Quest

Metalogix® StoragePoint 5.8

EMC Centera Adapter Guide

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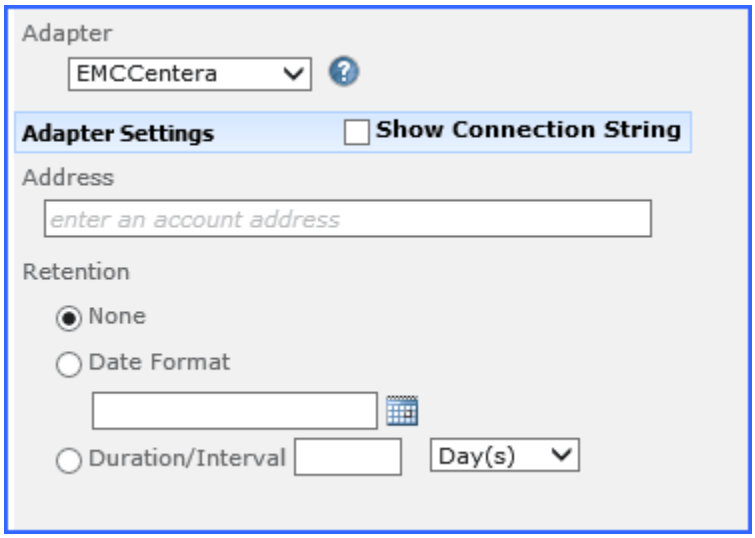
Centera Adapter Configuration

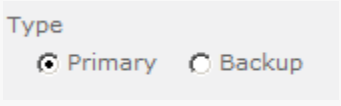
This section will provide you details on how to configure a storage endpoint's connection string to utilize the Centera Adapter. Please refer to the StoragePoint Reference Guide for information on managing Storage Endpoints.

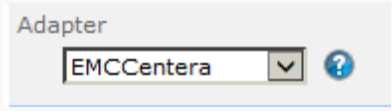
On the Application Management page, click *Storage and Backup Endpoints*.

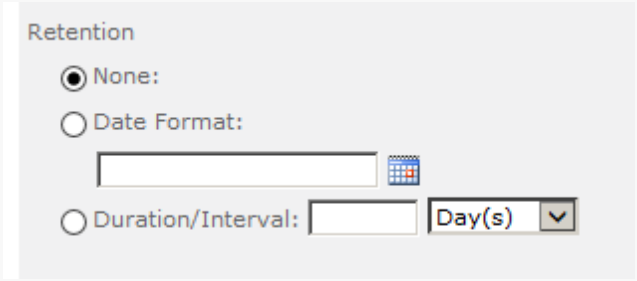
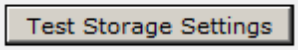
Click *Create New Endpoint* or click the name of an existing storage endpoint that you want to edit.

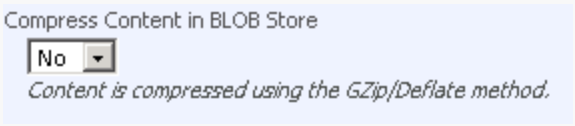
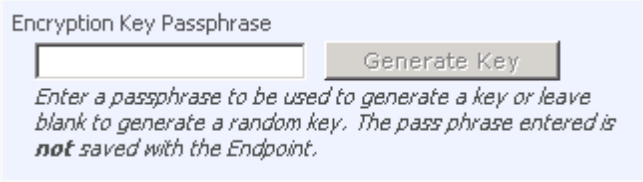
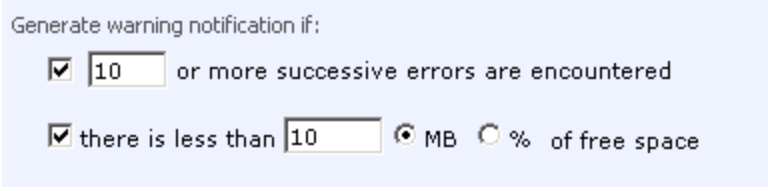


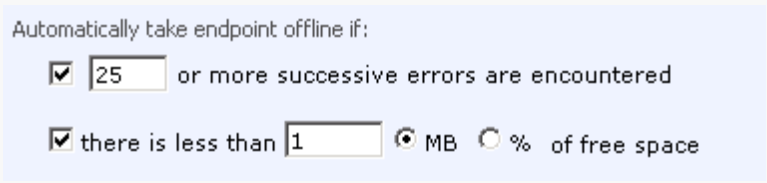
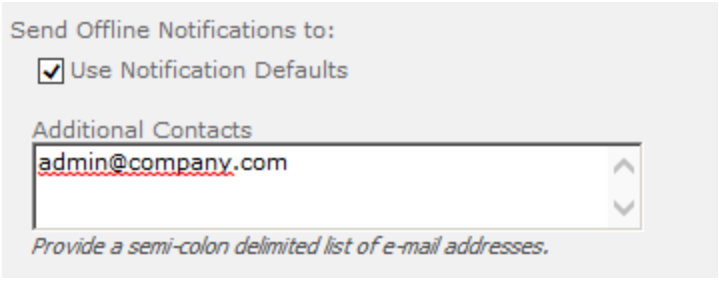
Centera Adapter Connection String Parameters

Setting	Value/Options
Name	Enter the unique name of the Storage or Backup Endpoint.
Type  See Backup Services Settings in the Reference Guide for more information on how Backup Endpoints are used.	*Primary* – this endpoint will be available for externalization when creating storage profiles. *Backup* – this endpoint will be in the Backup Services dropdown on the profile page.

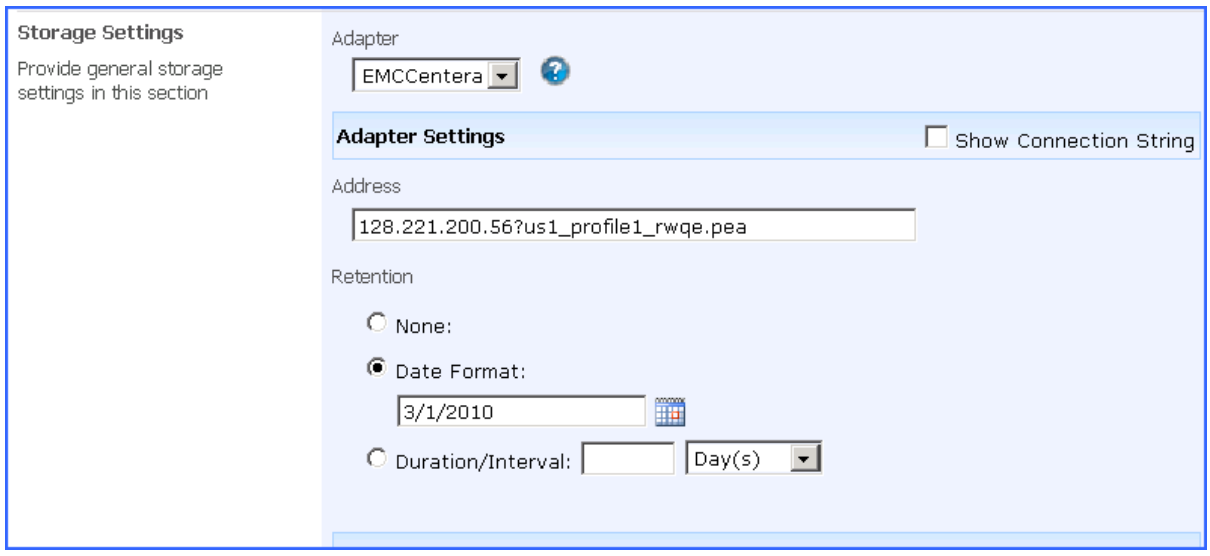
Setting	Value/Options
	The selection is locked down when saving.
Status 	*Online* – Storage Endpoint should be available to associate to a Storage Profile and accept BLOBs. (default) *Offline (Read Only)* – A storage endpoint can be configured, but not made available for externalizing content. The BLOBs already on the endpoint are still read only.
	Select the adapter for the endpoint that is being created.
	IP address or host name that represents the cluster address for the Centera instance to be used. Where examples of the cluster address could be any of the following: Without PEA (Pool Entry Authorization) file ADDRESS=centera.denallix.com With PEA file See Appendix A for more information. ADDRESS=128.221.200.56? us1_profile1_rwqe.pea Required.

Setting	Value/Options
	If supplied, the Centera adapter will calculate and supply a retention policy when saving content. Possible settings are: None [DateFormat] example: *Retention=*08/31/2009;* [Duration][Interval] example: *Retention=5D;* [Interval] may be days (D), months (M) or years (Y). NOTE: You can NEVER shorten the retention period once it has been established.
	If the endpoint is on a WORM (Write Once, Read Many) device, Unused BLOB Cleanup will ignore this endpoint.
	No – Externalized content BLOBs are not placed in folders. *Yes* – Externalized content BLOBs are placed in folders (default). If *Folder Content in BLOB Store* is *Yes* then you can select a date/time folder scheme from the dropdown. YYYY/MM/DD/HH/MM is the default.
	The Test Storage Settings button can be used at this point, or after completing the

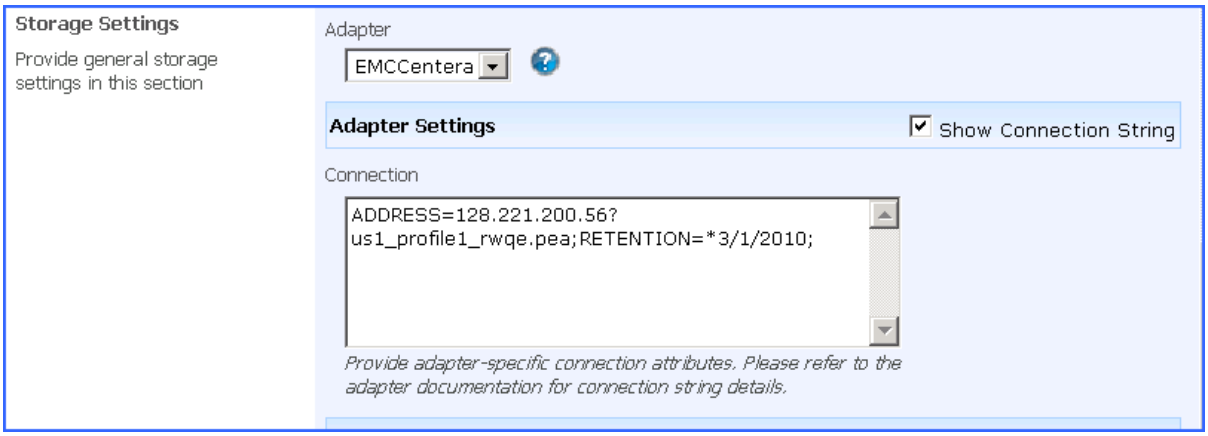
Setting	Value/Options
	endpoint configuration, to verify that the endpoint is accessible.
	*No* – Externalized content BLOBs are not compressed (default). *Yes* – Externalized content BLOBs are compressed.
	None – Encryption will not be applied to externalized BLOBs (default). *AES (128 bit)* – 128 bit AES encryption will be applied to externalized BLOBs. *AES (256 bit)* – 256 bit AES encryption will be applied to externalized BLOBs.
	Enter a passphrase to use when generating the encryption key. Using a passphrase will help you re-create the encryption key if necessary. You can generate a random key by leaving the box blank and clicking the *Generate Key* button. The encryption key passphrase will be hidden.
	A warning email can be sent if it encounters errors.

Setting	Value/Options
	An online storage endpoint can be automatically taken offline if it encounters errors. If a storage endpoint is taken offline automatically, BLOBs that were intended to be written to that endpoint will go to the content database.
	Default email addresses for system error and offline notification can be entered. Check the box to include the list of Default Notification Contacts specified on the General Settings page.

Example Storage Endpoint Using Centera Adapter



Click the *Show Connection String* checkbox to edit the connection string. Otherwise, fill in the connection fields shown for the adapter selected. Notice that the connection string parameters are name/value pairs separated by semi-colons when editing using the Show Connection String option.



NOTE: Adapter parameters are not case-sensitive.

NOTE: You should always use a passphrase when generating encryption keys. The passphrase gives you a means of re-creating keys should they become unrecoverable or corrupt. It is very important to remember or record the passphrase outside of Metalogix StoragePoint. Otherwise, encrypted content could become irretrievable in the event of a database failure.

If you choose to externalize content you should test the storage profile settings by clicking the *Test Storage Settings* button. A message under the button will indicate whether or not the test was successful. If the test fails the message will include the error that was the root cause of the failure.

NOTE: When testing access to an endpoint from within Central Administration, the Identity of the Application Pool hosting the Central Administration Site is the one that is being used for the test. If there are different Identities used for other Web Applications in the Farm then those identities will also need access but cannot be tested from within Central Admin itself. See BLOB Store Security and Metalogix StoragePoint Required Privileges in the Metalogix StoragePoint Reference Guide.

PEA Files

A client connection to a Centera system typically involves two pieces.

The first is the IP address or host name of the cluster itself.

The second is typically a ".pea" file which contains detailed authentication and rights information.

Here is an example: "192.168.1.10?d:\my_conn.pea"

Clients using the Centera API (this includes the StoragePoint Adapter for Centera) use a .pea file when connecting with Centera.

Each client machine (think "server in the farm") *must* have a copy of the *same* .pea file accessible for use in a consistent location. This file must also be on the machine hosting SharePoint Central Administration.

For example if the pea file used to connect is located at "D:\my_conn.pea" on one Farm machine then it must be similarly located and named on *all* Farm machines.

File system access to the pea file must be granted to the process and service identities of SharePoint. This file will be read when connecting to Centera.

(This requirement is similar to the set of identities that would be configured on a file share in the case of the built-in FileSystem adapter.)

For more information about .pea files, please see your Centera documentation.

Retention Promotion from IMP

If retention settings have been configured in the SharePoint site or library, those retention settings will stay with the BLOB when it goes to the endpoint. To enable this, there is a box on the endpoint screen, when adding the endpoint to the profile. If the profile already exists, with the endpoint added, the feature can still be enabled, but will only be applied to BLOBs created after the feature is enabled.

1. Open or create the profile.
2. Add the endpoint to the profile.
3. On the endpoint screen, at the bottom, will be an option to Enable Retention Promotion from IMP. Check this box.

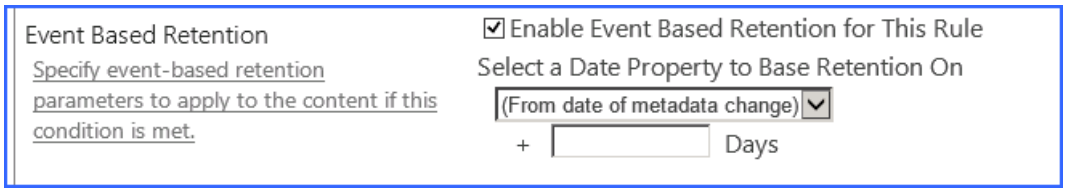
Event Based Retention

EBR is a feature that can be configured for certain storage endpoints. In addition to the default retention that can be configured on the endpoint, certain actions like updating a field can update the content to specify a different retention period. The steps for configuring the adapter to support EBR are outlined below.

The endpoint must be added to the profile for the following steps to work.

1. Expand the Archiving section of the profile.
2. Set the Enable Archiving dropdown to Yes.
3. Click New Rule.
4. Click Change to select the scope of the rule, which can be as wide as the profile scope or as narrow as a list. Click OK.
5. Select Metadata Change Rule and click New Condition.

6. By selecting the same endpoint that was added to the profile, a new field displays for designating EBR. Check the EBR box, select a field to base the retention on, and enter the number of days to which to update the retention time.



7. Click OK on the Condition window.
8. Click OK on the Rule window.
9. Click Save on the archiving page.
10. (OPTIONAL) Select Immediately or schedule a timer job to run, to process existing content for this archiving rule. Click OK on the Process Existing page.

NOTE: Content retention is modified when the field changes, not when it is uploaded. Uploaded content will receive the default retention setting, but modifying the designated EBR field will update the retention setting for that content.

Appendix: Troubleshooting

Problem: Receiving errors on storage or retrieval of externalized content.

Wherever possible, StoragePoint surfaces error messages returned by the adapter either directly to the user or within the SharePoint ULS logs. You should refer to your storage platform/provider documentation for resolution to errors logged by the adapter.

NOTE: If there is a mechanism in place such as a batch script or built-in tool to delete or move content from the endpoint after a certain timeframe or retention period, this can impact content in SharePoint. There are safeguards in place to track anything externalized to endpoints managed by a StoragePoint profile, but if the BLOBs are moved or deleted manually or by another mechanism, StoragePoint cannot track this.

Problem: The Test Storage Settings button on the endpoint connection page is returning an error.

When connecting to Centera with retention enabled it is expected that the "Test Storage Settings" button on the endpoint page may report failure as it will be prevented from removing the test file. This is by design.

Problem: Unable to load DLL 'FPLibrary.dll'

The application has failed to start because its side-by-side configuration is incorrect. Please see the application event log or use the command-line sxstrace.exe tool for more detail. (Exception from HRESULT: 0x800736B1)

It can be fixed by applying the following security update:

http://www.microsoft.com/en-us/download/details.aspx?id=26347

StoragePoint and EMC Centera Replication Capabilities

EMC Centera device has many topology options and offers various replication scenarios. StoragePoint does not need to handle replication aspects at all. The only configuration aspect StoragePoint needs is to have correctly configured PEA file with appropriate access to all replica server(s).

NOTE: The multi-cluster failover option is enabled by default. If a replica node is available, reading is done on secondary node. Write and delete operations will be processed on the primary node or the first available.

Examples of EMC Centera connection strings:

[Cluster topology]

10.2.3.4,10.6.7.8?c:\centera\rwe.pea
10.2.3.4 – primary node in the cluster (may be only one)
10.6.7.8 – secondary node in the cluster (may be more than one)

[Two clusters topology]

10.2.3.4,10.6.7.8?c:\centera\rwe.pea,10.2.9.10,10.6.11.12?c:\centera\rwe.pea,
10.2.3.4 – primary node in the first cluster (may be only one)
10.6.7.8 – secondary node in the first cluster (may be more than one)
10.2.9.10 - primary node in the second cluster (may be only one)
10.6.11.12 - secondary node in the second cluster (may be more than one)

[General schema]

ADDRESS := [primary=|secondary=]IP address|domain name
ADDRESS_LIST := ADDRESS[,ADDRESS_LIST]
CREDENTIAL := [[path=]file system path|name=profilename|secret=secret]
CREDENTIALS := CREDENTIAL[,CREDENTIALS]
CONNECTION_STRING := ADDRESS_LIST[?CREDENTIALS][,CONNECTION_STRING]

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