

# **Cloud Backup**

## Admin Guide

Release 3/2015



## **Table of Contents**

Table of Contents	2
Introduction	5
Audience	5
Cloud Backup Backup and Restore Offerings	5
Software Requirements	5
Navigating to the Computer Page	7
Chapter 1. Imaging Backup and Restore	10
Image Backup and Restore Features	10
About Image Backups	11
Image Backup Prerequisites	11
Backup Configuration	11
Supported Disks and File Systems	11
Supported Imaging Platforms	11
Creating Image Backups	12
About Restoring Image Backups	19
About Restoring Hyper-V VHD/VHDX Files	10
About Restoring hyper-v vho/ vho/ hies	······
About Mounting VHD Files as a Drive Letter or NTFS Folder	
	19
About Mounting VHD Files as a Drive Letter or NTFS Folder	<b>19</b> 19
About Mounting VHD Files as a Drive Letter or NTFS Folder Restoring Physical to Hyper-V Backups	<b>19</b> 19 24
About Mounting VHD Files as a Drive Letter or NTFS Folder Restoring Physical to Hyper-V Backups About Object-level Restore	<b>19</b> 19 24 <b>24</b>
About Mounting VHD Files as a Drive Letter or NTFS Folder Restoring Physical to Hyper-V Backups About Object-level Restore Extracting Objects for an Object-level Restore	<b>19</b> 19 24 <b>24</b> 
About Mounting VHD Files as a Drive Letter or NTFS Folder Restoring Physical to Hyper-V Backups About Object-level Restore Extracting Objects for an Object-level Restore Image Configuration Best Practices	
About Mounting VHD Files as a Drive Letter or NTFS Folder         Restoring Physical to Hyper-V Backups         About Object-level Restore         Extracting Objects for an Object-level Restore         Image Configuration Best Practices         Deleting Image Backups	
About Mounting VHD Files as a Drive Letter or NTFS Folder         Restoring Physical to Hyper-V Backups         About Object-level Restore         Extracting Objects for an Object-level Restore         Image Configuration Best Practices         Deleting Image Backups         Chapter 2. Virtual Machine Backup and Restore	
About Mounting VHD Files as a Drive Letter or NTFS Folder         Restoring Physical to Hyper-V Backups         About Object-level Restore         Extracting Objects for an Object-level Restore         Image Configuration Best Practices         Deleting Image Backups         Chapter 2. Virtual Machine Backup and Restore         Hyper-V Standard Backup and Restore	
About Mounting VHD Files as a Drive Letter or NTFS Folder         Restoring Physical to Hyper-V Backups         About Object-level Restore         Extracting Objects for an Object-level Restore         Image Configuration Best Practices         Deleting Image Backups         Chapter 2. Virtual Machine Backup and Restore         Hyper-V Standard Backup and Restore         Hyper-V Backup and Restore Features	
About Mounting VHD Files as a Drive Letter or NTFS Folder         Restoring Physical to Hyper-V Backups         About Object-level Restore         Extracting Objects for an Object-level Restore         Image Configuration Best Practices         Deleting Image Backups         Chapter 2. Virtual Machine Backup and Restore         Hyper-V Standard Backup and Restore         Hyper-V Backup and Restore Features         About Hyper-V Backups	
About Mounting VHD Files as a Drive Letter or NTFS Folder         Restoring Physical to Hyper-V Backups         About Object-level Restore         Extracting Objects for an Object-level Restore         Image Configuration Best Practices         Deleting Image Backups         Chapter 2. Virtual Machine Backup and Restore         Hyper-V Standard Backup and Restore         Hyper-V Backup and Restore Features         About Hyper-V Backups         Hyper-V Backup Prerequisites	
About Mounting VHD Files as a Drive Letter or NTFS Folder         Restoring Physical to Hyper-V Backups         About Object-level Restore         Extracting Objects for an Object-level Restore         Image Configuration Best Practices         Deleting Image Backups         Chapter 2. Virtual Machine Backup and Restore         Hyper-V Standard Backup and Restore         Hyper-V Backup and Restore Features         About Hyper-V Backup Prerequisites         Minimum Requirements	

## EVOLVE

Creating Hyper-V Backups
Restoring Hyper-V Backups43
Hyper-V Manager Virtual Machines Import Options49
Hyper-V Replication
Deleting Hyper-V Backups51
VMware Backup and Restore56
VMware Features
VMware Backup Prerequisites56
Minimum Requirements
VMware Supported Platforms56
VMware Standard Backup and Restore56
About VMware Standard Backups57
Creating VMware Standard Backups57
Restoring VMware Standard Backups66
Deleting VMware Standard Backups77
VMware QuickSpin Backup and Restore82
About QuickSpin Backups82
QuickSpin Licensing82
Creating QuickSpin Backups83
Restoring QuickSpin Backups94
Deleting QuickSpin Backups99
Chapter 3. Editing Backup Sets
About Editing Backup Sets
A Backup Destination Has Changed105
An Imaging Source Volume Is No Longer Present105
A File or Folder Selected for Backup Is No Longer Found106
A QuickSpin Host Destination Has Changed107
A QuickSpin Incremental Version Storage Location Has Changed108
Appendix
About Restoring Revisions for Hyper-V, VMware, and Imaging109
About Archiving Rules
How Archiving Works for Imaging109



How Archiving Works for Hyper-V and VMware	109
About Advanced Archiving	110
About Scheduling Backups	112
About the Backup Monitor	113
About Backup Options	113
About VMware Clusters	114
Glossary	117
Glossary	11/



## Introduction

This section includes the following topics:

- Audience
- Cloud Backup and Restore Offerings
- Software Requirements
- Navigating to the Computer Page

#### Audience

The audience for this document is IT professionals and Evolve IP customers and partners who provide clients with cloud backup and recovery support using Cloud Backup.

### **Cloud Backup and Restore Offerings**

Cloud Backup continues building on the strategy of expanding the breadth of Cloud Backup and data protection support as well as expanding the recoverability of data for small businesses. This User Guide provides support for the following offerings:

- Imaging backup and restore
- Virtual machines backup and restore for the following products:

Hyper-V VMware

### **Software Requirements**

Before installing the Cloud Backup cloud backup and recovery software on any computer, it is important to know what system environments are supported by Cloud Backup and what hardware is required.



The following table provides the requirements for running the backup software along with web portal requirements for Hyper-V and Imaging.

Backup Softw	are Requirements
Minimum Requirements	Supported Operating Systems
<ul> <li>2 GHz dual-core CPU</li> <li>1 GB of total RAM (500 MB free RAM during backup, restore, or delete operation)</li> <li>Free disk space equaling twice the size of your largest protected file (not</li> </ul>	<ul> <li>Server 2012/2012 R2</li> <li>Windows 8</li> <li>Windows 8.1</li> <li>Windows 7 SP1</li> <li>Server 2008/2008 R2/SBS 2011</li> <li>Windows Vista SP1</li> </ul>
<ul> <li>required for VM backups)</li> <li>Broadband Internet Connection</li> <li>Microsoft .NET Framework 3.5</li> <li>Recommended Specifications</li> </ul>	<ul> <li>Server 2003 SP1/SBS 2003 SP1</li> <li>Windows XP SP3</li> <li>Exchange</li> </ul>
<ul> <li>2GHz quad-core CPU</li> <li>4 GB of total RAM</li> <li>1 GB free RAM during backup, restore, or delete operation.</li> <li>Free disk space equaling twice the size of your largest protected file (not required for VM backups)</li> </ul>	<ul> <li>Exchange2013</li> <li>Exchange 2010</li> <li>Exchange 2007</li> <li>Exchange 2003</li> <li>(No DAG support)</li> </ul> SQL <ul> <li>SQL 2005 Standard Edition</li> </ul>
<ul> <li>Broadband Internet Connection</li> <li>Microsoft .NET Framework 3.5</li> <li>Portal Requirements</li> </ul>	<ul> <li>SQL 2008 Standard Edition</li> <li>SQL 2012 Standard Edition</li> <li>VMware</li> </ul>
<ul> <li>Internet Explorer 10, 11 (Desktop Mode)</li> <li>Firefox (most recent version)</li> <li>Flash player 6.0 or higher</li> <li>Silverlight 4.0 or higher</li> </ul>	<ul> <li>vSphere 4.1, 5.0, 5.1, and 5.5 (including clustered environments)</li> <li>All supported versions require a VMware Essentials license or higher.</li> <li>Hyper-V</li> </ul>
	<ul> <li>Hyper-V 2008 R2</li> <li>Server 2012 R2</li> <li>The following Hyper-V hardware versions are supported.</li> </ul>
	<ul> <li>Generation 1</li> <li>Generation 2</li> <li>Windows Imaging</li> </ul>
	<ul> <li>Windows 7, 8.1</li> <li>Server 2008 R2/SBS 2011/Server 2012/2012 R2</li> </ul>



#### Navigating to the Computer Page

To use the functionality in Cloud Backup for your customer's machines, you need to navigate to that machine's Computer Page.

To access the Computer Page, perform the following steps.

1. Log into your account @ https://evolveip.managemybackups.com

The Home page is displayed.





2. At the top of the page, click **Manage**.

The Management Dashboard is displayed.

	Computers View Reports	<ul> <li>Download Install</li> </ul>	er Contact Information		
me > Evolve IP					
Management D View, Edit, and Manage	Dashboard Your Account				
ANAGE					
ompany name:	Evolve IP				
ame:	Evolve IP				12/04/2014 - 03/04/2015
ontact and billing address:	989 Old Eagle School Rd Wayne, PA 19087 US		400GB		
none number:	610-232-0453		200GB	,••	
sername:	eipdemo				
mail address:	nreidy@evolveip.net 345.29.GB		08	12/20/10044	02/04/2015
mail address: nline usage: ustom field:	nreidy@evolveip.net 345.29 GB 		ов	12/24/2014	02/04/2015
nline usage:	345.29 GB		OB	12/24/2014	02/04/2015
nline usage:	345.29 GB		08	12/24/2014	02/04/2015
nline usage:	345.29 GB	Cloud usage	Local backup	12/24/2014 Preferences	🛃 Add Computer
nline usage: ustom field:	345.29 GB	Cloud usage 188.99 GB			🛃 Add Computer
nline usage: ustom field: Computer	345.29 GB - - Version 5.4.5	6	Local backup		🛃 Add Computer
nline usage: ustom field: Computer Cust1-Web-0002	345.29 GB - - Version 5.4.5	188.99 GB	Local backup		্রি Add Computer প্রু
nline usage: ustom field: Computer Cust1-Web-0002 Dan G Dell E5510-00	345.29 GB Version 5.4.5 003 5.4.4	188.99 GB 61.41 GB	Local backup	Preferences  	අත් Computer අප අප සි
nline usage: ustom field: Computer Cust1-Web-0002 Dan G Dell E5510-00 Godfrey-VDI-0004	345.29 GB - Version 5.4.5 003 5.4.4 5.4.5 5.4.5 5.4.5	188.99 GB 61.41 GB 1.78 GB	Local backup  	Preferences  	Add Computer & & & & & & & & & & & & & & & & & & &
nline usage: ustom field: Computer Cust1-Web-0002 Dan G Dell E5510-00 Godfrey-VDI-0004 ZVM-0008	345.29 GB - Version 5.4.5 003 5.4.4 5.4.5 5.4.5 5.4.5	188.99 GB 61.41 GB 1.78 GB 75.63 GB	Local backup   	Preferences    	Add Computer



3. Select the computer where the agent is installed.

		Download Installer Contact Information	
ome > Evolve IP > ZVM (0	008)		
Computer: Z View Computer (Evolution	<b>/M (0008)</b> re IP)		
OMPUTER INFORMATION			📝 Edit
lackup agent: computer name: computer ID: kccount username: imail address: thone number: froup: ocal backup subscription	Connected ZVM 0008 eipdemo nreidy@evolveip.net 6102320453 Default Group n: Disabled	100GB 50GB 0B 01/07/20	12/04/2014 - 03/04/2015 015 02/18/2015
		Delete Restore	
ackup Set/Action	Start Date	Results	Status
ackup Set/Action /Ms	Start Date 03/04/2015 01:00	Results Backed up 3 new items and 1.32 GB online for 00:30	0:28 Completed
ackup Set/Action /Ms /m images	Start Date 03/04/2015 01:00 03/03/2015 23:00	Results Backed up 3 new items and 1.32 GB online for 00:30 Backed up 3 new items and 367.57 MB locally for 00	0:28 Completed  Completed
ackup Set/Action /Ms /m images Demo Backup	Start Date           03/04/2015 01:00           03/03/2015 23:00           03/03/2015 22:00	Results Backed up 3 new items and 1.32 GB online for 00:30 Backed up 3 new items and 367.57 MB locally for 00 Backed up 132 new items and 10.64 MB online for 0	0:28 Completed 0:09:08 Completed 00:01:48 Completed
ackup Set/Action /Ms /m images Demo Backup	Start Date 03/04/2015 01:00 03/03/2015 23:00	Results Backed up 3 new items and 1.32 GB online for 00:30 Backed up 3 new items and 367.57 MB locally for 00	0:28 Completed 0:09:08 Completed 00:01:48 Completed
	Start Date           03/04/2015 01:00           03/03/2015 23:00           03/03/2015 22:00	Results Backed up 3 new items and 1.32 GB online for 00:30 Backed up 3 new items and 367.57 MB locally for 00 Backed up 132 new items and 10.64 MB online for 0	0:28 Completed 0:09:08 Completed 00:01:48 Completed 7:50 Completed
ackup Set/Action /Ms /m images Demo Backup /Ms	Start Date           03/04/2015 01:00           03/03/2015 23:00           03/03/2015 22:00           03/03/2015 01:00	Results Backed up 3 new items and 1.32 GB online for 00:30 Backed up 3 new items and 367.57 MB locally for 00 Backed up 132 new items and 10.64 MB online for 00:27 Backed up 3 new items and 1.33 GB online for 00:27	0:09:08 Completed 00:09:08 Completed 00:01:48 Completed 7:50 Completed 0:09:15 Completed

The Computer page is displayed.

4. Follow the steps in the procedures in this guide to perform your backups and restores.



## **Chapter 1. Imaging Backup and Restore**

This section provides the following information:

- Image Backup and Restore Features
- About Image Backups
- Image Backup Prerequisites
- Creating Image Backups
- About Restoring Image Backups
- Restoring Physical to Hyper-V Backups
- About Object-level Restore
- Image Configuration Best Practices
- Deleting Image Backups

#### **Image Backup and Restore Features**

Cloud Backup has added the ability to backup and restore physical machines locally with the following features:

- Back up servers, desktops, or laptops as volume-level images.
- Recover failed systems as virtual machines or mount images for quick access to files.

Cloud Backup also has added the following restore options:

- Restores to VHD/VHDX to create a Hyper-V Virtual Machine.
- Mounts as a volume or NTFS folder to recover individual files/folders.

To protect against user error, disk, or total system failure, you can backup and protect all local NTFS volumes, including system/boot to a local storage destination.

#### **Volume capacity limits**

The agent cannot back up volumes over 2 TB on Windows 7 and Windows 2008.

For newer Operating Systems (Server 2008 R2/SBS 2011/Server 2012/2012 R2), this limit is 64 TB.



#### VSS

The imaging feature uses VSS to quiesce the system on backup. All VSS writers are involved in this process. Make sure they are in a correct state before running a backup.

#### **Network Backup Destination**

if the network path used as a backup destination is on a NAS device, then its file system must not be sparse.

#### **About Image Backups**

When you perform a backup the image is stored locally and unencrypted, so you must ensure that enough disk space is made available. You can also store revisions.

A once daily backup is the default schedule for an image backup set. You also have the options of creating a recurring interval schedule, or schedule by calendar date and time.

Backups are run using the standard calendar scheduler. If a backup runs into its next start time, it finishes and resumes at the next scheduled time. See *About Scheduling Backups* for more information.

#### **Image Backup Prerequisites**

Image backups have the following prerequisites:

- Backup configuration
- Supported disks and file systems
- Supported imaging platforms

#### **Backup Configuration**

Install an agent on each physical machine you need to protect.

#### **Supported Disks and File Systems**

The following disks and file systems are supported:

- NTFS
- MBR disks
- GPT disks

#### **Supported Imaging Platforms**

The following platforms are supported by Imaging.

- Windows 7, 8.1
- Server 2008 R2/SBS 2011/Server 2012/2012 R2



#### **Creating Image Backups**

To create an image backup, perform the following steps.

1. Navigate to the Computer Page.

See *Navigate to the Computer Page* for instructions.

The Computer page is displayed.

COMPUTER INFORMATION			📝 Edin
Backup agent: Computer name: Computer ID: Account username: Email address: Phone number: Group: Local backup subscript	Connected 25 0017 0017 111-222-3333 Default Group Ion: Enabled	820M8 410M8 08	12/17/2013 - 03/17/2014
Concernation of the		X Delete Restore	Status
ackup Set/Action	Start Date	Results	Status Completed
Backup Set/Action Backup Set 3	Start Date	154 20 19 5	Completed
Backup Set/Action Backup Set 3 Delete	Start Date 03/17/2014 10:10	Results Backed up 1 new items and 6.17 MB locally for 00:01:42	Completed
Backup Set/Action Backup Set 3 Delete Delete	Start Date 03/17/2014 10:10 03/17/2014 09:14	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02	Completed Completed
Backup Set/Action Backup Set 3 Delete Delete Restore	Start Date 03/17/2014 10:10 03/17/2014 09:14 03/17/2014 09:13	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02 Deleted 0 items and 0.00 B for 00:00:02	Completed Completed Failed
Activity Set/Action Backup Set/Action Backup Set 3 Delete Delete Restore Restore Restore Restore Restore Restore	Start Date 03/17/2014 10:10 03/17/2014 09:14 03/17/2014 09:13 03/17/2014 09:12	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02 Deleted 0 items and 0.00 B for 00:00:02 Restored 1 items and 1.00 B for 00:00:10	Completed Completed Failed Completed



ł

2. Click the **Backup** tab.

The Your Backup Sets section is displayed.

OMPUTER INFORMATION									12 E
Backup agent: Connected Computer name: 0017 Computer ID: 0017 Account username: Email address: Phone number: 111-222-3333 Group: Default Group Local backup subscription: Enabled			820M8 410M8 03/10/2014			12/17/2013 - 03/17/20			
Activity	ettings 👔 👔 Backup	X Delete	Restore						
Your Backup Sets					😽 Export Backup	Selection	+	Add Bad	kup Set
Name		Backup Type	N	ext Backup	Automatic Back	up	Manu	al Con	trols
		Images	R	ecurring	AUTOMATIC	.40.	۲	E	×
Backup Set 2			72		AUTOMATIC	-0.0		N	×
Backup Set 2 Backup Set 3		Images	RA	ecurring	AUTOMATIC	100000		2	~

3. Click the Add Backup Set button. The Create Backup Set page is displayed.

<ul> <li>Exchange Information Store</li> <li>Exchange Mailbox Level</li> <li>SQL</li> <li>System State</li> <li>Wirtual Machines</li> <li>Images</li> <li>Choose this option to back up individual files and folders on this computer, or across the network.</li> </ul>	Files and Folders	Files and Folders	
<ul> <li>Exchange Mailbox Level</li> <li>SQL</li> <li>System State</li> <li>Backup Set Name: Backup Set 4</li> <li>Backup Destination: Online</li> </ul>	Exchange Information Store		
System State     Backup Set Name:       Virtual Machines     Backup Destination:       Online	Exchange Mailbox Level	actions the network.	
Backup Set Name: Backup Set 4  Virtual Machines Backup Destination:  Online	SQL		V
Backup Destination:  Online	System State	Backup Set Name: Backup Set 4	
Images O Local	Virtual Machines	Backup Destination: <ul> <li>Online</li> </ul>	
	Images	Cocal	



#### Click Images.

The Images page is displayed.

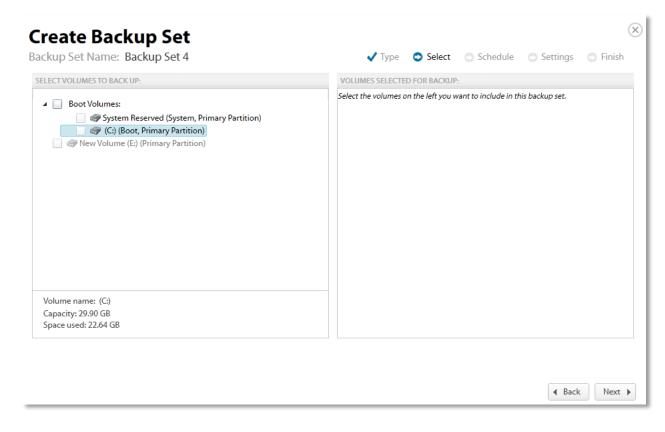
Create Backup Se							8
Backup Set Name: Backup Set	4		🗢 Туре	Select	Schedule	Settings	Finish
Files and Folders	Images						
Exchange Information Store	Choose this option to	back up images.					
Exchange Mailbox Level							5
SQL							
System State	Backup Set Name:	Backup Set 4					
Virtual Machines							
🔛 Images							
							Next 🕨

4. At the Backup Set Name field, type the backup set name, and then click **Next**. All volumes locally available to the agent are loaded and displayed.

ackup Set Name: Backup Set 4	🗸 Туре	-	Schedule	Settings	Finish
SELECT VOLUMES TO BACK UP:	VOLUMES SELECTE				
Boot Volumes:     System Reserved (System, Primary Partition)     G    (C:) (Boot, Primary Partition)     S    New Volume (E:) (Primary Partition)	Select the volumes o	n the left you v	vant to include in th	his backup set.	
lick on the name of a volume above to see more information about that volume					



5. Click the name of a volume to see more information about that volume as shown below.



6. Select the checkboxes of the volumes you want to include in the backup set.

The boot volumes group allows easy selection of any volume required to perform a restore of the physical system as a functional virtual machine.

The following volume sets cannot be selected for backup:

- Volumes with non-NTFS file systems
- Remote volumes / network shares
- Volumes which are already included in an imaging backup set
- Volumes greater than or equal to 2 TB in size on the following operating systems: Windows7, 2008, and 2011
- Volumes which reside on disks which are 4k native on the following operating systems: Windows7, 2008, and 2011



The selected volumes are displayed in the right panel of the screen.

**Note**: You can hover over grayed-out volumes to find out why volumes are not available (examples: the volume is a FAT or belongs to another backup set).

Create Backup Set Backup Set 4	🗸 Type 💿 Select 💿 Schedule 💿 Settings 💿 Finish
SELECT VOLUMES TO BACK UP:	VOLUMES SELECTED FOR BACKUP:
<ul> <li>Boot Volumes:</li> <li> <ul> <li></li></ul></li></ul>	Boot Volumes:
Click on the name of a volume above to see more information about that volume	
	▲ Back Next ▶

7. After making your selections, click **Next**.

The Create Backup Set Schedule page is displayed.

5	_		endar-based sche her to run your bi	0	-	interval-based sc ule or to scan for r	hedule new and modified	files at a specified	l time interval.
			Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Schedules Add		12 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM
Sundays At 12:00 AM Allow To Finish	-	01 AM	Allow To Finish	Allow To Finish	Allow To Finish	Allow To Finish	Allow To Finish	Allow To Finish	Allow To Finish
Mondays At 12:00 AM Allow To Finish		02 AM							
Tuesdays At 12:00 AM Allow To Finish		03 AM							
Wednesdays At 12:00 AM		04 AM							
Allow To Finish		05 AM							
Thursdays At 12:00 AM Allow To Finish		06 AM							
Fridays At 12:00 AM Allow To Finish		07 AM							
Saturdays At 12:00 AM		08 AM							



8. Create a calendar-based schedule or click the Create a recurring interval-based schedule radio button.

**Note**: A once daily backup is the default schedule for an image backup set. See *About Scheduling Backups* for more information.

If you select the recurring option, the following scheduling page is displayed.

	ackup Set me: Backup Set 4	✓ Type ✓ Select ○ Schedule ○ Settings ○ Finish
Scheduling	Create calendar-based schedule Specify that the imaging backup set will sc	Create recurring interval-based schedule an for changes at a specified time interval or from a pre-set calendar-based schedule.
	cal destination every 6 • hours	• Ig to start the next scheduled backup.
		▲ Back Next ▶

9. Use the down arrows to make your selections, and then click **Next**. The Storage location page is displayed.

Backup Set Name: B	Backup Set 4	🗸 Туре	🗸 Select	<ul> <li>Schedule</li> </ul>	Settings	🔿 Finish
Archiving rules	Keep 96  recoverable verse Notes: The backup will run 7 day(s) a wee	sions of backups at the destina k, running a total of 7 time(s) per v				
Backup Destination	Path: Choose a destination for your I backup and future revisions.	oackups. Please ensure your se	Browse	on has enougl	h space to hou	se the entire
Temporary Folder	Path: C:\Windows\TEMP\BackupAg	ent	Browse			



10. At the archiving rules section, select the number of recoverable versions you want backed up.

11. Type or browse to the backup destination.

Image backups and their revisions must be stored to a local storage location. Valid local storage locations are:

- Direct attached storage
- Network attached storage
- Removable storage

The following local storage locations cannot be selected for backup:

- Volumes with non-NTFS file systems
- Volumes which are already included in an imaging backup set
- Volumes greater than or equal to 2 TB in size on the following operating systems: Windows 7, 2008, and 2011
- Volumes which reside on disks which are 4k native on the following operating systems: Windows 7, 2008, and 2011
- Network attached storage with sparse file systems

**Important!** Because you are backing up the full volume and creating a VHD, ensure that you have enough local storage space for a full backup of each selected volume (it should be roughly equal to the used size of the volume) and any incremental changes. See *Backup Options* for more information.

12. Accept or change the temporary folder designation, and then click **Next**. The Finish page is displayed for your review.

	Backup	
	Selections:	This backup set contains 2 volume(s), currently totaling 22.67 GB , with a capacity of 30.00 GB. System Reserved (System, Primary Partition) (C.) (Boot, Primary Partition)
Ô	Schedule:	The backup will run 7 day(s) a week, running a total of 7 time(s) per week.
Į	Archiving	You will be able to recover up to 96 version(s) from the past 28 day(s).
		If everything looks good, click "Create Backup" below to create this Imaging backup set.
		( Back Create



13. After verifying the information, click the **Create** button. The backup status is displayed on the Your Backup Sets page.

Your Backup Sets			🔒 Export Backup Selectio	on 🕂 Add Ba	ckup Set
Name	Backup Type	Next Backup	Automatic Backup	Manual Co	ntrols
3.2.4 FF	Files and Folders		MANUAL		×
5.2.4 VMWare	VMware: QuickSpin		MANUAL		×
5.3 Pl	Images		MANUAL		×
Backup Set 4	Images	05/15/2014 02:00	AUTOMATIC <		×
Backup Set 5	Files and Folders	05/15/2014 00:00	AUTOMATIC <		×
VMware Standard	VMware: Standard		MANUAL		×

#### **About Restoring Image Backups**

Because files are being restored, after the restore is completed, you can choose what to do with these files. The following types of restores are available:

- Restore as a VHD/VHDX file
- Mount as a drive letter or NTFS folder

#### About Restoring Hyper-V VHD/VHDX Files

You can attach the Hyper-V disks (VHD files) that are restored to an existing VM.

VHD/VHDX is the virtual hard disk file type used by Microsoft's Hyper-V hypervisor. The agent produces the following files depending on the operating system on which it is installed:

- VHD: Windows 7, Windows 2008, Windows 2008 R2
- VHDX: Windows 8, Windows 8.1, Windows 2012, Windows 2012 R2

All virtual hard disks are recovered as dynamic disks.

Virtual hard disks take the following naming convention by default: Recovery\_{machine\_name}\_{volume or volume group label}

Example: Recovery\_LT-R9RLN75\_Boot

You can restore to another system if the OS version is different; however this only works as long as the change represents an upgrade. For instance, you can back up Windows 7 and restore on Windows 8 but not vise-versa.

#### About Mounting VHD Files as a Drive Letter or NTFS Folder

At the Object-level, you can mount a restored VHD file as a drive to explore and extract specific files.



#### **Restoring Physical to Hyper-V Backups**

To restore a physical machine to Hyper-V using Cloud Backup images, perform the following steps.

1. Navigate to the Computer Page. See *Navigate to the Computer Page* for instructions.

The Computer page is displayed.

COMPUTER INFORMATION			C Edit
Sackup agent:	Connected 🌽		12/17/2013 - 03/17/2014
Computer name:	0017		
Computer ID:	0017	82048	
Account username:			
Email address:		41048	
Phone number:	111-222-3333	-1040	
Беонар:	Default Group		
Local backup subscript	tion: Enabled	08	914
	ettings	Delete Restore	
			Status
tackup Set/Action	Start Date	Results	Status
Backup Set/Action Backup Set 3	Start Date 09/17/2014 10:10	Results Becked up 1 new Items and 6.17 MB locally for 00:01:42	Completed
Backup Set/Action Backup Set 3	Start Date	Results	Completed
Activity Set/Action Backup Set/Action Backup Set 3 Delete Delete	Start Date 09/17/2014 10:10	Results Becked up 1 new Items and 6.17 MB locally for 00:01:42	Completed
tackup Set/Action Backup Set 3 Delete Dolete	Start Date 03/17/2014 10:10 03/17/2014 09:14	Results Backed up 1 new Items and 6.17 MB locally for 00:01:42 Deleted 2 Items and 1.67 GB for 00:00:02	Completed Completed
Lackup Set/Action Backup Set 3 Delete Delete Restore	Start Date 69/17/2014 10:10 63/17/2014 09:14 63/17/2014 09:13	Results Backed up 1 new Items and 6.17 MB locally for 00:01:42 Deleted 2 Items and 1.67 GB for 00:00:02 Deleted 0 Items and 0:00 B for 00:00:02	Completed Completed Failed
Backup Set/Action Backup Set 3 Delete	Start Date 03/17/2014 10:10 03/17/2014 09:14 03/17/2014 09:13 03/17/2014 09:12	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.67 GB for 00:00:02 Deleted 0 items and 0.00 B for 00:00:02 Restored 1 items and 1.00 B for 00:00:10	Completed Completed Failed Completed

2. Click the **Restore** tab. The Your Restores section is displayed.

COMPUTER INFORMATI	0N			Ce Ed
Backup agent: Computer name: Computer ID: Account usernams Email address: Phone number; Group: Local backup sub	111-222-3333 Default Group		820MB 415MB	12/21/2013 - 03/21/2014
				3/87/3814
Activity	🕞 Settings 👔 Backup	X Delete	•	33/67/2014
Activity Your Restores		X Delete 🐺 Restore		4/07/2014 + Start a Restore
Your Restores Type	Settings	5	Completed	+ Start a Restore Cancel Restore
Your Restores	Settings	s		+ Start a Restore Cancel Restore
Your Restores Type Images	Settings 1 tlackup Statu 1 Rest	s pred	Completed 03/17/2014 09:12	+ Start a Restore Cancel Restore
Your Restores Type Images Images	Settings 1 Backup Statu 1 Rest 0 Rest	s ored ored	Completed 03/17/2014 09:12 03/17/2014 09:10	+ Start a Restore Cancel Restore



#### Click the Start a Restore button.

#### The Restore Type page is displayed.

Restore Browse and restore your data.	🗢 Type 💿 Select 💿 Settings 💿 F	Restore
Files and Folders Restore files that you've backed up by selecting them from their original folder hierarchy, by daily snaphots, or by backup set. This option is unavailable because you've not created any backup sets of this type.		
Microsoft Exchange Restore Microsoft Exchange Information Stores or by mailbox level. This option is unavailable because you've not created any backup sets of this type.		
Virtual Machines Restore VMware and/or Hyper-V virtual machines. This option is unavailable because you've not created any backup sets of this type.		
Microsoft SQL Restore Microsoft SQL databases. This option is unavailable because you've not created any backup sets of this type.		
System State Restore system state information. This option is unavailable because you've not created any backup sets of this type.		
Images Restore images of volumes or mount them for object-level restore.		
	Restore from a secondary catalog	Next 🕨

3. Click the **Images** radio button, and then click **Next**. The Restore Select page is displayed.

	VOLUMES SELECTED TO RESTORE:
<ul> <li>ELECT VOLUMES TO RESTORE:</li> <li>              Boot Volumes: (3/13/2014 9:50 AM)</li></ul>	Boot Volumes: (3/13/2014 9:50 AM) System (System, Primary Partition) SDisk (C:) (Boot, Primary Partition) (B:) (Primary Partition) (3/13/2014 9:50 AM)
elect Revision: (B-) <ul> <li>3/13/2014 9:50 AM</li> </ul>	



- 4. In the top left panel, select the volume checkboxes you want to restore.
- 5. In the bottom panel, select the specific revision of the virtual machines you want to restore.

Optionally, select the **Boot Volumes** group if you want to produce bootable virtual machines in Hyper-V from your backup images. The selected items are displayed in the right panel of the screen.

6. After reviewing your selections, click Next.

**Note**: The Boot Volumes group is not displayed if the source machine's boot volume was housed by a GPT disk.

The Restore Settings page is displayed.

<ul> <li>Restore image(s) to this</li> </ul>		C:\Restore		
	destination. Path.	C://restore		Browse
	-	esides, for quicker, object-level access:		
Volume:	New Label:	Mount as:		Drive Letter or Folder:
System				*
OSDisk (C:)	Recovery_C	Drive Letter	▼ F	· ·
(B:)	Recovery_B	Drive Letter	▼ G	<b>v</b>

- 7. Select the **Restore images(s) to this destination** radio button.
- Type the path or browse to the destination folder for the virtual hard disk files, and then click Next. Ideally, this restore destination is available to your Hyper-V host. If you want to mount an image, see *Restoring an Object-level Backup*.

**Note**: Cloud Backup creates the following virtual hard disk files in the restore destination:

- VHD If the agent performing the restore is installed on Windows 7, 2008 R2, or 2011 SBS.
- VHDX If the agent performing the restore is installed on Windows 8, 8.1, 2012, or 2012 R2.



The Confirmation page is displayed.

Resto	re	(
Browse and	d restore your data.	✓ Type ✓ Select ✓ Settings ○ Restore
	Selection:	You have chosen to restore 3 volume(s) , totaling 142.54 GB.
		System OSDisk (C:) (B:)
	Destination:	Your image(s) will be restored to C:\Restore.
	If everything	oks good, click "Restore" below to begin restoring your items to the specified destination.
		▲ Back Restore

9. Verify your settings, and click **Restore**. Cloud Backup restores the selected backup images as virtual hard disk files to the selected restore destination.

- 10. Launch Hyper-V Manager and proceed through the New Virtual Machine Wizard to the Connect Virtual Hard Drive step, and then browse to your restored VHD file.
- 11. Click **Finish** and the virtual machine is created.

See *Hyper-V Manager documentation* for more information.

**Note**: You don't need to install the OS, as it should already exist in your system image. Your restore is complete.



#### **About Object-level Restore**

The Image -level restore has the following features:

- You can mount the backup media as volumes or NTFS folders.
- You can browse the contents of the backup media in Windows Explorer.
- You can extract individual files and folders by copying and pasting through Windows Explorer.

**Important!** The backup media is locked when it is mounted. As a consequence, no backup or restore actions can occur. To ensure backups run, you must detach the backup media from Disk Management.

#### **Extracting Objects for an Object-level Restore**

To extract an object for an Object-level restore, perform the following steps.

1. Navigate to the Computer Page. See *Navigate to the Computer Page* for instructions.

The Computer page is displayed.

COMPUTER INFORMATION			😥 Edi
Backup agent: Computer name: Computer ID: Account username: Email address: Phone number: Group: Local backup subscripti	Connected 0017 0017 111-222-3333 Default Group Ion: Enabled	#20M8 410M6 08	12/17/2013 - 03/17/2014
Activity Set/Action	start Date	X Delete Restore	Status
Backup Set/Action	and the second sec		Completed
lackup Set/Action Backup Set 3	Start Date	Results	
Backup Set/Action Backup Set 3 Delete	Start Date 03/17/2014 10:10	Results Backed up 1 new items and 6.17 MB locally for 00:01:42	Completed
Backup Set/Action Backup Set 3 Delete Delete	Start Date 03/17/2014 10:10 03/17/2014 09:14	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02	Completed Completed
tackup Set/Action Backup Set 3 Delete Delete Restore	Start Date 03/17/2014 10;10 03/17/2014 09:14 03/17/2014 09:13	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02 Deleted 0 items and 0.00 B for 00:00:02	Completed Completed Failed
A CONTRACTOR OF A CONTRACTOR O	Start Date 03/17/2014 10:10 03/17/2014 09:14 03/17/2014 09:13 03/17/2014 09:12	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02 Deleted 0 items and 0.00 B for 00:00:02 Restored 1 items and 1.00 B for 00:00:10	Completed Completed Failed Completed



2. Click the **Restore** tab. The Your Restores section is displayed.

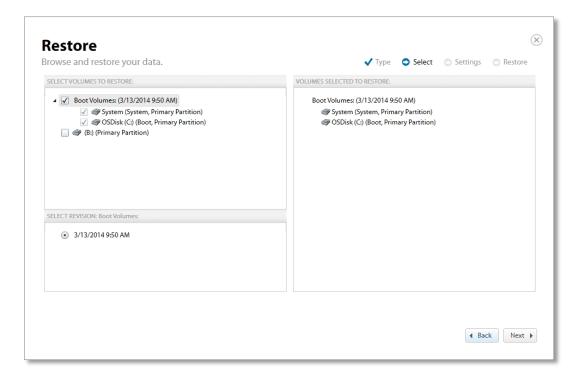
Computer: 00	017 (0017)		
COMPUTER INFORMATION			2.60
Backup agent; Computer name; Computer ID; Account username; Email address; Phone number; Group;	Connected 2/ 0017 0017 111-222-3333 Default Group	12/21/2013 - 0 820M8 410M8	03/21/201
Local backup subscrip	xtion: Enabled	68	_
		11	
		88 43/07/2034	tore
Activity		88 03/07/2014	tore
Activity 0	Settings 👔 Backup 🗙 Delete 💐 R	es es/07/2014	tore
Activity 3	Settings 🛛 🎓 Backup 🕺 🗙 Delete 📄 💐 R Status	es es/02/2014 store Completed Cancel Restore	tore
Activity 🗋 😡 : Your Restores Type mages images	Settings 👔 Backup 🗙 Delete 💐 R Status 1 Restored	es es/07/2014 store Completed Cancel Restore 05/17/2014 09:12	tore
Activity 3	Settings The Backup The Delete The Restored Status 1 Restored 0 Restored	en	wre ]

3. Click the **Start a Restore** button. The Restore Type page is displayed. Select the **Images** radio button, and then click **Next**.

) 🔄	Files and Folders Restore files that you've backed up by selecting them from their original folder hierarchy, by daily snaphots, or by backup set.		
	Microsoft Exchange Restore Microsoft Exchange Information Stores or by mailbox level. This option is unavailable because you've not created any backup sets of this type.		
	Virtual Machines Restore VMware and/or Hyper-V virtual machines. This option is unavailable because you've not created any backup sets of this type.		
	Microsoft SQL Restore Microsoft SQL databases. This option is unavailable because you've not created any backup sets of this type.		
	System State Restore system state information. This option is unavailable because you've not created any backup sets of this type.		
0 😭	Images Restore images of volumes or mount them for object-level restore.		



The volumes that can be selected for restore are displayed on the Select page.



- 4. In the top left panel, select the volume checkboxes you want to mount.
- 5. In the bottom panel, select the revision you want to mount. The selected items are displayed in the right panel of the screen.
- 6. After reviewing your selections, click **Next**. The Restore Settings page is displayed.

		~	
Choose how you would	l like to restore your images(s):		
Restore image(s) to t	his destination: Path:		Browse
Mount image(s) on the second secon	he machine where the agent resides, for	quicker object-level access:	
	_		
Volume:	New Label:	Mount as:	New Drive Letter or Folder:
System	Recovery_System	Drive Letter	• Z •
OSDisk (C:)	Recovery_C	Drive Letter	• X •



7. Select the **Mount image(s) on the machine where the agent resides** radio button.

Each selected volume is mapped to a drive letter on the machine where the agent is installed.

By default, each mounted volume is named Recovery\_{source volume label}. This naming convention allows mounted volumes to be easily identifiable.

You can also mount volumes to empty NTFS folders by expanding the **Mount as** drop-down and defining a destination folder as shown below.

Mount image(s) on the machine where the agent resides, for quicker, object-level access:					
Volume:	New Label:	Mount as:		New Drive Letter or Folder:	
System	Recovery_System	Drive Letter	•	Ζ -	
OSDisk (C:)	Recovery_C	Folder on existing drive	•	C:\Restore1	Browse

8. After mounting the images, click **Next**. The Restore Page is displayed.

Selection:	You have selected to mount 2 volume(s) for object-level restore. Up to 14.46 MB will be used in local storage
	System OSDisk (C:)
Destination:	Your image(s) will be mounted as :
	Recovery_System (Z:) Recovery_C (X:)
	When the restore is finished, these volumes will be accessible through Windows Explorer on the machine where the backup agent is installed. When you are finished, detach the virtual hard disks in Disk Managemen so backups can continue.
If everything loo	oks good, click "Restore" below to begin restoring your items to the specified destination.

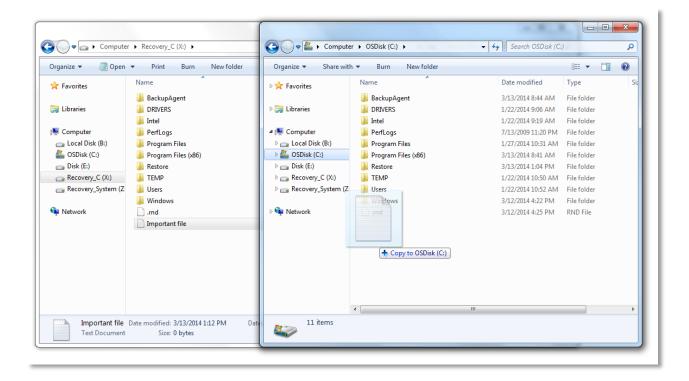


9. Review your configuration, and click **Restore**.

The process of mounting the images takes a matter of moments. When this is done, you are able to access the files and folders inside the chosen images within Windows Explorer on the machine where the agent is installed.

<ul> <li>Hard Disk Drives (5)</li> </ul>		
Local Disk (B:)	OSDisk (C:)	Disk (E:)
21.5 GB free of 21.9 GB	271 GB free of 443 GB	790 GB free of 931 GB
Recovery_System (Z:)	Recovery_C (X:)	
450 MB free of 498 MB	330 GB free of 443 GB	]

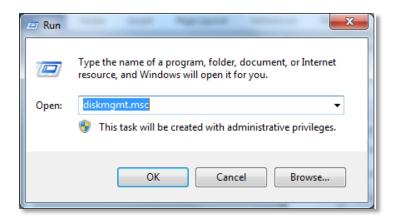
10. Copy and paste the desired files from the mount image to their ultimate destination via Windows Explorer.





CAUTION! Backups do not work while these volumes are mounted. Dismount these volumes when you are finished to make sure backups continue.

- 11. When you are finished copying the files you need, dismount the disks you mounted in Disk Management.
- 12. To access Disk Management, open **Run**. The Run pop-up is displayed.



13. At the Open field, type diskmgmt.msc. The Disk Management screen is displayed.

🔮 Disk Manage	ment								×
File Action	View Help								
🏟 🛛 🔜	2 🖬 🖸 🖬	I							
Volume	Layout	Туре	File System	Status	Capacity	Free Spa	% Fr	Fa	Ov.
🗃 (B:)	Simple		NTFS	Healthy (P		21.59 GB	98 %	No	0%
🗈 Disk (E:)	Simple		NTFS	Healthy (P		790.43 GB	85 %	No	0%
🗈 OSDisk (C:)	Simple		NTFS NTFS	Healthy (B		271.41 GB 330.96 GB	61 % 75 %	No	0% 0%
Recovery_C ( Recovery_Sys			NTES	Healthy (P Healthy (A		451 MB	75 % 90 %	No No	0%
System	Simple		NTFS	Healthy (S		450 MB	90 %	No	0%
Disk 0									
Basic					(B:)				
	System	OSDisk							
465.76 GB Online	499 MB NTFS	443.27 (	GB NTFS	Crash Dump, Prin	22.00 0	5B NTFS v (Primary Part	ition)		
465.76 GB		443.27 (	GB NTFS	, Crash Dump, Prir	22.00 0	68 NTFS y (Primary Part	ition)		
465.76 GB	499 MB NTFS	Acti Healthy	GB NTFS	, Crash Dump, Prir	22.00 0		ition)		
465.76 GB Online Disk 1 Basic 931.51 GB Online Disk 2	499 MB NTFS Healthy (System, Disk (E:) 931.51 GB NTFS	Acti Healthy Partition)	SB NTFS / (Boot, Page File		22.00 0		ition)		
465.76 GB Online Disk 1 Basic 931.51 GB Online Disk 2 Basic	499 MB NTFS Healthy (System, Disk (E:) 931.51 GB NTFS Healthy (Primary New Spanned Volt	Acti Healthy Partition) ume	SB NTFS (Boot, Page File	(.)	22.00 0				
465.76 GB Online <b>Disk 1</b> Basic 931.51 GB Online <b>Disk 2</b>	499 MB NTFS Healthy (System, Disk (E:) 931.51 GB NTFS Healthy (Primary New Spanned Volu New Striped Volur	Acti 443.27 ( Healthy Partition) ume	38 NTFS (Boot, Page File covery_C (X ,27 GB NTFS	(.)	22.00 0		9 M	IB allocat	
465.76 GB Online Disk 1 Basic 931.51 GB Online Disk 2 Basic 443.77 GB	499 MB NTFS Healthy (System, Disk. (E:) 931.51 GB NTFS Healthy (Primary New Spanned Volu New Striped Volur New Mirrored Volu	Acti 443.27 ( Healthy Partition) ume ume	SB NTFS (Boot, Page File	(.)	22.00 0		9 M		
465.76 GB Online Disk 1 Basic 931.51 GB Online Disk 2 Basic 443.77 GB Online	499 MB NTFS Healthy (System, Disk (E:) 931.51 GB NTFS Healthy (Primary New Spanned Volu New Striped Volur	Acti 443.27 ( Healthy Partition) ume ume	38 NTFS (Boot, Page File covery_C (X ,27 GB NTFS	(.)	22.00 0		9 M		
465.76 GB Online Disk 1 Basic 931.51 GB Online Disk 2 Basic 443.77 GB Online CD-RON	499 MB NTFS Healthy (System, Disk. (E:) 931.51 GB NTFS Healthy (Primary New Spanned Volu New Striped Volur New Mirrored Volu	Acti 443.27 ( Healthy Partition) ume ne	38 NTFS (Boot, Page File covery_C (X ,27 GB NTFS	(.)	22.00 0		9 M		
465.76 GB Online Disk 1 Basic 931.51 GB Online Disk 2 Basic 443.77 GB Online	499 MB NTFS Healthy (System, Disk (E) 931.51 GB NTFS Healthy (Primary New Spanned Volu New Striped Volur New Mirrored Volu New RAID-5 Volur	Acti 443.27 ( Healthy Partition) ume ne ne ic Disk	38 NTFS (Boot, Page File covery_C (X ,27 GB NTFS	(.)	22.00 0		9 M		
465.76 GB Online Disk 1 Basic 931.51 GB Online Disk 2 Basic 443.77 GB Online CD-RON	499 MB NTFS Healthy (System, 931.51 GB NTFS Healthy (Primary New Spanned Volu New Striped Volur New Mirrored Volu New RAID-5 Volur Convert to Dynam	Acti 443.27 ( Healthy Partition) ume ne ne ic Disk	38 NTFS (Boot, Page File covery_C (X ,27 GB NTFS	(.)	22.00 0		9 M		
465.76 GB Online Disk 1 Basic 931.51 GB Online Disk 2 Basic 443.77 GB Online CD-RON DVD (D:)	499 MB NTFS Healthy (System, Disk (E:) 931.51 GB NTFS Healthy (Primary New Spanned Volu New Striped Volur New Mirrored Volu New RAID-5 Volur Convert to Dynam Convert to GPT Di	Acti 443.27 ( Healthy Partition) ume ne ne ic Disk	38 NTFS (Boot, Page File covery_C (X ,27 GB NTFS	(.)	22.00 0		9 M		
465.76 GB Online Disk 1 Basic 931.51 GB Online Disk 2 Basic 443.77 GB Online CD-RON DVD (D:)	499 MB NTFS Healthy (System, Disk (E:) 931.51 GB NTFS Healthy (Primary New Spanned Volu New Striped Volur New Mirrored Volu New RAID-5 Volur Convert to Dynam Convert to GPT Di Offline	Acti 443.27 ( Healthy Partition) ume ne ne ic Disk	38 NTFS (Boot, Page File covery_C (X ,27 GB NTFS	(.)	22.00 0		9 M		



14. In Disk Management, locate the disks which contain the recovery volumes. In this case, Disk 2.

15. Right-click and select **Detach VHD**.

Detach Virtua	al Hard Disk
Detaching a	virtual hard disk will make it unavailable until it is attached aga
Virtual hard o	disk file location:
66c680d47	9f7ca6ac3061aca2\b3bb7077fea8-4382-88e1-1ddfbbc8607
Delete th	e virtual hard disk file after removing the disk.
	g the virtual hard disk file will cause all data stored on be permanently lost.
	OK Cancel

If you do not dismount these disks, backups for the selected volumes are unable to continue and errors are displayed in your backups.

#### **Image Configuration Best Practices**

- Do not run other plugins concurrently with the same agent. Be sure to schedule backups apart.
- Use a high quality storage platform to store your backups.
- Use USB 3.0 for external drives and gigabit Ethernet for network locations.
- To avoid performance issues, do not use a volume for local storage that is on the same physical disk as the volumes you want to back up.



#### **Deleting Image Backups**

To delete a backup, perform the following steps.

1. Navigate to the Computer Page. See *Navigate to the Computer Page* for instructions.

#### The Computer page is displayed.

COMPUTER INFORMATION			Ce Edit
Backup agent: Computer name: Computer ID: Account username: Email address: Phone number: Group: Local backup subscript	Connected 25 0017 0017 0017 111-222-3333 Default Group Ion: Enabled	820M8 410M8 08	12/17/2013 - 03/17/2014
Activity	ettings 🛛 🔒 Backup	X Delete	
	ettings a Backup	X Delete Restore Results	Status
Backup Set/Action			Status Completed
Backup Set/Action Backup Set 3	Start Date	Results	Completed
Backup Set/Action Backup Set 3 Delete	Start Date 03/17/2014 10:10	Results Backed up 1 new items and 6.17 MB locally for 00:01:42	Completed
Backup Set/Action Backup Set 3 Delete Delete	Start Date 03/17/2014 10:10 03/17/2014 09:14	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02	Completed Completed
Backup Set/Action Backup Set 3 Delete Delete Restore	Start Date 03/17/2014 10:10 03/17/2014 09:14 03/17/2014 09:13	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02 Deleted 0 items and 0.00 B for 00:00:02	Completed Completed Failed
Activity Backup Set/Action Backup Set 3 Delete Delete Restore	Start Date 03/17/2014 10:10 03/17/2014 09:14 03/17/2014 09:13 03/17/2014 09:12	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02 Deleted 0 items and 0.00 B for 00:00:02 Restored 1 items and 1.00 B for 00:00:10	Completed Completed Failed Completed



2. Click the **Delete** tab. The Your Deletes section is displayed.

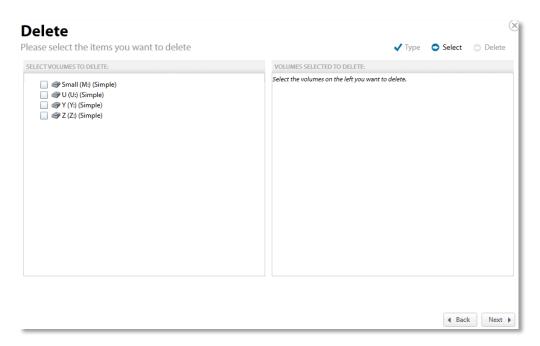
OMPUTER INFORMATION				🥖 Ed
lackup agent: computer name: computer ID: account username: imail address: 'hone number: iroup: ocal backup subscrip	Connected 25 0017 0017 111-222-3333 Default Group tion: Enabled		820M8 410M8 08	12/21/2013 - 03/21/2014 2014
Activity	Settings 👔 👔 Backup	X Delete	Restore	
Your Deletes				+ Delete Data
Гуре	Sta	tus	Completed	Cancel Delete
mages	2.10	m(s) Deleted	03/17/2014 09:14	

3. Select the **Delete Data** button. The Delete Type page is displayed.

ease	select the items you want to delete	🗢 Туре	Select	Delete
	Files and Folders Folete files that you no longer need by selecting from their original folder hierarchy, by daily snaphots, or by backup set. This option is unavailable because you've not created any backup sets of this type.			
	Microsoft Exchange Delete Microsoft Exchange Information Stores or by mailbox level. This option is unavailable because you've not created any backup sets of this type.			
6	Virtual Machines Delete VMware and/or Hyper-V virtual machines. This option is unavailable because you've not created any backup sets of this type.			
	Microsoft SQL Delete Microsoft SQL databases. This option is unavailable because you've not created any backup sets of this type.			
	System State Delete system state information. This option is unavailable because you've not created any backup sets of this type.			
) 🔛	Images Delete disk images.			



4. Click the **Images** radio button, and then click **Next**. The volumes that can be deleted are displayed.



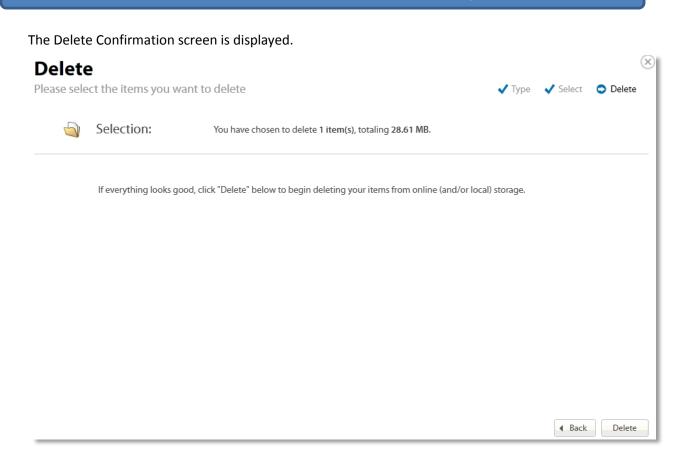
5. Select the volume checkbox in the left panel of the screen you want to delete. The selected volume is displayed in the right panel of the screen.

Delete				0
Please select the items you want to delete		🗸 Туре	Select	🔿 Delete
SELECT VOLUMES TO DELETE:	VOLUMES SELECTED TO DELETE:			
<ul> <li>Small (M:) (Simple) (All Revisions)</li> <li>U (U:) (Simple)</li> <li>Y Y: (Simple)</li> <li>Z (Z:) (Simple)</li> </ul>	Small (M:) (Simple) (All Revisio	ns)		
			◀ Bac	k Next ▶



#### Verify your selection, and then click Next.

Note: Delete removes all historical revisions as well. You cannot delete specific revisions.



6. Click the **Delete** button.



## **Chapter 2. Virtual Machine Backup and Restore**

This section provides backup and restore information for the following platforms:

- Hyper-V
- VMware Standard
- VMware QuickSpin

#### Hyper-V Standard Backup and Restore

This section includes the following information:

- Hyper-V Features
- About Hyper-V Backups
- Hyper-V Backup Prerequisites
- Creating Hyper-V Backups
- Restoring Hyper-V Backups
- Hyper-V Manager Virtual Machines Import Options
- Hyper-V Replication
- Deleting Hyper-V Backups

#### Hyper-V Backup and Restore Features

Hyper-V includes the following features:

- Protect multiple Hyper-V virtual machines with a single agent.
- Back up Hyper-V virtual machines to the cloud or to your local vault.
- Restore virtual machines to any system for import into Hyper-V, or mount them as virtual disks.
- Create and edit Hyper-V backup sets only through the portal, not the backup monitor.

However, Hyper-V backup sets can be started from the backup monitor.

#### **About Hyper-V Backups**

Hyper-V backups can be stored locally and in the cloud. When Hyper-V backups are stored locally, they are stored in the Cloud Backup proprietary format (encrypted and compressed) and require a standard restore process to access the data.

Hyper-V backups require that the agent is installed on the Hyper-V host, so only the VMs under the local host are displayed. You can select any number of virtual machines to be backed up.

You can schedule a backup set to run on a standard schedule. The default is running once per night. See *About Scheduling Backups* for more information.

During Hyper-V backup, the default is backing up 1 virtual machine at a time. This setting can be changed in the computer's Preferences in the portal or in the Backup Monitor.



Hyper-V backups copy a full initial backup of selected VMs. After this full initial backup, only changed portions of each VM are backed up to reduce backup times.

#### **Hyper-V Backup Prerequisites**

Hyper-V backups have the following prerequisites:

- Minimum Requirements
- Backup Configuration
- Permissions Required
- Hyper-V Supported Platforms

#### **Minimum Requirements**

The following list provides the minimum requirements:

- 2 GHz dual-core CPU
- 1 GB of Total RAM (500 MB free RAM during backup, restore, or delete operation)
- Free disk space equaling twice the size of your largest protected file (not required for VM backups)
- Broadband Internet Connection
- Microsoft .NET Framework 3.5

#### **Backup Configuration**

The following list provides the configuration requirements:

- Install an agent on each Hyper-V host running virtual machines that need to be backed up.
- Ensure that each VM you need to back up has the most recent version of Integration Services installed.

Note: Because of a Microsoft limitation, Windows XP VMs are paused during backup. This pause interrupts

#### **Hyper-V Permissions**

The Agent must be running as a local administrator on the Hyper-V host.

#### **Hyper-V Supported Platforms**

The following platforms are supported by Hyper-V.

- Hyper-V 2008 R2
- Server 2012 R2

The following Hyper-V hardware versions are supported.

- Generation 1
- Generation 2



# **Creating Hyper-V Backups**

To create a Hyper-V backup, perform the following steps.

1. Navigate to the Computer Page. See *Navigate to the Computer Page* for instructions.

The Computer page is displayed.

COMPUTER INFORMATION			Ce Edit
Backup agent: Computer name: Computer ID: Account username: Email address: Phone number: Group: Local backup subscript	Connected 2 0017 0017 111-222-3333 Default Group sion: Enabled	820M8 410M8 08	12/17/2013 - 03/17/2014
-	ettings 👔 Backup 🕻	X Delete Restore	Status
ackup Set/Action			Completed
ackup Set/Action Backup Set 3	Start Date	Results	Completed
lackup Set/Action Backup Set 3 Delete	Start Date 03/17/2014 10:10	Results Backed up 1 new items and 6.17 MB locally for 60:01:42	Completed
ackup Set/Action Backup Set 3 Delete Delete	Start Date 03/17/2014 10:10 03/17/2014 09:14	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02	Completed Completed
lackup Set/Action Backup Set 3 Delete Delete Restore	Start Date 03/17/2014 10:10 03/17/2014 09:14 03/17/2014 09:13	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02 Deleted 0 items and 0.00 B for 00:00:02	Completed Completed Failed
Activity Set/Action Backup Set/Action Backup Set 3 Delete Delete Restore Restore Restore	Start Date 03/17/2014 10:10 03/17/2014 09:14 03/17/2014 09:13 03/17/2014 09:12	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02 Deleted 0 items and 0.00 B for 00:00:02 Restored 1 items and 1.00 B for 00:00:10	Completed Completed Failed Completed



2. Click the **Backup** tab. The Your Backup Sets section is displayed.

OMPUTER INFORMATION					De Ec
Backup agent: Computer name: Computer ID: Account username: Email address: Phone number: Group: Local backup subscrip	Connected 2 0017 0017 111-222-3333 Default Group tion: Enabled		820M8 410M8 08	03/10/2014	12/17/2013 - 03/17/20
Activity	ettings 👔 Backup	X Delete	Restore		
Contraction of the second s				A Export Backup Selection	+ Add Backup Set
Your Backup Sets				Automatic Backup	Manual Controls
		Backup Type	Next Backup		
Name		Backup Type Images	Recurring	AUTOMATIC	X
Your Backup Sets Name Backup Set 2				AUTOMATIC de	× E <

3. Click the Add Backup Set button. The Create Backup Set Files and Folders page is displayed.

Create Backup Set Backup Set Name: Backup Set 2	
Files and Folders	Files and Folders
SQL	Choose this option to back up individual files and folders on this computer, or
Virtual Machines	across the network.
📔 Images	
	Backup Set Name: Backup Set 2
	Backup Destination: () Online and Local
	C Local
	Next ►

4. Click Virtual Machines.



The Create Backup Set Virtual Machines page is displayed.

Create Backup Set	(×
Backup Set Name: Backup Set 2	🗢 Type 💿 Select 💿 Schedule 💿 Settings 💿 Finish
Files and Folders	Virtual Machines
SQL	Choose this option to back up VMware and Hyper-V virtual machines.
Virtual Machines	
📔 Images	
	Backup Set Name: Backup Set 2
	Backup Type: O Hyper-V
	○ VMware
	Next 🕨

5. Select the **Hyper-V** radio button, and then click **Next**. The Standard backup message is displayed.

Create Backup Set Backup Set Name: Backup Set 2	🗢 Type 💿 Select 💿 Schedule 💿 Settings 💿 Finish
Files and Folders	Virtual Machines
SQL       Image: Square state       Image: Square state </td <td>Choose this option to back up VMware and Hyper-V virtual machines.</td>	Choose this option to back up VMware and Hyper-V virtual machines.
🔛 Images	
	Backup Set Name: Backup Set 2
	Backup Type: 💿 Hyper-V
	Standard backup. Backs up your Hyper-V image(s) to the cloud or locally (if local vault is enabled) for increased protection in the event of a disaster.
	Hyper-V Backup Destination:
	Online and Local
	VMware
	Next

6. Type the backup name and select the backup destination: online only (if Local Vault is disabled), local only, or online and local, and then click **Next**.



The virtual machines to be selected for backup are displayed.

Create Backup Set					0
Backup Set Name: Backup Set 2	🗸 Туре	Select	Schedule	Settings	🔿 Finish
SELECT THE VIRTUAL MACHINES YOU WANT TO BACK UP:	VIRTUAL MACHINES	S SELECTED FO	R BACKUP:		
Improvement     Improveme	Select the virtual ma	chines on the le	ft that you want to	include in this ba	ckup set.
				▲ Back	< Nex

7. Select the virtual machines to be backed up. The selected virtual machines are displayed in the right panel of the screen.

ackup Set Name: Backup Set 2   Type © Select © Schedule © Settings © Finish   ELECT THE VIRTUAL MACHINES YOU WANT TO BACK UP:   Instruct MACHINES SELECTED FOR BACKUP:   Image: Constraint of the set of the s	Create Backup Set					
<ul> <li>Image: HYPERV1</li> <li>Shell 1</li> <li>Shell 2</li> <li>Shell 3 Gen 2</li> <li>Shell 4 Gen 2</li> <li>Vista</li> </ul>	ackup Set Name: Backup Set 2	🗸 Туре	Select	Schedule	Settings	Finish
	<ul> <li>Image: Interpretation of the second se</li></ul>	HYPERV1	S SELECTED FOI	R BACKUP:		



8. After making your selections, click **Next**. The Create Backup Set Schedule page is displayed. See *About Scheduling Backups* for more information.

		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Schedules Add	12 AM	12:00 AM	12:00 AM	12:00 AM	12 00 010	12:00 AM	12:00 AM	12:00 AM
Sundays At 12:00 AM Allow To Finish	01 AM	Allow To Finish	Allow To Finish	Allow To Finish	12:00 AM Allow To Finish	Allow To Finish	Allow To Finish	Allow To Finish
Mondays At 12:00 AM Allow To Finish	02 AM							
Tuesdays At 12:00 AM Allow To Finish	03 AM							
Wednesdays At 12:00 AM Allow To Finish	04 AM							
Thursdays At 12:00 AM Allow To Finish	06 AM							
Fridays At 12:00 AM Allow To Finish	07 AM							
Saturdays At 12:00 AM Allow To Finish	08 AM							
	09 AM							

9. Select the schedule for your backup, and then click **Next**. The Create Backup Set Settings page is displayed.

Create Bac	-	🗸 Туре	✓ Select	✓ Schedule	Settings	( C Finish
Settings Ac	Ivanced Archiving					
Archiving Rules	Keep 4 Week(s)  and Determine how long to keep each version	no fewer than 4 🐑 versions. on and how many versions you want to	save to the set	rver.		
Temporary Folder	Path: C:\Windows\TEMP\BackupA	gent	Browse			

10. Select the archiving settings and temporary folder destination, and then click **Next**. See *Archiving Rules* for more information.



Note: 1 GB of temporary space is recommended for Hyper-V backups.

The Create Backup Set Confirmation page is displayed.

	Backup S Name: Backup		Settings 💿 Finish
	Selections:	This backup set contains 1 virtual machine(s).	
Ö	Schedule:	The backup will run 7 day(s) a week, running a total of 7 time(s) per week.	
	Archiving:	Keep all versions from now to 4 Week(s). After 4 Week(s) keep nothing. Keep no fewer than 4 version(s). Apply this rule to All files.	
		If everything looks good, click "Create" below to complete the creation of this backup set.	
			Back     Create

11. Verify your backup selections, and then click **Create**. The Your Backup Sets page is displayed with your current backup status.

OMPUTER INFORMATION						2 Ed
Backup agent: Computer name: Computer ID: Account username: Email address: Phone number: Group: Local backup subscrip	Connected 2 0017 0017 111-222-3333 Default Group tion: Enabled			820MB 410MB 28	03/10/2014	12/17/2013 - 03/17/201
	ettines 👌 Backup	X Delete	Restore			
Activity	ettings 👔 Backup	All and a second s				
Activity 🔅 S	ettings T Backup				Selection	+ Add Backup Set
Your Backup Sets	ettings 👔 🖉 Backup	Backup Type	N	iext Backup	Export Backup Selection	+ Add Backup Set
Your Backup Sets	ettings gackup	Backup Type Images		lext Backup ecurring		a suppression of the second seco
	ecungs g Beckup	1000			Automatic Backup	Manual Controls

To manually run a backup set, click the green arrow (Play) button under Manual Controls. Also, note the next scheduled automatic backup run time.



#### **Restoring Hyper-V Backups**

To restore a Hyper-V backup, perform the following steps.

1. Navigate to the Computer Page. See *Navigate to the Computer Page* for instructions. The Computer page is displayed.

COMPUTER INFORMAT	ON		2.60
			12.00
Backup agent: Computer name:	Connected 🚀		12/17/2013 - 03/17/2014
Computer ID:	0017	87046	
Account username			
Email address:		41040	
Phone number:	111-222-3333	197403	
Group:	Default Group scription: Enabled		
		*5	\$0/2014
Activity	G Settings	X Delete	
		X Delete Restore	Status
lackup Set/Actio			Status Completed
Backup Set/Actio	n Start Date	Results	Completed
lackup Set/Actio Backup Set 3 Delete	n Start Date 03/17/2014 10:10	Results Backed up 1 new items and 6.17 MB locally for 00:01:42	Completed
lackup Set/Actio Backup Set 3 Delete Delete	n Start Date 03/17/2014 10:10 03/17/2014 09:14	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02	Completed Completed
tackup Set/Actio Backup Set 3 Delete Delete Restore	n Start Date 03/17/2014 10:10 03/17/2014 09:14 03/17/2014 09:13	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02 Deleted 0 items and 0.00 B for 00:00:02	Completed Completed Failed
Activity Backup Set/Actio Backup Set 3 Delete Delete Restore Restore Restore	n Start Date 03/17/2014 10:10 03/17/2014 09:14 03/17/2014 09:13 03/17/2014 09:12	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02 Deleted 0 items and 0:00 B for 00:00:02 Restored 1 items and 1.00 B for 00:00:10	Completed Completed Failed Completed

2. Click the **Restore** tab. The Your Restores section is displayed.

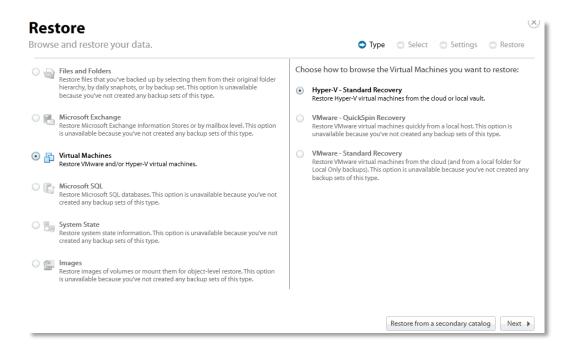
OMPUTER INFORMATION			C. Edit
Backup agent: Computer name: Computer ID: Account username: Imail address: Phone number: Sroup: Local backup subscrip	Connected 2 0017 0017 111-222-3333 Default Group tton: Enabled	820MB 410MB 88	12/21/2013 - 03/21/2014
Activity	Settings 📲 👔 Backup 🕺 🗙 Delete 📄	Restore	+ Start a Restore
Your Restores	Settings	Restore	+ Start a Restore
Your Restores			Contraction of the second
Your Restores Type mages	Status	Completed	and the second sec
Your Restores Type mages mages	Status 1 Restored	Completed 03/17/2014 09:12	and the second sec
	Staturs 1 Restored 0 Restored	Completed 03/17/2014 09:12 03/17/2014 09:10	and the second

Click the **Start a Restore** button. The Restore Type page is displayed.



rowse and restore your data.	🗢 Туре	Select	Settings	Restore
Files and Folders Restore files that you've backed up by selecting them from their original folder hierarchy, by daily snaphots, or by backup set. This option is unavailable because you've not created any backup sets of this type.				
Restore Microsoft Exchange Information Stores or by mailbox level. This option is unavailable because you've not created any backup sets of this type.				
Virtual Machines Restore VMware and/or Hyper-V virtual machines.				
Microsoft SQL Restore Microsoft SQL databases. This option is unavailable because you've not created any backup sets of this type.				
System State Restore system state information. This option is unavailable because you've not created any backup sets of this type.				
Restore images of volumes or mount them for object-level restore. This option is unavailable because you've not created any backup sets of this type.				
		Restore from a	secondary catal	og Next

3. Select the **Virtual Machines** radio button The Hyper-V restore option is displayed in the right panel.



4. Select the Hyper-V Standard Recovery radio button, and then click Next.



#### The virtual machines are displayed.

Restore						$(\times)$
Browse and restore your data.	•	🗸 Туре	Select	Settings	Restore	
SELECT THE VIRTUAL MACHINES TO RESTORE:	VIRTUAL MACHINES SELEC					
SELECT REVISION: Click on an item name above						
Click on a virtual machine name above to select an older revision for restore.						
				▲ Ba	ck Next	•

5. In the top left panel, select the virtual machine checkboxes you want to restore.

Your selection is displayed in the right panel of the screen.

Browse and restore your data.	✓ Type Select Settings Restore
SELECT THE VIRTUAL MACHINES TO RESTORE:	VIRTUAL MACHINES SELECTED FOR RESTORE:
SELECT REVISION: Windows XP New	

6. In the bottom panel, select the revision you want to restore.

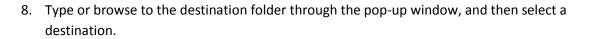
Note: You can only choose one revision to restore per selected VM.

7. After making your selections, click **Next**.



# The Destination page is displayed.

Restore Browse and resto	pre your data.	Type V Select O Settings O Restore
Destination	Path: Please choose a restore destination folder. Upon restore, a files will be restored into its respective folder. Once restore	a folder for each selected VM will be created in this directory and each VM's associated ed, the VM files can be imported into Hyper-V.



EVOLVE

	Please select a recovery destination:			
nation	<ul> <li>HYPERS Select a recovery destination:</li> <li>HYPERV1</li> <li>Coal Disk (C;)</li> <li>Secycle.Bin</li> <li>LocalVault</li> <li>PerfLogs</li> <li>Program Files</li> <li>Program Files</li> <li>Program Files (x86)</li> <li>Program Data</li> <li>System Volume Information</li> <li>Users</li> <li>Windows</li> </ul>			y and each VM's associate
		ОК	Cancel	

9. Click **OK**. The destination folder is displayed in the field.

Restore Browse and resto	are your data	✓ Type ✓ Select O Settings 🔘 Restore
	ore your data.	Virge Visiter Visiter
Destination	Path: C:\LocalVault	Browse
	Please choose a restore destination folder. Upon restore, a folder for ea files will be restored into its respective folder. Once restored, the VM file	each selected VM will be created in this directory and each VM's associated files can be imported into Hyper-V.
		d Back Next

10. Select Next.



The Restore page is displayed. See *Hyper-V Manager Virtual Machines Import Options* for more information.

Restore rowse and restore your data.			
🗗 Se	election:	You have selected to restore 2 virtual machine(s), totaling 4.21 GB.	
資 De	estination:	Your selected item(s) will be restored to C:\LocalVault.	
Hyper-V	Manager:	After the selected virtual machine file(s) are restored, you can recover these VMs using the Import Virtual Machine feature in the Actions menu of Hyper-V Manager. When importing these VMs, you will have a choice between three import options:	
Register:		he destination you selected for the recovered virtual machine(s) is the destination you intend to run it from. The vill be used when registering the VM with hypervisor.	
Restore:	removable drive) and y	he destination you selected for the recovered virtual machine(s) is a temporary location (e.g., on a share or you want Hyper-V to move the restored files to the appropriate location and register the virtual machine for you. /M will be used when registering the VM with the hypervisor.	
Сору:	a template for a new v	rou intend to import the recovered virtual machine(s) multiple times (e.g., you are using the virtual machine(s) as irtual machine). Hyper-V will copy the restored files to the appropriate location for you. With this option, a new nd used to register the VM with the hypervisor.	
		4 Back Restore	

11. Verify the restore selections and then click **Restore**. The Your Restores page is displayed with the status.

Computer: 0021	(0021)		
COMPUTER INFORMATION			📝 Edit
Backup agent: Computer name: Computer ID:	Running 🚀 0021 0021	Ch	01/09/2014 - 04/09/2014 art.
Account username: Email address: Phone number: Group: Local backup subscriptio	111-222-3333 Default Group		
Activity 🛞 Set		estore	
Your Restores			+ Start a Restore
Type Hyper-V: Standard	Status 0 VM(s) Restored	Completed RESTORE RUNNING	Cancel Restore

12. To cancel a restore, select the **Cancel Restore** icon.



After the restore is complete, the restore status is displayed.

Computer: 00	21 (0021)		
COMPUTER INFORMATION			📝 Edit
Backup agent: Computer name: Computer ID: Account username: Email address: Phone number: Group: Local backup subscript	Connected 0021 0021 111-222-3333 Default Group		01/09/2014 - 04/09/2014 Thart.
() (		Restore	
Your Restores			+ Start a Restore
Type Hyper-V: Standard	Status 1 VM(s) Restored	Completed 04/09/2014 15:10	Cancel Restore

### **Restoring to a Folder**

You can select the restore folder for the desired VM using the Import functionality in Hyper-V manager and import the VM into their environment.

Each VM has its own folder created within the specified restore directory.

Within that folder, the VM files are created with the same folder structure as when they were backed up.

All VHD files (associated with VM disks) and the XML configuration file are restored with a VM restore. If the VM was backed up in offline mode and the memory state needed to be saved, a VM restore also restores those associated BIN and VSV files.

### **Backup States of Imported VMs**

A VM is imported in a certain state depending on the state it was in when backed up. The following table provides the various backup states.

State at Time of Backup	Type of Backup	State after Restore
Running	Online	Off
Running	Offline	Saved
Saved	Offline	Saved
Paused	Offline	Saved
Off	Offline	Off

# Hyper-V Manager Virtual Machines Import Options

After you have restored your selected virtual machines, you must Import them into Hyper-V to power on and access the VMs.



To access Hyper-V import options, launch Hyper-V Manager, select **Import Virtual Machine**, and then select the VM directory you have restored.

There are 3 virtual machines import options in Hyper-V Manager:

- Register
- Restore
- Сору

### Register

Choose this option if the destination you selected for the recovered virtual machines are the destination you intend to run it from.

The original ID of the VM is used when registering the VM with hypervisor.

### Сору

Choose this option if you intend to import the recovered virtual machines multiple times (for example, you are using the virtual machines as a template for a new virtual machine). Hyper-V copies the restored files to the appropriate location for you.

A new ID is generated and used to register the VM with the hypervisor.

See Hyper-V Manager documentation for more information.

# **Hyper-V Replication**

Hyper-V Replication is a feature of Hyper-V 2012 and greater versions that allows users to replicate their production VMs to a secondary host on a near-continuous schedule.

If you are using Hyper-V replication, it is recommended that the Cloud Backup agent is installed on the recovery host and backs up the recovery VMs. This method puts less of a load on the production server. This method also provides more data protection.

Refer to the third-party Hyper-V Replication documentation for more information.



## **Deleting Hyper-V Backups**

To delete a Hyper-V backup, perform the following steps.

1. Navigate to the Computer Page.

See Navigate to the Computer Page for instructions. The Computer page is displayed.

	~		
Backup agent:	Connected 🚀		01/08/2014 - 04/08/2014
Computer name:	0021	Chart.	
Computer ID:	0021		
Account username:			
Email address:			
Phone number:	111-222-3333 Default Group		
Group: Local backup subscript			
cocal backup subscript	ion. Endored		
Activity 🛞 S	ettings 👔 Backup 🗙	Colete Restore	
Backup Set/Action	Start Date	Results	Status
	04/08/2014 00:00	Backed up 1 new items and 0.00 B online for 00:02:16	Completed
Backup Set 2			
Backup Set 2 Backup Set 1	04/07/2014 23:00	Backed up 1 new items and 512.20 MB online for 00:07:22	Completed
	04/07/2014 23:00 04/07/2014 00:00	Backed up 1 new items and 512.20 MB online for 00:07:22 Backed up 1 new items and 0.00 B online for 00:02:03	Completed

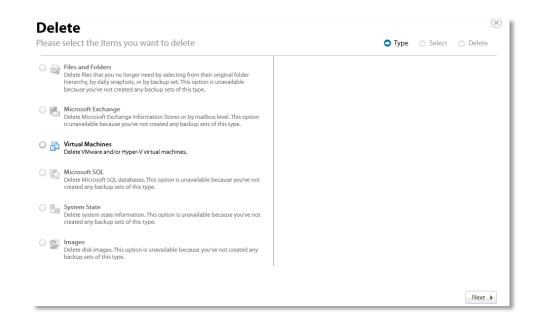
2. Select the Delete tab. The Your Deletes page is displayed.

Computer: 00 View Computer	21 (0021)				
COMPUTER INFORMATION					📝 Edit
Backup agent: Computer name: Computer ID; Account username:	Connected 20021 0021 0021			Chart.	01/08/2014 - 04/08/2014
Email address: Phone number: Group: Local backup subscript		X Delete	Bestore		
Activity 3 S	ettings 🍟 Backup	A Delete	oestore	Export Backup Selectio	n 🕇 Add Backup Set
Name Backup Set 1		Backup Type Hyper-V: Standard	Next Backup 04/08/2014 23:00	Automatic Backup	Manual Controls
Backup Set 2		Hyper-V: Standard	04/09/2014 00:00	AUTOMATIC de	×

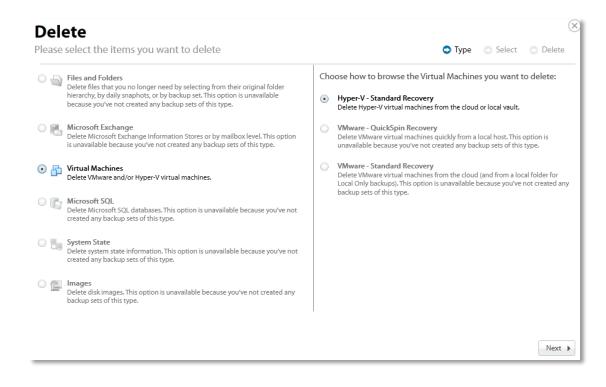
3. Select the **Delete Data** button.

The Delete Type page is displayed.





- 4. Select the Virtual Machines radio button.
- 5. The **Choose how to browse the Virtual Machines you want to delete** options are displayed in the right panel.



6. Select the Hyper-V Standard Recovery radio button, and then click Next.



The Virtual Machines are displayed.

Delete		$\otimes$
Please select the items you want to delete	✓ Type Select ODelete	
SELECT THE VIRTUAL MACHINES TO DELETE:	VIRTUAL MACHINES SELECTED TO DELETE:	
<ul> <li>☐ Shell 1 (HYPERV1)</li> <li>☐ ☐ Windows XP New (HYPERV1)</li> </ul>	Select the items on the left that you want delete.	
SELECT REVISION(S): Click on an item name above		
Click on a virtual machine name above to select which older revisions to delete.		
	Back     Next	

7. Select the virtual machines you want to delete. The selected virtual machines are displayed in the right panel of the screen.

Delete					$(\times)$
Please select the items you want to delete		🗸 Туре	Select	🔿 Delete	
SELECT THE VIRTUAL MACHINES TO DELETE:	VIRTUAL MACHINES SELECTED TO DELETE				
SELECT REVISION(S): Shell 1					
☑ 3/22/2014 12:00 AM					
			▲ Bac	k Next	•

8. In the bottom panel, select the specific revisions of the virtual machines you want to delete.



The following example shows 3 revisions selected.

ease select the items you want to delete	🗸 Туре 🤇	Select	Delet
ELECT THE VIRTUAL MACHINES TO DELETE:	RTUAL MACHINES SELECTED TO DELETE:		
Image: Shell 1 (HYPERV1) (All Revisions)       Image: Shell 1 (HYPERV1) (3 Revisions)         Image: Shell 1 (HYPERV1) (3 Revisions)       Image: Shell 1 (HYPERV1) (3 Revisions)	Shell 1 (HYPERV1) (All Revisions) Windows XP New (HYPERV1) (3 Revisions)		
LECT REVISION(5): Windows XP New 4/14/2014 11:00 PM			
4/13/2014 11:00 PM 4/12/2014 11:00 PM			
4/11/2014 11:00 PM 4/10/2014 11:00 PM			
4/9/2014 11:00 PM			
4/8/2014 11:00 PM			
4/7/2014 11:00 PM 4/6/2014 11:00 PM			
4/5/2014 11:00 PM			

9. After making your selections, click **Next**. The Delete Confirmation page is displayed.

lete se sele	ct the items you want to	o delete	🗸 Type	<b>√</b> Select	<ul> <li>Delete</li> </ul>
	Selection:	You have chosen to delete 1 item(s), totaling 1.00 GB.			
	lf everything looks good, cli	ck "Delete" below to begin deleting your items from online (and/or local) s	torage.		
				Back	Delete



No

Yes

10. Confirm your selection and click **Delete**.

If you select certain revisions to delete that other revisions (not currently selected for deletion) are dependent on, the following message is displayed.

There are 8 other backups that are dependent on your selection. Would you like to proceed with the delete and also delete the dependent backups?

If you select Yes, the dependent backups are also selected for deletion.

If you select **No**, nothing is changed. The message is displayed until selections are made that have no dependent revisions.

The Activity Page is displayed with the latest Delete.

COMPUTER INFORMATION			📝 Edit
Backup agent:	Connected 🚀	01/08/2014 - 0 Chart.	04/08/2014
Computer name:	0021	Charc	
Computer ID: Account username:	0021		
Email address:			
Phone number:	111-222-3333		
Group:	Default Group		
Local backup subscript			
cores onever anoscript	ion: Enabled		
coron correspondentipo	ion: Enabled		
		C Delete	
			atus
Activity Set/Action	ettings	Results Sta	moleted
Activity 3 Section Backup Set/Action Delete	rttings 👔 Beckup 💙 Start Date	Results Sta	
Activity Strain Set/Action Delete Backup Set 2	Attings Backup Start Date 04/08/2014 10:44	Results Sta Deleted 1 items and 1.00 GB for 00:00:05 Co	moleted
Activity Set/Action Delete Backup Set 2 Backup Set 1	Start Date         04/06/2014 10:44           04/06/2014 00:00         04/06/2014 00:00	Results Sta Deleted 1 items and 1.00 GB for 00:00:05 Co Backed up 1 new items and 0.00 B online for 00:02:16	moleted
Activity Set/Action Delete Backup Set 2 Backup Set 1 Backup Set 2	Start Date         04/08/2014 10:44           04/08/2014 00:00         04/07/2014 23:00	Results     Sta       Deleted 1 items and 1.00 GB for 00:00:05     Co       Backed up 1 new items and 0.00 B online for 00:02:16     Backed up 1 new items and 512:20 MB online for 00:07:22	moleted
Activity 💮 Se	Start Date           04/08/2014 10:44           04/08/2014 00:00           04/07/2014 23:00           04/07/2014 00:00	Results     Sta       Deleted 1 items and 1.00 GB for 00:00:05     Co       Backed up 1 new items and 0.00 B online for 00:02:16     Backed up 1 new items and 512.20 MB online for 00:07:22       Backed up 1 new items and 0.00 B online for 00:02:03     Backed up 1 new items and 0.00 B online for 00:02:03	moleted



# **VMware Backup and Restore**

This section includes the following information:

- VMware Features
- VMware Backup Prerequisites
- VMware Standard Backup and Restore
- VMware QuickSpin Standard Backup and Restore

### **VMware Features**

VMware includes both Standard and QuickSpin backups.

VMware Standard allows you to select multiple VMs running on multiple hosts to back up to the Cloud Backup cloud, the customer's local vault, or both.

You can see, select, and back up VMs that reside on hosts in a cluster. You can restore VMs to a host that is in a cluster.

VMware QuickSpin creates a recovery VM on a local vCenter/ESX host. Also, with QuickSpin, you can create and update a recovery VM on a host that is in a cluster. See *About VMware Clusters* for more information.

# **VMware Backup Prerequisites**

VMware backups have the following prerequisites:

- Minimum Requirements
- VMware Permissions
- VMware Supported Platforms

### **Minimum Requirements**

The following list provides the minimum requirements:

- 2 GHz dual-core CPU
- 1 GB of Total RAM (500 MB free RAM during backup, restore, or delete operation)
- Free disk space equaling twice the size of your largest protected file (not required for VM backups)
- Broadband Internet Connection
- Microsoft .NET Framework 3.5

### **VMware Supported Platforms**

The following platforms are supported by VMware.

- vSphere 4.1, 5.0, 5.1, and 5.5 (including clustered environments)
- All supported versions require a VMware Essentials license or higher

# VMware Standard Backup and Restore

This section includes the following topics:

About VMware Standard Backups



- Creating VMware Standard Backups
- Restoring VMware Standard Backups
- Deleting VMware Standard Backups

# **About VMware Standard Backups**

With VMware Standard Backups you can perform the following actions:

- Backup the VM locally, to the cloud, or both.
- Back up VMs in clustered environments.
- Choose to restore VMs into a sandbox test recovery or as a production recovery.
- Choose whether to attempt to automatically start the VMs upon restore or not.

## **Creating VMware Standard Backups**

To create a VMware Standard backup, perform the following steps.

1. Navigate to the Computer Page. See Navigate to the Computer Page for instructions.

The Computer page is displayed.

COMPUTER INFORMATION			C? Edi
			andera Sectore (Sectore)
Backup agent:	Connected 🊀		12/17/2013 - 03/17/201
Computer name:	0017		
Computer ID:	0017	82045	
Account username:			
Email address: Phone number:	111-222-3333	410MB	
Group:	Default Group	1200000	
Local backup subscripti			
			3/10/2014
and the second second	ttings	X Delete	
and the second second	ttings 🛛 😭 Backup	X Delete Restore	Status
ackup Set/Action			Status Completed
lackup Set/Action Backup Set 3	Start Date	Results	Completed
lackup Set/Action Backup Set 3 Delete	Start Date 03/17/2014 10:10	Results Backed up 1 new items and 6.17 MB locally for 00:01:42	Completed
lackup Set/Action Backup Set 3 Delete Delete	Start Date 03/17/2014 10:10 03/17/2014 09:14	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02	Completed
lackup Set/Action Backup Set 3 Delete Delete Restore	Start Date 03/17/2014 10:10 03/17/2014 09:14 03/17/2014 09:13	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02 Deleted 0 items and 0.00 B for 00:00:02	Completed Completed Failed
Activity Set/Action Backup Set/Action Backup Set 3 Delete Delete Restore Restore Restore	Start Date 03/17/2014 10:10 03/17/2014 09:14 03/17/2014 09:13 03/17/2014 09:12	Results Backed up 1 new items and 6.17 MB locally for 00:01:42 Deleted 2 items and 1.07 GB for 00:00:02 Deleted 0 items and 0.00 B for 00:00:02 Restored 1 items and 1.00 B for 00:00:10	Completed Completed Failed Completed



2. Click the **Backup** tab. The Your Backup Sets section is displayed.

COMPUTER INFORMATION								D Er
Backup agent:Connected #Computer name:0017Computer ID:0017Account username:Email address:Phone number:111-222-3333Group:Default GroupLocal backup subscription:Enabled			820M8 410M8 09	03/10/2014	12/	17/201	3 - 03/17/20	
Activity	ettings 👔 Backup	X Delete	Restore					
					Export Backup Selection	+	Add Bai	kup Set
Your Backup Sets				ext Backup	Automatic Backup	Manu	al Cor	trols
		Backup Type	14	CAR DOPROP				
Name		Backup Type Images		curring	AUTOMATIC		I	×
Your Backup Sets Name Backup Set 2 Backup Set 3			Re		AUTOMATIC <table-cell-columns></table-cell-columns>		1 I	×

3. Click the Add Backup Set button. The Create Backup Set page is displayed.

Files and Folders	Files and Folders			
Exchange Information Store	Choose this option to ba	ck up individual files and fo	olders on this computer, o	or
Exchange Mailbox Level	across the network.			
SQL				
System State	Backup Set Name:	Backup Set 7		
Virtual Machines	Backup Destination:	Online		
Images		C Local		

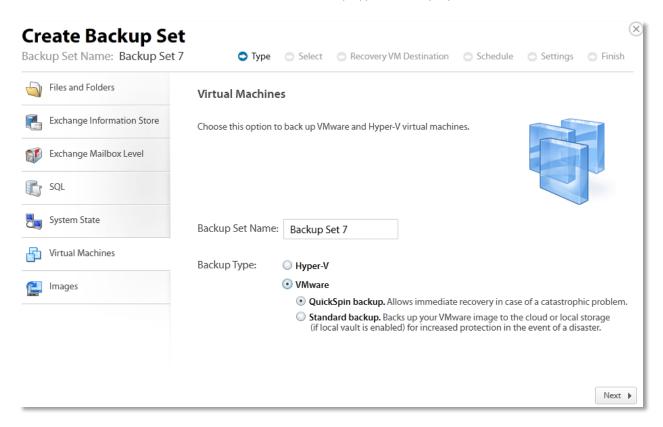
4. Click Virtual Machines.

The Create Backup Set Virtual Machines page is displayed.



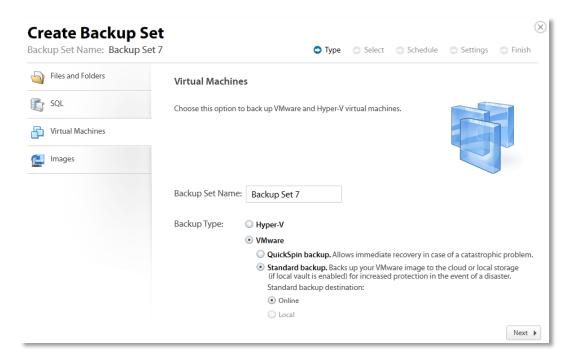
Create Backup Se Backup Set Name: Backup Set	
Files and Folders	
Exchange Information Store	Virtual Machines
Exchange Mailbox Level	Choose this option to back up VMware and Hyper-V virtual machines.
SQL	
System State	Backup Set Name: Backup Set 7
Virtual Machines	Backup Type: O Hyper-V
📔 Images	○ VMware
	Next >

5. Select the VMware radio button. The VMware Backup types are displayed.





6. Click the Standard backup, The Online and Local radio buttons are displayed.



7.Select your option, and then click **Next**. The Select page is displayed. If you've added a host before (by creating another VMware backup set), the host displays. Otherwise no hosts display.

Add either vCenter or stand-alone hosts by typing the IP address in the text box and clicking Add.

Create Backup Set	Ture	Coloret	• Cabadada	Continues	. Finish
Backup Set Name: Backup Set 7	🗸 Туре	Select	Schedule	<ul> <li>Settings</li> </ul>	Finish
SELECT THE VIRTUAL MACHINES YOU WANT TO BACK UP:	ITEMS SELECTED FO	OR BACKUP			
<ul> <li>IP2.168.22.202:443</li> <li>IP2.168.22.203:443</li> </ul>	Select the items on t	he left you wani	t to include in this b	aackup set.	
Change Server Credentials Type the IP address of the server you want to add (e.g. 192.168.1.1:443). If the host					
is managed by vCenter, please type the vCenter's IP address:					
Add					
				◀ Back	Next 🕨



The new IP address is displayed.

Create Backup Set Backup Set Name: Backup Set 7	✓ Type ● Select ◎ Schedule ◎ Settings ◎ Finish	×
SELECT THE VIRTUAL MACHINES YOU WANT TO BACK UP:	ITEMS SELECTED FOR BACKUP	
▷ [ <sup>1</sup> / <sub>6</sub> ] 192.168.22.202:443 ▷ [ <sup>2</sup> / <sub>6</sub> ] 192.168.22.203:443	Select the items on the left you want to include in this backup set.	
Change Server Credentials Type the IP address of the server you want to add (e.g. 192.168.1.1:443). If the host is managed by vCenter, please type the vCenter's IP address: 192.168.1.443 Add		

- 8. To change server credentials, select the host and then click the **Change Server Credentials** button. The Credentials pop up is displayed.
  - **Note**: You can authenticate to an : Unmanaged ESX host, a vCenter, or an ESX host managed to a vCenter. If you authenticate to a managed host, the dialog is slightly different it indicates that the host is managed and asks for the credentials for the vCenter.

T THE VIRTU	Please sign into the server: Username: administrator Password:		The backupset will rely on these credentials to perform the backup. Please use credentials that won't change often, or else the backup will fail.
			OK Cancel
ae Server C	redentials		
- ne IP addres	is of the server you want to add (e.g. 192.168.1.1:443). If the host enter, please type the vCenter's IP address:		
	Add		

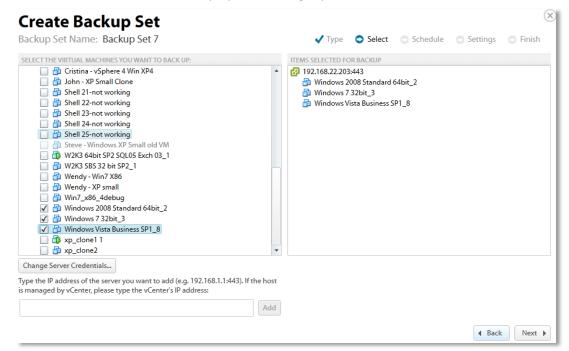
9. Make your changes and click **OK**.



Select the virtual machines to be backed up.

**Note**: In the left panel, the green display indicates that the VM is powered on. VMs that are from older hosts or have older hardware levels are grayed out.

The selected virtual machines are displayed in the right panel of the screen.





**Note**: If you selected a VM that requires special considerations, the following message is displayed. Ensure that the conditions listed are met, before clicking **Yes**, or the VM may not back up.

The following VM(s) may not be able to be backed up succe	essfully because of the follo	wing issues between Windows	2008/2011 SBS and ESXi 4.1 and later
Windows 2008 Standard 64bit_2			
Please ensure that the following conditions are met for the	e selected VMs:		
1. The UUID attribute must be enabled.			
2. The virtual machine must use only SCSI disks.			
3. The virtual machine must not use dynamic disks.			
If you are sure that these conditions are met for the above	VM(s), you may continue.		
Do you want to continue?			Yes No
🖌 👘 Windows 7 32bit_3			
🖌 👜 Windows Vista Business SP1_8			
xp_clone11			
🔄 👜 xp_clone2			
hange Server Credentials			
e the IP address of the server you want to add (e.g. 192.168.1.1 nanaged by vCenter, please type the vCenter's IP address:	:443). If the host		
	Add		

The selected virtual machines are displayed in the right panel.

ackup Set Name: Backup Set 7		🗸 Туре	Select	Schedule	Settings	Finish
ELECT THE VIRTUAL MACHINES YOU WANT TO BACK UP:		ITEMS SELECTED FO	RBACKUP			
<ul> <li>Cristina - vSphere 4 Win XP4</li> <li>John - XP Small Clone</li> <li>Shell 21-not working</li> <li>Shell 22-not working</li> <li>Shell 24-not working</li> <li>Shell 25-not working</li> <li>Shell 25-not working</li> <li>Steve - Windows XP Small old VM</li> <li>V2K3 64bit SP2 SQL05 Exch 03_1</li> <li>W2K3 SBS 32 bit SP2_1</li> <li>Wendy - Win7 X86</li> <li>Wendy - XP small</li> <li>Windows 2008 Standard 64bit_2</li> <li>Windows Vista Business SP1_8</li> <li>Xp_ clone1</li> <li>Xp_ clone2</li> </ul>		2 192.168.22.203				
Thange Server Credentials pe the IP address of the server you want to add (e.g. 192.168.1.1:443). If th	e host					
managed by vCenter, please type the vCenter's IP address:	Add					



10. After making your selections, click **Next**. The Create Backup Set Schedule page is displayed. See *About Scheduling Backups* for more information.

		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
Schedules Add	12 AM	<i>"</i>	2	1	2	\$	\$	3	
Sundays At 12:00 AM Allow To Finish	01 AM	12:00 AM Allow To Finish							
Mondays At 12:00 AM Allow To Finish	02 AM								
Tuesdays At 12:00 AM Allow To Finish	03 AM								_
Wednesdays At 12:00 AM Allow To Finish	04 AM								-
Thursdays At 12:00 AM Allow To Finish	06 AM								_
Fridays At 12:00 AM Allow To Finish	07 AM								_
Saturdays At 12:00 AM Allow To Finish	08 AM								_
	09 AM								-

11. Select the schedule for your backup, and then click **Next**. The Create Backup Set Settings page is displayed.

Create Bac	-					
Backup Set Name:	Backup Set 7	🗸 Туре	<ul> <li>Select</li> </ul>	Schedule	Settings	Finish
Settings Ad	Ivanced Archiving					
Archiving Rules	Keep $4 \stackrel{(\bullet)}{\bullet}$ Week(s) $\bullet$ and no fe Determine how long to keep each version an	wer than 4 💌 versions. d how many versions you want to		rver.		
Temporary Folder	Path: C:\Windows\TEMP\BackupAgent		Browse			
					4 Back	Next

12. Select the archiving settings and temporary folder destination, and then click **Next**. See *Archiving Rules* for more information.

**Note**: 1 GB of temporary space is recommended for VMware Standard backups.



The Create Backup Set Confirmation page is displayed.

	Selections:	This backup set contains 1 virtual machine(s).
Ó	Schedule:	The backup will run 7 day(s) a week, running a total of 7 time(s) per week.
	Archiving:	Keep all versions from now to 4 Week(s). After 4 Week(s) keep nothing. Keep no fewer than 4 version(s). Apply this rule to All files.
		If everything looks good, click "Create" below to complete the creation of this backup set.

13. Verify your backup selections, and then click **Create**. The Your Backup Sets page is displayed with your current backup status.

Your Backup Sets			🔒 Export Backup Sele	ction	Add I	Backup	Set
Name	Backup Type	Next Backup	Automatic Backup	Manu	ual Cor	ntrols	
😫 Backup Set 2	Images	Recurring	AUTOMATIC <		<b>%</b>	×	~
😫 Backup Set 3	Images	Recurring	AUTOMATIC <	$\triangleright$	1	×	
😫 Backup Set 4	Images	04/23/2014 00:00	AUTOMATIC <		<b>X</b>	×	
Backup Set 5	VMware: Standard	04/23/2014 00:00	AUTOMATIC <	$\triangleright$	<b>X</b>	×	
Backup Set 7	VMware: Standard	04/23/2014 00:00	AUTOMATIC <	$\triangleright$	<b>X</b>	×	
🖨 Bug 4239	Images		MANUAL		1	×	~

To manually run a backup set, click the green arrow (Play) button under Manual Controls. Also, note the next scheduled automatic backup run time.



### **Restoring VMware Standard Backups**

To restore a VMware Standard backup, perform the following steps.

1. Navigate to the Computer Page. See *Navigate to the Computer Page* for instructions. The Computer page is displayed.

COMPUTER INFORMATION			Edit
Backup agent: Computer name: Computer ID: Account username: Email address: Phone number: Group: Local backup subscripti	Connected 0028-a 0028 111-222-3333 Default Group ion: Disabled	01/24/2014 - 04/24/2 196MB 58MB 68 04/24/2014	2014
			_
Activity 💮 Se	ttings 👔 Backup	Celete Restore	
	ttings 3 Backup	Celete Restore Results Status	
ackup Set/Action			~
ackup Set/Action	Start Date	Results Status	^
ackup Set/Action Nestore	Start Date 04/24/2014 09:47	Results Status Restored 1 items and 125.00 MB for 00:02:57 Completed	Ŷ
ackup Set/Action lestore Mware Standard 2.2.4 FF	Start Date 04/24/2014 09:47 04/24/2014 08:43	Results Status Restored 1 items and 125.00 MB for 00:02:57 Completed Backed up 1 new items and 125.00 MB online for 00:02:11 Completed	Ŷ
ackup Set/Action Destore Mware Standard 12.4 FF	Start Date 04/24/2014 09:47 04/24/2014 08:43 04/24/2014 08:33	Results         Status           Restored 1 items and 125.00 MB for 00:02:57         Completed           Backed up 1 new items and 125.00 MB online for 00:02:11         Completed           Backed up 1 new items and 188.14 KB online for 00:00:18         Completed	î
Activity Set/Action Restore V/Wware Standard 5.2.4 FF 5.2.4 FF Delete Restore	Start Date 04/24/2014 09:47 04/24/2014 09:43 04/24/2014 08:33 04/24/2014 08:32	Results         Status           Restored 1 items and 125.00 MB for 00:02:57         Completed           Backed up 1 new items and 125.00 MB online for 00:02:11         Completed           Backed up 1 new items and 188.14 KB online for 00:00:18         Completed           Backed up 0 new items and 0.00 B online for 00:00:11         Warning	^

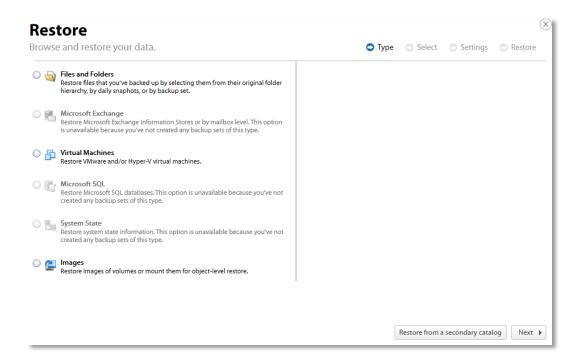
2. Click the **Restore** tab. The Your Restores section is displayed.

COMPUTER INFORMATION			📝 Edit
Backup agent: Computer name: Computer ID: Account username: Email address: Phone number: Group: Local backup subscrip	Connected 2 0028-a 0028 1111-222-3333 Default Group tion: Enabled	1208 608 08 03/13/2014	01/24/2014 - 04/24/2014
	Settings 👔 Backup 🗙 Delete	Restore	+ Start a Restore
Your Restores			Cancel Restore
Туре	Status ny data during the last 7 days.	Completed	cancer restore

3. Click the **Start a Restore** button.



The Restore Type page is displayed.



4. Select the **Virtual Machines** radio button. The VMware restore options are displayed in the right panel.

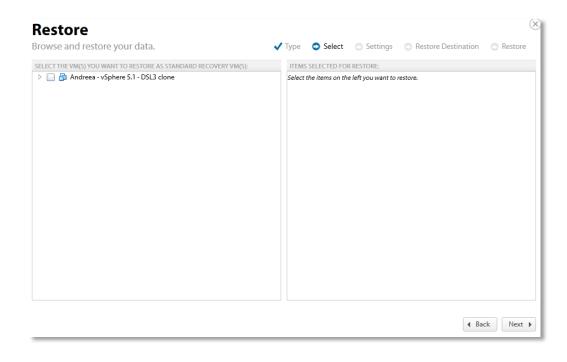
owse	e and restore your data.	🗢 Type 🔿 Select 🔿 Settings 🔘 Restore
	Files and Folders         Restore files that you've backed up by selecting them from their original folder hierarchy, by daily snaphots, or by backup set.         Microsoft Exchange         Restore Microsoft Exchange Information Stores or by mailbox level. This option is unavailable because you've not created any backup sets of this type.         Virtual Machines         Restore Wirrosoft SQL         Restore Microsoft SQL         Restore Microsoft SQL databases. This option is unavailable because you've not created any backup sets of this type.         System State         Restore system state information. This option is unavailable because you've not created any backup sets of this type.         Images         Restore images of volumes or mount them for object-level restore.	<ul> <li>Choose how to browse the Virtual Machines you want to restore:</li> <li>Hyper-V - Standard Recovery Restore Hyper-V virtual machines from the cloud or local vault. This option is unavailable because you've not created any backup sets of this type.</li> <li>VMware - QuickSpin Recovery Restore VMware virtual machines quickly from a local host. This option is unavailable because you've not created any backup sets of this type.</li> <li>VMware - Standard Recovery Restore VMware virtual machines from the cloud (and from a local folder for Local Only backups).</li> </ul>
		Restore from a secondary catalog Next



**Note:** You have the option of restoring from a secondary catalog if you have received a recovery drive from Cloud Backup. To do so, click the **Restore from a secondary catalog** button, and then select from the pop-up window as show below. Click **OK** when done.

Please select a catalog file below:			
<ul> <li>Evolve-PC</li> <li>Ø Local Disk (B:)</li> <li>Local Disk (C:)</li> <li>Ø Local Disk (E:)</li> </ul>			•
			-
	ОК	Cancel	

5. Select the VMware Standard Recovery radio button, and then click Next. The virtual machines are displayed.



6. Click the virtual machines to be restored.



The virtual machine revisions are displayed.

Restore					$\times$
Browse and restore your data.	🗸 Туре	Select	Settings	Restore Destinatio	n 🔿 Restore
SELECT THE VM(5) YOU WANT TO RESTORE AS STANDARD RECOVERY VM(5):		s SELECTED FOI	t RESTORE	restore.	
				4	Back Next 🕨

7. In the top left panel, double click the virtual machine to display the revisions, and then select the virtual machine revision radio button you want to restore.

Your selection is displayed in the right panel of the screen.

Restore		$(\times)$
Browse and restore your data.	Type 📀 Select 💿 Settings 💿 Restore Destination 💿	Restore
SELECT THE VM(S) YOU WANT TO RESTORE AS STANDARD RECOVERY VM(S):	ITEMS SELECTED FOR RESTORE:	
	4 Back	Next 🕨

8. After making your selections, click Next.



#### The Restore Settings page is displayed.

Restore type	Choose the type of restore you want to perform:
	Sandboxed test recovery Sandboxed test recovery is a non-destructive means for you to verify the integrity of your backed up VM(s) without impacting normal business operation. Your original VM(s) remain powered on and fully operational. Selected VMs will be copied from the cloud to a destination of your choice and deployed within an isolated VLAN.
	Production recovery Replace your selected, original VM(s) with a version stored in the cloud. If the original, protected VM(s) is still running and you've choosen to automatically start the recovery VM, the protected VM will be shut down before powering up the recovery VM.
Auto Start	After the VM(s) is restored, automatically start it.

9. Select a Restore type radio button.

If you select Sandboxed test recovery (default option)

- The source/production VMs are not shut down.
- The recovery VMs selected are started on their own separate VLAN to avoid conflicts with the production VMs.

If you select Production recovery

- The source/production VMs are shut down (if available).
- The recovery VMs selected are started using the production network. They assume the role of the original production VMs.
- 10. After making your selections, click **Next**. The Restore Destination page is displayed.

Browse and restore y	/our data.	🗸 Type 🖌 Select 🖌 Settin	gs 🗢 Restore Destination 💿 Restore
Select all VM(s)			
1. SELECT THE VM(S) TO SPEC	CIFY THEIR SETTINGS:	2. CHOOSE DESTINATION HOST FOR SELECTED VM(S):	3. SPECIFY SETTINGS FOR THE SELECTED VM(5)
Virtual Machine(s) Source Host IP Address		▶ □ 🔁 192.168.22.202	Please select a destination host to specify settings for the selected VMs.
🔲 🏰 Andreea - vSphere 5			
Destination Host			
Destination Host Resource Pool			
Resource Pool VM Folder			
Resource Pool			



In the left panel, select the VMs for which you want to specify settings.

**Option**: You can choose the settings for all VMs by selecting the **Select all VMs** checkbox so every VM uses the same Destination Host, Resource Pool, VM Folder, and Datastore.

The bottom left panel displays your selection status.

	store your data.	V Type V belett V betting	gs 🗢 Restore Destination 💿 Restore		
<ul> <li>Select all VM(s)</li> </ul>					
1. SELECT THE VM(S)	TO SPECIFY THEIR SETTINGS:	2. CHOOSE DESTINATION HOST FOR SELECTED VM(S):	3. SPECIFY SETTINGS FOR THE SELECTED VM(S		
/irtual Machine(s)	Source Host IP Address	▶ 🔲 🛃 192.168.22.202	Please select a destination host to specify		
🗸 🔂 Andreea - vS	phere 5. 192.168.21.25		settings for the selected VMs.		
Resource Pool	Not Specified				
VM Folder	Not Specified Not Specified				
Resource Pool /	Not Specified				

11. In the center panel, select the host on which the recovery VMs should reside as shown in the example below. The Destination Host status is displayed in the bottom left panel.

storise and rescore	your data.	🗸 Type 🗸 Select 🗸 Set	ttings 🛭 📀 Restore Destination 🛛 💿 Restore
✓ Select all VM(s)			
1. SELECT THE VM(S) TO SPI	ECIFY THEIR SETTINGS:	2. CHOOSE DESTINATION HOST FOR SELECTED VM(S):	3. SPECIFY SETTINGS FOR THE SELECTED VM(S
Virtual Machine(s)	Source Host IP Address	⊿ 📝 🛃 192.168.22.202	VM Folder
🖌 🚰 Andreea - vSphere	5. 192.108.21.25	> 🔽 鋼 5.1 Cluster	> 😝 Datastore
	ecified		
VM Folder Not Sp			

12. If selecting hosts that are part of a cluster, click the Cluster.



Restore					
Browse and rest	tore your	data.	🗸 Type 🖌 Select 🗸 Settings 📀 Restore Destination 💿 Re	estore	
✓ Select all VM(s)					
1. SELECT THE VM(S)	TO SPECIFY TH	EIR SETTINGS:	2. CHOOSE DESTINATION HOST FOR SELECTED VM(S): 3. SPECIFY SETTINGS FOR THE SELECT	ED VM	
Virtual Machine(s)	Sou	rce Host IP Address	▲ 📝 🗗 192.168.22.202 ▷ 🧊 VM Folder		
✓ 🗗 Andreea - vSphere 5.		.168.21.25	▲ 🗸 🛱 5.1 Cluster ▷ 🔋 Datastore	Datastore	
			• 192.168.21.23		
			Image: 192.168.21.25		
Destination Host 1	07 168 21 23				
Destination Host 1					
VM Folder N	lot Specified				
VM Folder N					
VM Folder N	lot Specified				
VM Folder N	lot Specified		Change Server Credentials Add New Server		
VM Folder N	lot Specified		Change Server Credentials Add New Server		
VM Folder N	lot Specified		Change Server Credentials Add New Server	Next	

The destination hosts are displayed. See *About VMware Clusters* for more information.

13. Optionally, click the **Change Server Credentials** button to change username and password. The Credentials popup is displayed.

rowse and re	estore your data.		🗸 Туре	🗸 Select	<ul> <li>Settings</li> </ul>	Restore Destination	Restore
Select all VM	Please sign into the server: Username:						E SELECTED VM(S
irtual Machine(	administrator						
🗸 🔂 Andreea -	Password:						
						OK Cancel	
Destination Host	192.168.21.23	-1					
/M Folder	Not Specified						
Datastore	Not Specified						
		Change Server	Credentials	Add New S	anvar		

- 14. Change username and password, and then click **OK**.
- 15. Optionally, click the **Add New Server** button to add a new server.



The Add New Server popup is displayed.

CELECTTHEVM	Type the IP Address of the serv Note: If the host is managed by			will then he abl	a to pavigate to the b	()	E SELECTED VI
/irtual Machine(	Note: If the nost is managed by	y vceniel, type the vcenie	i s ir address, foc	win then be abi	e to navigate to the f	Add	
			192.168.21.23				
Destination Host	192.168.21.23						
/M Folder	Not Specified						
Datastore	Not Specified						

16. Type the IP address in the text box, and then click **Add**. The credential prompt displays and asks you to authenticate.

Restore							$\times$
Browse and re	estore your data.		🗸 Туре	🗸 Select	<ul> <li>Settings</li> </ul>	Restore Destination	Restore
✓ Select all VM 1. SELECT THE VM	Please sign into the server: Username:						E SELECTED VM(S):
Virtual Machine(	administrator						
🗹 🗗 Andreea -	Password:						
	•••••						
						OK Cancel	
							·
	400 4 60 04 00						
Destination Host VM Folder	Not Specified						
Datastore	Not Specified						
		Change Server (	Credentials	Add New Se	erver		
						<ul> <li>◀ B</li> </ul>	ack Next 🕨



17. At the Restore Destination page, in the right panel, select the Resource Pool, VM Folder, and Datastore for the selected VMs as shown in the example below.

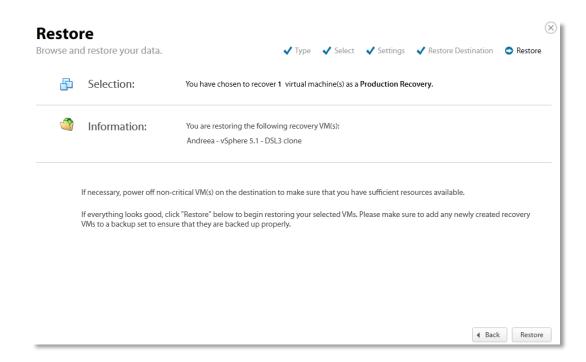
Restore			0
Browse and res	store your data.	🗸 Type 🗸 Select 🖌 Settings	Restore Destination ORestore
Select all VM(s)			
1. SELECT THE VM(S)	TO SPECIFY THEIR SETTINGS:	2. CHOOSE DESTINATION HOST FOR SELECTED VM(S):	3. SPECIFY SETTINGS FOR THE SELECTED VM(S):
Virtual Machine(s)	Source Host IP Address	⊿ 🖌 🛃 192.168.22.202	🔺 📁 VM Folder 🔶
🖌 🔂 Andreea - vS	phere 5. 192.168.21.25	▲ 🗸 印 5.1 Cluster	🔺 🔘 🎁 Andreea
		• 192.168.21.23	🔾 📁 Backup
		0 192.168.21.25	C     Restore
			🔺 🔘 🎁 Andrei
			🔺 🔘 🧊 vcenter folder
			🔘 🎁 QS - backup
			Image: Contract of the second seco
			🔺 🔘 🧊 Cosmin
			🔾 📁 Folder 1
			🔘 🎁 Folder 2
			C D Recovery
			🔺 🔘 🎁 Cristi
			🔘 🎁 Restore
Destination Host	192.168.21.23		▲ 🗃 Datastore
VM Folder	Restore		🔘 🚦 John1 (2 TB Total, 1.39 TB Free
Datastore J	lohn2 (4 TB Total, 3.2 TB Free)		💿 日 John2 (4 TB Total, 3.2 TB Free
			-
		Change Server Credentials Add New Server	

18. When done making your selections, click **Next**. The Restore Confirmation page is displayed.

Resto Browse an	<b>re</b> d restore your data.	✓ Type ✓ Select ✓ Settings ✓ Restore Destination Sectore
ß	Selection:	You have chosen to recover 1 virtual machine(s) as a Sandboxed test recovery.
3	Information:	You are restoring the following recovery VM(s): Andreea - vSphere 5.1 - DSL3 clone The following recovery VM(s) will be created: Andreea - vSphere 5.1 - DSL3 clone_Test_Recovery
		-critical VM(s) on the destination to make sure that you have sufficient resources available. lick "Create Sandboxed Test" below to begin restoring your selected VMs.
		▲ Back Create Sandboxed Test



If you selected Production recovery restore type, the following page is displayed.



19. Verify your selections, and then click **Create Sandboxed Test** or **Restore** (depending on your restore type).

The Your Restores page is displayed showing status of the restore.

Computer: 002	8-a (0028)		
COMPUTER INFORMATION			📝 Edit
Backup agent: Computer name: Computer ID: Account username: Email address: Phone number: Group: Local backup subscription	Running 20028-a 0028 111-222-3333 Default Group on: Disabled	100MB 50MB 08 04	01/24/2014 - 04/24/2014
Activity 🛞 Se	ttings 👔 Backup 🗙 Delete 🤍 Restore		
Your Restores			+ Start a Restore
Туре	Status	Completed	Cancel Restore
VMware: Standard	0 VM(s) Restored	RESTORE RUNNING	



When the restore is complete, the final status is displayed as show below.

View Computer	a (0028)		
COMPUTER INFORMATION			📝 Edi
Backup agent: Computer name: Computer ID: Account username:	Connected 🪀 0028-a 0028	10046	01/24/2014 - 04/24/2014
Email address: Phone number: Group: Local backup subscription	111-222-3333 Default Group h: Disabled	50MB 08	64/24/2014
Activity 🛞 Sett	ings 👔 Backup 🗙 Delete 🔳	Restore	
Your Restores			+ Start a Restore
Type VMware: Standard	Status 1 VM(s) Restored	Completed 04/24/2014 09:50	Cancel Restore

**Note**: if the host you restore to has a VM with the same name, the restored VM appends \_Recovery (or Recovery1 if \_Recovery exists).



#### **Deleting VMware Standard Backups**

To delete a VMware Standard backup, perform the following steps.

1. Navigate to the Computer Page. See *Navigate to the Computer Page* for instructions.

## The Computer page is displayed.

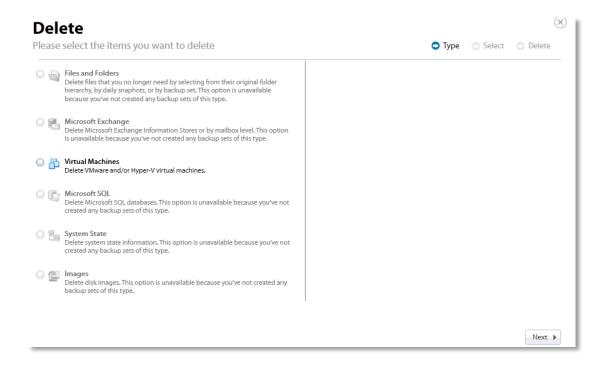
COMPUTER INFORMATION			📝 Edit
			Con Con
Backup agent:	Connected 🥢		01/25/2014 - 04/25/2014
Computer name:	0028-a		
Computer ID:	0028	260MB	
Account username:			
Email address:		100MB	
Phone number:	111-222-3333	TOONS	
Group:	Default Group		
Local backup subscript	ion: Disabled	08 04/35/2014	
	tttings 🛛 😭 Backup 🔅	X Delete Restore	Status
Backup Set/Action			Status Warning
Backup Set/Action	Start Date	Results	Warning
Activity Set/Action Backup Set/Action VMware Standard Restore 5.2.4 VMWare	Start Date 04/24/2014 11:39	Results Backed up 0 new items and 0.00 B online for 00:00:17	Warning
Backup Set/Action VMware Standard Restore	Start Date 04/24/2014 11:39 04/24/2014 11:18	Results Backed up 0 new items and 0.00 B online for 00:00:17 Restored 1 items and 0.00 B for 00:02:26	Warning Completed
Sackup Set/Action VMware Standard Restore 5.2.4 VMWare Restore	Start Date 04/24/2014 11:39 04/24/2014 11:18 04/24/2014 11:07	Results Backed up 0 new items and 0.00 B online for 00:00:17 Restored 1 items and 0.00 B for 00:02:26 Backed up 1 new items and 128.00 MB locally for 00:01:51	Warning Completed Warning
Backup Set/Action VMware Standard Restore 5.2.4 VMWare	Start Date 04/24/2014 11:39 04/24/2014 11:18 04/24/2014 11:07 04/24/2014 09:47	Results Backed up 0 new items and 0.00 B online for 00:00:17 Restored 1 items and 0.00 B for 00:02:26 Backed up 1 new items and 128:00 MB locally for 00:01:51 Restored 1 items and 125:00 MB for 00:02:57	Warning Completed Warning Completed

2. Select the Delete tab. The Your Deletes page is displayed.

Computer: 0028	3-a (0028)		
COMPUTER INFORMATION			📝 Edit
Backup agent: Computer name: Computer ID: Account username: Email address: Phone number: Group: Local backup subscriptio	Connected 0028-a 0028 111-222-3333 Default Group on: Disabled	200MB 100MB 08	01/25/2014 - 04/25/2014
Activity 🚳 Set	tings 👔 Backup 🗙 Delete	Restore	
Your Deletes			+ Delete Data
Type You have not deleted any d	Status data in the last 7 days.	Completed	Cancel Delete

3. Select the **Delete Data** button. The Delete Type page is displayed.





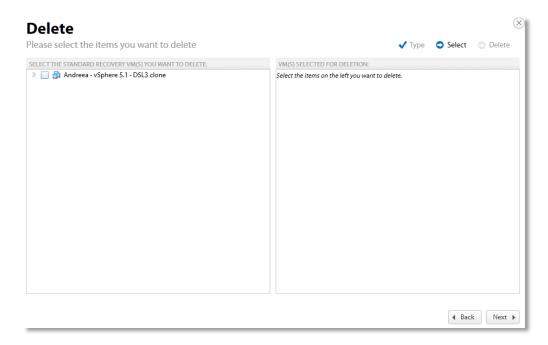
4. Select the **Virtual Machines** radio button. The Virtual Machine options are displayed in the right panel.

0 ५	Files and Folders Delete files that you no longer need by selecting from their original folder hierarchy, by daily snaphots, or by backup set.	Choose how to browse the Virtual Machines you want to delete: Hyper-V - Standard Recovery Delete Hyper-V virtual machines from the cloud or local vault. This option is unavailable because you've not created any backup sets of this type.
0	Microsoft Exchange Delete Microsoft Exchange Information Stores or by mailbox level. This option is unavailable because you've not created any backup sets of this type.	VMware - QuickSpin Recovery     Delete VMware virtual machines quickly from a local host.
⊙ ₽	<b>Virtual Machines</b> Delete VMware and/or Hyper-V virtual machines.	<ul> <li>VMware - Standard Recovery         Delete VMware virtual machines from the cloud (and from a local folder for             Local Only backups).     </li> </ul>
0	Microsoft SQL Delete Microsoft SQL databases. This option is unavailable because you've not created any backup sets of this type.	
0	System State Delete system state information. This option is unavailable because you've not created any backup sets of this type.	
0 😭	Images Delete disk images.	

5. Select the VMware Standard Recovery radio button, and then click Next.



The Virtual Machines are displayed.



6. Select the virtual machines you want to delete. The selected virtual machines are displayed in the right panel of the screen.

**Note**: If you click the arrow button next to the VM, a list of revisions are displayed. You can choose to delete specific revisions instead of the entire VM.

If you select certain revisions to delete that other revisions (not currently selected for deletion) are dependent on, the following message is displayed.



If you select Yes, the dependent backups are also selected for deletion.

If you select **No**, nothing is changed. The message is displayed until selections are made that have no dependent revisions.



Delete				×
Please select the items you want to delete		🗸 Туре	Select	🔿 Delete
SELECT THE STANDARD RECOVERY VM(5) YOU WANT TO DELETE:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: Select the standard recovery vm(s) you want to delete:           Image: S	VM(5) SELECTED FOR DELETION:			
			▲ Back	k Next 🕨

7. After making your selections, click **Next**. The Delete Confirmation page is displayed.

	e <b>lete</b> se sele	ct the items you want t	o delete	🗸 Туре	✓ Select	Delete
		Selection:	You have chosen to delete 1 item(s), totaling 125.00 MB.			
		If everything looks good, cl	ick "Delete" below to begin deleting your items from online (and/or local)	storage.		
_					4 Back	Delete



8. Confirm your selection, and then click **Delete**. The Activity Page is displayed with the latest Delete.

OMPUTER INFORMATION			📝 Edit
			Ce con
Backup agent:	Connected 🚀	01/08/2014 - 04/	08/2014
Computer name:	0021	Chart.	
Computer ID:	0021		
Account username:			
Email address:			
Phone number:	111-222-3333		
Group: Local backup subscripti	Default Group		
course sector			
Activity 💮 Se	ettings	X Delete	
-	ttings 🏦 Backup	X Delete Restore Results Statu	s
Backup Set/Action			-
Backup Set/Action	Start Date	Results Statu	leted
Backup Set/Action Delete Backup Set 2	Start Date 04/08/2014 10:44	Results Statu Deleted 1 items and 1.00 GB for 00:00:05 Comp	leted
Backup Set/Action Delete Backup Set 2 Backup Set 1	Start Date 04/08/2014 10:44 04/08/2014 00:00	Results Statu Deleted 1 items and 1.00 GB for 00:00:05 Comp Backed up 1 new items and 0.00 B online for 00:02:16	leted
Backup Set/Action Delete Backup Set 2 Backup Set 1 Backup Set 2	Start Date 04/08/2014 10:44 04/08/2014 00:00 04/07/2014 23:00	Results     Statu       Deleted 1 items and 1.00 GB for 00:00:05     Comp       Backed up 1 new items and 0.00 B online for 00:02:16     Backed up 1 new items and 512.20 MB online for 00:07:22	leted
Activity  Activity  Backup Set/Action Delete Backup Set 2 Backup Set 2 Backup Set 1 Backup Set 1 Backup Set 2 Backup Set 3 Backup Set	Start Date           04/08/2014 10:44           04/08/2014 00:00           04/07/2014 23:00           04/07/2014 00:00	Results     Statu       Deleted 1 items and 1.00 GB for 00:00:05     Comp       Backed up 1 new items and 0.00 B online for 00:02:16     Backed up 1 new items and 512.20 MB online for 00:07:22       Backed up 1 new items and 0.00 B online for 00:02:03     Backed up 1 new items and 0.00 B online for 00:02:03	leted



## VMware QuickSpin Backup and Restore

This section includes the following topics:

- About QuickSpin Backups
- Creating QuickSpin Backups
- Restoring QuickSpin Backups
- Deleting QuickSpin Backups

## About QuickSpin Backups

VMware QuickSpin extends VM backup ability to allow you to spin up a standby virtual machine onsite in a matter of minutes in case of a failure with your primary servers.

The VMware QuickSpin backup replicates the source VM data to a standby VM on another host. You need to select the Destination Host and the Datastore that is hosting the recovery VMs.

When the backup runs, the recovery VM is updated so the standby VM is always up-to-date as of the latest backup. Whatever has changed between the last backup and the current backup is then stored in the local storage that you selected.

QuickSpin restores are very simple, partially because the recovery VMs are standing by locally at the customer's site, ready to be started to replace their disabled production counterparts.

### **QuickSpin Licensing**

License fees for QuickSpin are charged per host. For example, if backup 1 VM is on a host then a fee is charged for a license for that host. If you backup a VM from another host, there is a fee charged for another license. You can back up as many VMs on the host as you would like.



## **Creating QuickSpin Backups**

To create a VMware QuickSpin backup, perform the following steps.

1. Navigate to the Computer Page. See *Navigate to the Computer Page* for instructions. The Computer page is displayed.

View Com	ter: 0017 (0017)					
COMPUTER INFORM	IATION				(2.1	Edit
Backup agent: Computer name Computer ID: Account userna Email address: Phone number: Group: Local backup st	e: 0017 0017 ame:	Group		#20M8 410M8 08	12/17/2013 - 03/17/20	014
						_
Activity	Settings	1 Backup	X Delete	& Restore		_
	A CONTRACTOR OF A			Restore	Status	_
	A CONTRACTOR OF A	ate	Res		Status Completed	~
Backup Set/Act	tion Start Da	ate 014 10:10	Res Bac	ults		-
Backup Set/Act Backup Set 3	tion Start Da	ate 014 10:10 014 09:14	Res Bac Dek	ults ked up 1 new items and 6.17 MB locally for 00:01:42	Completed	î
Backup Set/Act Backup Set 3 Delete	tion Start Da 03/17/20 03/17/20	ate 214 10:10 214 09:14 214 09:13	Resi Bac Deli Deli	ults ked up 1 new items and 6.17 MB locally for 00:01:42 eted 2 items and 1.07 GB for 00:00:02	Completed	î
Backup Set/Act Backup Set 3 Delete Delete	tion Start Da 03/17/20 03/17/20 03/17/20	ate 014 10:10 014 09:14 014 09:13 014 09:12	Res Bad Deli Deli Rep	ullts ked up 1 new items and 6.17 MB locally for 00:01:42 eted 2 items and 1.07 GB for 00:00:02 eted 0 items and 0.00 B for 00:00:02	Completed Completed Failed	î
Backup Set/Act Backup Set 3 Delete Delete Restore	tion Start Da 03/17/20 03/17/20 03/17/20 03/17/20	ate 014 10:10 014 09:14 014 09:13 014 09:12 014 09:10	Res Bac Del Del Res Res	sults sked up 1 new items and 6.17 MB locally for 00:01:42 eted 2 items and 1.07 GB for 00:00:02 eted 0 items and 0.00 B for 00:00:02 stored 1 items and 1.00 B for 00:00:10	Completed Completed Failed Completed	Î



2. Click the **Backup** tab. The Your Backup Sets section is displayed.

COMPUTER INFORMATION					📝 Ed
Backup agent: Computer name: Computer ID: Account username: Email address: Phone number: Group: Local backup subscrip			820M8 410M5 08	03/10/2014	12/17/2013 - 03/17/201
an merete at.	ettings 1 Backup	X Delete 🤳	Restore	(0)	10.000
		Backup Type	Next Backup	Automatic Backup	+ Add Backup Set
		packup type	Recurring		> S ×
Name		Images	Recorning		
Your Backup Sets Name Backup Set 2 Backup Set 3		Images Images	Recurring	AUTOMATIC 🦛	×

3. Click the Add Backup Set button. The Create Backup Set Files and Folders page is displayed.

Create Backup Set Backup Set Name: Backup Set 8	
Files and Folders	Files and Folders
Exchange Information Store	Choose this option to back up individual files and folders on this computer, or
Exchange Mailbox Level	across the network.
SQL	
System State	Backup Set Name: Backup Set 8
Virtual Machines	Backup Destination: <ul> <li>Online</li> </ul>
🔛 Images	_ Local
	Next 🕨

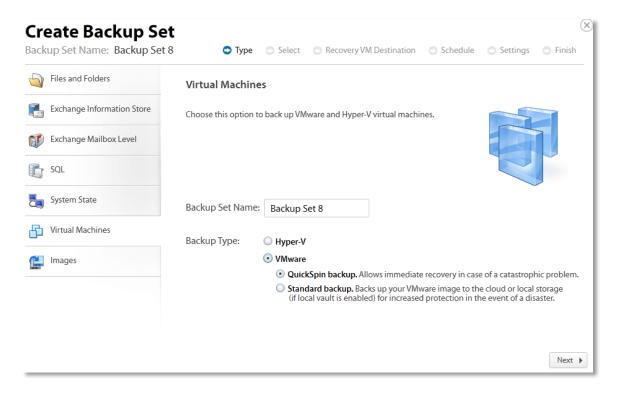
4. Click Virtual Machines.

The VMware Backup types are displayed.



<ul> <li>Exchange Information Store</li> <li>Exchange Mailbox Level</li> <li>SQL</li> <li>System State</li> <li>Backup Set Name: Backup Set 8</li> <li>Virtual Machines</li> </ul>	Files and Folders	Virtual Machin	nes	
SQL     Backup Set Name:       Backup Set 8	Exchange Information Store	Choose this option	to back up VMware and Hyper-V virtual machines.	
System State Backup Set Name: Backup Set 8 Virtual Machines	Exchange Mailbox Level			
Backup Set Name: Backup Set 8	SQL			
	System State	Backup Set Nam	e: Backup Set 8	
Buckup ()pci () ()pci ()	Virtual Machines	Backup Type:	O Hyper-V	
Images O VMware	Images		O VMware	

5. Click the **VMware** radio button. The Create Backup Set Virtual Machines page is displayed with QuickSpin selected by default.



6. Click Next.



The Virtual Machine hosts are displayed.

Create Backup Set Backup Set Name: Backup Set 8	Type	Select	Recovery VM Destination	Schedule	Settings	S Finish
	<ul> <li>Type</li> </ul>	U Delect	- ·	U Defiedule	U Dettings	U THIST
SELECT THE VIRTUAL MACHINES YOU WANT TO BACK UP:			ITEMS SELECTED FOR BACKUP			
<ul> <li>P 192.168.22.203.443</li> <li>P 22.168.22.203.443</li> </ul>			Select the items on the left you want	to include in this b	ackup set.	
Change Server Credentials						
Type the IP address of the server you want to add (e.g. 192 is managed by vCenter, please type the vCenter's IP addre		). If the host				
		Add				
					◀ Back	Next 🕨

- 7. Select the host to display the virtual machines. The Change Server Credentials button is activated.
- 8. To change server credentials, click the **Change Server Credentials** button. The Credentials pop up is displayed.

	Backup Set ame: Backup Set 8			🗸 Туре	Select	Schedule	Settings	Finish
SELECT THE VIRTU 192.1 192.1 192.1	Please sign into the serve Username: administrator Password:	:		er	form the back	II rely on these cre up. Please use cre en, or else the bac	dentials that	
						ОК	Cancel	
	redentials s of the server you want to ad enter, please type the vCenter		), lf the host					
			Add					
								k Next 🕨

- 9. Make your changes and click **OK**.
- 10. To add a new server, type the IP address in the text box and then click the **Add** button.
  - **Note**: You can authenticate to an Unmanaged ESX host, a vCenter, or an ESX host managed to a vCenter.



If you authenticate to a managed host, the dialog is slightly different – it indicates that the host is managed and asks for the credentials for the vCenter.

The added server is displayed.

Create Backup Set						×
Backup Set Name: Backup Set 8		🗸 Type	Select	Schedule	Settings	🔿 Finish
SELECT THE VIRTUAL MACHINES YOU WANT TO BACK UP:		ITEMS SELECTED FO	OR BACKUP			
<ul> <li>22.108.22.202:443</li> <li>23.168.22.203:443</li> <li>24.168.22.203:443</li> </ul>		Select the items on t	he left you wan	t to include in this k	backup set.	
Change Server Credentials Type the IP address of the server you want to add (e.g. 192.168.1.1:44 managed by vCenter, please type the vCenter's IP address: 192.168.1.443	3). If the host					
192.100.1,443	Add					
					<ul> <li>Back</li> </ul>	k Next ≱

11. Double-click the host name. The virtual machines to be selected for backup are displayed.

Create Backup Set	$\times$
Backup Set Name: Backup Set 8 🗸 Type 💿 Select	Recovery VM Destination Schedule Settings Finish
SELECT THE VIRTUAL MACHINES YOU WANT TO BACK UP:	ITEMS SELECTED FOR BACKUP
▶	Select the items on the left you want to include in this backup set.
Change Server Credentials Type the IP address of the server you want to add (e.g. 192.168.1.1:443). If the host is managed by vCenter, please type the vCenter's IP address:	
Add	Back     Next

12. Select the virtual machines to be backed up.



The selected virtual machines are displayed in the right panel of the screen.

**Note**: In the left panel, the green display indicates that the VM is powered on. VMs that are from older hosts or have older hardware levels are grayed out.

Create Backup Set		$(\times)$
Backup Set Name: Backup Set 8	✓ Type Select Recovery VM Destination Schedule Settings F	Finish
SELECT THE VIRTUAL MACHINES YOU WANT TO BACK UP:	ITEMS SELECTED FOR BACKUP	
<ul> <li>Cristina - vSphere 4 Win XP4</li> <li>John - XP Small Clone</li> <li>Shell 2-not working</li> <li>Shell 22-not working</li> <li>Shell 24-not working</li> <li>Shell 24-not working</li> <li>Shell 24-not working</li> <li>Shell 25-not working</li> <li>Steve - Windows XP Small old VM</li> <li>W2K3 64bit SP2 SQL05 Exch 03_1</li> <li>W2K3 64bit SP2 SQL05 Exch 03_1</li> <li>W4K3 SB2 32 bit SP2_1</li> <li>Wendy - Win7 X86</li> <li>Wendy - XP small</li> <li>Win7_x86_4debug</li> <li>Windows 2008 Standard 64bit_2</li> <li>Windows Vista Business SP1_8</li> <li>M xp_clone1</li> <li>Xp_clone1</li> </ul>	<ul> <li> <sup>[2]</sup> 192.168.22.203:443         <sup>[2]</sup> Windows 7 32bit_3         <sup>[2]</sup> Windows Vista Business SP1_8         <sup>[2]</sup> <sup>[2]</sup> Windows Vista Business SP1_8         <sup>[2]</sup> <sup>[2]</sup></li></ul>	
Change Server Credentials Type the IP address of the server you want to add (e.g. 1 is managed by vCenter, please type the vCenter's IP add		
Is managed by vicenter, prease type the vicenter's IP add	Add	
	4 Back	Next 🕨

13. After making your selections, click Next.

**Note**: If you selected a VM that requires special considerations, the following message is displayed. Ensure that the conditions listed are met, before clicking **Yes**, or the VM may not back up.

Windows 2008 Standard 64bit_2         Please ensure that the following conditions are met for the selected VMs:         1. The UUID attribute must be enabled.         2. The virtual machine must use only SCSI disks.         3. The virtual machine must not use dynamic disks.         If you are sure that these conditions are met for the above VM(s), you may continue.         Do you want to continue?         Yes         If Windows 732bit_3         Yes         Yes	
Yes         Image: Straight of the st	
2. The virtual machine must use only SCSI disks. 3. The virtual machine must not use dynamic disks. If you are sure that these conditions are met for the above VM(s), you may continue. Do you want to continue? Yes Yes Do you want to continue? Yes Do you want to continue? Yes	
3. The virtual machine must not use dynamic disks. If you are sure that these conditions are met for the above VM(s), you may continue. Do you want to continue? Yes Yes Mindows 7 32bit_3 Mindows Vista Business SP1_8 Mindows Vista Business SP1_8	
f you are sure that these conditions are met for the above VM(s), you may continue. Do you want to continue? Yes D Windows 7 32bit_3 D Windows Vista Business SP1_8 D transport of the second seco	
Do you want to continue? Yes Yes Mindows 7 32bit_3 Mindows Vista Business SP1_8 Mindows Vista Business SP1_8	
✓ 合 Windows Vista Business SP1_8       → xp_clone1 1	No
hange Server Credentials	
be the IP address of the server you want to add (e.g. 192.168.1.1:443). If the host nanaged by vCenter, please type the vCenter's IP address:	
Add	

The Recovery VM Destination page is displayed.

Select all VM(s)		
1. SELECT THE VM(S) TO	D SPECIFY THEIR SETTINGS:	2. CHOOSE DESTINATION HOST FOR SELECTED VM(S): 3. SPECIFY SETTINGS FOR THE SELECTED VM(S)
Virtual Machine(s)	Source Host IP Address	Please select a destination host to specify     settings for the selected VMs.
🖌 🗄 Windows 7 328	-	Settings for the selected vivis.
🖌 🚰 Windows Vista	Busin 192.168.21.27	I 192.168.22.203
Destination Most M	46	
Resource Pool No	ot Specified	
VM Folder No		

14. In the left panel, select the VMs for which you want to specify settings.

**Note**: You can choose the settings for all, one, or some VM(s). With the VMs panel, you can select any number of VMs to edit. VMs that do not have all their settings selected display as **Bold** and *Italic*. Clicking the **Select all VM(s) check box** provides all VMs with the same settings. You also can set the destination for each individual VM.

15. In the center panel, select the host on which the recovery VMs should reside as shown in the example below.

Select all VM(s		
	5) TO SPECIFY THEIR SETTINGS:	2. CHOOSE DESTINATION HOST FOR SELECTED VM(S): 3. SPECIFY SETTINGS FOR THE SELECTED VM(S):
Virtual Machine(s √ ∰Windows 7 √ ∰Windows Vi		▲ ☑ 192.168.22.202       > ∅ W Folder         ▲ ☑ 192.168.21.23       > 192.168.21.25         ▶ ☑ 192.168.22.203       > ☑ 192.168.22.203
Destination Host	192,168,21,23	
Destination Host VM Folder	192.168.21.23 Not Specified	



Optionally, click the Change Server Credentials button to change username and password.

Select all VM SELECT THE VM rtual Machine( Windows	Please sign into the server: Username: administrator Password:	•	The backupset will perform the backup won't change often	p. Please use cr	edentials that	E SELECTED VM
				ОК	Cancel	
estination Host source Pool	Not Specified Not Specified					
I Folder	Not Specified					
	Not Specified					

- 16. Change username and password, and then click **OK**.
- 17. Optionally, click the **Add New Server** button to add a new server.

The Add New Server popup is displayed.

/irtual Machine(	Note: If the host is managed by v0	Center, type the vCenter's IP address. You will then be	e able to navigate to the host you want.	
🛛 🔁 Windows V	fista Busin 192.168.21.27	▷ 22.168.22.203		
Destination Host	Not Specified			
	Not Specified Not Specified			
Destination Host Resource Pool /M Folder				



- 18. Type the IP address in the text box, and then click **Add**.
- 19. In the right panel, select the Resource Pool, VM Folder, and Datastore for the selected VMs as shown in the example below.

	me: Backup Set 8	✓ Type ✓ Select ○ Recovery VM Destination	🔘 Schedule 🔘 Settings 🔘 Finish
Virtual Machine(s)	TO SPECIFY THEIR SETTINGS: Source Host IP Addres	2. CHOOSE DESTINATION HOST FOR SELECTED VM(5): 4   2   2   2   2   2   2   2   2   2	3. SPECIFY SETTINGS FOR THE SELECTED VM(S): VM Folder  VM Folder  KG(F)  KG(F
	192.168.21.23 Not Specified Not Specified		<ul> <li>♥ Folder 2</li> <li>♥ Recovery</li> <li>♥ Cristi</li> <li>♥ Restore</li> </ul>
		Change Server Credentials Add New Server	▲ Back Next →

## 20. Click Next.

The Create Backup Set Schedule page is displayed. See *About Scheduling Backups* for more information.

	ackup Set ne: Backup Set 8 V Type V Select V Recovery VM Destination O Schedule O Settings O Finish
Scheduling	Create recurring interval-based schedule     Create calendar-based schedule     Specify that the QuickSpin backup set will scan for changes at a specified time interval or from a pre-set calendar-based schedule.
	ckSpin destination every 1 • hour(s) •
	✓ Back Next ►

21. Select the schedule for your backup, and then click Next.



The Create Backup Set Settings page is displayed.

<b>Create Back</b>	up Set 🛛 🔅
Backup Set Name: B	ackup Set 8 🗸 Type 🗸 Select 🗸 Recovery VM Destination 🖌 Schedule 🗢 Settings 💿 Finish
Archiving rules	<ul> <li>Keep 96 • recoverable versions of backups at the destination.</li> <li>Notes:</li> <li>1. You can retain up to 99 revisions per virtual machine. With your chosen schedule of backing up every 1 hour(s) and keeping 96 version(s), you will retain up to 4 day(s) of recoverable versions at the destination.</li> <li>2. The backup set preserves the current state of the virtual machine(s) only. User generated snapshots are not saved.</li> </ul>
Temp Folder	Path: C:\Windows\TEMP\BackupAgent Browse
Incremental version storage location	Specify the path where the incremental versions of your recovery VM(s) will be stored. This data will be used to recover previous versions of QuickSpin recovery VMs: Path: G:\ In order to restore a recovery VM successfully, you will need both the recovery VM snapshot information (in vSphere) and the incremental version information stored in this location. Note: If you want to change the location of the incremental versions, please choose a path that will not be compromised, deleted, or moved.
	▲ Back Next ▶

22. Select the archiving rules setting and temporary folder destination.

## See Archiving Rules for more information.

Note: 1 GB of temporary space is recommended for VMware Standard backups.

23. Browse to or type the incremental version storage location in the Path text box, and then click **Next**.

**Note**: To restore a VM successfully, you need both the recovery VM snapshot information (in vSphere) and the incremental version information stored in this location. If you want to change the location of the incremental versions, choose a path that cannot be compromised, deleted, or moved.



The Create Backup Set Confirmation page is displayed.

	<b>Backup</b> t Name: Backup		Recovery VM Destination 🛛 Schedule 🗸 Setting:	s 💿 Finish
	Selections:	The QuickSpin backup set contains <b>2 vi</b> r You are backing up this VM(s) from the fo		
		Licensed QuickSpin Source Host	VM	
		192.168.21.27 192.168.21.27	Windows 7 32bit_3 Windows Vista Business SP1_8	
Ó	Schedule:	The QuickSpin backup set will run every	1 hour(s).	
Į	Archiving:	You will be able to recover up to <b>96 vers</b> i	ion(s) from the past 4 day(s).	
sched	uled to run.	he locations of the destination hosts of the reco ck "Create" below to create this QuickSpin Reco	overy VMs, they will not be changed until the backup set is very backup set.	i next
			◀ Bac	k Create

24. Verify your backup selections, and then click Create.

**Note**: If you added an unlicensed host and added a VM to backup, the message above would indicate that you would be charged a licensing fee. See *VMware QuickSpin Licensing* for more information.



The Your Backup Sets page is displayed with your current backup status.

our Backup Sets			🔒 Export Backup Sele	ction 🔤	Add	Backup	Set
lame	Backup Type	Next Backup	Automatic Backup	Manu	ial Cor	ntrols	
Backup Set 2	Images	Recurring	AUTOMATIC <		<u> (</u>	×	~
Backup Set 3	Images	Recurring	AUTOMATIC <		<b>S</b>	×	
Backup Set 4	Images	04/23/2014 00:00	AUTOMATIC <		<b>S</b>	×	
Backup Set 5	VMware: Standard	04/23/2014 00:00	AUTOMATIC <		<u> (</u>	×	
🗗 Backup Set 7	VMware: Standard	04/23/2014 00:00	AUTOMATIC <		<b>S</b>	×	
Backup Set 8	VMware: QuickSpin	Recurring	AUTOMATIC 🔄		1	×	$\sim$

To manually run a backup set, click the green arrow (Play) button under Manual Controls. Also, note the next scheduled automatic backup run time.

### **Restoring QuickSpin Backups**

To restore a VMware QuickSpin backup, perform the following steps.

1. Navigate to the Computer Page. See *Navigate to the Computer Page* for instructions. The Computer page is displayed.

COMPUTER INFORMATION			📝 Edit
Backup agent:	Connected 🥢	01/24/2014 - 04	/24/2014
Computer name:	0028-a		
Computer ID:	0028	100468	
Account username:			
Email address:		SOMB	
Phone number: Group:	111-222-3333 Default Group		
uroup: Local backup subscript			
cocai backup subscript	ion: Disabled	04/24/2014	
Antivity 🖓 t	ettione	M Delate	
	ettings 👔 Backup	K Delete Restore Results Statu:	5
Backup Set/Action			
Backup Set/Action	Start Date	Results Statu	eted 🗸
Backup Set/Action Restore VMware Standard	Start Date 04/24/2014 09:47	Results Status Restored 1 items and 125.00 MB for 00:02:57 Compl	eted A
Backup Set/Action Restore VMware Standard 5.2.4 FF	Start Date 04/24/2014 09:47 04/24/2014 08:43	Results         Status           Restored 1 items and 125.00 MB for 00:02:57         Compi           Backed up 1 new items and 125.00 MB online for 00:02:11         Compi	eted eted eted
Backup Set/Action Restore VMware Standard 5.2.4 FF 5.2.4 FF	Start Date 04/24/2014 09:47 04/24/2014 08:43 04/24/2014 08:33	Results     Status       Restored 1 items and 125.00 MB for 00:02:57     Compl       Backed up 1 new items and 125.00 MB online for 00:02:11     Compl       Backed up 1 new items and 188.14 KB online for 00:00:18     Compl	eted eted eted
Activity Set/Action Restore VMware Standard 5.2.4 FF 5.2.4 FF Delete Restore	Start Date 04/24/2014 09:47 04/24/2014 08:43 04/24/2014 08:33 04/24/2014 08:32	Results     Status       Resored 1 items and 125.00 MB for 00:02:57     Compl       Backed up 1 new items and 125.00 MB online for 00:02:11     Compl       Backed up 1 new items and 188.14 KB online for 00:00:18     Compl       Backed up 0 new items and 0.00 B online for 00:00:21     Warning	eted eted eted eted eted eted

2. Click the **Restore** tab.



#### The Your Restores section is displayed.

Computer: 0017	(0017)		
COMPUTER INFORMATION			📝 Edit
Backup agent: Computer name: Computer ID: Account username: Email address: Phone number: Group: Local backup subscription	Connected 0028-a 0028 111-222-3333 Default Group c Enabled	1268 668 08 03/13/2014	01/24/2014 - 04/24/2014
Activity 🛞 Setti	ngs 👔 Backup 🗙 Delete 🔍 🦊 Restore		
Your Restores			+ Start a Restore
Туре	Status	Completed	Cancel Restore
You have not restored any d	ata during the last 7 days.		

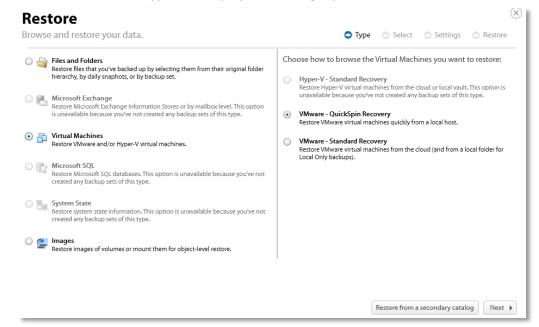
3. Click the Start a Restore button. The Restore Type page is displayed.

# $\otimes$ Restore Browse and restore your data. Type Select Settings Restore Files and Folders Restore files that you've backed up by selecting them from their original folder hierarchy, by daily snaphots, or by backup set. O 💽 Microsoft Exchange Restore Microsoft Exchange Information Stores or by mailbox level. This option is unavailable because you've not created any backup sets of this type. Virtual Machines Restore VMware and/or Hyper-V virtual machines. O The Microsoft SQL Restore Microsoft SQL databases. This option is unavailable because you've not created any backup sets of this type. O by System State Restore system state information. This option is unavailable because you've not created any backup sets of this type. 🔘 😭 Images Restore images of volumes or mount them for object-level restore. Next 🕨 Restore from a secondary catalog

4. Select the Virtual Machines radio button.



The Virtual Machine restore types are displayed in the right panel.



5. Select the VMware QuickSpin Recovery radio button, and then click Next. The virtual machines are displayed.

Restore				X
Browse and restore your data.	🗸 Туре	e 🗢 Select	Settings	Restore
SELECT THE VM(S) YOU WANT TO RESTORE AS QUICKSPIN RECOVERY VM(S):	ITEMS SELECTED FOR RESTORE:			
[] [cristi] dsl_2_Recovery_Recovery_Recovery	Select the items on the left you war	t to restore.		
			◀ Ba	ck Next 🕨

6. In the top left panel, double click the virtual machine to display the revisions, and then select the virtual machine revision radio button you want to restore.



Your selection is displayed in the right panel.

Restore	×
Browse and restore your data.	✓ Type Select Settings Restore
SELECT THE VM(S) YOU WANT TO RESTORE AS QUICKSPIN RECOVERY VM(S):          Image: The second	ITEMS SELECTED FOR RESTORE:         Image: Transmitting the second seco
	4 Back Next >

7. After making your selections, click **Next**. The Restore Settings page is displayed.

Restore					6
Browse and rest	ore your data.	🗸 Туре	✓ Select	Settings	Restore
Restore type	Choose the type of QuickSpin you want to perform:				
	<ul> <li>Sandboxed test recovery</li> <li>Sandboxed test recovery is a non-destructive means for you to vernormal business operation. Your production VM(s) remain powere powered on within an isolated VLAN.</li> </ul>				
	Production recovery Performs an instant recovery of your production VM(s) with the se running, it will be shut down before powering up the recovery VM		(s), If the produ	uction VM(s) is st	ill
				▲ Ba	ck Next 🕨

8. Select a Restore type radio button.

If you select Sandboxed test recovery (default option):

- The source/production VMs are not shut down.
- The recovery VMs selected are started on their own separate VLAN to avoid conflicts with the production VMs.
- Backups to the recovery VMs do not continue as long as the recovery VMs are powered on.



#### If you select Production recovery:

- The source/production VMs are shut down.
- The recovery VMs selected are started on using the production network. They will assume the role of the original production VMs.
- Backups to the recovery VMs will not continue as long as the recovery VMs are powered on.
- 9. After making your selections, click **Next**. The Restore Confirmation page is displayed.

Restore rowse and restore your data.		✓ Type ✓ Select ✓ Settings ○ Restore
P	Selection:	You have chosen to recover 1 virtual machine(s) as a QuickSpin sandboxed test recovery.
	Information:	You are recovering the following VM(s): [cristi] dsl_2_Recovery_Recovery_Recovery
	VM(s). • If the VM(s) you have of allow the restore to pr • You need to add the V • Make sure that you resonant of the	ff non-critical VM(s) on the destination to make sure that you have sufficient resources available to start the recovery chosen to restore is currently in the process of being backed up, the backup of the VM(s) will be cancelled in order to oceed. M(s) to an existing backup set or create a new one to ensure that the VM(s) is protected. move the original VM(s) from the backup set(s) so that you don't receive unnecessary errors. d, click "Restore" below to begin restoring your selected VM(s). Please make sure to add the recovered VM(s) to a at they are backed up properly.
		4 Back Restore

10. Verify your selections, and then click **Restore**. The Your Restores page is displayed showing status of the restore.

DMPUTER INFORMATION			2
lackup agent: Computer name: Computer ID: Account username: Imail address: "Mone number: Aroup: Local backup subscription	Running 0028-a 0028 111-222-3333 Default Group Disabled	50HB 50HB 65	01/24/2014 - 04/24/2 64/34/2014
Activity 💮 Setti	ngs 👔 Backup 🗙 Delete 🤳	Restore	
Your Restores			+ Start a Restore
Type	Status	Completed	Cancel Restore
VMware: QuickSpin	0 VM(s) Restored	RESTORE RUNNING	
rienare. Quickaper			



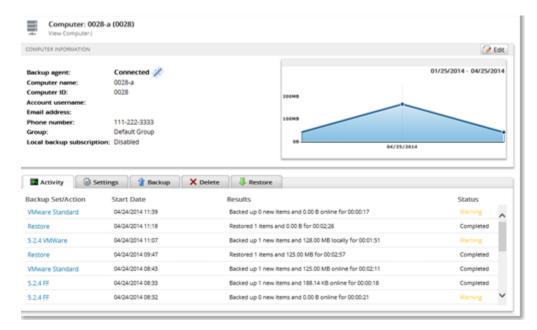
When the restore is complete, the final status is displayed as show below.

			📝 Ed
lackup agent: omputer name: omputer ID: ccount username:	Connected 🥢 0028-a 0028	100MB	01/24/2014 - 04/24/201
mail address:			
hone number:	111-222-3333	SOMB	
roup:	Default Group		
activity		store	64/24/2014
Your Restores			+ Start a Restore
	Status	Completed	Cancel Restore
ype		04/24/2014 11:20	
lype Mware: QuickSpin	1 VM(s) Restored		

## **Deleting QuickSpin Backups**

To delete a VMware QuickSpin backup, perform the following steps.

1. Navigate to the Computer Page. See *Navigate to the Computer Page* for instructions. The Computer page is displayed.



2. Select the Delete tab.



The Your Deletes page is displayed.

Computer: 00	28-a (0028)		
COMPUTER INFORMATION			📝 Edit
Backup agent: Computer name: Computer ID: Account username: Email address: Phone number: Group: Local backup subscrip	Connected 0028-a 0028 111-222-3333 Default Group tion: Disabled	200MB 100MB 08	01/25/2014 - 04/25/2014
Activity	Settings 👔 Backup 🗙 De	e Restore	
Your Deletes			+ Delete Data
Type You have not deleted an	Status y data in the last 7 days.	Completed	Cancel Delete

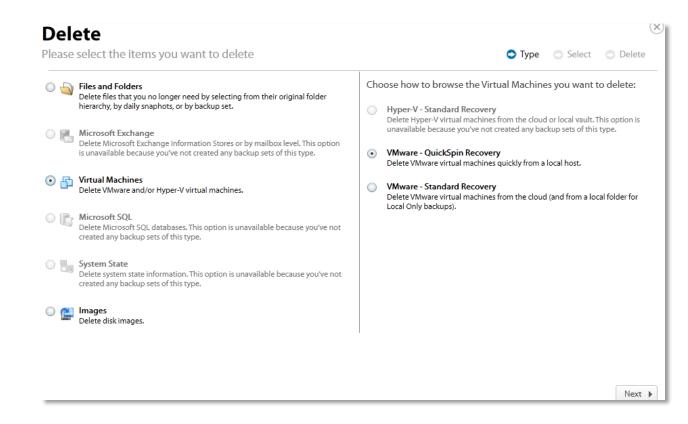
3. Select the **Delete Data** button. The Delete Type page is displayed.

lease select the items you want to delete	0	Туре	Select	Delete
Files and Folders Delete files that you no longer need by selecting from their original folder hierarchy, by daily snaphots, or by backup set. This option is unavailable because you've not created any backup sets of this type.				
Microsoft Exchange Delete Microsoft Exchange Information Stores or by mailbox level. This option is unavailable because you've not created any backup sets of this type.				
Virtual Machines Delete VMware and/or Hyper-V virtual machines.				
Microsoft SQL Delete Microsoft SQL databases. This option is unavailable because you've not created any backup sets of this type.				
System State Delete system state information. This option is unavailable because you've not created any backup sets of this type.				
Images Delete disk images. This option is unavailable because you've not created any backup sets of this type.				
	I			
				Next

4. Select the Virtual Machines radio button.

The Virtual Machine options are displayed in the right panel.





5. Select the VMware QuickSpin Recovery radio button, and then click Next. The Virtual Machines are displayed.

Delete	
Please select the items you want to delete	✓ Type Select ODelete
SELECT THE QUICKSPIN RECOVERY VM(S) YOU WANT TO DELETE:	VM(S) SELECTED FOR DELETION:
[Cristi] dsl_2_Recovery_Recovery_Recovery	Select the Items on the left you want to delete.
	4 Back Next

6. Select the virtual machines you want to delete.



The selected virtual machines are displayed in the right panel of the screen.

Delete	X
Please select the items you want to delete	✓ Type Select ○ Delete
SELECT THE QUICKSPIN RECOVERY VM(S) YOU WANT TO DELETE:	VM(S) SELECTED FOR DELETION:
✓ the [cristi] dsl_2_Recovery_Recovery_Recovery]	[cristi] dsl_2_Recovery_Recovery
	● Back Next ▶

7. After making your selections, click **Next**. The Delete Confirmation page is displayed.

<b>Delet</b> Please sele	<b>e</b> ect the items you want	to delete	🗸 Туре	✓ Select	Delete
ß	Selection:	You have chosen to delete 1 item(s).			
3	Information:	You are deleting the following Quick Spin VM(s): [cristi] dsl_2_Recovery_Recovery_Recovery			
	lf everything looks good, d	click "Delete" below to begin deleting your items.			
				▲ Back	Delete

8. Confirm your selection, and then click **Delete**.



### The Activity Page is displayed with the latest Delete.

Computer: 00 View Computer						
OMPUTER INFORMATION		6	edit 🤌			
Backup agent:	Connected 🧭	01/08/2014 - 04/08/	014			
computer name:	0021	Chart.				
Computer ID:	0021		_			
Account username:						
mail address:						
hone number:	111-222-3333					
sroup:	Default Group					
Local backup subscription: Enabled						
toral outside substrike	tion: Enabled					
		X Delete				
Activity 💮 S		Celete     Results     Status				
Activity 💮 stackup Set/Action	Settings					
Activity 3 sackup Set/Action Delete	Settings 1 Backup	Results Status	-			
	Settings The Backup Start Date 04/08/2014 10:44	Results Status Deleted 1 items and 1.00 GB for 00:00:05 Completer	^			
Activity Strain Sectors	Start Date 04/08/2014 10:44 04/08/2014 00:00	Results Status Deleted 1 items and 1.00 GB for 00:00:05 Complete Backed up 1 new items and 0.00 B online for 00:02:16				
Activity Strackup Set/Action Delete Backup Set 2 Backup Set 1 Backup Set 2	Settings Backup Start Date 04/08/2014 10:44 04/08/2014 00:00 04/07/2014 23:00	Results Status Deleted 1 items and 1.00 GB for 00:00:05 Complete Backed up 1 new items and 0.00 B online for 00:02:16 Backed up 1 new items and 512:20 MB online for 00:07:22	~			
Activity Strain	Settings         Packup         Start Date           04/08/2014 10:44         04/08/2014 00:00         04/07/2014 00:00           04/07/2014 23:00         04/07/2014 00:00         04/07/2014 00:00	Results Status Deleted 1 items and 1.00 GB for 00:00:05 Complete Backed up 1 new items and 0.00 B online for 00:02:16 Backed up 1 new items and 512.20 MB online for 00:07:22 Backed up 1 new items and 0.00 B online for 00:02:03				



## Chapter 3. Editing Backup Sets

To edit a backup set, perform the following step.

In the Manual Controls column at the Your Backup Sets section, select the edit icon of the backup set you want to edit.

COMPUTER INFORMATION						(2 Ec
Backup agent: Computer name: Computer ID: Account username: Email address: Phone number: Group: Local backup subscrip	Connected 0028-a 0028 111-222-3333 Default Group eton: Disabled		200MB		01/24/201	14 - 04/24/201
				84/24/2654		
	Settings 👔 Backup	X Delete	estore			
Your Backup Sets	Settings 👔 🖁 Backup			Export Backup Selection		
Your Backup Sets	Settings 👔 Backup	Backup Type	Next Backup	Export Backup Selection	Manual Cor	ntrols
Your Backup Sets Name 3.2.4 FF	Settlings 👔 Backup			Export Backup Selection		
Your Backup Sets Name \$2.4FF	Settings 👔 Backup	Backup Type	Next Backup	Export Backup Selection	Manual Cor	ntrols
	Settings 👔 Backup	Backup Type Files and Folders	Next Backup	Export Backup Selection Automatic Backup	Manual Cor	×

The Edit Backup Set wizard is displayed. You can select the type of backup you want to edit from the left column.

Files and Folders	Files and Folders
Exchange Information Store	Choose this option to back up individual files and folders on this computer, or
Exchange Mailbox Level	across the network.
SQL	
System State	Backup Set Name: Backup Set 7
Virtual Machines	Backup Destination: <ul> <li>Online</li> </ul>
🔛 Images	C Local



## **About Editing Backup Sets**

The Edit Backup Set wizard is similar to the Create Backup Set wizard you used to originally create the set, so the steps are essentially the same. Note that you may encounter the following prompts:

- A backup destination has changed
- An Imaging source volume is no longer present
- A file or folder selected for backup is no longer found
- A QuickSpin host destination has changed
- A QuickSpin incremental version storage location has changed

## A Backup Destination Has Changed

If you changed the backup destination, the following prompt is displayed.

Please select a backup destination:

Historical backups will be invalidated if the backup destination is changed. To continue incrementals, copy the latest full backups to the new storage location before resuming backups. Otherwise, a full backup will be taken in the new storage location.

If you changed the backup destination, historical revisions are invalidated. As a result, the next backup is a full unless you copy the full backup.

You can continue incremental backups by copying the full backups to the new destination from the original storage location prior to making the change.

## An Imaging Source Volume Is No Longer Present

If a source volume is no longer present, the following prompt asks you whether or not you would like to keep it in the backup set.



**Caution!** Only click **Remove backup data associated with any missing volume(s)** if you are certain you do not need to retain backups related to these volumes. You can always remove backup data from these volumes later on using the delete wizard.



## A File or Folder Selected for Backup Is No Longer Found

When editing a File and Folder backup, if a file or folder that was explicitly selected for backup is no longer found, the prompt below is displayed and asks if you would like to remove that file or folder from the backup set.

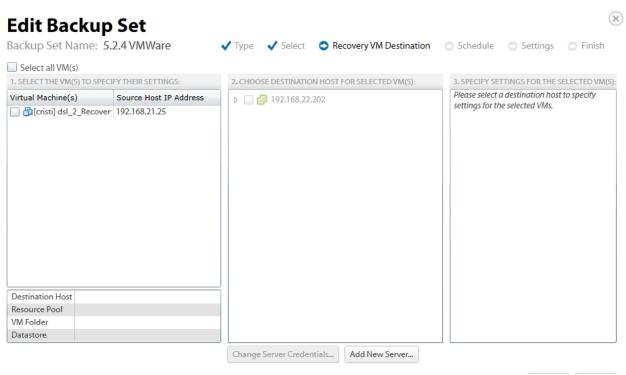
Clicking **Continue** removes the listed items from the backup set after the backup set is updated and saved. Failure to save this backup set and remove the listed items causes errors in your logs.

Backup Set Name: Test revs	🗸 Type 💿 Select 💿 Schedule 💿 Settings 💿 Finish
The following items in this backup set no longer exist or cannot be four	und:
C:\Test1.txt	
These items will be removed from the backup set upon saving. Failing t	to save this backup set and remove these items will result in errors in your logs.
	Continu



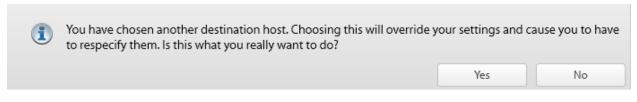
## A QuickSpin Host Destination Has Changed

At the QuickSpin Edit Backup Set Recovery VM Destination page, you can change the Host Destination.



Back Next
 Next

If you change the host destination, the following prompt is displayed.



If you select **Yes**, then the Specify Settings column is activated. You must re-specify the destination Resource Pool, VM Folder, and Datastore settings.



Back

Next 🕨

## A QuickSpin Incremental Version Storage Location Has Changed

At the QuickSpin Settings page, you can specify the path where the incremental versions of your recovery VMs are stored.

Edit Backup Set         Backup Set Name: 5.2.4 VMWare         Image: Set Name: 5.2.4 VMWare         Image: Set Name:	
Archiving rules	Keep 96 • recoverable versions of backups at the destination.
	<ol> <li>The backup will run 7 day(s) a week, running a total of 7 time(s) per week.</li> <li>The backup set preserves the current state of the virtual machine(s) only. User generated snapshots are not saved.</li> </ol>
Temp Folder	Path: C:\Windows\TEMP\BackupAgent Browse
Incremental version storage location	Specify the path where the incremental versions of your recovery VM(s) will be stored. This data will be used to recover previous versions of QuickSpin recovery VMs:
	Path: C:\Test Browse
	In order to restore a recovery VM successfully, you will need both the recovery VM snapshot information (in vSphere) and the incremental version information stored in this location.
	Note: If you want to change the location of the incremental versions, please choose a path that will not be compromised, deleted, or moved.

**Caution!** If you change the incremental version storage location, all revisions become invalidated and the next backup is a full. It is recommended you choose a location on the same drive as your Local Vault, if you have one set up.



# **Appendix**

This appendix includes the following topics:

- Restoring Revisions for Hyper-V and Imaging
- Archiving Rules
- About Scheduling Backups
- About the Backup Monitor
- Backup Options
- About VMware Clusters

# About Restoring Revisions for Hyper-V, VMware, and Imaging

With Hyper-V and Imaging, you can restore from a specific revision. By default you get the latest.

For example, if you backup a Hyper-V VM once at 1 p.m., once at 3 p.m., and once at 6 p.m., you would have 3 revisions and you can select to restore any of these revisions.

# **About Archiving Rules**

Selecting the drop-down for Add a New Archiving Rule allow you to create a new rule of one of the following types:

- Age
- Versions
- Disk Usage
- Date Range

The default options and archiving rules for Hyper-V and Imaging backup sets match those for VMware standard. The Hyper-V and Imaging backups default retention span is 4-weeks.

You can set the minimum number of days to hold revisions with the Keep at least <u>days</u> option.

Archiving rules dictate how many versions of each file Cloud Backup' systems keep and are set during the creation or the editing of a backup set. The maximum is 99 versions. You can set the minimum number of file versions with the **at least \_\_\_ versions** option.

Rules can be deleted by using the Delete icon at the beginning of the row when in edit mode.

# How Archiving Works for Imaging

You can choose to store a number of revisions in local storage. For example, if you would like to retain a week's worth of backups and you're running backups once per day, you should set your retention policy to keep 7 versions.

## How Archiving Works for Hyper-V and VMware

The first backup includes a true full copy of the files. After the first backup, just the changes to the files are copied. These changes constitute a revision of that file to restore.

If you choose to keep a large number of revisions then you store more data. If you choose a lower revision rule, there are fewer revisions and fewer file options for a restore, and therefore reduced risk.



Archiving rule options differ based on the type of data being backed up and the rules that the customer configures.

# **About Advanced Archiving**

Advanced archiving allows you to add a rule, edit a rule, or delete a rule.

At the Settings page in the backup wizard, you have the option of selecting the Advanced Archiving rules tab. The following page is displayed.

Set	tings Advanced Archiving			
Use a	Template 🔻			
•	Keep all versions from now to <b>4 Week(s)</b> . Afte Keep no fewer than <b>4 version(s)</b> .	er 4 Week(s) keep nothing.		

Double-clicking anywhere in the row in which a rule resides sets that rule to edit mode.

The **Save** button saves the rule as currently specified.



If you select the Use a Template drop-down, the following page is displayed.

Settings Advanced Archiving		
Use a Template         Image: Medical and Accounting         Accounting		
	▲ Back	Next 🕨

You have the ability to use a Medical or Accounting template as the starting point for creating an archiving rule.

The values of these templates are listed below:

Medical

- Type: Date Range
- Line 1: Keep all versions from now until 1 month
- Line 2: After 1 month, keep monthly versions for 1 year
- Line 3: After 1 year, keep yearly versions for 7 years
- Line 4: After 7 years, keep nothing.
- Keep no less than: 1 version
- Applies to: All



#### Accounting

- Type: Date Range
- Line 1: Keep all versions from now until 1 month
- Line 2: After 1 month, keep monthly versions for 3 year
- Line 3: After 3 years, keep yearly versions for 7 years
- Line 4: After 7 years, keep nothing.
- Keep no less than: 1 version
- Applies to: All

# **About Scheduling Backups**

With the Imaging option, when performing a backup, you can choose between Calendar and Interval scheduling when the following page is displayed:

Scheduling	Create cal	endar-based sch	edule 🔘	Create a recurring	interval-based sc	hedule		
	Choose whet	her to run your b	ackup from a cale	ndar-based sched	ule or to scan for r	new and modified	files at a specified	time interval.
		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Schedules Add	12 AM	\$	2	*	2	2	2	2
Sundays At 12:00 AM Allow To Finish	▲ 01 AM	12:00 AM Allow To Finish						
Mondays At 12:00 AM Allow To Finish	02 AM							
Tuesdays At 12:00 AM Allow To Finish	03 AM							
Wednesdays At 12:00 AM	04 AM							
Allow To Finish	05 AM							
Thursdays At 12:00 AM Allow To Finish	06 AM							
Fridays At 12:00 AM Allow To Finish	07 AM							
Saturdays At 12:00 AM	08 AM							

Calendar scheduling makes it easy to do once per day backups. This option is the default. Interval scheduling is not available using Hyper-V.

A recurring-interval schedule is the default. This defaults to backing up to the recovery VM every hour, but can be set as often as every 15 minutes.



Interval scheduling allows for more than once per day. The Interval schedule page is displayed below.

Create Backup Set Backup Set Name: Backup Set 4			Type	✓ Select	Schedule	Settings	Finish	×
Scheduling	Create calendar-based schedu		te recurring inter	val-based sche	dule			
Back up to the loc	al destination every 6 🔹	hours -						

Note: If needed, a currently running backup will finish before attempting to start the next scheduled backup.

# About the Backup Monitor

The Backup Monitor can be used to perform the following tasks:

- Run a Hyper-V, VMware, and Image backup
- Delete a Hyper-V, VMware, and Image backup
- View logs related to image and VMware actions
- View image and VMware backups in the Account Summary and Backup Sets screens

You cannot create or edit Hyper-V, VMware, or Image backups using the Backup Monitor.

You can create these backups using the management portal at *https://manage.Cloud Backup.com*.

# **About Backup Options**

During the Backup procedure, you have the following options:

- Online only
- Local only
- Online and local

**Note**: Online and Local is only shown if the Local Vault is set up for this computer. The Local Only option is available if the Local Vault is set up and the computer has a Local Backup subscription assigned.

#### **Online Only**

You are backing up to the cloud only.



## Local Only

Local only backup works in conjunction with an existing feature called the *Local Vault*. These backups are not stored on Cloud Backup servers and do not count toward your remote storage. Local Only also requires a Local Backup subscription. Without it, back up to both the local vault and the cloud.

Using the Local Vault as the storage space, the local-only backup feature allows you to create backups that are stored only on the Local Vault. This feature is ideal for data that needs to be backed up but that may not be the best candidate for online backup. Some reasons to use Local Only Backups are:

- For media files such as mp3s, movs, jpgs that won't change and don't need daily revisions.
- For any other personal data that is not critical.
- For any data that the client does not want to pay for but still wants backed up (music and/or video libraries).
- For Exchange Mailbox backups the messages are available locally in the event that a client is missing an e-mail (the recommendation is to then backup the Exchange Info Store databases online for Disaster Recovery).

# **About VMware Clusters**

Clusters are a group of hosts that are linked in such a way as to be managed as a group. A cluster can act as a single larger, more powerful host by sharing the resources of all hosts.

Some benefits of host clusters include:

- High Availability (HA)
- Sharing of Resources
- Live Migration of VMs between hosts

## **High Availability**

If a host in the cluster goes down, the VMs that resided on that host can be started up on one of the other hosts in the cluster.

## **Sharing of Resources**

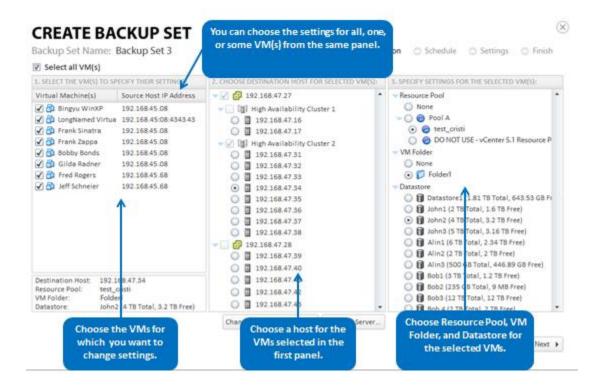
VMs can effectively be load balanced across hosts to most efficiently utilize the resources (CPU, Memory, etc.) of the cluster with VMware Distributed Resource Scheduler (DRS).

#### vMotion

Clustering hosts allows the use of vMotion, which is the live migration of VMs across hosts in the cluster without having to power them down.



The following graphic shows a page from the Cloud Backup Backup wizard that highlights the advantages of clustering.





# Glossary

The following table provides definitions for some of the terms used in this guide for cloud computing restore and backup functions.

Term	Definition
Archive Rules	Used to control the number of revisions that are stored, by removing unneeded revisions indicated in the rule. When the backup set is run, each rule is applied in the order listed within the set's revision rule list. The Standard Rules Types are:
	<ul> <li>Disk Usage</li> </ul>
	<ul> <li>Number of Revisions</li> </ul>
	<ul> <li>Disk Usage</li> </ul>
	Date Range
Asynchronous	An attribute of a Before and After Action. If designated for a Before action, the action starts at the start of a backup set, but may not completely finish before the backup set begins. If designated for an After action, the backup set may not completely finish before the action is run.
Backup Set	A selected set of data and folders that are backed up when run, either manually, or automatically based on an associated schedule. Backup sets can include files and folders, VMware and Hyper-V virtual machines (VMs), an image of one or more physical drives or SQL and Exchange data.
Cloud Archive	Data that no longer needs to be accessed on a regular basis is
	maintained and backed up remotely by a cloud storage service provider.
Cloud Application	A software application that is never installed on a local machine and is always accessed over the Internet.
Cloud Provider	A company that provides cloud-based platform, infrastructure, application, or storage services to other organizations and/or individuals.
Computer ID	A unique four digit code used to keep track of multiple subaccounts that are associated with a single main account. The first computer you install Online Backup Solution.com on has the computer ID 0000. Subsequent subaccounts have the next sequential computer ID of 0001, 0002, and so on.
Cluster	A group of hosts that are linked for the purpose of providing high availability.



Term	Definition
Differential Backup	A type of backup associated with SQL Server, for File and Folder, VMware Standard, and Hyper-V Standard backup sets. After the initial full backup is completed, a differential backup backups only data that has changed since the prior full backup.
FAT	File allocation table. A file system developed mostly for hard drives.
File Catalog	A list of all of data, and revisions that are contained within backup set. The catalog is transmitted to the backup servers with every backup.
GPT	Globally unique identifier(GUID) partition table. A standard for the layout of the partition table on a physical hard disk using globally unique identifiers.
Hypervisor	A platform that allows multiple operating systems to run on a host computer at the same time.
Image-level (volume-level) Backup	A process that backs up an entire storage volume.
Incremental Backup	Backs up only the data changed since the last backup. Microsoft Exchange, Imaging, and VMware QuickSpin support the use of Incremental backups.
IntelliBlox	A proprietary technology that uploads only the changed blocks of a file. At your next backup, the data is scanned and any changes at the block level are detected; only these changes are uploaded.
Local Vault	Keeps a mirror copy of backup data stored on Cloud Backup and local servers.
MBR	Master boot record. The first sector on a hard drive occupied by code necessary to start the operating system startup process.
MSP	Managed Service Provider. Provides delivery and management of a variety of services which include but are not limited to: network-based services (online backup), applications, and equipment.
NTFS	New technology file system. The standard file system of all supported Microsoft operating systems.
Quiescing	A process of bringing the data on a disk of a physical or virtual computer into a state suitable for backups.



Term	Definition				
Restore	The process of retrieving backed up data. You can restore your data to their original locations, or to a different folder.				
Revision	The state of data at a particular point of time.				
Revision Rules	See Archive Rules.				
Snapshot	A reproduction of the virtual machine as it was when you took the snapshot, including the state of the data on all the virtual machine's disks and the virtual machine's power state (on, off, or suspended).				
Synchronous	An attribute of a Before and After action. If designated for a Before action, the action completely finishes before the backup set begins. If designated for an After action, the backup set completely finishes, before the action is run.				
UNC	Uniform Naming Convention. Specifies a well-formed syntax to describe the location of a network resource, such as a shared file, directory, or printer.				
vCenter Server	The management tool used to administer the various available servers in the enterprise. These servers can be ESX or ESXi, each tied to a physical server and able to host a number of virtual machines.				
vCenter Server Database	A persistent storage area for maintaining the status of each virtual machine and user that is managed in the vCenter Server environment. Located on the same machine as vCenter Server.				
vMotion	The live migration of VMs across hosts in a cluster without having to power them down.				
VMware ESX/ESXi	VMware hypervisors that are installed on bare metal and run on the host computer.				
VMware vSphere	The name of the VMware virtualization system.				
VMware Virtual Machine Console	An interface that provides access to one or more virtual machines on the local host or on a remote host running vCenter Server.				
VSS	Volume Shadow Copy Service. A Windows service for capturing and creating snapshots called shadow copies.				

# **Cloud Backup Admin Guide**

# EVOLVE

# **INDEX**

Archiving Rules, 173 Audience, 7

# В

Α

Backing Up About Backup Options, 177 Editing Backup Sets, 168 Hyper-V Backups, 49 Image Backups, 14 QuickSpin Backups, 128 Scheduling Backups, 176 VMware Standard Backups, 83 Creating Hyper-V Backups, 51 Image Backups, 15 QuickSpin Backups, 128 VMware Standard Backups, 83 Hyper-V Backup Prerequisites, 50 Image Backup Prerequisites, 14 VMware Backup Prerequisites, 82 Backup States of Imported VMs, 70

# D

Deleting Hyper-V Backups, 72 Image Backups, 42 QuickSpin Backups, 159 VMware Standard Backups, 120

# Ε

Editing Backup Sets, 168

# Н

Hyper-V Backup and Restore Features, 49 Backup Prerequisites Backup Configuration, 50 Hyper-V Permissions, 50 Hyper-V Supported Platforms, 50 Minimum Requirements, 50 Replication, 72 Hyper-V Manager Virtual Machines Import Options, 71

# I

Image Backup and Restore Features, 13 Image Backup Prerequisites Backup Configuration, 14 Supported Disks and File Systems, 14 Supported Imaging Platforms, 14 Image Configuration Best Practices, 41

# Ν

Navigating to the Computer Page, 9

# Q

QuickSpin Licensing, 128

# R

Restoring About Mounting VHD Files as a Drive Letter or NTFS Folder, 25 Restoring a Hyper-V VHD/VHDX Files, 25 Restoring Image Backups, 25 Restoring Revisions for Hyper-V, VMware, and Imaging, 173 Extracting Objects for an Object-level Restore, 32 Hyper-V Backups, 59 Physical to Hyper-V Backups, 25 QuickSpin Backups, 148 To a Folder, 70 VMware Standard Backups, 99

# S

Software Requirements, 7

## V

VMware Backup Prerequisites Minimum Requirements, 82 VMware Supported Platforms, 82 Clusters, 178 Features,

