

AZURE STORAGE EXPLORER 4 USER GUIDE

Azure Storage Explorer is a utility for viewing and acting on Windows Azure Storage. Windows Azure Storage is the area of the Windows Azure Cloud Computing platform that provides non-database storage in the form of blobs, queues, and tables. This documentation is for Azure Storage Explorer version 4.0.0.9 (04/30/2011).

CONTENTS

Configuration	3
Basic Navigation.....	3
Storage Accounts.....	3
Developer Storage	4
Adding a Storage Account	4
Removing a storage Account	5
Storage Account Tabs	6
Select Storage to View	7
Options	7
General Options.....	7
Content Type Settings.....	9
Working with Blobs.....	10
Container Actions	10
Creating a New Container.....	11
Copying a Container	11
Renaming a Container	11
Deleting a Container	12
Container Security	12
Blob Actions	12
viewing a Blob.....	13
Creating a New Blob	14
Copying a Blob	16

Renaming a Blob	16
Deleting a Blob.....	16
Uploading Blobs.....	17
Downloading Blobs	17
Container & Blob Security	18
Working with Queues	22
Queue Actions	22
Creating a New Queue.....	23
Copying a Queue.....	23
Renaming a Queue	23
Deleting a Queue	23
Message Actions	24
Viewing a Message	25
Creating a New Message	26
Popping a Message	27
Popping All Messages	27
Uploading Messages	27
Downloading Messages	29
Working with Tables	30
Table Actions	30
Creating a New Table.....	31
Copying a Table.....	31
Renaming a Table	31
Deleting a Table	31
Querying Entities	33
Deleting Entities.....	33
Entity Actions.....	33

Editing an Entity.....	34
Creating a New entity	34
Copying an Entity.....	36
deleting an Entity.....	36
Uploading Entities.....	37
Downloading entities.....	38

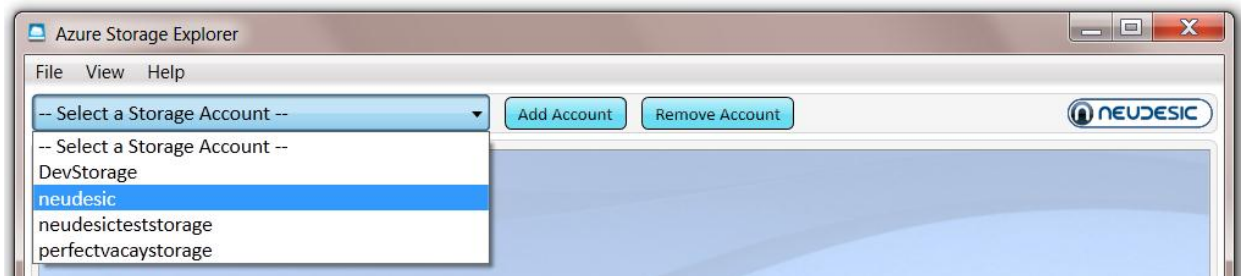
CONFIGURATION

Your configuration information (storage account credentials and preferences) is stored in the file AzureStorageExplorer.config in your user AppData folder \Users\<user>\AppData\Roaming\AzureStorageExplorer. This is an editable text file but we recommend making changes via Azure Storage Explorer.

BASIC NAVIGATION

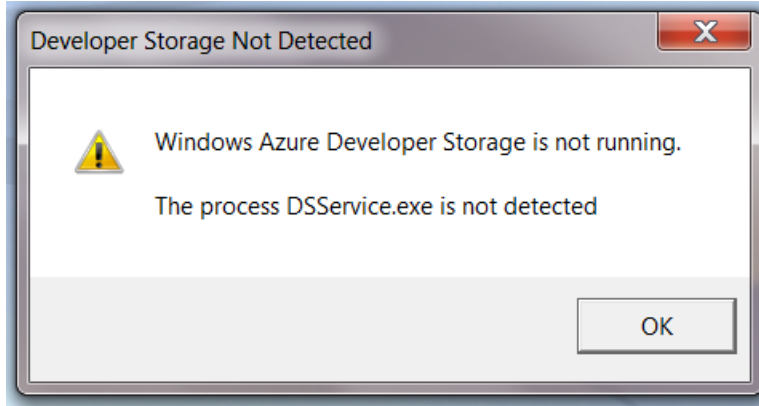
STORAGE ACCOUNTS

You can work with one or with multiple storage accounts. A combo box at top left allows you to select an account to work with; selecting an account opens up a tab for it. To the right of the combo box are buttons for adding a new storage account or removing the selected storage account.



DEVELOPER STORAGE

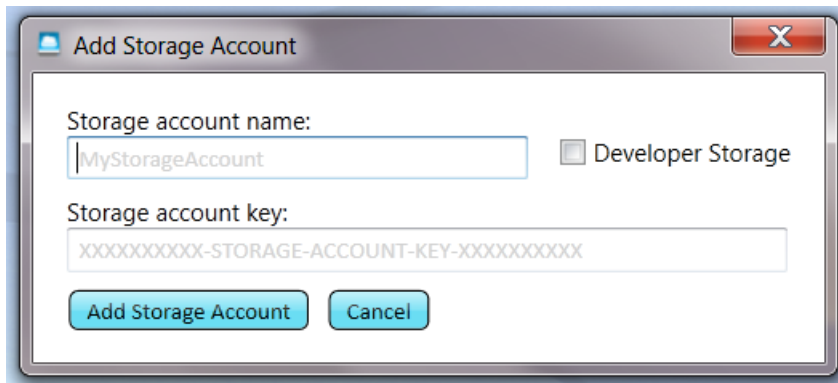
The DevStorage name is special and refers to your local Developer Storage. If you attempt to select it but Developer Storage is not running, you'll receive this error message:



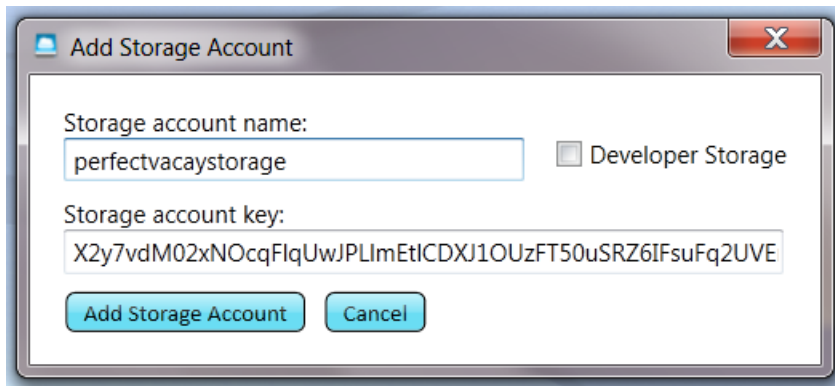
To start developer storage, select *Program Files > Windows Azure SDK > Developer Storage* from the Start Menu. Or, start an Azure application running out of Visual Studio.

ADDING A STORAGE ACCOUNT

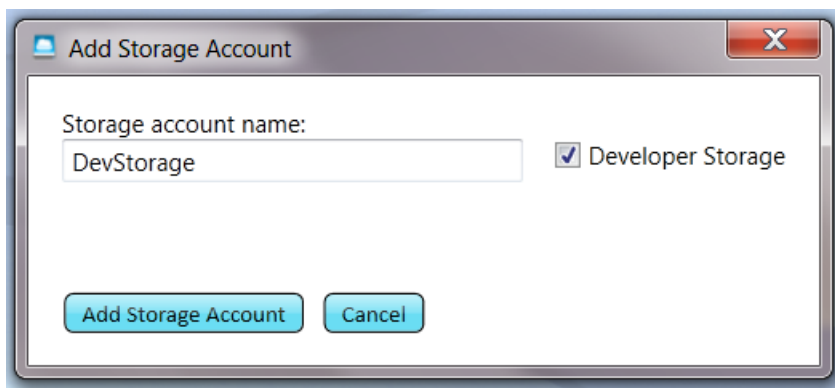
Click the Add Account button, which displays the dialog shown below.



For a cloud storage account, enter the account name and storage account key, then click Add Storage Account.

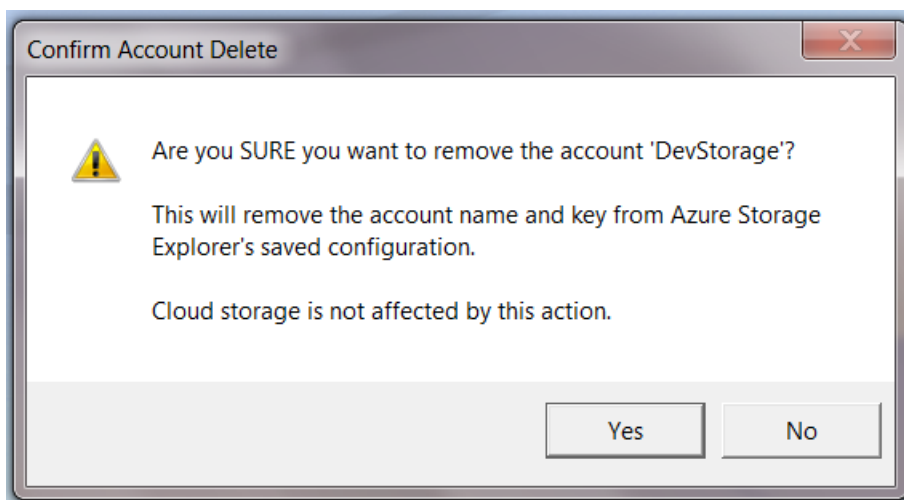


For a local Developer Storage account, just check the Developer Storage checkbox. There is no need to enter an account name or key.



REMOVING A STORAGE ACCOUNT

To remove a storage account, select it from the combo box then click the Remove Account button. If you confirm the delete the storage account will be removed from your configuration.

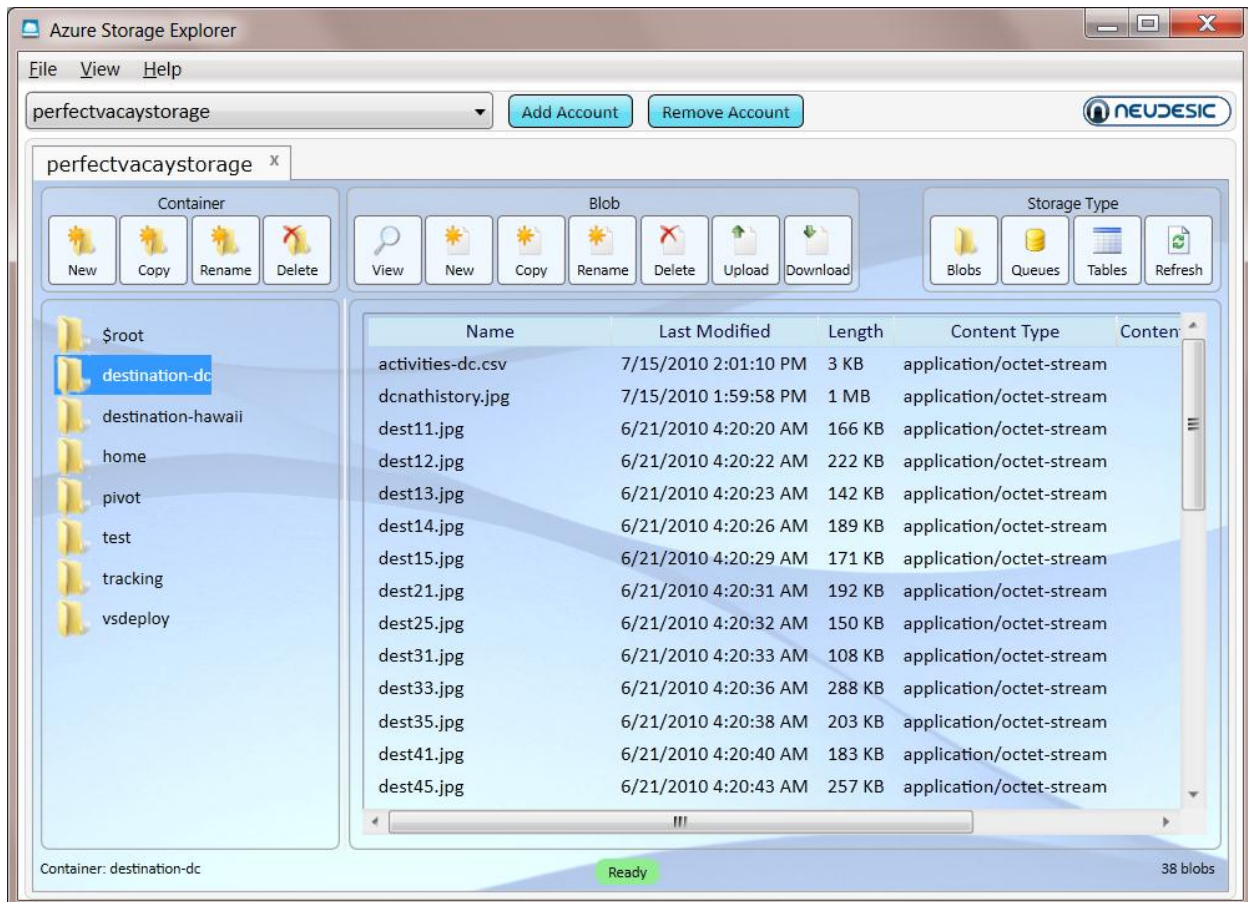


STORAGE ACCOUNT TABS

When you select a storage account, a tab opens up for working with it. If you have multiple tabs open, you can move between them either by clicking on a tab or by selecting from the combo box.

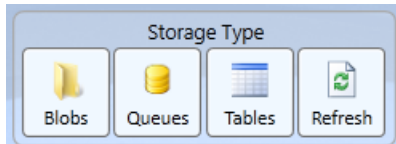
A storage account tab contains:

- A toolbar (top) for selecting the kind of storage to view and performing operations.
- A folder pane (left) that shows blob containers, queues, or tables.
- An item pane (right) that lists blobs, messages, or entities for the selected item in the left pane.
- A status bar (bottom) which shows the selected container (left), status (center), and item count and size (right)



SELECT STORAGE TO VIEW

The right-most Storage Type toolbar allows you to change your view to see views of blobs, queues or tables or to refresh the current view.



In the Blobs view, shown earlier, the left pane lists containers and the right pane lists blobs in the selected container. The Container toolbar has action buttons for containers and the Blob toolbar has action buttons for blobs.



OPTIONS

To view or modify option settings, invoke Tools > Options from the menu. There are several tabs of options.

GENERAL OPTIONS

On the general options these settings are available:

- *Culture*. The culture to use. If left blank, the current OS culture is used. Changing culture does not take effect until the next time you launch Azure Storage Explorer.
- *Show welcome screen on start-up*. If checked the welcome screen appears when Azure Storage Explorer is launched. If turned off, the welcome screen can also be summoned back via the Help menu.
- *Preserve window size and position*. If checked, the main window's size and position are saved and restore between sessions.

Options

General Content Types

Culture: ex: en-US (leave blank to use OS culture)

Show welcome screen on start-up: ☐

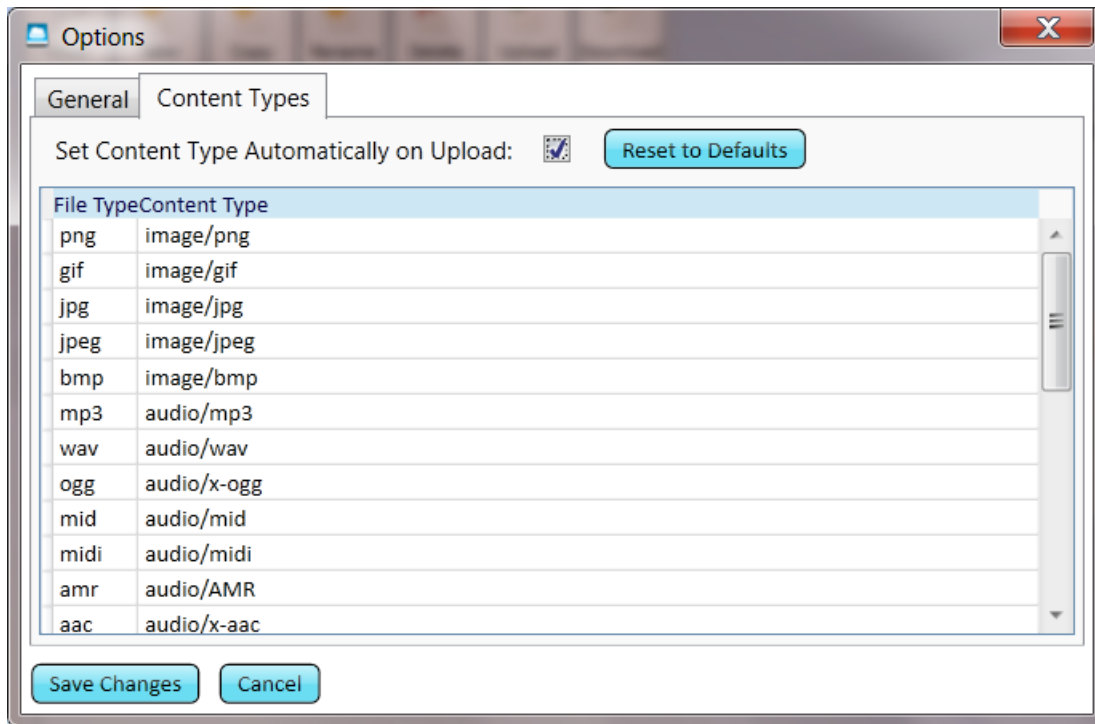
Preserve window size and position: ☒

Save Changes Cancel

CONTENT TYPE SETTINGS

The Content Type settings are used to allow blobs uploaded from files to have their ContentType property set automatically based on the file type.

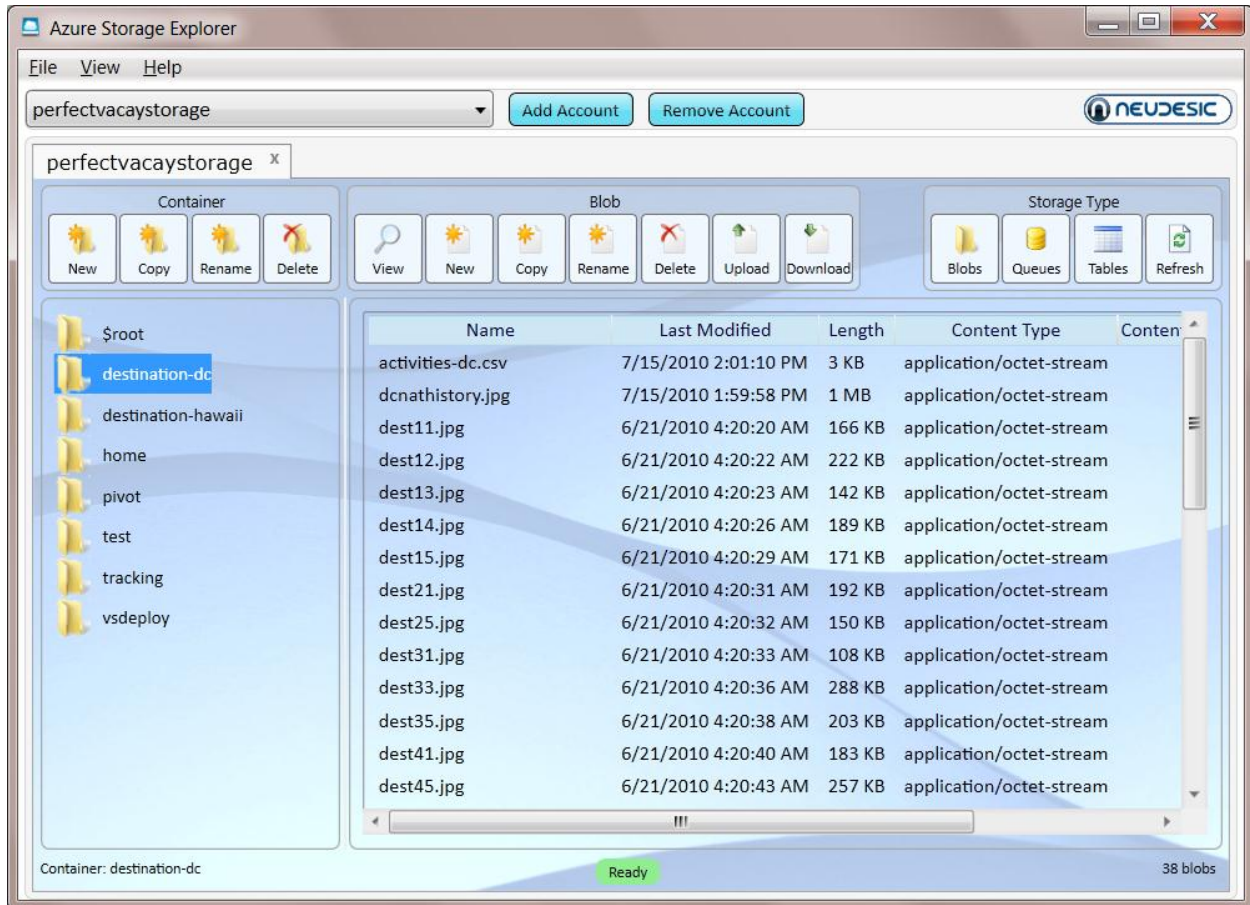
- *Set Content Type Automatically On Upload.* If checked, content types are automatically set for files uploaded to blob storage using the content types table.
- *Content Types Table.* This list defines file types and associated content types.



To save changes, click the Save Changes button.

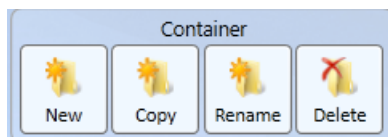
WORKING WITH BLOBS

To view blobs, open a storage account tab (blobs are the default view) or click the Blobs button on the Storage Type toolbar at top right. The left pane will list blob containers. Selecting a container will list its blobs in the right pane.



CONTAINER ACTIONS

The Container toolbar allows you to take actions on containers.

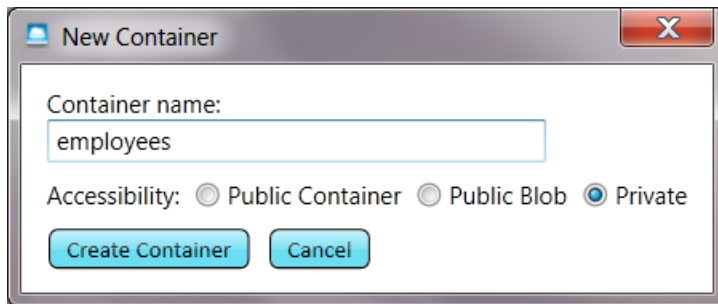


The container actions are:

- New Container
- Copy Container
- Rename Container
- Delete Container

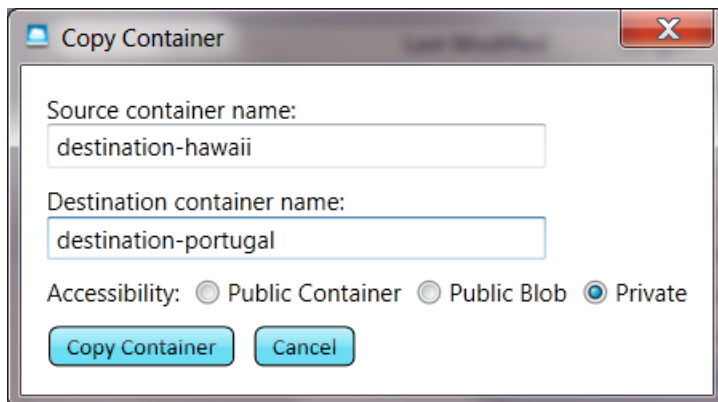
CREATING A NEW CONTAINER

To create a new container, click the New button in the Container toolbar. Enter a name for the container and select a level of access. Public container means the blobs are accessible as public Internet URLs as well as enumeration of the container itself. Public blob means the blobs are accessible as public Internet URLs. Private means no public Internet accessibility. Click Create Container to create a new, empty container.



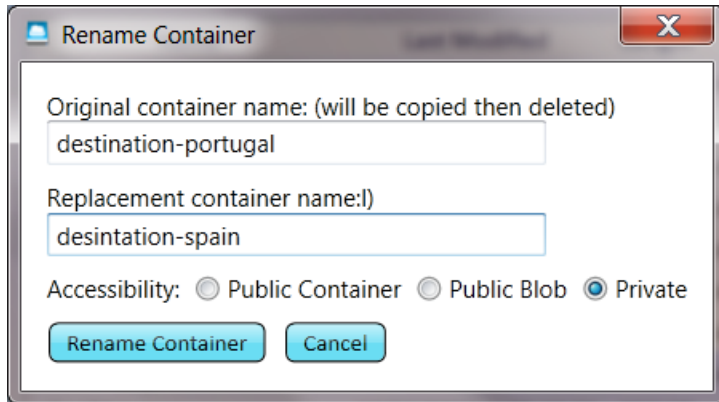
COPYING A CONTAINER

To copy the selected container, click the Copy button in the Container toolbar. Enter a destination container name and if desired change the level of access. Click Copy Container to create a new container and make a copy of all blobs in the source container in the new container.



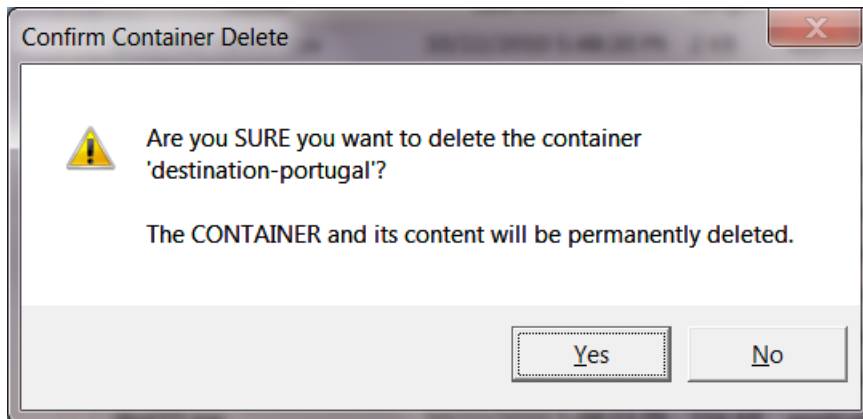
RENAMING A CONTAINER

To rename the selected container, click the Rename button in the Container toolbar. Enter a replacement container name and if desired change the level of access. Click Rename Container to copy the container and delete the original.



DELETING A CONTAINER

To delete the selected container, click the Delete button in the Container toolbar. If you confirm delete the container and all blobs it contains will be permanently deleted.

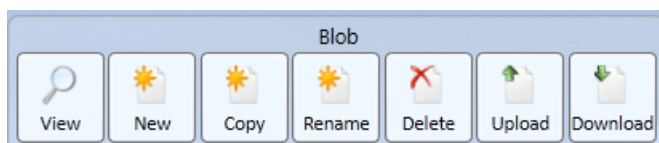


CONTAINER SECURITY

For container security actions, see *Container & Blob Security* in the Blob Actions section below.

BLOB ACTIONS

The Blob toolbar allows you to take actions on blobs.



The blob actions are:

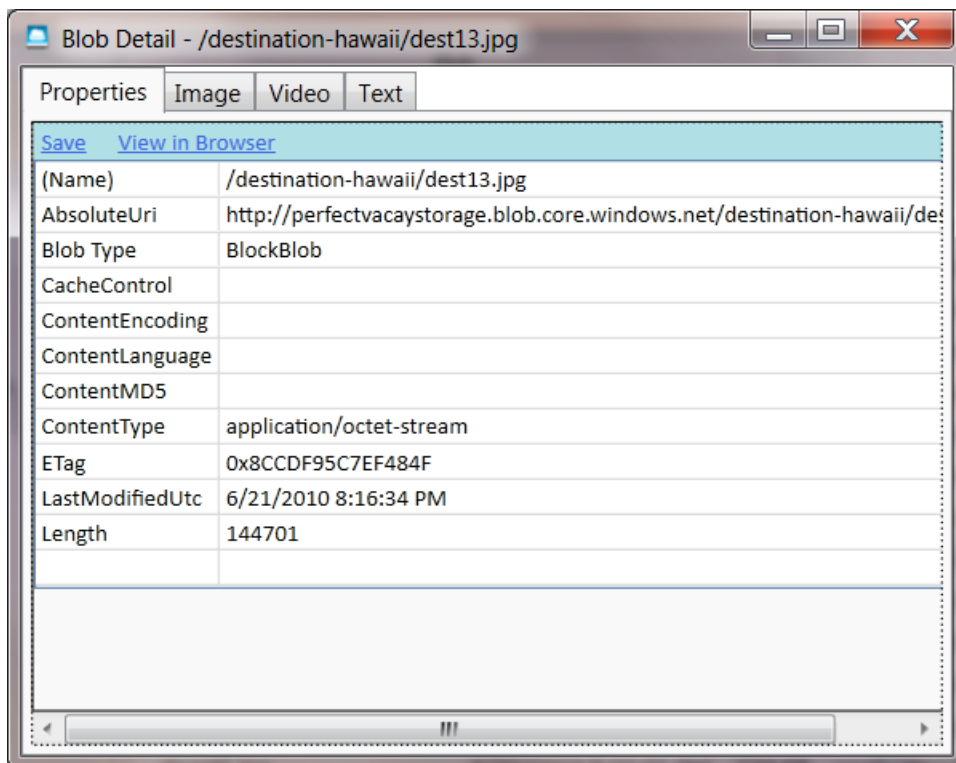
- View Blob
- New Blob
- Copy Blob

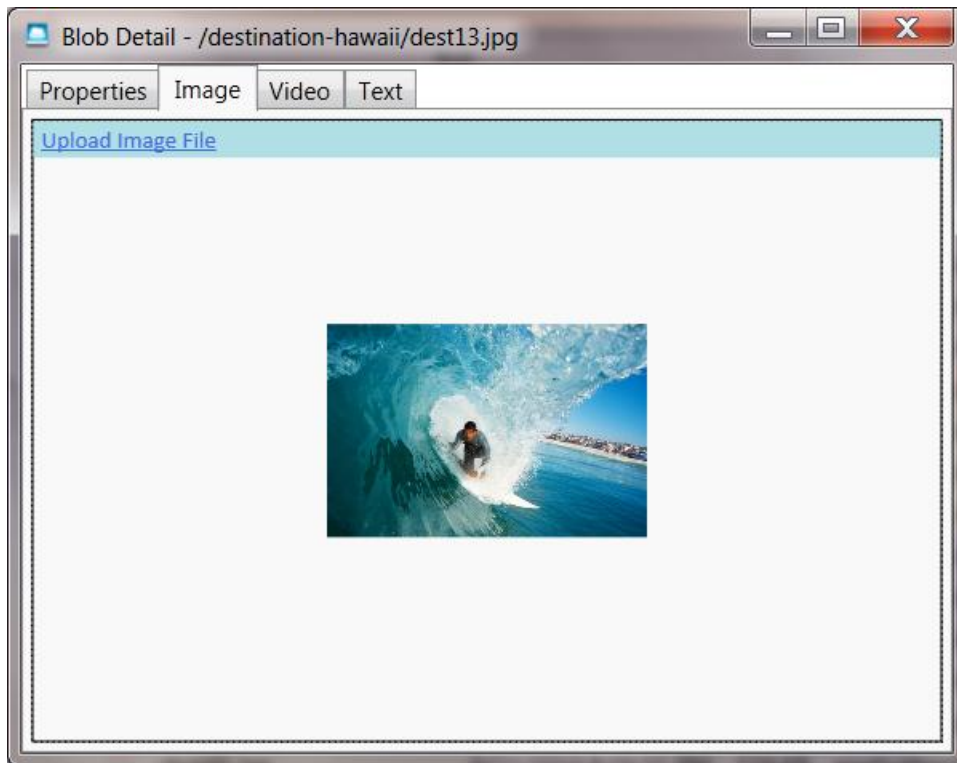
- Rename Blob
- Delete Blob
- Upload Blobs
- Download Blobs
- Container and Blob Security

VIEWING A BLOB

To view a blob, either double-click it, or select it and click the View button on the Blob toolbar. A blob detail dialog appears. The detail dialog has the following tabs:

- Properties – allows you to view properties. Some properties, such as ContentType, are modifiable.
- Image – displays the blob content as an image
- Video – displays blob content as a video
- Text – displays blob content as text, and allows the text to be edited and saved





Close the blob detail dialog when finished via the close box at top right.

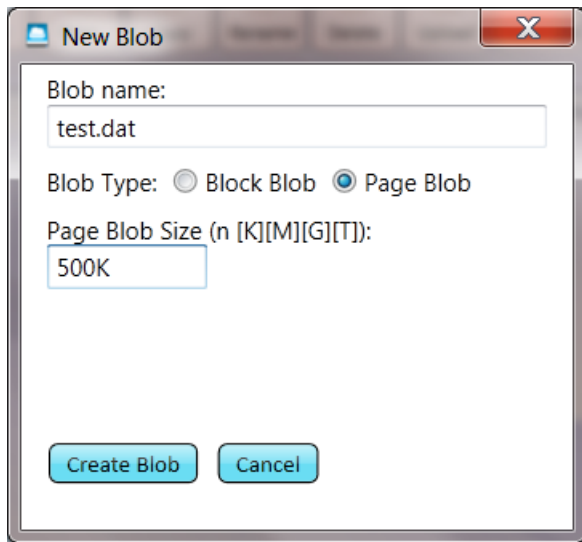
CREATING A NEW BLOB

To create a new blob, click the New button in the Blob toolbar. Enter a name for the blob and choose a blob type, Block Blob (sequential access) or Page Blob (random access, pre-allocated size).

For a block blob, you may specify initial text content for the blob if desired.



For a Page Blob, enter a size for the blob which must be a multiple of 512 bytes. You may use the suffixes K, M, G, or T in entering the size to indicate kilobytes, megabytes, gigabytes, or terabytes.

A screenshot of a 'New Blob' dialog box. The dialog has a title bar with a blue icon, the text 'New Blob', and a red close button. Inside, there is a text field for 'Blob name:' containing 'test.dat'. Below it, 'Blob Type:' has two radio buttons: 'Block Blob' (unselected) and 'Page Blob' (selected). Under 'Page Blob Size (n [K][M][G][T]):', there is a text field containing '500K'. At the bottom are two buttons: 'Create Blob' and 'Cancel'.

New Blob

Blob name:
test.dat

Blob Type: ☐ Block Blob ☒ Page Blob

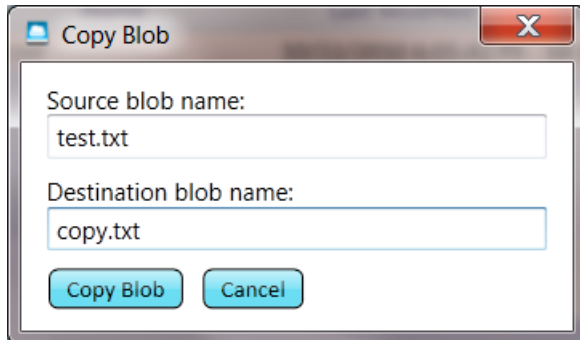
Page Blob Size (n [K][M][G][T]):
500K

Create Blob Cancel

Click Create Blob to create the blob. If successful, the new blob will now appear in the right pane.

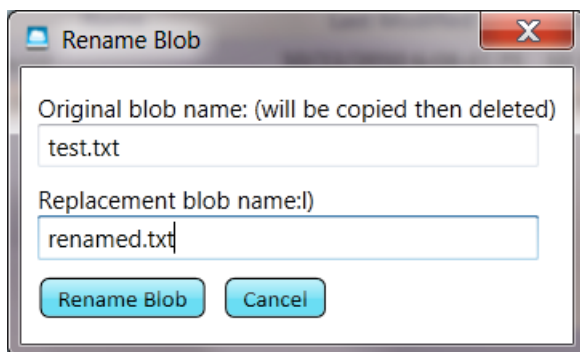
COPYING A BLOB

To copy the selected blob, click the Copy button in the Blob toolbar. Enter a destination blob name. Click Copy Blob to create a new blob with the same content as the original.



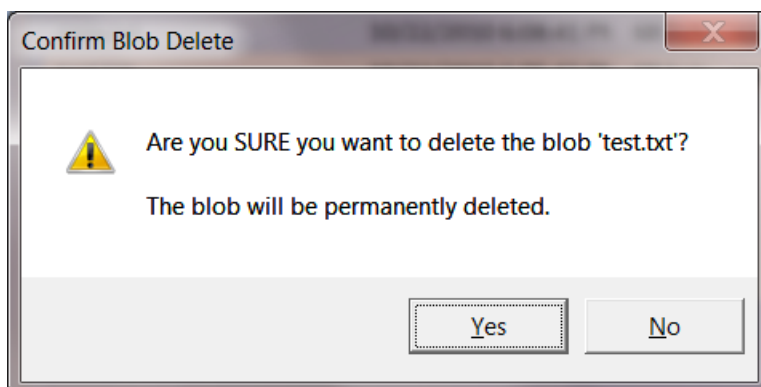
RENAMING A BLOB

To rename the selected blob, click the Rename button in the Blob toolbar. Enter a replacement blob name. Click Rename Blob to make copy of the blob and then delete the original.



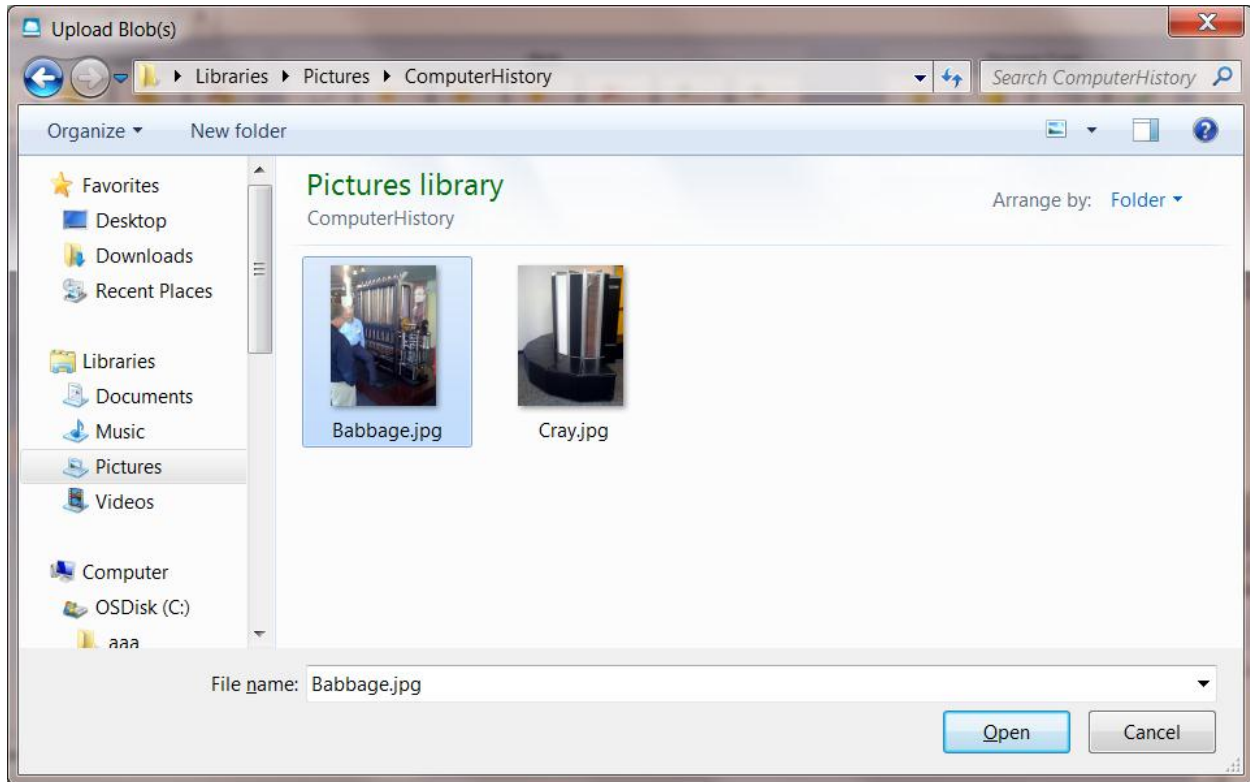
DELETING A BLOB

To delete one or more blobs, select the blob(s) to be deleted then click the Delete button in the Blob toolbar. If you confirm the delete, the selected blobs will be permanently deleted.



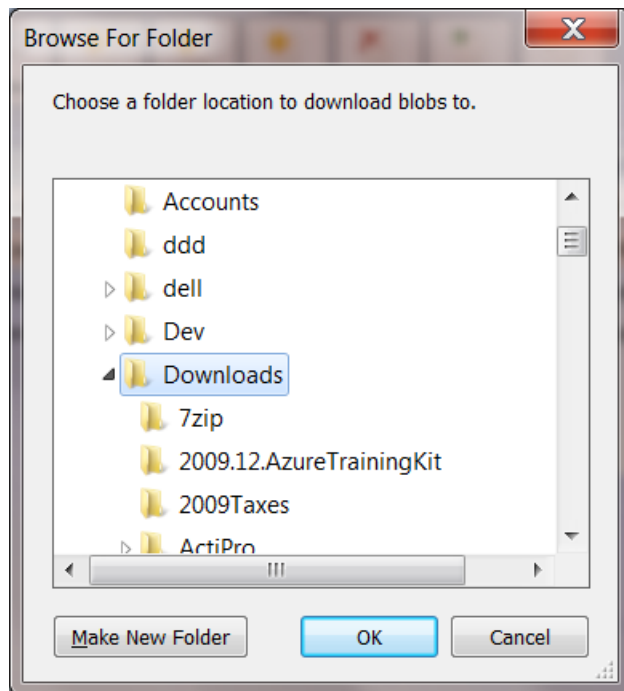
UPLOADING BLOBS

To upload one or more local disk files to blob storage, click the Upload button in the Blob toolbar. Browse to the folder you want to upload from and select one or more files. Click Open to upload. The files will be uploaded to blob storage and will appear in the right pane once uploading is complete.



DOWNLOADING BLOBS

To download one or more blobs to local disk files, select the blob(s) to download and click the Download button on the Blob toolbar. A folder browse dialog will open. Browse to the desired folder for download and click Ok to start the download.



CONTAINER & BLOB SECURITY

To view or modify security for the selected container or blob, select a container or a blob and click the Security button on the Blob toolbar. A security dialog appears with 3 tabs: *Container Access*, *Shared Access Signatures*, and *Shared Access Policies*.

Container Access

Blob containers can have 3 access levels: private, public blob, and public container.

- Private: the container and its blobs are only accessible with a storage account key.
- Public blob: with anonymous access (no storage key provided), blobs can be accessed as public Internet URLs but the container contents cannot be listed.
- Public container: with anonymous access (no storage key provided), blobs can be accessed as public Internet URLs and the container contents can be listed.

A container's access level is set when a container is newly created but it is changeable. To change a container's access level, go to the Container Access tab, select the desired access level, and click the *Update Access Level* button.



Shared Access Signatures

Shared access signature are special editions of a container or blob URL that grant a custom set of permissions. Query parameters on the URL grant specific permissions that override the default container permissions. A shared access signature can specify permissible actions (read, write, delete, list) and a time window of validity.

Shared Access Signatures come in two flavors, ad-hoc and policy-based:

- An ad-hoc signature is generated once and once issues the permissions it grants cannot be revoked or altered. The maximum validity time for an ad-hoc signature is 60 minutes.
- A policy-based signature is based on a named container policy that has been saved which specifies permissible actions and a time window (which may exceed 60 minutes). If policy can be altered or deleted to modify the permissions and validity period, even after the URL has been distributed.

To generate a Shared Access Signature, go to the Shared Access Signature tab. Select the signature type desired (ad-hoc or policy-based), specify your criteria, and click Generate Signature. The signature appears on the dialog and two new buttons are enabled: *Copy to Clipboard* and *Test*. Click *Copy to Clipboard* to copy the generated URL to your clipboard. Click *Test* to open the generated URL in a browser.

Blob & Container Security

Container name: samplecontainer1

Blob name: index.htm
(for a container signature, do not specify a blob name)

Policy: --- no policy selected ---
(for an ad-hoc signature, do not select a policy)

Permissions: ☒ Read ☐ Write ☐ Delete ☒ List

Start / Expiry Time (UTC): 4/30/2011 10:29:04 PM 4/30/2011 11:29:04 PM

Generate Signature

Close

Note: Generated signatures are not saved anywhere—you must copy and save them yourself before closing the dialog.

Shared Access Policies

The *Shared Access Policies* tab allows to view, add, delete, and modify your container's shared access policies.

- To add a new policy, click the New button and fill out the added grid row.
- To delete a policy, select the grid row and click the Delete button.
- To delete all policies, click the Clear button.
- To modify a policy, edit its fields.

None of the above changes are applied until you click the Save Policies button.

Blob & Container Security

X

Container Access

Shared Access Signatures

Shared Access Policies

New

Delete

Clear

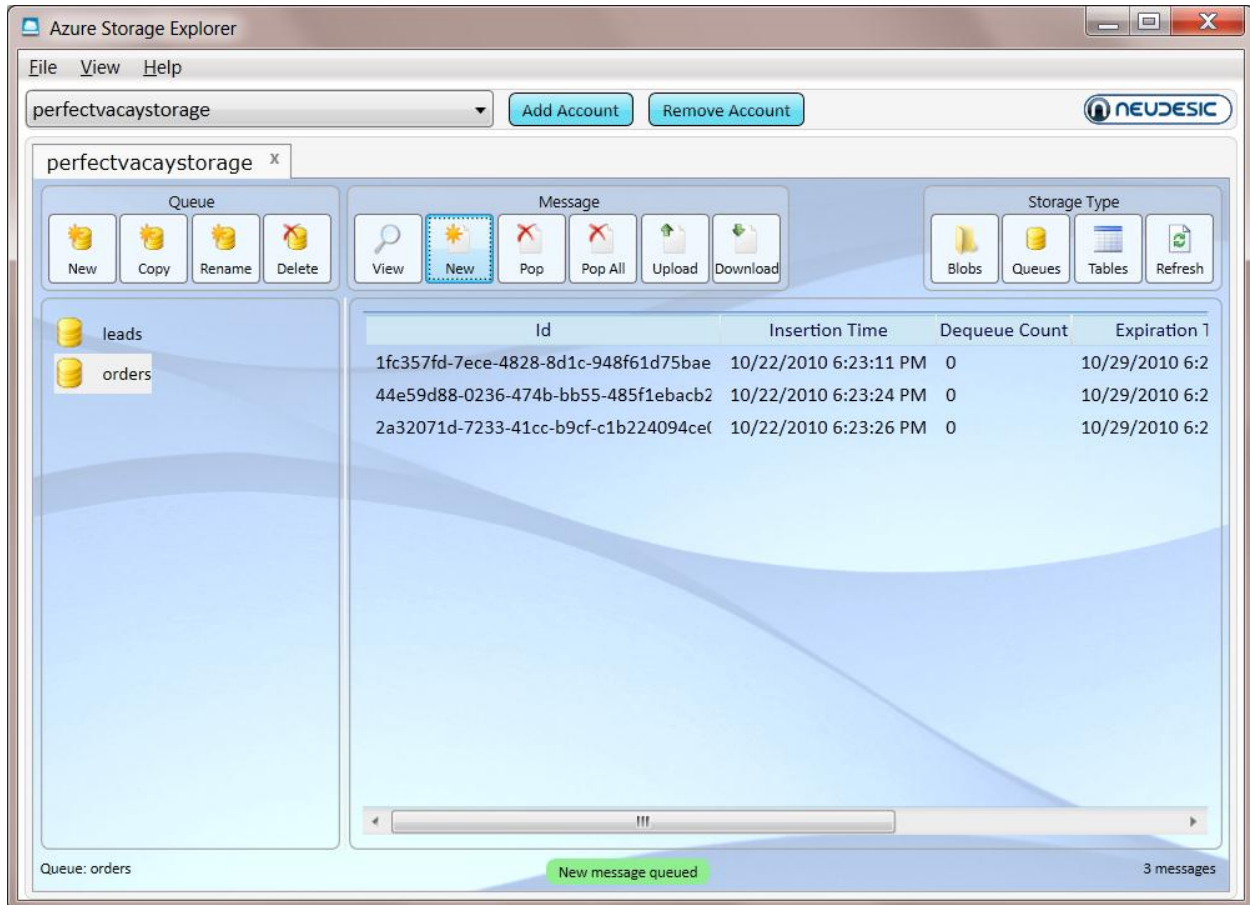
Save Policies

Policy Name	Read	Write	Delete	List	Start Time	Expiry Time
Policy1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4/26/2011 5:12:10 PM	4/26/2011 6:12:10 PM
Policy2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/1/2010 9:38:05 AM	12/31/2012 9:38:05 AM
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Close

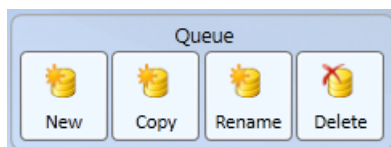
WORKING WITH QUEUES

To view queues, open a storage account tab and click the Queues button on the Storage Type toolbar at top right. The left pane will list queues. Selecting a queue will list its messages in the right pane. The messages come from peeking, so not all messages in the queue will necessarily be displayed but the topmost ones will be shown.



QUEUE ACTIONS

The Queue toolbar allows you to take actions on queues.

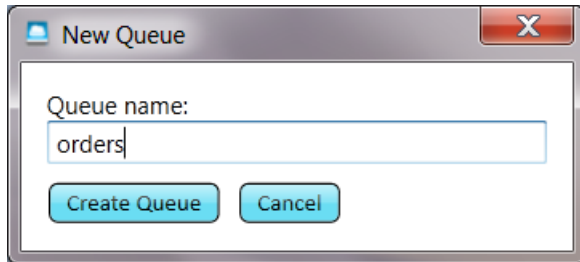


The queue actions are:

- New Queue
- Copy Queue
- Rename Queue
- Delete Queue

CREATING A NEW QUEUE

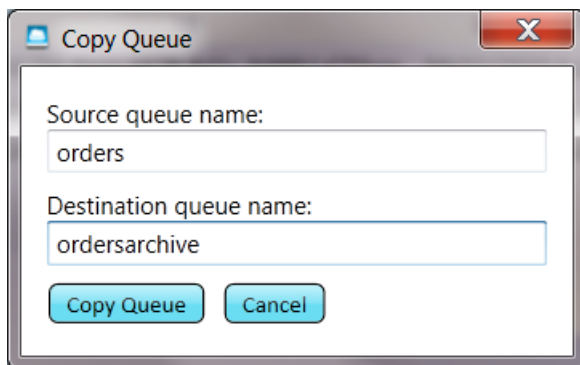
To create a new queue, click the New button in the Queue toolbar. Enter a name for the queue which must be lower-case. Click Create Queue to create a new, empty queue.



A dialog box titled "New Queue" with a close button (X) in the top right corner. It contains a text input field labeled "Queue name:" with the text "orders" entered. Below the input field are two buttons: "Create Queue" and "Cancel".

COPYING A QUEUE

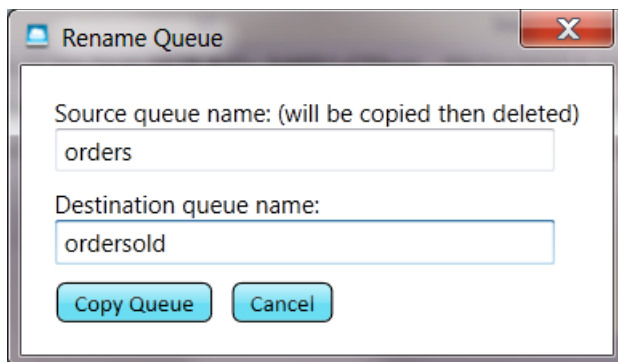
To copy the selected queue, click the Copy button in the Queue toolbar. Enter a destination queue. Click Copy Queue to create a new queue and make a copy of all messages in the source queue in the new queue.



A dialog box titled "Copy Queue" with a close button (X) in the top right corner. It contains two text input fields. The first is labeled "Source queue name:" and contains the text "orders". The second is labeled "Destination queue name:" and contains the text "ordersarchive". Below the input fields are two buttons: "Copy Queue" and "Cancel".

RENAMING A QUEUE

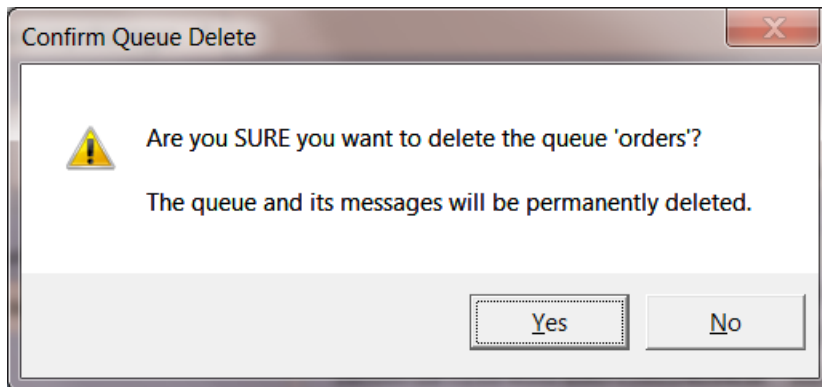
To rename the selected queue, click the Rename button in the Queue toolbar. Enter a replacement queue name. Click Rename Queue to copy the queue and delete the original.



A dialog box titled "Rename Queue" with a close button (X) in the top right corner. It contains two text input fields. The first is labeled "Source queue name: (will be copied then deleted)" and contains the text "orders". The second is labeled "Destination queue name:" and contains the text "ordersold". Below the input fields are two buttons: "Copy Queue" and "Cancel".

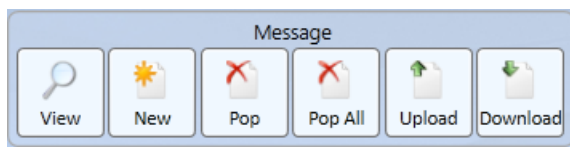
DELETING A QUEUE

To delete the selected queue, click the Delete button in the Queue toolbar. If you confirm delete the queue and all messages it contains will be permanently deleted.



MESSAGE ACTIONS

The Message toolbar allows you to take actions on queue messages.



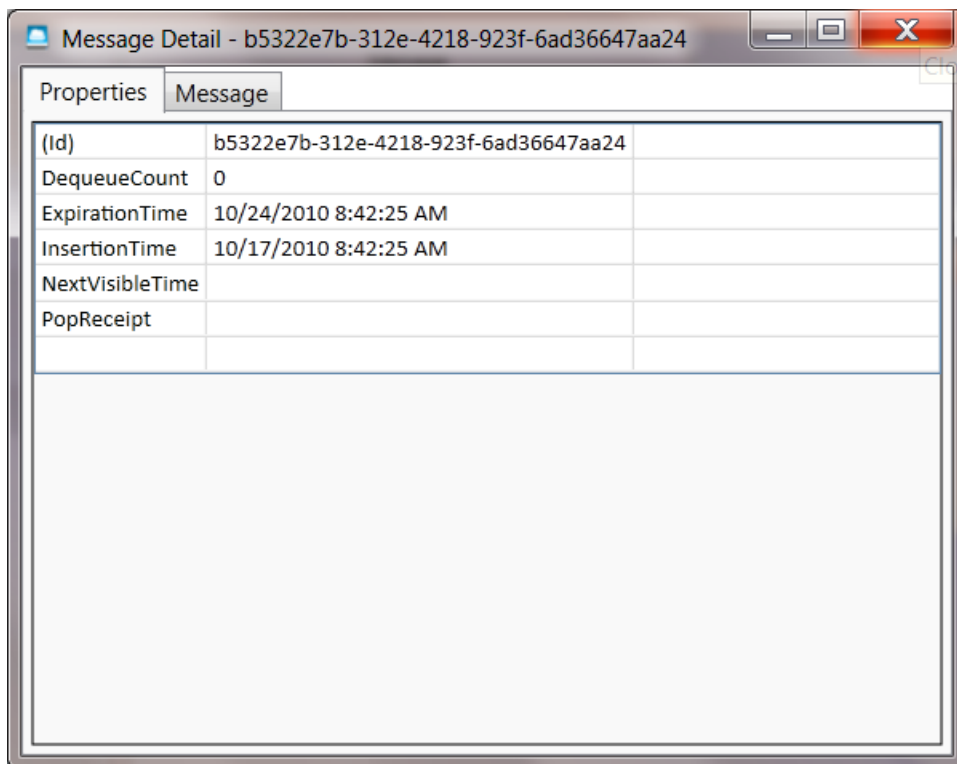
The message actions are:

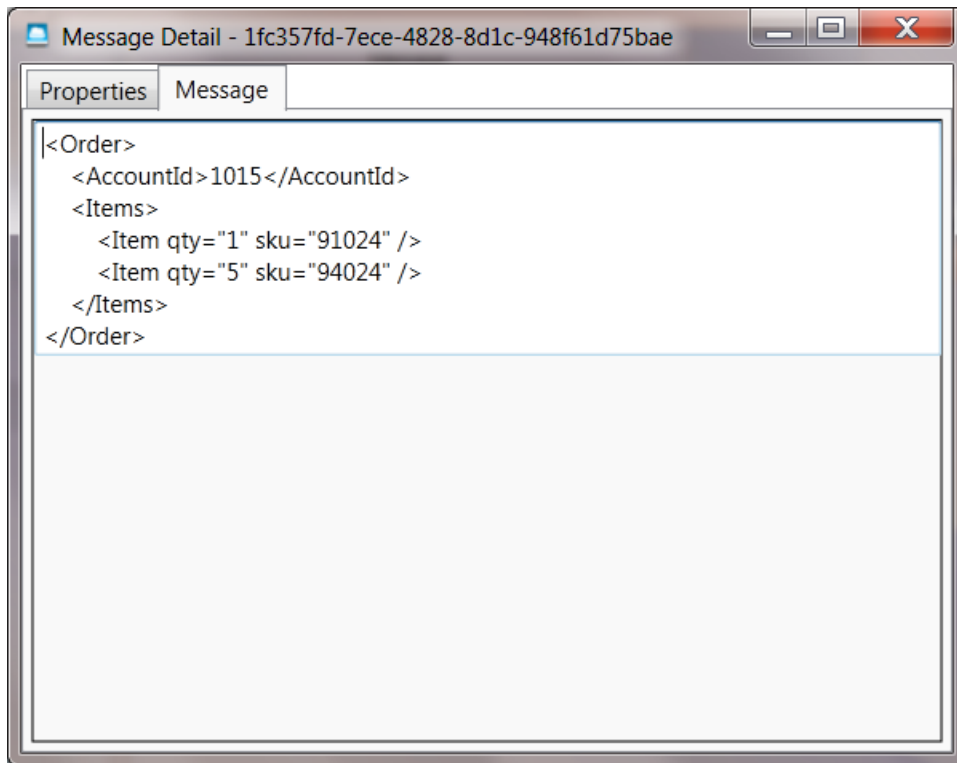
- View Message
- New Message
- Pop Message
- Pop All Messages
- Upload Messages
- Download Messages

VIEWING A MESSAGE

To view a message, either double-click it, or select it and click the View button on the Message toolbar. A message detail dialog appears. The detail dialog has the following tabs:

- Properties – allows you to view properties. Some of these properties, such as ContentType, are modifiable.
- Message – displays message content as text

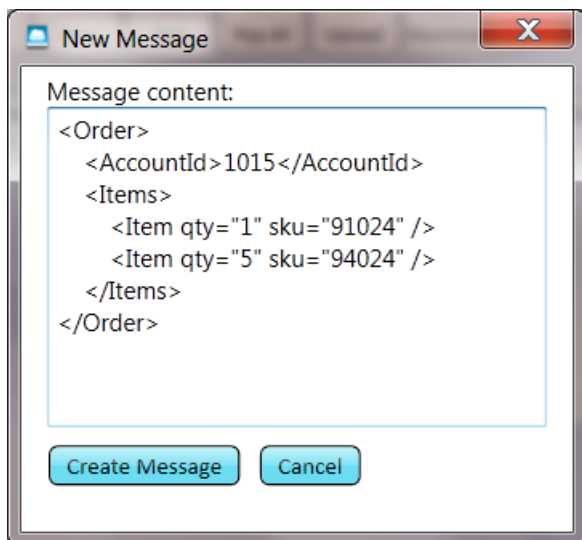




Close the message detail dialog when finished via the close box at top right.

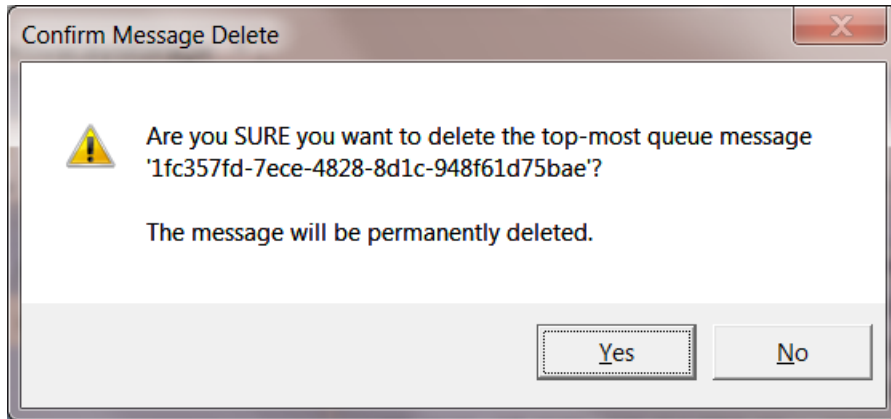
CREATING A NEW MESSAGE

To create a new message, click the New button in the Message toolbar. Enter content for the message. Click Create Message to create the message, which will appear in the right pane once created.



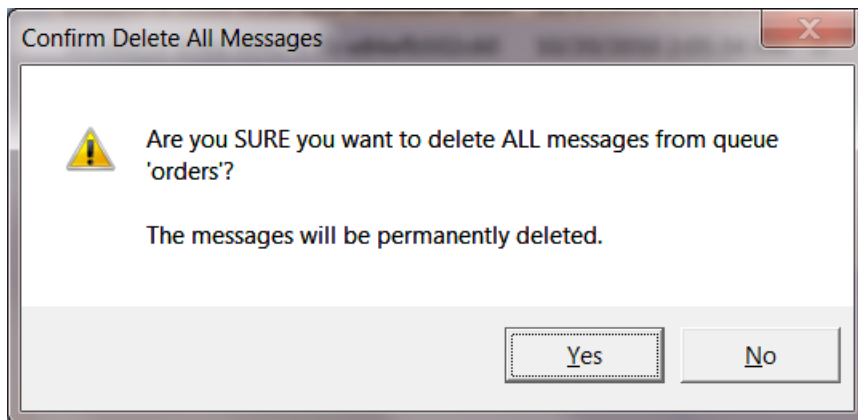
POPPING A MESSAGE

To pop the top message off of the queue (deleting it), click the Pop button in the Message toolbar. If you confirm delete the top message will be deleted from the queue.



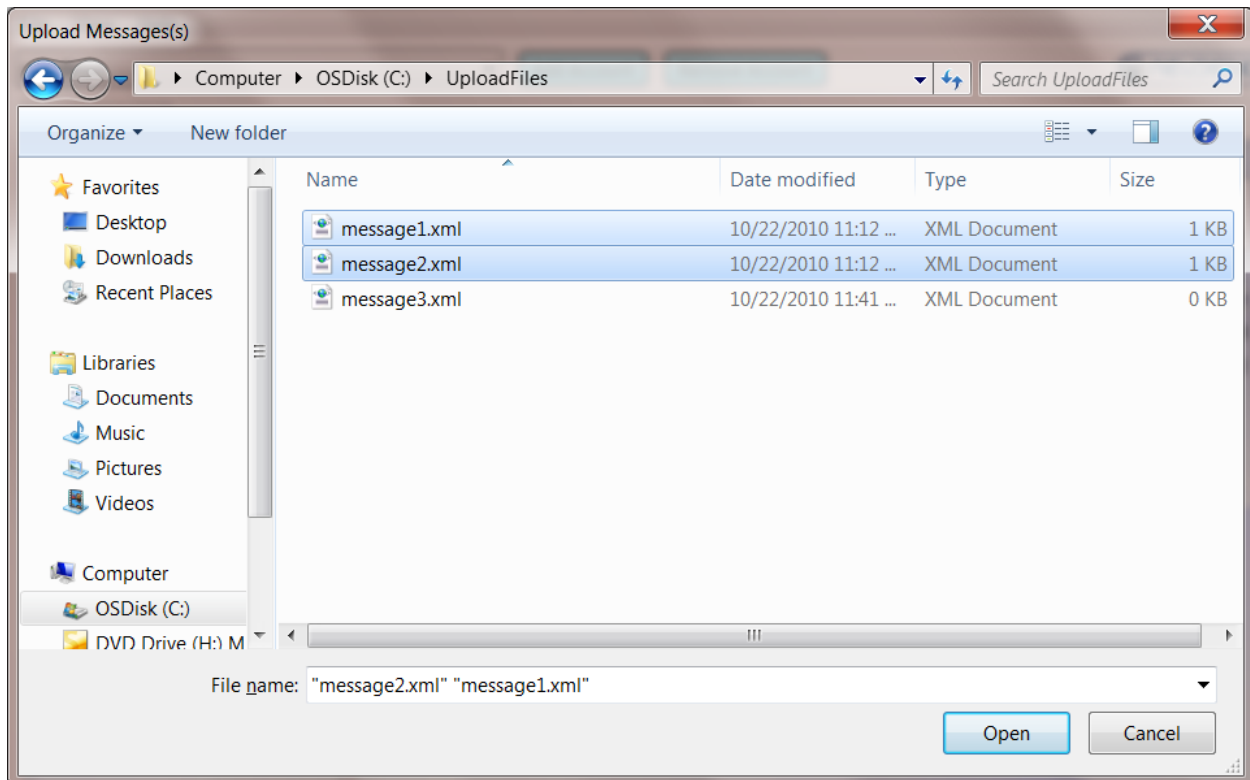
POPPING ALL MESSAGES

To pop all messages (emptying the queue), click the Pop All button in the Message toolbar. If you confirm delete all messages will be deleted from the queue.



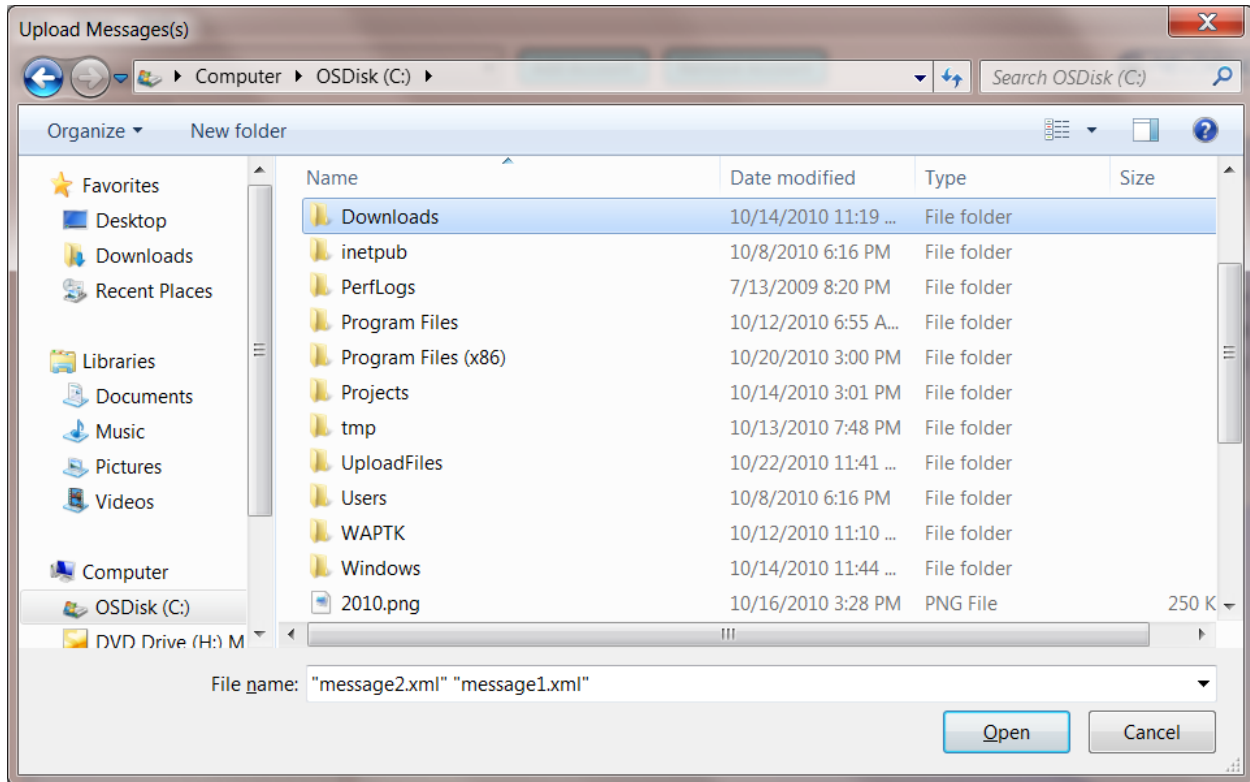
UPLOADING MESSAGES

To upload one or more local disk files as queue messages, click the Upload button in the Message toolbar. Browse to the folder you want to upload from and select one or more files. Click Open to upload. The files will be uploaded to queue storage and will appear in the right pane once uploading is complete.



DOWNLOADING MESSAGES

To download one or more messages to local disk files, select the message(s) to download and click the Download button on the Message toolbar. A folder browse dialog will open. Browse to the desired folder for download and click Ok to start the download.



WORKING WITH TABLES

To view tables, open a storage account tab and click the Tables button on the Storage Type toolbar at top right. The left pane will list tables. Selecting a table will allow you to query entities which will be displayed in the right pane.

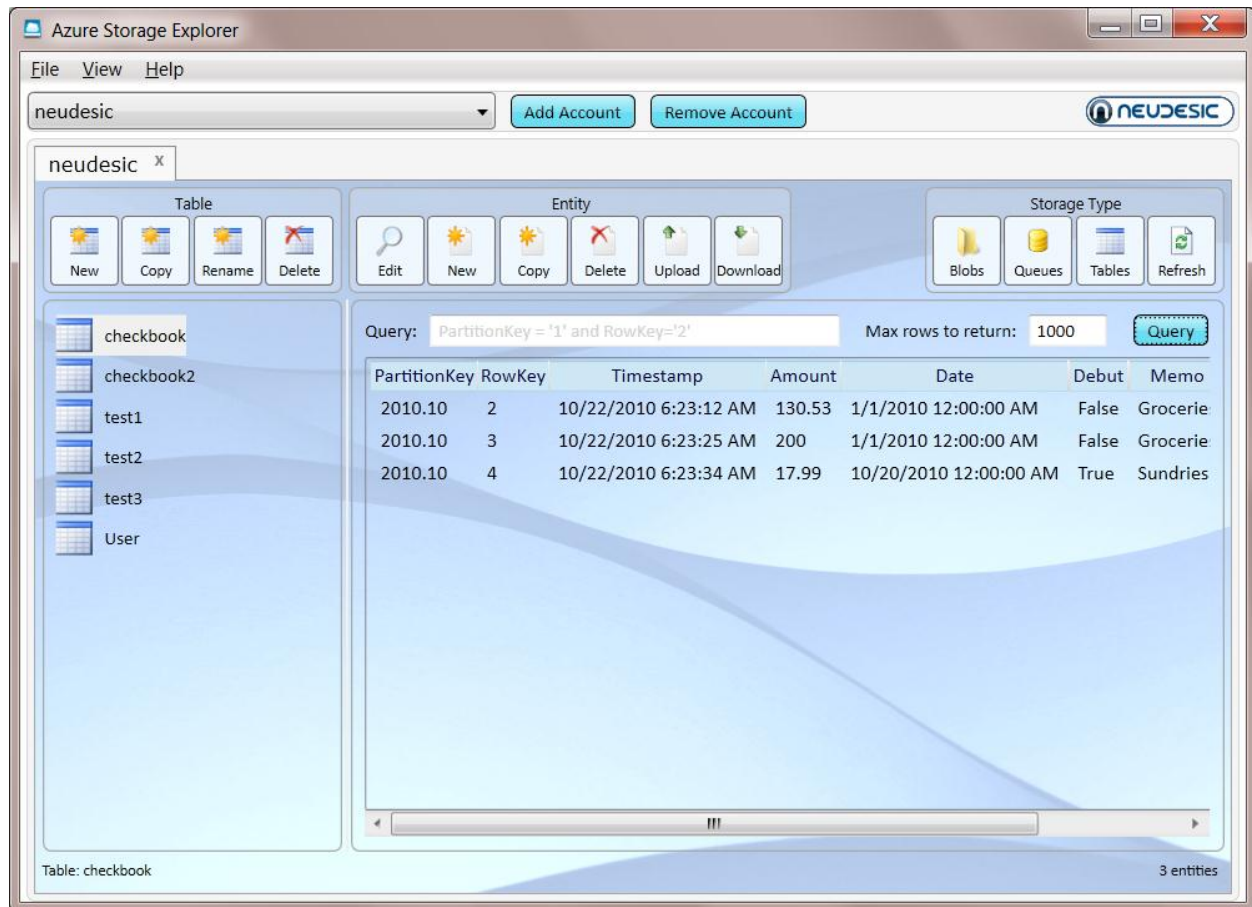
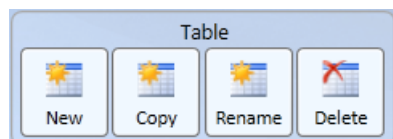


TABLE ACTIONS

The Table toolbar allows you to take actions on tables.

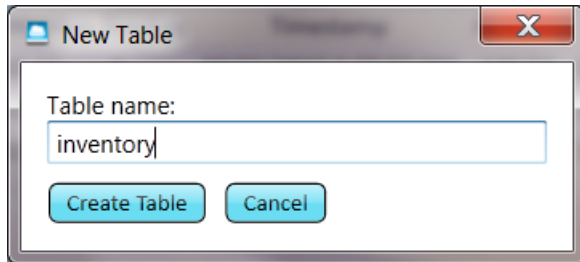


The table actions are:

- New Table
- Copy Table
- Rename Table
- Delete Table

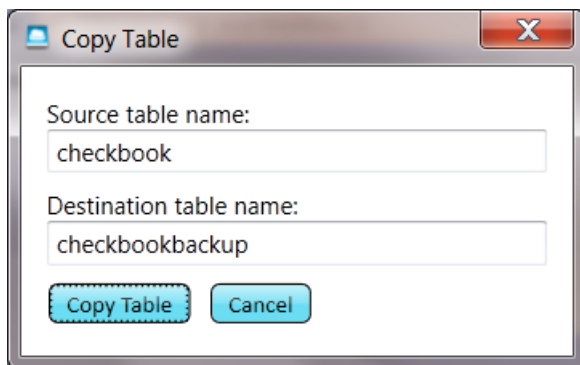
CREATING A NEW TABLE

To create a new table, click the New button in the Table toolbar. Enter a name for the table. Click Create Table to create a new, empty table.



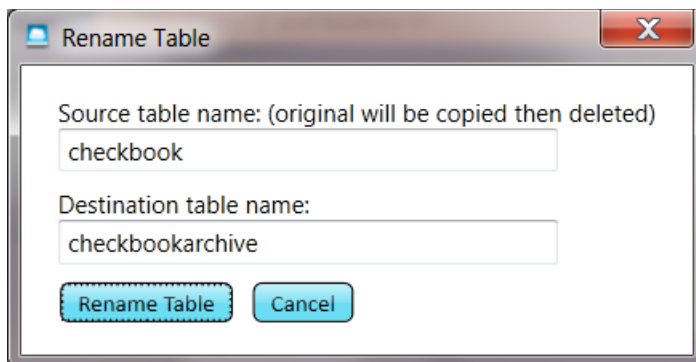
COPYING A TABLE

To copy the selected table, click the Copy button in the Table toolbar. Enter a destination table name. Click Copy Table to create a new table and make a copy of all entities in the source table in the new table.



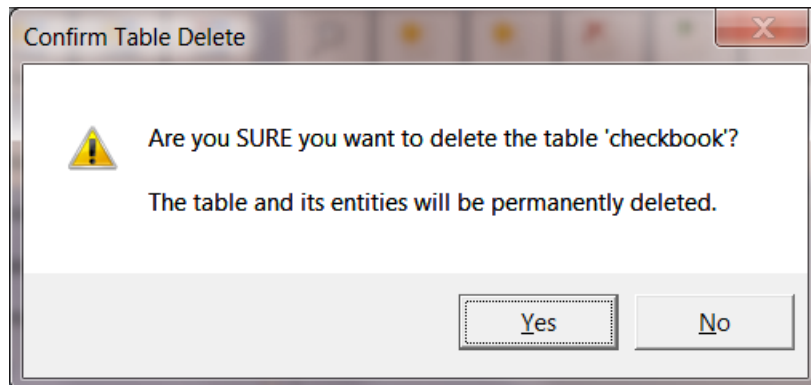
RENAMING A TABLE

To rename the selected table, click the Rename button in the Table toolbar. Enter a replacement table name. Click Rename Table to copy the table and delete the original.



DELETING A TABLE

To delete the selected table, click the Delete button in the Table toolbar. If you confirm delete the table and all entities it contains will be permanently deleted.



QUERYING ENTITIES

The right pane allows you to enter a LINQ query and query for entities. A blank query will query for all entities. Click the Query button to perform the query and list matching entities. The *Max rows to return* field allows you to control the number of entities returned.

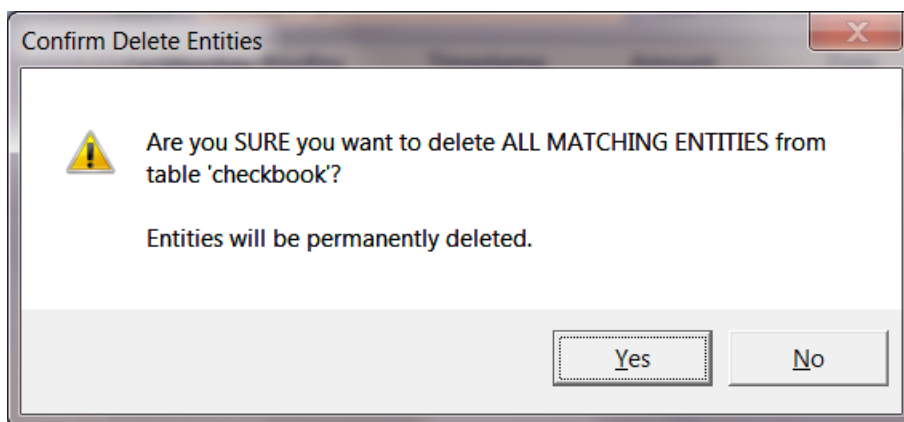


The interface shows a query input field with the text "RowKey = '3'", a "Max rows to return" field set to "1000", and two buttons: "Query" and "Delete". Below these is a table with the following data:

PartitionKey	RowKey	Timestamp	Amount	Date	Debit	Memo
2010.10	3	10/22/2010 6:23:25 AM	200	1/1/2010 12:00:00 AM	False	Groceries

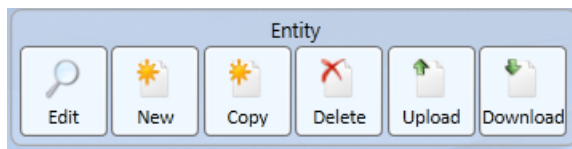
DELETING ENTITIES

To delete matching entities rather than querying for them, click the Delete button to the right of the Query button. All entities matching the query will be permanently deleted.



ENTITY ACTIONS

The Entity toolbar allows you to take actions on table entities.



The entity actions are:

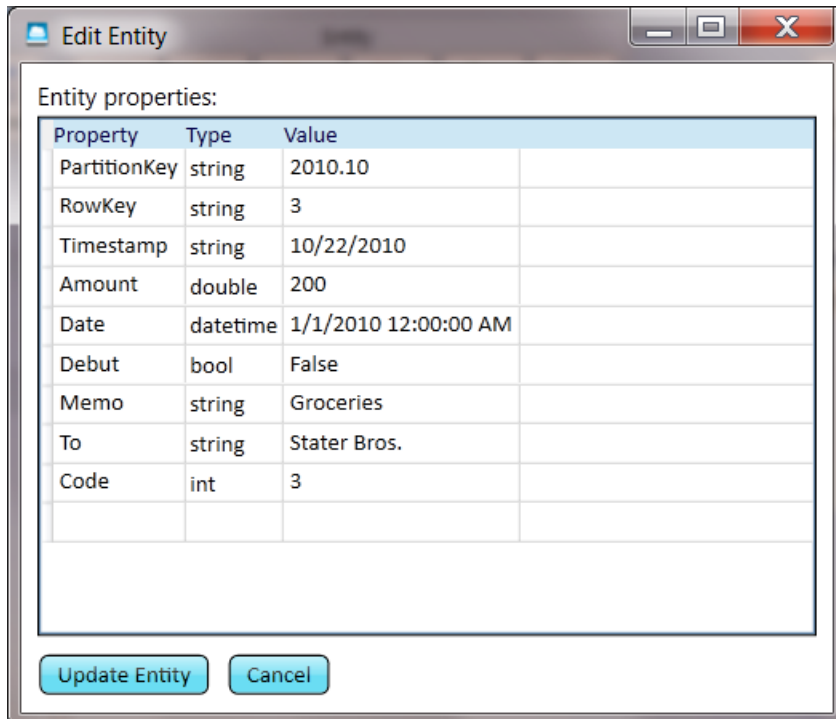
- Edit Entity
- New Entity
- Copy Entity
- Delete Entity
- Upload Entities
- Download Entities

EDITING AN ENTITY

To view or edit an entity, either double-click it, or select it and click the Edit button on the Entity toolbar. An entity detail dialog appears showing the entity's properties.

The entity properties (name, data type, value) may be edited, and you may add or remove properties. To enter a null value, enter "null".

Clicking Update Entity will update the record. RowKey is a required field. If the update changes the PartitionKey or RowKey, an add record / delete operation will be performed rather than an update record operation.



The screenshot shows a window titled "Edit Entity" with a standard Windows interface (minimize, maximize, close buttons). Inside the window, there is a section labeled "Entity properties:" followed by a table. The table has three columns: "Property", "Type", and "Value". Below the table, there are two buttons: "Update Entity" and "Cancel".

Property	Type	Value
PartitionKey	string	2010.10
RowKey	string	3
Timestamp	string	10/22/2010
Amount	double	200
Date	datetime	1/1/2010 12:00:00 AM
Debut	bool	False
Memo	string	Groceries
To	string	Stater Bros.
Code	int	3

CREATING A NEW ENTITY

To create a new entity, click the New button in the Entity toolbar. Schema (columns names/types) detected from the last query will be pre-loaded but you are free to make changes as desired. Edit the properties as described above under *Editing an Entity*. RowKey is a required field. Click Create Entity to create the new entity. The last query will refresh.

New Entity

Entity properties:

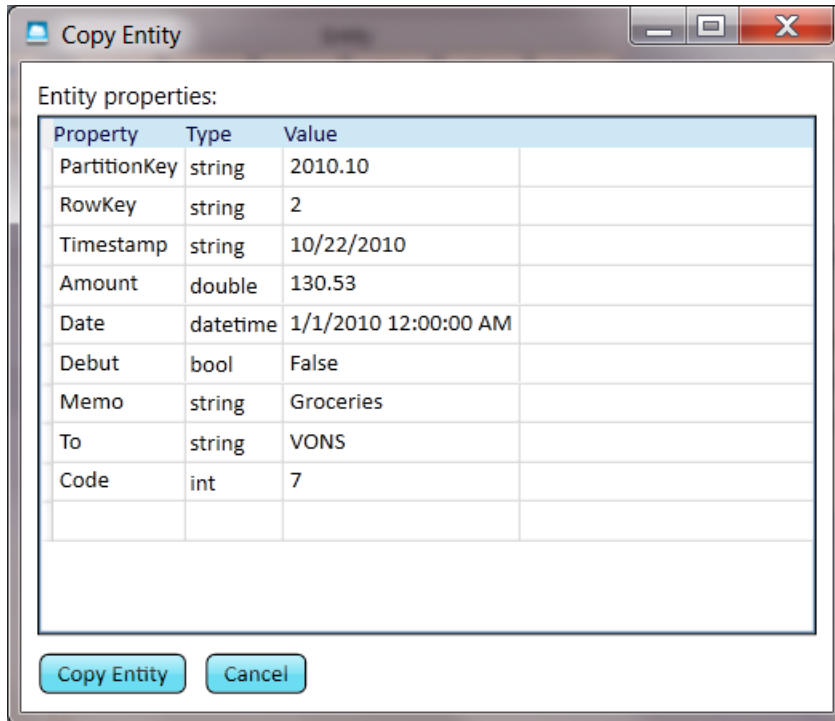
Property	Type	Value
PartitionKey	string	
RowKey	string	
Timestamp	string	1/1/0001
Amount	double	null
Date	datetime	null
Debut	bool	null
Memo	string	null
To	string	null
Code	int	null

Create Entity

Cancel

COPYING AN ENTITY

To copy the selected entity, click the Copy button in the Entity toolbar. Make desired alterations to the properties. Note you must change the PartitionKey and/or RowKey. Click Copy Entity to create a new entity.



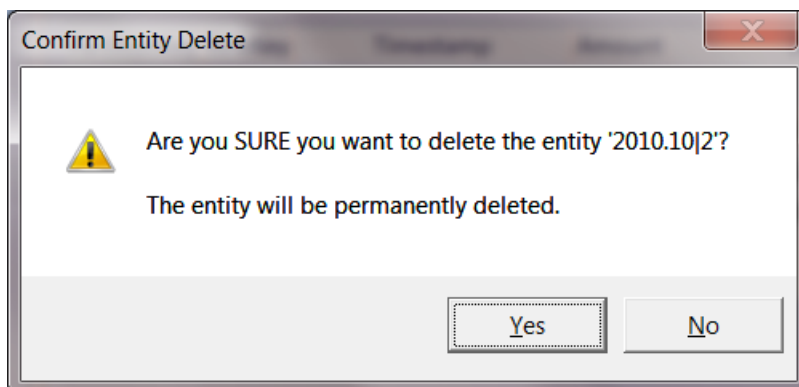
The 'Copy Entity' dialog box contains a table with the following data:

Property	Type	Value
PartitionKey	string	2010.10
RowKey	string	2
Timestamp	string	10/22/2010
Amount	double	130.53
Date	datetime	1/1/2010 12:00:00 AM
Debut	bool	False
Memo	string	Groceries
To	string	VONS
Code	int	7

At the bottom of the dialog are two buttons: 'Copy Entity' and 'Cancel'.

DELETING AN ENTITY

To delete one or more entities, select the entities(s) to be deleted then click the Delete button in the Entity toolbar. If you confirm the delete, the selected entities will be permanently deleted.



The 'Confirm Entity Delete' dialog box displays a warning icon and the following text:

Are you SURE you want to delete the entity '2010.10|2'?

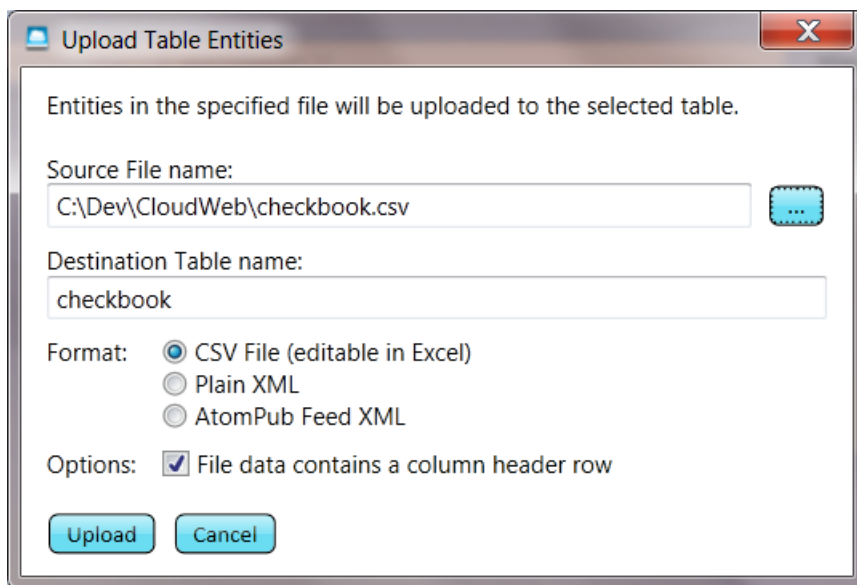
The entity will be permanently deleted.

At the bottom are two buttons: 'Yes' and 'No'.

UPLOADING ENTITIES

Table entities can be uploaded from a local file in one of several available formats. To upload entities from disk, select the table to upload to and click the Upload button on the Entities toolbar. In the Upload Dialog that appears, specify a format, options, and an input file. Click Upload to upload or Cancel to abort.

- **Table name.** The table name to export.
- **Destination file name.** The file to save to. Click the browse button to select and output folder and file.
- **Format.** The format to export to:
 - Comma-Separated Values (CSV) file, which can be edited with Excel
 - Plain XML file
 - AtomPub XML file
- **Options.** Import options:
 - *File data contains a column header row.* Applies to CSV files only. If checked, the first row of imported data is expected to be a list of column names. Example:
`PartitionKey,RowKey,TimeStamp,CustId,Company,StartDate,IsActive`
Column names may optionally specify a type as well. Example:
`PartitionKey,RowKey,TimeStamp,CustId:int,Company,StartDate:datetime,IsActive:bool`

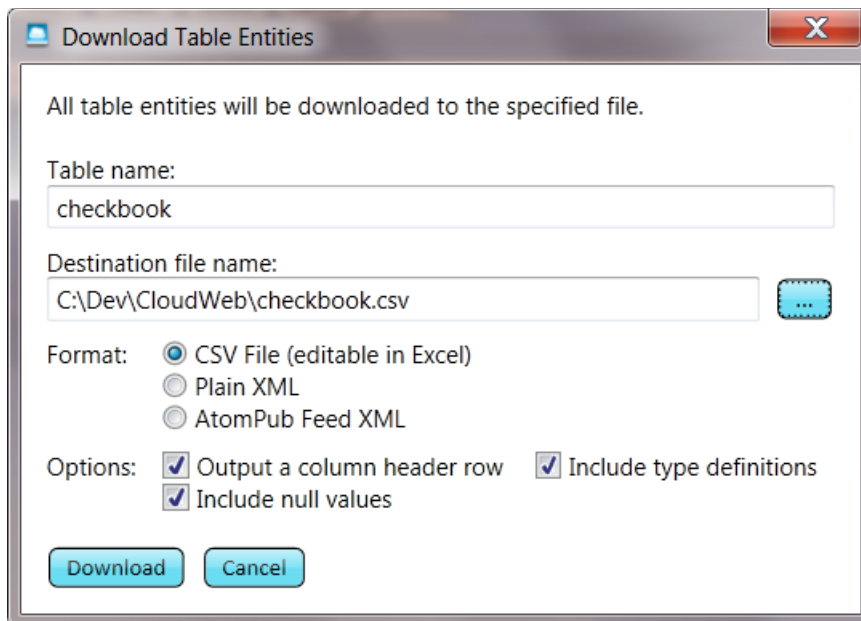


Once you click Upload, the upload will proceed in the background. When it is completed the number of successful and failed entity imports will be displayed in the bottom status area.

DOWNLOADING ENTITIES

A table collection of entities can be downloaded to a local file in one of several available formats. To download one or more entities to local disk, select the table to download and click the Download button on the Entities toolbar. In the Download Dialog that appears, specify a format, options, and an output file. Click Download to download or Cancel to abort.

- *Table name.* The table name to export.
- *Destination file name.* The file to save to. Click the browse button to select an output folder and file.
- *Format.* The format to export to:
 - Comma-Separated Values (CSV) file, which can be edited with Excel
 - Plain XML file
 - AtomPub XML file
- *Options.* Export options:
 - *Output a column header row.* Applies to CSV files only. If checked, the first row of exported data will list column names. Example:
`PartitionKey,RowKey,TimeStamp,CustId,Company,StartDate,IsActive`
 - *Include type definitions.* Applies to CSV files only. If checked, the header row of column names will also include column type information. Example:
`PartitionKey,RowKey,TimeStamp,CustId:int,Company,StartDate:datetime,IsActive:bool`
 - *Include null values.* If checked, null values will be included in the output and marked to as null values. For a CSV file the word “null” is output to indicate a null. For XML files a null attribute is rendered. These values are translated back to null property values if the file is subsequently uploaded back into table storage.



Once you click Download, the download will proceed in the background. When it is completed a completion status will be displayed in the bottom status area.