ?>
<Requirements>

  <MsiProductCheck Property="Microsoft Baseline Security Analyzer 2.1 installed"
  GUID="6AF5CAB9-FD0A-494F-8AA6-784D4B5D06C5">
    <Compare Method="ValueExists"/>
  </MsiProductCheck>

  <MsiProductCheck Property="Microsoft SQL Server Database Publishing Wizard 1.1 installed"
  GUID="8C6EE0B4-650F-452E-B9C2-882A72227B19">
    <Compare Method="ValueExists"/>
  </MsiProductCheck>

  <!--comes with VS web Express 2008-->
  <MsiProductCheck Property="Microsoft SQL Server Database Publishing Wizard 1.2 installed"
  GUID="9A33B83D-FFC4-44CF-BEEF-632DECEF2FCD">
    <Compare Method="ValueExists"/>
  </MsiProductCheck>

  <MsiProductCheck Property="Microsoft Visual Web Developer 2005 Express Edition installed"
  GUID="173275E9-C62A-4BCB-9389-574E93336DDA">
    <Compare Method="ValueExists"/>
  </MsiProductCheck>

  <MsiProductCheck Property="Microsoft Visual Web Developer 2008 Express Edition installed"
  GUID="19700927-105D-3812-8548-53EDA3F5A22D">
    <Compare Method="ValueExists"/>
  </MsiProductCheck>

  <RegistryCheck Property="Microsoft Visual Web Developer 2005 Express Edition Service Pack 1
  (DE) installed" Key="HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Updates\Microsoft Visual Web
  Developer 2005 Express Edition - DEU\KB926751" Value="Installed">
    <Compare ValueType="Int32" Method="ValueGreaterThan">0</Compare>
  </RegistryCheck>

```

```

<MsiProductCheck Property="Log Parser 2.2 (Tool) - EN installed" GUID="4AC23178-EEBC-4BAF-
8CC0-AB15C8897AC9">
  <Compare Method="ValueExists"/>
</MsiProductCheck>

<FileCheck Property="Powershell.exe V1 file exists" SpecialFolder="%SystemRoot%"
SearchPath="system32\windowspowershell\v1.0" FileName="powershell.exe">
  <Compare Method="ValueExists" />
</FileCheck>

<MsiProductCheck Property="Microsoft SQL Server 2005 Express Edition Service Pack 2 (EN)
32bit installed" GUID="2AFFFD7-ED85-4A90-8C52-5DA9EBDC9B8F">
  <Compare Method="ValueExists"/>
</MsiProductCheck>

<MsiProductCheck Property="Microsoft SQL Server Management Studio Express Service Pack 2
(EN) installed" GUID="20608BFA-6068-48FE-A410-400F2A124C27">
  <Compare Method="ValueExists"/>
</MsiProductCheck>

<RegistryCheck Property="IIS Version greater 4"
Key="HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Parameters"
Value="MajorVersion">
  <Compare ValueType="Int32" Method="ValueGreaterThan">4</Compare>
</RegistryCheck>

<ExternalCheck Property="FastCGI Extension for IIS7.0 installed"
SpecialFolder="%SystemRoot%" SearchPath="system32\inetsrv" CheckFile="apcmd.exe"
Arguments="list module FastCgiModule" >
  <Compare Method="ValueContains">FastCgiModule</Compare>
</ExternalCheck>

<ExternalCheck Property="IIS7 configured with FastCGI for PHP" SpecialFolder="%SystemRoot%"
SearchPath="system32\inetsrv" CheckFile="apcmd.exe" Arguments="list config -section:fastcgi"
>
  <Compare Method="ValueContains">php-cgi</Compare>
</ExternalCheck>

<MsiProductCheck Property="IIS Diagnostics Toolkit (x86) - EN installed" GUID="30EFFF0C-
573D-46FB-8AD5-20051225261A">
  <Compare Method="ValueExists"/>
</MsiProductCheck>

<ExternalCheck Property="Windows Media Services 2008 for Windows Server 2008 installed"
SpecialFolder="%SystemRoot%" SearchPath="system32\" CheckFile="servermanagercmd.exe"
Arguments="-install WMS -whatif" >
  <Compare Method="ValueContains">NoChange</Compare>
</ExternalCheck>

<ExternalCheck Property="MSSQL service found" SpecialFolder="%SystemRoot%"
SearchPath="system32\wbem\" CheckFile="wmic.exe" Arguments="service WHERE &#34;Caption like
&#39;%SQL Server%&#39;&#34; Get pathname /value" >
  <Compare Method="ValueContains">sqlservr.exe</Compare>
</ExternalCheck>

<ExternalCheck Property="SQL Server FullText Search service found"
SpecialFolder="%SystemRoot%" SearchPath="system32\wbem\" CheckFile="wmic.exe"
Arguments="service WHERE &#34;Caption like &#39;%SQL Server FullText Search%&#39;&#34; Get
Caption /value" >
  <Compare Method="ValueContains">SQL Server FullText Search</Compare>
</ExternalCheck>

<MsiProductCheck Property="Administration Pack for IIS 7.0 CTP2 (x86) installed"
GUID="C6E9540C-4B66-4367-A8CF-570DCFD9F030">
  <Compare Method="ValueExists"/>
</MsiProductCheck>

<MsiProductCheck Property="IIS7 Media Pack Bit Rate Throttling Module installed"
GUID="0BCD0854-EE6F-420F-8D2A-C6402DD6AAF7">
  <Compare Method="ValueExists"/>
</MsiProductCheck>

<MsiProductCheck Property="Microsoft FTP Publishing Service for IIS 7.0 installed"
GUID="47227506-80D3-4768-B822-F9F4BCFBE7C1">
  <Compare Method="ValueExists"/>
</MsiProductCheck>

```

```

    <MsiProductCheck Property="Microsoft WebDAV Extension for IIS 7.0 installed" GUID="C4C36B6D-
0400-4160-B9A1-7F0E44F626ED">
        <Compare Method="ValueExists"/>
    </MsiProductCheck>

    <MsiProductCheck Property="PowerShell Provider for IIS 7.0 installed" GUID="3C557BC2-9FC4-
4293-9E36-F6F5079E3E0C">
        <Compare Method="ValueExists"/>
    </MsiProductCheck>

    <FileCheck Property="Process Monitor v1.26 EN installed" SpecialFolder="%ProgramFiles%"
SearchPath="\Process Monitor" FileName="procmon.exe">
        <Compare Method="ValueExists" />
    </FileCheck>

    <FileCheck Property="BgInfo v4.12 EN installed" SpecialFolder="%ProgramFiles%"
SearchPath="\BgInfo" FileName="bginfo.exe">
        <Compare Method="ValueExists" />
    </FileCheck>

    <RegistryCheck Property="Notepad++ v4.8.2 installed"
Key="HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\Notepad++"
Value="DisplayName">
        <Compare ValueType="String" Method="ValueEqualTo">Notepad++</Compare>
    </RegistryCheck>

    <MsiProductCheck Property="MySQL Server 5.0.45 (Community Server) installed" GUID="2FEB25F8-
C3CB-49A2-AE79-DE17FFAFB5D9">
        <Compare Method="ValueExists"/>
    </MsiProductCheck>

    <MsiProductCheck Property="MySQL Connector/ODBC 3.51 installed" GUID="9A854ED3-C3B1-493D-
8104-C4B5AC459B7A">
        <Compare Method="ValueExists"/>
    </MsiProductCheck>

    <MsiProductCheck Property="MySQL Tools for 5.0 installed" GUID="EC561602-C0B9-4FAA-A175-
1B3273639AC3">
        <Compare Method="ValueExists"/>
    </MsiProductCheck>

    <MsiProductCheck Property="ActivePerl 5.8.8 Build 822 installed" GUID="D0E5A0E6-5947-4F21-
B8AE-5129D153083B">
        <Compare Method="ValueExists"/>
    </MsiProductCheck>

    <MsiProductCheck Property="ASP.NET AJAX 1.0 installed" GUID="082BDF7B-4810-4599-BF0D-
E3AC44EC8524">
        <Compare Method="ValueExists"/>
    </MsiProductCheck>

    <FileCheck Property="ASP.NET version 2.0" SpecialFolder="%SystemRoot%"
SearchPath="Microsoft.NET\Framework\v2.0.50727" FileName="aspnet_isapi.dll">
        <Compare Method="ValueExists" />
    </FileCheck>

    <ExternalCheck Property=".NET Framework 3.0 installed" SpecialFolder="%SystemRoot%"
SearchPath="system32\" CheckFile="servermanagercmd.exe" Arguments="-install NET-Framework-Core
-whatif" >
        <Compare Method="ValueContains">NoChange</Compare>
    </ExternalCheck>

    <FileCheck Property=".NET 3.5 c# Compiler Files installed" SpecialFolder="%SystemRoot%"
SearchPath="Microsoft.NET\Framework\v3.5" FileName="csc.exe">
        <Compare Method="ValueExists" />
    </FileCheck>

    <MsiProductCheck Property=".NET 3.5 Framework installed" GUID="2FC099BD-AC9B-33EB-809C-
D332E1B27C40">
        <Compare Method="ValueExists"/>
    </MsiProductCheck>

</Requirements>

```

9) A thank you

Thanks to:

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- Sebastian - a pleasure working with you.
- Frank for allowing me to do this project.
- Jan for all the valuable feedback & support
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