

Metalogix® StoragePoint 5.9.1

# File System Adapter Guide



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Metalogix® StoragePoint

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# FileSystem Adapter Configuration

This section will provide you details on how to configure a storage endpoint's connection string to utilize the File System Adapter, which is standard with StoragePoint. Please refer to the StoragePoint Reference Guide for information on managing Storage Endpoints.

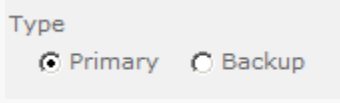
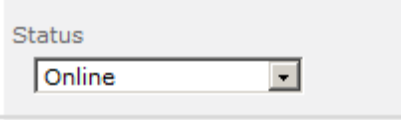
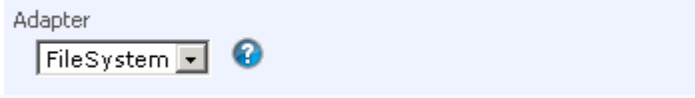
On the Application Management page, click *Storage and Backup Endpoints*.

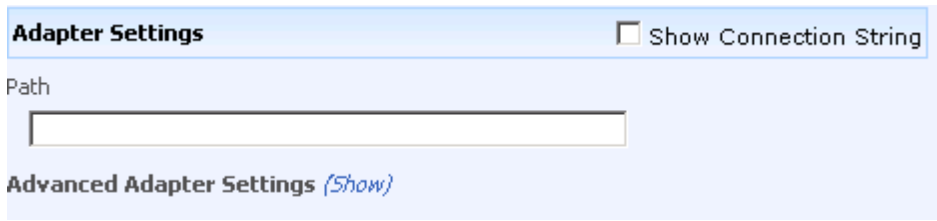

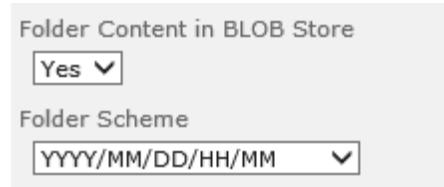
Click *Create New Endpoint* or click the name of an existing storage endpoint that you want to edit.

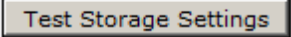
Click the *Show* link next to the Advanced Adapter Settings to see the additional fields.

## FileSystem Adapter Connection String Parameters

Setting	Value/Options
Name	Enter the unique name of the Storage or Backup Endpoint.

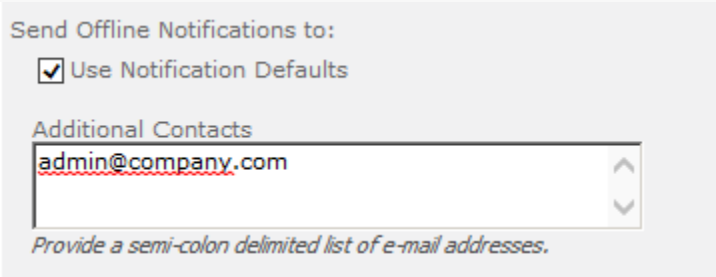
Setting	Value/Options
<p>Type</p>  <p>See Backup Services Settings in the Reference Guide for more information on how Backup Endpoints are used.</p>	<p><i>Primary</i>– this endpoint will be available for externalization when creating storage profiles.</p> <p><i>Backup</i>– this endpoint will be in the Backup Services dropdown on the profile page.</p> <p>The selection is locked down when saving.</p>
<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> 	<p>Select the adapter for the endpoint that is being</p>

Setting	Value/Options
	<p>created. The <i>FileSystem</i> adapter is installed with the core product by default.</p>
	<p>Enter an adapter-specific connection string in this box.</p>
	<p>If the endpoint is on a WORM (Write Once, Read Many) device, Unused BLOB Cleanup will ignore this endpoint.</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>

Setting	Value/Options
	YYYY/MM/DD/H H/MM is the default.
	The Test Storage Settings button can be used at this point, or after completing the endpoint configuration, to verify that the endpoint is accessible.
<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</p>

Setting	Value/Options
	externalized BLOBs.
<p>Encryption Key Passphrase</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #e6f2ff;"> <input style="width: 150px; height: 20px; margin-bottom: 5px;" type="text"/> <input style="margin-left: 10px; width: 100px; height: 20px;" type="button" value="Generate Key"/> </div> <p><i>Enter a passphrase to be used to generate a key or leave blank to generate a random key. The passphrase entered is <b>not</b> 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 style="width: 40px;" type="text" value="10"/> or more successive errors are encountered</p> <p><input checked="" type="checkbox"/> there is less than <input style="width: 40px;" 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 or is nearing capacity.</p>
<p>Automatically take endpoint offline if:</p> <p><input checked="" type="checkbox"/> <input style="width: 40px;" type="text" value="25"/> or more successive errors are encountered</p> <p><input checked="" type="checkbox"/> there is less than <input style="width: 40px;" 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 or is nearing capacity. If a storage endpoint is taken offline automatically, BLOBs that were intended to be</p>



Setting	Value/Options
	written to that endpoint will go to the content database.
 <p>Send Offline Notifications to:</p> <p><input checked="" type="checkbox"/> Use Notification Defaults</p> <p>Additional Contacts</p> <p>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 FileSystem Adapter

**Storage Settings**  
Provide storage device settings in this section.

Adapter:

**Adapter Settings**  Show Connection String

Path:

**Advanced Adapter Settings (hide)**

Deletion Method:

Buffer Size:

Support Metadata:

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.

**Storage Settings**  
Provide storage device settings in this section.

Adapter:

**Adapter Settings**  Show Connection String

Connection:

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

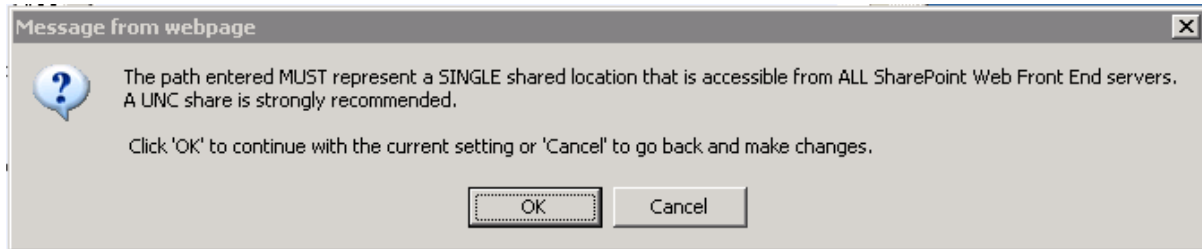
**NOTE:** Adapter parameters are not case-sensitive.

**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 (fileshare) 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.

If the path you entered for your FileSystem storage endpoint is not in a UNC format, you will see this message when saving to verify that your storage endpoint is accessible by all the WFEs in your SharePoint farm.



## FileSystem Adapter Connection String Options

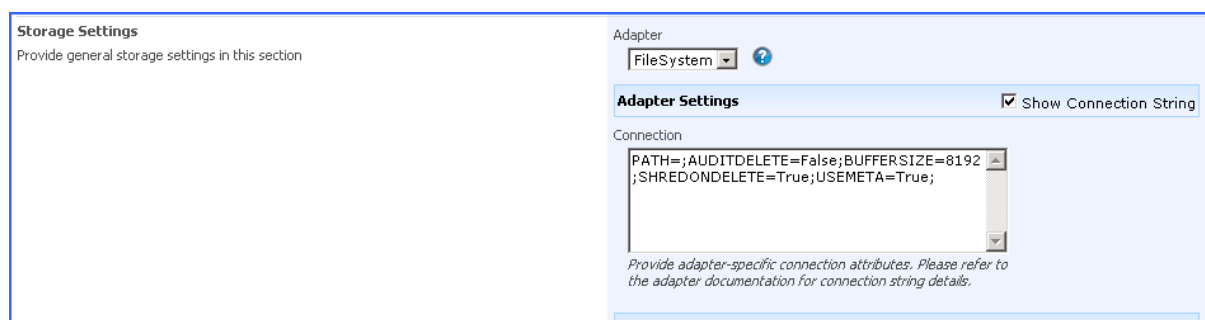
The built-in FileSystem adapter in Metalogix StoragePoint has a number of options to enable specific diagnostic and enhanced functionality. These options must be specified as attributes in the Connection string on the storage endpoint.

## Shred BLOB Files on Delete

The Shred on Delete option will cause the Unused BLOB Cleanup Job and Recall jobs to do a “secure” delete when they remove files from the external BLOB store. A “secure” delete consists of writing several passes of 0’s, 1’s and random bit patterns over the file before deleting it on the file store. This prevents the file from being recovered using file deletion recovery tools.

This option is turned on by appending ;ShredOnDelete=true to the Connection string of a profile that uses the FileSystem adapter:

Click the Show Connection String checkbox to edit the string.



Or, click the Show link next to the Advanced Adapter Settings to see the drop down field.

<b>Endpoint Name</b>	Name <input type="text"/>
<b>Endpoint Status</b>	Status <input type="button" value="Online"/>
<b>Storage Settings</b> Provide general storage settings in this section	Adapter <input type="button" value="FileSystem"/> ? <b>Adapter Settings</b> <input type="checkbox"/> Show Connection String Path <input type="text"/> <b>Advanced Adapter Settings</b> <i>(hide)</i> Deletion Method <input type="button" value="Shred"/> Buffer Size <input type="text" value="8192"/> Support Metadata <input type="button" value="True"/>

Please keep the following limitations in mind when using this feature:

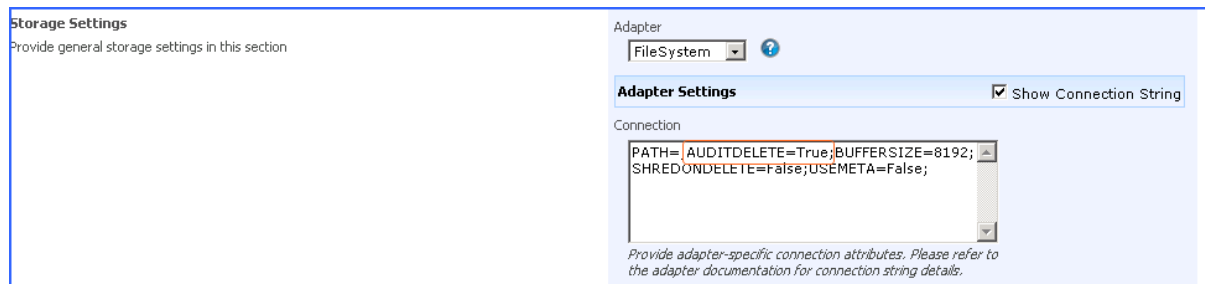
- Deletions of BLOB files only occur when the Unused BLOB Cleanup and Recall jobs remove them. Deleting a document in SharePoint does not immediately remove it from the BLOB store.
- Not all devices support secure delete. Most SCSI and SATA drives support the necessary device options. Some CIFS shares and other remote file store devices may not support it. It is important to test the option after turning it on.
- Many dedicated filer devices offer device level secure delete (i.e. HCAP, Centera, etc.). It is preferable to use the device's capabilities if they are present.
- Deletes of BLOB files are never guaranteed. Although unlikely, it is possible a BLOB file may be "leaked" on the BLOB store and not cleaned up by the Unused BLOB Cleanup Job. Metalogix StoragePoint support has tools to help clean these up periodically.
- This option is specific to the Metalogix StoragePoint FileSystem adapter. It does not work on other storage adapters.

## Deletion Audit

The Deletion Audit option stops Metalogix StoragePoint from physically deleting orphaned BLOB files. Instead they are renamed with a .DEL extension. In addition, every time Metalogix StoragePoint attempts to delete a BLOB file, a log entry is made in the SharePoint logs to identify information about the deletion. This option should be used if removal of content BLOBs from the file store needs to be audited first. In this case, the removal of the .DEL files is the responsibility of the client (i.e. Metalogix StoragePoint does not remove these).

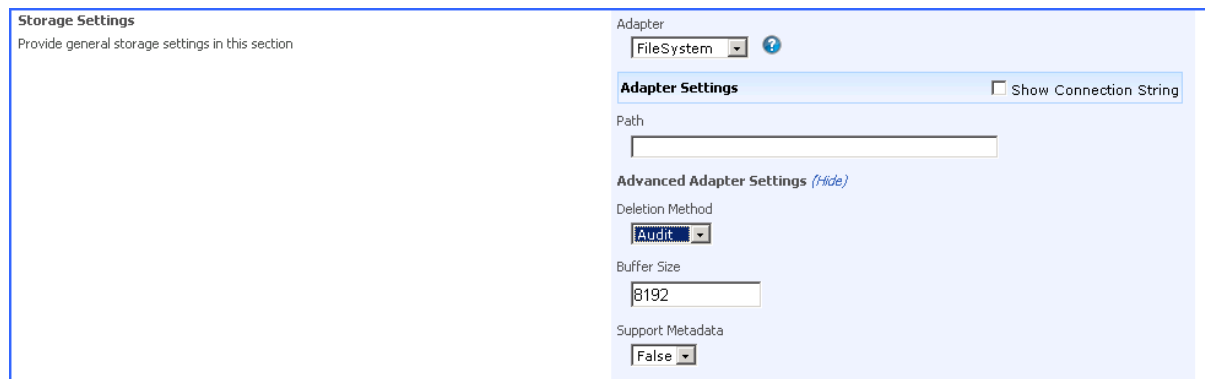
This option is turned on by appending ;AuditDelete=true to the Connection string of a profile that uses the FileSystem adapter:

Click the Show Connection String checkbox to edit the string.



The screenshot shows the 'Storage Settings' window. On the right, the 'Adapter' is set to 'FileSystem'. Under 'Adapter Settings', the 'Show Connection String' checkbox is checked. The 'Connection' text area contains the string: `PATH=;AUDITDELETE=True;BUFFERSIZE=8192;SHREDONDELETE=False;USEMETA=False;`. A red box highlights the `AUDITDELETE=True` part. Below the text area is a note: 'Provide adapter-specific connection attributes. Please refer to the adapter documentation for connection string details.'

Or, click the Show link next to the Advanced Adapter Settings to see the drop down field.



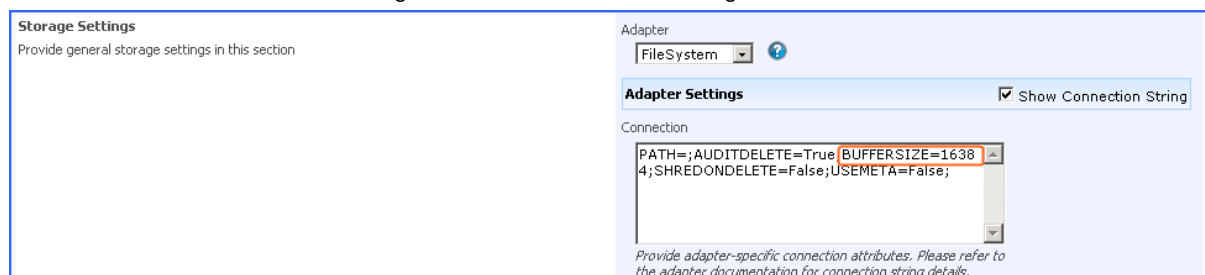
The screenshot shows the 'Storage Settings' window. Under 'Adapter Settings', the 'Show Connection String' checkbox is unchecked. Below this, the 'Advanced Adapter Settings (hide)' section is expanded. It includes: 'Deletion Method' set to 'Audit', 'Buffer Size' set to '8192', and 'Support Metadata' set to 'False'.

## Buffer Size

The Buffer Size option is used to override the Metalogix StoragePoint read/write buffer size default of 8192. The Metalogix StoragePoint default is tuned for maximum performance on most devices. The value can be modified if it is suspected that a different buffer size would be more optimal for a given device. Please be aware that it is recommended that you not change this setting and that increasing it does not necessarily increase performance. In fact, in many cases, increasing it will decrease performance.

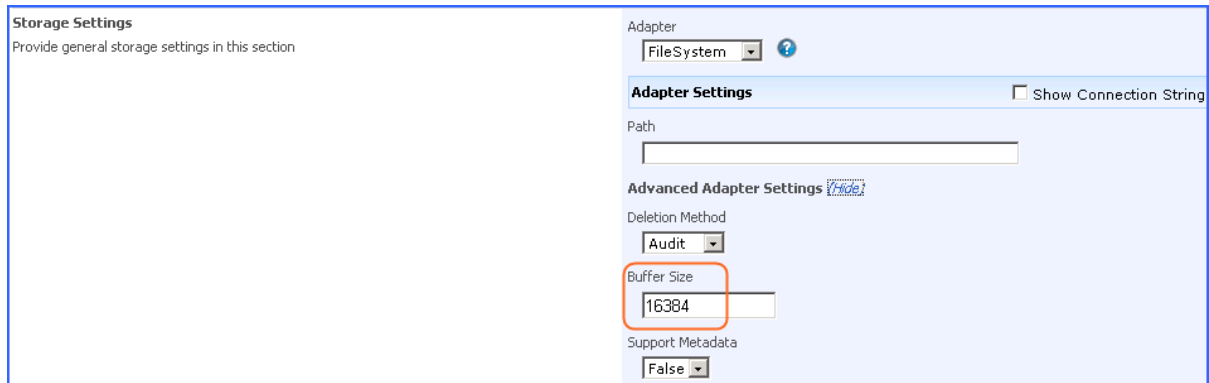
This option is specified by appending ;BufferSize=xxxx(where xxxx is the size to make the buffer) to the Connection string of a profile that uses the FileSystem adapter.

Click the Show Connection String checkbox to edit the string.



The screenshot shows the 'Storage Settings' window. Under 'Adapter Settings', the 'Show Connection String' checkbox is checked. The 'Connection' text area contains the string: `PATH=;AUDITDELETE=True;BUFFERSIZE=16384;SHREDONDELETE=False;USEMETA=False;`. A red box highlights the `BUFFERSIZE=16384` part. Below the text area is a note: 'Provide adapter-specific connection attributes. Please refer to the adapter documentation for connection string details.'

Or, click the Show link next to the Advanced Adapter Settings to see the text field.



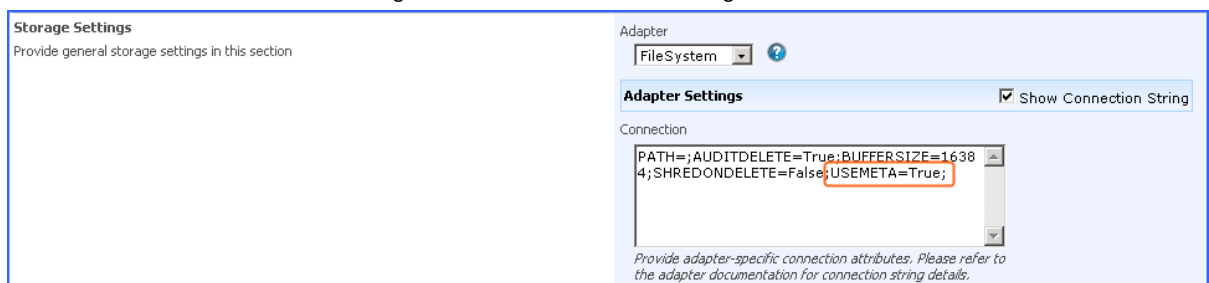
The screenshot shows the 'Storage Settings' interface for the 'FileSystem' adapter. The 'Advanced Adapter Settings' section is expanded, showing a 'Buffer Size' text input field with the value '16384' highlighted by a red box. Other settings include 'Deletion Method' set to 'Audit' and 'Support Metadata' set to 'False'. A 'Show Connection String' checkbox is visible but unchecked.

## Support Metadata

The Support Metadata option causes an additional file to be created for each BLOB written. This additional file will share the same name as the BLOB and include an extension of ".xml". It contains a snapshot of available SharePoint metadata. This metadata file will be created and populated on a "best effort" basis. The metadata snapshot file lives in the BLOB-store until the BLOB itself is deleted. At that time the xml file is also removed.

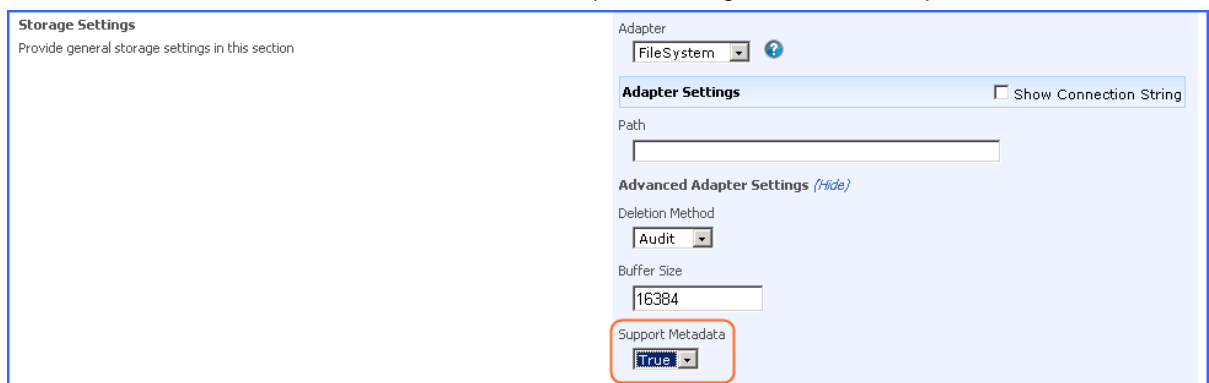
This option is turned on by appending ;UseMeta=True to the Connection string of a profile that uses the FileSystem adapter. This behavior is turned off by default and must be turned on explicitly if desired.

Click the Show Connection String checkbox to edit the string.



The screenshot shows the 'Storage Settings' interface with the 'Show Connection String' checkbox checked. The 'Connection' text area contains the string: 'PATH=;AUDITDELETE=True;BUFFERSIZE=16384;SHREDONDELETE=False;USEMETA=True;'. The 'USEMETA=True;' portion is highlighted with a red box. Below the text area is a note: 'Provide adapter-specific connection attributes. Please refer to the adapter documentation for connection string details.'

Or, click the Show link next to the Advanced Adapter Settings to see the drop down fields.



The screenshot shows the 'Storage Settings' interface with the 'Advanced Adapter Settings' section expanded. The 'Support Metadata' dropdown menu is highlighted with a red box and is set to 'True'. Other settings include 'Deletion Method' set to 'Audit' and 'Buffer Size' set to '16384'. The 'Show Connection String' checkbox is unchecked.

Please keep the following limitations in mind when using this feature:

- Enabling this option takes slightly more space in the BLOB-store in order to accommodate the metadata.
- Enabling this option may result in slightly longer times to perform BLOB writes and deletions.
- Metadata is written asynchronously compared to the actual BLOB contents. As a result there can be a lag between the commit of a BLOB and its associated metadata.
- This option is specific to the Metalogix StoragePoint FileSystem adapter. Please see the documentation of our other adapter(s) to find out if and how metadata is supported.

## VerifyWrites

This option posts back to StoragePoint to validate that the BLOB was written to the endpoint. It is not part of the connection string by default, but can be added by editing the connection string only; there is no user interface for this option. If verbose logging is enabled, the logs may contain information such as 'Written file verified as present: <filename>.'

```
VERIFYWRITES=true;
```

---

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### 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

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### Technical Support Resources

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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