

Metalogix® StoragePoint 5.8

# IBM Tivoli Adapter Guide



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# Tivoli Adapter Configuration

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

On the ApplicationManagement 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.

Adapter  
 IBM Tivoli

**Adapter Settings**  Show Connection String

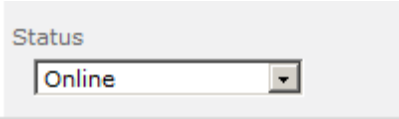





Client Base URL  
 Enter URL to connect to the Tivoli Client Web Service

Client Node  
 enter Client Node Name

Client Node Password  
 Enter Client Node Password

## Tivoli 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>Client Base URL</p> 	IP or DNS name chosen at the time the storage solution was provisioned which represents the Tivoli client access point. The Metalogix Tivoli Client uses port 8190. This port needs to be opened (inbound rule on the client machine) to communicate with SharePoint.
<p>Client Node</p>  <p>Client Node Password</p> 	Enter the connection information for accessing the Tivoli node.
<p>Is WORM Device</p> 	If the endpoint is on a WORM (Write Once, Read Many) device, Unused BLOB

Setting	Value/Options
	Cleanup will ignore this endpoint.
<div data-bbox="213 434 647 613"> <p>Folder Content in BLOB Store</p> <p>Yes ▾</p> <p>Folder Scheme</p> <p>YYYY/MM/DD/HH/MM ▾</p> </div>	<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>
<div data-bbox="245 1070 536 1122"> <p>Test Storage Settings</p> </div>	<p>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>
<div data-bbox="213 1357 778 1473"> <p>Compress Content in BLOB Store</p> <p>No ▾</p> <p><i>Content is compressed using the GZip/Deflate method.</i></p> </div>	<p><i>No</i>– Externalized content BLOBs are not compressed (default).</p>
<div data-bbox="213 1532 673 1630"> <p>Encryption Method for Content in BLOB Store</p> <p>None ▾</p> </div>	<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>

Setting	Value/Options
<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 <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 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>
<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 Tivoli

The screenshot shows the 'Adapter Settings' section of a configuration interface. At the top, the 'Adapter' dropdown is set to 'IBM Tivoli'. Below this, the 'Adapter Settings' header includes a checkbox for 'Show Connection String' which is currently unchecked. The form contains three input fields: 'Client Base URL' with the value 'http://225.225.25.25:8190/TivoliREST', 'Client Node' with the value 'Node1', and 'Client Node Password' which is masked with four dots.

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.

This screenshot shows the same configuration interface but with the 'Show Connection String' checkbox checked. The 'Connection' field is now a text area containing the string: 'URI=http://225.225.25.25:8190/TivoliREST;CLIENTNODE=Node1;PASSWORD=\*\*\*\*'. Below the text area, there is a note: '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



## Installing the Metalogix Tivoli Client

Installing the Metalogix Tivoli Client is critical for communication with the Tivoli node.

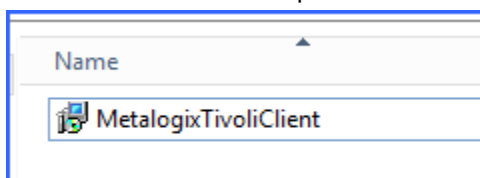
**NOTE:** There is a minimum version requirement of .NET 4.0 to install the Metalogix Tivoli Client.

**NOTE:** If this is an upgrade, the old client must be uninstalled before continuing with the install.

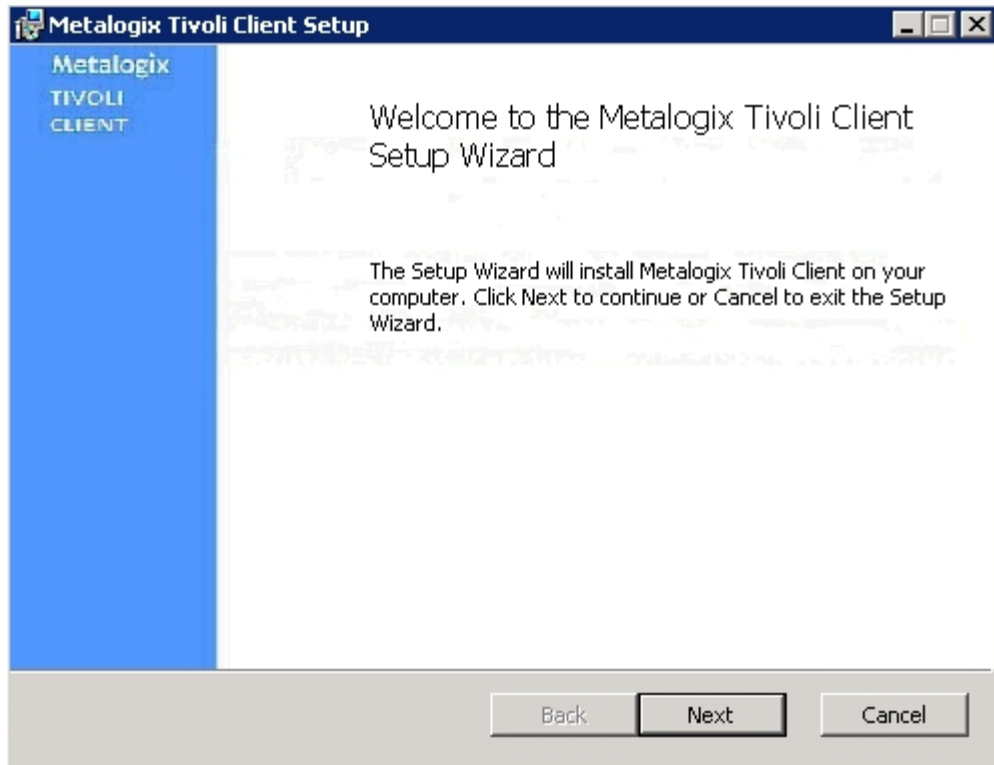
1. Download the Metalogix StoragePoint Tivoli Adapter Client from the Metalogix [website](#), and copy it to the Tivoli Client machine.



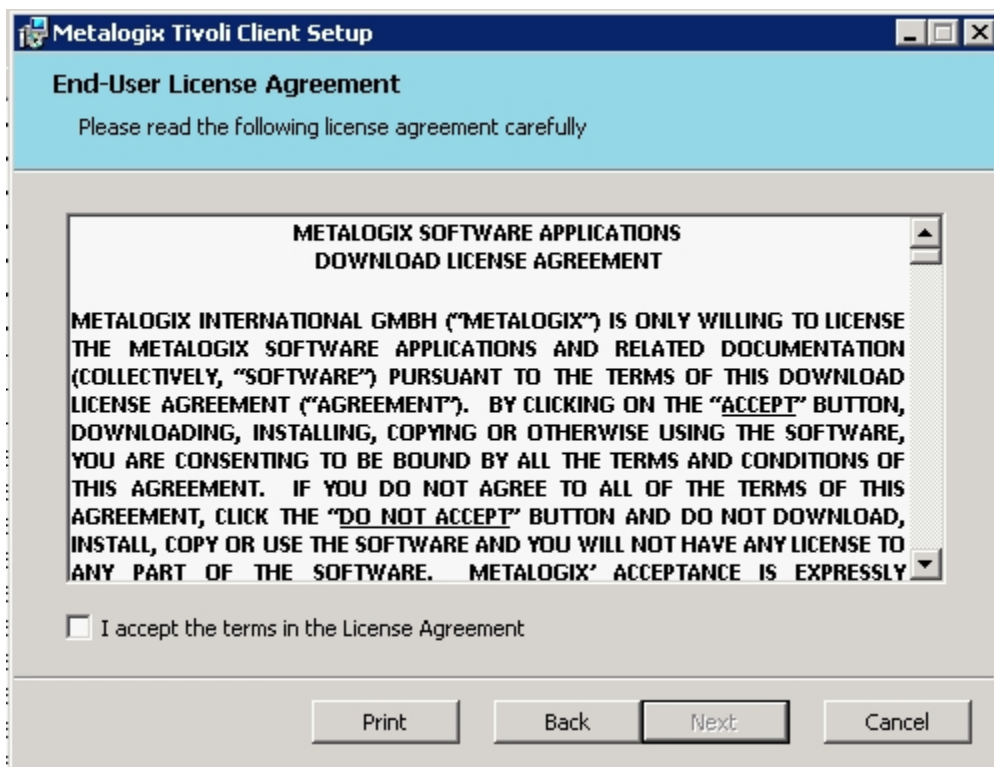
2. On the Tivoli client, unzip the file, and double click the executable.



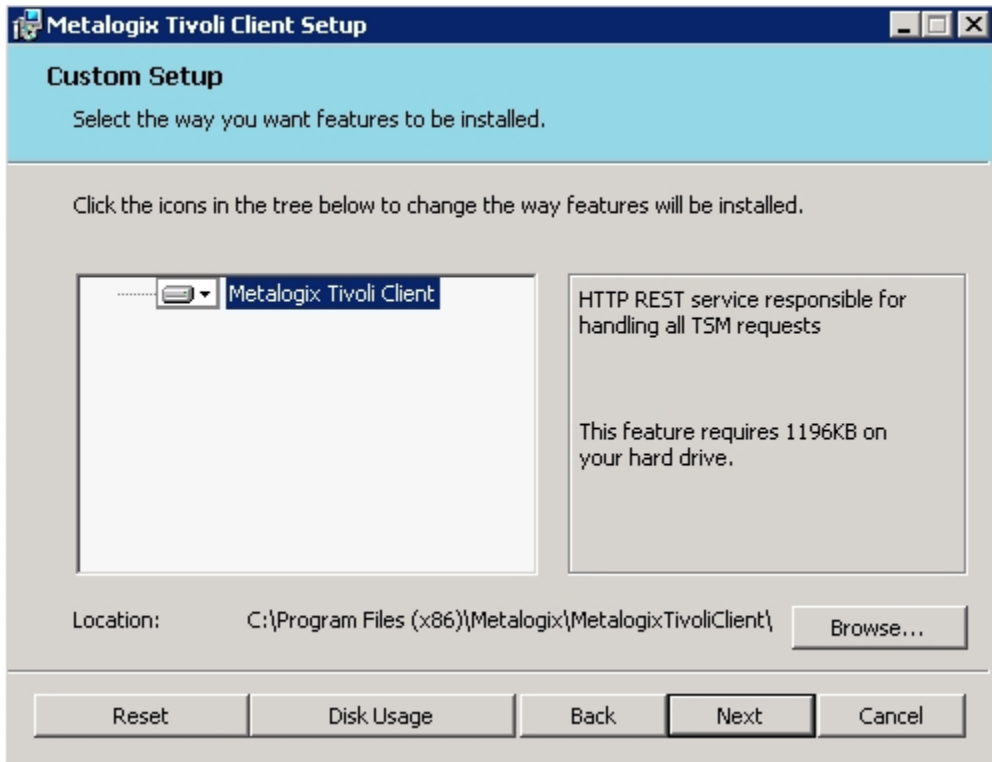
3. When the App Setup window opens, click Next.



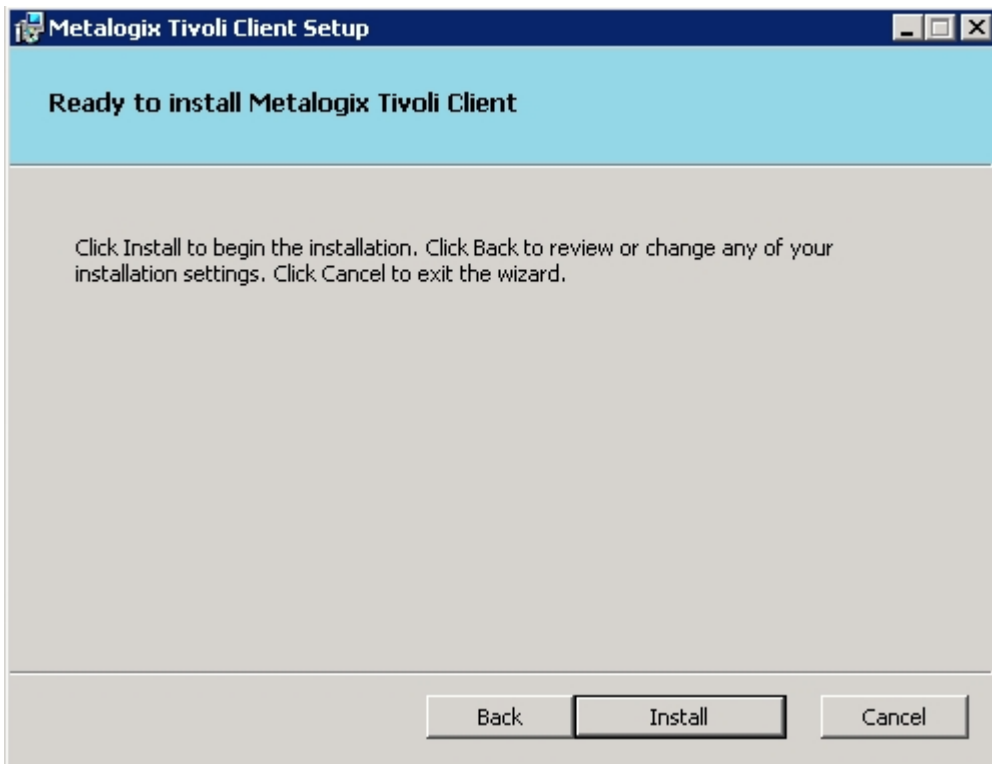
4. Click the checkbox, and click Next.



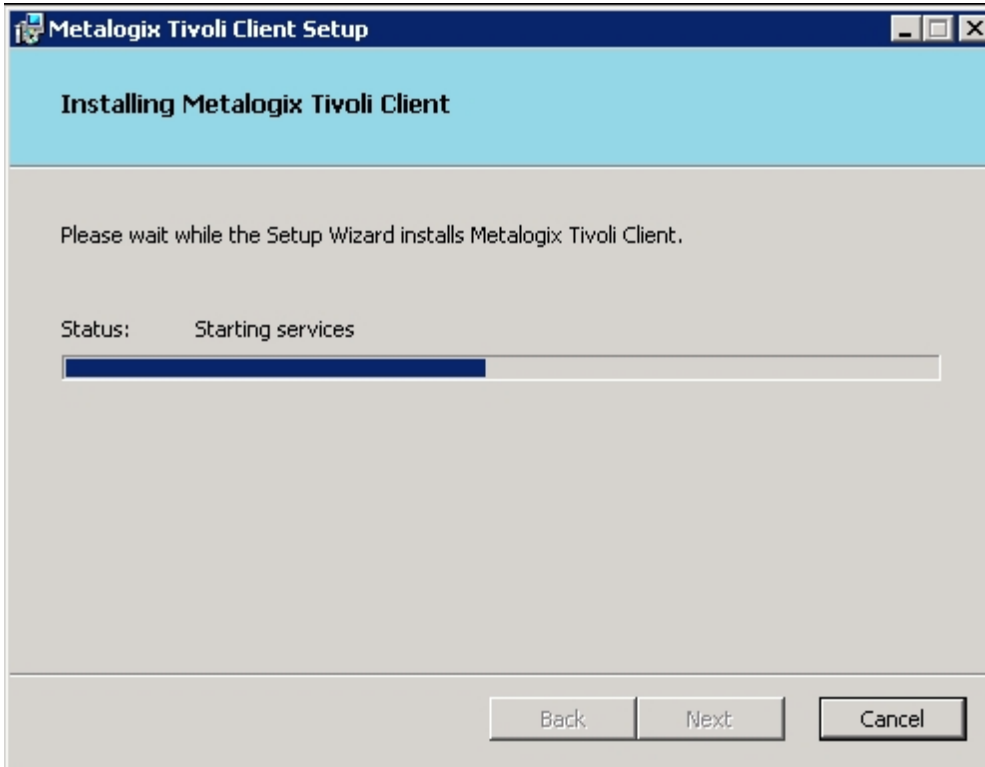
5. Click Next, or browse to a different location to install the service.



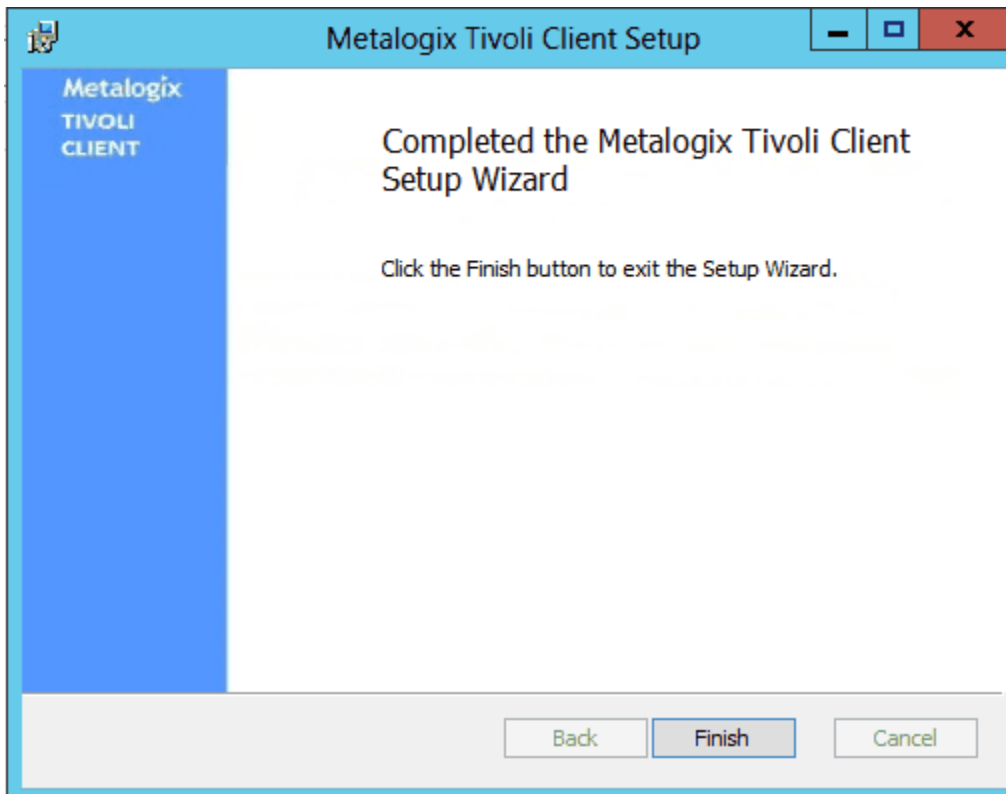
6. Click Install.



7. The window will refresh to show the progress.



8. Click Finish.



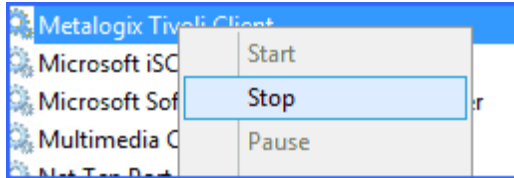
Confirmation

Open the services admin tool and make sure Metalogix Tivoli Client is running.

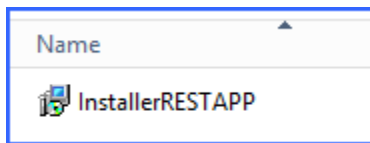
Local Session Manager	Core windo...	Running	Automatic
Metalogix Tivoli Client	HTTP RESTf...	Running	Automatic
Microsoft iSCSI Initiator Service	Manages In...		Manual

## Uninstalling the Metalogix Tivoli Client

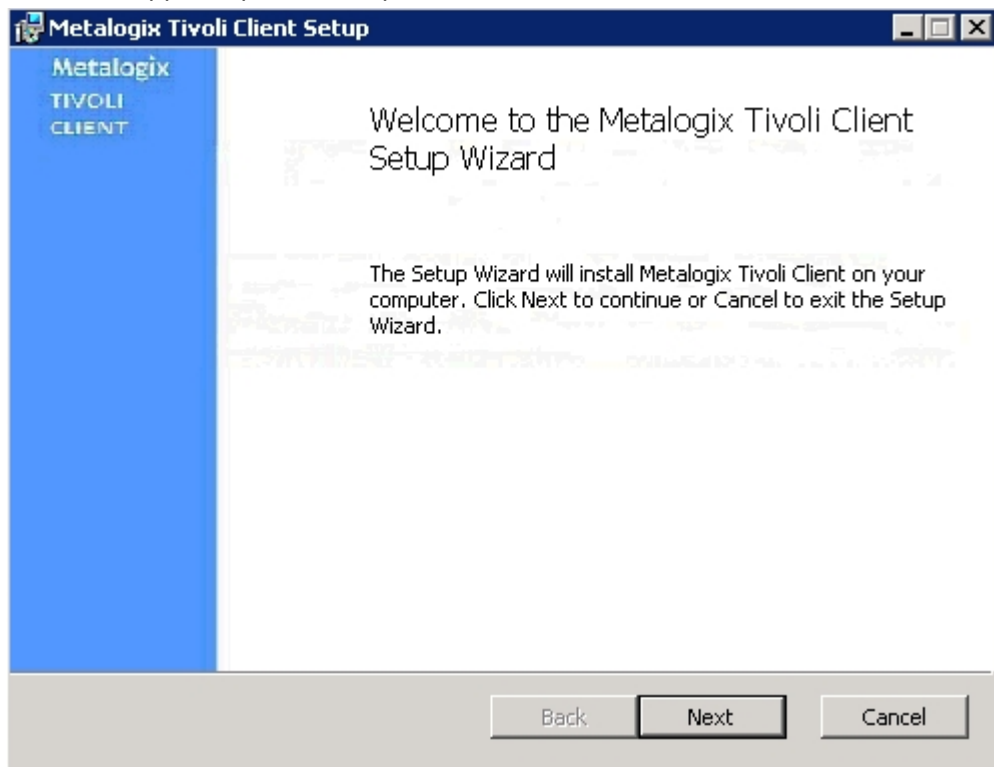
1. Stop the Metalogix Tivoli Client in Services.



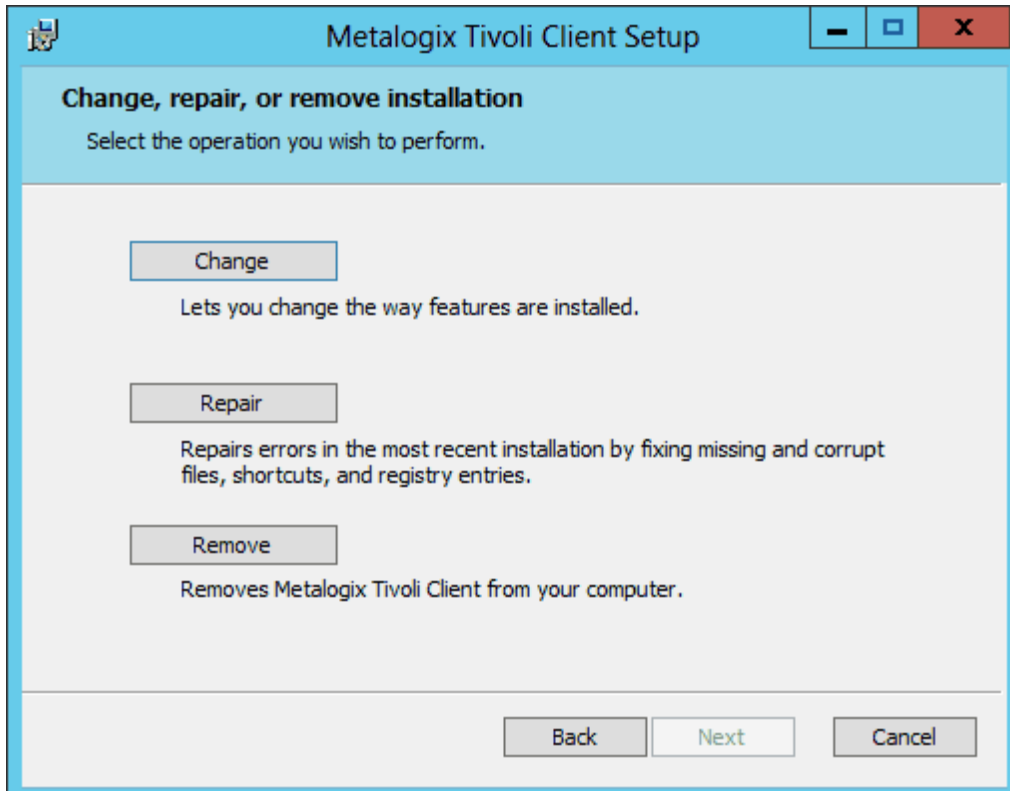
2. Double click the executable.



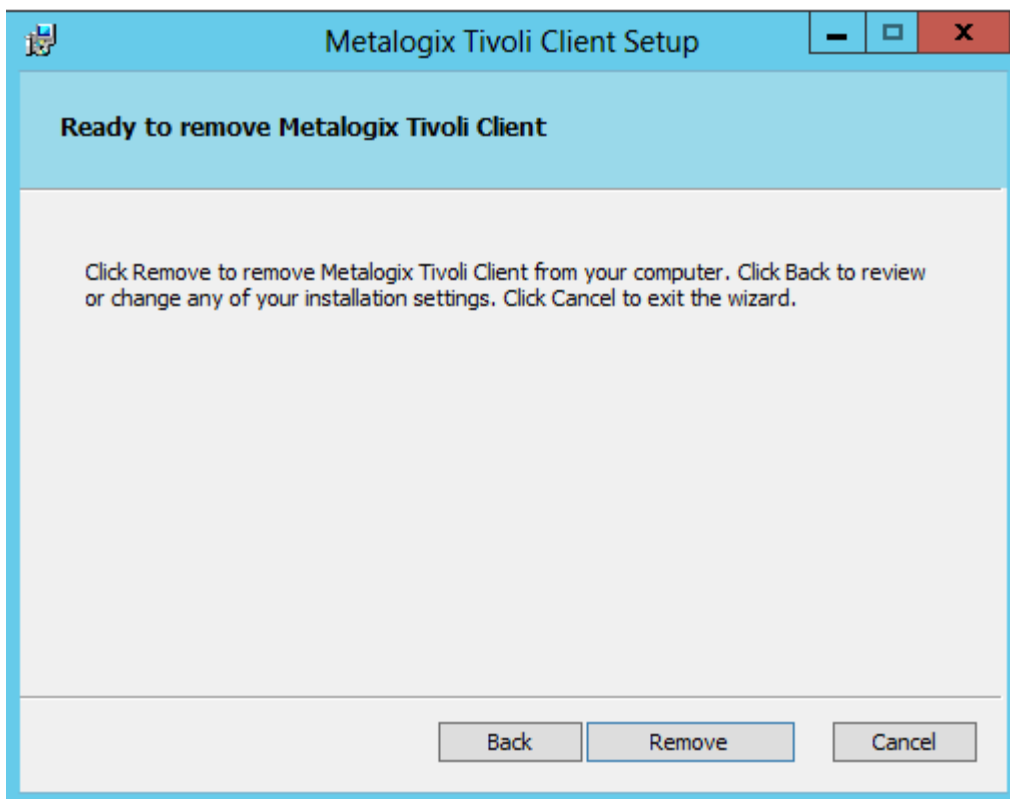
3. When the App Setup window opens, click Next.



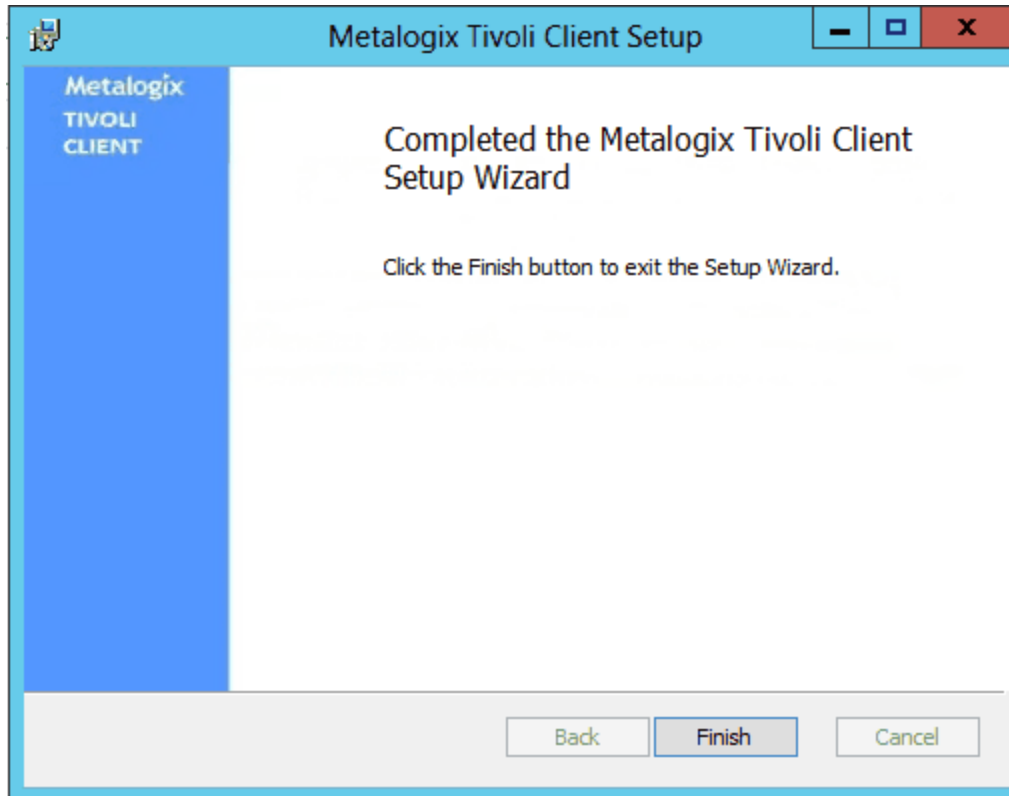
4. On the Change, repair or remove window, click Remove.



5. Click Remove.



6. Click Finish.



## 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.

Check to see that the TSM instance does not have Archive Data Retention Protection enabled. This will prevent the deletion of data on Tivoli, until the expiration date is reached. For more information please see this [link](#).

### Problem: Content won't migrate between nodes.

If multiple Nodes are configured on the Tivoli Server Manager, Administrator privileges need to be shared among nodes.

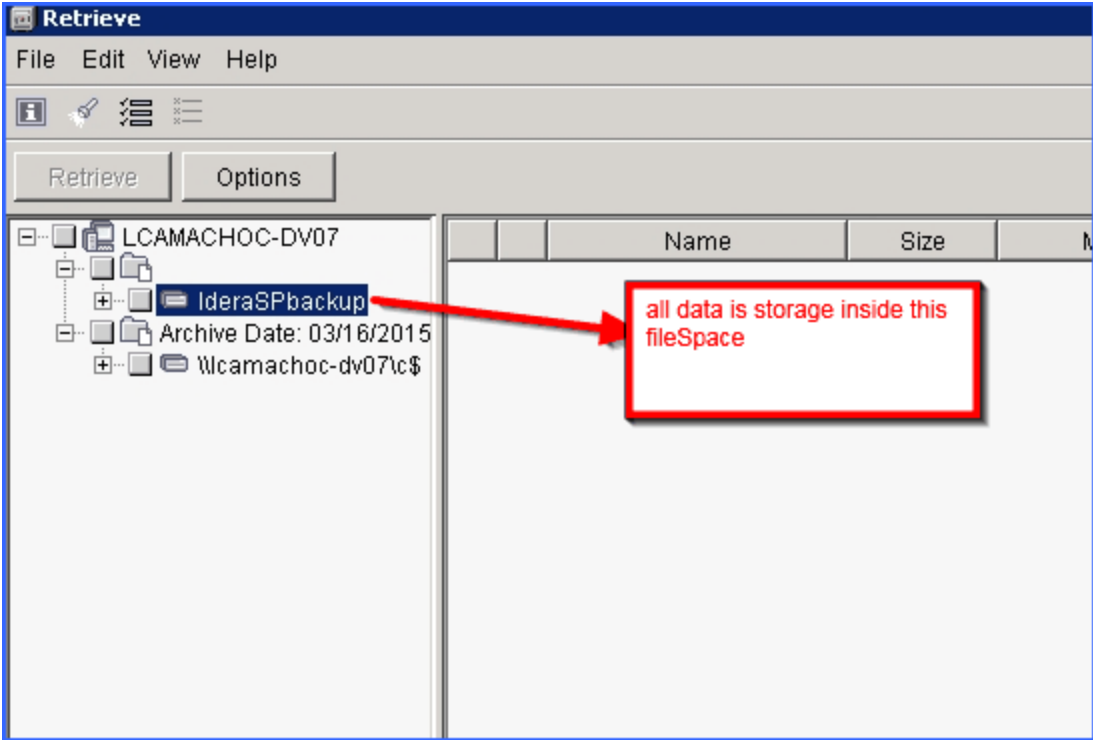
For more information and instructions, please see the following [link](#).

# Tips for Configuring Tivoli

If the Tivoli license has expired, there may be errors trying to recall or migrate data from the Tivoli endpoint. Renew the license to correct these errors.

## Location of Content on Tivoli

Within the Tivoli user interface, all content that is externalized by StoragePoint using the Tivoli endpoint adapter will be in a directory called IderaSPbackup.



## Tivoli Management Class

The Retain Version parameter should be greater than the Unused BLOB Retention period set for the profile using the endpoint. See the section on Unused BLOB Retention in the StoragePoint



Reference Guide.

```
IBM Tivoli Storage Manager
MgmtClass Name      : STANDARD
Description         : Installed default management class.
Space Management Technique : None
Auto Migrate on Non-Usage : 0
Backup Required Before Migration: YES
Destination for Migrated Files : SPACEMGPOOL
Copy Group
  Copy Group Name.....: STANDARD
  Copy Type.....: Backup
  Copy Frequency.....: 0 day(s)
  Versions Data Exists...: 2 version(s)
  Versions Data Deleted...: 1 version(s)
  Retain Extra Versions...: 30 day(s)
  Retain Only Version....: 60 day(s)
  Copy Serialization.....: Shared Static
  Copy Mode.....: Modified
  Copy Destination.....: BACKUPPOOL
  Lan Free Destination...: NO
  Deduplicate Data.....: NO

  Copy Group Name.....: STANDARD
  Copy Type.....: Archive
  Copy Frequency.....: Cnd
  Retain Version.....: 365 day(s)
  Copy Serialization.....: Shared Static
  Copy Mode.....: Absolute
  Retain Initiation.....: Create
  Retain Minimum.....: 65534 day(s)
  Copy Destination.....: ARCHIVEPOOL
  Lan Free Destination...: NO
  Deduplicate Data.....: NO

tsn>
```

this value should be grather than Retain Unused BLOBs or Retain Backup For

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