HPE VM Explorer

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User Manual

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Chapter 2: Introduction

VM Explorer is simple, yet powerful software to back up, replicate and restore your VMware ESX, ESXi and Microsoft Hyper-V Virtual Machines (VM).

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

What's new in version 6.1

- Scheduled Task jobs can be copied
- Large backups can be split into multiple tape media
- · Multiple files can be downloaded from the Web Interface
- The configuration file can be imported and exported from the Web Interface
- Support for new Amazon S3 region
- Enhanced network drive management
- Enhanced Web Interface security
- Support VDDK version 6.0.2 (64-bit)
- Support VDDK version 5.1.4 (32-bit)

Chapter 3: Install VM Explorer

This section describes how to install and configure VM Explorer.

Installation

- 1. Download the latest VM Explorer release from our website, http://www.trilead.com/download/.
- 2. Start the installation by double clicking the downloaded file. Follow the steps in the installation wizard.
- 3. Accept the End User License Agreement terms and condition.

Optionally, you can change your installation path.

NOTE To install VM Explorer 6.1, .NET Framework 4.0 or higher is required.

To start VM Explorer:

1. Click Start > All Programs > HPE Enterprise> VM Explorer.



Figure 1: VM Explorer Starter

If you click **Web Interface**, a web browser will automatically open on the configured address. If the VM Explorer web server has not been configured or is not running, the web server configuration dialog will appear:

HPE VM Explorer® - WebServer Settings	– 🗆 X
	Hewlett Packard Enterprise
Please configure the WebServer and press Start in order to use it.	
Web Interface Address	
Hostname or IP: localhost	Listening Port: 443
Enable https Certificate: No certificate selected Enable automatic redirect from http port 80 to https	Browse New
Open Windows firewall Start Stop Running on: <u>https://localhost/</u>	
Administration New Administrator password: Confirm new password:	Login usemame: admin Change password
	Start and Save Cancel

Figure 2: WebServer Settings

The configuration of the VM Explorer Web Interface is described in the next section, "Configure the VM Explorer Web Interface" on the next page.

NOTE You need to set the administrator password before logging into the Web Interface for the first time.



Figure 3: Standalone Interface

If there are problems starting the web client, you can start the standalone version. Click Legacy Interface from the Starter Dialog - "Figure 1: VM Explorer Starter" on the previous page.

Configure the VM Explorer Web Interface

The VM Explorer Web Interface settings can be configured from the dialog shown in the previous section, "Installation". It can also be configured from the standalone desktop interface of VM Explorer.

- 1. Select Settings from the File menu.
- 2. Switch to the Web Interface tab.

Settings ×
0
×.
General Email Default Settings Web Interface Instant Recovery Service Network
Web Interface Address
Hostname or IP: localhost Listening Port: 443
Enable https
Certificate: Trilead VM Explorer HTTPS Certificate Browse New
✓ Enable automatic redirect from http port 80 to https
Open Windows firewall
Start Stop Running on: https://localhost/
Administration
New Administrator password: Login usemame: admin
Confirm new password: Change password
Outgoing SMTP Server (for password recovery)
E-Mail: Full Name (optional):
Hostname or IP: Port: 25
Use SMTP authentication if the server supports it: Use SSL
Usemame: Load defaults
Password: Test
OK Cancel

Figure 4: Web Interface Settings

Configure the Web Interface address

After configuring the hostname (IP address) and the port, click **Start**. The **Stop** button will halt the web server configuration, **"Figure 4: Web Interface Settings" above**.

If the Enable HTTPS option is selected, the Web Interface will be accessible using the HTTPS protocol, and the web address will change accordingly. You can enable automatic redirect from the HTTP port 80 by checking the corresponding option.

A self-signed HTTPS certificate for VM Explorer is automatically installed on the local computer in the Personal store.

If you click **New**, you can generate and install a new VM Explorer HTTPS certificate, after a confirmation dialog.

NOTE The browser might display a warning message when opening the HTTPS link, if the HTTPS certificate is signed and not issued by a trusted certificate authority. To select a user trusted certificate, click **Browse**. This option allows you to view and choose a valid certificates.

Only certificates installed on the local computer and in the following folders can be used:

- Personal
- Trusted Root Certification Authorities
- Intermediate Certification Authorities
- Trusted Publishers
- Untrusted Certificates
- Third-Party Root Certification Authorities
- Trusted People
- Other People

The Friendly Name (or the Issuer By name if the first is not available) of the current HTTPS certificate is displayed in the **Certificate** field. Otherwise, VM Explorer will display, "Certificate Not Found."

If you click on the validate certificate text, an information dialog will appear.

The Web interface can also be configured if the Web server has to start automatically after a reboot, and if Windows Firewall is automatically opened.

If all settings are correctly configured, the link to the Web interface appears. Now you can use your browser to access VM Explorer. Insert the IP address manually or click the link that appears on Running on:.

VM Explorer Web Interface is tested to work with the latest version of the following browsers:



Figure 5: Supported web browsers

Configure the administrator password

In the Administration section, a new administrator password can be set.

- 1. Enter and confirm the new password.
- 2. Click Change password. The administrator login name is admin.

NOTE You need to set the administrator password before entering the Web Interface for the first time.

Configure the outgoing SMTP server

The outgoing SMTP server is used to send emails to the users of the Web Interface. For example, the password recovery system uses the email to send the new password.

How to configure the outgoing SMTP server

- 1. If the Email Default Settings tab and the Web Interface are already configured, they can be copied in this section by clicking Load Defaults.
- 2. Click **Test** to verify the settings are correctly configured.

Configure TCP ports

VM Explorer uses different TCP ports to communicate between VM Explorer and hosts or between hosts.

• For ESXi Servers:

For ESXi editions, TCP port 443 (HTTPS) is required.

If Use VM Explorer Agent on ESXi is enabled, ports 22 (SSH), 443 (HTTPS), 62000-65000 are required.

To use VDDK, port 902 is required.

• For ESX Servers:

For ESX servers 22 (SSH), 443 (HTTPS) and TCP ports 2500-3000 are required.

To use VDDK, port 902 is required.

To verify the ESX firewall you can run the following command: esxcfg-firewall -q

To manually modify your firewall, run the following command: esxcfg-firewall -o 2500:3000,tcp,in,VMX-Explorer esxcfg-firewall -o 2500:3000,tcp,out,VMX-Explorer

If you are copying from/to ESXi (using the agent) /Linux/FreeBSD, you also have to open the following ports on your ESX server:

esxcfg-firewall -o 62000:65000,tcp,in,VMX-Explorer esxcfg-firewall -o 62000:65000,tcp,out,VMX-Explorer

• For vCenter:

Port 443 (HTTPS) is required.

• For Hyper-V servers:

For Hyper-V servers 9000, 9001, 62000-65000 are required

• For Linux and FreeBSD servers:

For Linux and FreeBSD servers, the port 22 (SSH), 2500-3000 and 62000-65000 are required.

Chapter 4: VM Explorer Web Interface overview

Web Interface access

The link to access the Web Interface is configured in VM Explorer as described in the previous section (Start >All Programs >HP Enterprise >HPE VM Explorer). When connecting to this link, the login mask is shown. Here, you can insert login credentials and click Login to access the Web Interface. 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.

Hewlett Packard Enterprise
VM Explorer
Domain\Username
Password
Login
Reset Password

Figure 6: Web login field

If you have not yet configured the language before the login mask, the Language Choice screen will appear. You can localize the Web Interface with your preferred language.

VM Explorer language selection
No language has been configured yet. Please, select VM Explorer web interface language.
Please select your language 🔻
Save
This option can be also changed in Settings->Language.

Figure 7: Language selection for the first time access

Web Interface menu view

In the Web Interface, you will have a menu at the top of the page, where you will be able to select the following main views:

Datacenter

- Tasks
 Scheduler Tasks
 Task History
- Management
 Backup Explorer
 Replication Explorer
 Instant Recovery Service
 File Explorer
- Storage System
 SAN Infrastructure
 Tape Infrastructure
- User Menu
 User Options
 Settings
 Manuals
 About

VM Explorer DATACENT	ER TASKS - MANAGEMENT - STORAGE SYSTEMS - Ø	Tasks 💿	💄 admin 🗸
My Datacenter			
My Datacenter Search VMQ Expand All I Collapse All → Direct.7227120 → ESX61.084 → ESX54.rorpe → VCenter → Hyper-V → Tokyo-Amazon	Wizard Image: Craphs Image: Craphs Datacenter Overview Image: Craphs Hyper-V Image: Craphs <th></th> <th></th>		
Hewlett Packard Enterprise	© Copyright 2016 Hewlett Packard Enterprise Development LP	J	

Figure 8: Web available menu

Chapter 5: Add servers to the VM Explorer

VM Explorer allows you to add various types of servers to the Datacenter, from hypervisors to public or private clouds.

As well as select a name for the server to recognize the various entries, the icon in the Datacenter allows you to recognize the type of server. The following is a representation of the various possibilities:





Unrecognized VM

Add Hypervisor servers

Before you can start using VM Explorer, you need to add your Hypervisor hosts. There two ways you can do this.

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

OR

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

Both ways will start the Add Server Wizard. In the first dialog box, you will need to specify the type of server you want to add. For this example, we will choose ESX 3.x, ESXi 3/4/5.

Add Server		×
Please choose the type of server you want	t to add:	
VMware	Microsoft	
	8	
ESX/ESXi vCenter 3/4/5/6	Hyper-V Server	Hyper-V Cluster
Cloud Storage	Unix	
Amazon S3 OpenStack cloud cloud	Linux Server	FreeBSD Server
HP cloud Rackspace cloud		

Figure 9: Add server dialog

If you want to organize your hosts in folders, right-click on a host from **My Datacenter** panel and click **Add New Folder**. The dialog box asks you to specify your folder.

Add Folder			×
Folder Name	1	Create	Cancel

Figure 10: Organize servers in folder

Add an ESX/ESXi server

Name and location

You need to choose the location of the server in the VM Explorer Datacenter. This is only to order the server in different folders in the VM Explorer Datacenter and will not influence backups or replication in any way.

Add Server (ESX/ESXi 3/4/5/6)					
Name & Location	Display Name	New Serve	rl		0
Connection Settings	Location				
Port Settings					
SSH / VM Explorer Agent	vCenter Hyper-V				
Advanced Settings					
Test Connection					
Default Folders					
Summary					
		PREVIOUS	NEXT	FINISH	CANCEL

Figure 11: Add Server - Name & Location

Connection settings (ESX / ESXi host only)

At this point, the wizard requires the hostname (IP address), the username and the password. If you choose to connect to the host using a different user than root, insert the root password in **Root Password**; if you intend to use the SSH console to elevate privileges.

Name & Location	Specify the full DM	NS name or IP address of the server.	
Connection Settings	Hostname		8
Port Settings		The Hostname is required.	
SSH / VM Explorer Agent	Specify the accourt	In that will be used to connect to the server. Please note that in order it requires the permissions to see Virtual Machines and perform action	to ns
Advanced Settings	like Snapshots, Po SSH	ower On/Off, register/unregister VM, browse datastores and access thr	yndi
Test Connection	Username		
Default Folders	Password		
Summary	The root password the server will be only for the SU co	d is only used to elevate privileges within the SSH console. Connection made using the configured credentials, and root password will be used mmand.	to
	Root Password		
	Root Password		

Figure 12: Add Server - Connection Settings

Port settings (ESX/ESXi host only)

This page allows you to configure a different port for SSH (default is 22) and a different port for the ESX Management Console (HTTPS, default is 443).

Name & Location	The default port r	number for SSH is 22.	If the connection	over this port cannot	be
Connection Settings	established, pleas	e check for possible p	port customization	in the server setting	IS.
Port Settings	SSRPOR				0
SSH / VM Explorer Agent	The default port r over this port can	number for VMware V not be established, p	Veb Service comm lease check for po	unications is 443. If t ssible port customiza	he connectior ition in the
Advanced Settings	server settings.	443			
Test Connection					
Default Folders					
Summary					

Figure 13: Add Server - Port Settings

SSH/VM Explorer Agent (ESX/ESXi host only)

Enable SSH and use VM Explorer agent automatically (only on ESXi or higher) For an ESXi 4.1 or higher, there is the option to enable SSH and use the VM Explorer agent automatically. Select the corresponding check.

Use SSH (SCP) to transfer files if this is an ESX 3i/4i/5i host

By activating this option, SSH will be enabled to transfer files from your ESXi hosts. SSH is not faster than the normal ESXi API, but it is more stable for uploading files to your ESXi server. Please click the link to see how you can change your ESXi server into tech mode to enable SSH.

Try to use the VM Explorer agent on ESXi

VM Explorer usually deploys an agent to the server so backups are faster and more stable. ESXi does not support SSH by default and no agent will be deployed. If you enable this option, VM Explorer will deploy an agent to your ESXi server. Activating this feature is recommend, as the performance will be much better than when using the official API.

Name & Location	
Connection Settings	Use SSH (SCP) to transfer files if this is an ESX 3i/4i/5i host.
Port Settings	Click here to learn how to enable SSH on the ESX 3i/4.0i (tech mode)
CELL (1)M Evaluate A seat	Click here to learn how to enable SSH on the ESXi 4.1 (tech mode)
SSH / VM Explorer Agen	Click here to learn how to enable SSH on the ESXi 5 (tech mode)
Advanced Settings	Try to use the VM Explorer agent on ESXi. Requires TCP ports 62000 - 65000.
Test Connection	Faster and more stable than ESXi API.
Default Folders	
Summary	

Figure 14: Add Server - SSH / VM Explorer Agent

Advanced settings (ESX/ESXi host only)

The following three options are available in this tab:

Do not dynamically open the firewall

This only refers to Linux, ESX or ESXi \ge 5.0 servers only. VM Explorer will configure the firewall automatically for your Linux, ESX or ESXi \ge 5.0 server. You can open the ports yourself (see "FAQ and support" on page 109) and disable this option. In this case, the VM Explorer agents will not make any changes to your Linux or ESX firewall.

Use vmkfstools to locally copy virtual disks

This option is enabled by default and allows 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 ESX host to the same ESX host.

Use the VD Service

If you enable this feature, you will have the option to create differential backups.

NOTE ESX or ESXi 4.0/4.1/5.0/5.1/5.5 is required. This feature also does not work on ESXi 4.0/4.1/5.0/5.1/5.5 free edition.

Name & Location	When using the backup agent, do not dynamically open the firewall (ports 2500-
Connection Settings	3000, for ESXI ports 62000-65000). Affects only ESX, ESXI 2 5.0, Linux and FreeBSD servers (not ESXI <5.0). Warning: you need to manually configure the firewall of this server otherwise VM Explorer rannot browse/transfer file
Port Settings	from/to this host!
SSH / VM Explorer Agent	✓ Use vmkfstools to locally copy virtual disks. This option will increase copy speed but minkey or non-system processor.
Advanced Settings	but might use more system resources.
Test Connection	Suse VD Service. If you want to perform incremental backup using VMware CBT technology this function must be enabled. Only licensed ESXi and ESX can enable
Default Folders	this option. For ESXI free do not enable this option. Click here to learn how to install and initialize VD Service
Summary	

Figure 15: Add Server - Advanced Settings

Test connection

This tab automatically starts the Test Connection functionality and reports if it succeeded or if an error occurred. If it successful, you can now proceed to the last few options.

🕑 Te	st ESX Manageme	nt Service	
	neck ESX version		
🕑 Er	able SSH		
🕑 Te	est SSH/SCP Capab	ility	
🕑 Te	st Trilead Backup /	Agent	
🕑 Te	st VD Service (VDI	DK)	
est comple	ted successfully!		
	 Er Te Te Te est completion 	Enable SSH Test SSH/SCP Capab Test SSH/SCP Capab Test Trilead Backup / Test VD Service (VDI est completed successfully!	 Enable SSH Test SSH/SCP Capability Test Trilead Backup Agent Test VD Service (VDDK) est completed successfully!

Figure 16: Add server - test connection

Default folders

For the first field, you can configure a default directory which will appear on the backup/replication setup dialog when the current server is selected as a target server. The placeholders {DATETIME}, {DATE} and {VM} can be used in the path. Placeholders will be replaced with the following values:

- {DATETIME}: thecurrent 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

In the last field, you can configure a default directory, which is used as the start directory when 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.

When this server is selected as a target for backup, propose this directory as defa	iult:
	Browse
Note. You can use the following placeholders:	
(DATETIME) will be replaced by the current date/time.e.g. 2015-01-30-12590 (DATE) will be replaced by the current date.e.g. 2015-01-30 (DATE) will be replaced by the current date.e.g. 2015-01-30	1
{VM} will be replaced by the display name of the virtual machine.	
When you browse this server, start browsing in the following directory as default:	
	Browse
	When this server is selected as a target for backup, propose this directory as defa Image: Constraint of the server is selected as a target for backup, propose this directory as defa Note. You can use the following placeholders: (DATETIME) will be replaced by the current date/time. e.g. 2015-01-30-12590 (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.

Figure 17: Add server - default folders

Summary

At this point, you have succeeded in configuring your host. A brief summary is visible so you can check the parameters selected. Click **Save** and it will be automatically added to your Datacenter.

Add a Hyper-V server

This section shows the differences from adding an ESX/ESXi host when adding a Hyper-V host in the Add Server Wizard. For the tabs not explained, please check the previous sections.

 Connection Settings (Hyper-V only): This page allows you to set the credentials necessary for connecting to the Hyper-V host. The option Start Hyper-V Agent Using Configured Credentials starts the agent with the credentials inserted and not as your local system.

	Specify the full D	NS name or IP address of the server.	
Connection Settings	Hostname		8
Advanced Settings		The Hostname is required.	
Test Connection	Specify the accou	int that will be used to connect to the server.	
	Username	Administrator	
Default Folders	Password		
Summary	Domain	WORKGROUP	
	Start Hyper-	V Agent using configured credentials	

Figure 19: Add server (Hyper-V) - Connection settings

 Advance Settings (Hyper-V only): This option allows you to directly write to the disk without being buffered and is only intended for users who encounter this issue: http://support.microsoft.com/kb/976618.

INCIE IIIS ODUOI COULUSION DOWI LIE DACKUD DIOCESSII LAIDELIS SEL LO LOCAI COI IDULE	NOTE This option could slow	down the backup pro	ocess if target is set to	Local Computer
--	-----------------------------	---------------------	---------------------------	----------------

Add Server (Hyper-V Server)		
Name & Location	I //O Caching	
Connection Settings	Write data directly to the disk without being buffered	
Advanced Settings	Use this option only if you experience the issue described in Microsoft kb 976618 < <u>http://support.microsoft.com/kb/976618</u> >	
Test Connection		
Default Folders		
Summary		
	Previous Next Finish Cancel	

Figure 20: Add server (Hyper-V) - Advanced settings

3. Test Connection (Hyper-V host only): The test connection will deploy the *Trilead Agent Manager* to your server. If there are any problems, the **Agent Manager** appears. Open the Hyper-V Agent Manager window where you can manually deploy it. You can also select the option to remove the Agent Manager from the server.



Figure 21: Add server (Hyper-V) - Test connection

This page can also be accessed when selecting the server in the Datacenter of VM Explorer.

Hyper-V Agent Manager	
In order to manage Hyper-V Server "HPE Agent Manager" service should be deployed to this is done automatically when "Test Connection" is performed. If there are any problems manually deploy or remove "HPE Agent Manger" on Hyper-V Server.	the server. Usually is possible to
Restart "HPE Agent Manager" service on Hyper-V Server and test connection	Restart
Deploy "HPE Agent Manager" service on Hyper-V server and test connection	Deploy
Remove "HPE Agent Manager" service from Hyper-V server	Remove
If automatic deployment doesn't work, please download "HPE Agent Manager" from the u install it on Hyper-V server	inderneath URL and
http://www.trilead.com/Download/Agent/	

Figure 22: Add Server (Hyper-V) - Hyper-V Agent Manager

Add vCenter

This section will show the differences from adding an ESX/ESXi host when adding a vCenter host in the Add Server Wizard. For the tabs not explained, please check the previous sections.

1. Connection Settings (vCenter only): At this point, the wizard requires the hostname (IP address), the username and the password.

Name & Location	Specify the full [NS name or IP address of the server.	
Connection Settings	Hostname		8
Port Settings		The Hostname is required.	
Test Connection	Specify the acco	nt that will be used to connect to the serve	r.
Test connection	Username	root	
Summary	Password		

Figure 23: Add server (vCenter) - Connection settings

2. Port Settings (vCenter host only): In the vCenter configuration dialog, you can also configure a different port for the ESX Management Console (HTTPS, default is 443).

Add Server (vCenter)					
Name & Location	The default port numbe over this port cannot be	er for VMware Web e established, pleas	Service communic e check for possib	ations is 443. If the le port customizati	e connection on in the
Port Settings	HTTPS Port	443			Ø
Test Connection					
Summary					
		Previous	Next	Finish	Cancel

Figure 24: Add server (vCenter) - Port settings

After your vCenter has been added, VM Explorer will show all hosts belonging to your vCenter. To use the hosts, you have to configure every host by right-clicking and selecting Edit Server. For configuration details, refer to Add an ESX/ESXi server" on page 21.

NOTE: ESXi servers cannot be set to Lockdown mode because of permission issues. If ESXi servers are already in Lockdown mode, please remove the 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.

Add Amazon S3

This section will show the differences from adding an ESX/ESXi host when adding an Amazon S3 Cloud host in the Add Server Wizard. For the tabs not explained, please refer to the previous sections.

Connection Settings (Amazon S3 Cloud only): In this section, you can add the credentials needed to connect to the Amazon S3 Cloud and the region you want to work with.

You can select **All Regions** or just one of the regions that Amazon S3 Cloud provides. If you select a specific region, only the buckets contained will be visible.

TIP Choosing a specific region will reduce data latency.

ld Server (Amazon S3 cloud	Ð)				
Name & Location	Specify the access	keys to connect to A	WS services.		
Connection Settings	Access Key ID				۲
Test Connection	Secret Key	The Access Key I	D is required.		
Default Folders	Secter Rey				
Summary	Specify the Region.	Please note that a c	loser region can r	educe data latency	-
	Region	All Regions			
		Previous	Next	Finish	Cancel

Figure 25: Add server (Amazon S3) - Connection settings

Add OpenStack, HPE and Rackspace Cloud

This section will show the differences from adding an ESX/ESXi host when adding an OpenStack, HPE or Rackspace Cloud host in the Add Server Wizard. For the tabs not explained, please refer to the previous sections.

Connection Settings (Only for OpenStack, HPE and Rackspace Cloud host): In this section, you can add the credentials needed to connect to the cloud selected. You can also select if you want to access to the Tenant Name or the Tenant ID, and specify which one.

NOTE Earlier versions used the term project, instead of tenant.

	Specify the full URL	of the Cloud Identity Service API Endpoint.	
Connection Settings	Identity Endpoint		۲
Test Connection		The Identity Endpoint is required.	
Region	Specify the account	that will be used to connect to the server.	
Defeult Feldere	Username		
Detault Folders	Password		
Summary			
	Specify either the T	enant Name or ID to authenticate. Farlier versions used t	the term
	Specify either the T "Project" instead of	enant Name or ID to authenticate. Earlier versions used t "Tenant".	the term
	Specify either the To "Project" instead of " Tenant	enant Name or ID to authenticate. Earlier versions used f Tenant". Tenant Name	the term T
	Specify either the Tr "Project" instead of ' Tenant	enant Name or ID to authenticate. Earlier versions used t Tenant". Tenant Name	the term v
	Specify either the Tr "Project" instead of ' Tenant	enant Name or ID to authenticate. Earlier versions used t Tenant". Tenant Name	the term
	Specify either the To "Project" instead of ' Tenant	enant Name or ID to authenticate. Earlier versions used t Tenant". 	the term v

Figure 26: Add server (OpenStack, HPE, Raskspace) - Connection settings

Server information

To get an overview of a server, go to Datacenter and select a server.

Server overview

By selecting the server, you receive general information about the host and its datastores.

Verview Inst	ant Recovery Status			
General				
Hostname: xxx xx x	XXX			
T 100 500				
Type: VMware ESXI	550 build-/658501			
Storage				
Storage	Туре	Used Space	Used Percentage	
Storage	Type VMFS	Used Space 972.24 GB / 1.819 TB	Used Percentage 52%	
Storage Name datastore persistent	Type VMFS VMFS	Used Space 972.24 GB / 1.819 TB 901.46 GB / 924.00 GB	Used Percentage 52% 98%	
· Storage Name datastore persistent ISO	Type VMFS VMFS NFS	Used Space 972.24 GB / 1.819 TB 90146 GB / 924.00 GB 1.664 TB / 1.786 TB	Used Percentage 52 98% 93%	

Figure 27: Server - Overview

Instant recovery status

You can also click the **Instant Recovery Status** tab to check the connection status between Hypervisor and the VM Explorer NFS server.

Instant Recovery S	tatus
nstant Recovery Service Tester rough this page it is possible to	test the Instant Recovery functionalities and unmount any Recovery Datastore on the host.
leck status, keaus the instatu ke	Detectors in the bast and informer on the sound
st Service: Tries to mount the Re	PCOVERV DATASTORE IN THE DOST AND INTORMS ON THE RESULT.
st Service: Tries to mount the Re mount Recovery DS: Tries to un	covery Datastore in the host and informs on the result. mount the Recovery Datastore from the host and informs on the result.
st Service: Tries to mount the Re imount Recovery DS: Tries to un Check Status	Instant Recovery Service status:
st Service: Tries to mount the R imount Recovery DS: Tries to un Check Status Test Service	Recovery Datastore in the host and informs on the result. mount the Recovery Datastore from the host and informs on the result. Instant Recovery Service status: Instant Recovery Service correctly configured. Recovery Datastore Status:

Figure 28: Server - Instant recovery status

Check Status will update the status of the data and give you an overview of the possible and current operation. You can read the information of the datastore registered through the VM Explorer NFS Server and if any backup test is running.

The **Test Service** will mount the VM Explorer NFS datastore (used for automated backup test) to the host and check if a basic communication is possible.

The Unmount Recovery DS will execute the unmounts of the VM Explorer NFS datastore. If any backup test is running, this command will fail as the host will refuse it.

Upload Manager

The **Upload Manager** tab is available only for Amazon S3, and displays an overview of the multi-part uploads currently active with the Amazon S3 cloud.

Overview	Upload Manager gress Multipart Uploa	ts on Amazon S3 Abort All							
ubort all in-prog	gress Multipart Uploa	ts on Amazon S3 Abort All							
- Current Mul		ort all in-progress Multipart Uploads on Amazon S3 Abort All							
	tipart Uploads	Current Multipart Uploads							
Start	time Bucket	Descriptor File	Creator						
21.03.2016	10:16:39 vmx-ireland	WindowsServer2012R2_2.vmdk.delta	Admin						
			Abort Refresh						



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

The **Current Multipart Uploads** form gives 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.

Virtual Machine information

By selecting a virtual machine, you will have an overview of the VM.

WindowsServer2012R2		
General Screen		
OS Type: Microsoft Windows Server 20	012 (64-bit)	
Virtual Hardware	Active Marr: 2/5 MR	Guest Info
8192.00 MB RAM 2 Virtual disks	Host Mem: 2201 MB CPU Usage: 43 MHz	IP Address: 172.17.0.208
1 Ethernet Interfaces		
Disks		
[datastore1] WindowsServer2012R2/ [datastore1] WindowsServer2012R2/	WindowsServer2012R2.vmdk WindowsServer2012R2_1.vmdk	
Notes		

Figure 30: VM general

You also have the possibility to request a screenshot of the VM in the Screen tab. Click Refresh to stay up-to-date.

WindowsSe	rver2012R2				
General	Screen				
					Refresh
For your file For the second sec			H Windows S	Server 2012 R2	100 24045 91 21 201

Figure 31: VM screenshot

By right-clicking a VM in the Datacenter tree, a popup menu will allow you to execute VM related actions; such as power on/off, backup/replication, locate VM files or manage the snapshots.

Snapshots for W	indowsServer2012R2		×
Currently define	d snapshots for WindowsServer20	012R2:	
 BaseCo [O] [You O] Sna 	nfig are here] >-2016-03-21-1059		
Description:		Domovo Sabashot	Demove All Secrete
60 10		Remove Snapshor	Remove All Shapshors
New Snapsh	ot		
Name	Snap-2016-03-21-1203		
Description			
	 Snapshot the virtual mach Quiesce the file system in tools are installed) 	nine's memory the virtual machine ((only when VMware

Figure 32: 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 option for quiesce and memory snapshot, name the snapshot and give a brief description.

Chapter 6: Configure the SAN Infrastructure

If your network has an EMC² ScaleIO System installed, you can add a reference to this SAN system in VM Explorer to see the information about your ScaleIO and execute backups with Storage Snapshot. Refer to the "Backup" on page 54 section for more details.

You can find the SAN infrastructure by selecting Storage System > SAN Infrastructure at the top of the page.



Figure 33: SAN Infrastructure page

There are several ways to add your ScaleIO System. You can either click the Add a new ScaleIO System link on the introduction panel of the SAN Infrastructure page, or you can click the button with the same name in the SAN Infrastructure panel. You can also right-click to this panel and select the Add a new ScaleIO System in the menu.

If you choose to add a new SAN, a wizard will help you accomplish this operation.

Name and connection settings

- In the first tab, select the display name that identifies the SAN System in the tree of the SAN Infrastructure page.
 It is also necessary to fill connection fields. To do this, you need to know the Gateway host name and the MDM account of your EMC² ScaleIO System.
- 2. Once you have inserted all the necessary parameters, click Next to go to the next step.

Test connection

This tab will automatically start the test about the connectivity and uniqueness of this SAN System. It reports if it succeeded or if an error was encountered. If succeeded, you can now proceed to the next step.

Add a new SAN					×
Name & Connection Settings	Display Name	New ScaleIO			Ø
Test Connection	Connection Settings				
Summary	Specify the full DNS name	e or IP address of the S	ScaleIO System.		
	Gateway Hostname				
	MDM Username	admin			
	MDM Password				
		Previous	Next	Finish	Cancel

Figure 35: Add San Infrastructure - Test connection

Summary

Add a new SAN					×
Name & Connection Settings	Summary of the ScaleIO In	frastructure			A
Test Connection	Display Name:				
Summary	Gateway Hostname XXXXXXXXXXX MDM Username admin MDM Password				
					•
		Previous	Next	Save	Cancel
Figure 36: Add San Infrastructure - Summary

At this point, you have succeeded in configuring your SAN System. A brief summary is available so you can check the parameters selected. Click **Save** and it will be automatically added to your SAN Infrastructure tree.

NOTE: The settings can be changed any time by right-clicking your SAN System host entry in the SAN Infrastructure tree and choosing the Edit ScaleIO System menu.

Chapter 7: Configure the Tape Infrastructure

VM Explorer can help you to manage your Tape Infrastructures and save data. Once tape devices and media pools are set up, you can schedule the copy backups to tape, as well as restore them.

VM Explorer has been tested and completely supports HPE StoreEver 1/8 G2 Tape Autoloader and Dell PowerVault 124T autoloaders. It can also support other tape libraries/autoloaders/media changer devices with a barcode reader and the standard API.

🚔 Device Manager	_ D X
File Action View Help	
Image: Second Secon	

Figure 37: Windows Device Manager

VM Explorer automatically recognizes the tape devices visible the Windows machine on which it is installed. On Windows Device Manager, tape libraries are under the Medium Changer Devices group and tape drives are under the Tape Drives group.

The Tape infrastructure page can be found from the menu (Storage Systems >Tape Infrastructure). Click Rescan Infrastructure to rescan your Tape Infrastructure.



Figure 38: Tape Infrastructure page

Tape libraries

As you can see in the **"Figure 39: Tape Library overview" below**, in the left navigation menu, you can view the detected devices composing your infrastructure. The tape library is divided:



🖭 Media

I Media Pools

Tape Infrastructure	
C Rescan Infrastructure	
Expand All I Collapse All	Tape Library
 ✓ mathematical Tape Libraries ▶ mathematical Tape Library 	Chefresh Rename DAdd new Media Pool 🔐 Remove Library
🔻 🗣 Tape Backups	Device Information Library Properties
Group by Virtual Machine	Device Model: Tape Library Number of Drives: 5
Group by Scheduled Task	Location: Bus Number 0, Target Id 0, LUN 0 Number of Slots: 20
	Serial Number: B1153500C0 Number of Import/Export Ports: 4
	Number of Transports: 1
	Slots Anventory Estalog 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 10 11 12 13 14 15 16 17 18 19 20 10 11 12 13 14 15 16 17 18 19 20 10 11 12 13 14 15
	Drives I/E Ports Dimport All Media Transports
Hewlett Packard Enterprise	© Copyright 2016 Hewlett Packard Enterprise Development LP

Figure 39: Tape Library overview

Drivers

A drive is the physical part of a tape library that permits you to read and write data to/from a tape media.

If you click on this item, you can see some information about the drive and enable/disable it.

If you enable/disable a drive, VM Explorer will include/exclude it in the pool of drives in the backup procedures.

Media

The media item shows all the tape media and cartridges the tape library recognizes.

- 🖭 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.

The following is a list of Media Operations:

- Move to media pool: You can include a tape in a media pool. You can move the media in the free or in all of your custom media pools. For more information, refer to "Media Pools" in this section.
- Inventory: Prepare a new media used by VM Explorer or check if media is already recognized.
- Catalog: Inventory tape media and scan all the contents for previously written backups.
- Import: If media is in an I/E port, you can import it. VM Explorer will move the media in the first available empty slot.
- Export: If you want to remove media from the library, you can export it to move the tape media to an I/E port.
- Eject: Allows you to move media from the drive to the first available empty slot.
- Erase: Deletes all the data written on the tape. You can choose to make a short erase (fast) or a long erase (slow).

CAUTION: All the backups on this media tape will be deleted from the catalog.

• Mark as Free: If you mark the media as free, you tell VM Explorer that this media is considered ready to be used and its content can be overwritten.

CAUTION: All the backups on this tape media will be deleted from the catalog. If you use the Catalog action before the media has been reused, you can recover the existing backups.

• Remove from the Catalog: If your media is offline you can remove it from the catalog.

CAUTION: 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 the media has been reused, to recover the existing backups.

• Details: Allows you to see information about the media and which VM Explorer backups are saved.

Media Pools

A media pool is a container of media that helps to organize the media included in a tape infrastructure. VM Explorer defines three types of system media pools that cannot be modified nor used as target for

your backups:

Free: All media is marked as free and usable from the system. Media can be moved to populate other custom Media Pools.

Unrecognized: Composed by unrecognized tape media which content is still unknown. You can perform the Inventory media operation, to make them usable in the Free media pool, or the Catalog operation, in case you want to recover existing VM Explorer backups.

Imported: Composed by tape media containing existing backups that have been recognized during a Catalog operation. For example, media previously removed from 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.

Eustom: Users can define the list of media and the specific retention rules for the backups.

Create the Custom Media Pool

You can create a new custom media pool. Right-click on Media Pools and select Add Media Pool. This will open the Add Media Pool wizard.

Name

You must give a new custom media pool a name and you can insert a short description for parts of the pool. Click **Next** to show the next tab.

Add new Media Po	ol		×
Name	Please select the M	dia Pool name and optional description	
Media List	Name	MyPool	0
Retention	Description	1	Ø
Summary			
		Previous Next	Finish Cancel

Figure 40: Add Media Pool - Name

The Media List tab permits to add free media to this pool. Click Add to select the free tape media from the free media pool you want include in this Media Pool. If you want to remove media from the pool, select the ones you want to remove and click **Remove**. They will be moved to the free media pool.

ame	Here below there is	the list of Media cur	rently in the Media P	Pool You can add m	nedia taken from the
1edia List	Pool by clicking on	/ clicking on 'Add' S 'Remove'	elected media can b	e removed and put	f in the Free Media
etention		Name	Capacity	Free	Add
	CB0005L3		-	-	Demons
ummarv	CB0006L3		-	-	Remove

Figure 41: Add Media Pool - Media List

If you set the checkbox, Automatically add media from the 'Free' Media Pool when required, and if a backup needs an amount of space that cannot be granted by the media already present in this pool, VM Explorer will include the first free tape from the Free media pool. Click Next.

dd Tape Media from 'Free' N	1edia Pool			
ease select the media from	the 'Free' Media Pool you war	it to add to the current N	1edia Pool.	
Name	Media Pool	Capacity	Fre	e
CB0005L3	Free	-	-	
CB0006L3	Free	-	-	
CB0001L3	Free	-	-	



The Retention tape permits to set some rules useful to know how to use and/or reuse the media.

- Media Reutilization: You can choose if you want to reuse the same media in subsequent scheduled backup sessions or if you want to use a different media every session.
- Data Retention policy: You can select the desired media overwrite policy cyclic overwrite, overwrite if older than specific number of days, or never overwrite.

Name	Media reutilization
Media List	Please choose if you want to reuse the same media in consecutive scheduled backup sessions:
Retention	Continue using the last used media Use a new media every session
Summary	Data retention policy
	Once no free media is available in the pool, please select the desired media overwrite policy:
	Cyclically overwrite media as required Overwrite tane media if data is older than 7 Dave
	Never overwrite data

Figure 43: Add Media Pool - Retention

Click Next.

At this point, you have succeeded in configuring your Media Pool. A brief summary is available so that you can check the parameters selected. Click **Save** and it will be automatically added to your Tape Infrastructure tree.

dd new Media Po	al	×
Name	Summary of the Media Pool	
Media List	Name: MyMediaPool	
Retention	Description:	
Summary	Automatically add media from the 'Free' media pool when required: true	
	Media reutilization: Continue using the last used media	
	Data retention policy: Cyclically overwrite media as required	
	Media List:	
	- CB0006L3	
	Previous Next Save Ca	ncel

Figure 44: Add Media Pool - Summary

The settings you have selected can be changed at any time if you right-click your Media Pool host entry in the Tape Infrastructure tree and click the Edit menu.

Tape backups

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

- Virtual Machine
- Scheduled Task
- 🇯 Media Pool

If you right-click on each backup, you can show some details or start a procedure to restore the copy of this backup by clicking, **Restore backup from Media**. This will open the Tape Restore wizard.

options	The tape backup will be restored on the target server and path selectable here belo	w.
Summary	Once completed, the restored backup will be visible in the 'Backup Explorer' panel a could be handled like other regular backup entries.	nd
	Please select the destination server where to restore the tape backup	
	Target Server) *
	Please select the destination path where restored files will be saved	
	Target Location E:\Backups\20160304_2\ O Browse	

Figure 45: Tape Restore - Target options

Chapter 8: Configure Network Drives

As VM Explorer service runs within a different account than the logged in account, 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 page.

Set	tings		Add Edit Remove				
٥	General	Drive	Path	Username	Password	Status	
	Export / Import config file	A:\	\\xxx.xxxxxxxxx\transfer\			The network drive is connected	
	expert / impert comig inc	EA	\\xxx.x.xxx\ISO	administrator	•••••	The network drive is connected	
N.	License Manager						
-	Network Drives						
\sim	E-Mail Default Settings						
8	Instant Recovery Service						
1	Active Directory						
-	Users						
*	Groups						
۲	Language						
Ê	Event Logs						
⊁	Support						
?	Manuals						
•	Suggest new feature (ext. link)						
	=						
He	wlett Packard						
En	terprise		C	Copyright 2016 Hewle	tt Packard Enterprise	Development LP	

Figure 46: Network Drives page

Location

Select a drive letter for the network drive. If you have already mapped some network drives with letters, those letters will be not available.

Provide the correct network drive path.

dd a network drive					د
Location	Select the drive Let	ter you want to use	c		
Credentials	Drive Letter	Z:\	Ŧ		
Test Connection	Write the path of yo	ur network drive:			
Summary	Path	\\172.100.10.	1\transfer		Ø
		Previous	Next	Finish	Cancel

Figure 47: Network Drive - Location

Credential

If the network drive has user credentials, please provide. If not, check Do not use credentials.

ld a network drive					×
Location	Enter your credenti	als to connect to \\1	72.17.1.100\transfe	r:	
Credentials	🕑 Do not use cred	entials			
Test Connection	Username				Ø
Summarv	Password				\odot
		Show pass	word		

Figure 48: Network Drive - Credential

Test connection

A test connection with the network drive is made with your parameters, given in the previous tabs.



Figure 49: Network Drive - Test Connection

Summary

Check all the parameters and click **Save**. A brief summary is available so that you can check the parameters selected.

Location	Summary of the Network Drive you want to add	- 1
Credentials	Drive Letter:	
Test Connection	UNC Path:	
Summary	Username:	
	Password:	

Figure 50: Network Drive - Summary

Chapter 9: Schedule a task

VM Explorer allows you to schedule backup tasks to run on a regular basis, such as daily, weekly, monthly. You can also back up any specific virtual machine.

Create a scheduled task

There are two ways to create a scheduled task:

My E	Datacenter
Searc	ch VM Q
Expand	d All Collapse All
► ► ►	Direct_17217120 ESXi61_0.84 (Not Supported) ESX-Europe ESX-Europe
• =	Locate Files Power On Power Off Shutdown Guest and Power Off
	Unregister VM Unregister VM and move into Recycle Bin Backup Create New Backup Schedule Browse Backups
	Replicate Create New Replication Schedule Browse Replications Snapshots Manager

Figure 51: Create new backup schedule

Add Scheduled Task									
General	Weekend Back	(up Task							
Schedule									
 Enable automa Start time (24h) 	tic scheduling for	this task							
Run every	ur(s) First Time:	21.03.2016	>						
Weekly schedu	le								
Every week Monthly sched	ule	Mor	I 🔲 Tue	Wed	🔲 Thu	🔲 Fri 🗹) Sat 🗹 Sun		
Every Month		▼ on the	1.	•					
Run once 21.03.2016									
								ок	Cancel

Figure 52: Add scheduled task

1. To create a new scheduled task, switch to the Datacenter view and right-click the virtual machine you want to back up.

You can click the **On error execute next task**option. This allows the scheduled task to continue to the next step, even if the previous step failed.

- 2. Click Create New Backup Schedule. The Edit Scheduled Task box appears.
- 3. Enter a name for the task and configure the start time and schedule type.
- 4. Click OK.
- 5. The next screen is the same as when you back up a virtual machine manually.
- 6. Enter all the options and click OK to confirm.
- 7. You can click the **On error execute next task**option. This allows the scheduled task to continue to the next step, even if the previous step failed

As an alternative, you can create a new scheduled task by switching to the Scheduler view Tasks > Scheduled Tasks. Right-click Scheduled Tasks and click Add Scheduled Task.

If you switch to Scheduler view, you can edit entries at any time. You can also add multiple steps to a single backup task and you can add backups of VM1 and VM2 to the same task.

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

NOTE VM Explorer has a built-in Windows Service that executes the scheduled tasks. Using the VM Explorer service, you don't need to be logged in and have VM Explorer running to perform a scheduled task. Also, if the scheduler is enabled and the General Settings option is **Prevent 'Sleep Mode if scheduler is enabled**, this will prevent the system from Sleep Mode (if activated).

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

Scheduled Tasks										
Weekend Backup Task	The so	heduler is currently disab	ed.							Enable the Scheduler
	C Sch	neduled Task Details								
	Wor	rk Days Backup Task					Copy Task	Edit Task Name/Schedule	Disable Task	Run this Task Now
	The	a schadular is currantlu dis	abled it won't be automat	ically scheduled						
		scheduler is correnny of		icany series area.						
	Mos	st recent execution: Wedn	esday, 16 March 2016 at 15	:48						
		ask Elements								
	E	Туре	VM	Source	Target	Target Directory	Up			
		Backup	Windows Server 2012	Bern	Local Computer	C:\Users\CompanyBackup\{	-			
	1	Multi Backup	MULTI VMs	Bern	Tokyo	[datastore4] (VM)/(DATETI	Down			
		Backup	WindowsServer2012	Basel	Local Computer	E:\Backups\20160226\{VM}				
		Replication	Windows10	USA	Same Host as VM	[datastore1] {VM}				
							Add			
							Remove			
Hewlett Packard Enterprise					© Copyright 201	6 Hewlett Packard Enterprise D	evelopment LP			

Figure 53: Scheduled task page

Copy a scheduled task

A scheduled task can be entirely copied:

- 1. Right-click on a scheduled task that you want to copy from the Scheduled Tasks list.
- 2. Click Copy Task, or select the scheduled task that you want to copy and click Copy Task from the right panel.
- The Edit Scheduled Task dialog box will appear. The copied scheduled task will have the same configuration as the original one. These configurations can be changed in the popup dialog.
- 4. The copied task will be disabled (paused) to avoid multiple running and conflicts.
- 5. Click Enable the Scheduler from the Scheduler View to copy the scheduled task.

VM Explorer datacente	R TASKS - MANAGEMENT - STORAGE SYSTEMS - SETTINGS ABOUT	🍘 Tasks 💿 💄 admin ? 🛛 Logout
Copy of Work Days Backup Task (Paused)	Ceneral Task Name Copy of Work Days Backup Task Schedule enable automatic scheduling for this task Start time (24h format HH:MM) 2359 Run every 1 Hour(s) First Time: Øtom @ Tue @ Wed @ Thu @ Fri @ Set @ Sun Workly schedule Every week @ Run once 25012016	Overview Enable the Scheduler Disable Task Run this Task Now Up Down Earr Copy Add Remove el
Hewlett Packard Enterprise	© Copyright 2016 Hewlett Packard Enterprise Development LP	

Figure 54: Copy scheduled task dialog

Copy a scheduled task element

You can copy a single task element into the same scheduled task or to another scheduled task:

- 1. From the Task Elements list, right-click on a Task Element and click Copy, or click Copy on the right.
- 2. The Copy the selected **Task Element** box will appear. In this dialog you can select which scheduled task you want to copy the selected task element. Select the **Target Scheduled** task.
- 3. Click OK.

Copy the selected Task Element		×
Please choose the scheduled task into which the selected task element will be copi	ied	
Weekend Backup Task	•	
	ок	Cancel

Figure 55: Copy task element dialog

Command line interface

VM Explorer allows you to execute the scheduled tasks you created by entering a command line. This can be useful if you want to use different software as a scheduler. For example, you might use Windows built-in Task Scheduler.

To access full information about the command line interface, enter the following at the command prompt:

vmx.exe /?

VM Explorer will always generate an XML file containing all the information about the executed task. The output location can always be changed by adding the /logfile parameter.

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

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

Chapter 10: Backup

If you want to back up one of your virtual machines, switch to the **Datacenter** view. Expand your ESX or Hyper-V host to get a list of all your Virtual Machines. If you are using vCenter, expand your vCenter's hosts to see all virtual machines. Right-click the one you want to back up and click **Backup**. This opens the **Virtual Machine Backup** dialog box.

You can also create a task that backs up one of your VM's from Scheduled Tasks.

- 1. From the menu go to Tasks > Scheduled task and select a scheduled task in which you want to create the backup task.
- 2. Click Add.
- 3. The following dialog will appear. Click Single VM (if you want to backup just one VM).

Add Task Element		×
Please choose the type of task yo	ou want to add	
— Backup	Replication	
Copy Backup	Other	
	I 📈 🗎	
To Server To Tap Media	e E-Mail Custom Report Script	

Figure 56: Add Task Element

Single VM

This section explains how to backup a single VM.

- 1. Click the General Tab.
- 2. In the Host dropdown menu, choose the target location. This can be your local PC, an ESX host, an Hyper-V host, or a Linux/FreeBSD host which has been added in to your Datacenter view.
- 3. Choose the target directory and how you want to handle the backup.
- 4. Click OK. This will start the backup process.

VM Explorer will create a snapshot of your virtual machine. This means that you can back up a running virtual machine without stopping it. When the backup is finished, VM Explorer automatically deletes the snapshot on your ESX or Hyper-V server.

NOTE If you choose Overwrite existing files in the target directory, the existing backup will only be overwritten if the new backup is successful. This allows you to always keep a working backup, and you need enough free space while you run the backup. You can also delete the backup before the backup starts by checking the option Delete existing backup in the target directory before the backup starts option. If the backup fails, you will not have any working backup. Be careful when using this option.

General	Files & Disks	Snapshot	Connection	Advanced	Verify Backup			
- Source								
Host	ESX-Europe		•	VM V	/indowsServer2012R:	2	v	
Target -								
Host	Local Compu	iter	•	🕑 On e	error execute next tas	sk		
Directory	E:\Backups\{\	/M}\{DATETIM	IE}			Choose	Parent	
	The target of	directory must	not exist, it will b	e created.				
	If the target	t directory exist	/s, then it must be	e empty.				
	If the target	t directory exist	s, archive existin	g files in the ta	irget directory.			
	If the target	ł directory exist	s, overwrite exist	ting files in the	target directory.			
	Incremental	l Backup, target	folder must be e	mpty or must	contain specific VM Ir	ncremental Backu	p	
Nbr. of back	kups to keep	All	٣					
The virtual n	nachine WindowsSe	erver2012R2 will	be copied from th	ie server ESX-Ei	urope to the Local Cor	nputer into the dire	ctory E:\Backups\{VM}	\{DATE
•						100 C		

Figure 57: Backup - General

Files and disk tabs

Virtual Disks to be included in the backup

You can choose which Virtual Disks you want to include in the backup. If the **Include memory dump of the virtual machine** option in the Snapshot tab is enabled, all the virtual disks must be selected. Otherwise, you cannot restore the memory snapshot.

Thin provisioning support

The After backup convert as thin disk option allows you to convert all the disks in the thin format to be included in the backup. This option is only available under the following conditions:

- the target host is ESX/ESXi
- the VM Explorer Agent is enabled on the target server (only for ESXi)
- the Keep data compressed at destination option is not enabled

eneral	Files &	Disks	Snapshot	Connect	ion /	Advanced	Verify Backup		
Virtual (Disks to be	included	in the Backup						
	Bus		Descriptor Fi	le	Туре		Mode	Comments	
🖉 scsi0	0:0	Window	sServer2012R2.vn	ndk	vmfs	Default (p	ersistent)		

Figure 58: Backup - Files & Disks

Snapshot tab (ESX Only)

Include a memory dump of the virtual machine (needs additional snapshot)

If your VM is running, VM Explorer creates a memory snapshot of the VM. When you restart the VM, you will lose the current memory. Enable this option if you also want to back up the memory to capture the exact running state.

Quiesce the file system

If this option is enabled and the VMware tools are installed on the guest system, the VMware tools will inform the OS that a snapshot will be created. This allows a record of all necessary data for a consistent snapshot. We recommend keeping this option enabled.

NOTE All options are configured by default.

Make storage snapshot

If this option is enabled and all the datastores are located on SAN Infrastructures, the backup will make storage snapshots.

When a backup starts with this option selected, VM Explorer checks if all the datastores of this VM are located on SAN Infrastructures. If yes, VM Explorer creates a snapshot (storage) of each datastore, maps them in the same ScaleIO Data Client (SDC) where the VM is registered, mounts the volumes and then starts the normal backup process on this copy of the VM structure. After that, VM Explorer unmounts and un-maps all the datastores, and finally removes all the snapshots previously created.

-crief di	Files & Disks	Snapshot	Connection	Advanced	Verify Backup	
Makaal	Marking Samakat (
	de memory dump e	f the virtual may	hino (noode on o	dditional spansh	ot)	
Includ	ae alea file avetare i	-	shine (needs an a			
guies 🖉	ce the file system i	n the virtual ma	chine (only when	VMware tools a	re installed).	
	Set warning flag in	case of a Volum	e Shadow Copy S	Service (VSS) err	or, for Windows Ser	ver 2008 or greater
n order to	o access and backup	the virtual disks	of a virtual mach	ine a snapshot ha	s to be created. The	snapshot serves two purposes: First, it allows VM
Explorer † VM's file s	to access the VM's v system is in a consis	irtual disks. Seco tent state at the	nd, it assures that time of the backu	the virtual disks p, The VM can be	won't be altered by t set to "quiesce" its v	he VM during the backup. To ensure that the irtual disks when the snapshot is being taken.
Storage	Snapshot					
🖌 Make	storage snapshot.					
This featu normally.	ire will be performe	d only if all the da	atastores used by	this VM are prese	nt in SAN Systems. I	f not, the backup of this VM will be executed



This type of backup allows the host to release the VM source immediately after the storage snapshots are created. This allows merge times to drastically reduce compared to a normal backup.

Volume shadow copy service options

You can configure the VSS options. The VSS ensures the consistency of the backup. Not using the VSS may grant you a faster performance but data consistency will not be guaranteed.

ruur Plucifiin	e Backup								
General	Files & Disks	VSS Snapshot	Connection	Advanced	Verify Backup				
Volume S	Shadow Copy Servic	e Options							
Use the	e Volume Shadow (Copy Service (VSS) 1	to perform the vir	tual machine sna	ipshot				
Do not	use VSS. The snap	shot process is fast	er, but data consi	stency cannot be	guaranteed.				
n order to a	ccess and backup th	e virtual disks of a vi	irtual machine a sr	napshot has to be	created. The snapsh	ot serves two pu	rposes: First, it	allows	/M
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xplorer to a vstem is in a	access the VM's virtu a consistent state at	ual disks. Second, it a the time of the back	ssures that the vir sup. The VM can be	tual disks won't be e set to use the Vo	e altered by the VM olume Shadow Copy	during the backu Service (VSS) wh	p. To ensure th ien the snapsh	at the \ ot is bei	/M's file na
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xplorer to a ystem is in a aken.	access the VM's virtu	ual disks. Second. it a	ssures that the vir	tual disks won't be e set to use the Vo	e altered by the VM olume Shadow Copy	during the backu Service (VSS) wł	p. To ensure th	at the \ ot is be	/M's file
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ixplorer to a ystem is in <i>i</i> aken.	a consistent state at	ual disks. Second, it a	ssures that the vir	tual disks won't b	e altered by the VM.	during the backu	p. To ensure th	ot is be	/M's file

Figure 60: Backup - VSS Snapshot (Hyper-V)

Connection tab

Direct copy options

Direct copy allows you to directly transfer files between the source and the target server. You can configure the settings to reverse the direction of the TCP connection (default is from the source server to the target server). This option may be enabled in case of NAT (Network Address Translation).

The option to compress data during transfer is available in this section. You can also decide to keep the data compressed at the destination, but in this case, the File Level Restore will not be available for this backup.

The direct copy options are not available if the source or target server is ESXi and the VM Explorer Agent is not enabled.

Encryption

In this section, you can configure a password to encrypt the virtual disks of the backup.

Encryption cannot be used with the compression option or the Cloud servers (Amazon S3, OpenStack, etc.) due to their restricted interface. The direct copy connection will also be unavailable and all the data will be relayed through the VM Explorer. See section "Enable VD Services for incremental backups" on page 64 for more details.

CAUTION The password will be stored, encrypted and not retrievable.

Direct Copy Options The TCP connection will be established from the local computer to XXXXXXX Reverse direct connection established from the local computer to XXXXXXXX Reverse direct connection establishment (may be needed in case of NAT). Compress data during transfer. Keep data compressed at destination. File Level Restore will NOT be available. Direct copy allows to directly transfer files between the source and the target server. The achievable transfer speed is only limited by the available network bandwidth and the speed of the involved diak systems at the source and target server. Currently, direct copy and compression cannot be used with ESX servers (without Agent option enabled) due to their restricted interface. In case of an involved ESX server (without Agent option enabled) at data will be relayed through VM Esplorer. To makings the speed of backups on ESX servers and ensure directly transfer files between the source and the target server. Encryption Encrypt virtual disks using the specified password. Password Image Password Varing: the password will be stored encrypted and not retrievable, please be sure to remember it or write it down in a safe place in order to be able to decrypt the backup.	Direct Copy Options The TOP connection will be established from the local computer to XXXXXXXX. Reverse direct connection establishement (may be needed in case of NAT). Compress data during transfer. Compress data during transfer. Keep data compressed at destination. File Level Restore will NOT be available. Direct Copy allows to directly transfer files between the source and the target server. The achievable transfer speed is only limited by the available network bandwidth and the speed of the involved disk systems at the source and target server. Currently, direct copy and compression cannot be used with ESX servers (without Apent option enabled) due to their restricted interface. In case of an involved ESX server (without Apent option enabled) dual to their prestricted interface. In case of an involved ESX server (without Apent option enabled) dual to their restricted interface. In case of an involved ESX server (without Apent option enabled) dual to their restricted interface. In case of an involved ESX server (without Apent option enabled) dual to their restricted interface. In case of an involved ESX server (without Apent option enabled) dual to their preserver. Currently, direct copy and compression cannot be used with ESX servers, we suggest you to enable the Agent option on all your ESX servers. Encryption Encryption Change Password Warning: the password will be stored encrypted and not retrivable, please be sure to remember it or write it down in a safe place in order to be able to derrypt the backup. Currently, encryption cannot be used in conjunction with the compression option or the Cloud servers (Amazon 53, Open5tack, etc) due to their restricted interface. The direct copy connection will also be unvailable and all the data will be relayed through VM Explorer .		Files & Disks	Snapshot	Connection	Advanced	Verify Backup	
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Figure 61: Backup - Connection

Advanced tab

The advanced options allow configuration if the guest VM has to be shut down or un-suspended before starting the backup. These two options work only if VMware Tools or Hyper-V Integration Services are installed on the guest VM. Only one of the options can be enabled at the same time.

When If guest VM (source) is powered on shut it down is enabled, it can be configured when the guest has to be restarted (once the backup starts, once the backup is terminated or never restarts the guest VM).

You can set how much time VM Explorer must wait before the shutdown timeout error is raised.

When **If guest VM (source) is suspended** option is enabled, it can be configured when the guest has to be set when suspended (that is once the backup starts, and when the backup is terminated or not suspend the guest VM again). You can set the amount of time VM Explorer must wait before the suspend timeout error is raised.

General Advanced	Files & Disks							
Advanced		Snapshot	Connection	Advanced	Verify Backup			
 ✓ If guest ● R ● F ○ E 	Options VM (source) is po Restart guest VM (Restart guest VM (Don't restart guest	wered on shut it once the backup once the backup t VM	t down (VMware ' starts is terminated	Tools must be i	nstalled on guest VM	0		
Raise Suspend C	e an error if the g	uest does not po	ower off after 10	mi	nutes.			
If guest	VM (source) is su Return to suspend Return to suspend	spended executive led state once the led state once the	e a power on befo e backup starts e backup is termi	ore the backup inated				
Rais	e an error if the g	uest does not ur	suspend after	10 m	inutes.			
							OK	Cancel

Figure 62: Backup - Advanced

Verify backup

You can set The Verify Backup after the backup is finished. The File System Consistency check has to be performed and/or the backup must be tested using the VM Explorer Instant Backup Test system.

	Files & Disks	Snapshot	Connection	Advanc	ed Verify Backup			
- File Syster	n Consistency							
✓ Check the	nat the followi	ng file exists in the	target VM virte	ual disk				
Virtua	l Disk	[scsi0:0] Windo	wsServer2012R	2.vmdk			•	
Volum	e ID	VLP:VPD:DS075D8	570:PO100000					
File pa	ıth	\BOOTNXT					Please Select	
Check	that the file h	as been modified w	ithin the last	24 h a	urs.			
🕑 Start th	e newly create	d backup and perfo	orm a consisten	cy check (All	network adapters will be	detached)		
🗹 Ta	ke first Screen	shot after a delay o	of	15	econds.			
 Take second Screenshot after a delay of 			y of	30	seconds.			
🖉 Ta	ke second Scre							
✓ Tal	ke second Scre ke third Screer	ishot after a delay	of	60	reconds.			
✓ Tai	ke second Scre ke third Screer ke fourth Scree	ishot after a delay enshot after a dela	of y of	60 120	seconds. :econds.			
 ✓ Tal Tal Tal Tal 	ke second Scre ke third Screer ke fourth Scree ke fifth Screen	ishot after a delay enshot after a dela shot after a delay	of v of of	60 120 500 500 500 500 500 500 500 500 500 5	seconds. seconds. seconds.			

Figure 63: Backup - Verify Backup

File system consistency

This feature allows you to check for the existence 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 (the file must have been modified within the last 24 hours). The File System Consistency check will be performed once the backup/replication operation is completed: 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.

Confirm	
?	Before opening the file selection dialog, a temporary Virtual Machine snapshot is required in order to access the Virtual Disk. The temporary snapshot will be automatically removed when you close the file selection dialog. Do you want to proceed? OK Cancel

Figure 64: Backup - File Consistency confirm message

NOTE A temporary VM snapshot will be required to browse and access the virtual disk during the File System Consistency configuration. It will be automatically deleted once the file selection dialog closes. The following confirmation dialog will be shown. Click OK to accept and proceed.

Instant Backup Test

If you enable this option, once the backup terminates, it will be added to the Hypervisor inventory as a VM and powered on. The VM health state is checked and you can take screenshots of the VM Console every (x) seconds. Health state and screenshots can be checked in the Task History or in the e-mail report.

To be able to use this option you must configure the VM Explorer NFS Settings. Refer to the VM Explorer NFS settings.

Please note:

- Screen shots taken during backup test will be visible through the Task History or in the E-Mail reports.
- Automated backup test, for the moment, is only available for VM running on ESX or ESXi and if 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 made 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, are read-only).
- VM Explorer cannot perform the backup of the ESX/ESXi and Hyper-V host configuration.

Multiple VMs

If you have to back up more VMs with the same backup options, you can click Multi VM in the framebox Backup. Click Add and the Add Task Element page appears ("Figure 56: Add Task Element" on page 54).

Click Virtual Machine Backup and the Backing up a VM will appear.

eneral Files	s & Disks Snapshot Connect	ion Advanced Verify Ba	ckup		
Source -					
Host	Please select	▼ Sel	ect VMs		
Target -					_
Host	Local Computer	۳	On error execute next task		
Directory	E:\Backups\{VM}\{DATETI	ME}		Choose Parent	
	The target directory must	t not exist, it will be created			
	If the target directory exists	sts, then it must be empty.			
	If the target directory exists	sts, archive existing files in	the target directory.		
	If the target directory exists	sts, overwrite existing files	in the target directory.		
	Incremental Backup, targ	et folder must be empty or	must contain specific VM Increme	ental Backup	
Nbr. of back	kups to keep All	•			
Nothing will	be done.				

Figure 65: Multi backup - General

The difference with the single VM backup dialog is that you can select more than one Virtual Machine if you click **Select VMs**. A dialog with all available Virtual Machines appears. The order of the selected VMs to back up can be changed by clicking Up or **Down** and corresponds to the order in which the backups are done.

Select Virtual Machines		×
Host ESX-Europe Available Virtual Machines	Selected Virtual Machines	
WindowsServer2012R2 WindowsSRV2003R2(64) WindowsXP(32)	Add > Add All >> < Remove << Remove All	(vMA)
		OK Cancel

Figure 66: Multi backup - Select multiple VMs

In the backup dialog the directory field must contain the {VM} tag.

Since the settings are common for every VM included in the task, in the Files and Disks tab, there isn't the possibility to select the files and disks to back up for every single VM. All the files and disks of the virtual machines will be backed up.

Incremental backup

VM Explorer allows you to create incremental backups. Incremental backups only require one full backup and only the changed bytes will be transferred when there is a backup. VM snapshot points are not backed up with the incremental backup. However, in the restore process, you can choose which backup version (backup date) you want to restore. Refer to, "Restore an incremental backup" on page 86.

Incremental backup on ESX/ESXi (licensed edition) is only available by using the Virtual Disk Development Kit (VDDK) and has the following requirements:

- ESX 4.0/4.1 or ESXi 4.0/4.1/5.0/5.1/5.5 (ESXi 4.0/4.1/5.0/5.1/5.5 free edition is not supported)
- Virtual Hardware of your VM must be version 7 or higher
- VD service support is enabled for the Server in VM Explorer.
- The VD service must be initialized

To enable VD Service backup, you must edit your server settings (Expert Settings tab) in the VM Explorer Server view. Refer to "Add servers to the VM Explorer" on page 19 more details.

Incremental Backup on ESXi free edition does not use Virtual Disk Development Kit (VDDK) and has the following requirement:

• VM Explorer agent on ESXi option must be enabled

To enable VM Explorer agent on ESXi you must edit your server settings (Expert Settings tab) in the VM Explorer Server view. Refer to "Add servers to the VM Explorer" on page 19 for more details.

Incremental Backup on Hyper-V does not have any restrictions.

Once everything is set up correctly, you will able to configure the Incremental Backup options.

tual Machine	Backup					×
General	Files & Disks	Snapshot	Connection	Advanced	Verify Backup	
- Source -						
Host	ESX-Europe		٣	VM W	indowsServer2012R2	2 •
Target						
Host	Local Compute	21	٣	🕑 On e	rror execute next tas	¢
Directory	E:\Backups\{VM	1}				Choose Parent
	The target directed in target directed	rectory must n	ot exist, it will be	created.		
	 If the target of If the target of 	lirectory exists lirectory exists	, then it must be , archive existing	empty. files in the targ	et directory.	
	If the target of	lirectory exists	, overwrite existi	ng files in the ta	rget directory.	
	Incremental B	ackup, target f	older must be er	npty or must co	ntain specific VM Incr	emental Backup
Nbr. of bac	kups to keep	2	٣		If the event full backup a	is missed or full backup fails, do a at the next scheduled time
Make one f	ull backup every	۲	5 incrementa	Is 🔻		
		۲	Monday	٣	Every week	Ŧ
The virtual r	machine WindowsSer	ver2012R2 will I	be copied from th	e server ESX-Eu	rope to the Local Con	nputer into the directory E\Backups\{VM}. Neither
						OK Cance

Figure 67: Incremental Backup - General

Just choose the Incremental Backup option to enable an incremental backup. All other settings are the same as for the default backup. If this feature is enabled, VM Explorer will create an initial full backup of your VM. After the initial full backup, incremental backups will be created only containing the changed data.

Enable VD Services for incremental backups

Incremental backups on ESX require the following in order to run properly:

- ESX or ESXi 4.0 or later; ESXi free edition will not support incremental backups. VM Explorer can create full backups of your ESXi free edition.
- The virtual hardware must be version 7 or later. The Virtual Hardware Version is shown in your vSphere Client when editing the settings of your VM.
- VM Explorer needs to be initialized to use the Virtual Disk Service Library (VD Service) and each host must have the VD Service enabled.

Initialize the Virtual Disk Service (VD Service)

To enable the Virtual Disk Service in VM Explorer:

- 1. Click Help.
- 2. Click Enabling Virtual Disk Service (VD Service) in the user interface.
- 3. The initialize screen will appear. You need to install the VDDK package which can be downloaded on the VMware webpage:

https://my.vmware.com/group/vmware/get-download?downloadGroup=VSP510-VDDK-510

VM Explorer DATACENTER	TASKS + MANAGEMENT + STORAGE SYSTEMS +	SETTINGS	ABOUT	🖉 Tasks 💿	💄 admin	3	Logout
Settings							
🖨 General	User Manual				-1		
Export / Import config file	VM Explorer User Manual (PDF)						
💦 License Manager	Guides						
📥 Network Drives	Enabling SSH access to the ESX 3.0.X/3.5/4.0 Service Console	2					
E-Mail Default Settings	Enabling SSH access (tech mode) on the ESX 3//4						
8 Instant Recovery Service	Enabling SSH access (tech mode) on the ESXi 4.1						
Active Directory							
🚨 Users	Enabling SSH access (tech mode) on the ESALS						
😤 Groups	Enabling Virtual Disk Service (VD Service)						
오 Language							
Event Logs							
X Support							
? Manuals							
Suggest new feature (ext. link)							
Hewlett Packard							
Enterprise	© C	opyright 2016 H	lewlett Packard Enterprise Development LP				



This package needs only to be installed on the computer where V VM Explorer is running.

When you installed the VDDK package, click Initialize VD Service. VM Explorer will report that the initialization was successful.

Enable the VD Service for an ESX host

Next, you must enable the VD Service for your ESX/ESXi host in VM Explorer.

- 1. Go to the My Datacenter and right-click the ESX host you want to configure.
- 2. Click Edit Server.
- 3. The Edit Server page will appear.
- 4. Click the Expert Settings tab.
- 5. Enable the Use VD Service option for this host.
- 6. Click Test Connection to verify your settings.
- 7. Click Save to save your settings.
- 8. Repeat this setup for all other ESX/ESXi hosts.

Se	arch VM		Q
	and All Collapse All		
	Browse Files		
	Refresh server		
	Edit Server		
	Remove	ion	
	Collapse All		
	Add new Server		
	Add new Folder		

Figure 69: Edit server

Backup encryption

VM Explorer allows you to encrypt the backups to add more security to the virtual machines backups using the XTS-AES algorithm, a standard sector-based data encryption method defined by IEEE P1619. Only the disks data will be encrypted using the specified password.

Currently, encryption cannot be used in conjunction with the Cloud servers (Amazon S3, OpenStack, etc.) due to their restricted interface. The direct copy connection will also be unavailable and all the data will be relayed through VM Explorer.

When configuring a backup, you can find the Encryption section under the **Connection** tab. You can enable the encryption by checking the option and specifying a password.

seneral	Files & Disks	Snapshot	Connection	Advanced	Verify Backup				
Direct Co	py Options								_
The TCP c	onnection will be es	tablished from	the local compute	r to 172.17.1.20.					
Revers	e direct connection	establishment	(may be needed in	case of NAT).					
Compr	ess data during tra	nsfer.							
	ata compressed at	destination. Fi	le Level Restore wil	ll NOT be availa	ble.				
Direct cop network ba Currently, involved E and ensure	r allows to directly tr indwidth and the spi direct copy and com Xi server (without A directly transfer file	ansfer files bett eed of the invol pression cannol igent option en s between the s	ween the source and ved disk systems at be used with ESXi s abled), all data will b source and the targe	the target serv the source and t servers (without be relayed throu et server, we sug	r. The achievable arget server. Agent option enab gh VM Explorer. To gest you to enable	ransfer speed is o ed) due to their ra maximize the spe the Agent option	nly limited by the estricted interface and of backups or on all your ESXi :	e available e. In case of an n ESXi servers servers.	
Direct copy network ba Currently, v involved E and ensure Encryptic	y allows to directly tr indwidth and the sp direct copy and comp SXi server (without A directly transfer file	ansfer files bet eed of the invol pression cannot lgent option en s between the :	ween the source and ved disk systems at be used with ESXi s abled), all data will b source and the targe	the target serv the source and t servers (without be relayed throu et server, we sug	r. The achievable arget server. Agent option enab gh VM Explorer. To gest you to enable	ransfer speed is o ed) due to their ra maximize the spe the Agent option	nly limited by th stricted interfac ed of backups or on all your ESXi :	e available xe. In case of an n ESXi servers servers.	
Direct copy network bi Currently, i involved E and ensure Encrypti	y allows to directly tr indwidth and the spi direct copy and comp SXi server (without <i>I</i> i directly transfer file m	ansfer files beth eed of the invol pression cannot lygent option en s between the : ; the specified	ween the source and ved disk systems at be used with ESXi s abled), all data will b source and the targe password.	I the target serv the source and t servers (without be relayed throu tt server, we sug	rr. The achievable arget server. Agent option enab yh VM Explorer. To gest you to enable	ransfer speed is o ed) due to their rr maximize the spe the Agent option (nly limited by th stricted interfac ed of backups or on all your ESXI :	e available e. In case of an n ESXi servers servers.	
Direct copy network by Currently, involved E and ensure Encrypti Z Encrypti Password	y allows to directly tr andwidth and the spi direct copy and comy SX server (without A directly transfer file an r virtual disks using	ansfer files bet eed of the invol pression cannot ugent option en s between the : ; the specified	ween the source and ved disk systems at be used with ESXI a abled), all data will b source and the targe password.	I the target serv the source and I servers (without be relayed throu et server, we sug Warning	rr. The achievable arget server. Agent option enable th VM Explorer. To gest you to enable	ransfer speed is o ed) due to their ro maximize the spe the Agent option	nly limited by the stricted interface of backups or on all your ESXi is and not	e available e. In case of an n ESXi servers servers.	
Direct copy network bi Currently, i involved E and ensure Encrypti Encrypti Password	y allows to directly tr andwidth and the spi direct copy and comy SX server (without <i>I</i> directly transfer file on rt virtual disks using Show passwor	ansfer files bet eed of the invol pression cannot ugent option en s between the : g the specified	ween the source and ved disk systems at be used with ESXI i abled), all data will b source and the targe password.	I the target serv the source and t servers (without be relayed throu et server, we sug Warning retrieval place in	r. The achievable arget server. Agent option enable by VM Explorer. To gest you to enable the password will le, please be sure order to be able to	ransfer speed is o ed) due to their rr maximize the spe the Agent option - be stored encrypt to remember it or decrypt the backu	nly limited by the stricted interface ed of backups or n all your ESXI : d and not write it down in a p.	e available xe. In case of an n ESXi servers servers.	
Direct copy network bi Currently, , involved E and ensure Encryptic Password	y allows to directly tr andwidth and the spi direct copy and comy SXI server (without <i>I</i> directly transfer file on rt virtual disks using Show passwor	ansfer files bet eed of the invol vression cannol ygent option en s between the : g the specified d	ween the source and ved disk systems at be used with ESX(i abled), all data will b source and the targe password.	I the target serv the source and t servers (without be relayed throu et server, we sug warning retrieval place in	rr. The achievable arget server. Agent option enable by VM Explorer. To gest you to enable the password will le, please be sure order to be able to	ed) due to their ri maximize the spe the Agent option - be stored encryph o remember it o ri decrypt the backu	hly limited by the stricted interface ed of backups or on all your ESXI : ed and not write it down in a p.	e available ce. In case of an n ESXi servers servers.	

Figure 70: Backup encryption

CAUTION The password will be stored, encrypted and not retrievable.

- Encryption	1
Encrypt	virtual disks using the specified password.
Password	•••••
	Change Password

Figure 71: Password encryption

Once the backup task is saved and you want to change the password, you will need to enter the one previously inserted.

Click Change Password. Once the old password is confirmed, you will be able to input the new one.



Figure 72: Change encryption password

Chapter 11: Replication

To replicate a single virtual machine:

- 1. Click Single VM in Replication.
- 2. Click Addand the Add Task Element appears as shown in the "Figure 56: Add Task Element" on page 54.

Single VM

Click Single VM, and the following page will appear.

General tab

Virtual Machine	e Replication	×
General	Files & Disks Snapshot Connection Replication Advanced Verify Replication	
Source -	ESY.Furona Y VM WindowsSaruer201382 Y	
Target -		
Host	Same Host as VM 🔹 🕑 On error execute next task	
Directory	[datastore] (VM) Choose Parent	
	WindowsServer2012R2 (replicated)	
	If the target directory exists, archive existing files in the target directory. If the target directory exists, overwrite existing files in the target directory.	
	 Incremental Replication, target folder must be empty or must contain specific VM Incremental Replication 	
Nbr. of repl	All T	
The virtual r	machine WindowsServer2012R2 on the ESX-Europe will be copied into the directory [datastore] {VM}. No TCP Connection needed.	
	ок	Cancel

Figure 73: Replication - General

- 1. Select the Source Host and the VM you want to replicate.
- 2. On the Target Host dropdown menu, you can choose the target location. This can be the same host as VM or another host which has been previously added to your Datacenter view.
- 3. Choose the target directory, the name which will be used to register the replicated VM, and how you want to handle the target directory.

NOTE If you click overwrite existing files in the target directory, the previous replication will be overwritten only after the successful execution of the new replication. This is done to always keep a working replication; therefore, you need enough free space to temporarily hold both replications To delete the previous replication before the replication procedure starts by checking the **Delete** existing Replication in the target directory before the Replication starts option.

CAUTION If the replication fails, there will be no replications available.

The incremental replication option is only available by using Virtual Disk Development Kit (VDDK). The VDDK library is available only for a licensed ESX/ESXi host.

If in the host VD Service is not activated, the following dialog will be shown which allows you to initialize VDDK for the ESX server ("Figure 75: Replication - VD Service dialog" below). Click ESX Server Settings and the How to Enable Virtual Disk Service page will appear. This dialog allows user to download VDDK and/or initialize VDDK for the host ("Figure 74: Replication - Enable VD Service" below).

How to Enable Virtual Disk Service (VD Service)		×
Simply follow these 4 easy steps to enable VD Service		
Step 1: Download VDDK 6.0.2 from: http://www.vmware.com/download/download.do?downloadGroup=VDDK60U	J2	
Step 2:		
Select VDDK zip file:	Browse	
Step 3: Press "Initialize VD Service" in order to link VM Explorer with VDDK lib		
Initialize VD Service		
VM Explorer status: VDDK successfully initialized. You can now use VD Service to backup licensed ESXi/E	5X server.	
Step 4: Enable "Use VD Service" on backup or replication task	Clos	se

Figure 74: Replication - Enable VD Service



Figure 75: Replication - VD Service dialog

Files and disks

The configuration of Files and disks does not vary from the backup task configuration. Refer to the previous section, "Backup" on page 54.

Snapshot

The configuration of Snapshot does not vary from the backup task configuration. Refer to the previous section, "Backup" on page 54.

Connection Tab

Direct Copy Options

This section explains how to configure the direct copy options. Direct copy allows you to directly transfer files between the source and the target server. You can configure to reverse the TCP connection direction (default is from the source server to the target server). This option may be enabled in case of NAT (Network Address Translation).

The option to compress data during transfer is available in this section. The Keep the data compressed at destination option cannot be enabled for the replications because at the end of the replication process the VM will be registered on the target server.

The direct copy options are not available, if the source or target server is an ESXi and the VM Explorer Agent is not enabled.

Encryption

The encryption option is not available for any kind of replication.

Replication Tab

irtual Machine	Replication							×
General	Files & Disks	Snapshot	Connection	Replication	Advanced	Verify Replication]	
Replicati	on Options							
🕑 if the r	eplicated VM is tur	rned on, shutdo	wn the VM and re	place it.				
Incremen	tal Replication Opti	ons						
Number o	f Restore Points to	be kept 2		Ŧ				
This option	n permits to store Re	estore Points on	the replicated VM	You can select ho	w many Restore F	Points to be kept. Each t	ime, if necessary, the	oldest
This option	n will be used only o	n incremental re	plication.					
							OK	Cancel
							OK	Cancel

Figure 76: Replication - Replication tab

Under the **Replication** tab, you can shut down and replace the replicated VM, if it was manually powered on. For incremental replication, the **Number of Restore Points to be kept** is implemented.

VM Explorer will keep the Restore Points of previous incremental replications executed on the VM up to the number selected. This will permit the user to revert to one of these Restore Points, if needed, in the **Replication Explorer** Tab while keeping the previous version replicated.

Advanced Tab

For the advanced options, refer to the previous section, "Backup" on page 54.

Network Adapters tab (Hyper-V Host only)

Seneral Files & Disks	VSS Snapshot	Connection	Replication	Advanced	Network Adapters	Verify Replica	tion
umber of Network Adapters	found:1						
Network Adapters							
Adapter name			Connect	0			
Network Adapter			Not connected 🔻				
Dynamic MAC Address							
00-15-5D-01-08-67			Resto	re MAC Addres	5		

Figure 77: Replication - Network adapters

If the VM is replicated on a Hyper-V server, the **Network Adapters** tab will appear. In this tab, you can configure which virtual network the network adapters and the legacy network adapter should be link to. VM Explorer will automatically list all the network adapters that were found on the original VM. You can individually choose if you want to connect them as well as decide which Hyper-V network adapters they will connect to.

Verify replication tab

In this section, you can enable File Consistency Check for the target replicated VM. Refer to the previous section, "Backup" on page 54.
tual Machin	ne Replication							
General	Files & Disks	VSS Snapshot	Connection	Replication	Advanced	Network Adapters	Verify Rep	lication
File Syst	tem Consistency							
Check	that the followin	g file exists in the targ	get VM virtual dis	k				
Virt	ual Disk	[scsi0:0] Windows	Server 2012 R2.vh	ıdx				
Volu	ume ID	VLG{49751157-5e27-4e	01-adb5-2a36286c	ad7b}				
File	path	\System Volume Infe	ormation\tracking	g.log		Please Selec	:t	
Che	ck that the file ha	s been modified withi	n the last 12	hours.				
							OK	Cancel

Figure 78: Replication - Verify replication

Multiple VMs

If you have to replicate more VMs with the same options, click Multi VM in the frame-box. Click Add and the Add Task Element page appears.

irtual Machine I	Replication					
General Files	s & Disks Snapshot	Connection	Replication	Advanced		
Source -						
Host	Please select		•	Select VMs		
— Target —						
Host	Same Host as VM	М	*	On error execute next	task	
Directory					Choose	e Parent
	Register using the	following displ	ay name:			
	{VM} (replicated))				
	If the target dir	ectory exists, a	archive existing	files in the target directory.		
	If the target dir	ectory exists, o	overwrite exist	ng files in the target directory.		
	Incremental Re	plication, targe	t folder must k	e empty or must contain specifi	c VM Incremental Re	plication
Nbr. of repl	ications to keep	All	•			
Nothing will	be done. Please fully sp	pecify the target	t location.			

Click Multiple VM and the Virtual Machine Replication page appears.

Figure 79: Muilti Replication - General

The difference with the single VM replication dialog is that you can select more than one Virtual Machine. **Select VMs** will prompt a page that displays all the available Virtual machines. You can select the virtual machines to replicate (multiple selection is available). The order of the selected VMs to replicate can be changed by clicking **Up** or **Down** and corresponds to the order in which the replications are done.

Select Virtual Machines			
Host ESX-Europe Available Virtual Machines		Selected Virtual Machines	
WindowsServer2012R2 WindowsSRV2003R2(64) WindowsXP(32)	Add >	WindowsServer2012R2_2 vSphere Management Assistant (vMA)	
	Add All >> < Remove << Remove All		Up Down
	-		-

Figure 80: Multi Replication - Select multi VMs

In the replication dialog, the directory field and the display name used to register the replicated VM must contain the {VM} tag.

You cannot select files and disks to replicate for every single VM in the Files and Disks tab. The other configurations are the same as described in the previous section, "Replication explorer" below.

Replication explorer

For an overview of any replications performed with VM Explorer, click the **Replication Explorer** view. You can filter the replication's entries using the filters on the right side.

Every replicated VM can be powered on or off from the Replication Explorer:

- 1. Right-click on the registered VM.
- 2. Select Power On or Power Off.

VM Explorer DATACENTER	TASKS - MANAGEMENT -	STORAGE SYSTEMS +	SETTINGS A	ABOUT	🙆 Tasks 💰	💄 admin 💡	Logout
Replication Explorer							
Replication Explore Date Selection. Range Last Month From 2102.2016 To 2103.2016 Coup by	Backup status: Windows5ever 2012R2- 21032016 14:0512 (V	From: 210332016 InndowsServer2012R2 (replica	Te:			Expand /	UI I Collapse All
Hewlett Packard Enterprise		© Cop	vright 2016 Hewlet	tt Packard Enterprise Development LF	3		

Figure 81: Replication Explorer

Chapter 12: Copy a backup

You can schedule a copy of one or more existing backups to a different target destination by adding a new **Copy Backup Task** element.

- 1. Click Add and the Add Task Element window will appear as shown in the "Figure 56: Add Task Element" on page 54.
- 2. Select the type of copy backup you want to perform (Copy Backup To Server or Copy Backup To Tape Media).
- 3. After you make your selection, click Add Copy Backup Task.

Backups to copy

Here you can select the backup element(s) you want to copy from the list of currently configured backups. A tree representation of the configured scheduled tasks and their corresponding backup elements is displayed. You can select an entire scheduled task (all included backup elements will be copied) or individual (backup/multiple VMs) backup elements.

When the scheduled Copy Backup Task runs, each single VM backup element is processed individually. For each backup element, the most recent execution will be considered. If this latest version has not been already copied to the copy target (see next step), the file transfer will start. Otherwise, the current backup element will be skipped returning success.

Add Copy Backup Task	×
Backups to copy Target options Summary	Please select one or more Backups from the list below, showing the configured Scheduled Tasks and their corresponding Backup elements; the most recent version of each selected Backup will be copied
	Collapse All Expand All Deselect all
	Previous Next Finish Cancel

Figure 82: Copy Backup - Backups to copy

Target options (copy backup to a server only)

You can select the target host and the path for the backup copies. The final destination path on the target server is composed by the specified target base path followed by the selected append path option. Based on your preference, the backup copies will result grouped by the VM name, the by date/time of copy or vice versa.

The {VM} and {DATETIME} placeholders of the appendd path will be replaced as follows:

- 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. The format shown will be YYYY-MM-DD-hhmmss.

You can also specify how many full backup copies you want to keep stored on the target server once the copy task is complete. If you choose All (the default option), all previous backup copies will be untouched. If you select a specific number N, only the last N full backup copies will be kept. Older copies will be deleted.

Important notes for incremental backup copies:

- Copies of incremental backups are limited to a local machine as a target server.
- 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.

	Please select the destina	tion server for the backup copies		
larget options	Target Server	Local Computer		\oslash
Summary	Please select the destina	tion path where backup copies will be	e saved	
	Target Location			Browse
	Append path	/{VM}/{DATETIME} /// /// //	/{DATETIME}/{VM}	
	The append path will be {VM} will be replaced {DATETIME} will be	added to the Target Location and bar d by the display name of the backed u replaced by the starting date/time of i	ckup placeholders replaced as fol p virtual machine. the copy task, e.g., 2015-01-30-12	lows: 5901
	(Please note: for increme the original backup date	ntal backup copies, only {VM} will be time folder structure will be kept in th	appended, current date and time he copy)	will be ignored an
	Please choose how many	r copies for each backup will be kept s	tored on the target server	
	Please choose how many	y copies for each backup will be kept s es to keep 3 (ol	tored on the target server der copies will be deleted)	

Figure 83: Copy Backup - Target options (to Server)

Target options (copy a back to a tape media)

You can select the target tape media pool from your tape infrastructure for the backup copies. You also can select the target tape library then a corresponding target custom media pool you created. When you choose a media pool, you decide to copy the backups into a media included in it, using the retention rules you defined when the media pool was created.

All tape media available space is used to store backup data, and large backups are automatically split into multiple tape media when necessary. You can also choose to enable hardware data compression if your tape device supports it.

Backups to copy	Disconception the target 3	and Library and Tane Media Deal for the backup conic	
		ape Library and Tape Hedia Poor for the backup copie	-
Target options	Library	Tape Library One	0
Summary	Target Media Pool	MyMediaPool	\odot
	✓ Use hardware compression Configure the Tape D Do not enable this op	ession if available vive to perform hardware compression when writing th tion when copving already compressed backups.	e backup data to the Tape Media.

Figure 84: Copy Backup - Target options (Tape Media)

Summary

You can see a summary of the selected copy backup options before saving the changes. Click Save.



Figure 85: 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.

lit Copy Backup Task		×
Backups to copy	Please select one or more Backups from the list below, showing the configured Scheduled Tasks and their	
Target options	corresponding Backup elements; the most recent version of each selected Backup will be copied	
Summary	Copy of Copy of 60GB Scheduled task not found. Has it been removed?	
	Scheduled lask hor found, has it been removed :	
	Collapse All Expand All Deselect all	

Figure 86: Copy Backup - Target options (removed scheduled task)

Chapter 13: E-mail report

VM Explorer has an option to send email reports about the backups that have been made. To add the email report, you have two options. You can send it directly after a task has run or add a scheduled task with the only intent to send the report.

Add a new scheduled task to send a report:

- 1. Go to the Scheduler tab.
- 2. On the Scheduled Task list, right-click and select Add Scheduled Task.
- 3. Enter Email Report as a task name and set the time you want to receive the report.
- 4. Click OK.
- 5. On the Take Elements list, right-click and select Add e-mail report.
- 6. Configure the SMTP hostname.
- 7. Click Test to test your settings.
- 8. Click OK when you are complete.

Add a report to an existing task:

- 1. Open an existing scheduled task.
- 2. Right-click Task Elements and select Add E-mail Report.
- 3. Configure the SMTP hostname.
- 4. Test your settings. Click Test.
- 5. Click **OK** when you are complete.

E-Mail		Full Name (option	al)		
Receiver(s)					
E-Mails					
	(separate multiple with	semicolon ";")			
Subject	VMX Report {DATE1	TIME} ({STATUS})			
	You can use the followi	ng placeholders in the su	oject line: {DAT	ETIME}, {STATUS}	
Outgoing SMTP Ser Hostname or IP Use SMTP auther Username	ver	Port	Use	SSL	
Outgoing SMTP Ser Hostname or IP Use SMTP auther Username Password	ver	Port rts it:	Use	SSL	
Outgoing SMTP Ser Hostname or IP Use SMTP auther Username Password Report Type	ver	Port	Use	:SSL	
Outgoing SMTP Ser Hostname or IP Use SMTP auther Username Password Report Type Daily Report	ver	Port	Use ority Mail	I SSL	
Outgoing SMTP Ser Hostname or IP Use SMTP auther Username Password Report Type Daily Report	ver	Port	erity Mail	Normal priority mail	,

Figure 87: E-Mail report

If you click **Load default settings**, you can fill the form with the e-mail default values. If you have not configured them, you will be asked if you would like to be redirected to the settings panel.

Report type

- Current task report: Sends a report of the scheduled task in which the report has been added. This report is usually implemented at the end of a scheduled task with multiple tasks, so that the user is informed only on a specific scheduled task.
- Daily report: Sends a report with the last 24 hours of activities, including jobs still running, jobs terminated in the last 24 hours and their results.
 This kind of report is usually implemented in a daily scheduled task of its own, so that the user is updated an all activities executed every day.
- Weekly report: A daily report that will only be created report when integrating the jobs of the last week, not 24 hours.
- Monthly report: A daily report that will only be created when integrating the jobs of the last month, not 24 hours.
- Custom time report: A daily report that only you can specify the time frame when any job is executed.

CAUTION If an automated backup test has been configured to take screen shots of the VM console, the report will contain all the images that have been select to be sent in the report. Also, the size of the report may reach maximum capacity of the mail server.

Priority mail

This option permits you to set the priority to the mail based on the worst case scenario. If all jobs included in the report are success the priority will be set depending on the **On Success** option. If at least one job has a warning, the priority will be set to the **On Warning** option. If a job fail or an error occurred, the priority will be set to the **On Error** option.

Chapter 14: Custom script

To add a custom script to a scheduled task:

- 1. Click Custom Script.
- 2. Click Add.
- 3. Click Other in the Add Task Element box, as shown in "Figure 56: Add Task Element" on page 54.

The dialog shown below will appear. You can now select the script to run in the scheduled task. Select a bator ".exe" file and you can configure arguments, timeout (the time after which the task fails if the script execution hasn't finished) and the flag which indicates if the task has to fail or continue when the script fails.

You also can select an account (already present in your PC) that will launch the script file.

Click **Test** to verify the correct configuration script before saving the task.

Script täsk setup				×
Script				
Script file	E:\S	cripts\customScript.bat	Brows	e
Arguments	/d /r	1		
Script timeout after	30	seconds		
On error execute next	t task			
Account parameters Use Account Paramet	ers			
Username				
Password				
Domain				
Test		o	K Ca	ncel

Figure 88: Script task setup

Chapter 15: Restore a VM

To restore any backup, click the **Backup Explorer** view. The **Backup Explorer** view shows all the backups performed (according to the selected filters).

Backup status: OK	From: HVClusterNode1	To: XXX.XX.XX
 WindowsSen Windows10 - Windows Sen 18.03.2010 	er2012R2_CORE - 18.03.2016 21.03.2016 rer 2012 R2 - 18.03.2016 13.49:38 (To: Bern)	

Figure 89: Restoring - Backup Explorer

To restore a backup:

- 1. Click Restore a backup from the Available Restores menu.
- 2. Click Restore.

To restore any backup using the Free Edition of VM Explorer 6.0 or to restore any backup not listed in the **Backup Explorer**:

- 1. Click the File Explorer view.
- 2. Navigate to the folder where you have stored the backup. In this folder, you will find the vmxbackup.xml file. This file contains all information about your original virtual machine.
- 3. Right-click the vmxbackup.xml file.
- 4. Click Restore Backup.



Figure 90: File Explorer

The Virtual Machine Restore dialog box will open.

General tab

Choose the target host where you want to restore the backup. Then, select the directory and how you want to restore the backup.

Host	ESX-Europe		Backup date	Version: 1 - 16.03.2010	5 08:49 *
Directory	[datastore] ESXi_6.1-Restored				Choose Parent
	et directory must not exist it will h	e created.			
The targe	er uneerory must not exist, it will b				
 The targ If the tar 	get directory exists, then it must b	e empty.			
The targ If the tar	get directory exists, then it must b	e empty.			
The targ If the tar	get directory exists, then it must b	e empty.			
The targ If the tar	get directory exists, then it must b	e empty.			
 The targ If the tar Registration 	get directory exists, then it must b	e empty.			
 The targ If the tar Registration Register 	n Settingsusing the following display name:	e empty. ESXi_6.1-Rest	ored		
 The targ If the tar Registration Register Power or 	n Settings	e empty. ESXi_6.1-Rest	ored		
 The targ If the tar Registration Register Power or 	n Settings	e empty.	ored		

Figure 91: Restore - General

Register using the following display name allows you to directly register the virtual machine to your inventory. If you skip this option, you can always register any VM to your datastore by going to the File **Explorer**. Click **Register VM** and right-click on the VM configuration file, *.vmx for ESX VMs or *.xml for Hyper-V VMs.

The last option allows you to automatically power on the VM after registration.

Files and disks tab

In the Files and disks tab, you can choose which file/disk that needs to be included in the restore. In the Thin Provisioning Support section, you can choose if the disks have to be converted as thin after the restore process. This option is only available for the following conditions:

- if the target host is ESX/ESXi.
- if VM Explorer Agent is enabled on the target server.
- if no discs with the same name are present.

Connection tab

In this tab ("Figure 93: Restore - Connection" on the next page) the user can configure the direct copy options.

	ral Files & Disks Conne	ction	
F -1			
FII	Descriptor File	Sizo	Ocisional Data
•	ESXi 61vmx	2777	[datastore] ESXi 61
-	ESXi 6.1vmsd	43	[datastore] ESXi 61
1	ESXi 6.1.vmxf	374	[datastore] ESXi 6.1
1	ESXi_6.1.nvram	8684	[datastore] ESXi_6.1
	ESXi_6.1.vmdk.delta.config	849	E:\Backups\20160316_inc1\ESXi_6:1\backup-version-2016-03-16-084648\2016-0
1	scsi0:0 disk (ESXi_6.1.vmdk.currentvr	1 1.69 MB	[datastore] ESXi_6.1
Th	in Provisioning Support		

Figure 92: Restore - Files & Disks

tual Machin	e Restore					
General	Files & Disks	Connection				
Direct C	opy Options					
The TCP	connection will be	established from 1	he local computer	to Bern.		
Rever	se direct connectio	n establishment (may be needed in	case of NAT).		
Comp	ress data during tr	anster.				

Figure 93: Restore - Connection

Network adapters tab (Hyper-V Host only)

If the VM has to be restored on a Hyper-V server, you can choose which virtual network the network adapters and the legacy network adapter will be linked to. All the saved network adapters can be restored in the new VM in the **Network Adapters** tab.

Click Connect to: to select which network will connect to the network adapter.

Restore MAC Address automatically sets the old MAC address on the adapter.

General	Connection	Network Adapters		
umber of	Network Adapter	found:1		
Networ	k Adapters			
Adapter	name		Connect to	
Networ	k Adapter		Not connected	٣
Static MA	AC Address			
00-50-5	56-A1-BE-39		Restore MAC Address	

Figure 94: Restore - Network Adapters

Click OK to start restoring the VM. After your VM has been restored, VM Explorer will close the dialog box.

Restore an incremental backup

The restore of incremental backups is identical to normal restores. The only difference is that you can choose up to which date you want to restore. This gives you the option to choose a specific restore point. Start the restore as described in the previous section, "Restore a VM" on page 83. This will make VM Explorer restore the initial backup including all differential files up to the specified date.

General	Files & Disks	Connection				
Target —						
Host	ESX-Europe		•	Backup date	Version: 1 - 21.03.2016	5 14:49 ¥
Directory	[datastore] V	VindowsServer-Res	stored			Choose Parent
The targ If the targ	get directory mus rget directory exi	at not exist, it will b	e created. e empty.			
The tars If the tars Registration	get directory mus rget directory exi n Settings	it not exist, it will b	e created. e empty.			
 The targ If the ta Registratic Registratic Registratic Power o 	get directory mus rget directory exi on Settings	it not exist, it will b ists, then it must be ing display name: ration	e created. e empty. WindowsSer	ver-Restored		
The tars If the ta Registratic Registratic Power o	get directory mus rget directory exi on Settings r using the follow in VM after regist	rt not exist, it will b ists, then it must br ing display name: ration	e created. e empty. WindowsSer	ver-Restored		
 The targ If the ta Registratic Registratic Power o 	get directory mus rget directory exi on Settings r using the follow in VM after regist	rt not exist, it will b	e created. e empty. WindowsSer	ver-Restored		

Figure 95: Restore Incremental Backup - General

Restore an encrypted backup

As explained above, simply right-click the encrypted backup, which will be displayed by a yellow padlock, and click **Restore**.

You will be prompted to enter the password used to encrypt the backup in order to proceed with the restore

Backup status: OK	From: Bern
▼ 🛄 Windows10 - 21.	03.2016
21.03.2016 15	:07:37 (To: Local Machine)
WindowsServer	2012R2_CORE - 18.03.2016
Windows Server	2012 R2 - 18.03.2016

Figure 96: Restore encrypted backup

Once the password has been supplied correctly, the standard restore dialog will be displayed as normally.

As for the restore, when using Instant VM Recovery and File Level Restore, you will be prompted to insert the password in order to proceed with the operation.

Chapter 16: Instant VM Recovery

VM Explorer can begin a backup directly on a selected server, without restoring or copying any file. This feature is provided by the Instant VM Recovery System.



Figure 97: Instant VM Recovery from the Backup Explorer

Instant VM Recovery allows you to register a VM to your selected server. A NFS server will mount a temporary datastore on your host. The actual disk will be kept in your local disk.

Instant VM	Recovery		×
Target s	settings lect the target Host:		
Host	ESX-Europe	¥	
🕑 Detac	ch VM's network adapters		
Please sp	ecify the display name of the \	/M	
VMExplo	orer_IVMR_ WindowsServer		
Note that	t the prefix "VMExplorer_IVMR	" will be used in the VM display name	
			Start Cancel

Figure 98: Instant VM Recovery target settings

No modification will be saved on the backup, so that any test made during your Instant VM Recovery will not conflict with your backup. You can also execute the procedure detaching any network adapters so that no conflict will arises with the original VM (default option).

While the Instant VM is running, you can perform a vMotion operation to migrate the VM to an existing datastore, making it a real VM. This mitigates the dependency will be no more deon the VM Explorer Instant VM Recovery System.

The Instant VM Recovery is only available for backups and VMware ESX/ESXi virtual machines saved locally on a supported Cloud storage.

Chapter 17: File Explorer

File Explorer allows you to view and download files from your ESX, Hyper-V, Linux or FreeBSD hosts. You can choose the server which you want to browse. Select the server from the **Select** drop-down menu.

File Explorer							
			Nar	me	Date Modified	Attr	Size
Server Local Computer *		ide0_0			05.08.2015 14:55	d	<dir></dir>
		C43EC3B	F-98BA-4D11-A5DF-A65E0085	1841.xml	05.08.2015 14:54		39.04 kB
Local Computer		C43ec3bf	-98ba-4d11-a5df-a65e0085184	1.xml.vss	05.08.2015 14:55		39.04 kB
▼ E \		😽 vmxback	un xml	1	05.08.2015 14:55		1.43 kB
Adobe			GZip				
backup			View as Text				
Google Drive			Instant VM Recovery				
 Hyper-V_Backup 			Restore Backup				
▼ /ubuntu_1414			Delete Backup				
2015-08-05-145438			Developed				
ide0_0			Download				
2015-08-05-150249			Refresh				
temp				-			

Figure 99: File Explorer

You can also register virtual machines to your ESX or Hyper-V hosts by right-clicking the VM configuration file *.vmx for ESX VMs or *.xml for Hyper-V VMs and click **Register VM**.

File Explorer also allows you to restore backups. Right-click the vmxbackup.xml file and select **Restore** Backup.

File level restore for single file

File Explorer allows you to browse a disk image file and recover single files. Select a disk image file and double click to navigate to its content and view all the files and directories. To recover a single file or a whole directory:

- 1. Right-click on the file.
- 2. Click Copy.
- 3. Choose the destination.

NOTE You can also drag and drop the files to copy the files or directory to a destination.

VM Explorer can browse all virtual drives of non-compressed backup.

The following file systems on disk image files are supported:

- NTFS
- FAT
- EXT

NOTE EXT4 is an incompatible feature; 64bit is not supported.

Windows Dynamic Disks

NOTE Simple, spanned, striped, and mirrored volumes.

Linux LVM - Logical Volume Manager

NOTE Linear, striped, and mirrored volumes.

If the EXT partition in the selected image disk is not 100% consistent, you will receive a warning message, but you can continue navigating the image disk. The warning message suggests enabling the quiesce option for the backups to generate consistent disk images.

Disk imag	e warning
	An ext partition in the selected image disk is not 100% consistent and it may not be browsable. Please enable the quiesce option for the backup to generate consistent disk images.
	ок

Figure 100: Disk image warning

Chapter 18: Task History

Task History						
Statistics		Name	Start	End	Duration	Result
Overview of scheduled tasks result.		myTapeSched	Monday, 9. November 2015 19:00:01	Monday, 9. November 2015 19:00:40	1 Minute	Success
1943 196	=	myTapeSched	Monday, 9. November 2015 18:00:00	Monday, 9. November 2015 18:00:41	1 Minute	Success
Success Failed	-	myTapeSched	Monday, 9. November 2015 17:00:00	Monday, 9. November 2015 17:00:42	1 Minute	Success
140 390	=	myTapeSched	Monday, 9. November 2015 16:53:08	Monday, 9. November 2015 16:53:54	1 Minute	Success
Warning Aborted	-	myTapeSched	Monday, 9. November 2015 16:37:35	Monday, 9. November 2015 16:38:17	1 Minute	Success
F Filter		myTapeSched	Monday, 9. November 2015 09:25:04	Monday, 9. November 2015 09:25:45	1 Minute	Success
By Date All T	=	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
By Result All results •		myTapeSched	Friday, 6. November 2015 16:49:34	Friday, 6. November 2015 16:49:35	1 Minute	Failed
	=	Monthly Backup of win2012R2	Tuesday, 27. October 2015 13:16:38	Tuesday, 27. October 2015 13:41:54	26 Minutes	Success
Refresh Delete History	-	Monthly Backup of win2012R2	Tuesday, 27. October 2015 10:38:25	Tuesday, 27. October 2015 10:52:32	15 Minutes	Warning
Result Legend		backupSANS w/o mem	Tuesday, 27. October 2015 09:00:05	Tuesday, 27. October 2015 09:06:03	6 Minutes	Aborted
Running	=	backupSANS w/o mem	Tuesday, 27. October 2015 08:42:41	Tuesday, 27. October 2015 08:45:33	3 Minutes	Aborted
Success		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
Failed		backupSANS w/o mem	Friday, 23. October 2015 12:00:01	Friday, 23. October 2015 12:01:16	2 Minutes	Failed
Aborted	=	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
	=	backupSAN5 w/o mem	Friday, 23. October 2015 11:20:42	Friday, 23. October 2015 11:23:58	4 Minutes	Aborted
	-	backupSANS w/o mem	Friday, 23. October 2015 11:13:19	Friday, 23. October 2015 11:17:14	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
Hewlett Packard						

Figure 101: Task History page

Task History gives an overview of the recent scheduled tasks results, showing the name, the start and the end time, the duration of the task execution and the result.

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

The following screenshot shows the Scheduled Task Detail dialog with the details of the task.

				Defrech
5GB (Success)				Refresh
VM Explorer Version: 6.1.001.0				
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 fasks processed: 9/9				
Dataile:				
The task has finished successfully				
,				
Eller			Test Details	
Filter			Task Details	
🖌 Filter 🖉 Success 🖉 Warning	✓ Failed		Task Details Start time: 21.03.2016 13:29:28	
Filter Success Warning Abort Disabled	 Failed Waiting 		Task Details Start time: 21.03.2016 13:29:28 End time: 21.03.2016 13:31:55	
Filter Success Abort Disabled	✔ Failed✔ Waiting		Task Details Start time: 2103.2016 13:29:28 End time: 21.03.2016 13:31:55 Duration: 3 Minutes	
Filter Success Ø Warning Abort Ø Disabled Running	 ✔ Failed ✔ Waiting 		Task Details Start time: 2103.2016 13:29:28 End time: 2103.2016 13:31:55 Duration: 3 Minutes	
Filter Success Karning Abort Running Running	✔ Failed✔ Waiting		Task Details Start time: 2103 2016 13:29:28 End time: 2103 2016 13:31:55 Duration: 3 Minutes Total Transferred size: 512001 MB	
Filter Success Warning Abort Running Task	✓ Failed ✓ Waiting Result	Duration	Task Details Start time: 2103.2016 13:29:28 End time: 2103.2016 13:31:55 Duration: 3 Minutes Total Transferred size: 5120.01 MB Transfer Rate: 36.31 MB/s	
Filter Success Kurning Task St Backup (Ubuntu_10:0_Desktop)	Failed Kesult Disabled	Duration	Task Details Start time: 2103.2016 13:29:28 End time: 2103.2016 13:31:55 Duration: 3 Minutes Total Transferred size: 5120.01 MB Transfer Rate: 36.31 MB/a Encode Secure Level Mark Advisor	
Filter Success Warning Abort Kunning Task SX Backup (Ubuntu, 1010_Deskt.op) Topy of Localhost Backup (Ubuntu, 1010_Deskt.	Failed Kesult Disabled	Duration	Task Details Start time: 2103.2016 13:29:28 End time: 2103.2016 13:31:55 Duration: 3 Minutes Total Transferred size: 5120:01 MB Transfer Rate: 36.31 MB/s Source Server: Local Machine Transfer Machine	v66 bared) (Tane
Filter Success Warning Abort Filte Filter Fi	Failed Waiting Result Disabled Disabled Disabled	Duration	Task Details Start time: 2103.2016 13:29:28 End time: 2103.2016 13:31:55 Duration: 3 Minutes Total Transferred size. 512:001 MB Transfer Rate: 36.31 MB/s Source Server: Local Machine Target Server: Hewlett Packard MSL G3 Series library (Library)	x64 based) (Tape
Filter Succes Warning Abort Stacker St	Failed Kathing Result Disabled Disabled Disabled Disabled	Duration	Task Details Start time: 2103.2016 13:29:28 End time: 2103.2016 13:31:55 Duration: 3 Minutes Total Transferred size: 5120.01 MB Transfer Rate: 36.31 MB/a Source Server: Local Machine Target Server: Hewlett Packard MSL G3 Series library (Library) Target Location: mwm (Tage Media Pool) - Media cart	xô4 based) (Tape 04L4
Filter Success Warning Abort Disabled Running Task SX Backup (Ubuntu_1010_Deskt. Copy of Localhost Backup (Ubuntu_1010_Deskt.	Failed Kesult Insubled Disabled Disabled Success	Duration 3 Minutes	Task Details Start time: 2103.2016 13:29:28 End time: 2103.2016 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 (Library) Target Location: mymy (Tape Media Pool) - Media: cart	xó4 based) (Tape 04L4
Filter Success Kabort Abort Task Task Sty Backup (Ubuntu, 1010, Desktt., Sory of Localhest Backup (Ubuntu, 1010, Deskt., Cory of Localhest Backup (Ubuntu, 1010, Deskt.,	Failed Waiting Waiting Disabled Disabled Disabled Success Success	Duration 3 Minutes 3 Minutes	Task Details Start time: 2103 2016 13:29:28 End time: 2103 2016 13:31:55 Duration: 3 Minutes Total Transfered size: 512001 MB Transfer Rat: 30.31 MB/s Source Server: Local Machine Target Server: Hewlett Packard MSL G3 Series library (Library) Target Location: mymy (Tape Media Pool) - Media: cart Details:	xó4 based) (Tape 04L4

Figure 102: Scheduled Task Details

The HTML Report shows the current task result in a browser, that is HTML formatted and can be printed.

Chapter 19: Instant Recovery Service

The Instant Recovery Service view gives an overview of the Instant VM Recovery and Instant Backup Test running. It shows 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.



Figure 103: Instant Recovery Service page

There are two types of Instant Recovery Services:

- Instant VM Recovery. This service starts when you select a backup and when you click Instant VM Recovery from the popup menu. This is a running task with no time limit. To prevent the VM being kept indefinitely, the user needs to stop the process when it is complete, 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.

Chapter 20: Settings

General

To configure some general settings:

- 1. Click Settings.
- 2. In the left menu, click General.

Settings			
🖨 General	Paths		
Export / Import config file	Default Local Path	E:\Backups	Browse
🂦 License Manager			
击 Network Drives	General		
🔀 E-Mail Default Settings	Show tip-bar with suggestions	4	
🔗 Instant Recovery Service	🗆 Weite date divertly to the disk	wishave hains huffared	
Active Directory	write data directly to the disk		
🐣 Users	file cache consumes most of th	rience the issue described in Microsoft kb 976018 < <u>http://support.microsoft.com/kb/976018</u> > (e physical RAM), even if VM Explorer is installed on Windows Server 2008 R2. Please note tha	the system at this option
😤 Groups	could slow down backup proces	ss if target is set to "Local Computer".	
😌 Language	Prevent "Sleep Mode" if scheder	uler tasks is enabled	
📄 Event Logs	Check for virtualized network	adapters: E1000 & E1000E	
X Support			
? Manuals	Privacy		
♥ Suggest new feature (ext. link)	Automatically submit perform	ance data and usage statistics View policy	
	Save task result in Windows event	log	
	📄 Log success tasks 📄 Log wa	rning tasks 📃 Log error tasks	
	Save		

Figure 104: Settings - General

Path

To configure the default Local Path, click **Paths** and select the path you want to set as the default local path. This path is used in File Explorer (home directory for your local computer) in the Backup setup dialog (default target directory) in the Custom Script and in the dialogs where a local path is proposed.

NOTE If you don't configure a local path, VM Explorer will use the Windows Environment MyDocuments path.

General

In the General section, the **Show tip-bar with suggestion** check box can be enabled/disabled to show or hide the tip bar with the suggestions. This bar could also be deactivated by clicking X.

Did you know you can switch to the Datacenter tab to add the servers you would like to backup?

X

The Write data directly to the disk without being buffered must be activated only if, during backup, there are performance problems as described in the Microsoft KB 976618http://support.microsoft.com/kb/976618.

The **Prevent Sleep Mode if scheduler is enabled** permits the system to go into Sleep Mode (if activated). This option will be applied only if the scheduler is enabled.

Privacy

You can enable/disable sending the performance data in the Privacy section. Click View policy to see the information about the privacy condition.

Windows event log

To save the scheduled tasks results in the Windows Event Log, check/uncheck the type of event in the Save task result in Windows Event Log section.

The result will be written in the Windows Event log at the end of the scheduled task execution, if the result type (success, warning or error) is enabled in the settings. Aborted tasks will be shown as a warning event.

Export/Import configuration

The configuration file can be exported or imported in Settings.

The exporting functionality allows you to encrypt the configuration file with a password.

From the same window you can import an existing configuration.

NOTE Ensure that you are not importing a configuration that has web server settings disabled.

Settings	
🔅 General	Export / Import config file
Export / Import config file	You can export or import the configuration file from this page
🂦 License Manager	
🚠 Network Drives	Export Config Import Config
🔀 E-Mail Default Settings	
🔗 Instant Recovery Service	
Active Directory	
💄 Users	
😤 Groups	
😋 Language	
🚍 Event Logs	
* Support	
? Manuals	
Suggest new feature (ext. link)	

Figure 105: Settings - Export/Import configuration file

E-mail

To configure the default e-mail settings:

- 1. Click Settings.
- 2. Click the E-mail view in the left menu and fill the fields you want to configure.
- 3. If you filled all the fields, click Test to verify that the settings are correct.
- 4. Click Ok to save the settings.

Settings		
General Export / Import config file KLicense Manager Antwork Drives E-Mail Default Settings Ø Instant Recovery Service	In this page you can configure an Report" task in the "Scheduled Ta Important: By configuring these p "Scheduled Tasks".	id test the default Email parameters. The following parameters allows you to configure more quickly the "E-mail asks" (Clicking the "Load default settings" button on the bottom left of the "E-Mail Report" popup window). parameters, doesn't make VM Explorer sending email reports. You need to create an "E-Mail Report" task in
Active Directory	E-Mail	Full Name (optional)
≗ Users ☆ Groups @ Language	Receiver(s) E-Mails (se	parate multiple with semicolon ".")
Event Logs X Support Manuals	Subject V	MX Report {DATETIME} {(STATUS}) u can use the following placeholders in the subject line: {DATETIME}; {STATUS}
t¶Suggest new feature (ext. link)	Outgoing SMTP Server Hostname or IP Use SSL Use SMTP authentication Username Password	Port 25
		Test

Figure 106: 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.

Active Directory

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

Settings		Edit Delete	
🛱 General	_	Domain Name	Domain Controller
Export / Import config file			
💦 License Manager			
📥 Network Drives			
🔀 E-Mail Default Settings			
🔗 Instant Recovery Service			
Active Directory			
🐣 Users			
😤 Groups			
😌 Language			
Event Logs			
XSupport			
? Manuals			
Suggest new feature (ext. link)			

Figure 107: Settings - Active Directory page

To add an Active Directory entry:

- 1. Click Add.
- 2. Fill the Domain Name and the Domain Controller (IP or computer name) fields.

Active Directory Details	
Domain Name	(e.g. domain.local)
Domain Controller	(e.g. 192.168.11)
Test Connection	Add Cancel

Figure 108: Active Directory Details

When testing the connection or acquiring the existing users in the Active Directory, you are prompted to add the administrative credentials (this will be requested every time, as VM Explorer does not store the administrative credentials in its database).

User

The Users settings allows you to add, edit and delete the VM Explorer users and their access permission. The table shows the list of the current users included in VM Explorer, with additional detailed information.

Settings	Add L	ocal User	Add Active Directory Use	Edit Delete			
🔅 General	Active	Туре	Domain	Username	First Name	Last Name	E-Mail
Export / Import config file	1		HPE User	admin			
🏋 License Manager							
🛔 Network Drives							
🔀 E-Mail Default Settings							
8 Instant Recovery Service							
Active Directory							
🚨 Users							
🚰 Groups							
🕙 Language							
🚍 Event Logs							
X Support							
? Manuals							
Suggest new feature (ext. link)							

Figure 109: Settings - Users

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	X
Active	2
Domain Name	HPE User 🔻
Username	
E-Mail	
First Name	
Last Name	
Password	
Group	•
	Add Cancel

Figure 110: Settings - User Details

Local users will only be available in VM Explorer and the password will be stored and encrypted.

Add Active Directory Users				×
Domain Name HPE.local V Filter by Username V	Retrieve Users			
Active Directory Users:		Selected Users:		
Username First Name Last Name		Username	First Name	Last Name
	Add > Add All >> < Remove << Remove All			
		Add selected Users to Group		*
				Add Cancel

Figure 111: Settings - Add Active Directory Users

When adding users, you can also retrieve lists of users from Active Directories added in VM Explorer. Refer to "Active Directory" on page 96 for more information. After the Active Directory has been added, click Add Active Directory Users.

The new window will allow you to insert in the VM Explorer configuration the users present in the Active Directory. Select the domain name from the list (if multiple Active Directories have been added) then click **Retrieve Users** to obtain the list from the **Active Directory**. This action will require to enter the administrative credentials since VM Explorer does not save them.

As the retrieved list limit is 2000, if the user you are looking for is not present you can use the **Filter by** option. The filter can be applied by username, first name and last name.

Once you have selected the users to be added, you can now choose on which group they will be added. Click Add selected Users to group. Multiple choices are permitted.

As an admin, you will be able to edit the first name, the last name, the e-mail and the user groups in which the user has privileges. All other fields are disabled for editing in order to keep consistency with **Active Directory**.

Groups

In the Groups settings, you can add or exclude the users in every group. The available groups are:

- Administrator: performs all administrative activities in VM Explorer.
- Scheduled Task Operator: manually executes scheduled tasks and views the Task History.
- Restore Task Operator: performs restore operations using existing backups/replications and restores single files from any backup.
- Task Viewer: views all the existing backups/replications and the Task History.
- Guest: can view the Datacenter, the Scheduled Tasks, the existing backups/replications and the Task History in read-only mode.

To edit a group, click the Edit. You can add a user by selecting it from the Users list. To delete a user, click X next to the name.

Group Details		×
Name	Administrator	
Description	Can perform all administrative activities in VM Explorer.	
Admin Rights	۶.	
Users		•
	• admin	
	Save Ca	ncel

Figure 112: Settings - Group Details

Instant Recovery Service

To use VM Explorer NFS, ensure that no other NFS server is running on the machine with VM Explorer installed and that no other services are using TCP port 111.

Settings				
🛱 General	VM Explorer NFS Server			
Export / Import config file	The VM Explorer NFS Server is requ	ired by all the Instant Recovery features:		
💦 License Manager	- Instant VM Recovery (IVMR) - Instant Backup Test (IBT)			
📥 Network Drives				
₩E-Mail Default Settings	Enable VM Explorer NFS server			
& Instant Recovery Service	 Open Windows firewall 			
Active Directory	NFS server listening port	2049		
🐣 Users		(default: 2049)		
🖶 Groups	Mountd listening port	4242		
🕒 Language		(default: 4242)		
🛱 Event Logs	Local temporary mount path	ΕΛ	Browse	
⊁ Support	Local temporary cache path	E:\	Browse	
? Manuals				
Suggest new feature (ext. link)			Start	Stop
	VM Explorer NFS Server Status			
	VM Explorer NFS Server is running	on Any		
	NFS Server listening on port 2049			
	Mountd listening on port 4242			
Hewlett Packard Enterprise		© Copyright 2016 Hewlett Packard Enterprise Development LP		

Figure 113: Settings - Instant Recovery Service

To be able to use the automatic backup test, you need to configure and enable the VM Explorer NFS:

- 1. Click Settings.
- 2. In the left menu, click Instant Recovery Service.

Start and Stop allow you to influence the VM Explorer NFS server while the dialog is open. If the Enable VM Explorer NFS server option is checked, VM Explorer NFS Server will automatically start when the dialog is closed. The server will automatically stop if this option is disabled.

The Open Windows Firewall option will automatically open Windows Firewall for the VM Explorer NFS Server.

The NFS server listening port and the Mounted listening port are the ports that will be used to communicate with the NFS client on the host.

NOTE These changes take place once the server is restarted.

The Local temporary mount path and Local temporary cache path are the local paths that will be used to save temporary NFS mount files and temporary Instant VM cache files. The default value for both is the default system temporary path.

The VM NFS Server Status shows an overview of the server status.

Language

The Language settings page allows you to localize the web application in your preferred language.

Settings	
🔅 General	Language Choice
Export / Import config file	Select the language you want to use. This operation will cause the logout.
💦 License Manager	English *
📥 Network Drives	
⊠E-Mail Default Settings	Save
𝔗 Instant Recovery Service	
Active Directory	
🚨 Users	
😤 Groups	
🕑 Language	
🖹 Event Logs	
★ Support	
? Manuals	
Suggest new feature (ext. link)	

Figure 114: Settings - Language

This feature allows you to view almost all the strings in the Web Interface. By our choice, we did not translate: dates and times, tasks details, HTML Reports, Events logs, and some Service errors.

NOTE When you apply changes, the web application will automatically restart. Then you will return to the login page.

Chapter 21: Supported Operating systems for installing VM Explorer

- Windows Vista 32-bit/64-bit
- Windows 7 32-bit/64-bit
- Windows 8
- Windows 8.1
- Windows 10
- Windows Server 2008 32-bit/64-bit
- Windows Server 2008 R2
- Windows Server 2012
- Windows Server 2012 R2

Supported ESX Versions

VMware ESX Server 3.0.X

- VMware ESX Server 3.0.0 Build 27701
- VMware ESX Server 3.0.1 Build 32039
- VMware ESX Server 3.0.2 Build 52542
- VMware ESX Server 3.0.3 Build 104629
- VMware ESX Server 3.0.3 Update 1 Build 231127
- VMware ESX Server 3.0.3 Update 1 Build 312855

VMware ESX Server 3.5

- VMware ESX Server 3.5 Build 64607
- VMware ESX Server 3.5 Update 1 Build 82663
- VMware ESX Server 3.5 Update 2 Build 110268
- VMware ESX Server 3.5 Update 3 Build 123630
- VMware ESX Server 3.5 Update 4 Build 153875
- VMware ESX Server 3.5 Update 5 Build 207095
- VMware ESX Server 3.5 Update 5 Build 213532
- VMware ESX Server 3.5 Update 5 Build 226117
- VMware ESX Server 3.5 Update 5 Build 227413
- VMware ESX Server 3.5 Update 5 Build 238493
- VMware ESX Server 3.5 Update 5 Build 259926
- VMware ESX Server 3.5 Update 5 Build 283373

- VMware ESX Server 3.5 Update 5 Build 317866
- VMware ESX Server 3.5 Update 5 Build 391406
- VMware ESX Server 3.5 Update 5 Build 604481
- VMware ESX Server 3.5 Update 5 Build 702112
- VMware ESX Server 3.5 Update 5 Build 725354

VMware vSphere 4.0 (ESX 4.0)

- VMware ESX 4.0 Build 164009
- VMware ESX 4.0 Build 175625
- VMware ESX 4.0 Build 181792
- VMware ESX 4.0 Build 193498
- VMware ESX 4.0 Update 1 Build 208167
- VMware ESX 4.0 Update 1 Build 213128
- VMware ESX 4.0 Update 1 Build 219382
- VMware ESX 4.0 Update 1 Build 236512
- VMware ESX 4.0 Update 1 Build 244038
- VMware ESX 4.0 Update 1 Build 256968
- VMware ESX 4.0 Update 2 Build 261974
- VMware ESX 4.0 Update 2 Build 294855
- VMware ESX 4.0 Update 2 Build 332073
- VMware ESX 4.0 Update 2 Build 360236
- VMware ESX 4.0 Update 2 Build 392990
- VMware ESX 4.0 Update 3 Build 398348
- VMware ESX 4.0 Update 3 Build 480973
- VMware ESX 4.0 Update 4 Build 504850
- VMware ESX 4.0 Update 4 Build 538074
- VMware ESX 4.0 Update 4 Build 660575
- VMware ESX 4.0 Update 4 Build 702116
- VMware ESX 4.0 Update 4 Build 721907
- VMware ESX 4.0 Update 4 Build 787047
- VMware ESX 4.0 Update 4 Build 989856
- VMware ESX 4.0 Update 4 Build 1070634
- VMware ESX 4.0 Update 4 Build 1335992
- VMware ESX 4.0 Update 4 Build 1682696

VMware vSphere 4.1 (ESX 4.1)

- VMware ESX 4.1 Build 260247
- VMware ESX 4.1 Build 320092

- VMware ESX 4.1 Build 320137
- VMware ESX 4.1 Build 348481
- VMware ESX 4.1 Build 381591
- VMware ESX 4.1 Build 433742
- VMware ESX 4.1 Build 502767
- VMware ESX 4.1 Build 538358
- VMware ESX 4.1 Build 582267
- VMware ESX 4.1 Build 659051
- VMware ESX 4.1 Build 702113
- VMware ESX 4.1 Build 721871
- VMware ESX 4.1 Build 800380
- VMware ESX 4.1 Build 874690
- VMware ESX 4.1 Build 988178
- VMware ESX 4.1 Build 1050704
- VMware ESX 4.1 Build 1198252
- VMware ESX 4.1 Build 1363503
- VMware ESX 4.1 Build 1682698

ESXi Versions

VMware ESXi 3.5

- VMware ESXi 3.5 Build 70348
- VMware ESXi 3.5 Update 1 Build 82664
- VMware ESXi 3.5 Update 2 Build 110271
- VMware ESXi 3.5 Update 3 Build 123629
- VMware ESXi 3.5 Update 4 Build 153875
- VMware ESXi 3.5 Update 5 Build 207095
- VMware ESXi 3.5 Update 5 Build 213532
- VMware ESXi 3.5 Update 5 Build 226117
- VMware ESXi 3.5 Update 5 Build 238493
- VMware ESXi 3.5 Update 5 Build 259926
- VMware ESXi 3.5 Update 5 Build 289752
- VMware ESXi 3.5 Update 5 Build 317866
- VMware ESXi 3.5 Update 5 Build 391406
- VMware ESXi 3.5 Update 5 Build 604481
- VMware ESXi 3.5 Update 5 Build 702112
- VMware ESXi 3.5 Update 5 Build 725354

VMware ESXi 4.0

- VMware ESXi 4.0 Build 164009
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- VMware ESXi 4.0 Build 193498
- VMware ESXi 4.0 Update 1 Build 208167
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- VMware ESXi 4.0 Update 4 Build 504850
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- VMware ESXi 4.0 Update 4 Build 702116
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VMware ESXi 4.1

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- VMware ESXi 4.1 Build 538358
- VMware ESXi 4.1 Build 659051
- VMware ESXi 4.1 Build 702113

- VMware ESXi 4.1 Build 721871
- VMware ESXi 4.1 Build 800380
- VMware ESXi 4.1 Build 874690
- VMware ESXi 4.1 Build 988178
- VMware ESXi 4.1 Build 1050704
- VMware ESXi 4.1 Build 1198252
- VMware ESXi 4.1 Build 1363503
- VMware ESXi 4.1 Build 1682698

VMware ESXi 5.0

- VMware ESXi 5.0 Build 469512
- VMware ESXi 5.0 Build 474610
- VMware ESXi 5.0 Build 504890
- VMware ESXi 5.0 Build 515841
- VMware ESXi 5.0 Build 623860
- VMware ESXi 5.0 Build 653509
- VMware ESXi 5.0 Build 702118
- VMware ESXi 5.0 Build 721882
- VMware ESXi 5.0 Build 768111
- VMware ESXi 5.0 Build 821926
- VMware ESXi 5.0 Build 914586
- VMware ESXi 5.0 Build 1024429
- VMware ESXi 5.0 Build 1117897
- VMware ESXi 5.0 Build 1254542
- VMware ESXi 5.0 Build 1311175
- VMware ESXi 5.0 Build 1489271
- VMware ESXi 5.0 Build 1851670
- VMware ESXi 5.0 Build 1918656
- VMware ESXi 5.0 Build 2000308
- VMware ESXi 5.0 Build 2312428
- VMware ESXi 5.0 Build 2509828
- VMware ESXi 5.0 Build 3086167

VMware ESXi 5.1

- VMware ESXi 5.1 Build 799733
- VMware ESXi 5.1 Build 838463
- VMware ESXi 5.1 Build 914609
- VMware ESXi 5.1 Build 1021289

- VMware ESXi 5.1 Build 1065491
- VMware ESXi 5.1 Build 1117900
- VMware ESXi 5.1 Build 1157734
- VMware ESXi 5.1 Build 1312873
- VMware ESXi 5.1 Build 1312874
- VMware ESXi 5.1 Build 1483097
- VMware ESXi 5.1 Build 1612806
- VMware ESXi 5.1 Build 1743533
- VMware ESXi 5.1 Build 1900470
- VMware ESXi 5.1 Build 2000251
- VMware ESXi 5.1 Build 2191751
- VMware ESXi 5.1 Build 2323236
- VMware ESXi 5.1 Build 2583090
- VMware ESXi 5.1 Build 3070626

VMware ESXi 5.5

- VMware ESXi 5.5 Build 1331820
- VMware ESXi 5.5 Build 1474528
- VMware ESXi 5.5 Build 1623387
- VMware ESXi 5.5 Build 1746974
- VMware ESXi 5.5 Build 1891313
- VMware ESXi 5.5 Build 1892794
- VMware ESXi 5.5 Build 2068190
- VMware ESXi 5.5 Build 2143827
- VMware ESXi 5.5 Build 2302651
- VMware ESXi 5.5 Build 2403361
- VMware ESXi 5.5 Build 2456374
- VMware ESXi 5.5 Build 2638301
- VMware ESXi 5.5 Build 2718055
- VMware ESXi 5.5 Build 3029944
- VMware ESXi 5.5 Build 3116895
- VMware ESXi 5.5 Build 3248547
- VMware ESXi 5.5 Build 3343343
- VMware ESXi 5.5 Build 3568722

VMware ESXi 6.0

- VMware ESXi 6.0 Build 1921158
- VMware ESXi 6.0 Build 2494585

- VMware ESXi 6.0 Build 2615704
- VMware ESXi 6.0 Build 2715440
- VMware ESXi 6.0 Build 2809209
- VMware ESXi 6.0 Build 3029758
- VMware ESXi 6.0 Build 3073146
- VMware ESXi 6.0 Build 3247720
- VMware ESXi 6.0 Build 3380124
- VMware ESXi 6.0 Build 3568940
- VMware ESXi 6.0 Build 3620759

Hyper-V versions

Supported Hyper-V versions

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

Supported tape libraries and autoloaders

- HPE StoreEver 1/8 G2 Tape Autoloader
- Dell PowerVault 124T

User Manual
Chapter 22: FAQ and support

If you have any questions, please refer visit our online FAQ http://www.trilead.com/FAQ/.

If you need support, contact us at support@trilead.com.



