



**Hewlett Packard**  
Enterprise

# HPE VM Explorer

Software Version: 6.3

## HPE VM Explorer User Guide

Document Release Date: December 2016  
Software Release Date: December 2016

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# Getting Started

HPE VM Explorer is a low-cost, easy-to-use and reliable backup solution for VMware vSphere and Microsoft Hyper-V environments. Within minutes you can start centrally managing your backups to disk, tape and cloud through an intuitive and easy-to-navigate web interface.

Advanced backup capabilities include incremental backups and replication, snapshot integration and native cloud support for leading Cloud platforms. With instant VM recovery, direct file level restore from the cloud, encryption, and verification, HPE VM Explorer delivers resiliency, efficiency and agility in your virtual environments.

The following documentation explains the main tasks required for configuration and daily use of HPE VM Explorer. All services hereinafter are brought to you by HPE.

For more information on which HPE VM Explorer version is best suited to your needs, consult our data sheet, available on the [HPE website](#).

## What's new in version 6.3

The 6.3 release of HPE VM Explorer features a number of enhancements designed to provide:

- [Update to system requirements and supported environments, below](#)
- [Microsoft Exchange Server item \(e-mail\) level recovery, on the next page](#)
- [Amazon S3 compatible storage target, on the next page](#)
- [Virtual Disk Service enablement enhancements, on the next page](#)
- [Change default backup type to Incremental, on the next page](#)
- [Task Scheduler frequency enhancements, on page 10](#)

## Update to system requirements and supported environments

To keep HPE VM Explorer up to date with the latest environments and technologies, the 6.3 release features:

- VMware ESXi 6.5 support
- EXT4 64-bit file level recovery support
- .NET Framework 4.6.2 support (mandatory for HPE VM Explorer6.3)



**NOTE:** If you are running applications on a Hyper-V host that do not support .NET 4.6.2, you will not be able to install the Agent. Microsoft does not recommend running anything else on a Hyper-V host. For more information, see the Microsoft documentation, available here: [https://blogs.technet.microsoft.com/uspartner\\_ts2team/2014/01/15/if-im-using-hyper-v-what-other-services-should-run-in-the-host-os/](https://blogs.technet.microsoft.com/uspartner_ts2team/2014/01/15/if-im-using-hyper-v-what-other-services-should-run-in-the-host-os/).

## Microsoft Exchange Server item (e-mail) level recovery

With HPE VM Explorer 6.3 Enterprise & Professional editions you can now perform item (e-mail) level recovery: you can extract and recover any e-mail of your choice from the backup of a VM containing Microsoft Exchange Server.

This feature is only available to administrators and it supports both Microsoft Exchange Server 2013 and 2016.

## Amazon S3 compatible storage target

You can now configure a new cloud storage target (S3 Compatible), enabling the ability to point to a custom Amazon S3 compatible target. You can access this medium by selecting "S3 Compatible" in the Cloud Storage Targets section when adding a new server.

## Virtual Disk Service enablement enhancements

When adding a VMware hypervisor to your Data Center (such as ESXi), HPE VM Explorer will try to enable the use of VD Service on all hosts by default. This results in a streamlined setup process reducing the number of configuration steps. The VD Service enables faster and more data efficient backups/replications by leveraging the VMware VADP (vStorage APIs for Data Protection) for Change Block Tracking (CBT), thus saving you storage space.

**NOTE:** VADP is not supported with free editions of ESXi.

## Change default backup type to Incremental

HPE VM Explorer 6.3 now selects Incremental as the default backup type, if your system allows it. Incremental backups enable you to transfer only the modified data to the next backup, not your entire Virtual Machine, thus saving you time and resources.

## Task Scheduler frequency enhancements

HPE VMX 6.3, adds the option to configure schedules to run every 15 minutes and every 30 minutes. This enables more frequent replications to keep your DR copy up to date.

# Prerequisites

In order to download, install and operate HPE VM Explorer, you need to have certain systems installed on your computer.

## Browser prerequisites

You need to have one of these browsers installed on your system to download and run HPE VM Explorer:

- Mozilla Firefox
- Google Chrome
- Microsoft Edge
- Opera
- Internet Explorer 11

## Operating system and .NET version prerequisites

HPE VM Explorer has been designed to work with the following operation systems:

- Windows Server 2016
- Windows Server 2012 R2
- Windows Server 2012
- Windows Server 2008 R2

The supported Microsoft .NET Framework version is 4.6.2.

## ESXi versions

HPE VM Explorer supports the following versions of ESXi:

- VMware ESXi 6.5
- VMware ESXi 6.0
- VMware ESXi 5.5

- VMware ESXi 5.1
- VMware ESXi 5.0
- VMware ESX/ESXi 4.1
- VMware ESX/ESXi 4.0

## Hyper-V versions

HPE VM Explorer supports the following Hyper-V versions:

- Hyper-V Server 2016
- Hyper-V Server 2012 R2
- Hyper-V Server 2012
- Hyper-V Server 2008 R2 (SP1)

**NOTE:** You need to have .NET Framework 4.6.2 installed on your Hyper-V server.

## Tape Libraries / Autoloaders

HPE VM Explorer supports the following Tape Libraries/Autoloaders:

- HPE StoreEver 1/8 G2 Tape Autoloader
- HPE StoreEver MSL2024
- HPE StoreEver MSL4048
- HPE StoreEver MSL6480
- HPE StoreEver MSL8096
- HPE StoreOnce VTL
- Dell PowerVault 124T

**NOTE:** HPE VM Explorer requires barcodes on every tape (which means, no support for standalone tape drives, or libraries without labeled media). HPE VM Explorer does not currently work with mixed media partitions. HPE VM Explorer does not support WORM media. HPE VM Explorer does not currently support Cleaning tapes.

## Virtual storage systems

HPE VM Explorer supports EMC ScaleIO v1.32.

# Microsoft Exchange Server

HPE VM Explorer supports Microsoft Exchange Server versions 2013 and 2016 (any update) for the Exchange Server recovery feature.

# Installation and Configuration

After downloading HPE VM Explorer, we recommend that you go to your browser's download folder and transfer the HPE-VMExplorer-6.3.xxx.msi file to a folder of your convenience. Then:

1. Run *HPE-VMExplorer-6.3.xxx.msi*. **Step Result:** The **HPE VM Explorer Setup** wizard screen is displayed.
2. In the **Welcome to the HPE VM Explorer Setup** wizard screen, click **Next**.
3. In the **End User License Agreement** wizard screen, read the terms and conditions, select the **I accept the terms in the License Agreement** checkbox and click **Next**.
4. In the **Destination Folder** wizard screen, click **Change** if you want to select a different destination folder than the default one, or click **Next**.
5. Click **Install**.
6. In the **Completed the HPE VM Explorer Setup Wizard** screen, the **Launch HPE VM Explorer now** checkbox is selected by default, but you can clear it if you want to run HPE VM Explorer at a later date. Click **Finish** to exit the installation wizard and start HPE VM Explorer.

**Important!** You need to have SSL 3.0 or earlier deactivated on the computer on which you are installing HPE VM Explorer. See the Microsoft Knowledge Base Article dedicated to restricting the use of certain cryptographic algorithms and protocols in this respect, available [here](#).

[This video tutorial](#) shows you how to install, configure and activate your license key in HPE VM Explorer.

## Starting VM Explorer

If the **Launch HPE VM Explorer now** checkbox is selected by default in the **Completed the HPE VM Explorer Setup Wizard** screen at the end of your installation process, HPE VM Explorer will start as soon as the installation is complete.

To start HPE VM Explorer independently from the installation process, go to *Start > All Programs > HP Enterprise > HPE VM Explorer* or double-click the HPE VM Explorer icon on your desktop.

- If this is your first time using HPE VM Explorer, the **HPE VM Explorer - WebServer Settings** window is displayed, where you can configure the web settings for the application. For more information, see [Configuring HPE VM Explorer, on the next page](#).
- If this is not your first HPE VM Explorer installation and you want to preserve your previous settings (and your previous installation directory is intact), click the green Earth icon in the HPW HPE VM

Explorer® - Starter screen. To modify your previously saved configurations, click Web Settings. For more information, see [Configuring HPE VM Explorer, below](#).



#### **HPE VM Explorer Starter screen**

Next, you need to log on to the application. For more information, see [Running the HPE VM Explorer web interface](#), on page 20.

## Configuring HPE VM Explorer

If you have not configured the HPE VM Explorer web server or if the HPE VM Explorer web server is not running, once you run HPE VM Explorer for the first time, you need to configure the web server settings. To do so, click **WebServer Settings** in the **HPE VM Explorer® – Starter** screen.

1. In the **HPE VM Explorer – Web Server** settings window, configure the boxes, as follows:

#### **In the Web Interface Address section:**

##### **Hostname or IP**

Change your local computer hostname or IP, if different from the default one.

##### **Listening Port**

Change the listening port, if different from the default one.

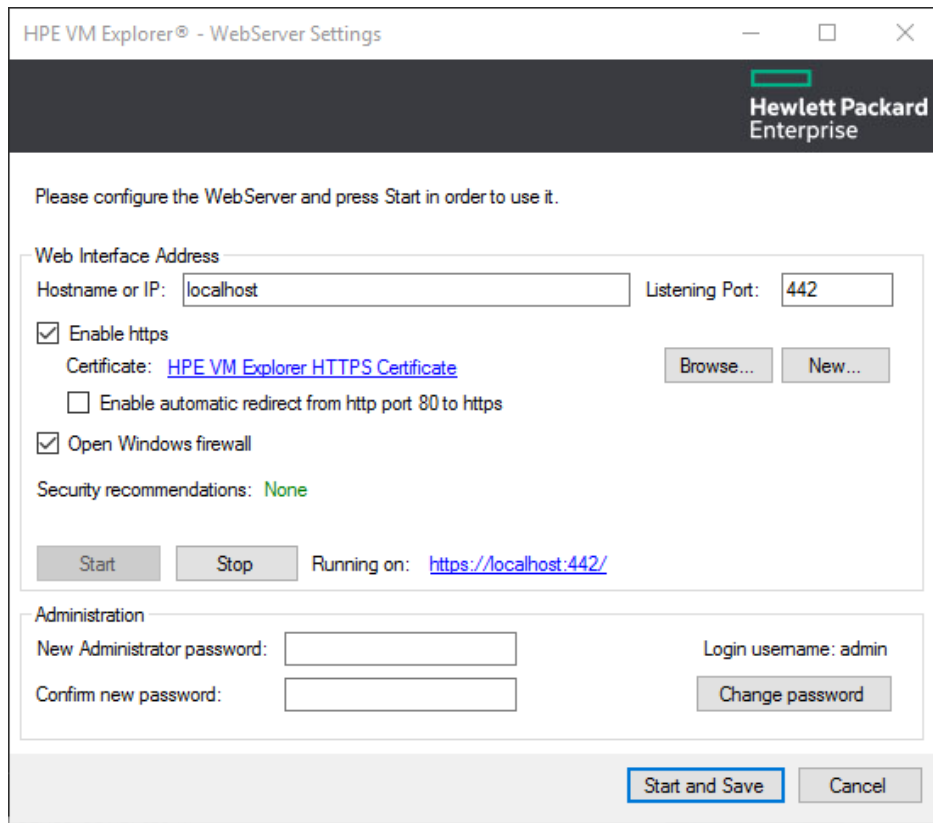
##### **Enable https**

Select this checkbox to make the web interface accessible using the HTTPS protocol. This causes the web address to change accordingly. Not enabling HTTPS will require you to change the listening port from the default 443. Also, depending on your selection, the UI options available to you at this stage may vary.

##### **Certificate**

Displays the HTTPS certificate. A self-signed HTTPS certificate for HPE VM Explorer is automatically installed on your local computer, in the Personal store. To find out more information about your certificate, click the hyperlink and then read the **Certificate** dialog box.

**Important!** When using your personal certificate, make sure it is valid (not expired), that it has a private key and that the Enhanced Key Usage has already been set. The Enhanced Key Usage is an option you need to add in your Personal Certificate to make it valid for HPE VM Explorer.



### WebServer Settings

The **Friendly Name** (or the **Issuer By** name, if the first is not available) of the current HTTPS certificate is displayed in the **Details** tab, otherwise HPE VM Explorer will display *Certificate not found*.

**NOTE:** You can use only certificates already installed in the following folders of your local computer:

- Personal
- Trusted Root Certification Authorities
- Intermediate Certification Authorities
- Trusted Publishers



- Untrusted Certificates
- Third-Party Root Certification Authorities
- Trusted People
- Other People

When finished, click **OK** to return to the **HPE VM Explorer- WebServer Settings** window.

**Browse...**

Click this button to add a new certificate. If you already have one available on your computer, select the desired certificate in the **Windows Security** dialog box and then click **OK**.

**New**

Click this button to generate and install a new HPE VM Explorer HTTPS certificate after clicking **OK** in the **Create new https certificate** confirmation dialog box.

**Enable automatic redirect from http port 80 to https**

Select this checkbox to enable automatic redirection from the default HTTP port 80.

**Open Windows firewall**

Select this checkbox to enable Windows Firewall to allow access for HPE VM Explorer.

**SSL protocols status: Disabled/Enabled**

HPE VM Explorer needs all SSL protocols (3.0, 2.0) to be disabled to function properly. For more information, see [Microsoft KB Article 187498](#).

**Start**

Click to start the web server, if not started already.

**Stop**

Click to stop the web server, if needed.

**Running on:**

Displays the localhost. Note that, depending on the settings, your browser could display a warning message when opening HTTPS links, as the HTTPS certificate is self-signed and not issued by a trusted certificate authority. To select a user trusted certificate, click **Browse...** See earlier in this publication for the options available to you at this stage.

**In the Administration section:**

**New Administrator password**

Type your administrator password before entering the web interface for the first time. The default login user name is *admin*. Your password must comply with the HPE VM Explorer security policy and must observe the following requirements whenever you create or modify a user:

- A minimum of 10 and a maximum of 20 characters
- At least one lower case letter [a-z]
- At least one upper case letter [A-Z]
- 2 digits (0-9)
- At least 1 special character (such as: % & ? ; : ! - . \_ \* @ # + \$ =)

To recover a lost password, see [Recovering your password, on page 112](#).

#### **Confirm new password**

Confirm your administrator password.

#### **Change password**

Click if you need to change your existing password.

2. When finished, click **Start and Save**. **Step Result:** If you have correctly configured all settings, HPE VM Explorer opens in your default browser. For the list of supported browsers, see [Browser prerequisites, on page 11](#).

If there are problems starting the web client, you can start the standalone version. Click **Legacy Interface** from the Starter Dialog.

## Disabling SSL protocols

For security purposes, we recommend that you disable SSL protocols versions 2.0 and 3.0 when using HPE VM Explorer.

To disable SSL protocol 2.0:

1. Go to **Start > regedit.exe**, right-click it and point to **Run as administrator** on the shortcut menu.
2. In the **Registry Editor** window, expand the tree to *HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\Schannel\Protocols\SSL 2.0*.
3. If, under **Protocols**, the keys from the subpaths **SSL 2.0/Server/Enabled** and **SSL 2.0/Client/DisabledByDefault** do not exist, create them, as follows:
  - a. Right-click **Protocols** and, in the shortcut menu, click **New > Key**, name the key **SSL 2.0**.
  - b. Right-click the **SSL 2.0** key, point to **New > Key** and then name the key **Client**.
  - c. Under **SSL 2.0**, right-click **Client**, point to **New > DWORD (32-bit) Value**, name the value **DisabledByDefault**.
  - d. Right-click the **SSL 2.0** key, point to **New > Key** and name the key **Server**.
4. Under **SSL 2.0**, right-click **Server**, point to **New > DWORD (32-bit) Value** and name the value

**Enabled.**

5. Under **SSL 2.0**, select **Client** and then, in the right pane, double-click the **DisabledByDefault REG\_DWORD** value.
6. In the **Edit DWORD (32-bit) Value** dialog box, in the **Value Data** box, change the value to **1** and click **OK**.
7. Under **SSL 2.0**, select **Server** and then, in the right pane, double-click the **Enabled REG\_DWORD** value.
8. In the **Edit DWORD (32-bit) Value** dialog box, in the **Value Data** box, leave the value at **0** and then click **OK**.
9. Restart your Windows server.

To disable SSL protocol 3.0:

1. Go to **Start > regedit.exe**, right-click it and point to **Run as administrator** on the shortcut menu.
2. In the **Registry Editor** window, expand the tree to **HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\Schannel\Protocols\SSL 3.0**.
3. If, under **Protocols**, the keys from the subpath **SSL 3.0/Server/Enabled** do not exist, create them, as follows:
  - a. Right-click **Protocols** and, on the shortcut menu, point to **New > Key** and name the key **SSL 3.0**.
  - b. Right-click the **SSL 3.0** key, point to **New > Key** and name the key **Server**.
  - c. Under **SSL 3.0**, right-click **Server**, point to **New > DWORD (32-bit) Value** and name the value **Enabled**.
4. Under **SSL 3.0**, select **Server** and then, in the right pane, double-click the **Enabled DWORD** value.
5. In the **Edit DWORD (32-bit) Value** dialog box, in the **Value Data** box, leave the value at **0** and then click **OK**.
6. Restart your Windows server.

For more information, visit the Microsoft support page: <https://support.microsoft.com/en-us/kb/245030>.

### **Disabling 3DSCipher**

To avoid a security issue, you must also disable 3DSCipher on the system where you have installed HPE VM Explorer. To do so:

1. Open your Group Policy Editor. To do so, go to **Start > Run**, type **gpedit.msc** and press **Enter**.
2. In the **Local Group Policy Editor** screen, expand **Administrative Templates > Network** and click **SSL Configuration Settings**.

3. Under **Setting**, open **SSL Cipher Suite Order** and then, in the **SSL Cipher Suite** dialog box, click **Enabled**. The SSL Cipher suites are displayed below **Options**, delimited by "," (comma).
4. Copy and paste the SSL Cipher suites in a text editor, then search and remove ciphers containing the *3DES* occurrence. Then, replace the SSL Cipher suites in the **SSL Cipher Suite** dialog box with the edited string and click **Apply**.
5. When finished, restart your computer to apply the new settings with the disabled 3DESCipher.

## Configuring TCP ports

HPE VM Explorer uses different TCP ports to communicate with hosts or enable communication between hosts:

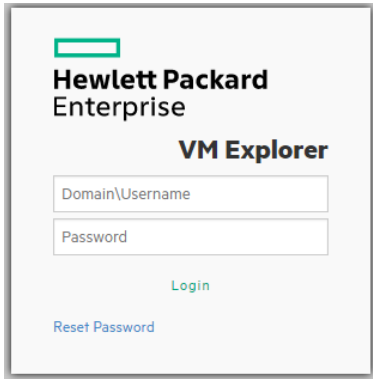
Server	Required Port Number	Observations
ESXi Servers	443 (HTTPS)	Enabling <b>Use HPE VM Explorer Agent</b> on ESXi requires ports 22 (SSH), 443 (HTTPS) and 62000-65000.  Using VDDK requires port 902.
vCenter	443 (HTTPS)	-
Hyper-V Servers	9000, 9001, 62000-65000	-
Linux and FreeBSD	22 (SSH), 2500-3000 and 62000-65000	-

## Running the HPE VM Explorer web interface

After you have finished configuring HPE VM Explorer, you need to log on using the credentials you selected during the configuration stage. For more information, see [Configuring HPE VM Explorer, on page 15](#).

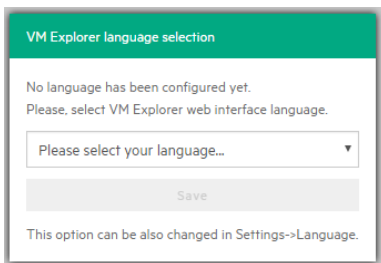
To run HPE VM Explorer, go to **Start > RUN > HPE VM Explorer** and then, in the **HPE VM Explorer® - Starter** window, click the green Earth icon and then enter your login credentials.

The administrator login name is **admin** and the password has to be previously configured in the Web Interface settings. If the login credentials are correct, the user can access the VM Explorer Web Interface.



**Web logon**

If you have not selected your language of choice yet, you can choose which localization to use in the **HPE VM Explorer language selection** screen.



**Language selection (first time access)**

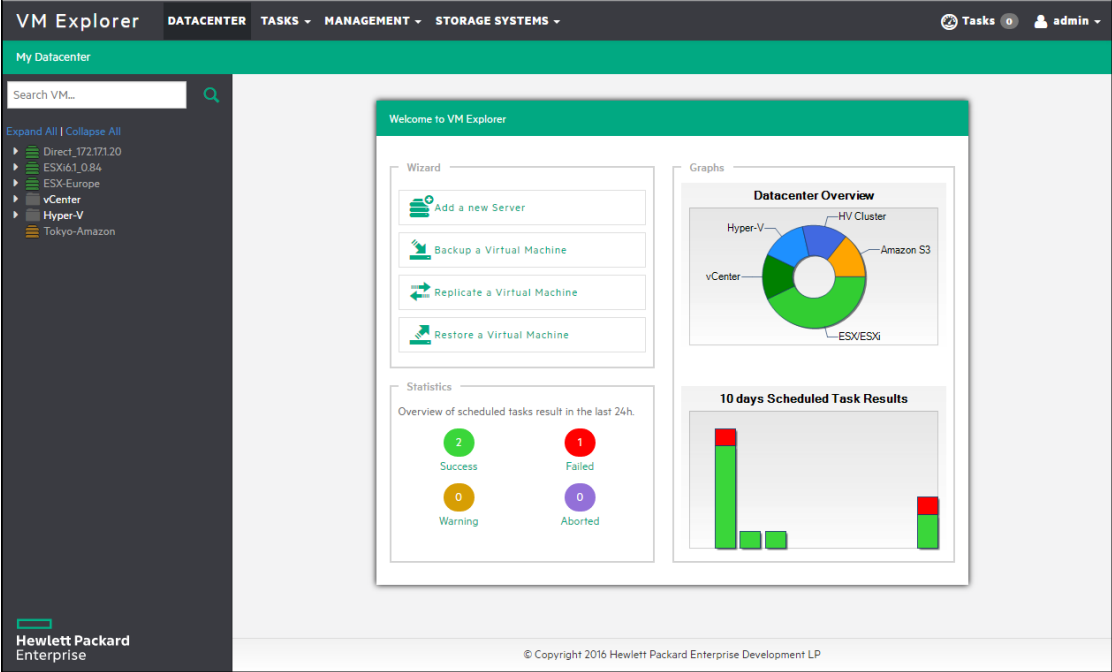
The languages currently available to you at this stage are:

- English
- French
- German
- Italian
- Spanish
- Japanese
- Russian
- Chinese—simplified
- Portuguese—Brazilian

The Web Interface of HPE VM Explorer consists of the following menus and submenus:

Menu	Datacenter	Tasks	Management	Storage System	User Menu (on the right side)
Submenus	-	Scheduler	Backup Explorer	SAN	User options

		Tasks Task History	Replication Explorer Instant Recovery Service File Explorer	Infrastructure Tape Infrastructure	Settings Manuals About... Logout
--	--	--------------------------	---	--	--



HPE VM Explorer Datacenter view

# Setting Up Your Storage Environment in HPE VM Explorer

You can set up a variety of storage targets in HPE VM Explorer. For more information, see:

- [Adding Hypervisor servers, on the next page](#)
- [Adding storage target servers, on page 36](#)
  - [Adding an Amazon S3 storage target, on page 37](#)
  - [Adding OpenStack, HPE Helion, Rackspace, Azure and S3 Compatible cloud storage targets, on page 37](#)
  - [Adding Linux and FreeBSD servers, on page 38](#)
- [Configuring the SAN Infrastructure, on page 44](#)
- [Configure Tape Infrastructure, on page 46](#)

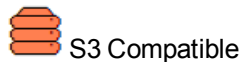
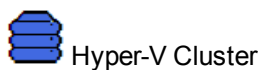
## Working with Servers in HPE VM Explorer

You can add a large variety of servers to the HPE VM Explorer Datacenter, from hypervisors to public/private clouds, which you can later modify or delete.

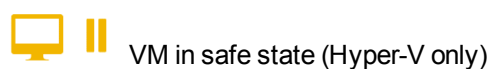
## Visual representations of the supported servers and VM status

To make navigation easier for you, every supported server is represented by a dedicated icon in the datacenter, as follows:





In addition, various icons enable you to recognize the state of the Virtual Machine deployed in the Hypervisor:



## Adding Hypervisor servers

Before you can start using HPE VM Explorer, you need to add your Hypervisor hosts.

There two ways to add a hypervisor server.



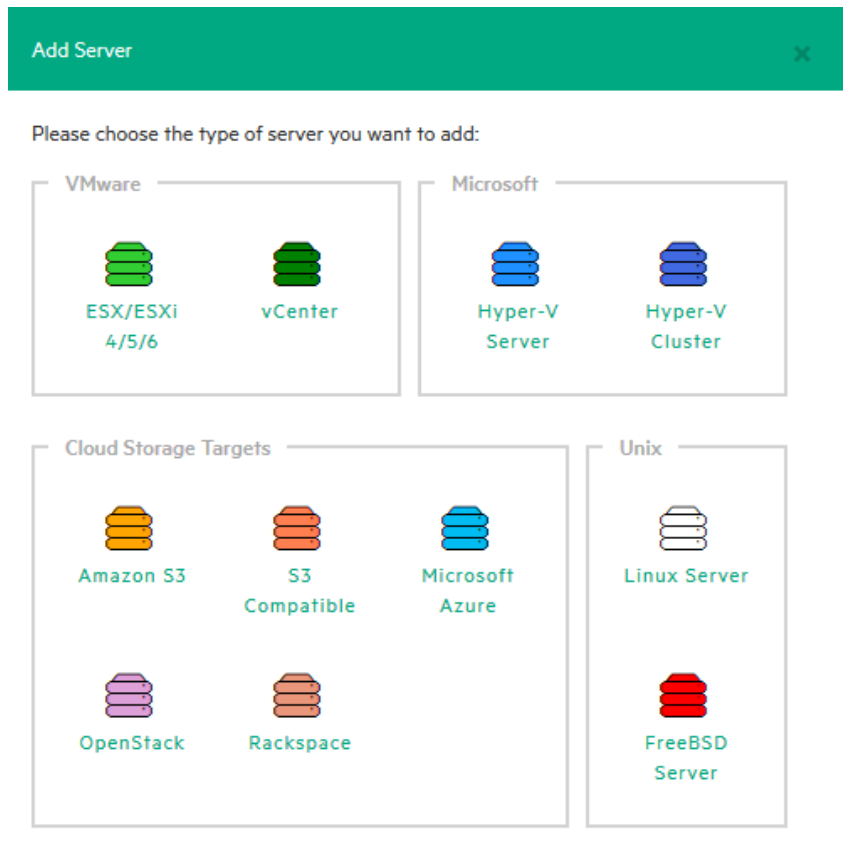
1. Click the **Add a New Server** link on the intro page of HPE VM Explorer.
2. Click **Add Server**.

OR

1. Right-click **My DataCenter**.
2. Click **Add Server**.

Both methods start the **Add Server Wizard**.

3. In the **Add Server** wizard screen, select the type of server you want to add.



#### Add Server screen

4. Configure the **Add Server <Server Name>** wizard screen, as required. During the configuration process, you can navigate through the previously completed wizard screens at any time. Depending on your server selection at this stage, the procedures available to you may vary. Read later in this publication for more information.

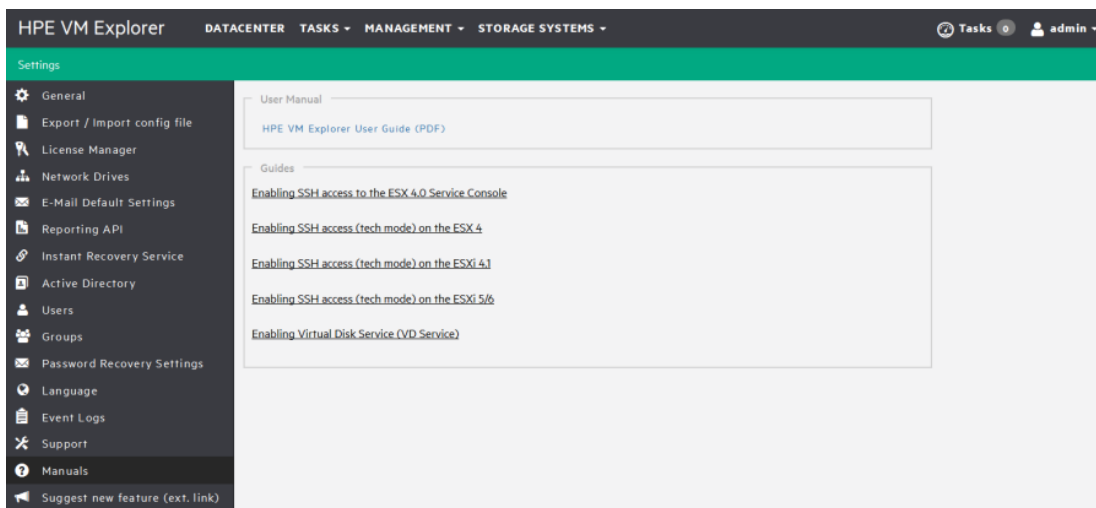
**NOTE:** Before adding servers to HPE VM Explorer, we recommend that you integrate your host (s) into a folder structure to increase your efficiency. To do so, right-click a host on the **My Datacenter** view, point to **Add Folder** and then type a meaningful name for your folder. Note that you can only add one child level folder to the root.

## Initializing Virtual Disk Service (VD Service)

When enabled, the Virtual Disk service uses the VMware VDDK (Virtual Disk Development Kit) to perform backups. This will leverage VMware's VADP (vStorage API's for Data Protection) enabling enhanced features, including Change Block Tracking, which results in more efficient backups.

To enable the Virtual Disk Service in HPE VM Explorer

1. Go to **<User Name> Manuals > Enabling Virtual Disk Service (VD Service)**.



### Settings - Manuals

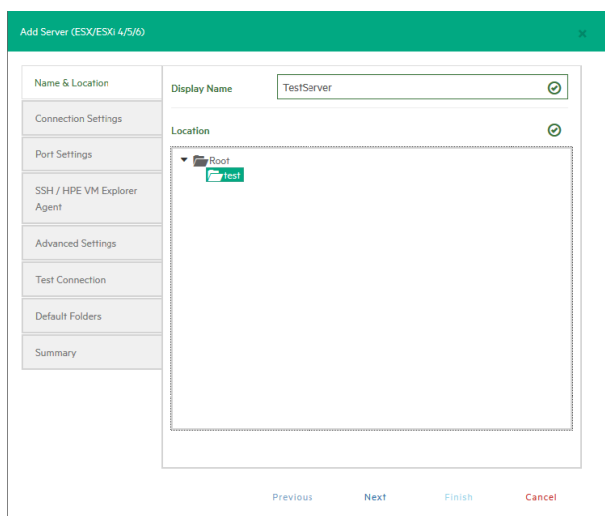
2. In the **How to Enable Virtual Disk Service (VD Service)** screen, install the VDDK package on the computer where HPE VM Explorer is running from the manufacturer's website <https://my.vmware.com/group/vmware/get-download?downloadGroup=VSP510-VDDK-510>.
3. After installing the VDDK package, click **Initialize VD Service** in HPE VM Explorer.

## Adding an ESXi server

You can add an ESXi server to HPE VM Explorer in the ESX/ESXi 4/5/6 screen, which you can complete by clicking **Next** after filling in the required information. Note that, unless otherwise stated, these procedures are shared across the application when adding various servers and storage environments.

1. In the **Add Server** wizard, click ESX/ESXi 4/5/6 and then, in the **Add Server ESX/ESXi 4/5/6** screen, select a display name for your server and browse to the desired location to store the server in the HPE VM Explorer Datacenter.

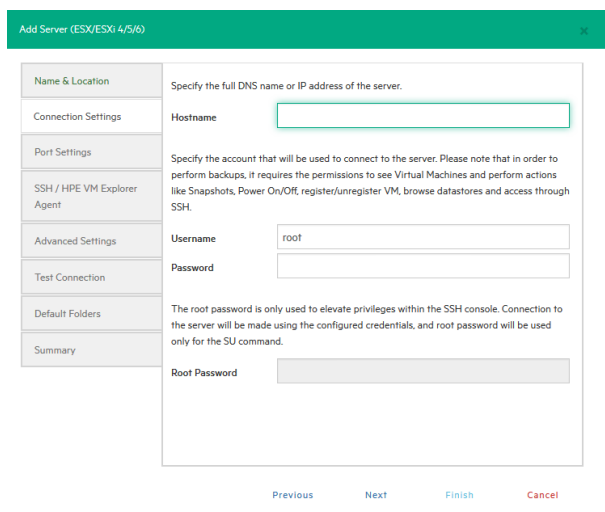
**NOTE:** This action only organizes the server in different folders in the HPE VM Explorer Datacenter and will not influence backups or replication in any way.



### Add Server - Name & Location

2. In the **Connection Settings** screen, type the hostname (or IP), the username and the password, and the root password if you choose to connect to the host using a different user than the root.

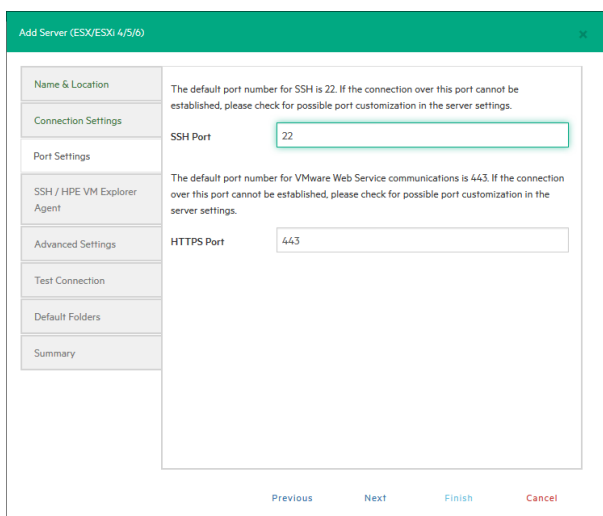
**NOTE:** If you connect to the host using a different user than "root", type the root password in the **Root Password** box.



### Add Server - Connection Settings

3. In the **Port Settings** screen, configure a port for SSH (if different from the default 22) and an HTTPS port for the ESX Management Console (if different from the default 443).

**NOTE:** : This procedure only applies to the ESXi host.



### Add Server- Port Settings

4. In the **SSH / HPE VM Explorer Agent** wizard screen, select one of the following checkboxes.

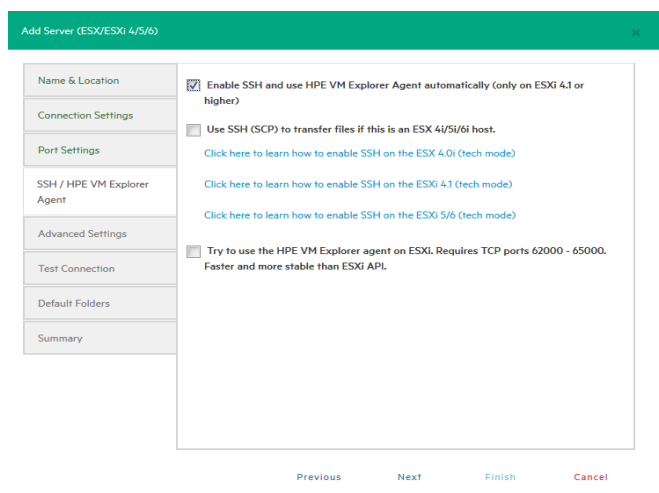
**NOTE:** This procedure only applies to the ESXi host. The HPE VM Explorer Agent is an automatically deployed wrapper over the Hypervisor API and it is used for performing various operations, such as creating, replicating, restoring backups and so on.)

- a. **Enable SSH and use HPE VM Explorer agent automatically (only on ESXi or higher).** For ESXi 4.1 or later, you can enable SSH and use the HPE VM Explorer agent automatically.
- b. **Use SSH (SCP) to transfer files if this is an ESX 4i/5i/6i host.** You can enable SSH to transfer files from your ESXi hosts. Click the links in the wizard screen to see how you can change your ESXi server into tech mode to enable SSH.

**NOTE:** SSH is no faster than the normal ESXi API, but it is more stable for uploading files to your ESXi server.

- c. **Try to use the HPE VM Explorer agent on ESXi.** HPE VM Explorer usually deploys an agent to the server so that backups are faster and more stable. ESXi does not support SSH by default, so no agent will be deployed. By selecting this option, HPE VM Explorer will deploy an agent to your ESXi server. We recommend activating this feature, as the performance will be much better than when using the official API.

**NOTE:** Activating this feature is recommended, as the performance will be much better than when using the official API.



### Add Server - SSH / VM Explorer Agent

5. On the **Advanced Settings** tab, configure the following settings:

a. **When using the backup agent, do not dynamically open the firewall.**

This option only refers to Linux or ESXi 5.0 or later servers. HPE VM Explorer will configure the firewall automatically for your Linux or ESXi 5.0 or later server. You can open the ports yourself (for more information, see the [HPE VM Explorer Practitioner Forum](#)) and disable this option. In this case, the HPE VM Explorer Agent will not make any changes to your Linux or ESX firewall.

b. **Use vmkfstools to locally copy virtual disks**

This option is enabled by default and allows HPE VM Explorer to use the `vmkfstools` to copy virtual disks when the target host is the same as the source host. The use of `vmkfstools` increases the local copy speed, but sometimes uses more system resources.

Disable this option if you notice performance problems during your backups or replication from an ESXi host to the same ESXi host.

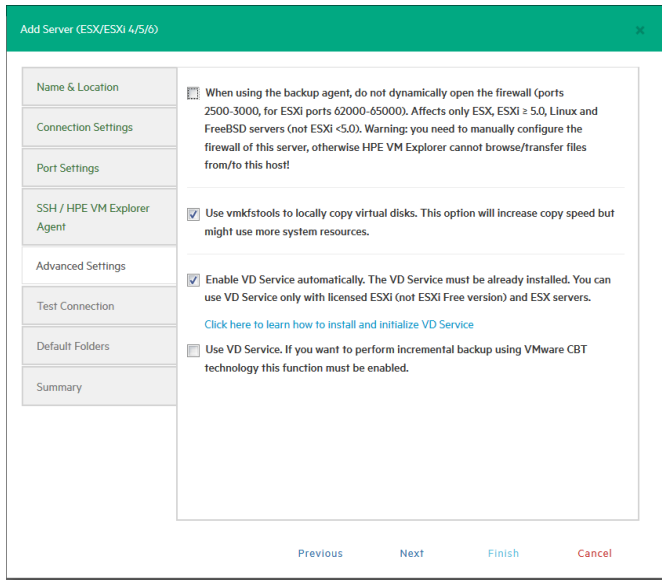
c. **Enable VD Service automatically**

This feature is enabled by default if VD service is already installed. Follow the on-screen instructions in the **Click here to learn how to install and initialize VD Service** section and configure the VD Service in the **How to Enable Virtual Disk Service (VD Service)** screen. For more information, see [Initializing Virtual Disk Service \(VD Service\)](#), on page 26.

d. **Use VD Service.** If you enable this feature, you will be able to create differential backups.

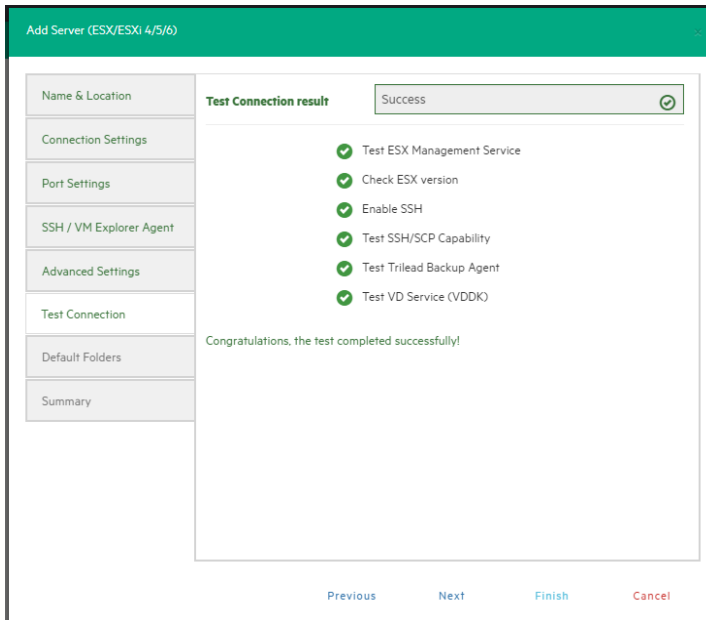
To use the VD Service interface, you need to make a one-time installation and initialization of the VD libraries. For more details, follow the **Click here to learn how to install and initialize VD Service** link.

**NOTE:** ESXi 4.0 / 4.1 / 5.0 / 5.1 / 5.5 / 6.0 is required. This feature does not work on the ESXi 4.0 / 4.1 / 5.0 / 5.1 / 5.5 / 6.0 free edition.



### Add Server - Advanced Settings

- In the **Test Connection** wizard screen, you can test your connectivity status. This is where you are notified in case an error occurs.



### Add Server - Test Connection

- In the **Default Folders** wizard screen, configure a default directory for backup/replication. This folder will be suggested to you in the setup dialog box when the current server is selected as a target server. You can also use the following placeholders:
  - In the first box, configure a default directory which will appear on the backup/replication setup dialog when the current server is selected as a target server. You can use the {DATETIME},

{DATE} and {VM} placeholders in the path. Placeholders will be replaced with the following values:

{DATETIME}: the current date/time, will write the date using the following format:  
YYYY-MM-DD-hhmmss

{DATE}: the current date, will write the date using the following format:  
YYYY-MM-DD

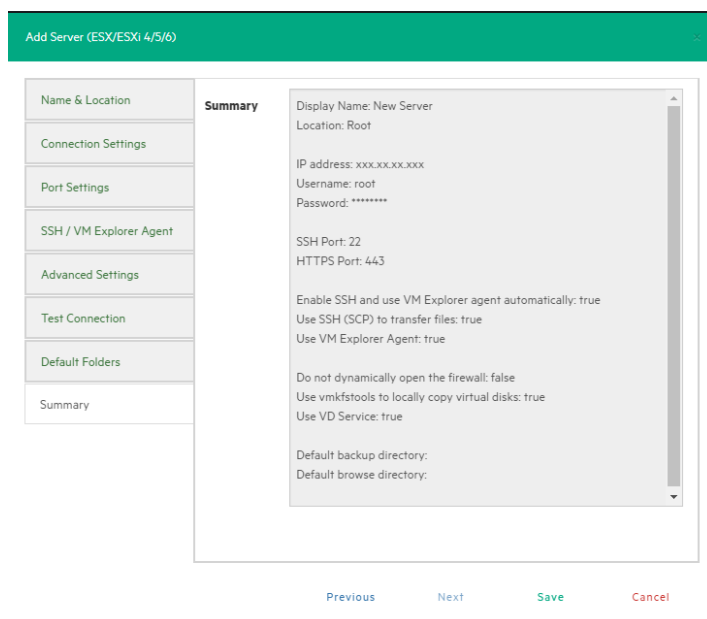
{VM}: the display name of the virtual machine.

8. In the second box, configure a default directory, which is used as the start directory when HPE VM Explorer File Explorer is selected. In File Explorer, when you start to navigate a specific server or when you click **Home**, you will be redirected to the configured directory.

The screenshot shows a configuration window titled "Add Server (ESX/ESXi 4/5/6)". On the left is a sidebar with tabs: "Name & Location", "Connection Settings", "Port Settings", "SSH / VM Explorer Agent", "Advanced Settings", "Test Connection", "Default Folders", and "Summary". The "Default Folders" tab is selected. The main area contains the text: "When you browse this server, start browsing in the following directory as default:". Below this is a text input field and a "Browse" button. Above the input field is a note: "Note. You can use the following placeholders: {DATETIME} will be replaced by the current date/time, e.g. 2015-01-30-125901; {DATE} will be replaced by the current date, e.g., 2015-01-30; {VM} will be replaced by the display name of the virtual machine." At the bottom of the window are four buttons: "Previous", "Next", "Finish", and "Cancel".

### Add Server - Default Folders

9. The **Summary** tab displays the summary of your ESXi settings. Click **Save** to add your settings to your Datacenter.



**Add Server - Summary**

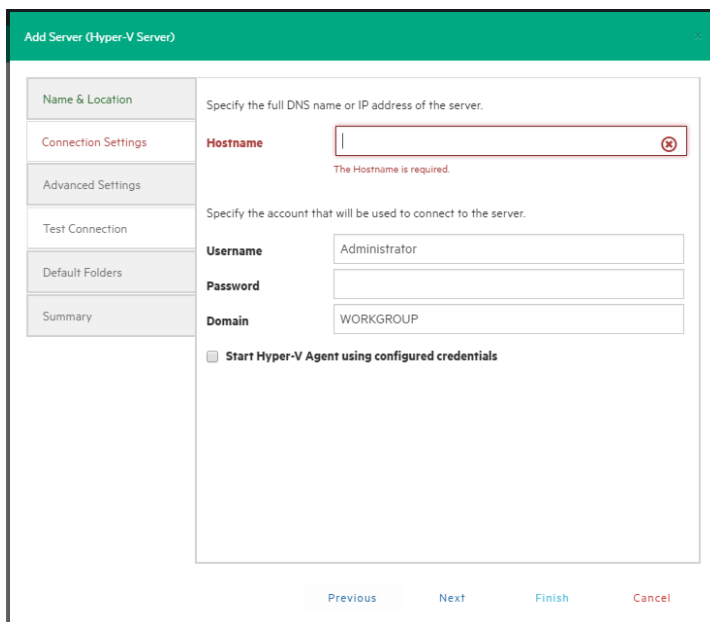
## Adding a Hyper-V server

This section covers the differences between adding an ESXi host and a Hyper-V host in the **Add Server** wizard of HPE VM Explorer. You can find information on the tabs not explained here earlier in this publication. For more information, see also [Adding an ESXi server, on page 26](#).

To add a Hyper-V server

1. In the **Connection Settings (Hyper-V Server)** wizard screen, configure the credentials for connecting to the Hyper-V host. Make sure you have a valid account with the Hyper-V host. Select the **Start Hyper-V Agent using configured credentials** checkbox to start the Hyper-V Agent with these credentials, not as the local system's user, if such credentials exist. If not, the system will use the local system user's credentials as default.

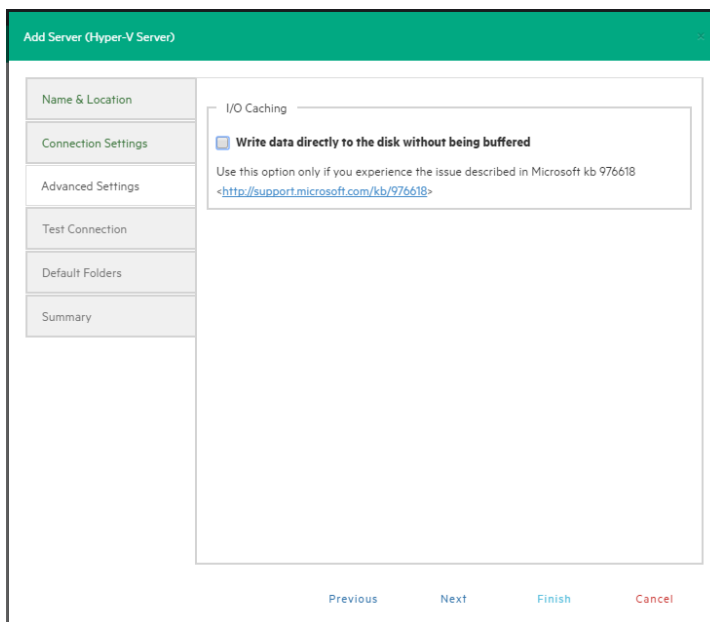




### Add server (Hyper-V) - Connection settings

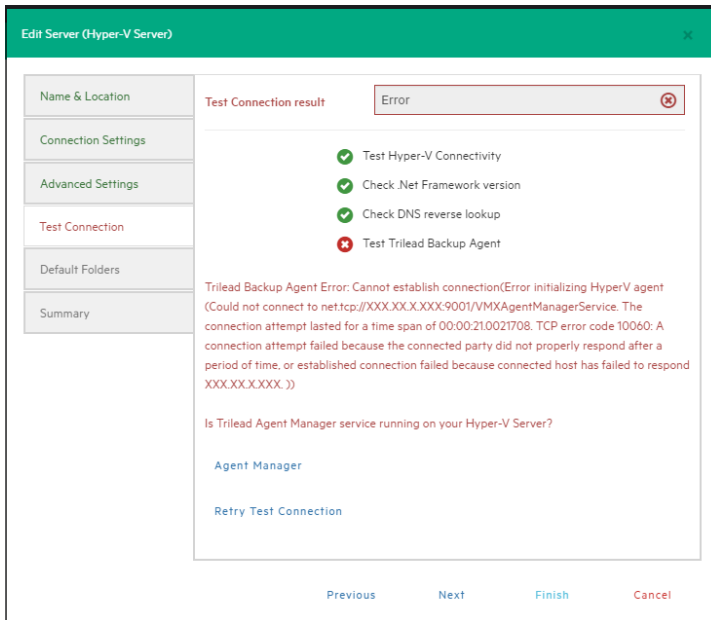
2. In the **Advanced Settings (Hyper-V Server)** wizard screen, selecting the **Write data directly to the disk without being buffered** checkbox solves performance issues in applications and services when the system file cache consumes most of the physical RAM in certain services, as documented in the [Microsoft KB Article 976618](https://support.microsoft.com/kb/976618).

**NOTE:** This option could slow down the backup process if target is set to **Local Computer**.



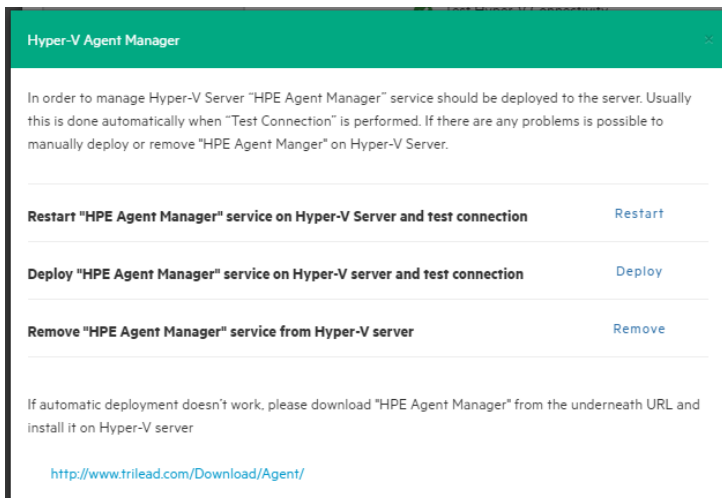
### Add server (Hyper-V) - Advanced settings

3. In the **Test Connection (Hyper-V Server)** wizard screen, you can deploy the HPE VM Explorer Agent Manager Service to your server. In case of errors, the Agent Manager button is displayed; clicking it opens the Hyper-V Agent Manager window where you can manually deploy it. You can also choose to remove the HPE VM Explorer Agent Manager from the server. The HPE VM Explorer Agent Manager verifies if your HPE VM Explorer Agent is up-to-date and will install the latest version on your Hypervisor, if needed.



### Add server (Hyper-V) - Test connection

You can also access this screen when selecting the server in the HPE VM Explorer Datacenter.



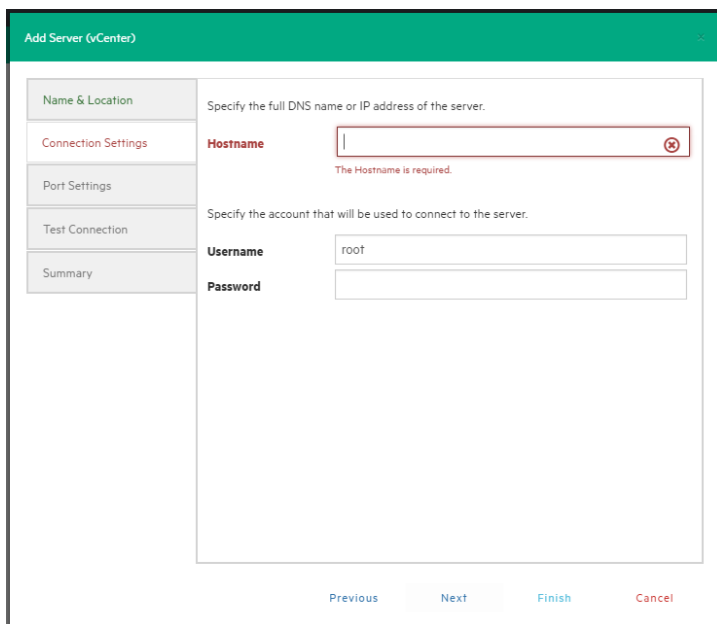
### Add Server (Hyper-V) - Hyper-V Agent Manager

## Adding a vCenter server

This section covers the differences between adding an ESXi host and a vCenter host in the Add Server wizard. You can find information on the wizard screens not explained here earlier in this publication. For more information, see also [Adding an ESXi server, on page 26](#).

To add a vCenter

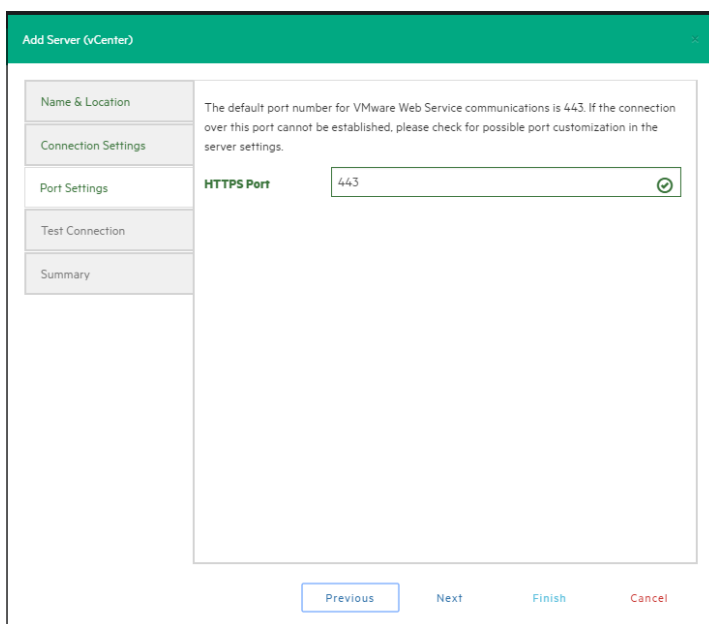
1. In the **Connection Settings (vCenter)**: wizard screen, type the hostname (or IP), the username and the password for the vCenter server.



The screenshot shows the 'Add Server (vCenter)' wizard interface. On the left is a navigation pane with tabs: Name & Location, Connection Settings (selected), Port Settings, Test Connection, and Summary. The main area is titled 'Specify the full DNS name or IP address of the server.' and contains a 'Hostname' input field with a red border and a red error message below it: 'The Hostname is required.' Below this is a 'Specify the account that will be used to connect to the server.' section with 'Username' (containing 'root') and 'Password' input fields. At the bottom are buttons for 'Previous', 'Next', 'Finish', and 'Cancel'.

### Add server (vCenter) - Connection settings

2. In the **Port Settings (vCenter)** wizard screen, configure an HTTPS port for the ESX Management Console (if different from the default 443).



### Add server (vCenter) - Port settings

After you have added the server, HPE VM Explorer displays all the hosts belonging to your vCenter.

To use the hosts, you must configure every host by right-clicking and selecting **Edit Server**. For configuration details, see [Add an ESX/ESXi Server](#).

**NOTE:** You cannot set ESXi servers to Lockdown mode because of permission issues. If ESXi servers are already in Lockdown mode, you must remove Lockdown. To do so, open the Direct Console User Interface (DCIU) on the host, press F2 for Initial Setup, and then select **Configure Lockdown Mode** and disable Lockdown mode.

To remove the lockdown mode

1. Open the Direct Console User Interface (DCIU) on the host.
2. Press **F2** for Initial Setup.
3. Select **Configure Lockdown Mode** and disable lockdown mode.

## Adding storage target servers

In HPE VM Explorer, you can add the following storage targets: Amazon S3, OpenStack, HPE Helion, Rackspace and Azure cloud, as well as Linux and FreeBSD servers.

**NOTE:** You cannot use any of the cloud storage or Unix servers as target for VM replication.

## Adding an Amazon S3 storage target

This section covers the differences between adding an ESXi host and adding an Amazon S3 Cloud host in the Add Server wizard. You can find information on the wizard screens not explained here earlier in this publication. For more information, see also [Adding an ESXi server, on page 26](#).

To add an Amazon S3 storage target, in the **Connection Settings (Amazon S3 Cloud)** wizard screen, add your credentials to connect to the Amazon S3 Cloud as well as the region you want to work with. Make sure you have access to an Amazon S3 server and to your cloud account's Access Key ID and Secret Access Key and type this information in the Connection Settings wizard screen. For more information, click here. You can select All Regions or just one of them from the list. If you select a specific region, the region-specific bucket will become visible.

**TIP:** Choosing a specific region will reduce data latency.

The screenshot shows the 'Add Server (Amazon S3 cloud)' wizard. The 'Connection Settings' step is active, requiring an 'Access Key ID' and a 'Secret Key'. A red error message indicates that the 'Access Key ID' is required. The 'Region' dropdown is set to 'All Regions'. Navigation buttons 'Previous', 'Next', 'Finish', and 'Cancel' are visible at the bottom.

### Add server (Amazon S3) - Connection settings

Once finished, you can schedule your backups to the Amazon S3 server. For more information, see [Creating a scheduled task, on page 94](#).

## Adding OpenStack, HPE Helion, Rackspace, Azure and S3 Compatible cloud storage targets

This section covers the differences between adding an ESXi host and adding an OpenStack, HP, Rackspace, Azure Cloud or S3 Compatible host in the **Add Server** wizard. You can find information on

the wizard screens not explained here earlier in this publication. For more information, see also [Adding an ESXi server, on page 26](#).

You can choose between making backups directly to the cloud or to a local storage and then uploading the backup to the cloud.

**NOTE:** You cannot use any of the cloud storage or Unix servers as target for VM replication.

In the **Connection Settings** wizard screen, type the credentials you need to connect to the selected cloud. For OpenStack, HPE Helion and Raskspace, you can also select if you want to access to the **Tenant Name** or the **Tenant ID** and you can specify which one(s).

**NOTE:** Earlier versions used the term *Project* instead of *Tenant*.

The screenshot shows the 'Add Server (OpenStack cloud)' wizard. The 'Connection Settings' step is active. It includes an 'Identity Endpoint' field with a red error message, 'Username' and 'Password' text boxes, and a 'Tenant' dropdown menu with a text box below it. Navigation buttons 'Previous', 'Next', 'Finish', and 'Cancel' are at the bottom.

**Add server (OpenStack, HPE Helion, Raskspace, Azure, S3 Compatible) - Connection settings**

## Adding Linux and FreeBSD servers

This procedures of adding Linux and FreeBSD servers are similar to adding an ESXi host, except for the **SSH/HPE VM Explorer Agent** and **Advanced Settings**, which are only used by ESXi hosts. For more information, see also [Adding an ESXi server, on page 26](#).

## Modifying a server or Virtual Machine

Depending on your needs, you can easily modify the settings of an existing server in HPE VM Explorer. To do so, go to the **Datacenter** view, right-click the server you want to modify and then point to **Edit**

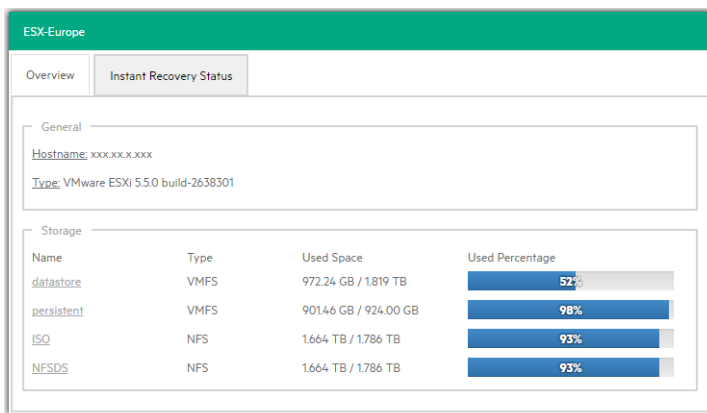
**Server** in the shortcut menu. Then, configure the **Edit Server (ESXi 4/5/6)** wizard accordingly. For more information on how to configure a server, see [Adding a Hyper-V server, on page 32](#).

## Viewing server or Virtual Machine information

In HPE VM Explorer, you can always check whether your server or Virtual Machine settings are compliant with your needs.

### Server overview

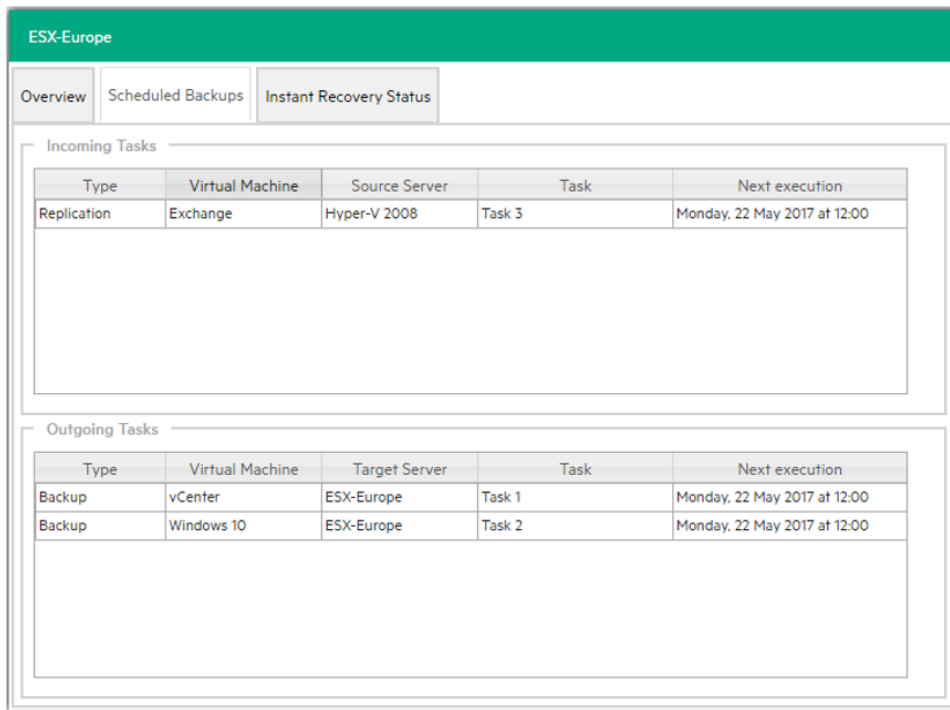
In the **Overview** tab of the **<server name>** screen, you can see general information about the host and its datastores:



### Server - Overview

## Inbound/Outbound view

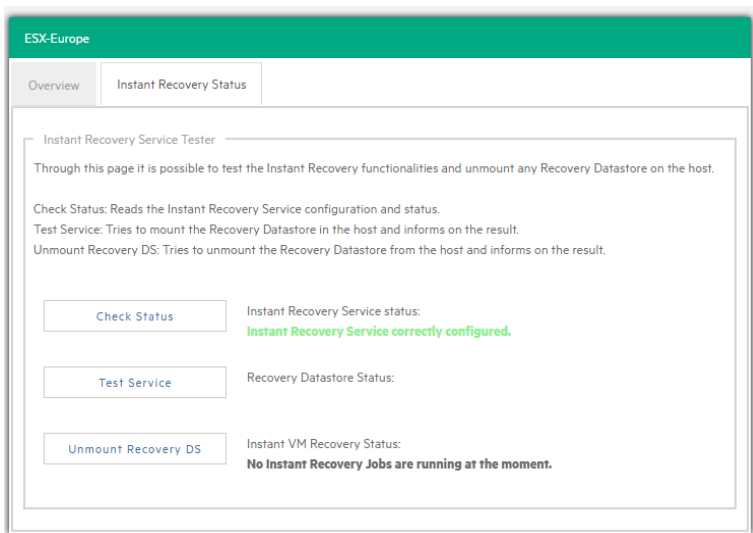
In the **Scheduled Backups** tab of the **<server name>** screen, you can view all the tasks connected to the current server:



**Inbound/Outbound view**

## Instant recovery status

In the **Instant Recovery Status** tab of the **<server name>** screen, you can check the connection status between the Hypervisor and HPE VM Explorer’s NFS server (this feature is only available for ESXi):



**Server - Instant recovery status**

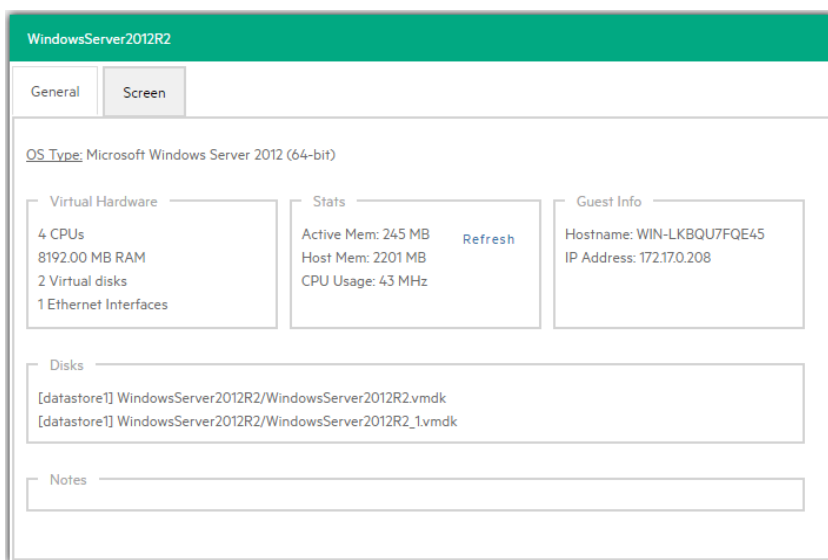
The **Instant Recovery Status** tab provides you with the following options:



- **Check Status** updates the status of the data and gives you an overview of the possible and current operation.  
You can read the information of the datastore registered through the HPE VM Explorer NFS Server and if any backup test is running.
- **Test Service** mounts the HPE VM Explorer NFS datastore (used for automated backup test) to the host and check if a basic communication is possible.
- **Unmount Recovery DS** runs the unmounts of the HPE VM Explorer NFS datastore. If any backup test is running, this command will fail as the host will refuse it.

## Viewing Virtual Machine information

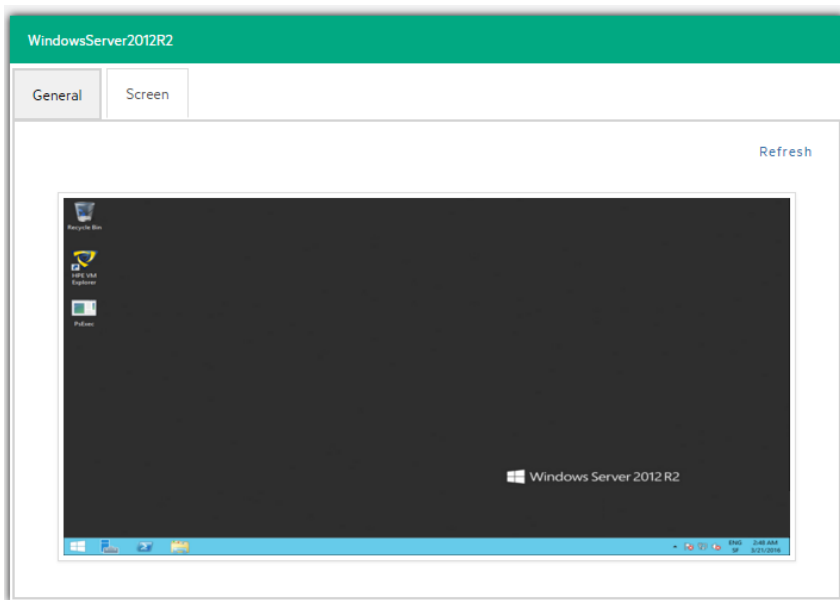
To have an overview of a Virtual Machine, expand the servers on the **Datacenter** view, click the desired Virtual Machine and then see all the desired information in the **<Virtual Machine Name>** screen.



### Virtual Machine information

You can also request a screenshot of the VM in the **Screen** tab. Just press **Refresh** to update.

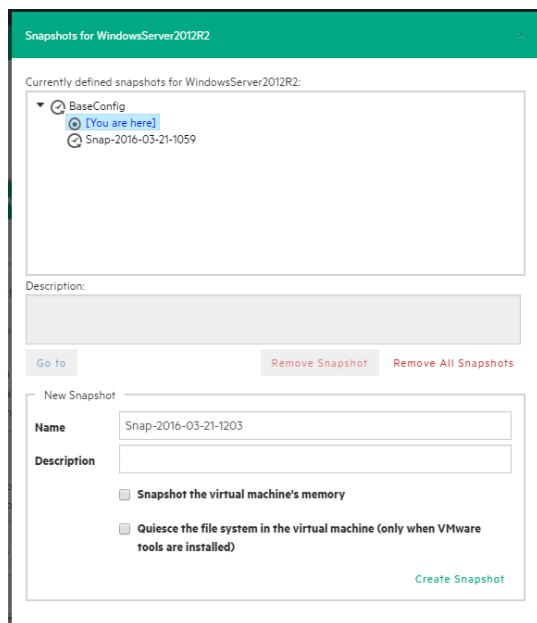
You can right-click a VM in the **Datacenter** tree and then, in the **Snapshots for <Virtual Machine Name>** screen, you can run VM related actions, such as power on/off, backup/replication, locate VM files or manage the snapshots.



### VM screenshot

Clicking **Snapshot Manager** enables you to see the snapshot tree of the selected VM. Here you can navigate through the snapshots and delete one or more snapshots.

Click **Create Snapshot** to take a new snapshot. You can set the option for *quiesce* and *memory snapshot*. Give your snapshot a name and a meaningful description.



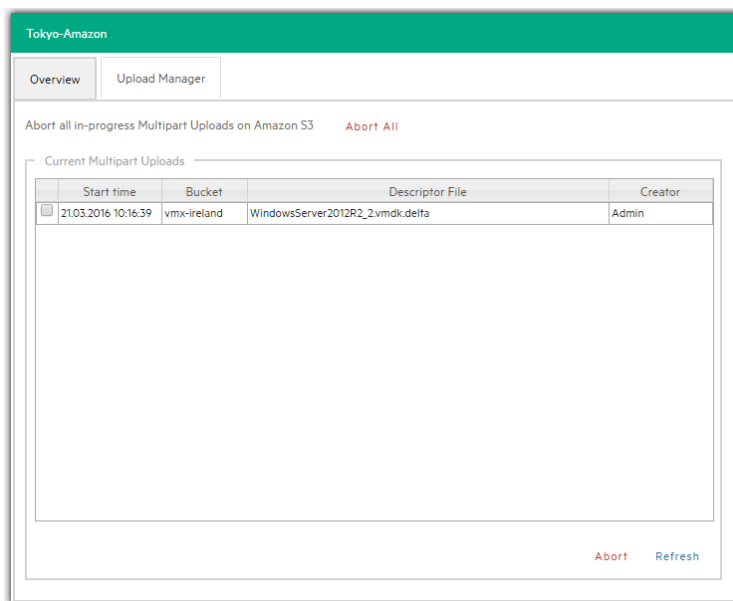
### VM Snapshot Manager

When selecting the **Snapshot Manager** option, a new dialog will appear, showing the snapshot tree of the selected VM. You can navigate through the snapshots, delete a specific snapshot or both.

To take a new snapshot, click **Create Snapshot**. You can set the options for quiesce and memory snapshot, name the snapshot and give a brief description.

## Upload Manager

The **Upload Manager** tab of the **<server name>** screen is only available for Amazon S3. Here you can have an overview of the multipart uploads currently active with the Amazon S3 cloud:



### Server - Upload Manager

**Abort All** stops and deletes all multi-part upload jobs currently running.

The **Current Multipart Uploads** form displays a list of all running, uploaded jobs. If you select one or more of jobs, you can stop them without influencing the other jobs. This allows you to stop a job that may be blocked or malfunctioning.

Refresh is not automatic and must be activated by clicking **Refresh**, even the first time.

## Deleting a server

In HPE VM Explorer, you can delete a server you no longer need. To do so, go to the **Datacenter** view, right-click the server that you want to delete and then point to **Remove** on the shortcut menu. Then, in the **Confirm** dialog box, click **OK**.

## Configuring the SAN Infrastructure

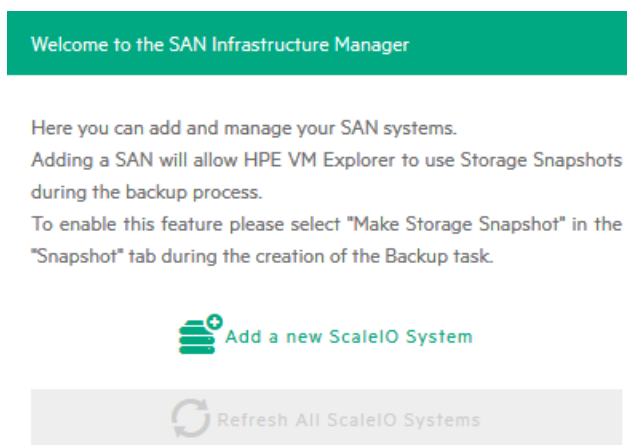
If your network has an EMC<sup>2</sup> ScaleIO System installed, you can add a reference to this SAN system in HPE VM Explorer to see the information about your ScaleIO and execute backups with Storage Snapshot. For more details, see [Backup](#).

You can add a SAN infrastructure and you can modify or delete an existing one.

## Adding a SAN infrastructure

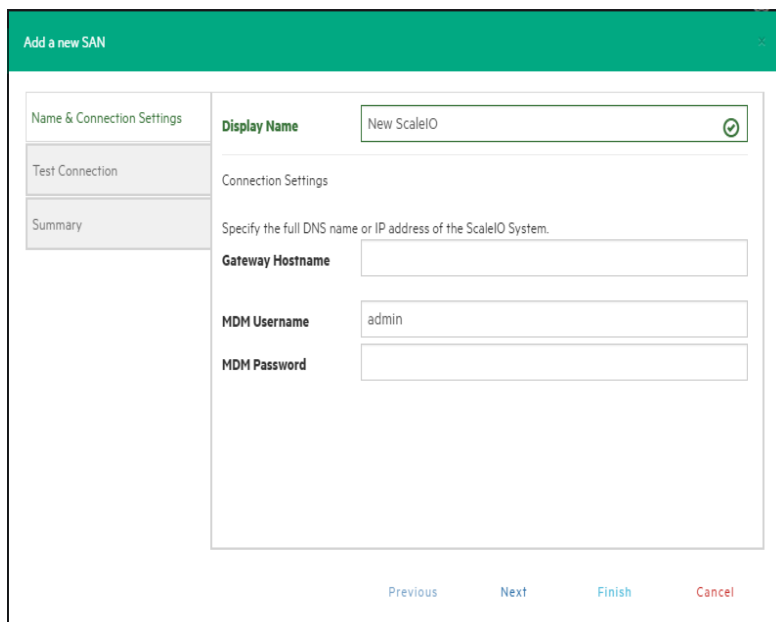
To add a SAN infrastructure:

1. Go to **Storage Systems** and point to **SAN Infrastructure**.



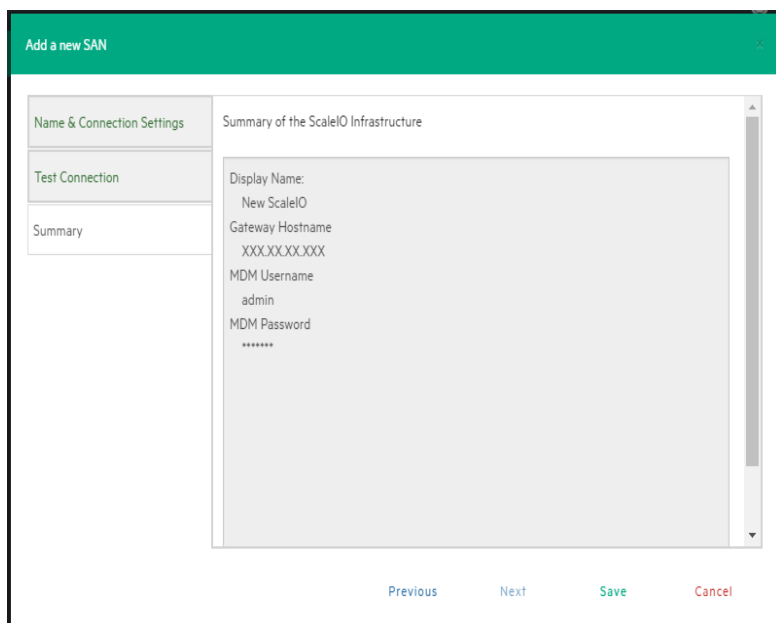
### SAN Infrastructure page

2. In the **Welcome to the SAN Infrastructure Manager** screen, click **Add a new ScaleIO System**. You can also click **Add a new ScaleIO System** on the **SAN Infrastructure** view or right-click a free area in the **SAN Infrastructure** view and point to **Add a new ScaleIO System...** on the shortcut menu.
3. In the **Add a new SAN** wizard, in the **Name & Connection Settings** screen, complete the boxes, as required. When finished, click **Next**.



### Add San Infrastructure - Test Connection

4. In the **Test Connection** wizard screen, you can test the connectivity and uniqueness of your SAN System. If the test is successful, click **Next**.
5. In the **Summary** wizard screen, you can see the summary of your SAN infrastructure. At this stage, you can always go back and reconfigure the details of your SAN infrastructure. When finished, click **Save**. Your newly added SAN infrastructure is available in the **SAN infrastructure** view.



### Add San Infrastructure - Summary

## Modifying a SAN infrastructure

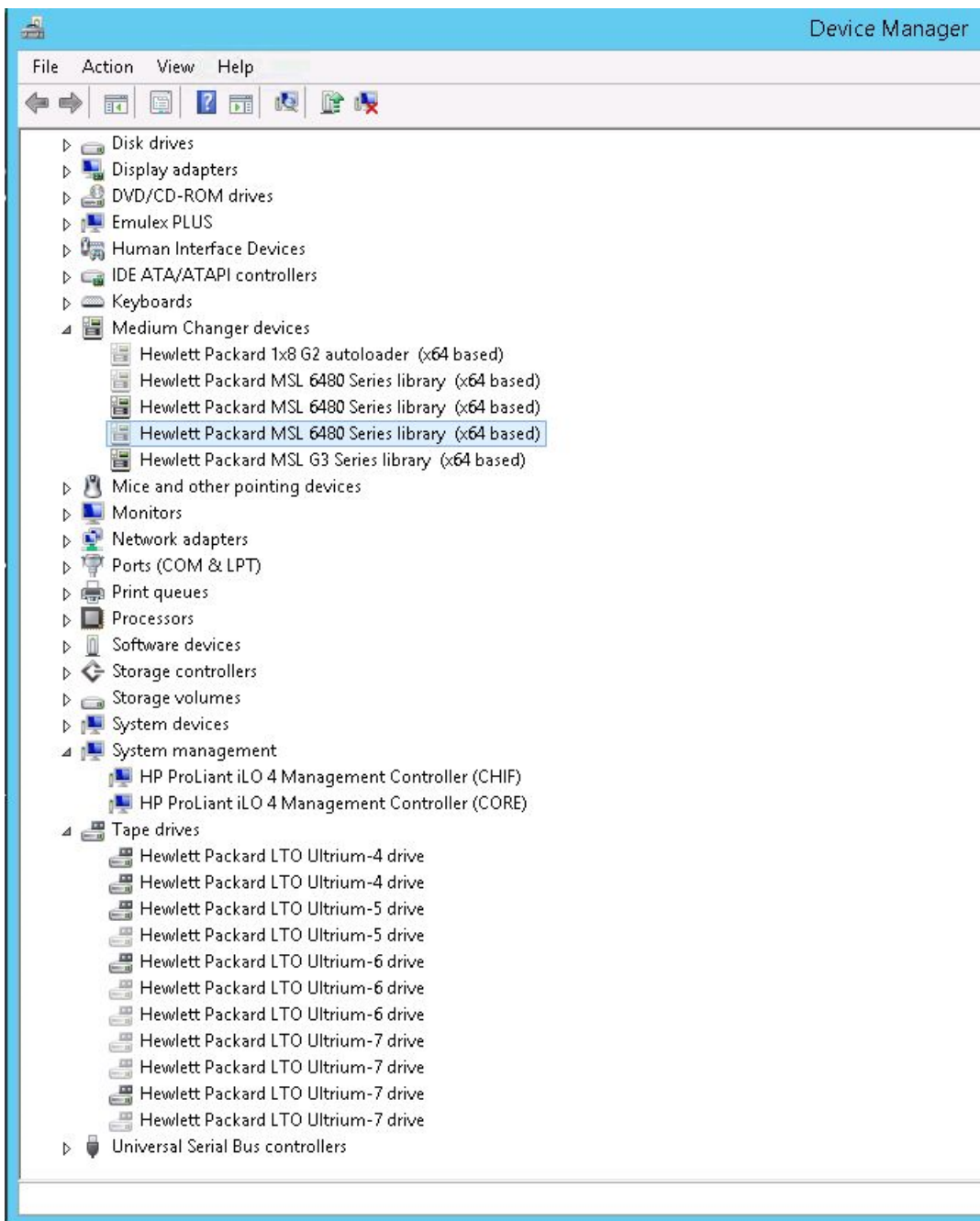
To modify your SAN infrastructure, right-click your SAN System host entry in the SAN Infrastructure tree, point to **Edit ScaleIO System...** on the shortcut menu and then modify the SAN Infrastructure settings accordingly. For more information, see [Adding a SAN infrastructure, on page 44](#).

## Deleting a SAN infrastructure

To delete your SAN infrastructure, right-click your SAN System host entry in the SAN Infrastructure tree and point to **Remove ScaleIO System** on the shortcut menu. In the confirmation box, click Yes.

## Configure Tape Infrastructure

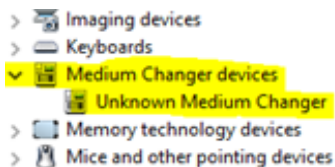
With HPE VM Explorer you can back up and restore your data on tape. See [Tape Libraries / Autoloaders, on page 12](#) for a full list of supported Tape devices. Moreover, HPE VM Explorer can also support other Tape libraries, autoloaders or media changer devices with barcode readers that implement standard API.



### Windows Device Manager

HPE VM Explorer automatically recognizes tape devices visible to the Windows computer they are installed on. In Windows Device Manager, you can find tape libraries under the **Medium Changer devices** and tape drives under the **Tape drives** group.

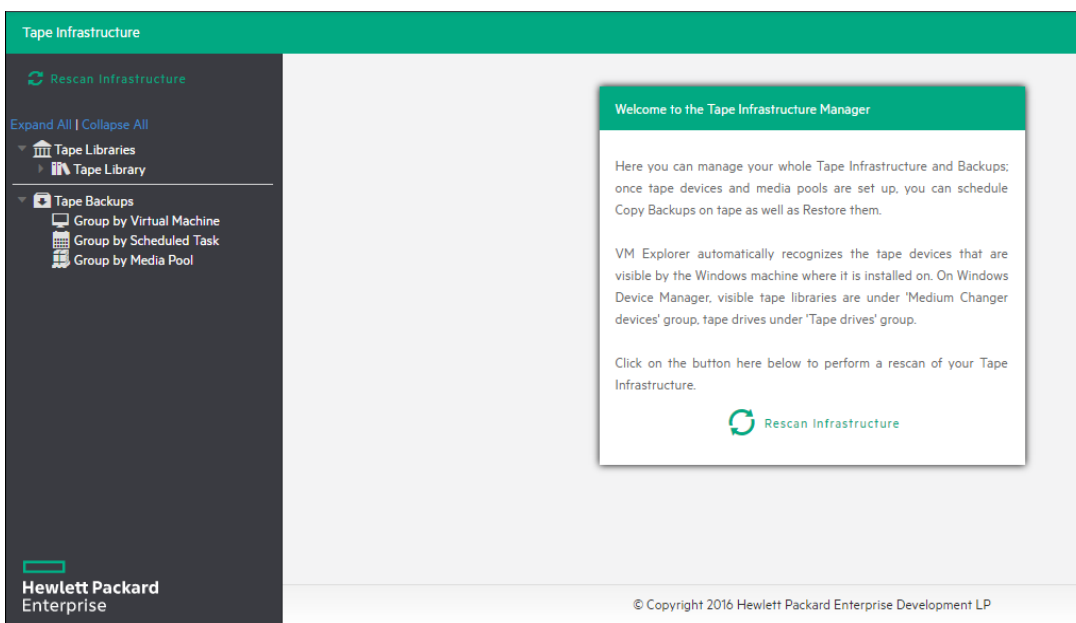
We recommend that you install the latest device drivers from your hardware provider, especially if HPE VM Explorer does not detect the tape library and Windows Device Manager displays it as Unknown Medium Changer.



### Unknown Medium Changer in Windows Device Manager

Before running a tape backup for HPE VM Explorer, you need to set up the libraries (with drives, media and media pools). You can find the latest drivers for HPE StoreEver tape library/autoloader/drive family and HPE D2D Virtual Tape Libraries (VTL) by clicking here. Also, make sure your tape backup environment is setup.

To access the Tape infrastructure page, go to **Storage Systems > Tape Infrastructure** and click **Rescan Infrastructure**.



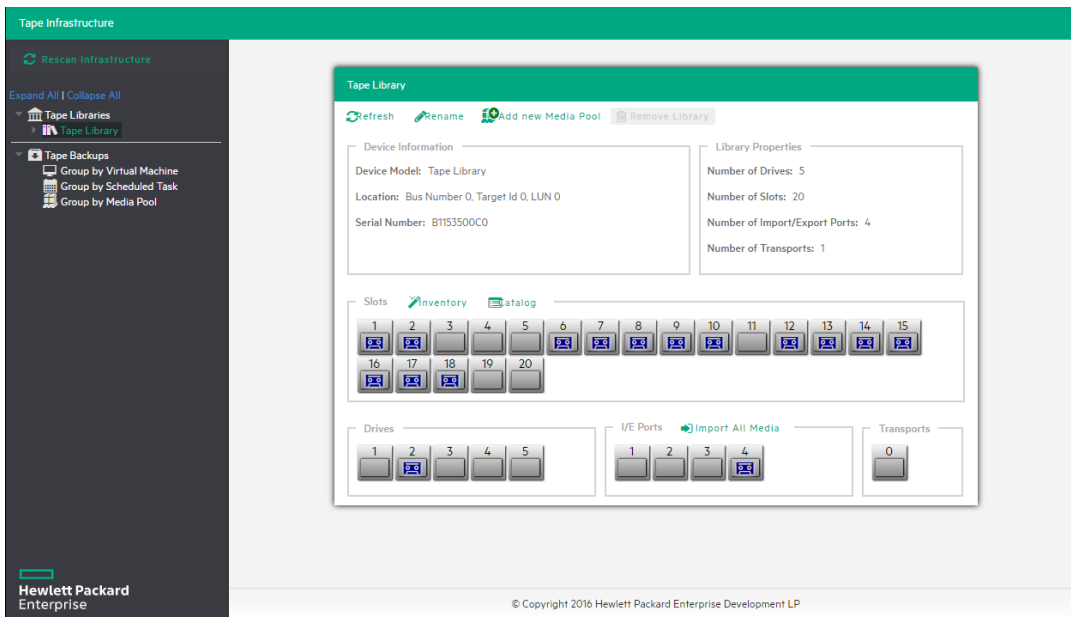
### Rescan Tape Infrastructure

## About Tape Libraries

As you can see in the **About Tape Libraries, above**, on the left side you can see the detected devices composing your infrastructure. The tape library is divided into:









### Tape Library overview

## About Drives

A drive is the physical part of a tape library that enables you to read and write data from/to a tape media. Clicking this item enables you to see some information about the drive and to enable/disable it, which will cause HPE VM Explorer to include/exclude it from the pool of drives usable in the backup procedures.

## About Tape Media

The media item shows all the tape media/cartridges recognized by this tape library. There are:

-  Online media: list of media currently and physically present in the tape library.
-  Offline media: list of known media present in the tape library, but not inserted.

You can perform the following operations on the media:




Operation	Description
<b>Move to media pool</b>	You can logically include a tape in a Media pool. You can move the media in the free or in all your customs media pools. For more information, see <a href="#">About Media Pools, on the next page</a> .
<b>Inventory</b>	Prepare new media for use with HPE VM Explorer or check if new media is already recognized.

<b>Catalog</b>	Makes the inventory of the tape media and scans all its contents for existing backups. HPE VM Explorer reads the entire tape to catalog all the backups copied in it, so this operation can take some time.
<b>Import</b>	If the media is in an I/E port, you can import it and HPE VM Explorer will move the media to the first available empty slot.
<b>Export</b>	Use this option to move the tape media from its slot to an I/E port. If you want to physically remove media from the library.
<b>Eject</b>	Enables you to move media from the drive to the first available empty slot.
<b>Erase</b>	Click to delete all data written on the tape. You can choose between Short erase (fast) or Long erase (slow). Warning: Clicking Erase removes all the backups on the tape media and from the catalog.
<b>Mark as Free</b>	Click to mark the media ready to use and to overwrite its content. Warning: All the backups on this tape media will be deleted from the catalog. If you use the Catalog action before reusing the media, you can still recover the existing backups.
<b>Remove from catalog</b>	If your media is offline, you can remove it from the catalog. Warning: All the backups on this tape media will be deleted from the catalog. If you later decide to re-import the media, you can use the Catalog action before reusing the media to recover existing backups.
<b>Details</b>	Click to see few information about the media and which HPE VM Explorer backups are saved on it.

## About Media Pools


A media pool is a container of media that helps to organize the media included in a tape infrastructure.

HPE VM Explorer define 3 types of system media pools that cannot be modified nor used as target of your backups:

-  **Free**—This pool contains all the media from the system, marked as free and usable. You can move the media to populate other custom Media Pools.
-  **Unrecognized**—This pool consists of unrecognized tape media the content of which is still unknown. You can perform the **Inventory** operation to make the media usable in the **Free Media Pool** or the **Catalog** operation, in case you want to recover existing HPE VM Explorer backups.
-  **Imported**—This media pool consists of tape media containing existing backups recognized during a **Catalog** operation (for example, media previously removed from the catalog or previously

used by another Tape Library).

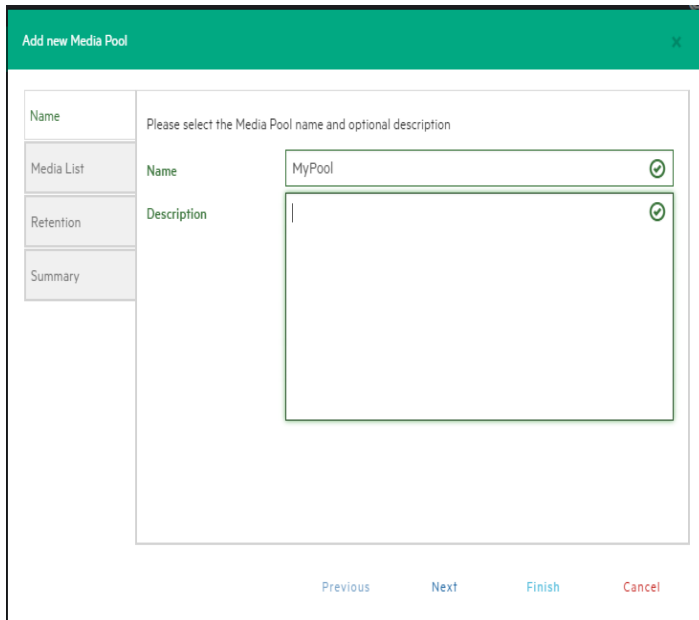
**NOTE:** In order to perform backups on tape, you can create custom media pools for that purpose.

-  **Custom**—In this custom Media Pool you can define the list of media and the specific retention rules for the backups.

## Creating a Custom Media Pool

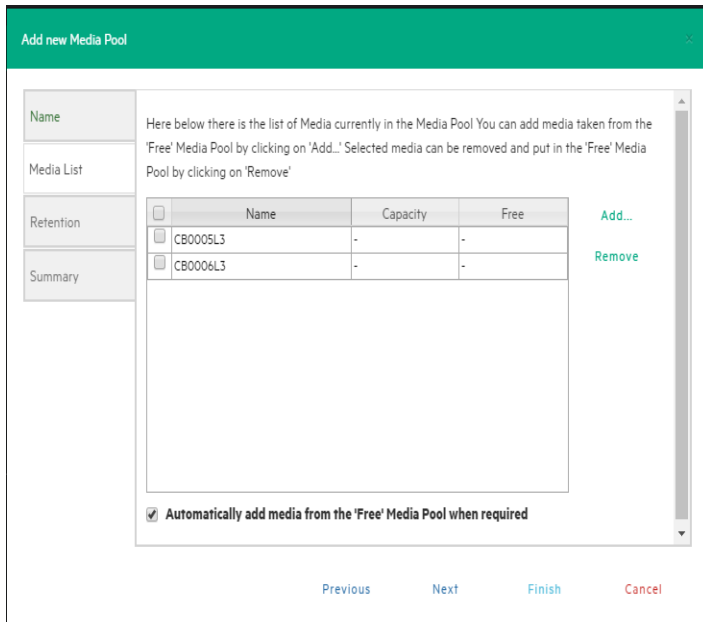
You can create a new custom media pool by right-clicking **Media Pools** and pointing to **Add Media Pool**. Then, complete the **Add new Media Pool** wizard, as follows:

1. In the **Name** wizard screen, type a name and a meaningful description for your pool. When finished, click **Next**.



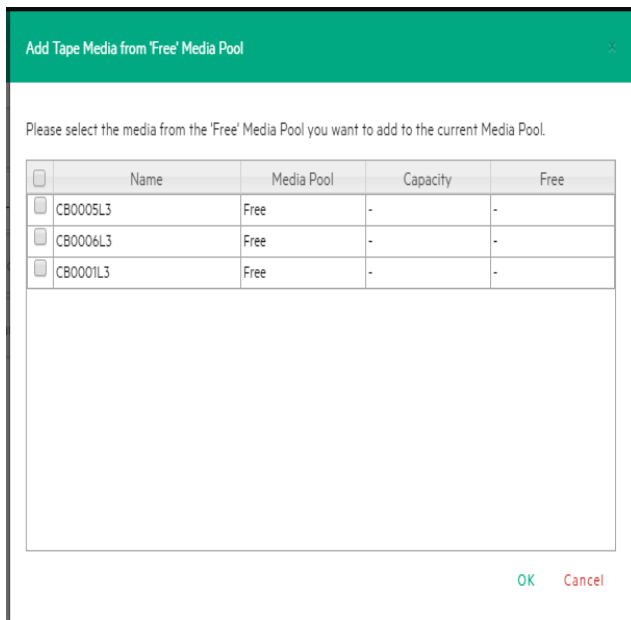
### Add Media Pool - Name

2. In the **Media List** wizard screen, click **Add** to select the free tape media from the **Free** media pool. You can also remove an existing media and move it to the Free media pool by selecting it and clicking **Remove**. Select the **Automatically add media from the 'Free' Media Pool when required** checkbox if you want HPE VM Explorer to include the first free tape from the Free media pool if a backup needs space that is unavailable in the media already present in this pool. When finished, click **Next**.



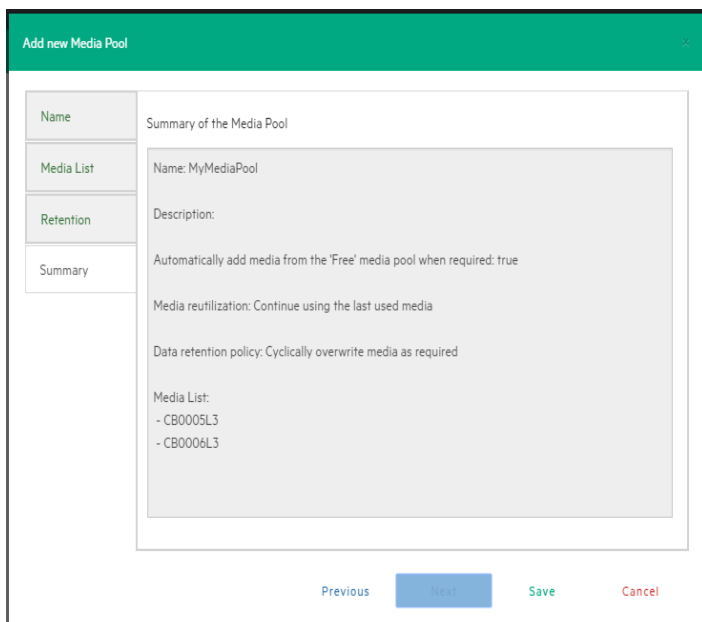
### Add Media Pool - Media List

3. In the **Retention** wizard screen, set the rules for using/reusing the media, as follows. When finished, click **Next**.
  - Under **Media reutilization**—select whether you want to reuse the same media in subsequent scheduled backup sessions or if you want to use different media every session.
  - Under Data retention policy—select the desired media overwrite policy.



### Add Media Pool - Free pool

4. The **Summary** wizard screen displays the details of your newly configured Media Pool. At this stage, you can go back and make any necessary changes. When finished, click Save to add your Media Pool to your Tape Infrastructure tree. You can change your media Pool settings at any time by right-clicking your Media Pool host entry in the **Tape Infrastructure** tree and pointing to the **Edit** menu.



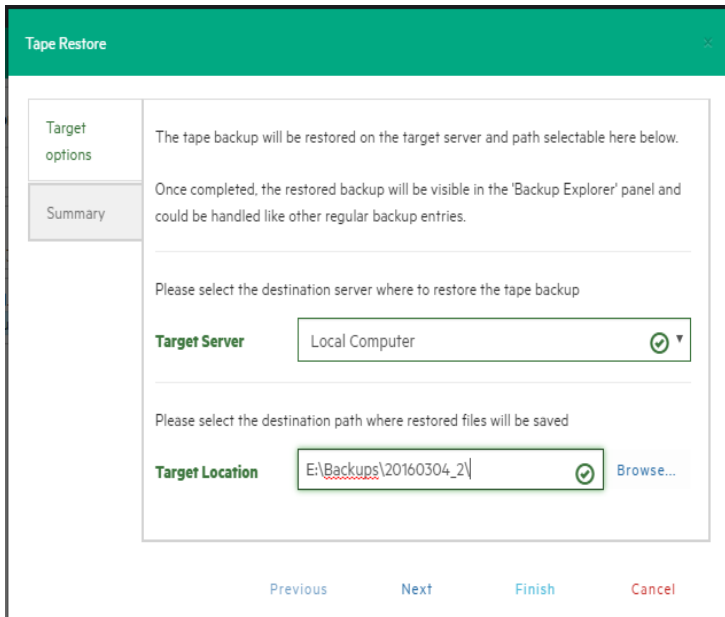
**Add Media Pool - Summary**

## Tape backups

You can find all your backups saved with HPE VM Explorer in your Tape Infrastructures. You can show them grouped by:

- Virtual Machine
- Scheduled Task
- Media Pool

Right-clicking the desired backup enables you to view its details or to start a restore procedure by selecting Restore backup from Media... and then completing the **Tape Restore** wizard.



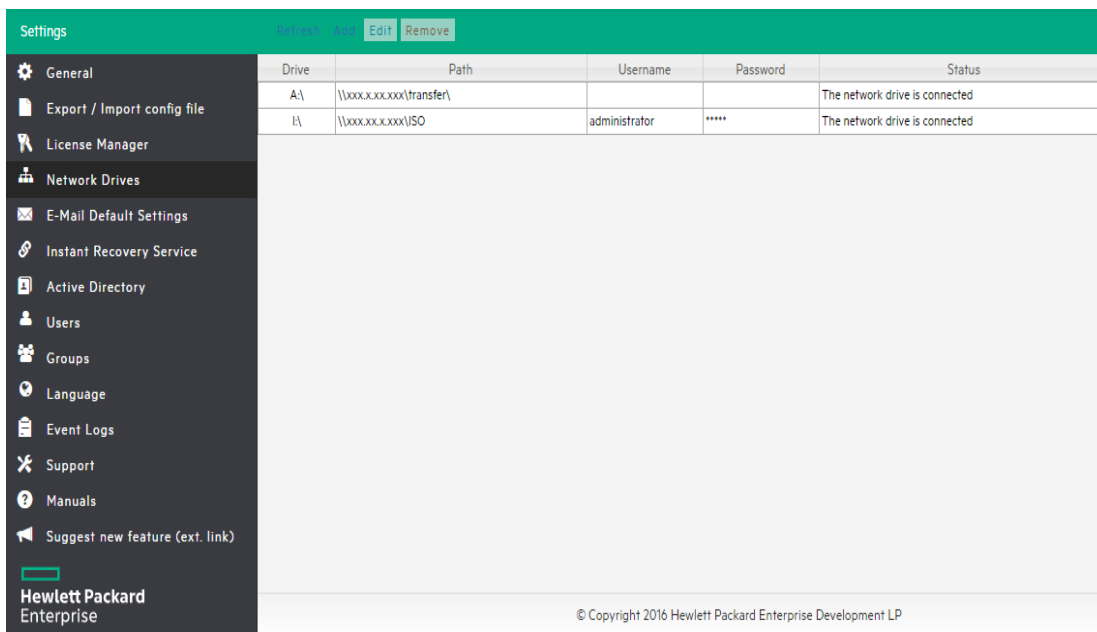
**Tape Restore - Target options**

## Configure Network Drives

As HPE VM Explorer service runs within a different account than the logged in account, HPE VM Explorer has no direct access to the shares mounted to your account. Therefore, network drives (used as a backup target) must be configured within **VM Explorer** to let the service mount them automatically.

To configure your Network Drives

1. Go to **Settings**.
2. Click **Network Drives** from the **User** menu.
3. Open the **Network Drives** screen.

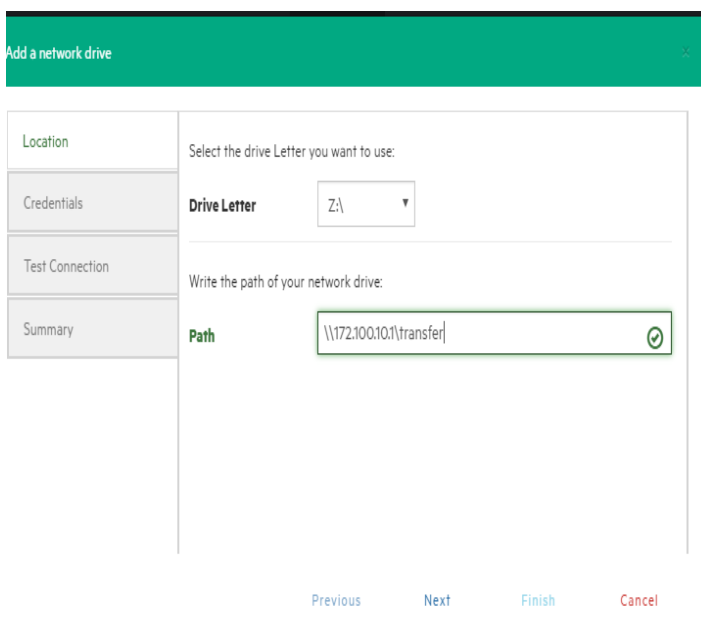


**Network Drives screen**

- On the Network Drives page, click **Add** to add a new network drive. Click **Edit** to edit an existing network drive.

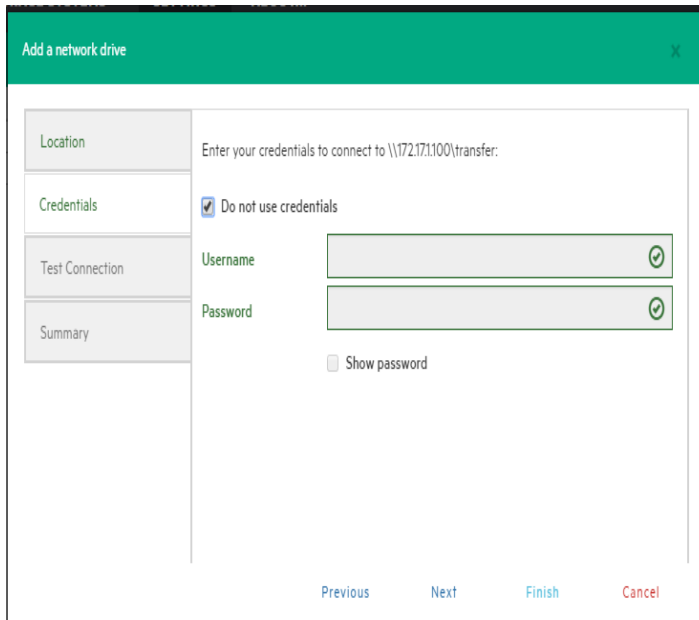
The **Add a network drive** wizard opens.

- On the **Location** tab, select a drive letter for the network drive. If you have already mapped some network drives with letters, those letters are not available.
- Enter the correct network drive path in the **Path** box.



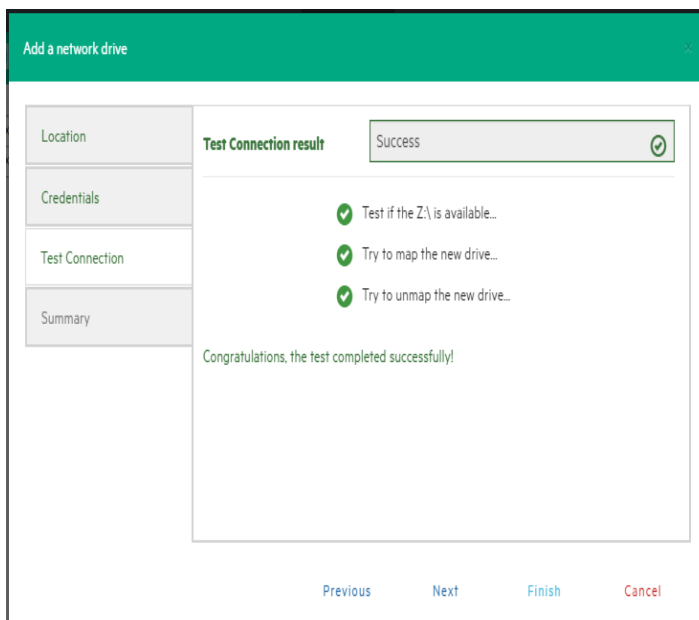
**Network Drive - Location**

7. Click **Next**.
8. On the **Credentials** tab, provide user credentials if the network drive uses them. If it does not, select **Do not use credentials**.



### Network Drive - Credential

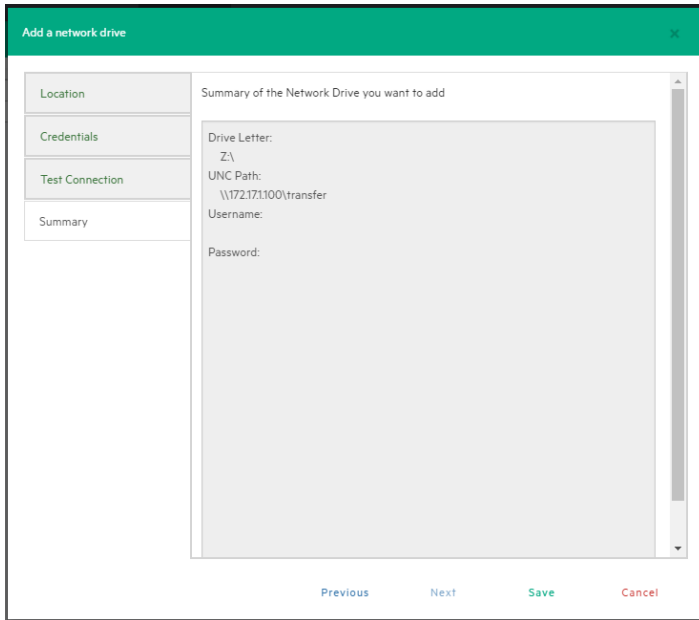
9. Click **Next**.
- The **Test Connection** tab opens. A connection test with the network drive is performed, using your parameters.



### Network Drive - Test Connection



10. Click **Next**. In the **Summary** tab, verify all the parameters and click **Save**.



### Network Drive - Summary

# Backing Up One or Multiple Virtual Machines

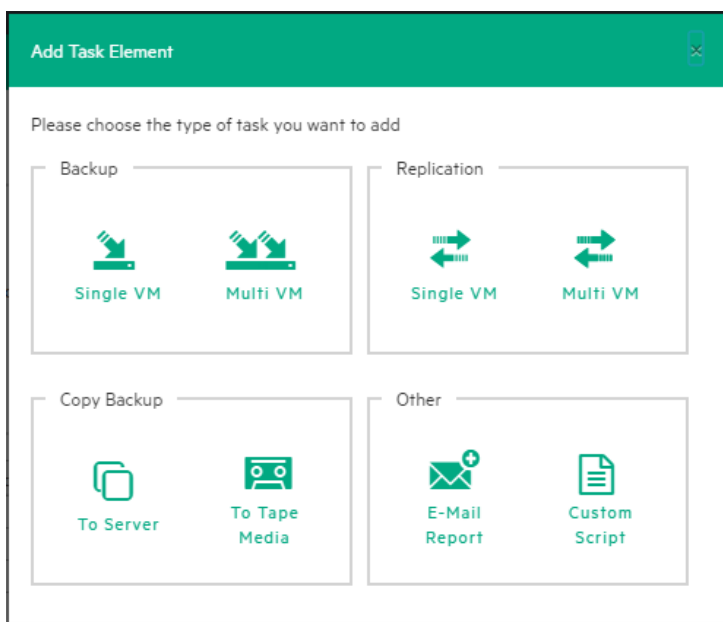
With HPE VM Explorer you can back up one or multiple Virtual Machines.

To perform a backup in HPE VM Explorer:

1. Go to the **Datacenter** view and expand your ESXi or Hyper-V host to get a list of all your Virtual Machines. If you are using vCenter, then expand your vCenter hosts to see all Virtual Machines.
2. Right-click the Virtual Machine you want to back up and click **Backup...** and then, in the **Virtual Machine Backup** dialog box, configure the boxes, as required.

You can also create a task to back up one of your VMs from the **Scheduled Tasks** view. To do so:

1. Go to **Tasks > Scheduled Tasks** and select a scheduled task in which to create the backup task.
2. Click **Add** and then, in the **Add Task Element** screen, click **Single VM** (for more information, see [Backing up a single VM, on the next page](#)) or **Multi VM** (for more information, see [Backing up multiple VMs, on page 66](#)).



**Add Task element**

## Backing up a single VM

To back up a single VM, click **Single VM** in the **Add Task Element** screen. For more information, see [Backing Up One or Multiple Virtual Machines, on the previous page](#). Then, in the **Virtual Machine Backup** dialog box, configure the boxes in the specific tabs, as follows. Depending on the nature of the VM, some of the options available to you at this stage may vary.

1. In the **General** tab, under **Target**, select a target location from the **Host** list. This can be your local PC, an ESXi host, a Hyper-V host or a Linux/FreeBSD host already added to your **Datacenter** view. Choose the target directory and configure the backup process. When finished, click **OK** to start the backup process.

The screenshot shows the 'Virtual Machine Backup' dialog box with the 'General' tab selected. The 'Source' section has 'Host' set to 'ESX-Europe' and 'VM' set to 'WindowsServer2012R2'. The 'Target' section has 'Host' set to 'Local Computer' and 'On error execute next task' checked. The 'Directory' is 'E:\Backups\{VM}\{DATETIME}' with a 'Choose Parent...' link. Below the directory field are five radio button options: 'The target directory must not exist, it will be created.' (selected), 'If the target directory exists, then it must be empty.', 'If the target directory exists, archive existing files in the target directory.', 'If the target directory exists, overwrite existing files in the target directory.', and 'Incremental Backup, target folder must be empty or must contain specific VM Incremental Backup'. The 'Nbr. of backups to keep' is set to 'All'. A status bar at the bottom indicates: 'The virtual machine WindowsServer2012R2 will be copied from the server ESX-Europe to the Local Computer into the directory E:\Backups\{VM}\{DATETIME}'. 'OK' and 'Cancel' buttons are at the bottom right.

### Backup - General

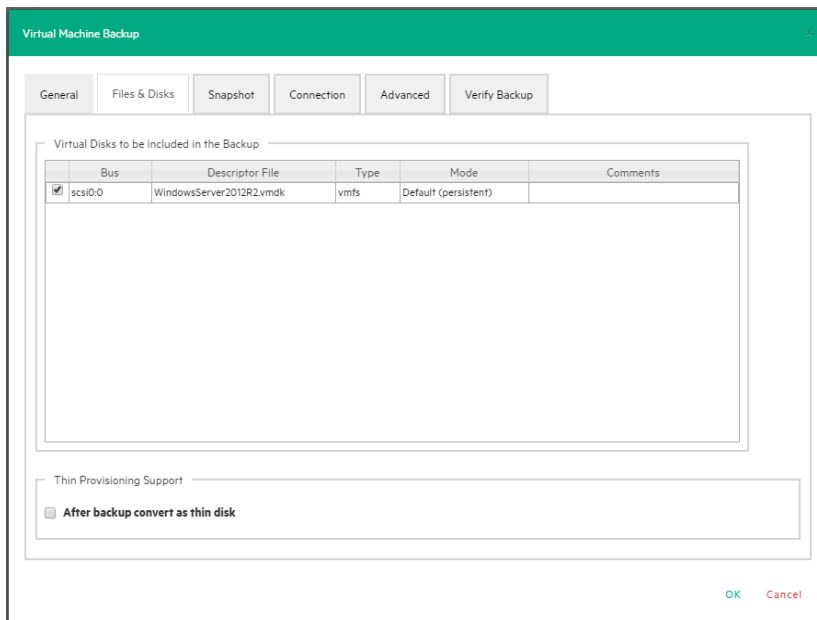
HPE VM Explorer will create a snapshot of your Virtual Machine, which means you can back up a running Virtual Machine without stopping it. When the backup is finished, HPE VM Explorer automatically deletes the Snapshot on your ESXi or Hyper-V server.

**NOTE:** Selecting the **If the target directory exists, overwrite existing files in the target directory** checkbox will only overwrite the existing backup after the new backup has been successful. The reason for this is to always keep a working backup, so make sure you have enough free space while running the backup. You can also delete the existing backup before starting the new backup by selecting the **Delete existing Backup in the target directory before the Backup starts** checkbox.

**IMPORTANT:** Selecting this checkbox means that, if the backup fails, you will no longer have a functional backup.

At this stage, you can also perform an incremental backup. For more information, see [Performing an incremental backup, on page 67](#).

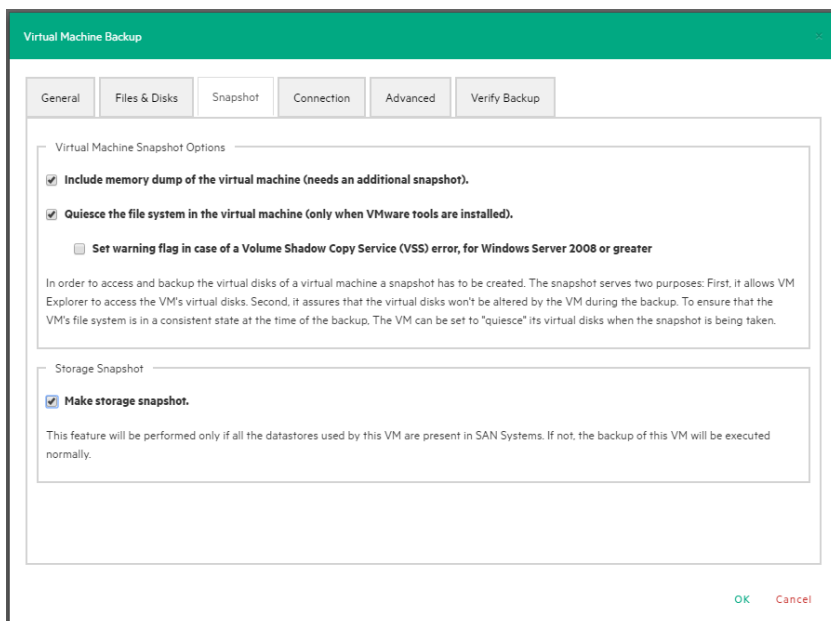
2. In the **Files & Disks** tab, choose which Virtual Disks you want to include in the backup. If the option **Include memory dump of the virtual machine** is enabled in the **Snapshot** tab, you must select all virtual disks, otherwise you will not be able to restore the memory snapshot. Select the **After backup convert as thin disk checkbox** to convert all disks in the backup to thin format. This option is only available if:
  - a. The target host is ESXi
  - b. The HPE VM Explorer Agent is enabled on the target server (only for ESXi).
  - c. The **Keep data compressed at destination** option is not enabled.
  - d. There are no other discs with the same name.



### Backup - Files & Disks

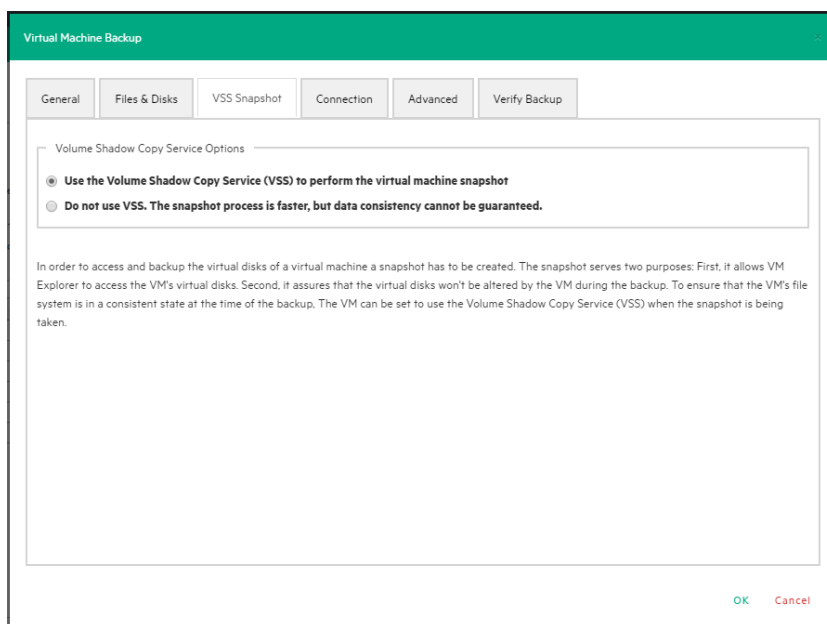
3. In the **Snapshot** tab (ESXi only), configure your VM backup snapshot options. All recommended options are already selected by default.
  - **Include memory dump of the virtual machine (needs additional snapshot)**—If your VM is running, HPE VM Explorer creates a memory snapshot of the VM. When restarting the VM, you will lose the current memory. If you also want to back up the memory to capture the exact running state, select this checkbox.

- **Quiesce the file system in the virtual machine (only when VMware tools are installed)**– Select this checkbox (recommended) if VMware tools are installed on the guest system so that VMware tools can inform the OS that a snapshot will be created. This enables you to write down all necessary data for a consistent snapshot.
- **Make storage snapshot**–Select this checkbox if all datastores are located on SAN Infrastructures to enable the backup to make storage snapshots of each datastore, map them on the same ScaleIO Data Client (SDC) where the VM is registered, mount the volumes and then start the normal backup process on this copy of the VM structure. Then, HPE VM Explorer unmounts and then un-maps all the datastores and finally removes all the snapshots previously created. This type of backup allows the host to release the source VM immediately after the storage snapshots are created, thus drastically reducing the merge times of a normal backup.



### Backup – Snapshot (ESXi)

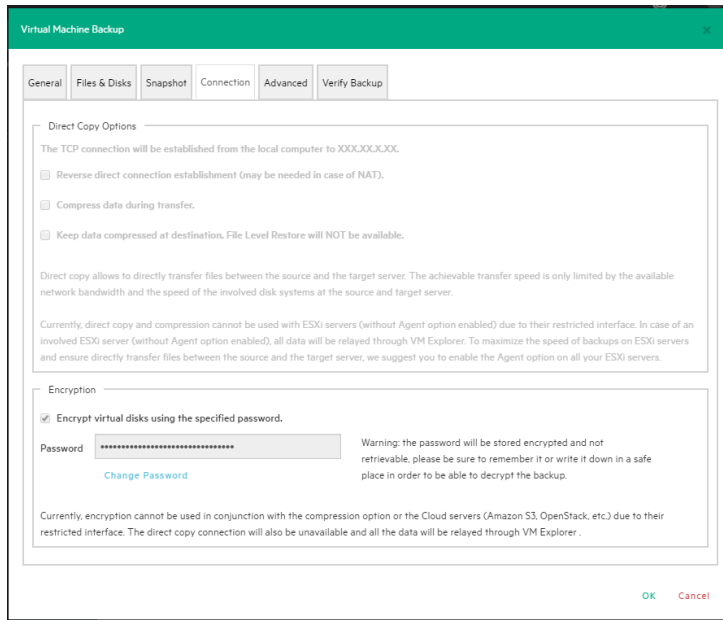
4. In the **VSS Snapshot tab** (Hyper-V only), configure your VSS options, which ensures the consistency of the backup. Not using the VSS may grant you a faster performance but does not guarantee backup data consistency.



### Backup - VSS Snapshot (Hyper-V)

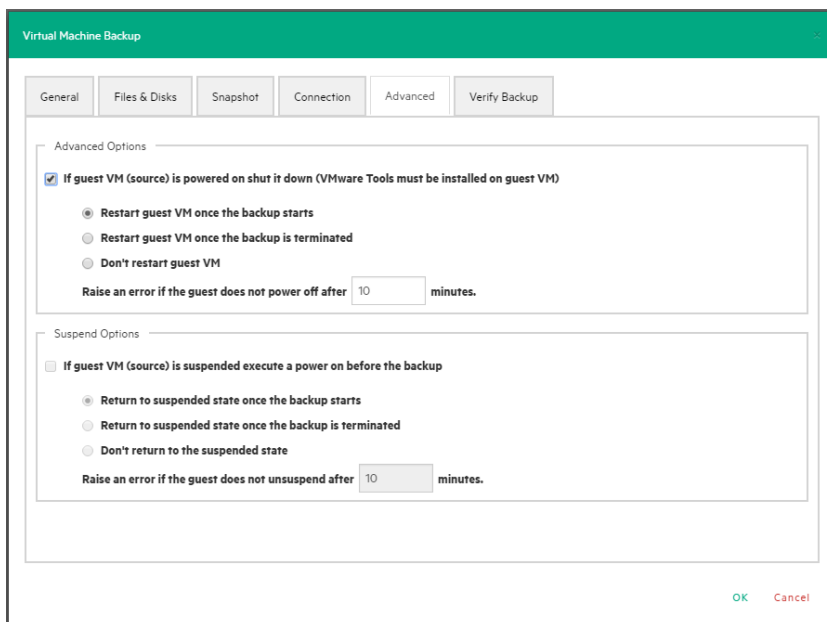
5. In the **Connection** tab, configure the single VM backup connectivity options.
  - a. **Direct Copy Options**—Select if you want to transfer files directly between the source and the target server. You can also reverse the direction of the TCP connection (default is from the source server to the target server) in case of NAT (Network Address Translation). The direct copy options are not available if the source or target server is ESXi and the HPE VM Explorer Agent is not enabled.
  - b. **Compress data during transfer**—Select to compress data during transfer. You can also decide to keep the data compressed at destination but in this case the File Level Restore will not be available for this backup.
  - c. **Encryption**—You can also use encryption in conjunction with the Cloud servers (Amazon S3, OpenStack and so on). The direct copy connection is unavailable and all the data will be relayed through HPE VM Explorer (for more details, see [Enabling VD Services for incremental backups, on page 68](#)).

**CAUTION:** The password is stored encrypted and is not retrievable. Make sure to save it in a safe place to be able to decrypt the backup.



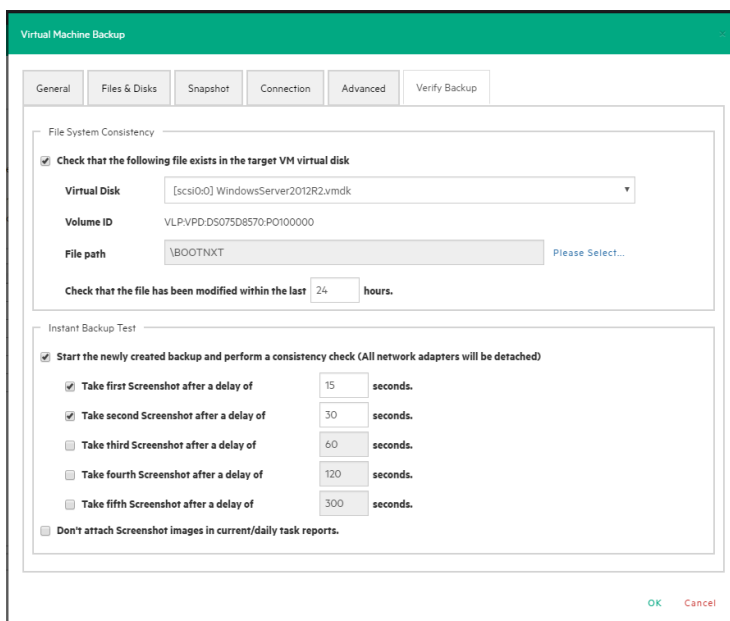
### Backup - Connection

6. In the **Advanced** tab, you can either shut down or unsuspend the guest VM before starting the backup if VMware Tools or Hyper-V Integration Services are installed on the guest VM.
  - If you choose to shut the guest VM down, you can also configure if and when to restart it (once the backup starts, once the backup is terminated or never to restart the guest VM) and the shutdown timeout error interval.
  - If the guest VM (source) is suspended, you can set the next suspended state (once the backup starts, once the backup is terminated or not to suspend the guest VM again), as well as the suspend timeout error interval.



### Backup - Advanced

7. In the **Verify Backup** tab you can configure when to run the File System Consistency check after the backup is completed and whether or not to test the backup using the HPE VM Explorer Instant Backup Test system.

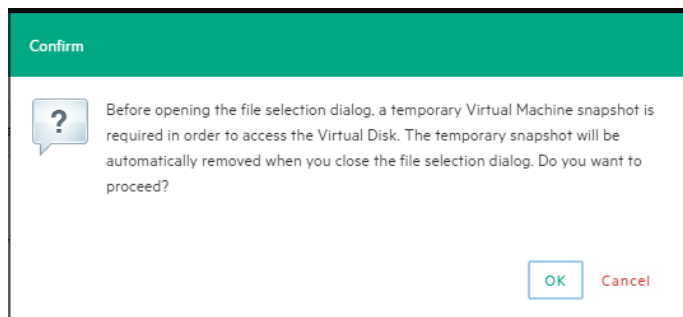


### Backup - Verify Backup

- **Perform a File System Consistency check**—Enables you to check for changes and last modification date of a specific file in a target virtual disk, once the backup/replication operation is



completed. You can select the target virtual disk and the file path to check and specify the acceptable modification time interval (for example, if the file has changed within the last 24 hours). The File System Consistency check is performed once the backup/replication operation is completed: HPE VM Explorer will open the fresh target virtual disk and look for the specified file path, checking for its existence and last modification date. If the check fails, the resulting backup/replication status will be set to Warning and a detailed message will be included in the report.



#### Backup - File Consistency confirm message

**NOTE:** During the File System Consistency configuration, in order to access and browse the virtual disk, a temporary VM snapshot will be required, which will be deleted automatically once the file selection dialog box closes. To accept and proceed, click OK in the Confirm dialog box.

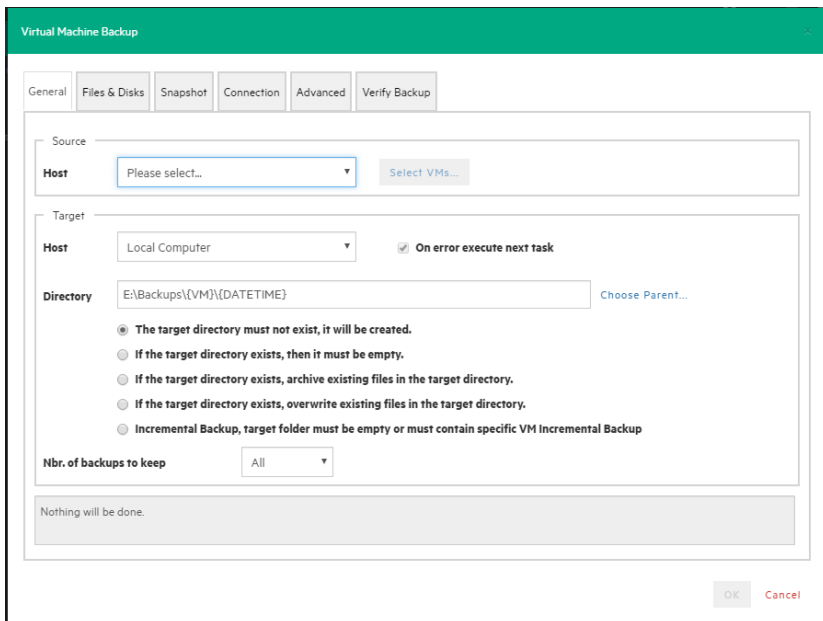
- **Instant Backup Test**—Enabling this option adds a completed backup to the Hypervisor inventory as a powered on VM. The VM health state is checked and you can take screenshots of the VM Console every x seconds. You can check the health state and VM screenshots in the Task History or in the e-mail report. For more information, see [Task History, on page 102](#) or [Sending E-mail Reports, on page 99](#).

To use this option, configure the HPE VM Explorer NFS Settings. For more information, see [Working with HPE VM Explorer Settings, on page 104](#).

**NOTE:** Screenshots taken during backup test are visible in the **Task History** view or in **E-mail reports**. Automated backup test, for the moment, is only available for VM running on ESXi and if the target is set to <local computer>. During the backup test all network adapters will be disconnected so that the test will not compromise your network. Any change occurred during the Instant Backup Test will be discharged when the test is over and will have no influence on the backup data (backup data, during the test, is read-only). HPE VM Explorer cannot perform the backup of the ESXi and Hyper-V host configuration.

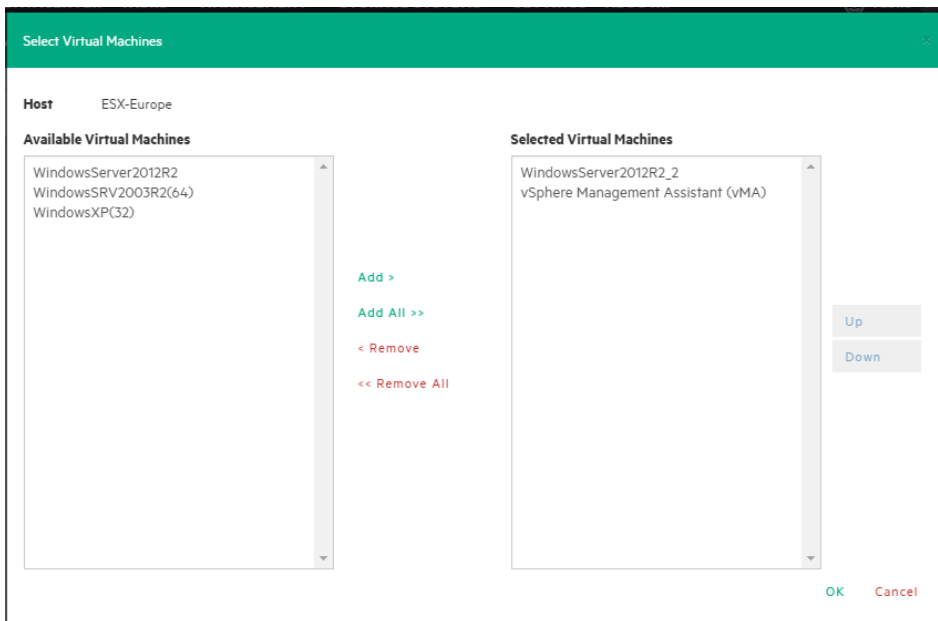
## Backing up multiple VMs

To back up two or more VMs, in the **Add Task Element** screen, under **Backup**, click **Multi VMs**. For more information on how to get to this screen, see [Backing Up One or Multiple Virtual Machines, on page 58](#). Then, in the **Virtual Machine Backup** dialog box, configure the boxes in the specific tabs, as described in [Backing up a single VM, on page 59](#).



### Multi backup - General

The difference with the single VM backup is that you can select more than one VM by clicking **Select VMs...** and then selecting the desired VMs to back up. You can change the machines' backup priority using the **Up** and **Down** buttons. In the backup dialog box, the directory field must contain the **{VM}** tag.



### Multi backup - Select multiple VMs

Also, since the settings are shared across every VM included in the task, you cannot select the files and disks to back up for every single VM in the **Files & Disks** tab: everything in the virtual machines will be backed up.

## Performing an incremental backup

With HPE VM Explorer you can create incremental backups, which transfer only the modified files to the next backup, not the entire Virtual Machine. Note that you cannot perform an incremental backup of VM snapshot points, but during the restore process you can choose which backup version (backup date) you want to restore. For more information, see [Restoring an incremental backup, on page 85](#).

There are no restrictions for running Incremental Backup on Hyper-V, but you need to take into account certain aspects when performing an Incremental Backup on ESXi servers.

## Prerequisites for incremental backup

- For **ESX/ESXi (licensed edition)**, you need Virtual Disk Development Kit (VDDK) installed on your computer and your system needs to meet the following requirements:
    - ESXi 4.0/4.1/5.0/5.1/5.5/6.0
- NOTE:** ESXi 4.0/4.1/5.0/5.1/5.5/6.0 free edition is not supported).
- Virtual Hardware of your VM must be version 7 or higher (check your version in your vSphere

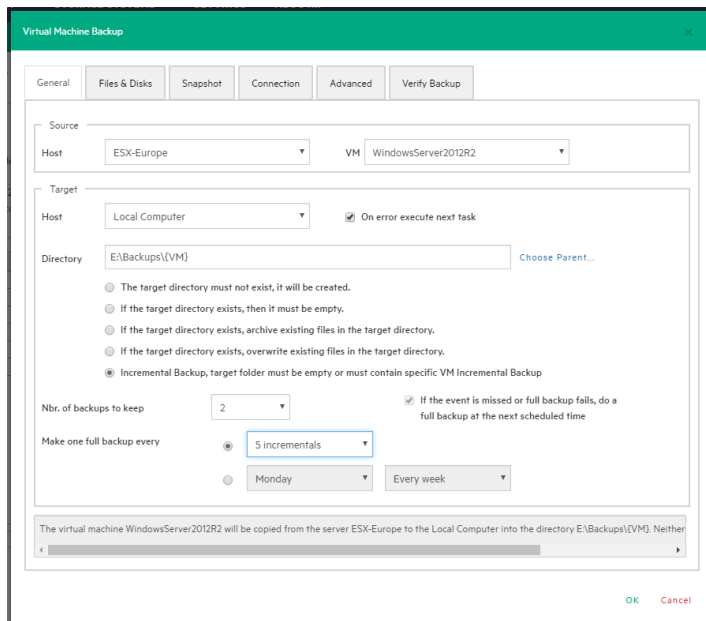
Client in the settings editing section of your VM).

- You must enable VD service support for the Server in HPE VM Explorer.
- You must initialize the VD service.

To enable VD Service backup, you must edit your server settings (**Expert Settings** tab) in the HPE VM Explorer Server view. For more information, see [Working with Servers in HPE VM Explorer, on page 23](#).

- For **ESXi free edition**, you do not need VDDK, but you must enable the HPE VM Explorer agent on the ESXi server by selecting the Try to use the HPE VM Explorer agent on ESXi (...) checkbox in the SSH / HPE VM Explorer Agent screen of the Add or Edit Server (ESX/ESXi 4/5/6) wizard. For more information, see [Working with Servers in HPE VM Explorer, on page 23](#).

After configuring all the settings, in the Virtual Machine Backup dialog box, select Incremental Backup, target folder must be empty or must contain Specific VM Incremental Backup. All other procedures are the same as for the default backup. HPE VM Explorer initially creates a full backup of your VM and then will create incremental backups, which contain only the changed data.



**Incremental Backup - General**

## Enabling VD Services for incremental backups

To enable Incremental Backups on ESXi, you need ESXi 4.0 or later. Next, you must make sure, that you upgraded the virtual hardware in your VM to Version 7 or later.

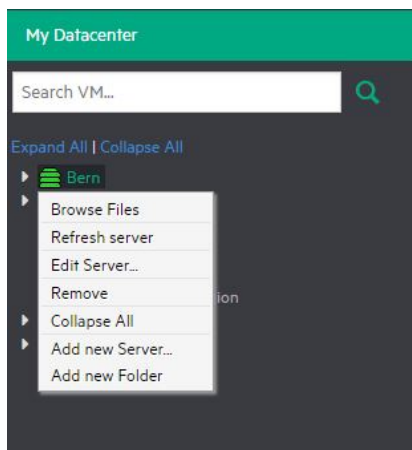
In addition to this, HPE VM Explorer needs to be initialized to use the Virtual Disk Service Library (VD Service) and you must enable the VD Service in HPE VM Explorer for each host.

## Enabling VD Service for each ESXi host

Once the VD service is initialized, you need to enable it on each ESXi host.

To enable the VD Service

1. Go to the **My Datacenter** view and right-click the ESXi host you want to configure. In the shortcut menu, point to **Edit Server...**
2. In the **Edit Server** wizard, go to the **Advanced Settings** screen and select **Use VD Service**. Click **Next**.



**Edit server**

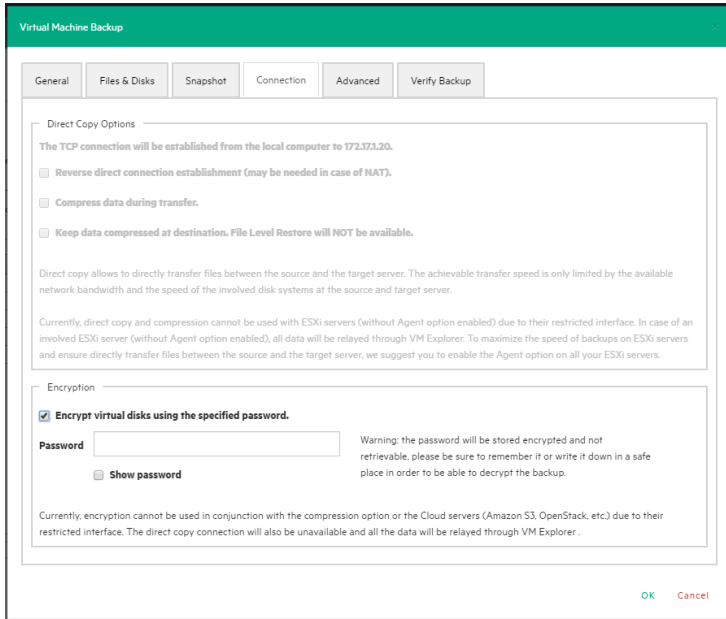
3. In the **Test Connection** screen, verify your settings. When finished, click **Finish**. Repeat this procedure for all other ESXi hosts.

## Backup encryption

With HPE VM Explorer, you can encrypt the backups to increase the security of your Virtual Machines using AES algorithm, a standard sector-based data encryption method defined by IEEE P1619. Specifically, only the disks' data will be encrypted using the specified password.

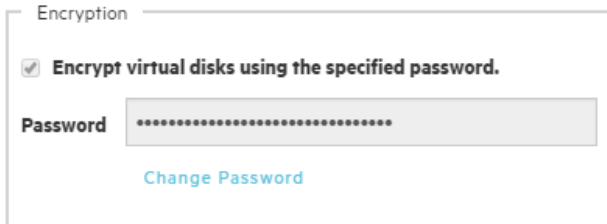
You can use encryption in conjunction with Cloud storage targets. The direct copy connection is unavailable and all the data is relayed through HPE VM Explorer.

To encrypt your backups, during the backup configuration process (for more information, see [Backing Up One or Multiple Virtual Machines, on page 58](#)), in the **Connection** tab, select **Encrypt virtual disks using the specified password** and then type your password.



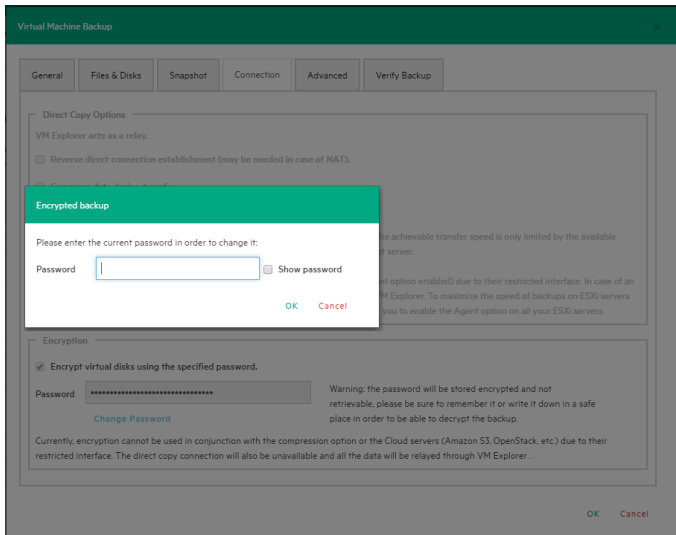
### Backup encryption

**CAUTION:** The password is stored encrypted and is not retrievable, so make sure to remember it or write it down in a safe place in order to be able to decrypt the backup.



### Password encryption

**NOTE:** You can only change your password after typing your existing password.

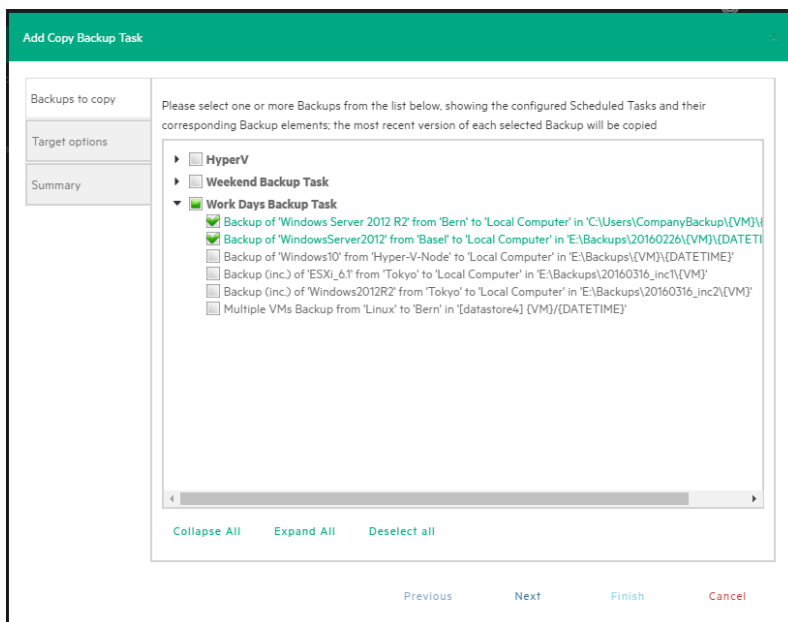


### Change encryption password

## Copy a backup

You can schedule a copy of one or more existing backups to another target destination. To do so:

1. Go to **Tasks > Scheduled Tasks** and click **Add**.
2. In the **Add Task Element** screen, under **Copy Backup**, select the desired backup destination: to server or to tape media.
3. In the **Add Copy Backup Task** wizard, in the **Backups to copy** screen, select the backup element(s) you want to copy from the list. Here, you can select an entire scheduled task (all included backup elements will be copied) or individual backup/multiple VMs backup elements. The scheduled Copy Backup Task is performed individually for every VM only on backup versions that have changed since the last backup (if not, no backup is performed of these machines).



### Copy Backup - Backups to copy

4. a. (for **Copy Backup to Server** only) In the **Target options** screen, select the target host and the path for the backup copies. The destination path of the target server consists of the specified target base path followed by the selected append path option. You can group the backup copies by VM name or by date/time of copy and vice versa.

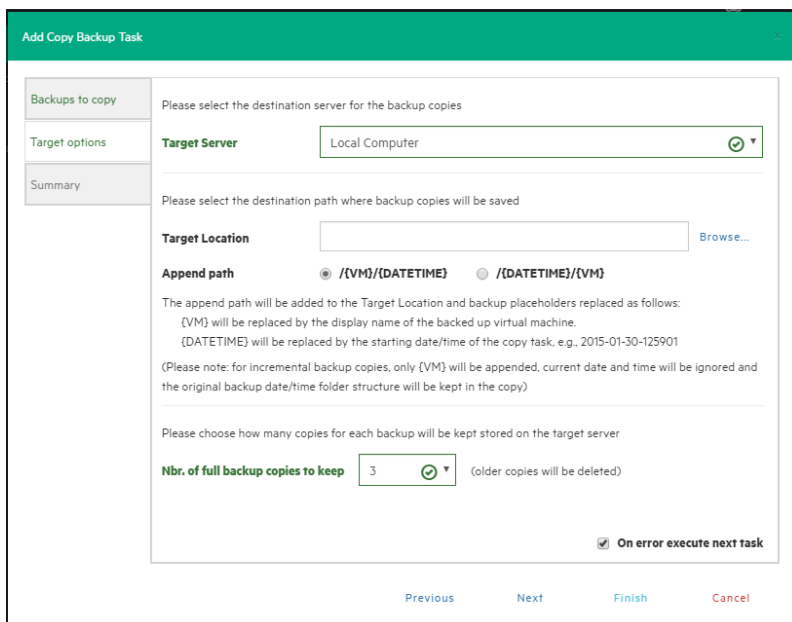
The {VM} and {DATETIME} placeholders of the append path stand for:

- {VM}: the display name of the backed up virtual machine.
- {DATETIME}: the starting date/time of the scheduled task in which the copy task is included, in **YYYY-MM-DD-hhmmss** format

Also, specify the number of full backup copies to store on the target server: either **All** (default), which copies all backup copies, or a specific number, which deletes all older copies.

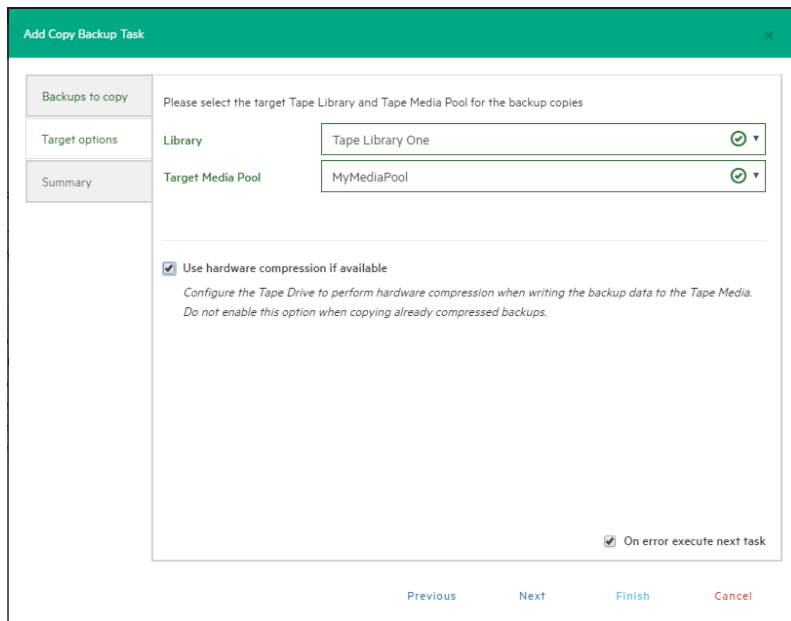
**Important!** The copy of incremental backups is limited to the local machine as target server. Also, to keep the incremental folder structure consistent, only the {VM} subfolder will be appended to the target base path, ignoring current date/time and keeping the original backup date/time folder structure.





### Copy Backup - Target options (to Server)

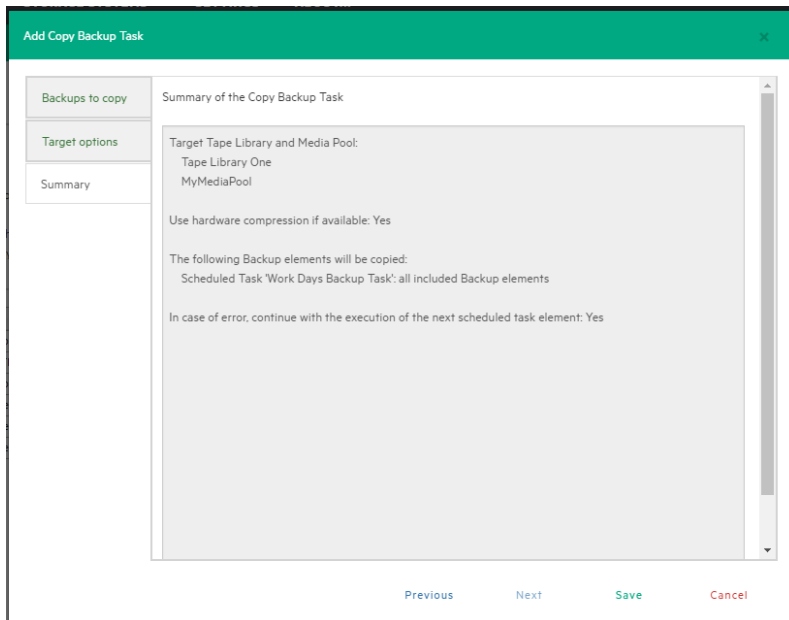
8. **b. (for Copy Backup to Tape Media)** In the **Target options** screen, select the desired target tape media pool. You can select the target tape library, then a corresponding target custom media pool you created. When choosing a media pool, you will copy the backups onto a media included in it, using the media pool's retention rules. All available space will be used to store backup data. Large backups will be automatically split into multiple tape media if necessary. Also, you can enable hardware data compression if your tape device supports it.



### Copy Backup - Target options (Tape Media)

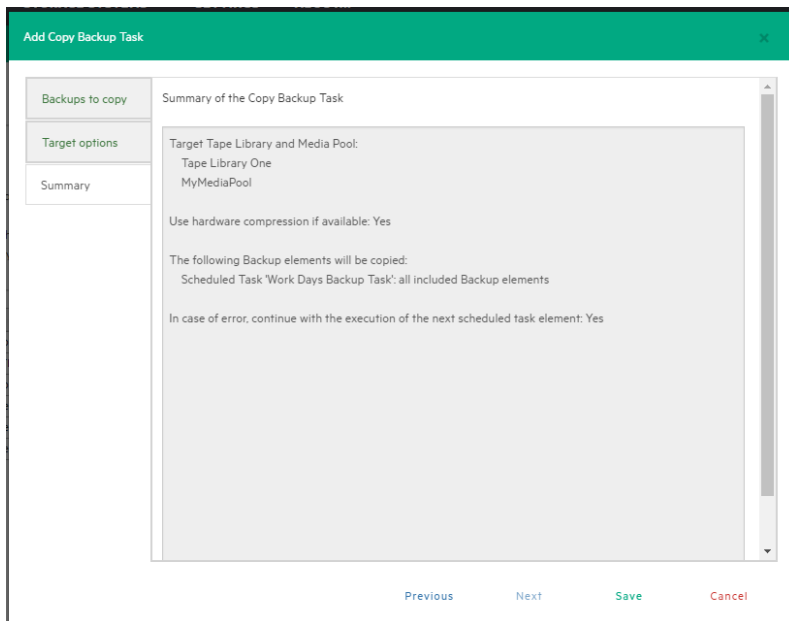
5. In the **Summary** screen, you can see the details of your copy backup options. At this stage you

can go back and make any necessary changes. When finished, click **Save**.



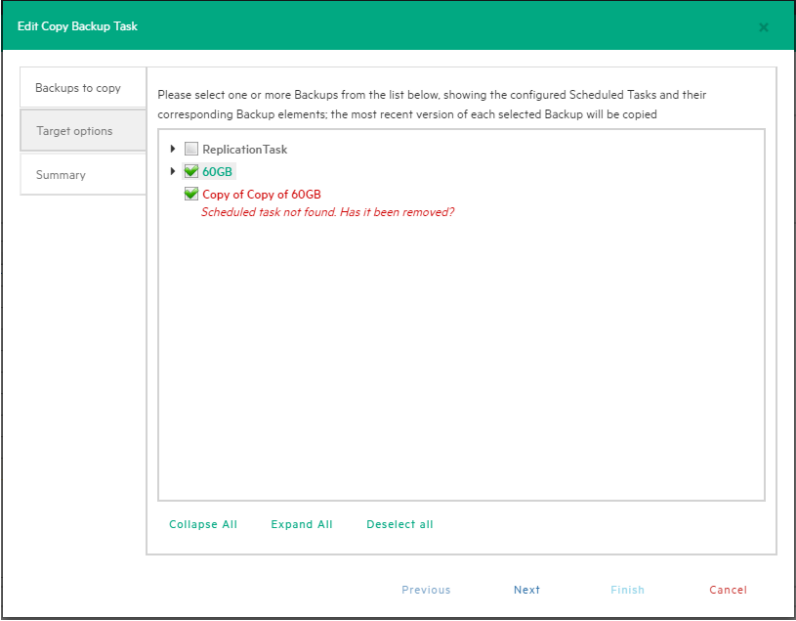
### Copy backup - Summary

**NOTE:** Removing or modifying any scheduled tasks or backup elements referenced by the copy backup task (removing a backup element that was supposed to be copied) might result in failed subtasks. You can fix this by keeping the copy backup task up to date, editing it and deselecting the highlighted items with errors.



### Copy backup - Summary

**NOTE:** Removing or modifying any scheduled tasks or backup elements referenced by the copy backup task (for example, removing a backup element that was scheduled for copying) may result in failed subtasks. To fix this, keep the copy backup task up-to-date, modify it and clear the highlighted items with errors:



**Copy Backup - Target options (removed Scheduled Task)**

# Replicating One or More Virtual Machines

With HPE VM Explorer, you can replicate one or multiple Virtual Machines to another hypervisor host. To do so:

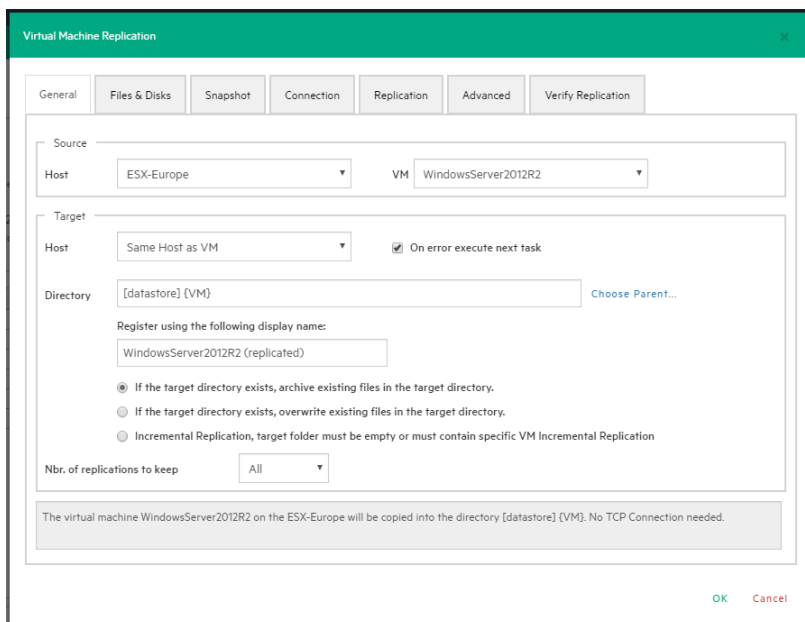
1. Go to **Tasks > Scheduled Tasks** and click **Add**.
2. In the **Add Task Element** screen, under **Replication**, select either **Single VM** or **Multi VM**, depending on your preferences.
3. In the **Virtual Machine Replication** dialog box, configure the replication parameters. For more information, see [Replicating a single VM, below](#) and [Replicating multiple VMs, on page 81](#).

## Replicating a single VM

**NOTE:** If this is your first time to make an incremental replication, follow the on-screen instructions.

To replicate a single VM, configure the **Virtual Machine Replication** dialog box, as follows:

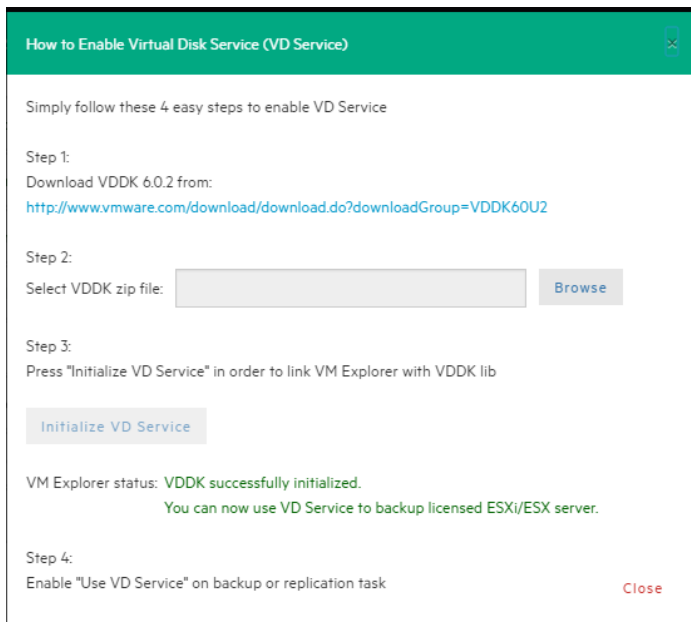
1. Click **Single VM** and then, in the **General** tab, select the **Source Host** and the VM that you want to replicate and the target location – the same host as the VM or another host in the **Datacenter** view. Choose the target directory, the name which will be used to register the replicated VM, and how you want to handle the target directory.



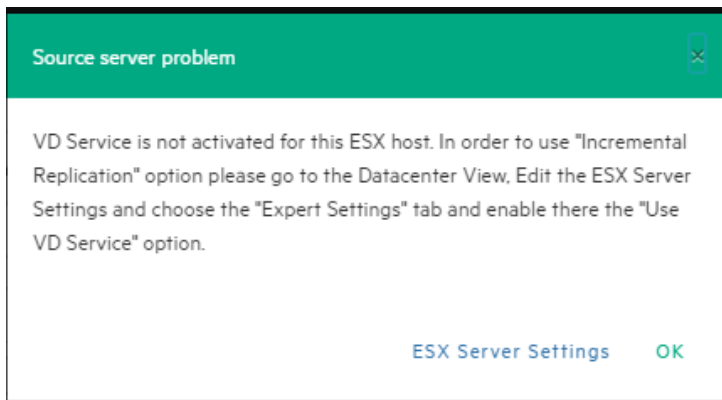
### Replication - General

**NOTE:** Selecting **Overwrite existing files in the target directory** will overwrite the previous replication only after the successful execution of the new one. The purpose is to always preserve a functional replication, so make sure there is enough free space to temporarily hold both replications. Selecting **Delete existing Replication in the target directory before the Replication starts** will erase your existing replication before the execution of the new one. If the replication process fails, you will have no replications available, so proceed with caution.

Virtual Disk Development Kit (VDDK) must be activated to make an incremental replication, so this procedure only applies to licensed ESXi hosts, not to the ESXi free version. If the host's VD Service is not activated, you will be prompted to initialize VDDK for the ESXi server. Click **ESXi Server Settings** and then, in the **How to Enable Virtual Disk Service** dialog box, download VDDK and/or initialize VDDK for the host. When finished, click **Close**.



### Replication - Enable VD Service

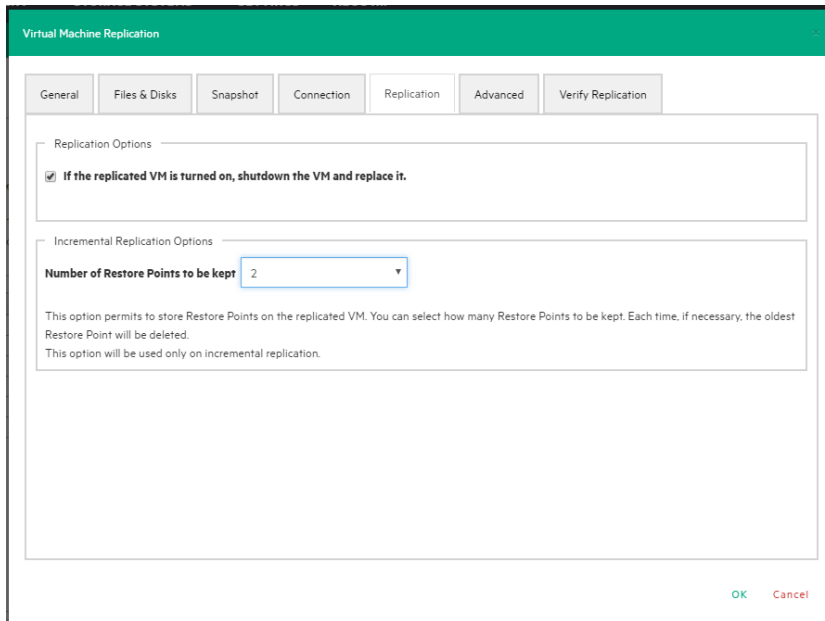


### Replication - VD Service dialog

2. Selecting **Overwrite existing files in the target directory** will overwrite the previous replication only after the successful execution of the new one. The purpose is to always preserve a functional replication, so make sure there is enough free space to temporarily hold both replications.
3. In the **Files & Disks and Snapshot** screens, the procedures you need to perform are similar to backing up a VM. For more information, see [Backing up a single VM, on page 59](#).
4. In the **Connection** tab, configure the direct copy options, which enables you to directly transfer files between the source and the target server. You can reverse the TCP connection direction (default is from the source server to the target server) for Network Address Translation (NAT).  
You can also compress data during transfer, but you cannot keep the data compressed at destination for replications because at the end of the replication process the VM will be registered on the target server. Also, the direct copy options are not available if the case of ESXi source or

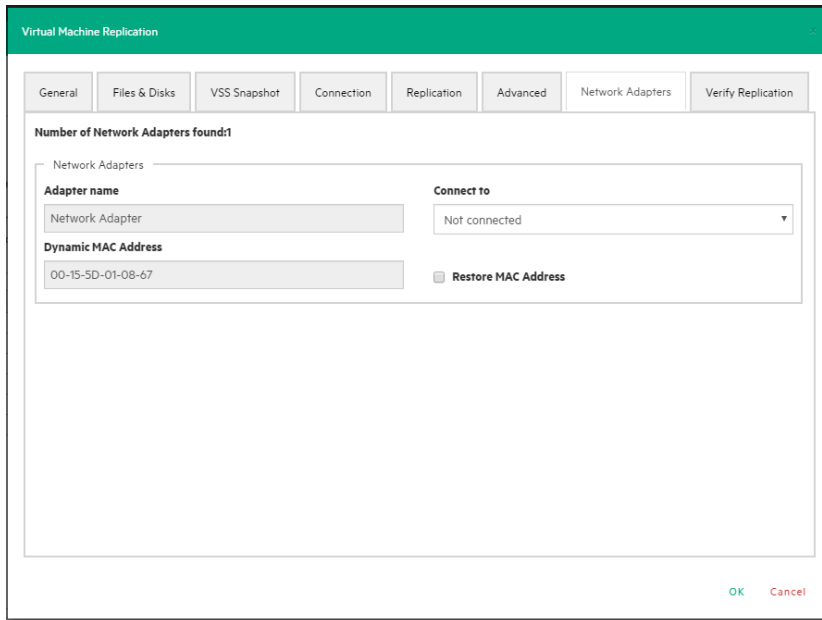
target server and the HPE VM Explorer Agent is not enabled. In addition, this type of replication does not support encryption.

5. In the **Replication** tab, you can choose to shut down and replace the replicated VM, if it is already powered on manually. Also, for incremental replication, you can choose to preserve any desired number of Restore Points, which you can revert to, if needed, whilst keeping the previous version replicated.



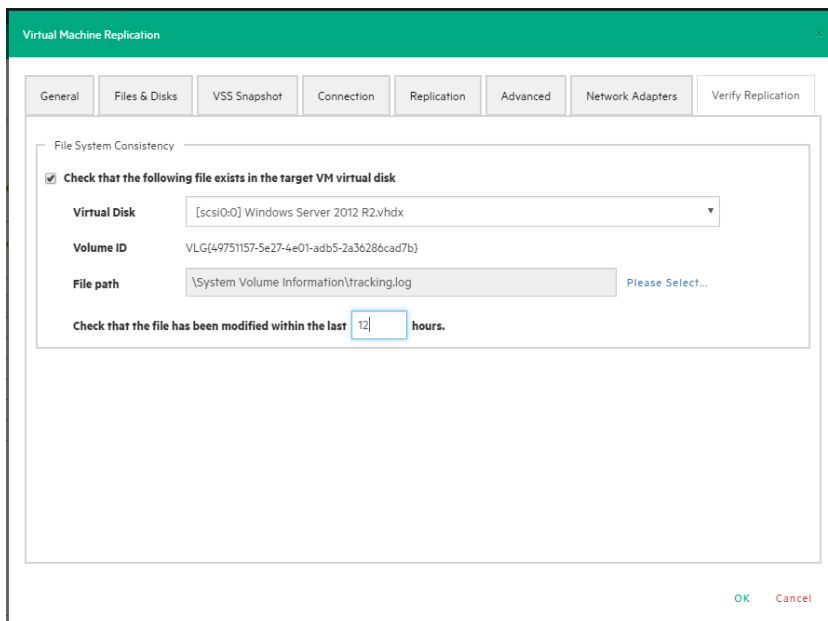
### Replication - Replication tab

6. For information on how to configure the **Advanced** tab, [Backing up a single VM, on page 59](#).
7. In the **Network Adapters** tab (available for Hyper-V Host only), select from the list which virtual network the (legacy) adapters should connect to.



### Replication - Network adapters

8. In the **Verify Replication** tab, you can enable the **File Consistency Check** feature for the target replicated VM. For more information, see [Backing up a single VM, on page 59](#).



### Replication - Verify replication



## Replicating multiple VMs

To replicate two or more VMs, in the **Add Task Element** screen, under **Replication**, click **Multi VMs**. For more information on how to get to this stage, see [Replicating One or More Virtual Machines, on page 76](#). Then, in the **Virtual Machine Replication** dialog box, configure the boxes in the specific tabs, as described in [Replicating a single VM, on page 76](#).

The screenshot shows the 'Virtual Machine Replication' dialog box with the 'Replication' tab selected. The 'Source' section has a 'Host' dropdown set to 'Please select...' and a 'Select VMs...' button. The 'Target' section has a 'Host' dropdown set to 'Same Host as VM' and a checked 'On error execute next task' checkbox. Below this is a 'Directory' text field with a 'Choose Parent...' button. A section titled 'Register using the following display name:' contains a text field with the placeholder '{VM} (replicated)'. Three radio buttons are present: 'If the target directory exists, archive existing files in the target directory.' (selected), 'If the target directory exists, overwrite existing files in the target directory.', and 'Incremental Replication, target folder must be empty or must contain specific VM Incremental Replication'. At the bottom, there is a 'Nbr. of replications to keep' dropdown set to 'All' and a message box that says 'Nothing will be done. Please fully specify the target location.' 'OK' and 'Cancel' buttons are at the bottom right.

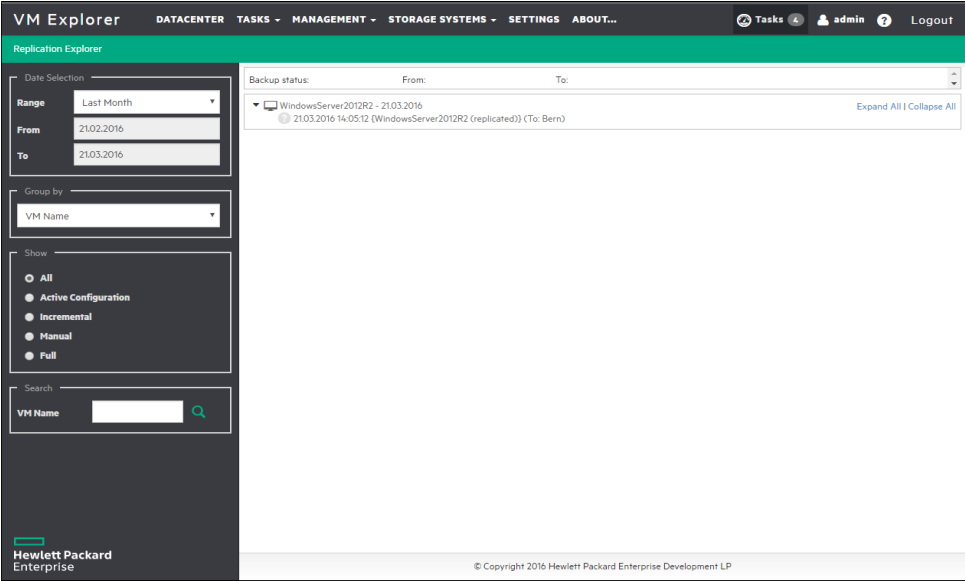
### Multi Replication - General

The difference with the single VM replication procedure is that here you can select two or more Virtual Machines by clicking **Select VMs** in the **General** tab and picking the desired VMs in the **Select Virtual Machines** dialog box. The directory and the display name used to register the replicated VM must contain the {VM} tag.

Also, since the settings are common across every VM included in the task, in the **Files & Disks** tab you cannot select the files and disks to replicate for every single VM as everything on these machines will be replicated.

## Replication Explorer

To have an overview of any replications performed with HPE VM Explorer, go to **Management > Replication Explorer**. You can filter the replication entries using the filters to the right. You can also power on/off every replicated VM by right-clicking the registered VM and selecting the desired operation.

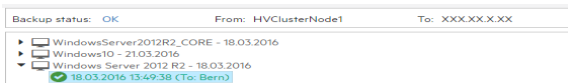


**Replication Explorer**

# Restoring a VM Backup

In HPE VM Explorer, restoring a VM backup is a simple operation.

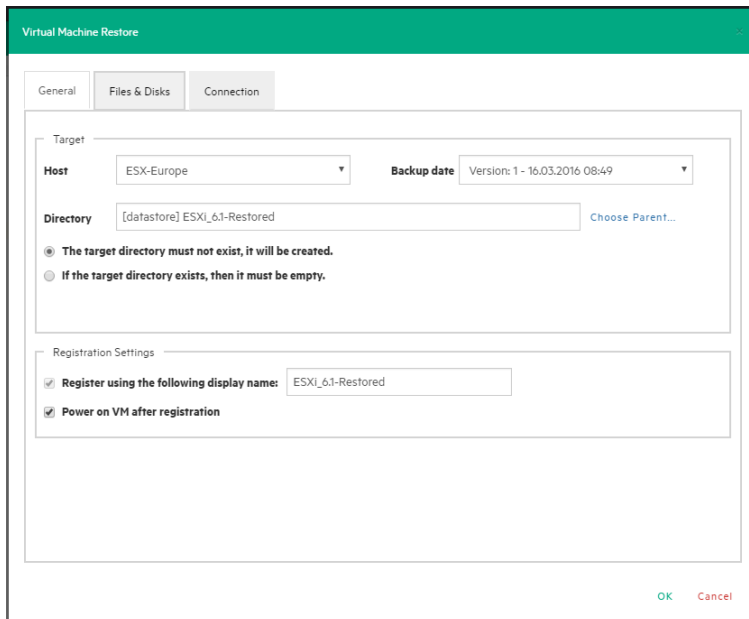
To restore a backup in HPE VM Explorer, Professional and Enterprise editions, go to **Management > Backup Explorer**, filter to view the desired backups, if needed, then right-click the backup you want to restore and point to **Restore**.



## Restoring - Backup Explorer

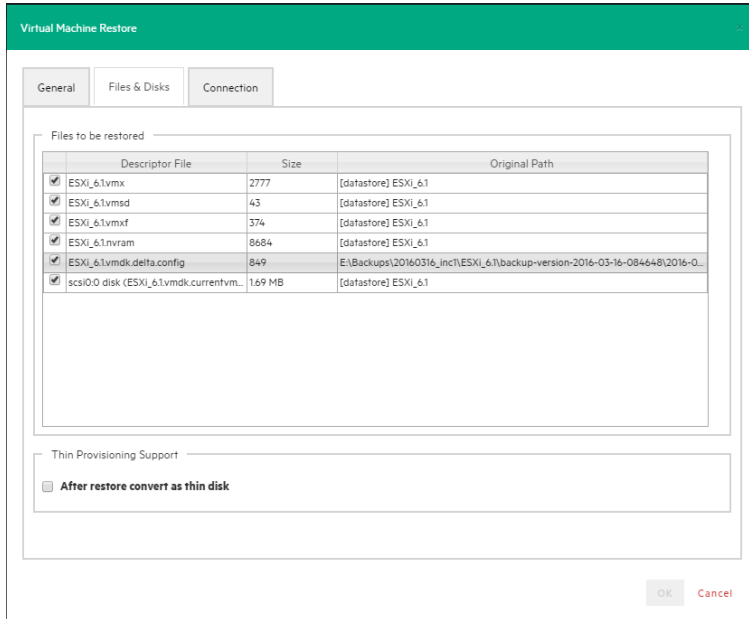
To restore a backup in HPE VM Explorer Free Edition or to restore any backup not listed in **Backup Explorer**:

1. Go to **Management > File Explorer**, open the desired backup folder and right-click the `vmxbackup.xml` file, which contains all the information about your original VM. On the shortcut menu, point to **Restore Backup...**
2. In the **Virtual Machine Restore** dialog box, in the **General** tab, choose the target host where you want to restore the backup, select the directory and whether to directly register the Virtual Machine to your inventory using the default name. If not, you can always register any VM to your datastore by going to **File Explorer**, right-clicking the VM configuration file (\*.vmx for ESXi VMs or \*.xml for Hyper-V VMs) and pointing to **Register VM**. Also, you can power on the VM after registration.



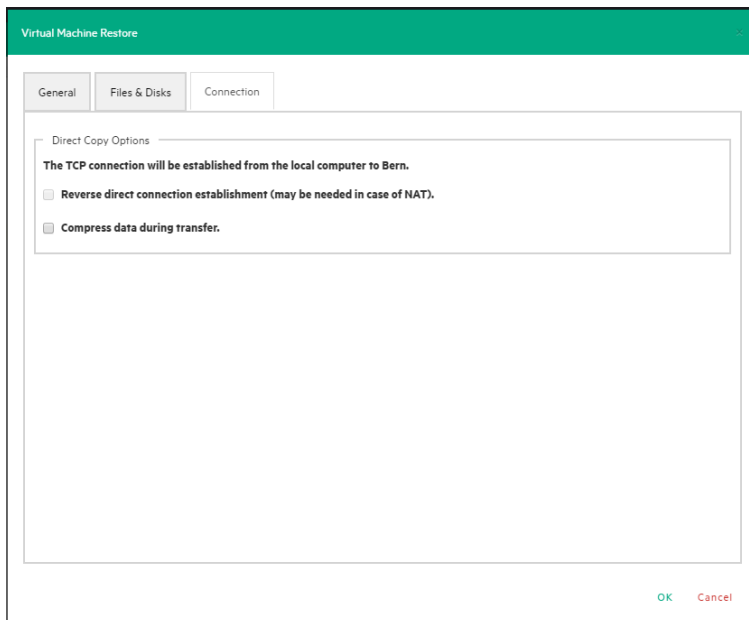
## Restore - General

3. In the **Files & Disks** tab, choose which file/disk you want to include in the restore and whether to convert the disks as thin after restore (if your Target host is ESXi, HPE VM Explorer Agent is enabled on the target server and there are no other disks with the same name).



### Restore - Files & Disks

4. In the **Connection** tab, configure the direct copy options. The procedures are similar to [Replicating a single VM, on page 76](#).



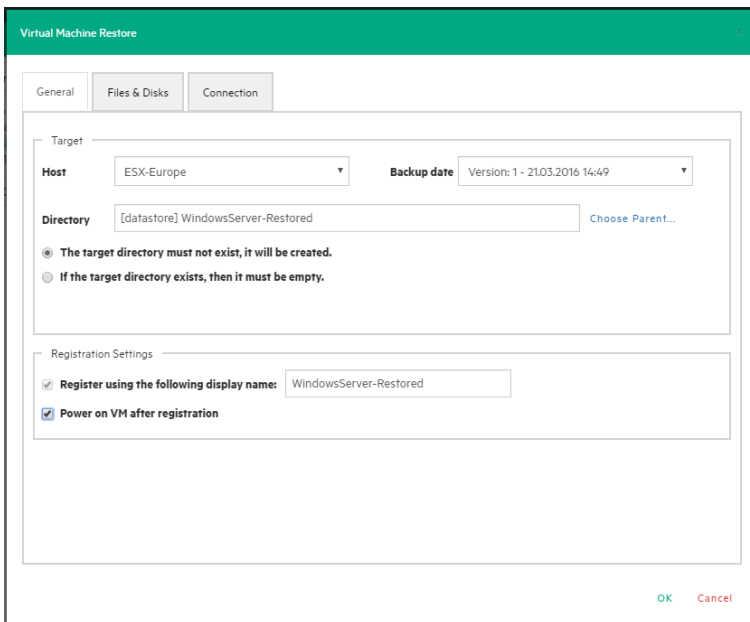
### Restore - Connection

5. (Hyper-V Host only) In the **Network Adapters** tab, in the **Connect to** list, select which virtual network the network adapters and the legacy network adapter should be linked to. You can restore

all saved network adapters in the new VM. To automatically set the old MAC address on the adapter, select **Restore MAC Address**. When finished, click **OK**.

## Restoring an incremental backup

When restoring an incremental backup, you can choose up to which date to restore the date – more exactly, you can choose a specific restore point to restore. The other procedures are identical to regular backup restores. For more information, see [Restoring a VM Backup, on page 83](#).



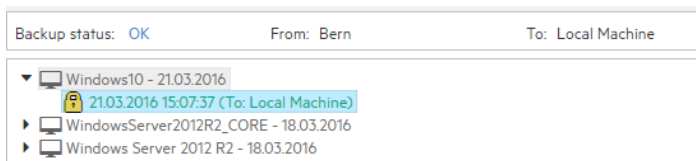
### Restore Incremental Backup - General

## Restoring an encrypted backup

When restoring an encrypted backup, make sure you know the encryption password.

To restore an encrypted backup

1. Right-click the encrypted backup (indicated by a yellow padlock) and click **Restore**.
2. Enter the password used to encrypt the backup.



### Restore encrypted backup

The standard restore dialog is displayed.

When using Instant VM Recovery and File Level Restore, HPE VM Explorer prompts you to enter the password in order to proceed with the operation.

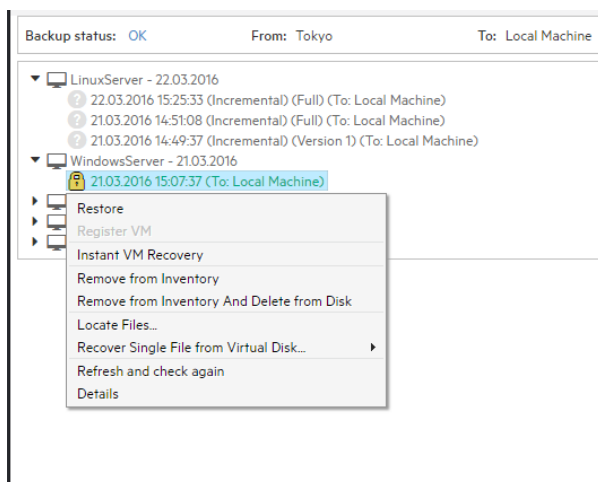
## Making an instant VM Recovery

The Instant VM Recovery feature is only available for backups of VMware ESXi Virtual Machines saved locally or on a supported Cloud storage.

## Making an instant VM Recovery from a local machine

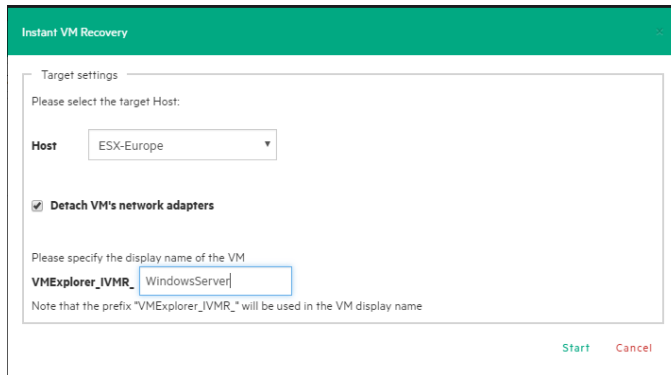
With HPE VM Explorer, you can power on a backup directly on a selected server without the need of restoring or copying any file using the Instant VM Recovery System. To do so:

1. Go to **Management > Backup Explorer**, filter through the available backups, if needed, then expand the backups' tree to get to the desired VM. Then, right-click desired the VM and on the shortcut menu point to **Instant VM Recovery**. A NFS server will mount a temporary datastore on you host. The actual disk will be preserved in your local disk.



### Instant VM Recovery from the Backup Explorer

2. In the Instant VM Recovery dialog box, register the VM to your selected server.



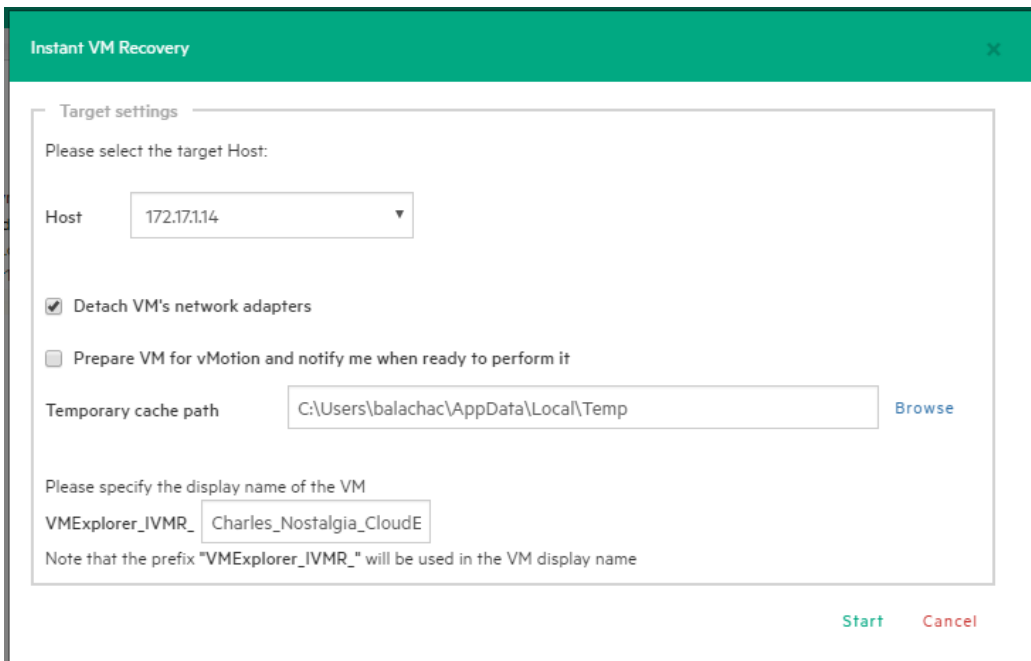
### Instant VM Recovery target settings

- When finished, click **Start**.

**NOTE:** You can perform any test during your Instant Recovery process, as none of your changes will be saved. You can also remove any network adapters to avoid conflicts with the original VM (default option). While the Instant VM is up and running, you can even perform a vMotion operation to migrate it on an existing datastore, making it a real VM, not dependent on the HPE VM Explorer Instant VM Recovery System.

## Making an instant VM Recovery from Cloud backups

With HPE VM Explorer, you can launch Instant VM Recovery of VM backups saved on a supported Cloud storage (Amazon S3, Rackspace, Open Stack, Azure or HPE Helion). The procedures are similar to making an Instant VM Recovery from a local machine (for more information, see [Making an instant VM Recovery from a local machine, on the previous page](#)), except for some additional options:



### Instant VM Recovery from Cloud

Select the **Prepare VM for vMotion and notify me when ready to perform it** checkbox if you plan to perform a vMotion migration on that Instant VM later. This will start an optimized data transfer task, added to the running tasks list where you can check the progress. Once this task is completed, you will be notified that Instant VM is ready for vMotion.

You can set the default local path for temporary Instant VM Recovery cache files in the main HPE VM Explorer **Settings** screen, in the **Instant Recovery Service** tab. Here you can override the default value with a custom path. Generally, a safe estimate of the temporary disk space required for an Instant VM Recovery of a Cloud backup is the total size of the backup itself.

HPE VM Explorer implements optimizations to improve the performance of an Instant VM Recovery of a Cloud backup, but even so the performance is generally slower than that of a local backup, strongly depending on the network bandwidth and server workload of your infrastructure. The better the performance of the network and hypervisor server, the more responsive the Instant VM Recovery process.



# Single Item Recovery

With HPE VM Explorer, you can recover individual files such as Exchange Server items (e-mails) or various single files from your backup.

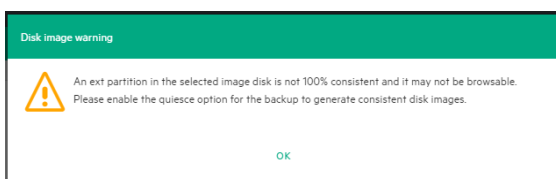
## File level restore for single files

File Explorer enables you to browse a disk image file and recover single files. Just select a disk image file and double-click on it to navigate its content and view all its files and directories. To recover a single file or a whole directory, right-click on the file and select **Download**, then choose the destination.

You can browse all virtual drives of non-compressed backup. HPE VM Explorer supports the following file systems on disk image files:

- NTFS
- FAT
- EXT
- Windows Dynamic Disks (simple, spanned, striped, mirrored volumes)
- Linux LVM—Logical Volume Manager (linear, striped, mirrored volumes).

If the EXT partition in the selected image disk is not 100% consistent, you will be notified in this respect, however, you can continue navigating the image disk. To generate consistent disk images, we recommend that you enable the quiesce option for the backups.



**Disk image warning**

## Recovering Microsoft Exchange Server message(s)

HPE VM Explorer can provide you with Exchange Server message(s) recovery, which enables you to recover e-mails (with or without attachments) from a VM backup that contains a valid Microsoft Exchange Server installation. This feature currently applies to the Enterprise and Professional editions of HPE VM Explorer and is only available to administrators.

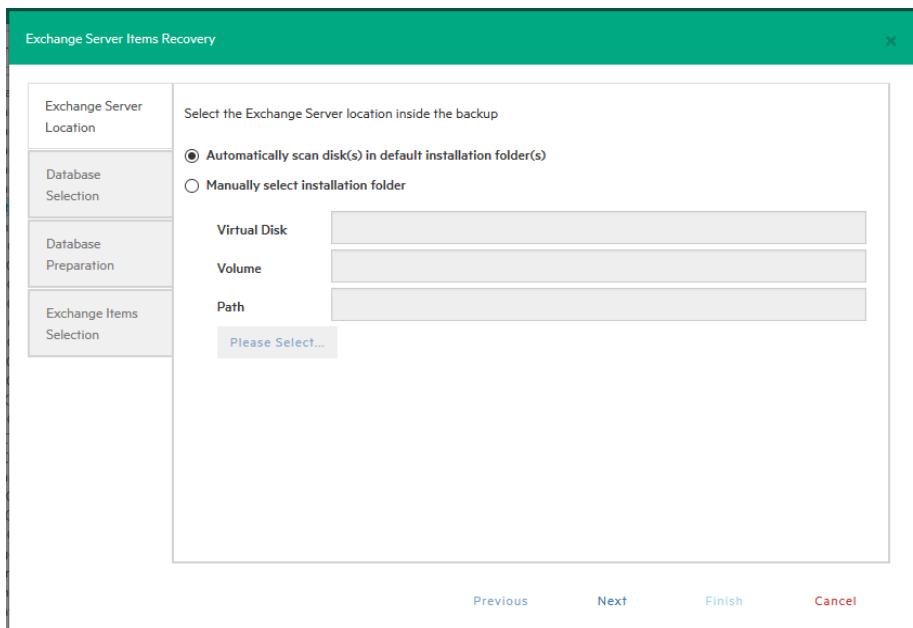
**NOTE:** HPE VM Explorer supports Microsoft Exchange Server versions 2013 and 2016.

To recover an Exchange Server item:

1. Go to **Management > Backup Explorer** and then navigate to the VM of your choice by expanding the list of available backups.
2. Right-click the VM that you want to recover the Exchange Server item from and point to **Recover Exchange Server Items...** on the shortcut menu. The **Exchange Server Items Recovery** wizard is displayed.
3. In the **Exchange Server Location** wizard screen, select the location of the Exchange Server installation. You can either:
  - a. Let HPE VM Explorer scan the available disks automatically, or
  - b. Select a location manually by clicking the **Please Select** button and choosing the desired folder in the **Choose Directory** dialog box.

**NOTE:** Make sure you have enough disk space on your computer to accommodate the entire Exchange Server database you are retrieving. You can configure the Exchange Recovery data path in the **Settings** section of HPE VM Explorer. For more information, see [Configuring General settings, on page 104](#).

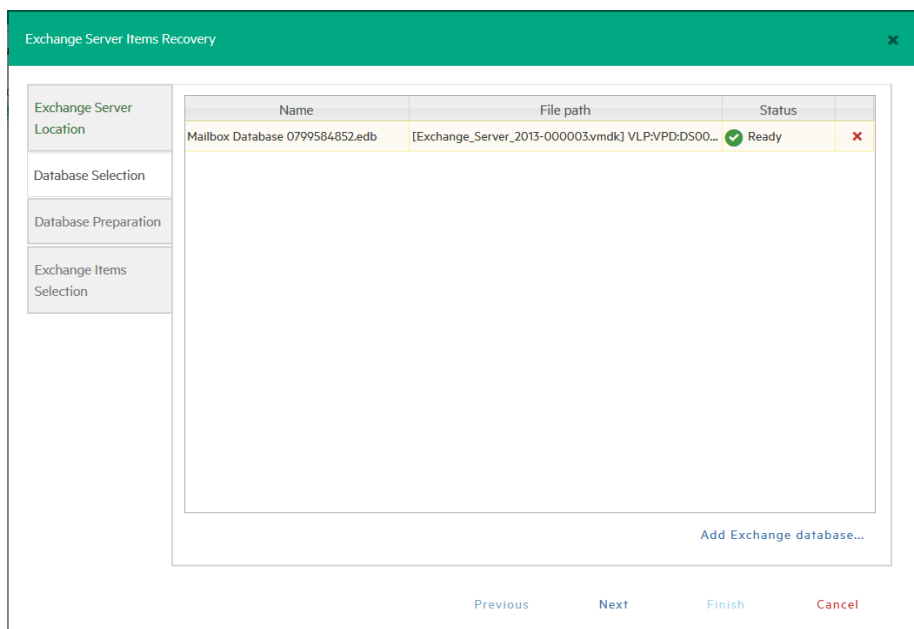
When finished, click **OK** to return to the **Exchange Server Items Recovery** wizard and then click **Next**.



#### Exchange Server Recovery wizard – select location

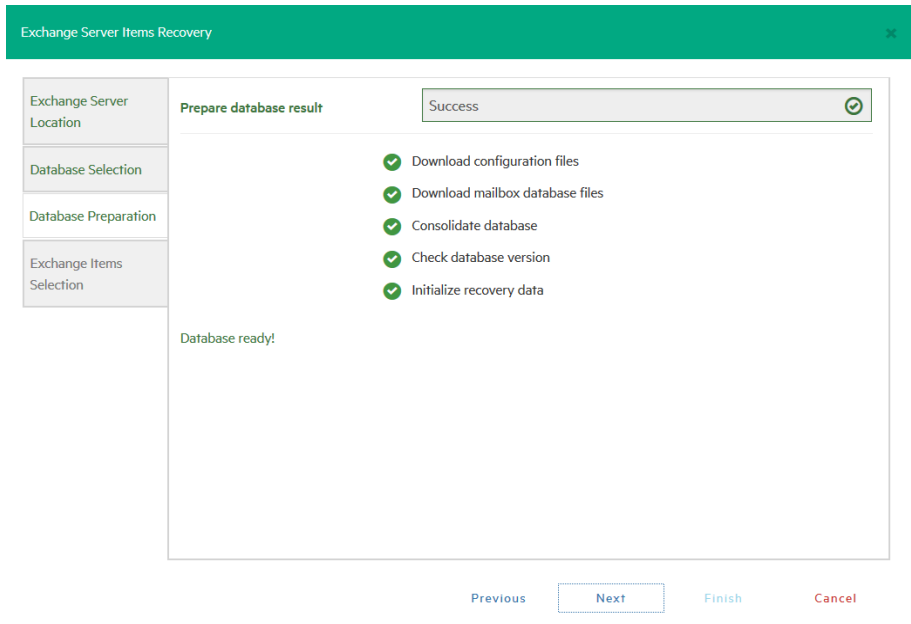
4. In the **Database Selection** wizard screen, you can see the database detected by HPE VM Explorer as well as its recovery status: **Not Ready** (before the extraction of the temporary

recovery data from the backup)/**Ready** (when the extraction is successful). You can delete the temporary recovery data on the local machine by clicking the **✖** close button. If you want to manually select another Exchange Server database, click **Add Exchange database** and then choose the desired one in the **Select File...** dialog box. When finished, click **OK** to return to the **Database Selection** wizard screen and click **Next**.



### Exchange Server Recovery wizard – Select database

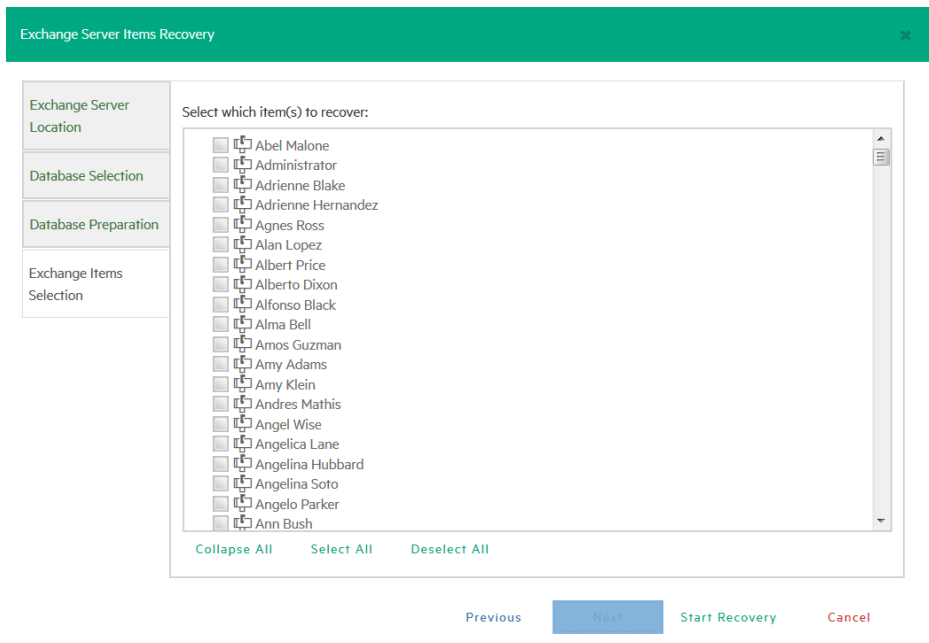
5. In the **Database Preparation** wizard screen, you can see the process of extracting and consolidating the Exchange database for recovery. The temporary recovery data is automatically saved in the location configured in the **Settings>General** section. For more information, see [Configuring General settings, on page 104](#). If the operation is not successful, click **Refresh** to verify your Exchange Server settings and then go back in the **Exchange Server Items Recovery** wizard to make the necessary changes. If the operation is successful, click **Next**.



### Exchange Server Recovery wizard – Prepare database

6. In the **Exchange Item Selection** wizard screen, you can see the mailboxes of all the users in the selected Exchange Server database.
  - a. If you want to restore single e-mails, expand the user name(s), navigate to the desired mailbox folder and select the e-mail you want to recover.
  - b. If you want to restore all the e-mails associated to certain users, select the checkboxes next to the user names.

You can select/clear all the users whose e-mail mailboxes you want to recover by clicking the respective buttons. Also, you can collapse all expanded user accounts by clicking **Collapse All**. You can recover any types of e-mails irrespective of their folder or whether or not they have one or multiple attachments. When finished, click **Start Recovery**.



### Exchange Server Recovery wizard – Select Exchange Server items

7. When the process is complete, you can download the recovered item(s) as a .ZIP file. In order to copy back one or more e-mails to the production, simply drag-and-drop them into your Microsoft Outlook mailbox. Then, you can continue the recovery process by clicking **Yes** in the confirmation message or you can click **No** to exit the **Exchange Server Items Recovery** wizard.

**NOTE:** Make sure your browser allows pop-ups from HPE VM Explorer.

# Scheduling Tasks

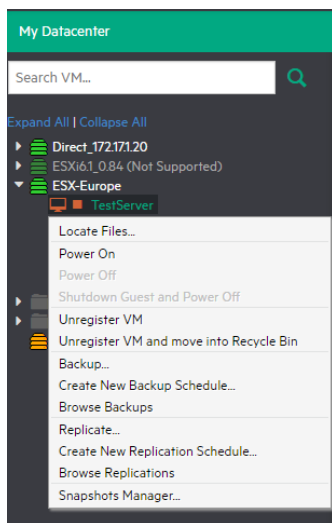
With HPE VM Explorer you can schedule your backup tasks to run automatically with configurable time intervals, such as quarter-hourly, hourly, daily, weekly and/or monthly.

## Creating a scheduled task

You can create a scheduled task either from the **Datacenter** view or from the **Tasks > Scheduled Tasks** view.

To create a scheduled backup task from the **Datacenter** view:

1. Go to the **Datacenter** view, right-click the Virtual Machine you want to back up and then point to **Create New Backup Schedule...** on the shortcut menu.



### Create new backup schedule

2. In the **Edit Scheduled Task** dialog box, configure the boxes according to your preferences. When finished, click **OK**.

**Edit Scheduled Task**

General

Task Name: New Scheduled Task

Schedule

Enable automatic scheduling for this task

Start time (24h format HH:MM): 12:00

Run every

15 minutes (dropdown) First Time: 22.08.2017

Weekly schedule

Every week (dropdown)  Mon  Tue  Wed  Thu  Fri  Sat  Sun

Monthly schedule

Every Month (dropdown) on the 1. (dropdown)

Run once

22.08.2016

OK Cancel

### Edit Scheduled Task

- Next, follow the Virtual Machine manual backup procedures described later in this publication. For more information, see [Backing Up One or Multiple Virtual Machines, on page 58](#). Also, selecting the **On error execute next task** checkbox enables the scheduled task to continue to the next step even if the previous step failed.

To create a new scheduled task from the Scheduler view

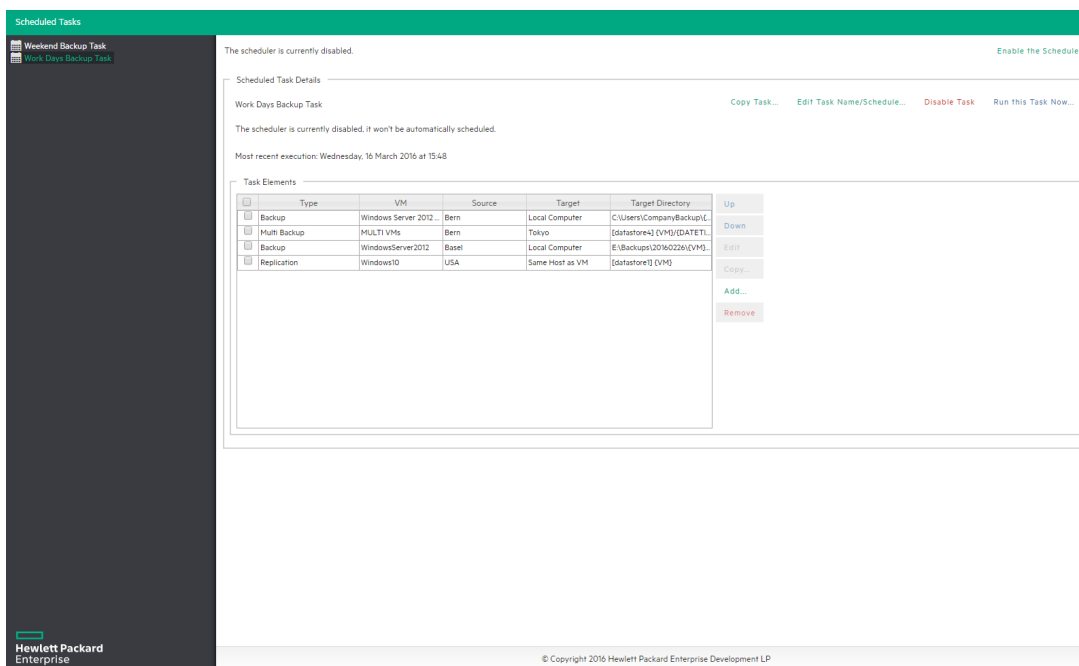
- Switch to the **Scheduler** view: **Tasks > Scheduled Tasks**.
- Right-click **Scheduled Tasks**.
- Click **Add Scheduled Task**.

To modify your entries at any time, switch to **Scheduler** view. You can also add multiple steps to a single backup task, meaning that you can add backups of multiple Virtual Machines to the same task.

**NOTE:** Make sure that you enable the scheduler in HPE VM Explorer by clicking **Enable the Scheduler** in the **Scheduler** View.

**IMPORTANT:** HPE VM Explorer Windows Service that executes scheduled tasks. When using the HPE VM Explorer service you do not need to be logged on and have HPE VM Explorer running to perform scheduled tasks. In addition, if the scheduler is enabled and the **General Settings** option **Prevent 'Sleep Mode' if scheduler is enabled** (**Settings > General Settings**) prevents the system's Sleep Mode (if activated).

4. You can also disable a single task element in a scheduled task, by unchecking it directly in the **Task Elements** list.



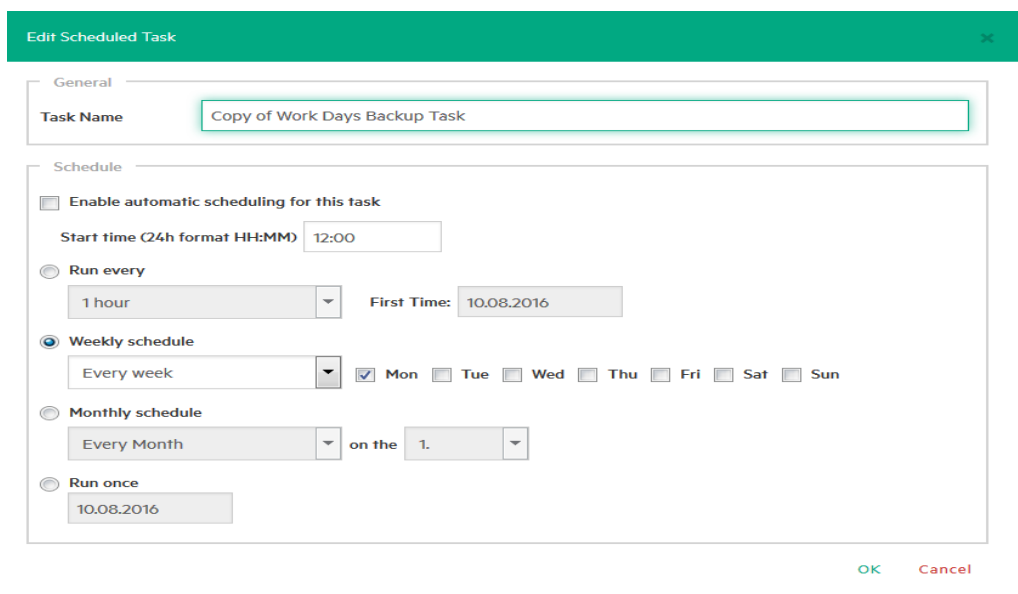
Scheduled Task screen

## Copying a scheduled task

To copy a scheduled task:

1. Go to **Tasks > Scheduled Tasks**, right-click the scheduled task that you want to copy from the **Scheduled Tasks** list and point to **Copy Task...** You can also select the desired scheduled task and click the **Copy Task...** button on the **View Window**.
2. In the **Edit Scheduled Task** dialog box, you can modify any of the task's inherited settings. When finished, click **OK**. To avoid multiple running tasks and any potential conflicts, the copied task is disabled (Paused) by default, so you have to click **Enable the Scheduler** in the **Scheduler** view.

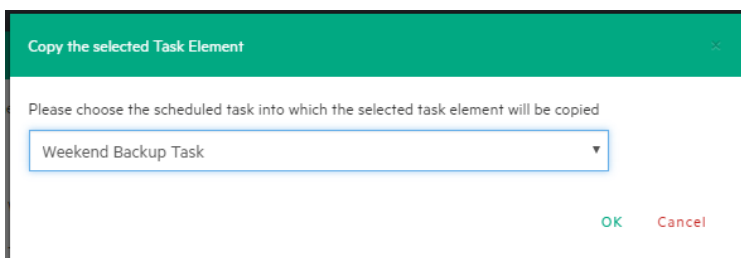




Copy Scheduled Task dialog box

## Copying a scheduled task element

You can copy a single task element into the same or to another scheduled task. To copy a scheduled task element, while in the **Task Elements** list, right-click a task element and select **Copy...**, or press the **Copy...** button to the right. Then, in the **Copy the selected Task Element** dialog box, select into which scheduled task you want to copy the selected task element. Select the target scheduled task and click **OK**.



Copy Task Element dialog box

## Using command line interface

HPE VM Explorer enables you to execute the scheduled tasks you created via command line. This can be useful if you want to use a different software as scheduler, such as the Windows built-in Task Scheduler.

To access full information about the command-line interface, simply type `vmx.exe /?` in command prompt to generate an .XML file containing all the information about the executed task. You can modify the output location by adding the `/logfile` parameter.

To start a backup task, you need the `/runtask` option. For example, to run your task, you can type:

```
vmx.exe /runtask:mytask /logfile:"c:\log files\vmx\vmx.xml"
```

## Custom script

In HPE VM Explorer, you can add a custom script element to a scheduled task. To do so:

1. Go to **Tasks > Scheduled Tasks**, select the desired task and click **Add**.
2. In the **Add Task Element** screen, under **Other**, click **Custom Script**. The **Script task setup** dialog box is displayed.
3. In the **Script task setup** dialog box, click **Browse** to select the script you want to run in the scheduled task. You can select a `.bat` or `.exe` file and you can configure the arguments, timeout interval (the time after which the task fails if the script has not finished) and whether the task should stop or continue if the script fails. You also can select an existing account to launch the script file and test your script configuration. When finished, click **OK**.

The screenshot shows the 'Script task setup' dialog box. It has a green title bar with the text 'Script task setup'. The dialog is divided into two main sections. The top section is titled 'Script' and contains a 'Script file' field with the value 'E:\Scripts\customScript.bat' and a 'Browse' button. Below this is an 'Arguments' field with the value '/d /n'. There are two checked checkboxes: 'Script timeout after 30 seconds' and 'On error execute next task'. The bottom section is titled 'Account parameters' and contains a 'Use Account Parameters' checkbox which is unchecked. Below this are three input fields for 'Username', 'Password', and 'Domain'. At the bottom of the dialog, there are three buttons: 'Test', 'OK', and 'Cancel'.

**Script task setup**

# Sending E-mail Reports

HPE VM Explorer has a built-in option to send e-mail reports about performed backups. To add e-mail reporting, you can either configure HPE VM Explorer to use e-mail notifications after performing a task or you can add a scheduled e-mail notification task.

## Adding e-mail reporting as a scheduled task

1. Go to **Tasks > Scheduled Tasks**, right-click the **Scheduled Tasks** view and point to **Add Scheduled Task...** on the shortcut menu.
2. In the **Add Scheduled Task** dialog box, give a meaningful name to your e-mail reporting task, such as **E-mail report for <Task Name>**, and set the report schedule. When finished, click **OK**.
3. Then, right-click the **Task Elements** list of this task and point to **Add E-Mail Report...** on the shortcut menu.
4. In the **E-Mail Report** screen, configure the settings of your e-mail report, such as **SMTP Hostname**, **E-mail** and **Subject**. You can also test your settings or load the default settings, which you can complete at this stage if not previously configured. For more information on configuring e-mail settings, see [Configuring e-mail default settings, on page 107](#). Also, set the type of report and the priority of your e-mail. For more information, see later in this section. When finished, click **OK**.

The screenshot shows the 'E-Mail Report' configuration window. It has a green title bar and contains several sections: 'Sender' with 'E-Mail' and 'Full Name (optional)' fields; 'Receiver(s)' with 'E-Mails' and 'Subject' fields (the subject field has a placeholder 'VMX Report [DATETIME] ([STATUS])'); 'Outgoing SMTP Server' with 'Hostname or IP', 'Port', 'Use SSL', and 'Use SMTP authentication' checkboxes, plus 'Username' and 'Password' fields; 'Report Type' with a dropdown menu set to 'Daily Report'; and 'Priority Mail' with three dropdown menus for 'On Error', 'On Warning', and 'On Success', all set to 'Normal priority mail'. At the bottom, there are 'Load default settings', 'Test', 'OK', and 'Cancel' buttons.

**E-Mail report**

## Adding an e-mail report to an existing task

1. Open an existing scheduled task, right-click **Task Elements** and select **Add E-mail Report**.
2. In the **E-Mail Report** screen, configure the SMTP hostname and then click **Test** to test your settings. Clicking **Load default settings** enables you to complete the form with the default e-mail values. If not configured, you can choose to be redirected to the settings panel.
3. When finished, click **OK**.

## Types of reports

The following default reports are available in HPE VM Explorer:

- **Current task report**—sends a report of the scheduled task to which the report has been added. It is usually implemented at the end of a scheduled task with multiple tasks, to keep you informed on specific scheduled task.
- **Daily report**—sends a report with the activities occurred in the past 24 hours, including jobs still running, jobs terminated in the past 24 hours and their results, whether or not the jobs have been included in the task or not. It is usually implemented in a daily scheduled task of its own, to keep you informed on all activities executed every day.
- **Weekly report**—works the same as the Daily report, but integrates jobs in the past week.
- **Monthly report**—works the same as the Daily report, but integrates jobs in the past month.
- **Custom time report**— works the same as the Daily report, but for a specified time frame in which all the job executed (including the ones still running) are included in the report.

**CAUTION:** If you have not configured automated backup tests to take screenshots of the VM console, the report will contain all the images selected for the report. Be careful on the size of the report as it may reach the maximum capacity of the mail server.

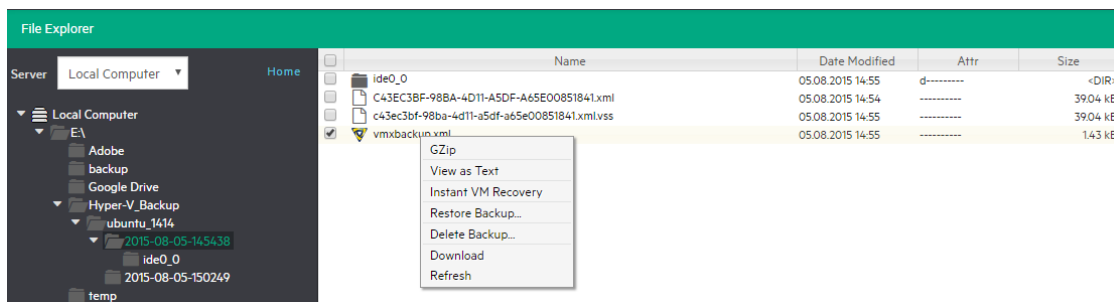
## Setting up a priority e-mail address

You can set the priority to the mail based on the worst-case scenario. If all jobs included in the report are successful, you can set the priority depending on the **On Success** option. If at least one job has a warning, you can set the priority to **On Warning**. If at least on job fails or an error occurs, you can set the priority to **On error**.

# Working with File Explorer

File Explorer enables you to view and download files from your ESX, Hyper-V, Linux or FreeBSD hosts and select the server you want to browse. Simply go to **Management > File Explorer** and select the server from the **Server** list.

In addition, you can register Virtual Machines to your ESXi or Hyper-V hosts by right-clicking the VM configuration file (\*.VMX for ESXi VMs or \*.XML for Hyper-V VMs) and choosing the **Register VM** command.



## File Explorer

File Explorer also enables you to restore backups by right-clicking the *vmxbackup.xml* file and pointing to **Restore Backup...**

# Task History

Go to **Tasks > Task History** for an overview of the recent scheduled tasks results, with the name, the start and the end time, the duration of the task execution and the result.

Name	Start	End	Duration	Result
myTapeSched	Monday, 9 November 2015 19:00:01	Monday, 9 November 2015 19:00:40	1 Minute	Success
myTapeSched	Monday, 9 November 2015 18:00:00	Monday, 9 November 2015 18:00:41	1 Minute	Success
myTapeSched	Monday, 9 November 2015 17:00:00	Monday, 9 November 2015 17:00:42	1 Minute	Success
myTapeSched	Monday, 9 November 2015 16:53:08	Monday, 9 November 2015 16:53:54	1 Minute	Success
myTapeSched	Monday, 9 November 2015 16:37:35	Monday, 9 November 2015 16:38:17	1 Minute	Success
myTapeSched	Monday, 9 November 2015 09:25:04	Monday, 9 November 2015 09:25:45	1 Minute	Success
myTapeSched	Monday, 9 November 2015 08:35:20	Monday, 9 November 2015 09:23:36	49 Minutes	Failed
myTapeSched	Friday, 6 November 2015 16:57:51	Friday, 6 November 2015 17:43:49	46 Minutes	Failed
myTapeSched	Friday, 6 November 2015 16:49:34	Friday, 6 November 2015 16:46:35	1 Minute	Failed
Monthly Backup of win2012R2	Tuesday, 27 October 2015 13:36:38	Tuesday, 27 October 2015 13:41:54	26 Minutes	Success
Monthly Backup of win2012R2	Tuesday, 27 October 2015 10:38:25	Tuesday, 27 October 2015 10:52:32	15 Minutes	Warning
backupSANS w/o mem	Tuesday, 27 October 2015 09:00:05	Tuesday, 27 October 2015 09:06:03	6 Minutes	Aborted
backupSANS w/o mem	Tuesday, 27 October 2015 08:42:41	Tuesday, 27 October 2015 08:45:33	3 Minutes	Aborted
backupSANS w/o mem	Tuesday, 27 October 2015 08:39:29	Tuesday, 27 October 2015 08:42:30	4 Minutes	Aborted
backupSANS w mem	Monday, 26 October 2015 17:22:54	Monday, 26 October 2015 17:49:25	27 Minutes	Success
backupSANS w mem	Friday, 23 October 2015 11:54:23	Friday, 23 October 2015 12:02:08	8 Minutes	Aborted
backupSANS w mem	Friday, 23 October 2015 12:00:01	Friday, 23 October 2015 12:01:16	2 Minutes	Failed
backupSANS w/o mem	Friday, 23 October 2015 11:50:39	Friday, 23 October 2015 11:53:41	4 Minutes	Aborted
backupSANS w/o mem	Friday, 23 October 2015 11:40:48	Friday, 23 October 2015 11:44:20	4 Minutes	Failed
backupSANS w/o mem	Friday, 23 October 2015 11:24:52	Friday, 23 October 2015 11:25:40	1 Minute	Failed
backupSANS w mem	Friday, 23 October 2015 11:20:42	Friday, 23 October 2015 11:23:58	4 Minutes	Aborted
backupSANS w mem	Friday, 23 October 2015 11:13:19	Friday, 23 October 2015 11:17:54	4 Minutes	Aborted
Check SANScale	Friday, 23 October 2015 10:52:02	Friday, 23 October 2015 10:58:16	7 Minutes	Aborted
Check SANScale	Friday, 23 October 2015 09:49:36	Friday, 23 October 2015 10:10:10	21 Minutes	Aborted
Check SANScale	Friday, 23 October 2015 09:17:40	Friday, 23 October 2015 09:43:04	26 Minutes	Success

## Task History page

**TIP:** You can view more details for each entry by double clicking an entry.

Clicking the **Html Report** button shows the current task result in your browser in HTML format, ready for print.

Scheduled Task Details
✕

5GB (Success)
Refresh

VM Explorer Version: 61.001.0  
 Start time: Monday, 21. March 2016 13:29:27  
 End time: Monday, 21. March 2016 13:41:43  
 Duration: 13 Minutes  
 Total Transferred size: 25600.07 MB  
 Transfer Rate: 36.31 MB/s  
 Number of tasks processed: 9/9

Details:  
 The task has finished successfully.

Filter

Success     Warning     Failed

Abort         Disabled     Waiting

Running

Task Details

Start time: 21.03.2016 13:29:28  
 End time: 21.03.2016 13:31:55  
 Duration: 3 Minutes

Total Transferred size: 5120.01 MB  
 Transfer Rate: 36.31 MB/s

Source Server: Local Machine  
 Target Server: Hewlett Packard MSL G3 Series library (x64 based) (Tape Library)  
 Target Location: mymy (Tape Media Pool) - Media: cart04L4

Details:  
 The task has finished successfully.

Task	Result	Duration
ESX Backup (Ubuntu_1010_Desktop)	Disabled	-
Copy of Localhost Backup (Ubuntu_1010_Desk...	Disabled	-
Copy of Localhost Backup (Ubuntu_1010_Desk...	Disabled	-
Copy of Localhost Backup (Ubuntu_1010_Desk...	Disabled	-
Copy of Localhost Backup (Ubuntu_1010_Desk...	Success	3 Minutes
Copy of Localhost Backup (Ubuntu_1010_Desk...	Success	3 Minutes
Copy of Localhost Backup (Ubuntu_1010_Desk...	Success	3 Minutes

HTML Report
Previous Result    Next Result    OK

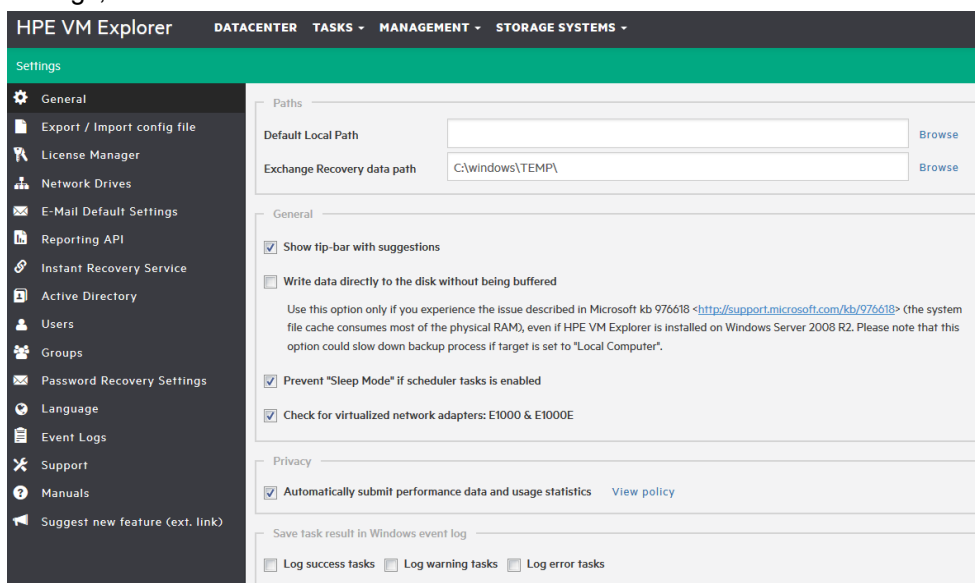
### Scheduled Task Details

# Working with HPE VM Explorer Settings

Go to **<user account>** -> **Settings** to configure your HPE VM Explorer settings, such as the UI language, event logs, support information, documentation and so on.

## Configuring General settings

To configure some of HPE VM Explorer's general settings, such as the Default Local Path, the Windows event logs and others, in the **Settings** view, click **General**. When finished configuring the settings, click **Save**.



### Settings - General

## Under Paths

Click **Browse** to configure the default Local Path used in **File Explorer** (home directory for local computer), in the **Backup** setup dialog (default target directory), in the **Custom Script** configurator and wherever a local path is required. If left blank, HPE VM Explorer will use the Windows **My Documents** path.

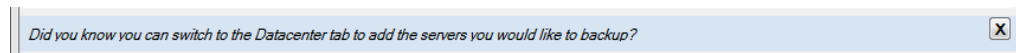
Also, click **Browse** to configure the Exchange Server recovery location for temporarily storing the logs and the **.edb** database file downloaded during the recovery process. For more information on recovering



individual Microsoft Exchange Server items, see [Recovering Microsoft Exchange Server message\(s\)](#), on page 89.

## Under General

Select/clear the **Show tip-bar with suggestions** checkbox to display/hide the tip bar with the suggestions. You can also deactivate the tip-bar by clicking **X** (close).



Select the **Write data directly to the disk without being buffered** checkbox only if, during backups, performance issues as described in the Microsoft KB 976618 occur. For more information, see <https://support.microsoft.com/en-us/kb/976618>.

Select the **Prevent 'Sleep Mode' if scheduler is enabled** checkbox to prevent the system from going into sleep mode. This option will be applied only if the scheduler is enabled. For more information, see [Scheduling Tasks](#), on page 94.

## Under Privacy

Here you can decide whether or not to send performance data sending (for statistical purposes). For more information, click **View policy**.

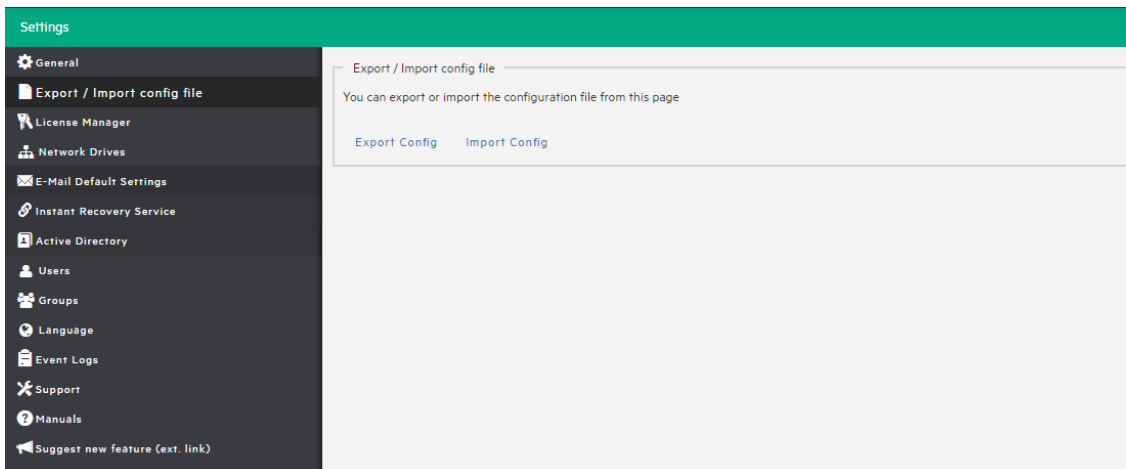
## Under Save task result in Windows event log

To save the results of Scheduled Tasks in the Windows Event Log, select/clear the desired checkbox (es) under **Save task result in Windows Event Log**.

## Export/Import configuration settings

In HPE VM Explorer, you can export/import the existing configuration. During export, you can encrypt the configuration file with a password (recommended).

**NOTE:** Ensure that you are not importing a configuration with its web server settings disabled.



### Settings - Export/Import configuration file

## Managing network drives

In HPE VM Explorer, you can add, modify and delete network drives that you can use to perform and restore backups from. To view and manage network drives, in the **Settings** view, click **Network Drives**. Click **Refresh** to update the list of available network drives.

**NOTE:** Before adding or modifying a network drive, make sure the target is available on your network and that you have write access to the shared folder.

## Adding a network drive

To add a network drive:

1. In the **Network Drives** view, click **Add** and then, in the **Location** screen of the **Add a network drive** wizard, select a letter for your network drive and write your network drive's path. When finished, click **Next**.
2. In the **Credentials** screen, type your access credentials, if necessary, and then click **Next**.
3. In the **Test Connection** screen, you can verify if your connection is valid. If not, you can go back and reconfigure your newly added network drive. If yes, click **Next**.
4. The **Summary** screen displays the details of your newly added network drive. At this stage you can go back and make any necessary changes. When finished, click **Finish**.

Your newly added drive is now available in the **Network Drives** view.

## Modifying a network drive

To modify an existing network drive, in the **Network Drives** view, select the network drive you want to modify and click **Edit**. Then, complete the **Add a network drive** wizard. For more information, see [Adding a network drive, on the previous page](#).

## Removing a network drive

To delete an existing network drive, in the **Network Drives** view, click the network drive you want to delete and click **Remove**. Then, in the confirmation box, click **OK**.

## Configuring e-mail default settings

In the **E-Mail Default Settings** screen, you can configure the default e-mail settings. You can also test if your settings are correct. When finished, click **OK**.

**Settings**

- General
- Export / Import config file
- License Manager
- Network Drives
- E-Mail Default Settings**
- Instant Recovery Service
- Active Directory
- Users
- Groups
- Language
- Event Logs
- Support
- Manuals
- Suggest new feature (ext. link)

In this page you can configure and test the default Email parameters. The following parameters allows you to configure more quickly the "E-mail Report" task in the "Scheduled Tasks" (Clicking the "Load default settings" button on the bottom left of the "E-Mail Report" popup window).

Important: By configuring these parameters, doesn't make VM Explorer sending email reports. You need to create an "E-Mail Report" task in "Scheduled Tasks".

**Sender**

E-Mail  Full Name (optional)

**Receiver(s)**

E-Mails   
(Separate multiple with semicolon ";")

**Subject**

VMX Report {DATETIME} {{STATUS}}

You can use the following placeholders in the subject line: {DATETIME}, {STATUS}

**Outgoing SMTP Server**

Hostname or IP  Port

Use SSL

Use SMTP authentication if the server supports it:

Username

Password

Test

### Settings - E-Mail

**NOTE:** These settings will be used when adding an e-mail report in the scheduler, only if you click **Load default settings**.

## Instant Recovery Service

Go to **Management > Instant Recovery Service** for an overview of the Instant VM Recovery and Instant Backup Test running, with the VM name, the type of test running, the start time, the server on which the test is running on, the user that started the test and the client.

Status	VM Name	Type	Start time	End time	Server	User (Domain)	Client
Running	VMExplorer_VMR_Windows7	Instant VM Recovery	21.03.2016 17:42:11		172.17.114	admin (HPE User)	WebServer

### Instant Recovery Service page

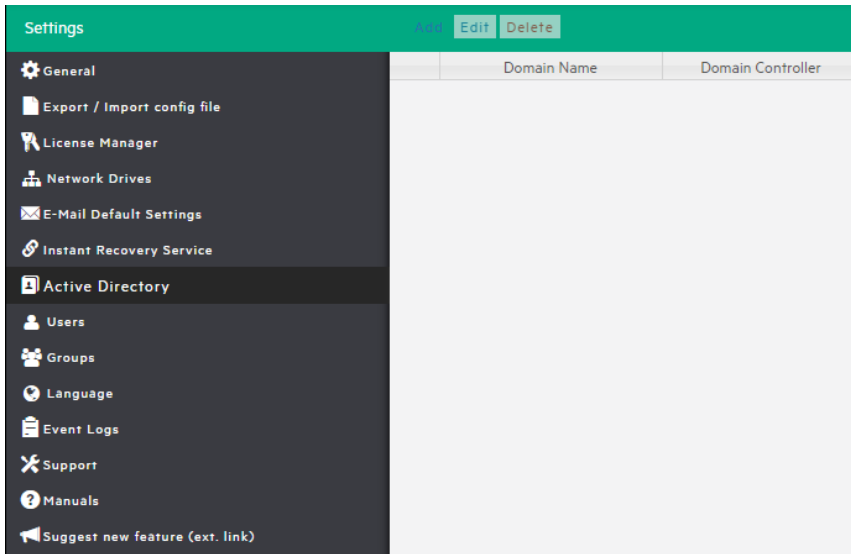
There are two types of Instant Recovery Services:

- **Instant VM Recovery**—This service starts when selecting a backup and clicking Instant VM Recovery from the menu. This running task has no time limit and to prevent the VM to be kept indefinitely you must stop the process once finished using the Instant VM Recovery job.
- **Instant Backup Test**. This service is only available at the end of a local backup, when the **Verify Backup** option has been enabled. As this task is related to the backup and has a time out, it is highly recommended to let this job finish on its own.

You can filter the Instant Recovery Service view by the type, the server on which the VM is running, and the user.

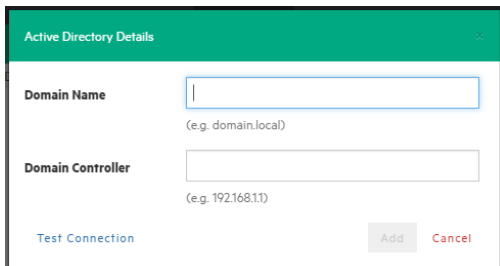
## Configuring the Active Directory

You can include Active Directory entries in your configuration and authenticate users through the Domain server using the Active Directory credentials.



### Settings - Active Directory page

To add an Active Directory entry, click **Add** and fill in the **Domain Name** and the **Domain Controller** (IP or computer name).

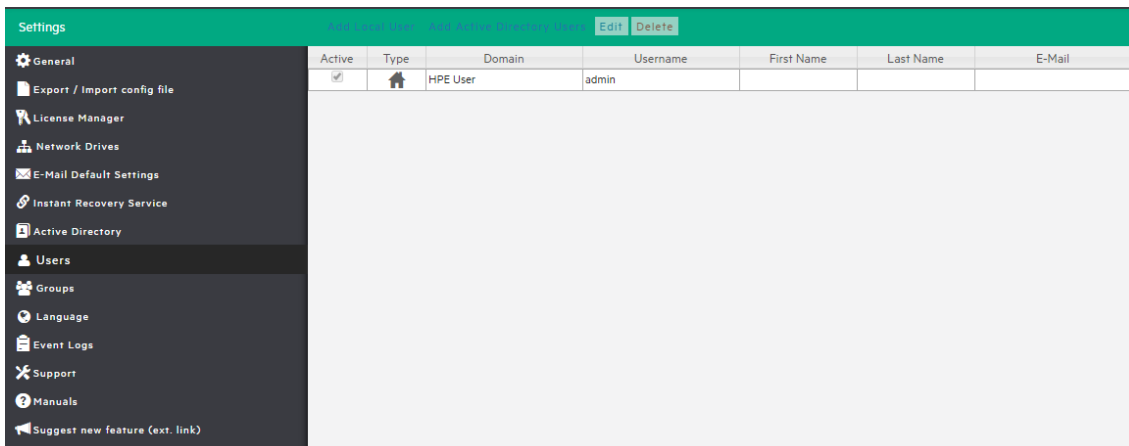


### Active Directory Details

Every time you test the connection or acquire existing users in the Active Directory, you need to type your administrative credentials, as HPE VM Explorer does not store the administrative credentials in its database.

## Working with Users

In the **Users** settings you can add, modify and delete HPE VM Explorer users and their access permissions. You can see the current users included in HPE VM Explorer with their detailed information.



### Settings - Users

To add a new local user, click **Add Local User** and then, from the **Groups** list, select the user group to define the type of access. The choices are multiple.

To add a new local user

1. Click **Add Local User**.
2. Select the user group from the Groups list. Multiple choices are permitted.

User Details

Active

Domain Name HPE User

Username

E-Mail

First Name

Last Name

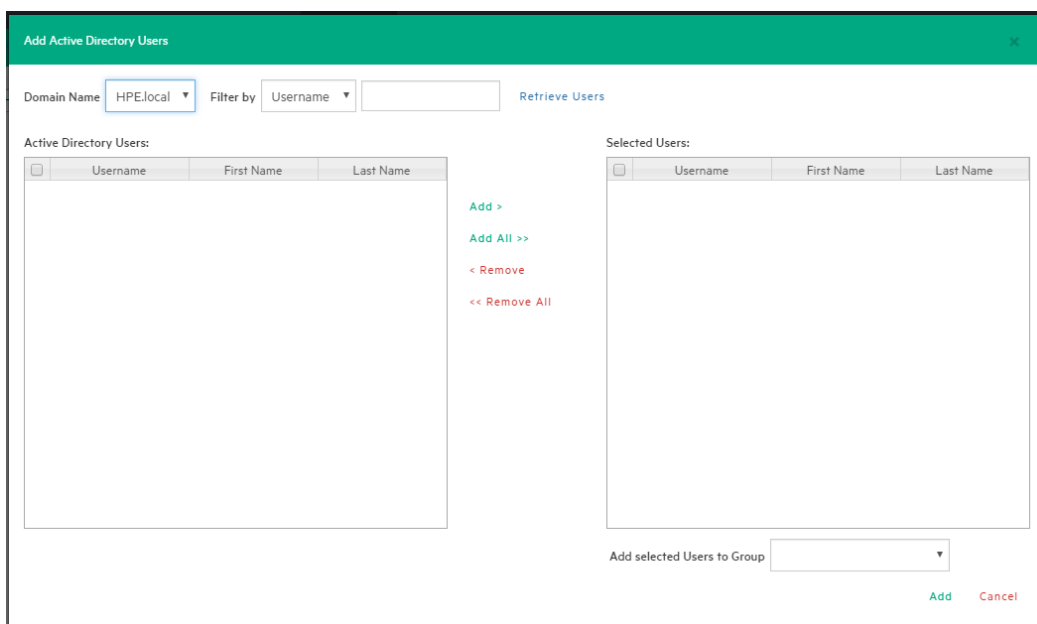
Password

Group

Add Cancel

### Settings - User Details

Only local users are available in HPE VM Explorer, and the password is stored encrypted.



### Settings - Add Active Directory Users

You can also add existing users from the Active Directories added to HPE VM Explorer (for more information, see [Configuring the Active Directory, on page 108](#)) by selecting **Add Active Directory Users** and then adding them. Also, select the desired domain name from the list and click **Retrieve Users**. Make sure you know your administrative credentials (HPE VM Explorer does not store them).

The list you retrieve is limited to 2000 entries, but you can use the **Filter** option if the user you are looking for is not present. The, select to which group to add your users by clicking **Add selected Users to group**. Users can be part of multiple groups.

Only Administrators can modify the first name, last name, the e-mail and the user groups in which the user has privileges. All other fields are disabled to editing in order to keep consistency with Active Directory.

## Working with Groups

You can add or exclude users in every group using the Groups Settings. The available groups are:

- **Administrator:**—Can perform all administrative activities in HPE VM Explorer.
- **Scheduled Task Operator:**—Can manually execute Scheduled Tasks and view the **Task History**.
- **Restore Task Operator:**—Can perform restore operations using existing backups/replications and restore single files from any backup.
- **Task Viewer:**—Can view all the existing backups/replications and view the **Task History**.
- **Guest:**—Can view the Datacenter, the Scheduled Tasks, the existing backups/replications and the Task History in "read-only" mode.

You can modify a group and you can add and delete a user.

The screenshot shows a 'Group Details' dialog box. The title bar is green and contains the text 'Group Details' and a close button. The main content area is white and contains the following fields:

- Name:** A text input field containing the text 'Administrator'.
- Description:** A text area containing the text 'Can perform all administrative activities in VM Explorer.'
- Admin Rights:** A checkbox that is checked.
- Users:** A dropdown menu with a blue border and a downward arrow. The dropdown is open, showing a list with one item: 'admin'.

At the bottom right of the dialog, there are two buttons: 'Save' (in green) and 'Cancel' (in red).

Settings - Group Details

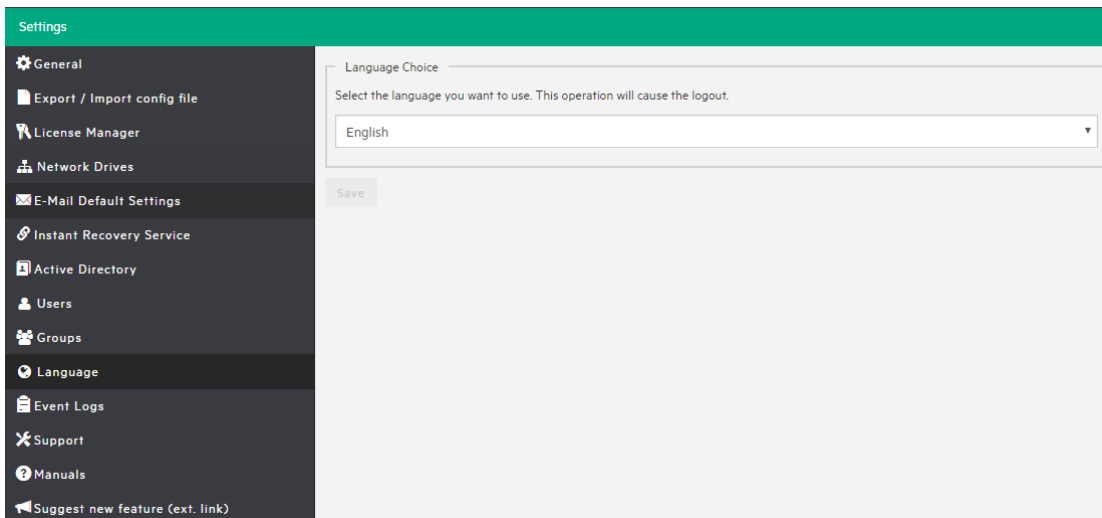
## Recovering your password

You can recover a lost password via e-mail after configuring the sender and Outgoing SMTP Server settings in the **Password Recovery Settings** screen. If you have already configured e-mail settings in the **E-Mail Default Settings** page, you can load them by clicking **Load default settings**. You can also test your e-mail settings.

## Changing your display language

In the **Language** screen you can change the language of your UI.





## Settings - Language

**NOTE:** Some UI elements have not been translated on purpose: dates and times, tasks details, HTML Reports, Events logs, some Service errors. Also, when selecting a different UI language, after applying the changes, the web application will automatically restart and you will return to the **Login** page.

You can choose from any of the following languages:

- English
- French
- German
- Italian
- Spanish
- Japanese
- Russian
- Chinese–simplified
- Portuguese–Brazilian



# Send documentation feedback

If you have comments about this document, you can [contact the documentation team](#) by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

**Feedback on HPE VM Explorer User Guide (HPE VM Explorer 6.3)**

Add your feedback to the email and click **Send**.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to [AutonomyTPFeedback@hpe.com](mailto:AutonomyTPFeedback@hpe.com).

We appreciate your feedback!