

Metalogix® StoragePoint 5.9

EMC Centera Adapter Guide



© 2019 Quest Software Inc. ALL RIGHTS RESERVED.

This guide contains proprietary information protected by copyright. The software described in this guide is furnished under a software license or nondisclosure agreement. This software may be used or copied only in accordance with the terms of the applicable agreement. No part of this guide may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording for any purpose other than the purchaser's personal use without the written permission of Quest Software Inc.

The information in this document is provided in connection with Quest Software products. No license, express or implied, by estoppel or otherwise, to any intellectual property right is granted by this document or in connection with the sale of Quest Software products. EXCEPT AS SET FORTH IN THE TERMS AND CONDITIONS AS SPECIFIED IN THE LICENSE AGREEMENT FOR THIS PRODUCT, QUEST SOFTWARE ASSUMES NO LIABILITY WHATSOEVER AND DISCLAIMS ANY EXPRESS, IMPLIED OR STATUTORY WARRANTY RELATING TO ITS PRODUCTS INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL QUEST SOFTWARE BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS, BUSINESS INTERRUPTION OR LOSS OF INFORMATION) ARISING OUT OF THE USE OR INABILITY TO USE THIS DOCUMENT, EVEN IF QUEST SOFTWARE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Quest Software makes no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Quest Software does not make any commitment to update the information contained in this document.

If you have any questions regarding your potential use of this material, contact:

Quest Software Inc.
Attn: LEGAL Dept.
4 Polaris Way
Aliso Viejo, CA 92656

Refer to our Web site (<https://www.quest.com>) for regional and international office information.

Patents

Quest Software is proud of our advanced technology. Patents and pending patents may apply to this product. For the most current information about applicable patents for this product, please visit our website at <https://www.quest.com/legal>.

Trademarks

Quest, the Quest logo, and Metalogix are trademarks and registered trademarks of Quest Software Inc. and its affiliates. For a complete list of Quest marks, visit <https://www.quest.com/legal/trademark-information.aspx>. All other trademarks and registered trademarks are property of their respective owners.

Metalogix® StoragePoint

Updated August 2019

Version 5.9

Contents

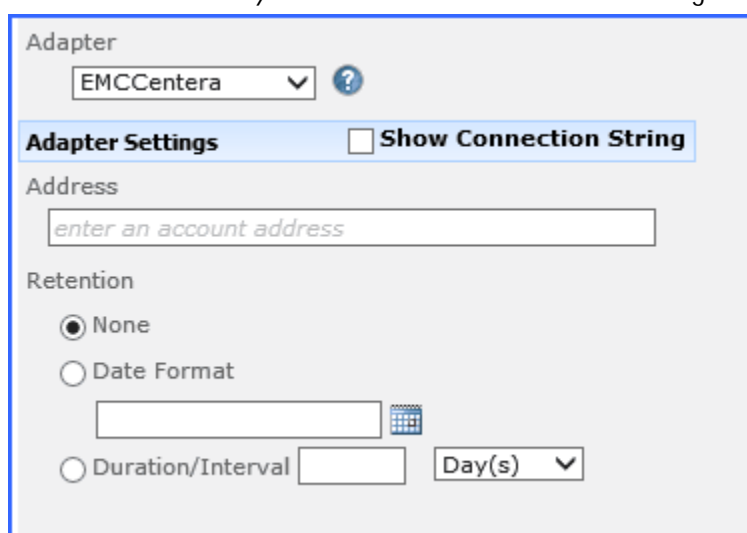
Centera Adapter Configuration	4
Centera Adapter Connection String Parameters	4
Example Storage Endpoint Using Centera Adapter	8
PEA Files	9
Retention Promotion from IMP	10
Event Based Retention	10
Appendix: Troubleshooting	11
Problem: Receiving errors on storage or retrieval of externalized content.	11
Problem: The Test Storage Settings button on the endpoint connection page is returning an error.	12
Problem: Unable to load DLL 'FPLibrary.dll'	12
StoragePoint and EMC Centera Replication Capabilities	12
About Us	14
Contacting Quest	14
Technical Support Resources	14

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.



Adapter
EMCCentera

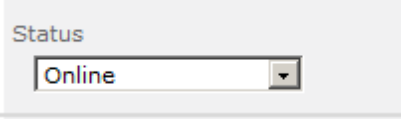

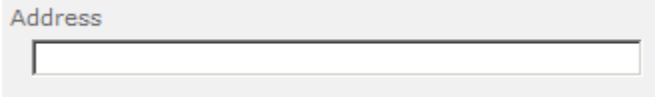
Adapter Settings Show Connection String

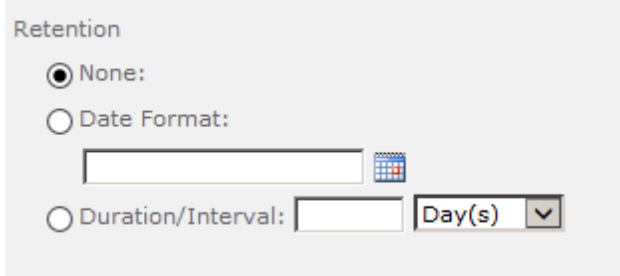



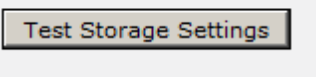
Address
enter an account address

Retention
 None
 Date Format
 
 Duration/Interval Day(s)

Centera Adapter Connection String Parameters

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

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

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

Setting	Value/Options
	<p>endpoint configuration, to verify that the endpoint is accessible.</p>
<p>Compress Content in BLOB Store</p> <p><input type="button" value="No"/> ▾</p> <p><i>Content is compressed using the GZip/Deflate method.</i></p>	<p><i>No</i>– Externalized content BLOBs are not compressed (default).</p> <p><i>Yes</i>– Externalized content BLOBs are compressed.</p>
<p>Encryption Method for Content in BLOB Store</p> <p><input type="button" value="None"/> ▾</p>	<p><i>None</i>– Encryption will not be applied to externalized BLOBs (default).</p> <p><i>AES (128 bit)</i>– 128 bit AES encryption will be applied to externalized BLOBs.</p> <p><i>AES (256 bit)</i>– 256 bit AES encryption will be applied to externalized BLOBs.</p>
<p>Encryption Key Passphrase</p> <p><input type="text"/> <input type="button" value="Generate Key"/></p> <p><i>Enter a passphrase to be used to generate a key or leave blank to generate a random key. The pass phrase entered is not saved with the Endpoint.</i></p>	<p>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 <i>Generate Key</i> button. The encryption key passphrase will be hidden.</p>
<p>Generate warning notification if:</p> <p><input checked="" type="checkbox"/> <input type="text" value="10"/> or more successive errors are encountered</p> <p><input checked="" type="checkbox"/> there is less than <input type="text" value="10"/> <input checked="" type="radio"/> MB <input type="radio"/> % of free space</p>	<p>A warning email can be sent if it encounters errors.</p>

Setting	Value/Options
<p>Automatically take endpoint offline if:</p> <p><input checked="" type="checkbox"/> <input type="text" value="25"/> or more successive errors are encountered</p> <p><input checked="" type="checkbox"/> there is less than <input type="text" value="1"/> <input checked="" type="radio"/> MB <input type="radio"/> % of free space</p>	<p>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.</p>
<p>Send Offline Notifications to:</p> <p><input checked="" type="checkbox"/> Use Notification Defaults</p> <p>Additional Contacts</p> <p><input type="text" value="admin@company.com"/></p> <p><i>Provide a semi-colon delimited list of e-mail addresses.</i></p>	<p>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.</p>

Example Storage Endpoint Using Centera Adapter

Storage Settings
Provide general storage settings in this section

Adapter: ?

Adapter Settings Show Connection String

Address:

Retention:

None:

Date Format:

Duration/Interval: Day(s)

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.

Storage Settings
Provide general storage settings in this section

Adapter
EMCCentera ?

Adapter Settings Show Connection String

Connection

```
ADDRESS=128.221.200.56?
us1_profile1_rwqe.pea;RETENTION=*3/1/2010;
```

Provide adapter-specific connection attributes. Please refer to the adapter documentation for connection string details.

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.

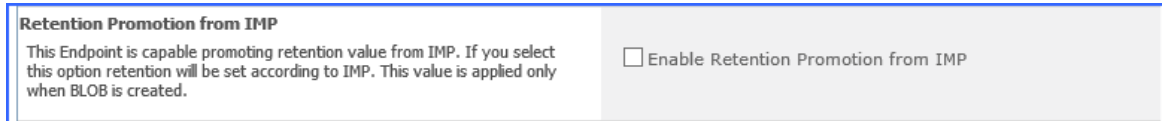
(This requirement is similar to the set of identities that would be configured on a file share in the case of the built-in FileSystem adapter.)

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.

- 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.

Event Based Retention <u>Specify event-based retention parameters to apply to the content if this condition is met.</u>	<input checked="" type="checkbox"/> Enable Event Based Retention for This Rule Select a Date Property to Base Retention On (From date of metadata change) ▼ + <input type="text"/> Days
--	--

- Click OK on the Condition window.
- Click OK on the Rule window.
- Click Save on the archiving page.
- (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=profile name | secret=secret]
CREDENTIALS := CREDENTIAL[,CREDENTIALS]
CONNECTION_STRING := ADDRESS_LIST[?CREDENTIALS][,CONNECTION_STRING]

About Us

We are more than just a name

We are on a quest to make your information technology work harder for you. That is why we build community-driven software solutions that help you spend less time on IT administration and more time on business innovation. We help you modernize your data center, get you to the cloud quicker and provide the expertise, security and accessibility you need to grow your data-driven business. Combined with Quest's invitation to the global community to be a part of its innovation, and our firm commitment to ensuring customer satisfaction, we continue to deliver solutions that have a real impact on our customers today and leave a legacy we are proud of. We are challenging the status quo by transforming into a new software company. And as your partner, we work tirelessly to make sure your information technology is designed for you and by you. This is our mission, and we are in this together. Welcome to a new Quest. You are invited to Join the Innovation™.

Our brand, our vision. Together.

Our logo reflects our story: innovation, community and support. An important part of this story begins with the letter Q. It is a perfect circle, representing our commitment to technological precision and strength. The space in the Q itself symbolizes our need to add the missing piece — you — to the community, to the new Quest.

Contacting Quest

For sales or other inquiries, visit www.quest.com/contact.

Technical Support Resources

Technical support is available to Quest customers with a valid maintenance contract and customers who have trial versions. You can access the Quest Support Portal at <https://support.quest.com>

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. The Support Portal enables you to:

- Submit and manage a Service Request
- View Knowledge Base articles

- Sign up for product notifications
- Download software and technical documentation
- View how-to-videos
- Engage in community discussions
- Chat with support engineers online
- View services to assist you with your product