Symantec NetBackup™
Add-in for Microsoft SCVMM
Console Guide

Release 7.7
Symantec NetBackup™ Add-in for Microsoft SCVMM Console Guide

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This chapter includes the following topics:

- About the NetBackup Add-in for System Center Virtual Machine Manager (SCVMM)
- Notes on the NetBackup Add-in for SCVMM

About the NetBackup Add-in for System Center Virtual Machine Manager (SCVMM)

You can use the NetBackup Add-in for Microsoft System Center Virtual Machine Manager (SCVMM) console to recover virtual machines from NetBackup backup images.

You can use the add-in to do the following in the SCVMM console:

- Recover the full virtual machine to its original location or to an alternate location.
- Monitor the progress of recovery jobs that the add-in initiated.

Figure 1-1 shows an SCVMM environment with NetBackup servers and the NetBackup add-in.
Notes on the NetBackup Add-in for SCVMM

Note the following about the NetBackup add-in:

- This first release of the NetBackup add-in for SCVMM does not support the following: Monitoring of virtual machine backups, restore of individual files from virtual machine backups, or restore of the virtual machine to a staging location. See “Notes on restoring Hyper-V virtual machines with the Recovery Wizard” on page 35.

- To use the NetBackup add-in, you must log on to the SCVMM console with the Administrator role. For any user that is logged on with a different role, the add-in functionality is disabled.

- The NetBackup add-in must be installed by every user who wants to use it. See “Accessing the Recovery Wizard” on page 36.

- For future versions of the NetBackup Add-in for SCVMM: Due to Microsoft limitations on 3rd party add-ins, the NetBackup add-in does not support upgrades to the existing version of the add-in. When a new release of the add-in is available, the current version must be uninstalled.

Note: You can upgrade SCVMM without needing to reinstall the add-in.
Installing the NetBackup Add-in for SCVMM

This chapter includes the following topics:

- Requirements for the NetBackup Add-in for SCVMM
- Installing the NetBackup Add-in for SCVMM
- Installation message: Add-in cannot be installed
- Installation message regarding localized environments
- Uninstalling the NetBackup Add-in for SCVMM

Requirements for the NetBackup Add-in for SCVMM

Table 2-1 describes the requirements for the NetBackup Add-in for SCVMM.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Supported versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCVMM server</td>
<td>System Center 2012 R2 Virtual Machine Manager and later.</td>
</tr>
<tr>
<td></td>
<td>With the NetBackup 7.7 release, the Add-in has been validated with the latest available SCVMM 2012 R2 version (Rollup 6).</td>
</tr>
<tr>
<td></td>
<td>For the latest list of supported SCVMM versions, see the Symantec NetBackup Enterprise Server and Server 7.7 - 7.7.x OS Software Compatibility List available from the following location:</td>
</tr>
<tr>
<td></td>
<td>NetBackup Master Compatibility List</td>
</tr>
<tr>
<td>NetBackup</td>
<td>NetBackup 7.7 and later.</td>
</tr>
</tbody>
</table>
Installing the NetBackup Add-in for SCVMM

This topic describes how to obtain the installation files and install the NetBackup Add-in for SCVMM.

Table 2-2  NetBackup Add-in for SCVMM: installation requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>NetBackup add-in installation file</td>
<td>You can download the installation file NetBackup_7.7_Plugins.zip from the following location:</td>
</tr>
<tr>
<td></td>
<td><a href="https://symantec.flexnetoperations.com">https://symantec.flexnetoperations.com</a></td>
</tr>
<tr>
<td>SCVMM console host</td>
<td>Download the installation .zip file to the SCVMM console host, or to a different Windows host.</td>
</tr>
<tr>
<td></td>
<td>Note: The Windows host must have network connectivity to the SCVMM server.</td>
</tr>
<tr>
<td>SCVMM server(s) and their credentials</td>
<td>When the add-in is installed, it runs in the SCVMM console. The following are required to complete the add-in installation:</td>
</tr>
<tr>
<td></td>
<td>■ Host name or IP address of each SCVMM server.</td>
</tr>
<tr>
<td></td>
<td>■ User name and password of each SCVMM server.</td>
</tr>
<tr>
<td></td>
<td>■ Port number for each SCVMM server (default is 443).</td>
</tr>
<tr>
<td>Additional user access</td>
<td>Additional user access may be needed in the following situation:</td>
</tr>
<tr>
<td></td>
<td>■ User Account Control is enabled on the SCVMM console host.</td>
</tr>
<tr>
<td></td>
<td>■ The user who installs the add-in is not the user who installed the System Center.</td>
</tr>
<tr>
<td></td>
<td>See &quot;Installation message: Add-in cannot be installed&quot; on page 15.</td>
</tr>
</tbody>
</table>

To install the NetBackup Add-in for SCVMM

1  In your NetBackup product entitlement letter, locate your serial number for software downloads.

2  Go to the FileConnect webpage and enter your serial number: https://symantec.flexnetoperations.com

3  From FileConnect, download the NetBackup_7.7_Plugins.zip file to the SCVMM console host.
4 Unzip the downloaded NetBackup_7.7_Plugins.zip file and locate the SymcNBUAddIn.zip file.

The path to the SymcNBUAddIn.zip file is the following:
\NB_7.7_Plugins\NBscvmmAddIn\NetBackup_scvmmAddIn_Win\SymcNBUAddIn.zip

Note: Do not unzip the SymcNBUAddIn.zip file. That zip file is needed for installation of the add-in.

Zip files for other NetBackup plug-ins are also included in the downloaded NetBackup_7.7_Plugins.zip file. Those files are not required for the NetBackup Add-in for SCVMM.

5 Launch the SCVMM console and connect to the SCVMM server.

You need the server's host name or IP address, and its logon credentials.

6 In the SCVMM console, open the Settings workspace, then click the Import Console Add-in option in the SCVMM ribbon.

The Import Console Add-in Wizard appears.
7 In the **Select an Add-in** screen, click **Browse** and browse for the SymcNBUAddIn.zip file.

Several warnings appear. These warnings can be safely ignored.

8 Click **Continue installing this add-in anyway**.

If the **Import Console Add-in Wizard** states "The Add-in cannot be installed," you may need additional user access.

See "**Installation message: Add-in cannot be installed**" on page 15.

When you have the required user access, browse for the NetBackup add-in file again (step 7) and continue this installation procedure.
9 On the **Summary** screen, click **Finish**.

If the NetBackup add-in is installed on a Windows host that has a non-English system locale, SCVMM may issue a message when the installation completes.

See “Installation message regarding localized environments” on page 19.

The imported add-in appears in the **Jobs** window of the SCVMM console, and in the **Settings** workspace under **Console Add-ins**.
If you had logged into the SCVMM console with your own credentials, restart the SCVMM console when prompted.

**Note:** If you selected the *Use current Microsoft Windows session identity* option, a restart is not required.

**Note:** To use the NetBackup add-in, you must log on to the SCVMM console with the Administrator role. If you log on to SCVMM with a different role, the add-in functionality is disabled.

**Note:** The first time you use the NetBackup add-in, an End User License Agreement (EULA) appears. To use the add-in, you must accept the EULA.

**Installation message: Add-in cannot be installed**

Lack of user permissions may cause the error "Add-in cannot be installed" during installation of the NetBackup Add-in for SCVMM.

For example, the error may occur in the following situation:

- User Account Control is enabled on the SCVMM console host,
The user who installs the add-in on the SCVMM console is not the user who installed the System Center.

During the add-in installation, the following message appears:
To grant installation permissions to all authenticated users on the SCVMM console host

1. On the SCVMM console host, browse to the following location:
   
   C:\Program Files\Microsoft System Center 2012\Virtual Machine Manager\bin

2. Right-click the AddInPipeline folder, and click Properties.

3. Click Advanced on the Security tab, and click Continue.
4 Select the **BUILTIN** group, and click **Edit**.

5 Click **Select a principal**.
6 Enter **Authenticated Users**, and click **OK**.

7 To close each properties dialog, click **OK**.

   The following Microsoft article contains further information on this issue:
   
   [http://support.microsoft.com/kb/2904712](http://support.microsoft.com/kb/2904712)

8 To install the NetBackup Add-in for SCVMM:

   See “Installing the NetBackup Add-in for SCVMM” on page 11.

### Installation message regarding localized environments

If the NetBackup add-in is installed on a Windows host that has a non-English system locale, SCVMM may issue a message when the installation completes. The message states that an argument cannot be validated because it contains more than 64 characters. The error results from a Microsoft limitation on the length of the add-in name, which varies with the selected locale.

For example: The following appears if Windows was set to the French system locale:
Uninstalling the NetBackup Add-in for SCVMM

To uninstall the NetBackup Add-in for SCVMM

1. In the SCVMM console, open the **Settings** workspace.
2. In the **Console Add-ins** node, click on the Symantec NetBackup Add-in and then click **Remove**.
3. When you are prompted to confirm the removal, click **Yes**.

The uninstallation should appear in the **Jobs** window of the SCVMM console.
Recovering virtual machines

This chapter includes the following topics:

- Configure the NetBackup Recovery Wizard
- Notes on restoring Hyper-V virtual machines with the Recovery Wizard
- Accessing the Recovery Wizard
- Restore Virtual Machine Wizard screens
- Checking the status of a recovery job

Configure the NetBackup Recovery Wizard

To use the NetBackup Recovery Wizard to restore virtual machines, configure the following:

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Reference topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enable the NetBackup Web Services on the master server.</td>
<td>See “Enabling NetBackup Web Services on the Windows master server” on page 22. See “Enabling NetBackup Web Services on the UNIX or Linux master server” on page 25.</td>
</tr>
</tbody>
</table>
Table 3-1  Configuring the NetBackup Recovery Wizard (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Reference topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Create an authentication token file.</td>
<td>See &quot;Creating an authentication token for the NetBackup add-in for SCVMM&quot; on page 29.</td>
</tr>
<tr>
<td>4</td>
<td>Authorize the NetBackup Add-in to restore virtual machines.</td>
<td>See &quot;Authorizing the NetBackup add-in to restore virtual machines&quot; on page 31.</td>
</tr>
</tbody>
</table>

Enabling NetBackup Web Services on the Windows master server

By default, the NetBackup Web Services are disabled on the master server. To allow the NetBackup add-in for SCVMM to communicate with the master server, the NetBackup administrator must enable the NetBackup Web Services.

Table 3-2  To enable the NetBackup Web Services on the Windows master server

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Reference topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create a group <strong>nbwebgrp</strong> and a user <strong>nbwebsvc</strong>.</td>
<td>See “To create group nbwebgrp and user nbwebsvc” on page 23.</td>
</tr>
<tr>
<td>2</td>
<td>If the NetBackup master server is a server in an MSCS cluster, verify the domain user configuration.</td>
<td>See “To verify the domain user configuration if the NetBackup master server is in an MSCS cluster” on page 23.</td>
</tr>
<tr>
<td>3</td>
<td>Grant the <strong>Log On As Service</strong> right.</td>
<td>See &quot;To grant the Log On As Service right&quot; on page 23.</td>
</tr>
<tr>
<td>4</td>
<td>Set up the NetBackup Web Services on each master server that the add-in must access to perform restores.</td>
<td>See “To set up NetBackup Web Services” on page 24.</td>
</tr>
</tbody>
</table>
To create group **nbwebgrp** and user **nbwebsvc**

- On the master server, check whether the **nbwebgrp** group contains the **nbwebsvc** user.

  If the user and group do not exist, create them.

  **nbwebsvc** and **nbwebgrp** can be local user and local group or domain user and domain group. They can be an Active Directory user and group.

  **Note:** A combination of local user and domain group or domain user and local group is not supported. Both **nbwebsvc** and **nbwebgrp** must be local, or both must be part of the same domain.

  **Caution:** For security reasons, it is highly recommended to create this user with a strong password and disable remote logon for this user.

To verify the domain user configuration if the NetBackup master server is in an MSCS cluster

1. In **Active Directory Users and Computers**, click the **Users** folder under your domain controller.
2. Double-click the **nbwebsvc** user.
3. On the **nbwebsvc Properties** dialog, click the **Member Of** tab. It should contain the following records:
   
   **Domain Users**
   
   **nbwebgrp**
   
   By default, **nbwebgrp** is set as the primary group.
4. Select the **Domain Users** record and click **Set Primary Group**.
   
   Make sure that **Domain Users** is set as the primary group: the **Set Primary Group** option should be grayed out.
5. Click **OK**.
   
   The NetBackup web management console should now start correctly when you run setupWmc.bat in the next procedure.

To grant the Log On As Service right

1. Go to **Control Panel > Administrative Tools > Local Security Policy**.
2. Under **Security Settings**, click **Local Policies** and then **User Rights Assignment**.
3 Right click **Log on as a service** and select **Properties**.
Add the `nbwebsvc` user. For a domain user, include the appropriate domain.

4 Save your changes and close the **Log on as a service Properties** dialog.
Now you can start the WMC service from the Windows Services tool or by means of the `setupWmc` script. In a clustered environment, you must start the WMC service on all nodes.

To set up NetBackup Web Services

1 Run the `setupWmc` script on the master server, as follows:
   - If the master server is not in a clustered environment:
     ```bash
     install_path\NetBackup\wmc\bin\install\setupWmc.bat -password password
     ```
     The **password** is for the local user `nbwebsvc`.
   - If the master server is in a clustered environment:
     ```bash
     install_path\NetBackup\wmc\bin\install\setupWmc.bat -domain domain_name -password password
     ```
     The **domain_name** is for the domain that contains group `nbwebgrp` and user `nbwebsvc`. The **password** is for the local user `nbwebsvc`.

   Note: If `setupWmc.bat` fails to start the NetBackup Web Services, a message is displayed. The following log file contains further details:
   ```bash
   install_path\NetBackup\wmc\webserver\logs\nbwmc_setupWmc.log
   ```

   Enter the following for help with this command:
   ```bash
   setupWmc.bat -help
   ```

2 To make sure the NetBackup Web Services are enabled, go to the following location in a web browser:

   ```text
   https://<server>:<port>/nbwebservice/application.wadl
   ```

   Where:
   - **server** is the host name or IP address of the master server, or the virtual name or IP address for clustered environments.
   - **port** is the port number.

   To find the port that NetBackup Web Services uses, enter the following on the NetBackup master server:
   ```bash
   install_path\NetBackup\wmc\bin\install>configurePorts.bat -status
   ```

   The **HTTP 401** error indicates that the NetBackup Web Services are enabled.
Enabling NetBackup Web Services on the UNIX or Linux master server

By default, the NetBackup Web Services are disabled on the master server. To allow the NetBackup add-in for SCVMM to communicate with the master server, the NetBackup administrator must enable the NetBackup Web Services.

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Reference topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create a group nbwebgrp and a user nbwebsvc.</td>
<td>See “To create group nbwebgrp and user nbwebsvc” on page 25.</td>
</tr>
<tr>
<td>2</td>
<td>Set up the NetBackup Web Services on each master server that the add-in must access to perform restores.</td>
<td>See “To set up NetBackup Web Services” on page 26.</td>
</tr>
</tbody>
</table>

To create group nbwebgrp and user nbwebsvc

- On the master server, check whether the nbwebgrp group contains the nbwebsvc user.

  To create the nbwebgrp group, enter the following:

  ```
  /usr/openv/netbackup/bin # groupadd nbwebgrp
  ```

  To create the nbwebsvc user, enter the following:

  ```
  /usr/openv/netbackup/bin # useradd -g nbwebgrp -c 'NetBackup Web Services application account' -d /usr/openv/wmc nbwebsvc
  ```

  Enter the command with the values as shown. The -c option specifies the password file comment, and -d specifies the user's home directory as /usr/openv/wmc.

  **Note:** Symantec recommends default permissions (UMASK) for the nbwebsvc user. NetBackup assigns appropriate permissions to this user when it enables NetBackup Web Services.
To set up NetBackup Web Services

1. Run the `setupWmc` script on the master server:

   `/usr/openv/wmc/bin/install/setupWmc`

   Enter the following for help with this command:

   `setupWmc --help`

2. To make sure the NetBackup Web Services are enabled, go to the following location in a web browser:

   `https://<server>:<port>/nbwebservice/application.wadl`

   Where:
   - `server` is the host name or IP address of the master server, or the virtual name or IP address for clustered environments.
   - `port` is the port number.

   To find the port that NetBackup Web Services uses, enter the following on the NetBackup master server:

   `/usr/openv/wmc/bin/install/configurePorts --status`

   The HTTP 401 error indicates that the NetBackup Web Services are enabled.

Configuring ports for the NetBackup Web Services

The NetBackup Recovery Wizard requires the proper configuration of web ports for the NetBackup Web Services on the master server. Otherwise, you cannot authorize the NetBackup add-in for SCVMM to restore the virtual machines that were backed up by that master server.

The NetBackup installation process automatically runs the `configurePorts` script to configure NetBackup Web Services to run on any of the following sets of ports.

<table>
<thead>
<tr>
<th>Port set</th>
<th>HTTP port</th>
<th>HTTPS port</th>
<th>shutdown port</th>
</tr>
</thead>
<tbody>
<tr>
<td>First set</td>
<td>8080</td>
<td>8443</td>
<td>8205</td>
</tr>
<tr>
<td>Second set</td>
<td>8181</td>
<td>8553</td>
<td>8305</td>
</tr>
<tr>
<td>Third set</td>
<td>8282</td>
<td>8663</td>
<td>8405</td>
</tr>
</tbody>
</table>

If the `configurePorts` script does not find one of the sets free (for example, 8080, 8443, and 8205), it logs an error to the following file:

Windows:
On UNIX and Linux, the following appears on the NetBackup system console:

```
configurePorts: WmcPortsUpdater failed with exit status <status_code>
```

When this error occurs, use the following procedure on the master server to manually configure the ports. The `configurePorts` command is in the following location:

**Windows:**

```
install_path\NetBackup\wmc\bin\install\configurePorts
```

**UNIX or Linux:**

```
/usr/openv/wmc/bin/install/configurePorts
```
To configure ports for the NetBackup Web Services

1. On the master server, enter the following to list the currently configured ports:

   configurePorts -status

   **Example output:**

   Current Http Port: 8080
   Current Https Port: 8443
   Current Shutdown Port: 8205

2. Use the `configurePorts` command in the following format to re-configure a port:

   configurePorts -httpPort http_port | -httpsPort https_port | -shutdownPort shutdown_port

   You can configure one, two, or three ports at a time. For example, to configure the HTTP port to 8081 and the HTTPS port to 8553:

   configurePorts -httpPort 8081 -httpsPort 8553

   **Output:**

   Old Http Port: 8080
   New Http Port: 8081
   Old Https Port: 8443
   New Https Port: 8553

   Use this command as needed to configure a set of ports for HTTP, HTTPS, and shutdown. See Table 3-4 for a list of the port sets.

3. If the master server is in a clustered environment, do the following:

   - Make sure that the same set of ports are free on all the cluster nodes: Do step 1 on each node.
   - Reconfigure the ports on each node as required: Do step 2.
   - To override the ports that are used across all nodes, enter the following:

     configurePorts -overrideCluster true

     This command updates the following file on shared disk:

     Windows:
     `install_path\NetBackup\var\global\wsl\portfile`

     UNIX or Linux:
     `/usr/openv/netbackup/var/global/wsl/portfile`

     The NetBackup installer for Web Services uses this file during installation in a clustered mode.
Creating an authentication token for the NetBackup add-in for SCVMM

To allow the add-in to restore VMs, generate an authentication token on the NetBackup master server.

**To create an authentication token on the NetBackup master server**

1. Enter the following on the master server:

   **Windows**
   ```
   install_path\NetBackup\wmc\bin\install\manageClientCerts.bat -create SCVMM_console_host
   ```
   **UNIX, Linux**
   ```
   /usr/openv/wmc/bin/install/manageClientCerts -create SCVMM_console_host
   ```

   where `SCVMM_console_host` is the fully qualified domain name of the host where the add-in is installed. The `manageClientCerts` command returns the location of a compressed file that contains the authentication token.

   **Note:** Do not create or rename the authentication token file using any characters such as an asterisk (*) that violate the Windows file and directory naming conventions. If the name of the token file contains any reserved Windows characters, the add-in cannot be authorized to restore VMs from the master server’s backups. For more details on Windows naming conventions, see the Microsoft article [Naming Files, Paths, and Namespaces](https://docs.microsoft.com/en-us/windows/win32/fileio/naming-conventions).

2. Provide the compressed authentication token file to the SCVMM server administrator.

   **Caution:** Be sure to share or send the compressed file in a secure manner. With the master server token, the add-in can be authorized to restore virtual machines.

   See “Authorized the NetBackup add-in to restore virtual machines” on page 31.

Revoking an authorization token

You can delete or revoke a master server authentication token, as follows.
To revoke the authorization token

1 Enter the following on the master server:

Windows

install_path\NetBackup\wmc\bin\install\manageClientCerts.bat
-delete SCVMM_console_host

UNIX, Linux

/usr/openv/wmc/bin/install/manageClientCerts -delete
SCVMM_console_host

where SCVMM_console_host is the fully qualified domain name of the host
where the add-in is installed.

The -delete option removes the authentication token and its compressed file
from the master server. The add-in is no longer authorized to restore virtual
machines from the backups that this master server made.

2 To re-authorize the add-in for restores for this master server, create a new
token and if necessary re-add the master server in the SCVMM console.

See “Creating an authentication token for the NetBackup add-in for SCVMM”
on page 29.

See “Authorizing the NetBackup add-in to restore virtual machines” on page 31.

Listing all current authorization tokens

You can list all the master server authentication tokens that are presently in use.

To list all current authorization tokens

◆ Enter the following on the master server:

Windows

install_path\NetBackup\wmc\bin\install\manageClientCerts.bat -list

UNIX, Linux

/usr/openv/wmc/bin/install/manageClientCerts -list

Sample output:

<table>
<thead>
<tr>
<th>Client</th>
<th>Expiry Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCVMM_console_host_1</td>
<td>Thu Feb 06 16:16:51 GMT+05:30 2016</td>
</tr>
<tr>
<td>SCVMM_console_host_2</td>
<td>Fri Feb 07 11:22:53 GMT+05:30 2016</td>
</tr>
</tbody>
</table>
The command lists the SCVMM console hosts for which the tokens were created as well as their expiration dates. It can help diagnose communication problems between the SCVMM console host and the master server when a certificate has expired.

- For well-formatted output, set the command prompt or shell screen size to more than 100 units.
- Server names that are longer than 40 characters are truncated: Characters beyond the first 40 are replaced with “...”.

**Authorizing the NetBackup add-in to restore virtual machines**

The NetBackup master server initiates and controls the backup of virtual machines. To use the add-in to restore virtual machines, you must obtain a master server authentication token from the NetBackup administrator. Then you can authorize the add-in to restore the virtual machines that were backed up by that master server.

**To authorize the add-in to restore virtual machines (or to edit or delete an authorization)**

1. Ask the NetBackup administrator to provide an authentication token file.
   
   See “Creating an authentication token for the NetBackup add-in for SCVMM” on page 29.

2. Copy the authentication token file to the computer or laptop where the SCVMM console is launched.
   
   Make a note of the location.

3. In the SCVMM console ribbon, click the **NetBackup** option.
4 Click **Manage Master Servers**.

5 Enter the following under **Add Master Server** to specify a NetBackup master server and its authentication token.
Add Master Server

- **Master Server Name**
  Enter the fully qualified domain name of the master server.

- **Web services port**
  If the NetBackup administrator has not changed the port, accept the default (8443). Otherwise, contact the administrator for the correct port number.

- **Authentication token**
  Click **Browse** to select the authentication token file that the NetBackup administrator provided.
  Click **Add**. The server is added to the list of master servers that the add-in can communicate with.

6. To verify that the SCVMM console can communicate with the master server, click **Check Status**.

   If the communication is successful, the **Connection Status** field reads **Connected**.

7. To add other master servers and their authentication tokens, click **Add Master Server** in the upper right and repeat step 5 and 6.

8. To delete an authorization, click the delete icon next to the master server name.

When the authorization is deleted, the add-in can no longer restore from the backups that the master server performed.
9 To edit an authorization, click the edit icon opposite the master server name.

You can enter a different web services port, or click **Update Token** to select a different authentication token.
10 Click Save.

11 Click Close.

Notes on restoring Hyper-V virtual machines with the Recovery Wizard

Use the Symantec NetBackup Recovery Wizard in the SCVMM console to restore a virtual machine from its NetBackup image.

Note the following about the NetBackup Add-in Recovery Wizard:

- For the pre-requisites for using the Recovery Wizard:
  See “Configure the NetBackup Recovery Wizard” on page 21.
The NetBackup Recovery Wizard is for restore of an entire virtual machine, not for restore of individual files. To restore individual files from the virtual machine backup, use the NetBackup Backup, Archive, and Restore interface. See the topics on restoring individual files in the NetBackup for Hyper-V Administrator's Guide.

The NetBackup Recovery Wizard does not support restore to a staging location. To restore the virtual machine to a staging location, use the NetBackup Backup, Archive, and Restore interface.

Changes that are made through Hyper-V Manager on individual Hyper-V hosts or clusters can take up to 24 hours to be reflected in the SCVMM Console. Until then, the NetBackup add-in Recovery Wizard may not have the latest virtual machine configuration state. In that case, the Recovery Wizard’s pre-recovery checks related to the VM’s location may not be based on the most recent data in SCVMM. You may have to make a different selection in the Recovery Wizard. See “The pre-recovery checks in the NetBackup Add-in Recovery Wizard return out-of-date information about the VM” on page 50.

Accessing the Recovery Wizard

In the SCVMM console, you can launch the Recovery Wizard from the NetBackup add-in as described in this topic.

Note: To have access to the add-in, you must install it yourself. If you did not install it, the NetBackup option does not appear in the SCVMM ribbon.

To access the Recovery Wizard

1. In the SCVMM console, open the VMs and Services workspace.
2. Click All Hosts.
3. In the SCVMM ribbon, click the **NetBackup** option.

The first time you use the NetBackup add-in, an End User License Agreement (EULA) appears. To use the add-in, you must accept the EULA.

The components of the Symantec NetBackup add-in appear.

4. Click the **Recovery Wizard**.

The Virtual Machine Selection screen appears.

See "Virtual Machine Selection screen" on page 37.

**Restore Virtual Machine Wizard screens**

Use the following screens in the NetBackup add-in to restore a Hyper-V virtual machine.

**Virtual Machine Selection screen**

Use this screen to specify the virtual machine to restore.
Figure 3-1  Virtual Machine Selection screen in the NetBackup Recovery Wizard for SCVMM

![Virtual Machine Selection screen in the NetBackup Recovery Wizard for SCVMM](image)

Table 3-5  Fields in the Virtual Machine Selection screen of the NetBackup Recovery Wizard

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Master Server** | Use the drop-down list to select the master server that made the backup.  
If the master server is not in the drop-down, you must add the server to the master server list.  
See "Authorizing the NetBackup add-in to restore virtual machines" on page 31. |
| **VM Identifier** | Enter the display name, host name, or GUID of the virtual machine that you want to restore.  
**Note:** This field is not case-sensitive. |
| **Next**       | When you are done, click **Next** to go to the next screen of the wizard. |

Backup Image Selection screen

Use this screen to select a backup image from which to restore the virtual machine.
Figure 3-2 **Backup Image Selection** screen in the NetBackup Recovery Wizard for SCVMM

Table 3-6 Fields in the **Backup Image Selection** screen

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Backup Image Attributes</strong></td>
<td>Lists the information about the virtual machine backup image.</td>
</tr>
<tr>
<td></td>
<td>By default, the most recent backup image is displayed.</td>
</tr>
<tr>
<td><strong>Select Another Image</strong></td>
<td>Click this option to select a different backup image. See <a href="#">Select Another Image screen</a>.</td>
</tr>
<tr>
<td><strong>Virtual Machine Attributes</strong></td>
<td>Lists the information about the virtual machine at the time it was backed up.</td>
</tr>
<tr>
<td><strong>Virtual Machine Files</strong></td>
<td>Lists the files that are included in the virtual machine image.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> To see the entire path, you can pull the Name column border to the right, or hover over the row to display a tool tip.</td>
</tr>
<tr>
<td><strong>Next</strong></td>
<td>When you are done, click <strong>Next</strong> to go to the next screen of the wizard.</td>
</tr>
</tbody>
</table>
Select Another Image screen

Use the Select Another Image screen to find a backup image, then select the image in the lower pane and click Select. The virtual machine files from that image are displayed in the Backup Image Selection screen.

Figure 3-3  Select Another Image screen in the NetBackup Recovery Wizard for SCVMM

Table 3-7  Fields in the Select Another Image screen

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last 7 Days</td>
<td>Shows the backup images that were made within the last week, last 2 weeks, last month, or within a period that you specify.</td>
</tr>
<tr>
<td>Last 14 Days</td>
<td>Click Custom to select the period. Use the pull-down arrows to select a different date, and click Search. The images that fall within the search dates are displayed.</td>
</tr>
<tr>
<td>Last 30 Days</td>
<td>Select an image and click Select.</td>
</tr>
<tr>
<td>Custom</td>
<td></td>
</tr>
</tbody>
</table>

Restore Options screen

Use this screen to specify destination options for the restored virtual machine.
Figure 3-4  Restore Options screen in the NetBackup Recovery Wizard for SCVMM

Table 3-8  Fields in the Restore Options screen

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restore Destination</td>
<td>Lists the details on the restore destination.</td>
</tr>
<tr>
<td>Display Name</td>
<td>The display name of the virtual machine to restore.</td>
</tr>
<tr>
<td>Hyper-V server</td>
<td>The Hyper-V server on which to restore the virtual machine. The default is the original server. To restore the virtual machine to an alternate Hyper-V server, click Change and use the pull-down to select a different server. The pull-down lists the Hyper-V servers that the SCVMM server manages.</td>
</tr>
</tbody>
</table>
**Table 3-8** Fields in the Restore Options screen *(continued)*

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Restore Location</strong></td>
<td>The directory in which to restore the virtual machine. The default is the original directory. To select an alternate restore directory, click <strong>Browse</strong> and select the directory:</td>
</tr>
<tr>
<td><strong>Reset to Original</strong></td>
<td>Resets the restore location to the original Hyper-V server and original directory.</td>
</tr>
<tr>
<td><strong>Restore Options</strong></td>
<td>Lists the restore options.</td>
</tr>
<tr>
<td><strong>Overwrite existing virtual machine</strong></td>
<td>If a virtual machine with the same display name exists at the destination, that virtual machine must be deleted before the restore begins. Otherwise, the restore fails. Select this option to delete the existing virtual machine.</td>
</tr>
</tbody>
</table>

**Note:** To create a new directory for the restore location, click the **Explore directory** link at the bottom of the **Select Destination Folder** dialog. Administrator privileges may be required.

**Note:** When browsing for directories, the Microsoft **RemoteFileBrowserDialog** widget may display a dynamic volume with its GUID instead of with a volume letter. You can still select a destination folder under the GUID-identified volume. See the following Microsoft article on this issue:

**Using Dynamic Disks to host virtual machine files in Virtual Machine Manager**
Review Settings screen

Use this screen to review the settings that are used for the recovery and to start the recovery.

**Table 3-9**  Fields in the Review Settings screen

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Virtual Machine Details</strong></td>
<td>Lists the details of the virtual machine that is selected for restore.</td>
</tr>
<tr>
<td><strong>Image Details</strong></td>
<td>Lists the details of the backup image from which the virtual machine is to be restored.</td>
</tr>
</tbody>
</table>
Table 3-9  Fields in the Review Settings screen (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restore Destination</td>
<td>Lists the details of the restore destination.</td>
</tr>
<tr>
<td>Restore Options</td>
<td>Lists the restore options.</td>
</tr>
<tr>
<td>Recover</td>
<td>Runs pre-recovery checks to validate your selections. If the checks are successful, it starts the recovery. When you click <strong>Recover</strong>, a pop-up shows the job ID of the recovery job. The following topic explains how to check the status of the recovery: See “Checking the status of a recovery job” on page 44. <strong>Note:</strong> If changes to the VM were recently made through Hyper-V Manager (not through SCVMM), the pre-recovery checks may encounter out-of-date information about the VM. See “The pre-recovery checks in the NetBackup Add-in Recovery Wizard return out-of-date information about the VM” on page 50.</td>
</tr>
</tbody>
</table>

### Checking the status of a recovery job

You can check the status of a recovery job that is in progress and view the history of all recovery jobs.
To check the status of a recovery job

1. In the SCVMM console, open the Jobs workspace.
2. For the jobs that are in progress, click Running.
3. For a listing of recent jobs and past jobs, click History.

The Status column shows the job's percent completion.

For all jobs not in progress, the Status column reads Completed or Failed.

If the NetBackup master server is disconnected or goes down during the recovery, the Status column is updated to:

Failed – Lost connection with NetBackup Master Server.

Note: You can reorder the listing by clicking on a column header.
Note: The Restart and Cancel buttons are not supported and are grayed out.
Troubleshooting

This chapter includes the following topics:

- About logging for the NetBackup Add-in for SCVMM
- Viewing log messages for the NetBackup Add-in for SCVMM
- Changing the logging level for the NetBackup Add-in for SCVMM
- The pre-recovery checks in the NetBackup Add-in Recovery Wizard return out-of-date information about the VM

About logging for the NetBackup Add-in for SCVMM

The NetBackup Add-in for SCVMM records log messages about the following activities:

- Restoring VMs by means of the NetBackup add-in.
- Adding or removing NetBackup master servers from the NetBackup add-in.

<table>
<thead>
<tr>
<th>Table 4-1</th>
<th>Logging for NetBackup Add-in for SCVMM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Logging details</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Log message format</td>
<td>yyyy-mm-dd hh:mm:ss,ms [pid] message</td>
</tr>
<tr>
<td>Logging levels</td>
<td>Several logging levels (verbosity) are available:</td>
</tr>
</tbody>
</table>
| See “Changing the logging level for the NetBackup Add-in for SCVMM” on page 50.
Table 4-1  Logging for NetBackup Add-in for SCVMM (continued)

<table>
<thead>
<tr>
<th>Logging details</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log location</td>
<td>The log location depends on where SCVMM is installed and who is logged on.</td>
</tr>
<tr>
<td></td>
<td>The following is an example log location for user <strong>J Doe</strong>:</td>
</tr>
<tr>
<td></td>
<td>C:\Program Files\Microsoft System Center 2012 R2\Virtual Machine Manager\Bin\AddInPipeline\AddIns\J Doe\SyncNBUAddIn \Logs</td>
</tr>
<tr>
<td></td>
<td>See “Viewing log messages for the NetBackup Add-in for SCVMM ” on page 48.</td>
</tr>
<tr>
<td>Log retention period</td>
<td>All log messages are written to the same log file in a 24-hour period. Each log file is retained for 7 days and then is automatically deleted.</td>
</tr>
</tbody>
</table>

Viewing log messages for the NetBackup Add-in for SCVMM

**Note:** Log files are retained for 7 days and then are automatically deleted.

**Note:** If no log-related activity occurs in the NetBackup add-in during a 24-hour period, no log file is created.

To view the NetBackup Add-in for SCVMM log messages

1. In the SCVMM console, open the **VMs and Services** workspace.
2. Click **All Hosts**.
3. In the SCVMM ribbon, click the **NetBackup** option.
4. Click **Settings**.
5 Click **View Logs**.

![Settings](image1.png)

The log files are shown as follows:

![Logs](image2.png)

**Note:** The logs are written to the directory where you installed the NetBackup add-in.

6 Double-click on a log file.

The log file opens as follows:

![Log File](image3.png)

7 When you are finished, close the **Logs** window and click **Cancel**.
Changing the logging level for the NetBackup Add-in for SCVMM

To change the logging level
1. In the SCVMM console, open the **VMs and Services** workspace.
2. Click **All Hosts**.
3. Click the **NetBackup** option in the SCVMM console ribbon.
4. Click **Settings**.
5. Use the **Set Log Level** pull-down to select a different level.

By default, logging is set to the minimum level of detail (Error level). The following levels are available:

- **Error**: The default level.
- **Warning**: Includes the error messages.
- **Information**: Includes the warning and the error messages.
- **Debug**: Includes the information, warning, and error messages - the highest level of detail.

6. Click **Save**.

The pre-recovery checks in the NetBackup Add-in Recovery Wizard return out-of-date information about the VM

When you click **Recover** on the **Review Settings** screen of the Add-in Recovery Wizard, the wizard runs pre-recovery checks to validate your selections and the recovery destination. However, if changes to the VM were recently made through
Hyper-V Manager (not through SCVMM), the pre-recovery checks may encounter out-of-date information about the VM. Changes that are made through Hyper-V Manager on individual Hyper-V hosts or clusters can take up to 24 hours to be reflected in SCVMM. This delay is due to the Microsoft SCVMM refresh cycle, which the NetBackup add-in does not control.

For example: If the VM was recently deleted through the Hyper-V Manager, the deletion may not be reflected yet in SCVMM. In this case, the add-in’s pre-recovery checks report that the VM still exists. The following message appears:

A virtual machine with the same identity exists on <host> and the overwrite option was not selected. Please review restore options and select overwrite to continue.

To recover the VM, go back to the wizard’s Restore Options screen and select Overwrite existing virtual machine, and rerun the recovery.

Note: In an SCVMM environment, Microsoft recommends making VM configuration changes through SCVMM (not through the Hyper-V Manager on individual hosts or clusters). Changes that are made through the SCVMM Console are reflected immediately in SCVMM. The add-in’s pre-recovery checks therefore reflect the current state of the VM.