

# New Backup and Restore Interface User Guide

Version 5.7





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## INTRODUCTION

This chapter includes the following topics:

- Audience
- What's New
- About This Document
- Backup Agent Software Requirements
- Related Documentation
- Partner Support

### Audience

This document is intended for IT professionals and partners providing their clients with cloud backup and recovery support.

### What's New

This release contains the following new features:

- A new software user interface.
- Support for Hyper-V Offline Mode backups.
- Support for vSphere 6.5 and Windows 2016.

### About This Document

This User Guide provides the following information:

Part	Contents
Introduction	Information about this release and this document.
1	New Software User Interface. This release provides an HTML5 user interface that replaces the Silverlight wizard. This change enhances the software user interface.
2	New Technical Features includes the following new features: <ul style="list-style-type: none"> <li>• Hyper-V Offline Mode backups</li> <li>• Support for vSphere 6.5 with TLS 1.0 Enabled</li> </ul>
3	New ConnectWise and Autotask Sections
4	Files and Folders Backup and Restore
5	VMware Standard Backup and Restore
6	VMware QuickSpin Backup and Restore
7	SQL Server Backup and Restore
8	Physical Imaging Backup and Restore



Part	Contents
9	Hyper-V Standard Backup and Restore
10	Hyper-V Rapid Recovery Backup and Restore
11	Exchange Mailbox Level Backup and Restore
12	Exchange Information Store Backup and Restore
13	System State Backup and Restore
14	How to prepare for and contact partner support.
15	Appendix

## Related Documentation

The following documentation is available:

- *Backup and Restore Reference Guide* – provides details on how to perform backups and restores for each backup type.
- *Best Practices Partner Guide* - provides details on best practices for performing backups and restores.
- *Quick Start Partner Guide* - provides information about setting your preferences, creating templates, and installing the software.
- *Autotask Integration Guide* - provides information about setting up Autotask integration with the Backup Agent.
- *ConnectWise Integration Guide* - provides information about setting up ConnectWise integration with the Backup Agent.





## Backup Agent Software Requirements

The following table provides the requirements for running the Backup Agent software.

Backup Agent Software Requirements	
<b>Supported Operating Systems</b> <ul style="list-style-type: none"><li>• MS Windows Server 2008 SP2/2008 R2 SP1, SP2/2012/2012 R2/2012 R2 Essentials/2016</li><li>• MS Windows 7 SP1/8.0/8.1/10</li><li>• MS Windows Small Business Server 2011</li><li>• MS Windows Vista SP2</li></ul> <b>Physical Imaging and BMR Supported Operating Systems</b> <ul style="list-style-type: none"><li>• MS Windows 7.0/8.1/10</li><li>• MS Windows Server 2008 SP2/2008 R2 SP1/2012/2012 R2/2012 R2 Essentials/2016</li><li>• MS Windows Small Business Server 2011</li></ul> <b>BMR Support</b> <ul style="list-style-type: none"><li>• <b>Hard Disk Controllers</b><ul style="list-style-type: none"><li>— SCSI</li><li>— IDE</li><li>— SATA</li></ul></li><li>• <b>Boot Types/Disk Partition Styles</b><ul style="list-style-type: none"><li>— MBR</li><li>— GPT</li></ul></li><li>• <b>Supported File Systems (for backup source)</b><ul style="list-style-type: none"><li>— NTFS</li></ul></li><li>• <b>Supported Backup Destinations</b><ul style="list-style-type: none"><li>— 512 byte sector disks</li><li>— 4K native sector disks</li></ul></li><li>• <b>Sparse file systems</b> do not support Rapid Recovery to Hyper-V hosts. Hyper-V does not support running virtual machines from sparse file systems.</li></ul> <b>Web Portal Requirements</b> <ul style="list-style-type: none"><li>• Internet Explorer 10/11 (desktop mode)</li><li>• Firefox (most recent version)</li></ul>	<b>Minimum Requirements for File and Folder Backups</b> <ul style="list-style-type: none"><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 required for VM backups)</li><li>• Broadband Internet Connection</li><li>• MS.NET Framework 4.5.2</li></ul> <b>Minimum Requirements for Exchange, SQL, Imaging, VMware, and Hyper-V Backups</b> <ul style="list-style-type: none"><li>• 2GHz quad-core CPU</li><li>• 4 GB of Total RAM (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><li>• Broadband Internet Connection</li><li>• MS.NET Framework 4.5.2 (to allow backup/restore/delete management from the web)</li></ul> <b>Exchange</b> <ul style="list-style-type: none"><li>• MS Exchange 2007 SP1/2010/2010 SP1, SP2/2013/2013 SP1/2016 (when installed on Windows Server 2008 R2 with SP2/2012 Standard Editions or Small Business Server 2011. Does not support DAG or clustered environments.)</li></ul> <b>SQL</b> <ul style="list-style-type: none"><li>• SQL 2008/2012/2014 Standard Edition</li><li>• SQL Servers must be running in simple recovery mode</li><li>• Support for SQL 2005 is not provided.</li></ul> <b>Virtual Machines</b> <ul style="list-style-type: none"><li>• VMware ESX/ESXi/vCenter</li></ul>



Backup Agent Software Requirements	
	<p>5.0/5.1/5.5/6.0/6.1/6.5/</p> <ul style="list-style-type: none"><li>• VMware vSphere 6.5. (TLS 1.0 must be enabled on all hosts managed by the vCenter Server.)</li><li>• All supported VMware versions require VMware Essentials license or higher. Includes support for clustered environments.</li><li>• Hyper-V 2012 R2/2012/2008 R2 (does not include clustered support)</li><li>• Windows Server 2012 R2 Essentials is not supported as a virtualization host</li></ul>

## Partner Support

Partner Support is available 8 AM to 9 PM (EST).

**Phone:** 800.569.0155 or 617.948.5300

**Email:** [support@intronis.com](mailto:support@intronis.com)

You also can use the live chat service 8 AM to 6 PM (EST).

Click the following link:

**Link:** <http://www.intronis.com/support/contact.php>



## PART I. NEW SOFTWARE USER INTERFACE

This release provides an HTML5 user interface that replaces the Silverlight wizard. This change enhances the software interface.

This part includes the following chapters:

- New Pages
- New Display Features
- New General Features
- New Template Interface

### Chapter 1. New Pages

This chapter includes the following topics:

- New Computer Page Tab Settings
- New System Page
- New Software Page
- New Notifications Page
- New Backup Selections Page
- New Restore Selections Page
- New Delete Selections Page

#### New Computer Page Tab Settings

The following tabs have been added to the Computer page:

- System
- Software
- Notifications

Figure 1 provides a display of the new tabs.



Figure 1. New Computer Page Tab Settings.



## New System Page

The System page is where you can specify computer-specific settings to determine how the agent on the local computer behaves.

The System page allows you to do the following:

- Specify how many items are backed up or restored at the same time.
- Specify how many times a file should be retried if it fails to back up.
- Set wildcard exclusions to exclude items from your backup sets.
- Specify how Stray Files are managed.

Figure 2 provides a display of the System page.

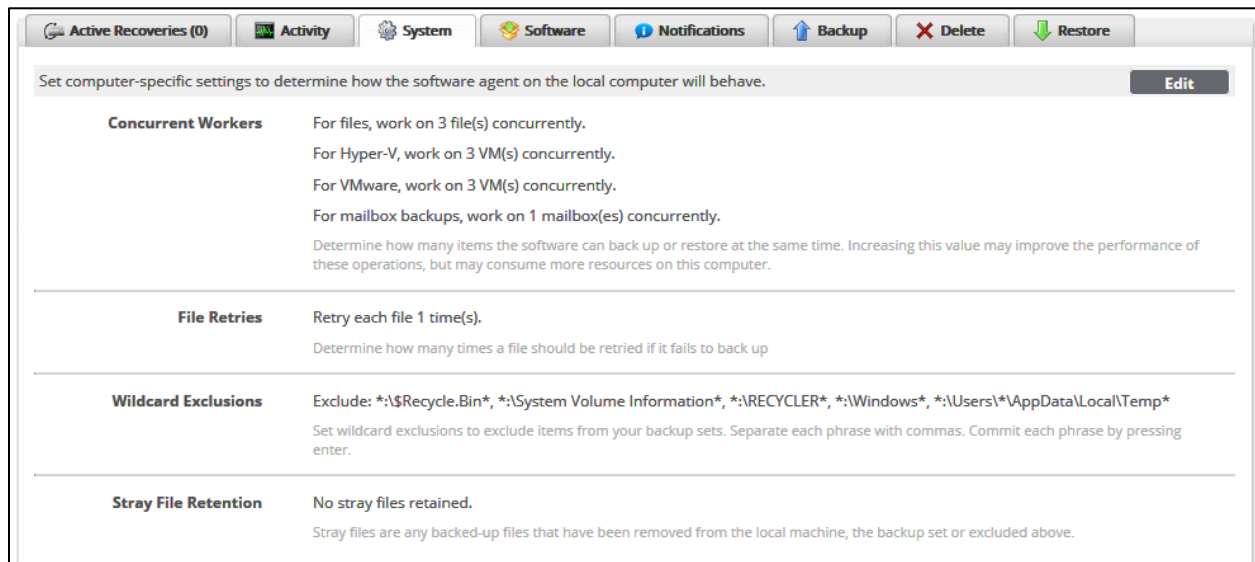


Figure 2. System Page.

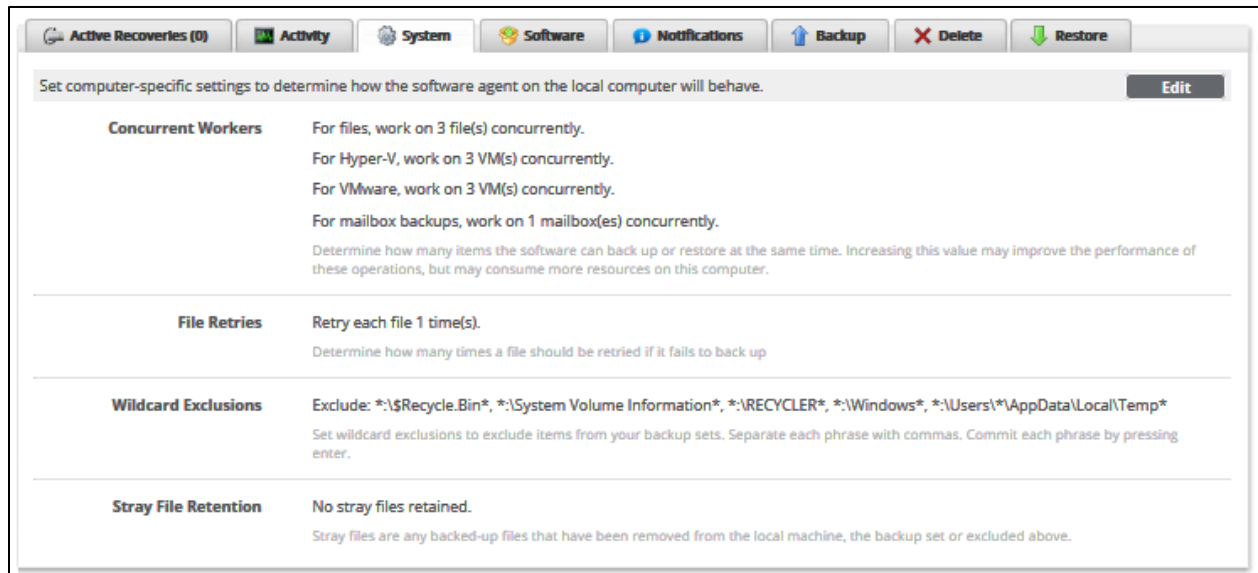


### Editing the System Page

To edit the System page, perform the following steps.

1. At the Computer page, click the **System** tab.

The System page is displayed.



2. Click the **Edit** button.



The fields are enabled.

- At the Concurrent Workers section, specify how many VMs are backed up or restored at the same time.

**Note:** Increasing this value may improve the performance of these operations, but may consume more resources on this computer.

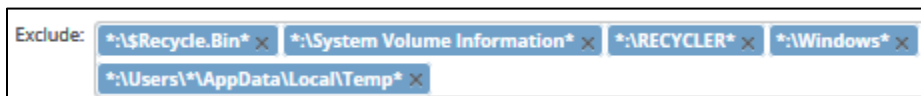
- At the File Retries section, specify how many times a file should be retried if it fails to back up.

**Note:** The default setting is 1.

- At the Wildcard Exclusions section, set wildcard exclusions to exclude items from your backup sets.

**Note:** Separate each phrase with commas. Commit each phrase by pressing **Enter**.

**Example:** The following is an example of committed wildcard exclusions.



6. At the Stray File Retention section, optionally select the following:

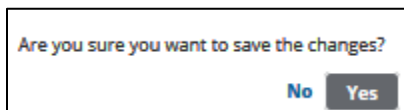
- Automatically remove stray files after x days.  
**Note:** The default is 90 days.
- Skip file removal if volume or share is not found.
- Always keep the most recent copy of each file.

**Note:** The last two options are enabled only when the first item is selected.

**Definition:** Stray files are any backed-up files that have been removed from the local machine, the backup set or excluded above.

7. When you have completed your selections, click the **Save** button.

The confirmation pop-up is displayed.



8. Click **Yes**.

Your new settings are displayed.

## New Software Page

The Software page is where you can specify computer-specific settings that determine how the backup agent on the local computer behaves.

The Software page allows you to do the following:

- Specify a temporary folder.
- Disable or synchronize the Local Vault folder with the remote servers.
- Set bandwidth throttling limits.
- Upload logs
- Create a backup installer
- Apply templates



Figure 3 provides a display of the Software page.

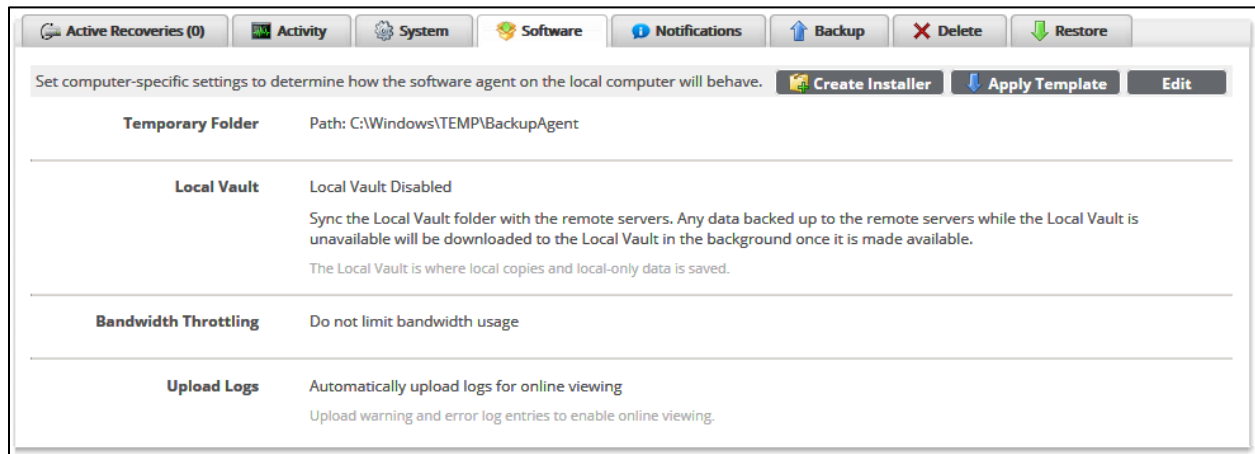


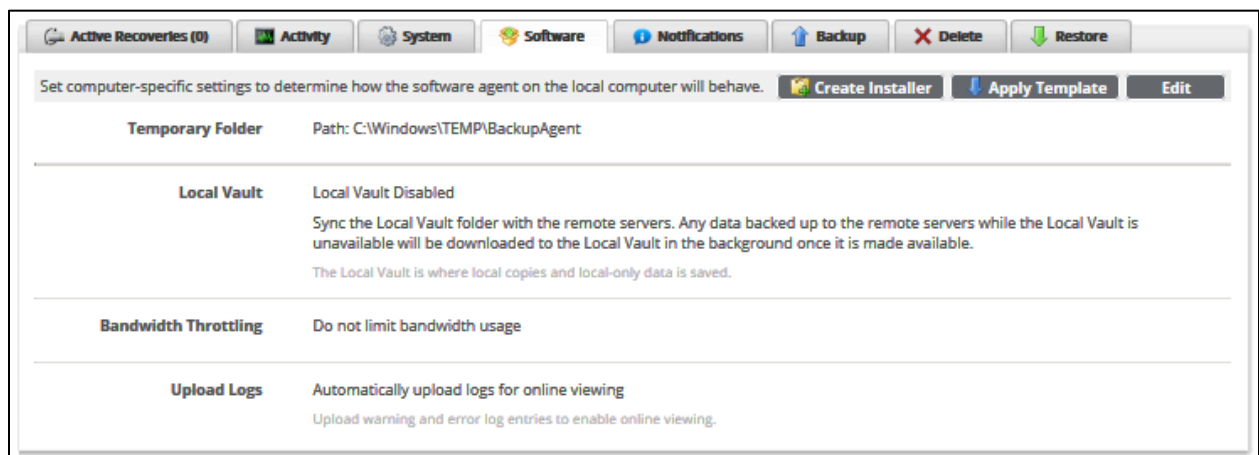
Figure 3. Software Page.

## Editing the Software Page

To edit the Software page, perform the following steps.

1. At the Computer page, click the **Software** tab.

The Software page is displayed.



2. Click the **Edit** button.





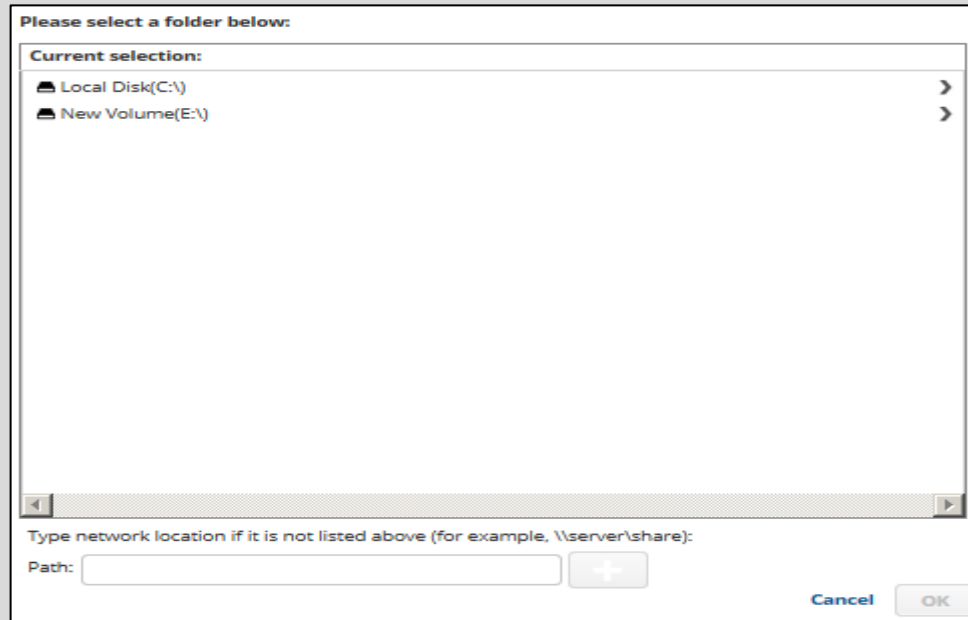
The fields are displayed.

3. At the Temporary Folder section, accept the default, type a new path, or click the **Browse** button to locate the temporary folder.

### Browse Option

- a. Click the **Browse** button.

The folder options are displayed.



b. Select the destination.

The OK button is activated.



c. Click **OK**.

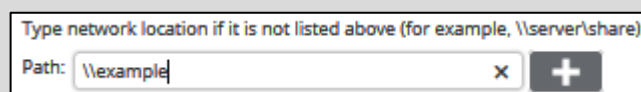
The address is displayed in the Path field.



To add a network location that is not listed, perform the step below.

### Adding a Network Location

a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.



The add button is activated.



b. Click the add  button.

4. At the Local Vault section, optionally select the **Enable the Local Vault** check box.

**Definition:** The Local Vault is where local copies and local-only data are saved.

- a. If enabled, click the **Browse** button to locate the Local Vault. See *Browse Option* above.
- b. Optionally, select one of the following check boxes.
  - **Sync the Local Vault folder with the remote servers.**  
**Note:** Any data backed up to the remote servers while the Local Vault is unavailable is downloaded to the Local Vault in the background once it is made available.
  - **Backup directly to the Local Vault first.**  
**Note:** All data is uploaded to the remote server in the background. This option is designed for businesses with low bandwidth and smaller backup sets as it only uses one thread to upload to the cloud to ensure low bandwidth utilization.
- c. Select from 1 to 5 items to process concurrently when synchronizing the Local Vault folder with the remote servers.

5. At the Bandwidth Throttling section, optionally select the **Limit bandwidth usage** radio button.

The usage fields are enabled.

6. Set your usage limits.

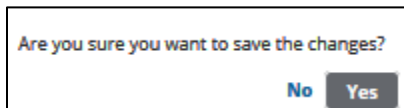
**Note:** The default setting is Sunday through Sunday from 12 AM to 12 AM with a limit of 64 Kb/s.

7. At the Upload Logs section, optionally select the **Automatically upload logs for online viewing** check box.

**Note:** This option uploads warning and error log entries to enable online viewing.

8. When you have completed your selections, click the **Save** button.

The confirmation pop-up is displayed.



9. Click **Yes**.

Your new settings are displayed.

## About the Custom Backup Installer

You can create a custom installer file that allows the software to self-install with the proper username, and Computer ID.

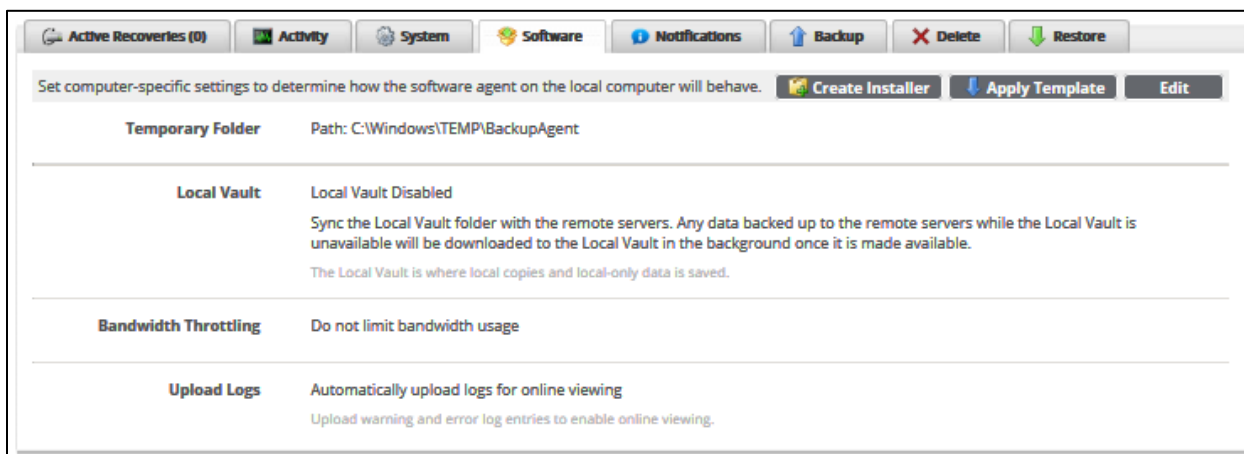
This option also allows you to configure the Backup Agent's settings from the Management Portal.

## Creating a Custom Backup Installer

To create a custom backup installer, perform the following steps.

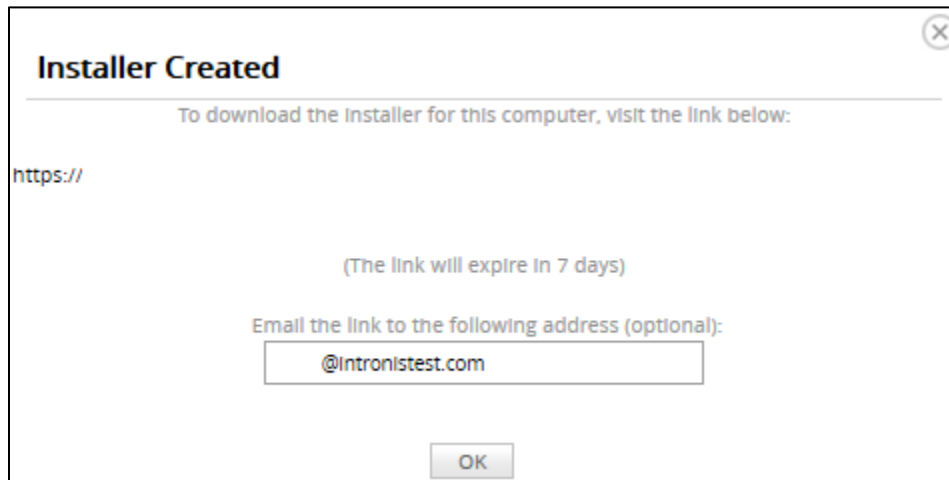
1. At the Computer page, click the **Software** tab.

The Software page is displayed.



2. Click the **Create Installer** button.

The Installer Created pop-up is displayed.



3. Copy and paste the link or email it to the contact for this computer, and then click **OK**.
4. Run the installer.

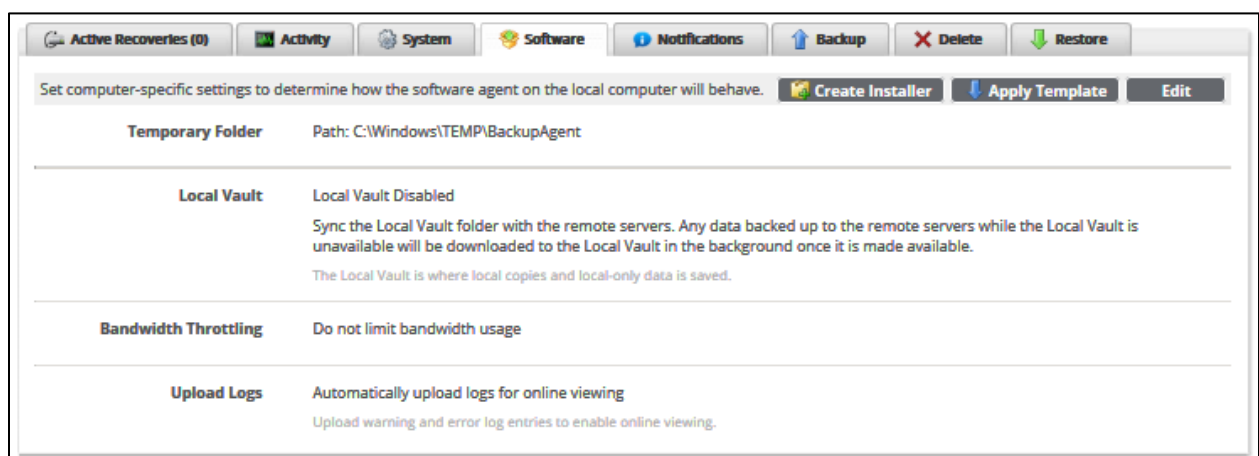
The Setup Wizard is displayed. See *Installing the Backup Agent Software* in the *Quick Start Partner Guide* for procedure.

## Applying a Template to a Single Computer from the Software Page

To apply a template to a single computer, perform the following steps.

1. At the Computer page, click the **Software** tab.

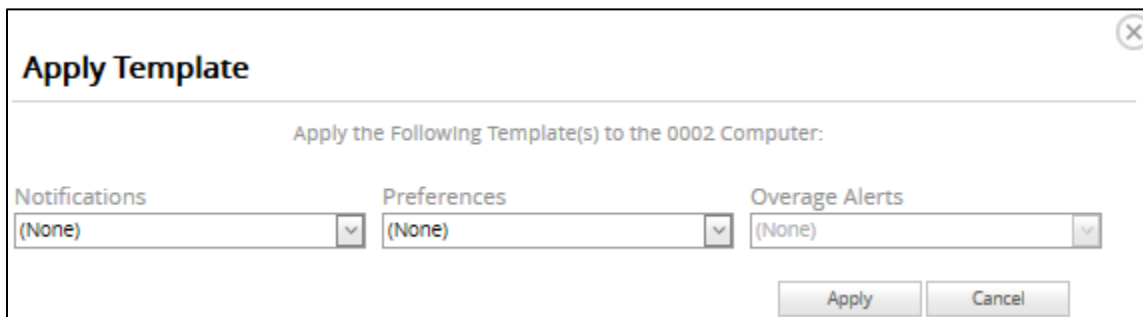
The Software page is displayed.



2. Click the **Apply Template** button.

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The Apply Template pop-up is displayed.



**Apply Template**

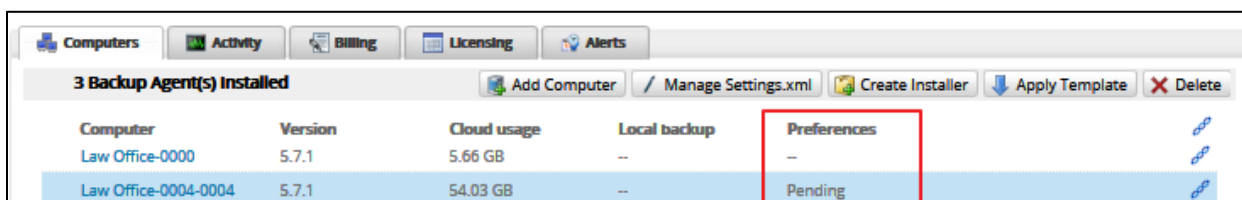
Apply the Following Template(s) to the 0002 Computer:

Notifications: (None) Preferences: (None) Overage Alerts: (None)

Apply Cancel

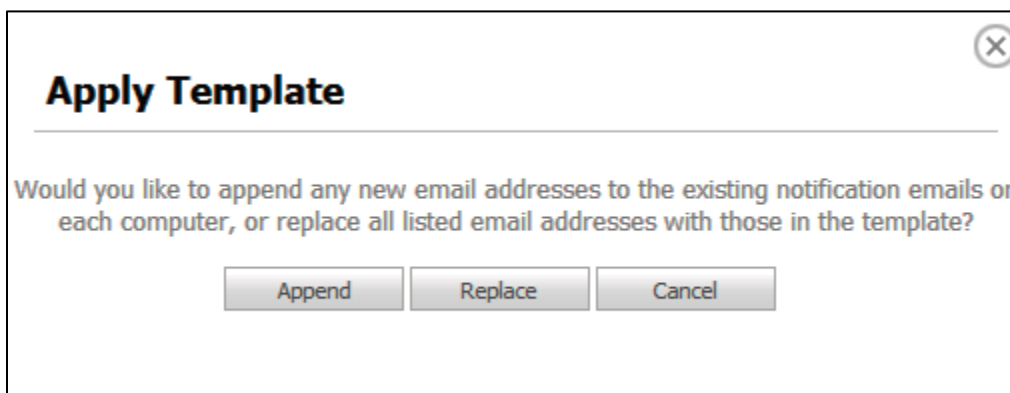
3. Select the desired template from the drop-down menus, and then click **Apply**.

- If applying Preferences templates, the changes are applied to the selected agent the next time the agent checks in. Agents that are running check in every 15 minutes.
- Note that a Pending status for a Preference template is displayed on the Computers section of the Manage Account page until the template is applied, as shown below.



Computer	Version	Cloud usage	Local backup	Preferences
Law Office-0000	5.7.1	5.66 GB	--	--
Law Office-0004-0004	5.7.1	54.03 GB	--	Pending

- If applying Notifications templates and/or Overage Alerts templates, the Append pop-up is displayed, as shown below.



**Apply Template**

Would you like to append any new email addresses to the existing notification emails on each computer, or replace all listed email addresses with those in the template?

Append Replace Cancel

- **Append** adds settings not already specified (good for modifying notifications settings).
- **Replace** overwrites all settings with exactly what was chosen in the template (good for resetting or clearing notifications settings).

4. Click **Append** or **Replace**.

The new email notifications are added or replaced.

See *Templates* for more information.

### New Notifications Page

The Notifications page allows you to assign backup notifications for various backup outcomes to be sent to any number of email addresses.

The Notifications page allows you to do the following:

- Specify what email addresses that receive backup notifications and define the report criteria.
- Customize the content of the Backup Complete, Backup Warning and Backup Failed notifications.
- Control how often you receive notifications that a backup set has not run.
- Set how long a backup set can run before sending an email notification and specify how often to send the email notification.
- Control email notifications for VMware QuickSpin, Images, and Files & Folders backup sets that are using recurring-interval schedules.
- Specify how many times (1-25) these same backup sets using recurring-interval schedules must fail consecutively before receiving a notification.



Figure 4 provides a display of the Notifications page.

Figure 4. Notifications Page.

### Editing the Notifications Page

To edit the Notifications page, perform the following steps.

1. At the Computer page, click the **Notifications** tab.





The Notifications page is displayed.

- To add email recipients and select the events with which to notify them, click the **Edit Emails** button.


The Emails template is displayed.

- To add email recipients, click the **Add Extra Email** button.



A new field is displayed.

Add Extra Email	Completed	Warning	Failed	Backup(s) Missed	No Recent Backups	Backup Runtime	
ra@intronis.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	×
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	×

- At the new field, type the email address, and then select the event checkboxes with which to notify the recipients. To remove the field, click the remove  icon.
- After completing your selections, click the **Save** button.

The Notification page is displayed with your new email recipients.

Active Recoveries (0)

Activity

System

Software

Notifications

Backup

Delete

Restore

Assign backup notifications for various backup outcomes to be sent to any number of email addresses.

Edit Emails





Edit Settings

Emails

EmailRecipients (1)

Determines what email addresses you would like to receive backup notifications and define the criteria in which these notifications report.

The default email address for this account is automatically included.

y@intronistest.com  Completed,  Warning,  Failed,  No Recent Backups


Settings

Notification Preferences

Customize the content of the Backup Complete, Backup Warning and Backup Failed notifications.


Include Failed Items

Include No Files Notice

 No Recent Backups

Control how often you receive notifications that a backup set has not run.

If a backup has not run in 1 week(s) send an email notification every 1 day(s)


 Backup Runtime


Set how long a backup set can run before sending an email notification and specify how often to send the email notification.


If a backup runs longer than 48 hour(s) send an email notification every 1 day(s)

Recurring-Interval Scheduled Backups

Control email notifications for QuickSpin, Images, and Files & Folders backup sets that are using recurring-interval schedules.

 Send "Backup Complete" email notifications

 Send "Backup Warning" email notifications

 Send "Backup Failed" email notification only after 1 recurring-interval scheduled backup(s) in a row failed.

Also, specify how many times (1-25) these same backup sets using recurring-interval schedules must fail consecutively before receiving a notification.

- To assign notification settings, click the **Edit Settings** button.



The settings fields are enabled.

Edit the criteria for which your notifications are triggered

### Settings

#### Notification Preferences

Customize the content of the Backup Complete, Backup Warning and Backup Failed notifications.

☒ Include Failed Items ☒ Include No Files Notice

---

#### No Recent Backups

Control how often you receive notifications that a backup set has not run.

If a backup has not run in   send an email notification every

---

#### Backup Runtime

Set how long a backup set can run before sending an email notification and specify how often to send the email notification.

If a backup runs longer than   send an email notification every

---

#### Recurring-Interval Scheduled Backups

Control email notifications for QuickSpin, Images, and Files & Folders backup sets that are using recurring-interval schedules.

☒ Send "Backup Complete" email notifications ☒ Send "Backup Warning" email notifications

Also, specify how many times (1-25) these same backup sets using recurring-interval schedules must fail consecutively before receiving a notification.

☒ Send "Backup Failed" email notification only after  recurring-interval scheduled backup(s) in a row failed.

[Cancel](#) [Save](#)

7. Make your edits, and then click the **Save** button.

The Notification page is displayed with your new settings.

**Manage Templates**  
View, Add and Edit Templates

[Support](#)

[Notifications](#) [Preferences](#) [Overage Alerts](#)





































































Choose who should receive notification emails for a computer or group of computers

[+ Add Template](#)

Name	Emails
Template 1	2

## New Backup Selections Page

Figure 5 provides a display of the new Backup Selections page.

Backup Selections		Export Backup Selection				
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove
+  Files and Folders (4)	 	Files and Folders 1		11/07/2016 @ 09:30 PM		
+  Physical Imaging (2)	 	Files and Folders 2		--		
+  Hyper-V Standard	 	Files and Folders 3		--		
+  Hyper-V Rapid Recovery	 	Files and Folders 4		11/01/2016 @ 11:00 PM		
+  VMware Standard (1)	 	Physical Imaging 1		--		
+  VMware QuickSpin (3)	 	Physical Imaging 2		11/01/2016 @ 11:00 PM		
+  SQL Server (2)	 	VMware Standard 1		11/01/2016 @ 11:00 PM		
+  Exchange Mailbox Level	 	VMWare QuickSpin 1		--		
	 	VMWare QuickSpin 2		--		
	 	VMWare QuickSpin 3		--		
	 	SQL 1		--		
	 	SQL 2		--		

**Figure 5. New Backup Selections Page.**

## Backup Selections Icons

The following table provides descriptions of the new Backup Selections page icons.

Icon	Description
	Add a new backup selection.
	Edit the backup selection.
	Run the backup selection.
	A backup is scheduled.
	A backup is not scheduled.
	Manual backup running with option to cancel.



## Icon



## Description

Remove backup set.

## New Restore Selections Page

Figure 6 provides a display of the new Restore Selections page.

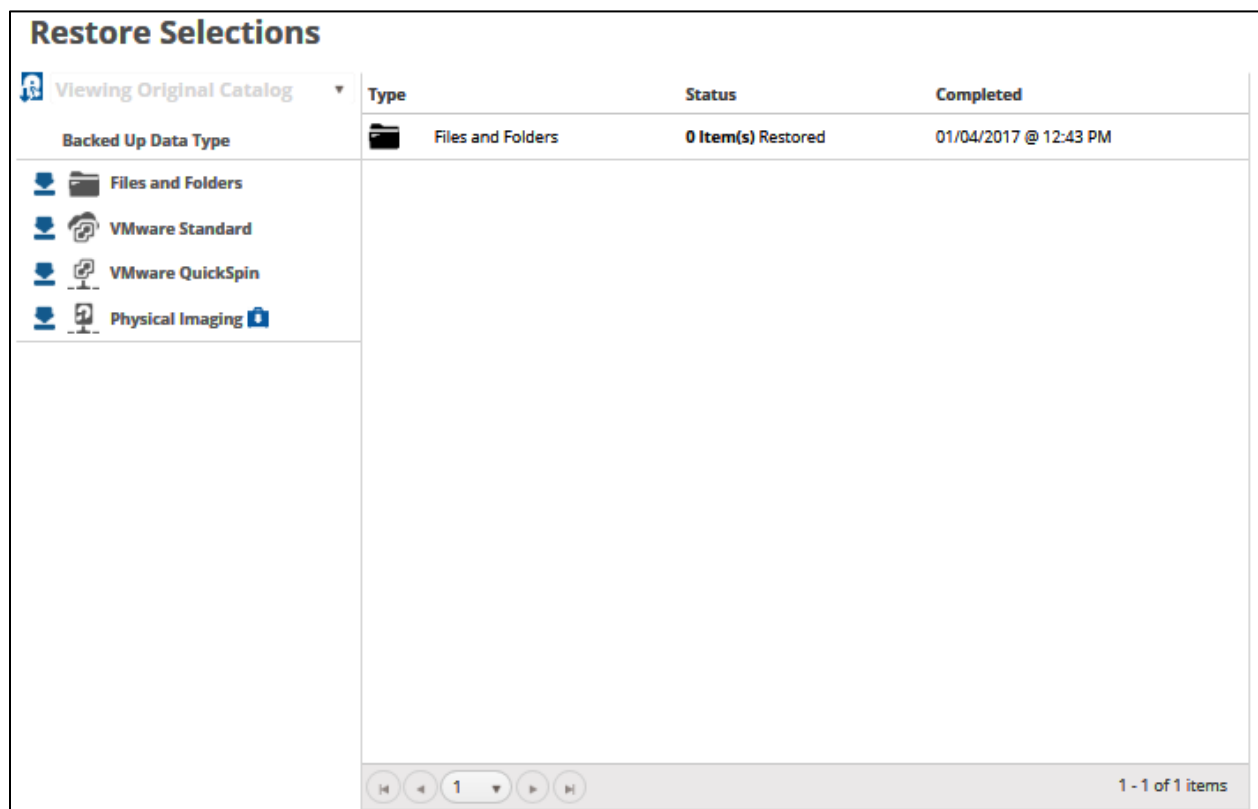








Figure 6. New Restore Selections Page.









## Restore Selections Icons

The following table provides descriptions of the new Restore Selections page icons.

Icon	Description
	Manually configure the respective Restore selection.
	Currently restoring.
	Stop action.
	Filter the displayed column items.
	Locate a secondary catalog. See <i>Restoring from a Secondary Catalog</i> .
	Download and create Bare-Metal Restore media.

## New Delete Selections Page

Figure 7 provides a display of the new Delete Selections page.

Delete Selections			
Backed Up Data Type	Type	Status	Completed
 Files and Folders	 Files & Folders	4 Item(s) Deleted	11/04/2016 @ 10:33 AM
 SQL Server			
 VMware Standard			
 VMware QuickSpin			
 Physical Imaging			





1 - 1 of 1 items

Figure 7. New Delete Selections Page.



### Delete Selections Icons

The following table provides descriptions of the new Delete Selections page icons.

Icon	Description
	Manually delete the respective Delete selection.
	Currently deleting.
	Stop action.
	Filter the displayed column items.



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## New Software User Interface





## Chapter 2. New Display Features

This chapter includes the following topics:

- Navigating the Software
- Expanding and Contracting Page Displays
- Drilling Down to Specific Volumes, Folders, and Versions

### Navigating the Software

There are two ways to navigate in the software: linearly by clicking the **Next** button, or selecting the tabs.

First time users may want to use the **Next** [Next >](#) button that is displayed on most pages, which allows you to experience the full functionality of the software to become familiar with all the features.

More experienced users may want to navigate by using the tabs to make modifications to only some of the default settings.

Tab features are specific to the different backup and restore types and therefore vary in their display. This guide addresses these types of differences in their respective sections.

For instance, Figure 8 provides an example of the tabs that display when performing a Files and Folders backup. See the respective backup type tabs section for more details.

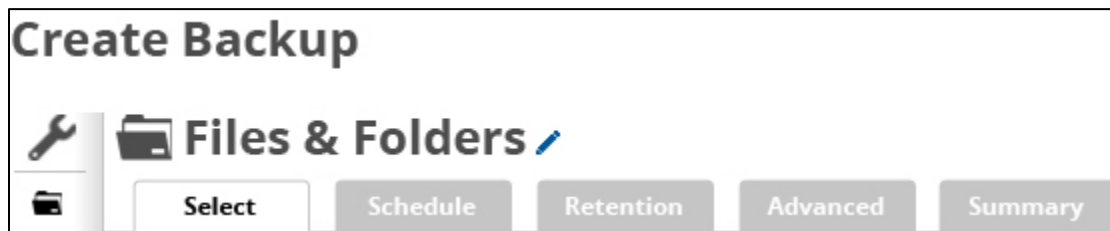


Figure 8. Files and Folders Tab Feature.



## Expanding and Contracting Page Displays

Many of the software pages allow you to expand and contract page views.

By clicking the expand/contract arrows as shown in Figure 9, you can modify the page display. This feature is particularly helpful when drilling down to select specific files.

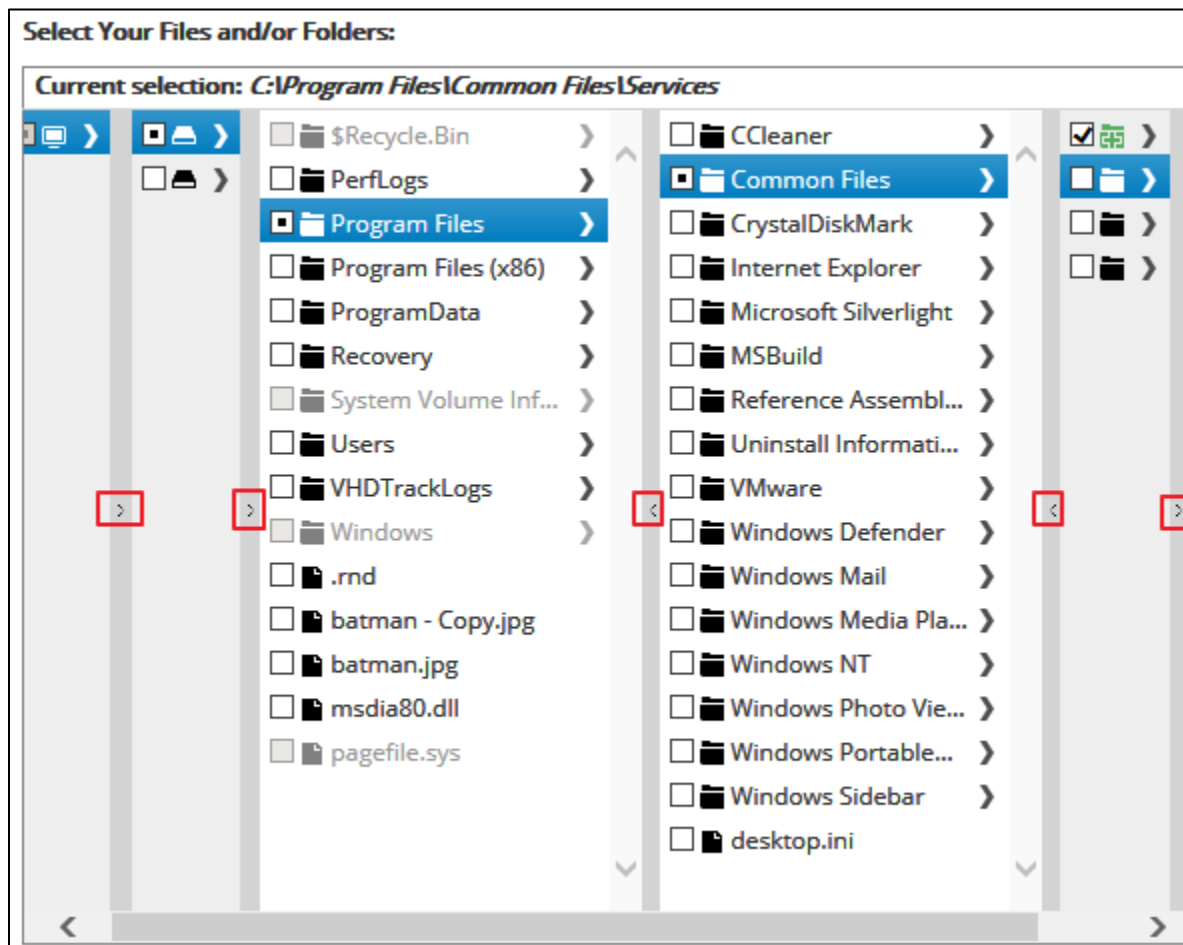


Figure 9. Page Display Feature.





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## New Software User Interface



## Chapter 3. New General Features

This chapter includes the following topics:

- About Restoring from a Secondary Catalog
- Changing Backup Set Names
- Manual Backup
- Error Handling

### About Restoring from a Secondary Catalog

There may be occasions when you want to restore from a secondary catalog using a restore drive. For example:

- Bandwidth limitations restrict restoring a large amount of data
- A primary catalog is corrupt

You can request a restore drive of your data instead of restoring over the Internet by contacting Partner Support. See *Partner Support*.

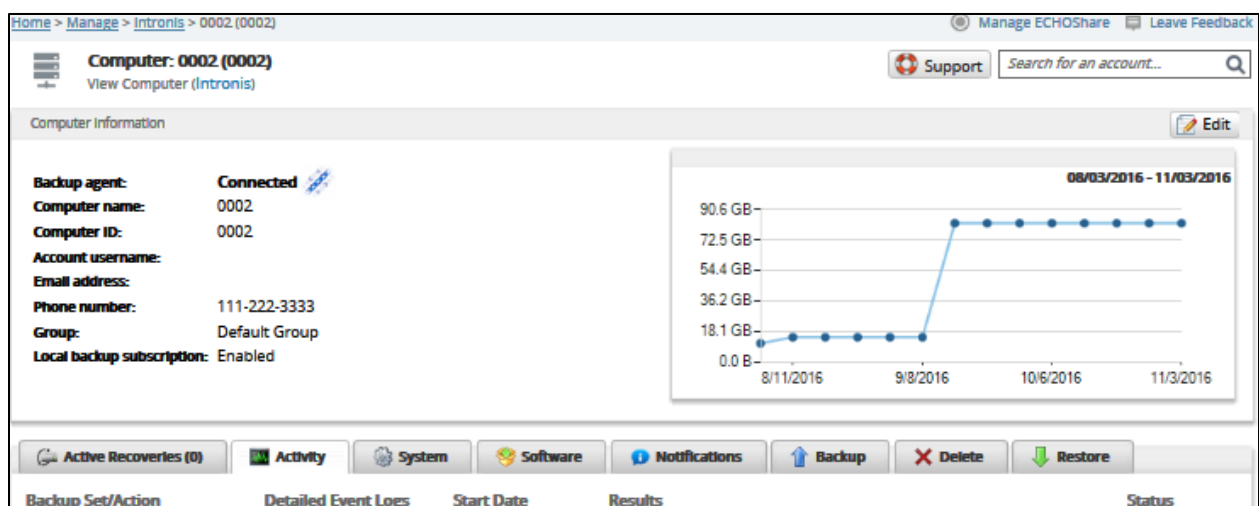
When the restore drive arrives, use the secondary catalog option to perform the restore.

### Restoring from a Secondary Catalog

To restore from a secondary catalog, perform the following steps.

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

The Computer page is displayed.




2. Click the **Restore** tab.













The Restore Selections page is displayed.

**Note:** The example below has the catalog icon highlighted.

### Restore Selections

 Viewing Original Catalog ▾

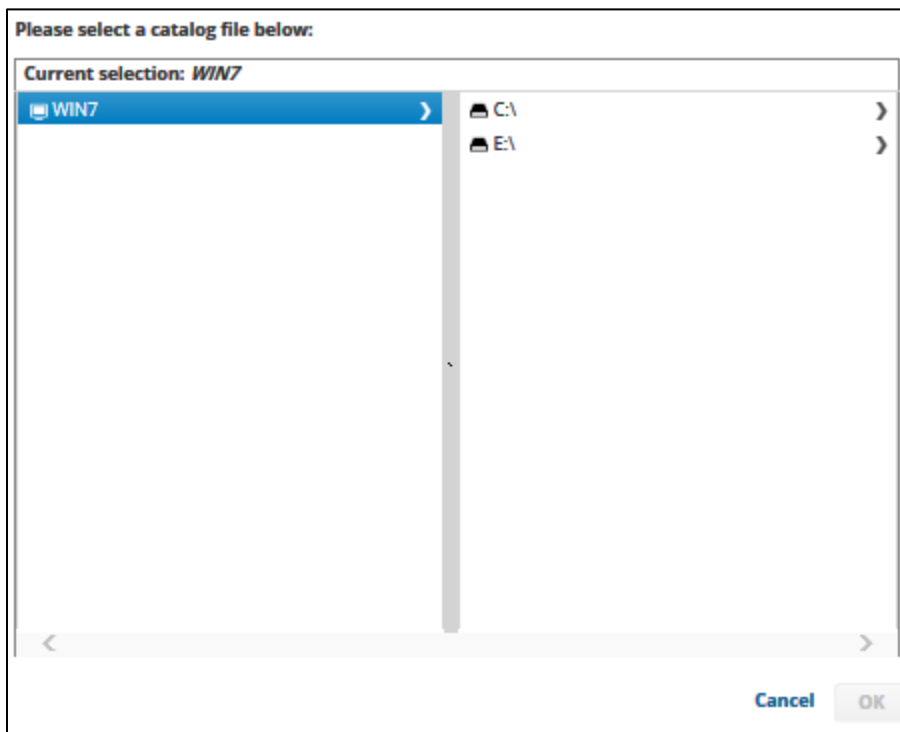
Backed Up Data Type	Type	Status	Completed
 Files and Folders	 Files and Folders	0 Item(s) Restored	01/04/2017 @ 12:43 PM
 VMware Standard			
 VMware QuickSpin			
 Physical Imaging 			


  1  

1 - 1 of 1 items

- Click the catalog  button.

The catalog selection pop-up is displayed.




Clicking the arrow  at the right of the items displays more files and folders.

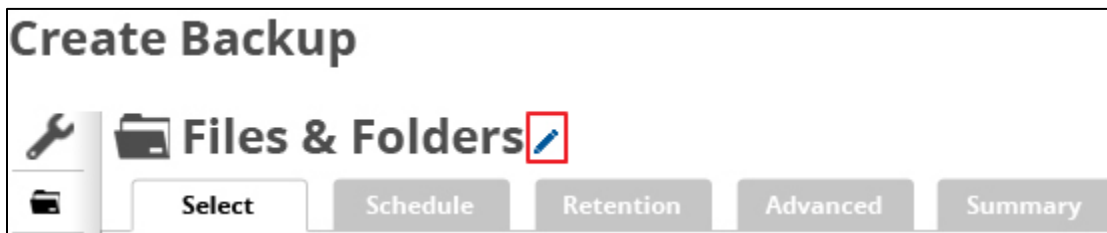
4. Select the catalog file, and then click **OK**.
5. Refer to the restore procedures in this guide.

## Changing Backup Set Names

To change the name of backup set when creating or editing the backup, perform the following steps.

1. At the backup set name on any page, click the edit  icon.

The placement of the icon is indicated in the example below.






The name field is activated and the edit icons are displayed.


A text input field containing the text "Files and Folders". To the right of the field are three icons: a blue 'X' (delete), a green checkmark (enable), and a red 'X' (cancel).

2. Click the delete  icon to erase the current name.

The name is erased.

**Note:** To cancel the name change and restore the current name, click the escape  icon.

A text input field that is currently empty. To the right of the field are the same three icons: a blue 'X' (delete), a green checkmark (enable), and a red 'X' (cancel).

3. Type the new name of the backup set in the field, and then click the enable  icon.

The new backup set name is displayed.

A text input field containing the text "Files and Folders 1". To the right of the field are the same three icons: a blue 'X' (delete), a green checkmark (enable), and a red 'X' (cancel).

## Manual Backup

At the Backup Selections page, you can run a manual backup at any time.

Figure 11 shows a backup running with no schedule that can be run manually. You can also run a manual backup that has a schedule.













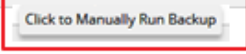


Backup Selections						
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove
 Files and Folders (3)		Files and Folders 1		10/24/2016 @ 09:30 PM		
 Physical Imaging (2)		Files and Folders 2		--		
 Hyper-V Standard		Files and Folders 3				

Figure 11. Manual Backup.






The backup running and stop icons are displayed while the backup is running.

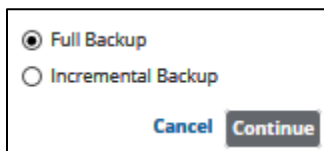


## Manually Running a Backup Set

To run a backup manually, perform the following steps.

1. At the Backup Selections page, click the blue play  button in the Run column.

Depending on the backup type, the run Full or Incremental pop up is displayed.



2. Make your selection, and then click **Continue**.

The backup begins to run and status is displayed.

## Error Handling

When creating, editing, or restoring a backup set, if an error is found, a prompt is displayed asking if you would like to correct or ignore the error. The error message specifically lets you know how to correct it. In addition, a red exclamation point is displayed on the tab of the known error location.

Figure 12 provides an example where errors occurred, and the corresponding error message.



Figure 12. Error Display.

Clicking **Fix Now** displays the first page where the error occurred.



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## New Software User Interface



## Chapter 4. New Template Interface

This section includes the following topics:

- About Templates
- About Setting Preferences Templates
- Creating a New Preferences Template
- Creating a New Email Notification Template
- Assigning Notification Settings
- Editing Templates
- Deleting Templates
- About Applying a New Template
- Applying a New Template to a Single Computer
- Applying a New Template to a Computer Group

### About Templates

**Templates** are predefined groups of preferences, alerts, and notifications settings that can be applied to a computer or group of computers at one time.

Newly applied templates overwrite any existing preferences, notifications settings, or overage alerts.

Figure 13 provides a display of the Manage Templates page.

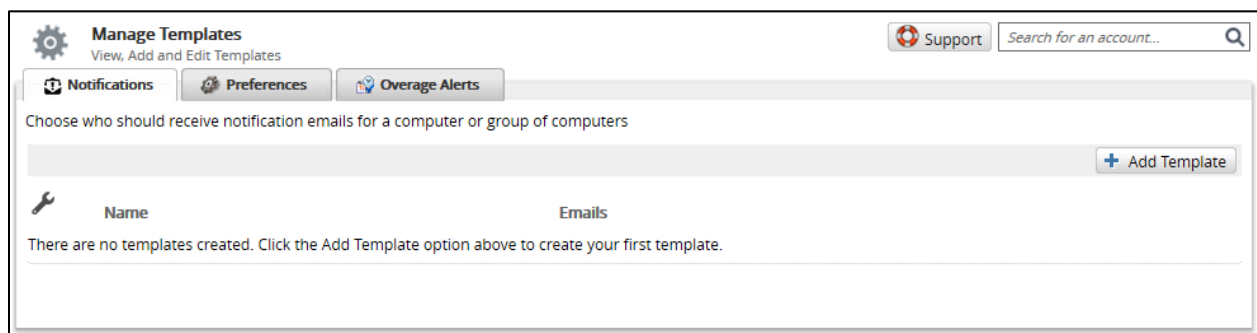


Figure 13. Manage Templates Page.

### Applying Templates

A template may be applied from **Apply Template** tabs located on the following pages:

- Management Dashboard under both the Accounts View and Group View tabs
- Manage Account page under the Computers tab.
- Computer page under the Software tab.

### About Setting Preferences Templates

When setting preferences, you can set

- System preferences
- Software preferences

Applying a preferences template requires the backup agent to be connected and may take up to 15 minutes during which a pending message is displayed on the Computer section of the Manage Account page.

### System Preferences

Under the System Preferences tab, you can configure the following options:

- Concurrent Workers
- File Retries
- Wildcard Exclusions
- Stray File Retention

#### *Concurrent Workers*

This option allows you to determine how many files and VMs the software can back up, restore, or delete at the same time. Increasing this value may improve the performance of these operations, but may consume more resources on the computer.

#### *File Retries*

This option allows you to determine how often a file can be retried if it fails to back up.

#### *Wildcard Exclusions*

This option allows you to set wildcard exclusions to add to each computer's exclusion list. Each phrase must be separated by a comma and committed by pressing **Enter**.

#### *Stray File Retention*

This option allows you to set the following retention rules:

- Automatically remove stray files after a number of days.
- Skip file removal if the volume or the share is not found.

## Software Preferences

Under the Software Preferences tab, you can configure the following options:

- Bandwidth Throttling
- Upload logs

### *Bandwidth Throttling*

This option allows you to set the bandwidth usage limits and times, or to deselect limits.

### *Upload logs*

This option allows you to upload warning and error log entries to enable online viewing.

## Creating a New Preferences Template

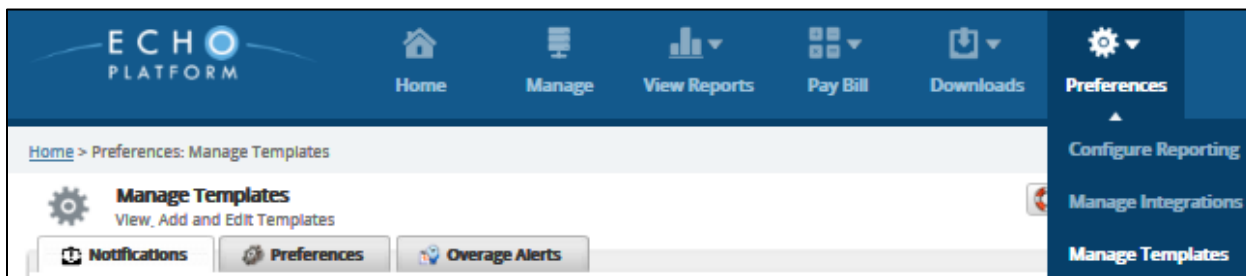
**Note:** By leaving a preference setting unselected, the template, when applied, does not overwrite that setting for the computer.

For example, if you create a template that adjusts only the Bandwidth Throttling setting, the other settings are not overwritten by this template. See *About Setting Preferences* for more information.

To create a new Preferences template, perform the following steps.

1. At the ECHOplatform ribbon, click **Preferences**.

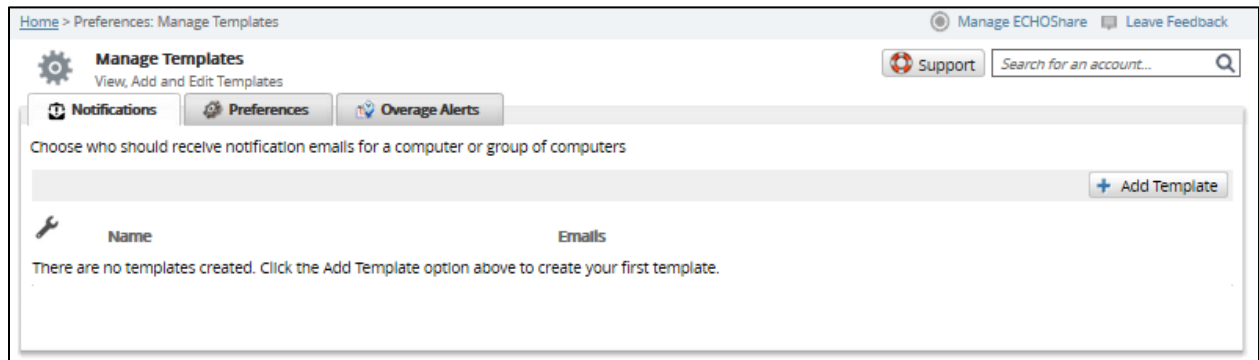
The Preferences drop-down menu is displayed.



2. Select **Manage Templates**.

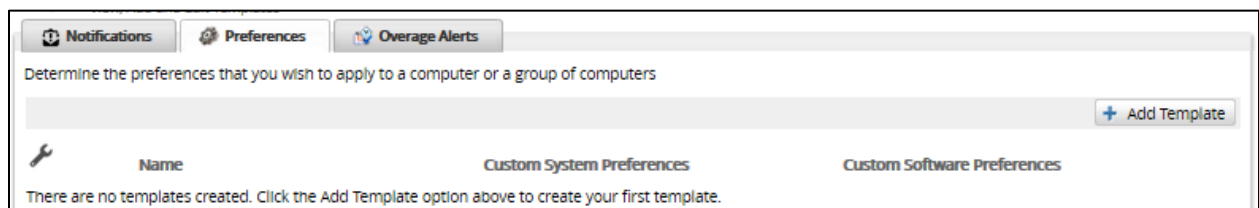


The Manage Templates page is displayed.



3. Click the **Preferences** tab.

The Preferences page is displayed.



4. Click the **Add Template** tab.



The System Preferences template is displayed.

**Add Template**

**Template 1** [edit icon]

**System** | **Software**

☐ **Concurrent Workers** For files, work on  file(s) concurrently.  
For Hyper-V, work on  VM(s) concurrently.  
For VMware, work on  VM(s) concurrently.  
For mailbox backups, work on  mailbox(es) concurrently.  
Determine how many items the software can back up or restore at the same time. Increasing this value may improve the performance of these operations, but may consume more resources on this computer.

☐ **File Retries** Retry each file  time(s).  
Determine how many times a file should be retried if it fails to back up

☐ **Wildcard Exclusions** Exclude:   
Set wildcard exclusions to exclude items from your backup sets. Separate each phrase with commas. Commit each phrase by pressing enter.

☐ **Stray File Retention** ☐ Automatically remove stray files after  days.  
☐ Skip file removal if volume or share is not found.  
☐ Always keep the most recent copy of each file.  
Stray files are any backed-up files that have been removed from the local machine, the backup set or excluded above.

**Cancel** **Save**

5. Click the edit [edit icon] icon to display the Add Template name field, as shown below.

Click here to rename


**Template 1** [edit icon]

The Add Template name field is displayed.

Press ENTER to confirm, ESC to cancel

[green checkmark] [red X]



6. Type a template name and then click the confirm  icon.

The new template name is displayed.

7. At the Concurrent Workers section, click the check box,

The fields are enabled.

8. Click the arrows to specify how many items are backed up or restored at the same time.

**Note:** Increasing the value may improve the performance of these operations, but may consume more resources on the computer.

The following table provides the default settings.

Item	Concurrent Workers Default Setting
Files	3
Hyper-V	3
VMware	3
Mailbox backups	1

9. At the File Retries section, click the check box.

The fields are enabled.

10. Click the arrows to specify how many times a file should be retried if it fails to back up.

**Note:** The default setting is 1.

11. At the Wildcard Exclusions section, click the check box.





The fields are enabled.

12. Set wildcard exclusions to exclude items from your backup sets.

**Note:** Separate each phrase with commas. Commit each phrase by pressing **Enter**.

**Example:** The following is an example of committed wildcard exclusions.

13. At the Stray File Retention section, click the check box.

The fields are enabled.

14. Optionally select the following:

- Automatically remove stray files after x days.  
**Note:** The default is 90 days.
- Skip file removal if volume or share is not found.
- Always keep the most recent copy of each file.

**Note:** The last two options are enabled only when the first item is selected.

**Definition:** Stray files are any backed-up files that have been removed from the local machine, the backup set or excluded above.

15. To configure software preferences, click the **Software** tab.



The Software Preferences page is displayed.

16. Click the Bandwidth Throttling check box

The usage fields are enabled.

17. Select the **Limit bandwidth usage** or the **Do not limit bandwidth usage** radio button.

18. If **Limit bandwidth usage** is enabled, set your usage limits.

**Note:** The default setting is Sunday through Sunday from 12 AM to 12 AM with a limit of 64 Kb/s.

19. Click the Upload Logs check box.

The check box is enabled.

**Note:** This option uploads warning and error log entries to enable online viewing.

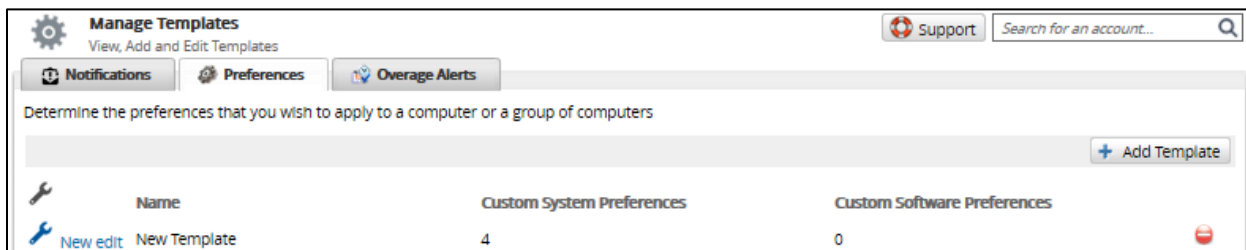
20. Optionally, clear the **Automatically upload logs for online viewing** check box.

21. When you have completed your selections, click the **Save** button.

The confirmation pop-up is displayed.

22. Click **Yes**.

The Preferences template is displayed.



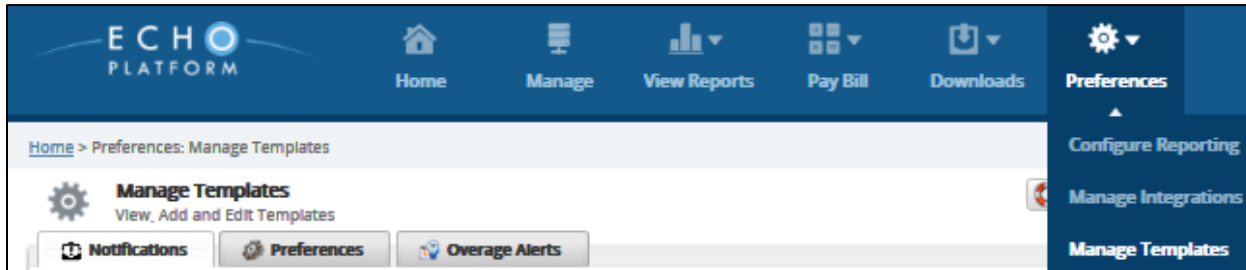
You can now apply the template to a single computer or a group of computers. *See About Applying a New Template.*

## Creating a New Email Notification Template

To create a new Email Notification template, perform the following steps.

1. At the ECHOplatform ribbon, click **Preferences**.

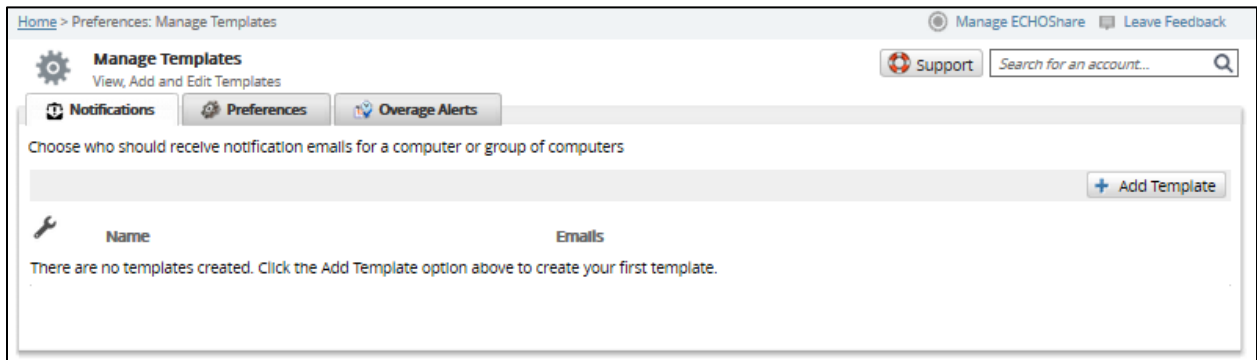
The Preferences drop-down menu is displayed.



2. Select **Manage Templates**.

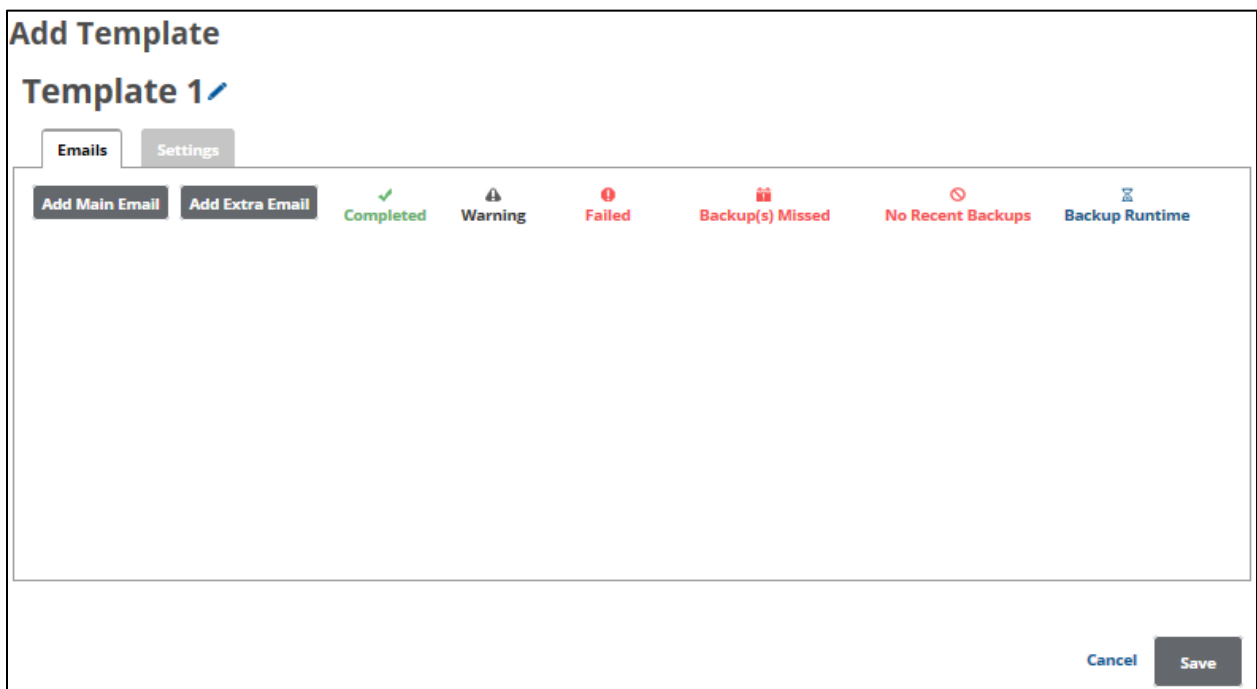


The Manage Templates page is displayed with Notifications as the default view.

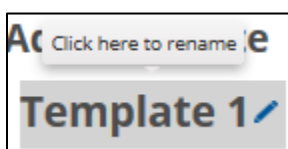


3. Click the **Add Template** button.

The Add Template page is displayed.



4. To add a new template name, click the existing template name, as shown below.



The name field is displayed.

☒
☐

- Type a template name, and then click the check mark ☒ icon.
- Click the **Add Main Email** button.

The Main Email check box notification options are displayed.

Template 1

Emails

Settings

Add Main Email

Add Extra Email

Completed

Warning

Failed

Backup(s) Missed

No Recent Backups

Backup Runtime

Main email on each computer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-----------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	-------------------------------------

- Select the check box for each notification you want emailed.
- To add additional emails, click the **Add Extra Email** button.

The extra email text box is displayed.

Add Main Email

Add Extra Email

Completed

Warning

Failed

Backup(s) Missed

No Recent Backups

Backup Runtime

Main email on each computer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- Make your selections, and then click **Save**.

The new Notifications template is displayed as shown below.

Manage Templates

View, Add and Edit Templates

Support

Search for an account...

Notifications

Preferences

Overage Alerts

Choose who should receive notification emails for a computer or group of computers

+ Add Template

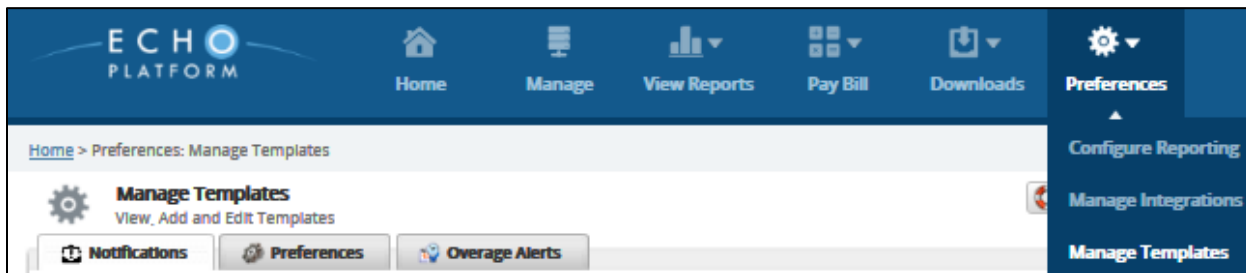
Name	Emails
Template 1	2

## Assigning Notification Settings

To assign notification settings, perform the following steps.

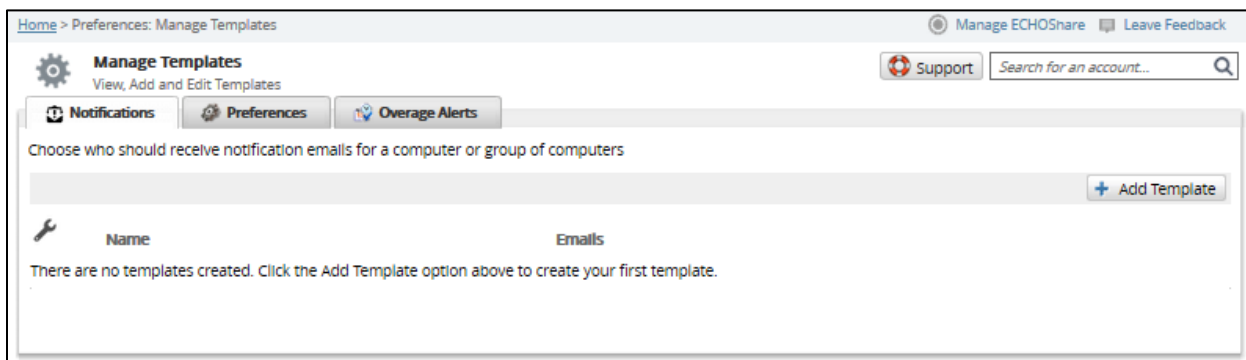
1. At the ECHOplatform ribbon, click **Preferences**.

The Preferences drop-down menu is displayed.



2. Select **Manage Templates**.

The Manage Templates page is displayed with Notifications as the default view.



3. Click the **Add Template** button.



The Add Template page is displayed.

### Add Template


#### Template 1


Emails


Settings


Add Main Email


Add Extra Email


Completed 

Warning 

Failed 

Backup(s) Missed 

No Recent Backups 

Backup Runtime 

Cancel

Save

4. Click the **Settings** tab.



The settings template is displayed.

The screenshot shows the 'Settings' tab in the Intronis interface. It contains several sections for configuring backup notifications:

- Notification Preferences:** Includes checkboxes for 'Include Failed Items' and 'Include No Files Notice', both of which are checked. Below this is a section for 'No Recent Backups' with a red circle icon, allowing users to control notification frequency based on backup status (e.g., 'If a backup has not run in 1 Week(s) send an email notification every 1 Day(s)').
- Backup Runtime:** A section with a blue icon allowing users to set a maximum runtime for backups (e.g., 'If a backup runs longer than 48 Hour(s) send an email notification every 1 Day(s)').
- Recurring-Interval Scheduled Backups:** A section with a green icon for controlling email notifications for specific backup types (QuickSpin, Images, and Files & Folders). It includes checkboxes for 'Send "Backup Complete" email notifications', 'Send "Backup Warning" email notifications', and 'Send "Backup Failed" email notification only after 1 recurring-interval scheduled backup(s) in a row failed'.

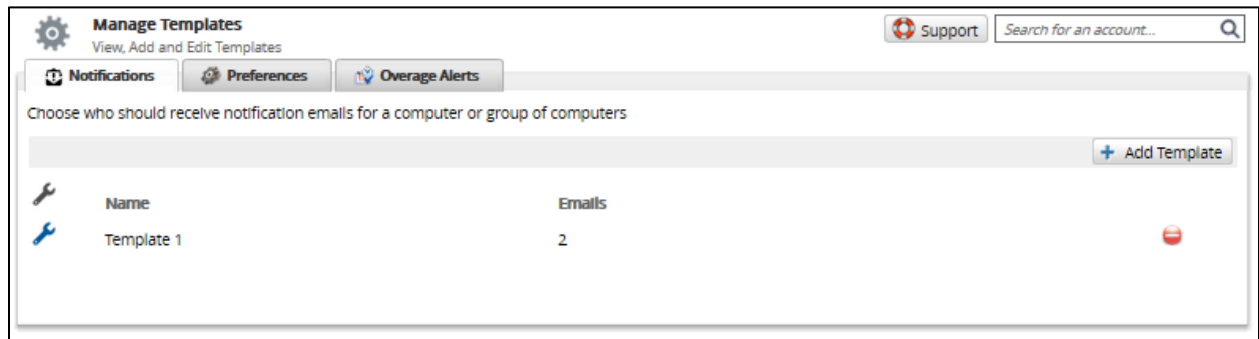
At the bottom right of the settings panel are 'Cancel' and 'Save' buttons.

5. At the Notification Preferences section, optionally clear the **Include Failed Items** and/or the **Include No Files Notice** check boxes.
6. At the No Recent Backups section, optionally control how often you receive notifications that a backup set has not run.
7. At the Backup Runtime section, optionally set how long a backup set can run before sending an email notification and specify how often to send the email notification.
8. At the Recurring-Interval Scheduled Backups section, optionally control email notifications for QuickSpin, Images, and Files & Folders backup sets that are using recurring-interval schedules.
9. Specify how many times (1-25) backup sets using recurring-interval schedules must fail consecutively before receiving a notification.
10. After completing your selections, click the **Save** button.





The Notifications template is displayed.



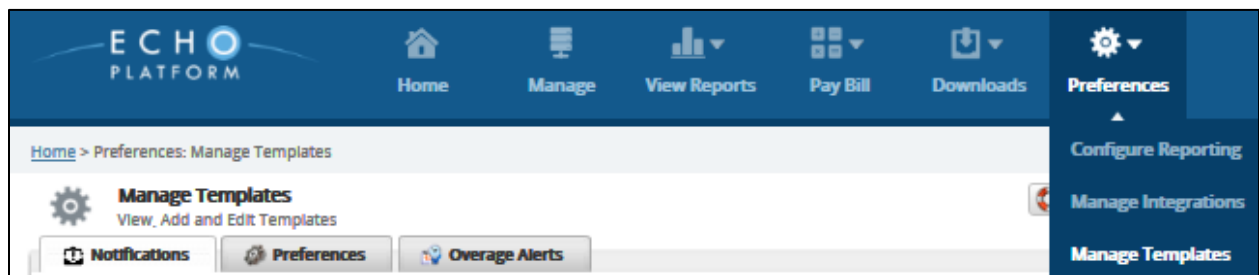
You can now apply the template to a single computer or a group of computers. *See About Applying a New Template.*

## Editing Templates

To edit templates, perform the following steps.

1. At the ECHOplatform ribbon, select **Preferences**.

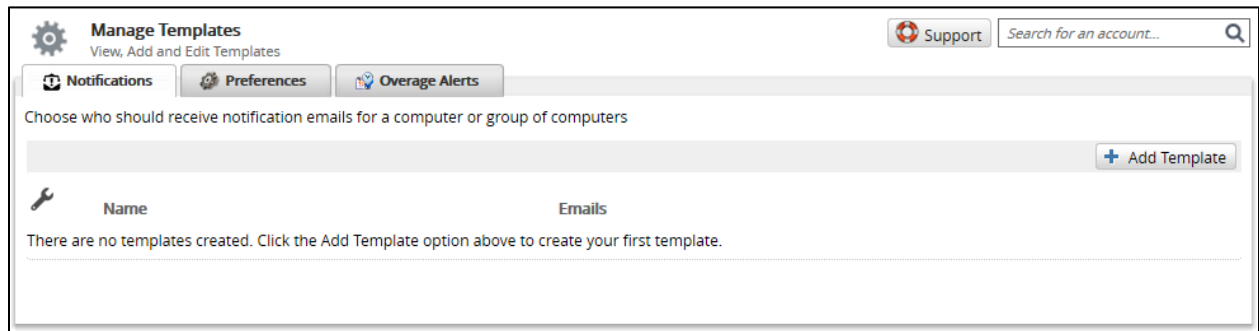
The Preferences drop-down menu is displayed.



2. Select **Manage Templates**.

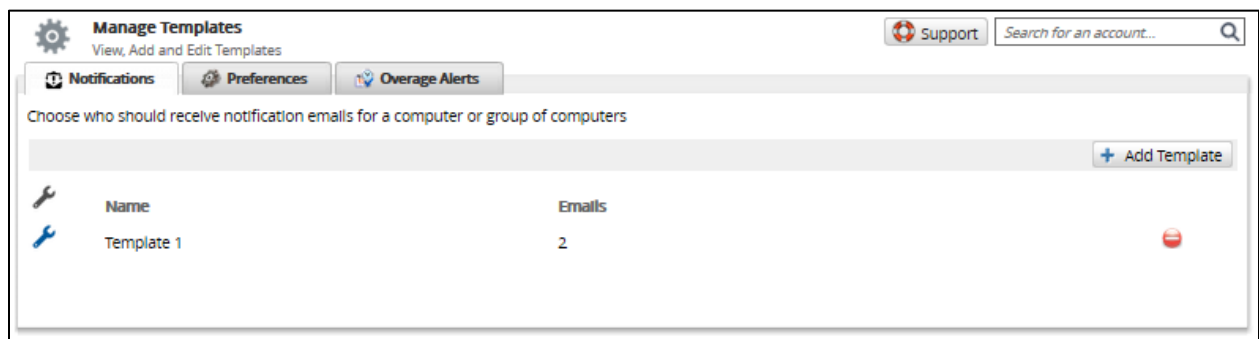


The Manage Template page is displayed.



3. Select the **Notifications**, **Preferences**, or the **Overage Alerts** tab.

The Notification templates are displayed in the example below.



4. Click the Edit  icon to the left of the template you want to modify.

The Edit Template page is displayed.

**Example:** The Notification options are displayed in the example below.

## Edit Template

### Template 1

Emails
Settings

Add Main Email
Add Extra Email

	Completed	Warning	Failed	Backup(s) Missed	No Recent Backups	Backup Runtime	
Main email on each computer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	✕
info@intronis.com	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✕

Cancel
Update

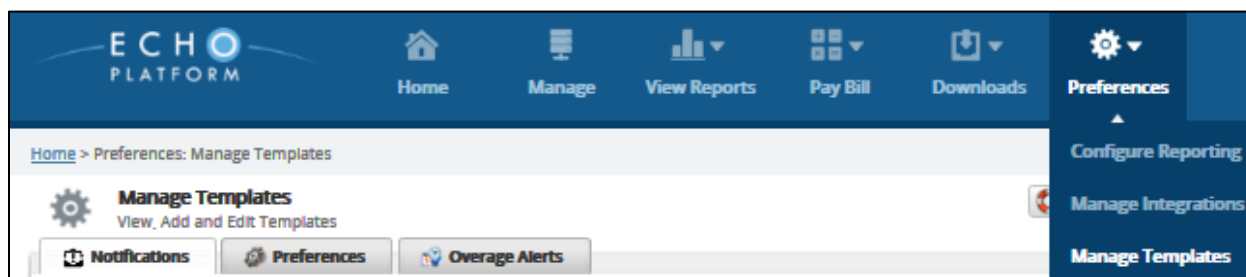
- Make your edits, and then click **Update**.

## Deleting Templates

To delete templates, perform the following steps.

- At the ECHOpatform ribbon, select **Preferences**.

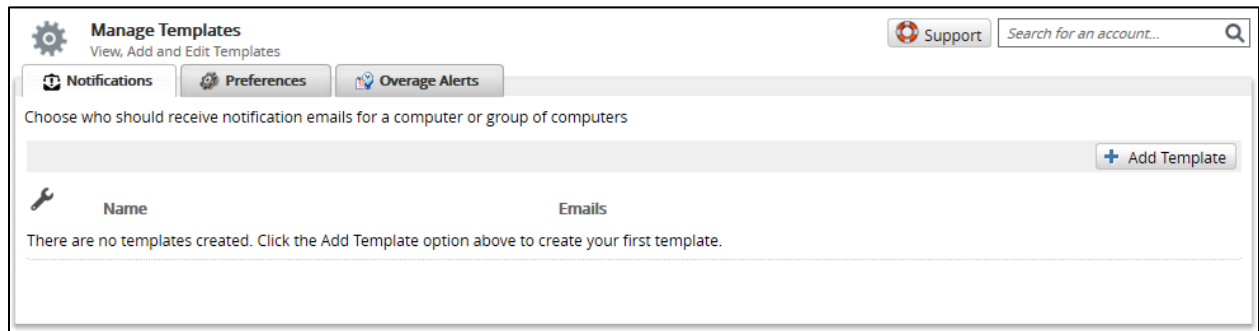
The Preferences drop-down menu is displayed.



- Select **Manage Templates**.

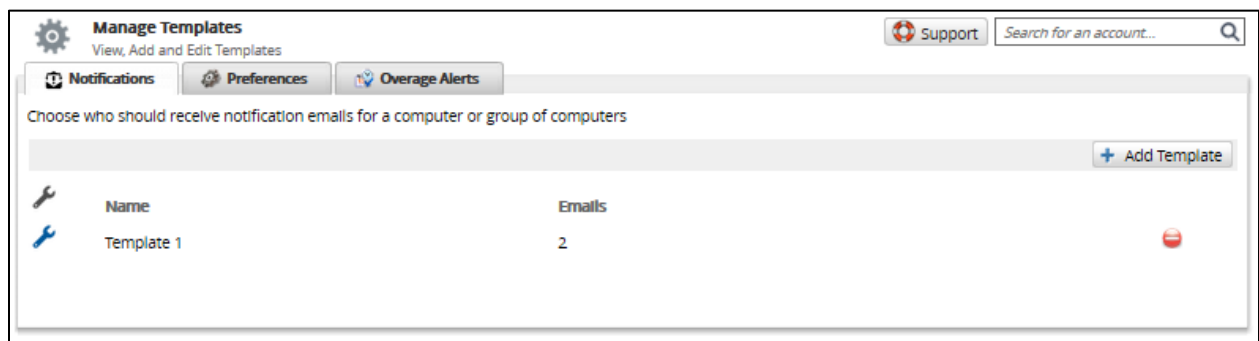


The Manage Templates page is displayed.



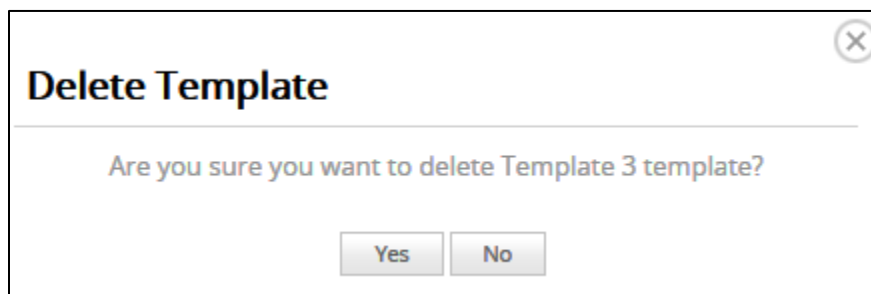
3. Select the **Notifications**, **Preferences**, or the **Overage Alerts** tab.

The Notification templates are displayed in the example below.



4. Click the Delete  icon to the right of the template you want to delete.

The Delete Template prompt is displayed.



5. Click **Yes**.

The template is deleted.




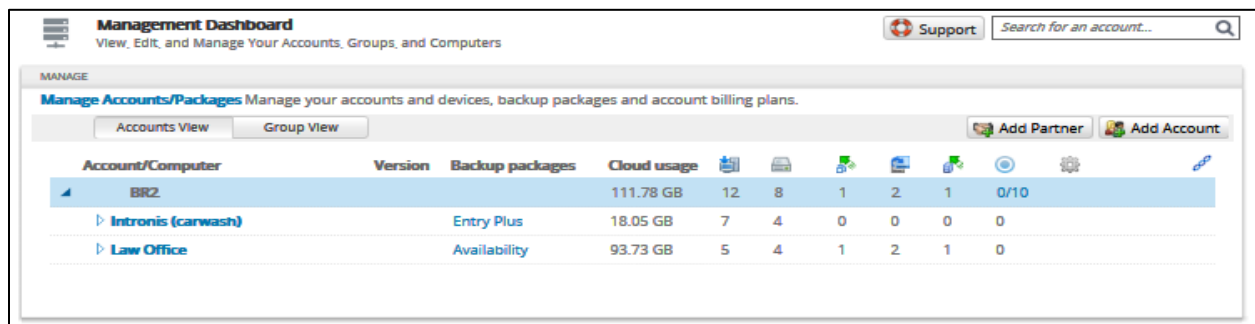
### About Applying a New Template

Templates can be applied to a single computer, or applied to a group of computers.

### Applying a New Template to a Single Computer

To apply a new template to a single computer, perform the following steps.

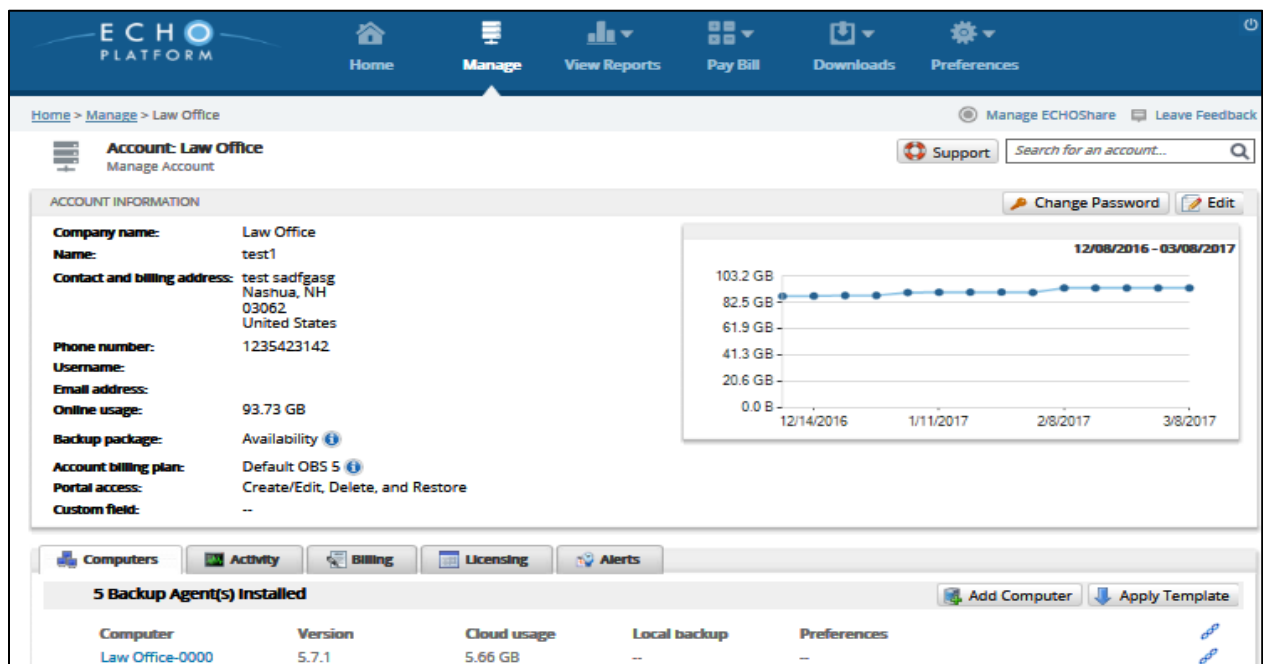
1. At the Management Dashboard, display a partner's accounts/computers by clicking the expand arrow  to its left, and then click the specific account/computer, as shown below.



The screenshot shows the 'Management Dashboard' with the 'Accounts View' tab selected. A table lists accounts/computers with columns for Account/Computer, Version, Backup packages, Cloud usage, and various status icons. The 'BR2' account is expanded, showing sub-accounts: 'Intronis (carwash)' and 'Law Office'.

Account/Computer	Version	Backup packages	Cloud usage	12	8	1	2	1	0/10
BR2			111.78 GB						
Intronis (carwash)	Entry Plus		18.05 GB	7	4	0	0	0	0
Law Office	Availability		93.73 GB	5	4	1	2	1	0

The Manage Account page is displayed.



The screenshot shows the 'Manage Account' page for 'Law Office'. It includes account information, a line graph of cloud usage, and a list of installed backup agents.

**ACCOUNT INFORMATION**

Company name:	Law Office
Name:	test1
Contact and billing address:	test sadfgasg Nashua, NH 03062 United States
Phone number:	1235423142
Username:	
Email address:	
Online usage:	93.73 GB
Backup package:	Availability
Account billing plan:	Default OBS 5
Portal access:	Create/Edit, Delete, and Restore
Custom field:	--

**Cloud Usage Graph:** 12/08/2016 - 03/08/2017. Y-axis ranges from 0.0 GB to 103.2 GB. The graph shows a steady increase in usage over time.

**5 Backup Agent(s) Installed**

Computer	Version	Cloud usage	Local backup	Preferences
Law Office-0000	5.7.1	5.66 GB	--	--

2. Click the **Apply Template** tab.



The Apply Template pop-up is displayed.

The 'Apply Template' dialog box is shown. It has a title bar with a close button. Below the title, it says 'Apply the Following Template(s) to the 0002 Computer:'. There are three dropdown menus: 'Notifications' with '(None)' selected, 'Preferences' with '(None)' selected, and 'Overage Alerts' with '(None)' selected. At the bottom right are 'Apply' and 'Cancel' buttons.

3. Select the desired templates from the drop-down menus, and then click **Apply**.

- If applying Preferences templates and/or Overage Alerts templates, the changes are applied to the selected agent the next time the agent checks in. Agents that are running check in every 15 minutes.
- Note that a Pending status is displayed on the Computer section of the Manage Account page until the template is applied, as shown below.

Computer	Version	Cloud usage	Local backup	Preferences
Law Office-0000	5.7.1	5.66 GB	--	--
Law Office-0004-0004	5.7.1	54.03 GB	--	Pending

- If applying Notifications templates, the Append pop-up is displayed, as shown below.

The 'Append Template' dialog box is shown. It has a title bar with a close button. Below the title, it asks: 'Would you like to append any new email addresses to the existing notification emails on each computer, or replace all listed email addresses with those in the template?'. At the bottom are 'Append', 'Replace', and 'Cancel' buttons.

- **Append** adds settings not already specified (good for modifying notifications settings).
- **Replace** overwrites all settings with exactly what was chosen in the template (good for resetting or clearing notifications settings).

- Click **Append** or **Replace**.

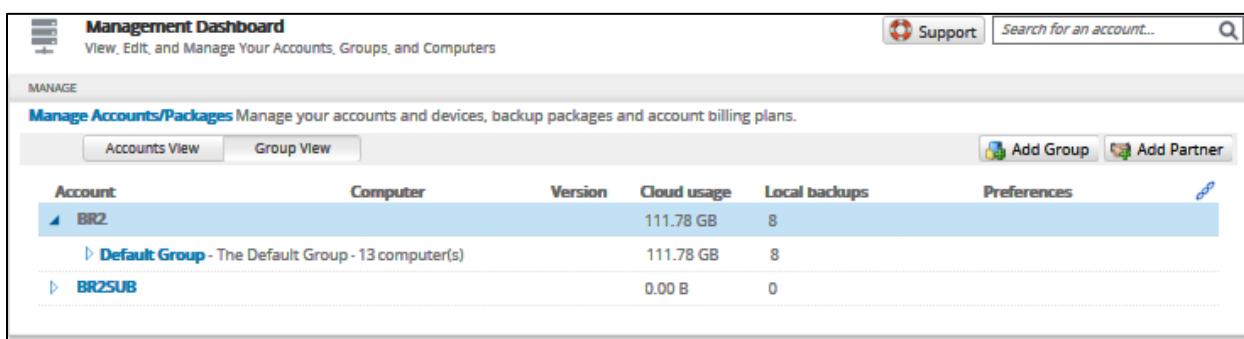
The new emails are added or replaced.

## Applying a New Template to a Computer Group

To apply a new template to a computer group, perform the following steps.

- At the Management Dashboard, select the **Group View** tab.

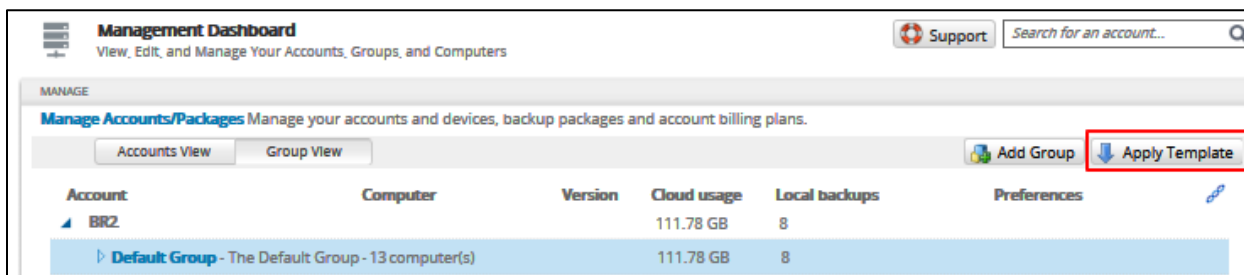
The groups are displayed.



Account	Computer	Version	Cloud usage	Local backups	Preferences
BR2			111.78 GB	8	
	Default Group - The Default Group - 13 computer(s)		111.78 GB	8	
BR2SUB			0.00 B	0	

- Click a specific group row to highlight it.

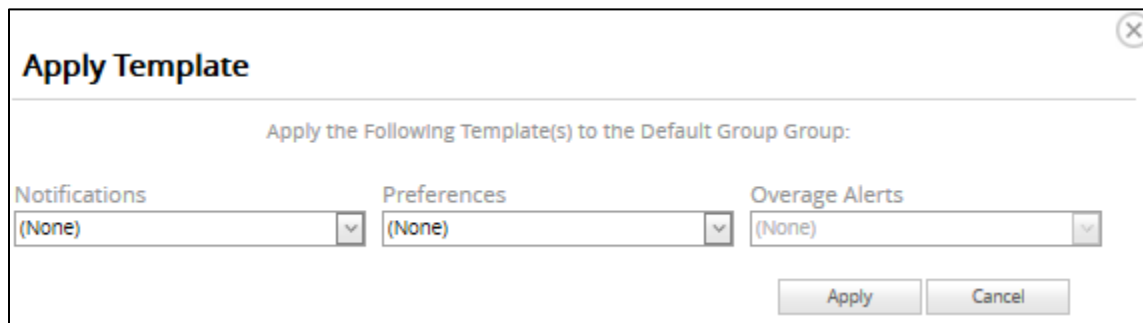
The Apply Template tab is displayed, as shown below.



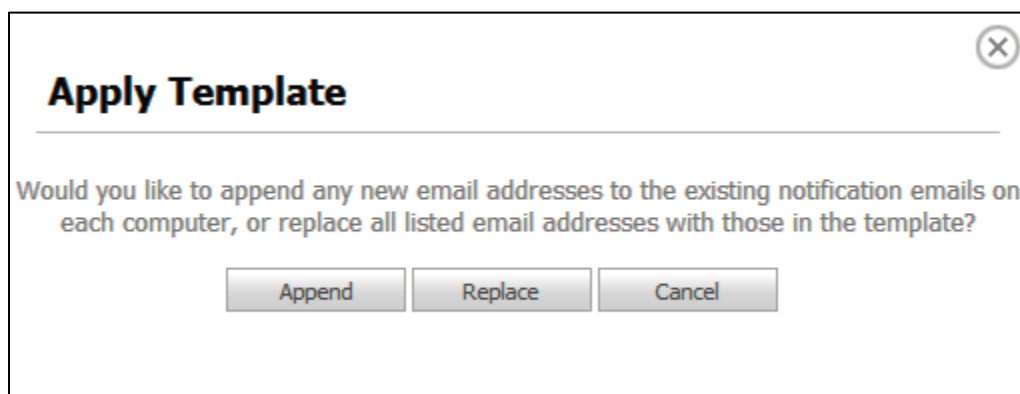
Account	Computer	Version	Cloud usage	Local backups	Preferences
BR2			111.78 GB	8	
	Default Group - The Default Group - 13 computer(s)		111.78 GB	8	

- Click the **Apply Template** tab.

The Apply Template pop-up is displayed.



4. Select the desired templates from the drop-down menus, and then click **Apply**.
  - If applying Preferences templates, the changes are applied to the selected agent the next time the agent checks in. Agents that are running check in every 15 minutes.
  - If applying Notifications templates, the Append pop-up is displayed, as shown below.



5. Optionally, click **Append** or **Replace** email addresses.
  - **Append** adds settings not already specified (good for modifying notifications settings).
  - **Replace** overwrites all settings with exactly what was chosen in the template (good for resetting or clearing notifications settings).





## PART II. NEW TECHNICAL FEATURES

This part includes the following chapters:

- Hyper-V Offline Mode
- Support for vSphere 6.5 with TLS 1.0 Enabled

### Chapter 1. Hyper-V Rapid Recovery Offline Mode

With Hyper-V Offline Mode, you are able to back up Hyper-V Rapid Recovery VMs in an offline state if an online backup cannot be taken. For instance, if the guest VM has dynamic disks, this mode allows guest VMs to be backed up in a non-quiesced, offline state.

The default behavior is always to perform online Hyper-V backups.

At the Settings page, when the Backup Mode is enabled (Figure 14), the software performs an offline backup of the Hyper-V VM only if the online backup fails.

The software attempts to make an online backup first. If unable to back up, an offline backup is created, the virtual machine pauses into a saved state while the snapshot is taken, and then the virtual machine is resumed. The virtual machine may become unavailable during the snapshot process.



Figure 14 provides an example of the Hyper-V Rapid Recovery Advanced page with the Offline Backup Mode option.

The screenshot displays the 'Advanced' tab of the Hyper-V Rapid Recovery configuration interface. It includes sections for 'Temporary Folder', 'Force Full Backups', and 'Backup Mode'. The 'Backup Mode' section features a checkbox for 'Enable Offline Backup Support', which is currently unchecked. A red rectangular box highlights this checkbox and the accompanying warning text: 'When enabled, the virtual machine may become unavailable during the snapshot process.' The interface also includes a 'Notes' section with a single bullet point and navigation links for '< Previous' and 'Next >'.

Select Schedule Retention **Advanced** Summary

**Temporary Folder**  
Define where the temporary folder that's used in backing up VM(s) resides. Manually type in a path or browse to the desired location.  
Path:  [Browse...](#)

**Force Full Backups**  
Define how often full backups are performed after incremental backups.  
A full backup is forced every  incremental backup(s).

**Backup Mode**  
This software will attempt to make an online backup first. If unable, an offline backup is created, pausing the virtual machine into a saved state while the snapshot is taken and the virtual machine is resumed.

☐ **Enable Offline Backup Support**  
**When enabled, the virtual machine may become unavailable during the snapshot process.**

**Notes**

- Taking a full VM backup periodically ensures the stability of the backup chain. Full backups take longer to run but result in shorter incremental chains and potentially shorter recovery times.

[< Previous](#) [Next >](#)

Figure 14. Hyper-V Offline Backup Mode.



## Chapter 2. Support for vSphere 6.5 with TLS 1.0 Enabled

This release provides support for vSphere 6.5 with TLS 1.0 enabled.

### vSphere API Configuration

This section provides a description of how to configure a VMware 6.5 host to allow the Backup Agent to back up and restore data to and from the host.

By default, VMware ESXi 6.5 does not support TLS 1.0. TLS 1.0 is the version of the TLS/SSL protocol used by the VDDK library (version 5.1) that the Agent uses to connect to an ESXi host.

For managed hosts, TLS 1.0 must be enabled on all the hosts managed by the vCenter Server. This requirement is necessary because the host that is responsible for transferring data from the disk may not be the host on which the VM resides (or the one to which a VM is being restored).

The vCenter Server chooses from its unordered list of hosts the first host with read/write access to the pertinent data store to perform the data transfer (whether backup or restore).

### Enabling TLS 1.0 on an ESXi 6.5 Host

To enable TLS 1.0 on an ESXi 6.5 Host, perform the following steps.

1. Connect to the ESXi host via ssh.
2. Add the following line to `/etc/vmware/config`: `tls.protocols=tls1.0,tls1.1,tls1.2`
3. Restart the rhttpproxy service by running the following command: `/etc/init.d/rhttpproxy restart`



**Intronis**  
MSP Solutions by Barracuda

## New Technical Features



## PART III. NEW CONNECTWISE AND AUTOTASK SECTIONS

This part includes the following chapters:

- ConnectWise
- Autotask

### Chapter 1. Connectwise

The following sections from the *ConnectWise Integration Guide* have been updated because of the Silverlight removal. Refer to the *ConnectWise Integration Guide* for more information.

This chapter includes the following topics:

- Ticketing Setup
- Billing Setup
- Billing Strategies

#### Ticketing Setup

This section includes the following topics:

- Overview
- Mapping Tickets

#### Overview

Setting up ticketing integration means that the current backup notifications can be automatically sent to ConnectWise, assigned to a specific Service Board, and given a pre-defined:

- Status
- Priority
- Required Date
- Service Type



### Mapping Tickets

To map tickets to ConnectWise companies, perform the following steps.

1. At the ConnectWise Integration page, click the **Tickets** tab.

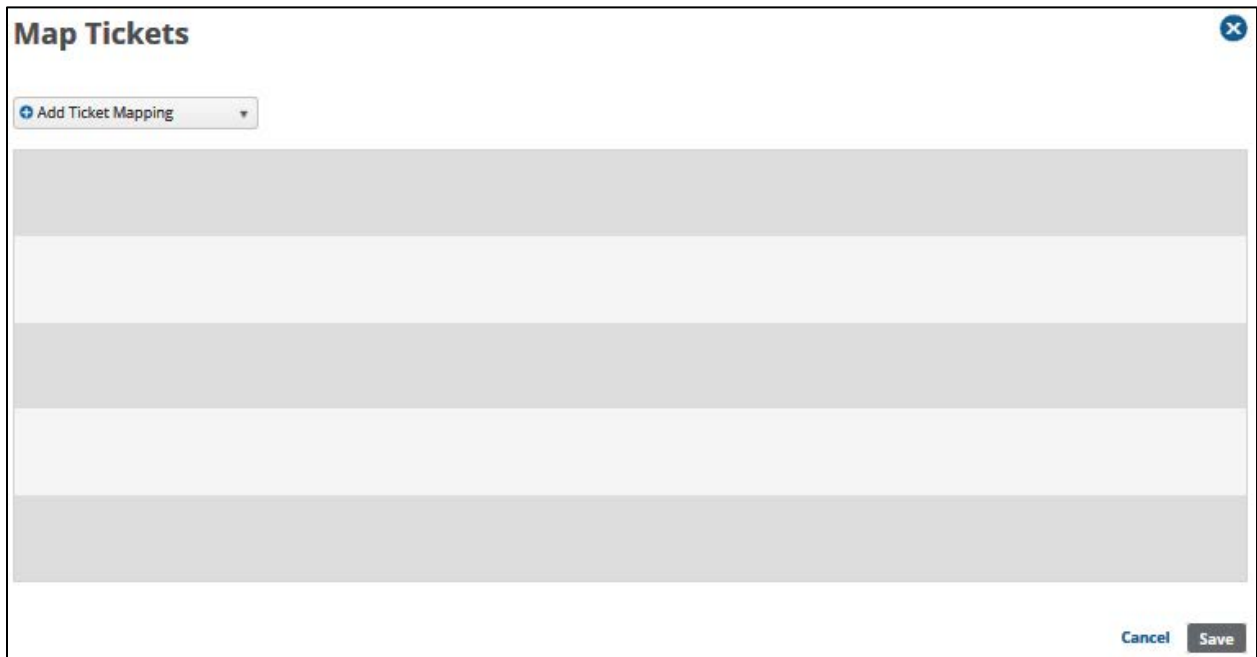
The screenshot shows the 'ConnectWise Integration' page. At the top, there's a 'Support' button and a search bar. Below that, the 'CONNECTWISE INTEGRATION INFORMATION' section is visible, with an 'Edit' button. This section is divided into 'Status' and 'Preferences'. The 'Status' section shows: Integration status: Notices Present; Accounts: 2 Accounts are not linked; Tickets: Ticket mappings not set up; Billing: Billing not set up. The 'Preferences' section shows: Company name: intronis\_f; URL: ; ConnectWise username (email): pm; Integration guide: with a 'Download' button. Below this is a tabbed interface with 'Accounts', 'Tickets', 'Billing', and 'Logs'. The 'Accounts' tab is active, showing a table with columns: Intronis Account, ConnectWise Company, and Status. One row is visible: 'carwash - James Smith' linked to an empty 'ConnectWise Company' field, with a status of 'Unlinked'. A 'Refresh Accounts' button is on the right.

The Tickets page is displayed.

The screenshot shows the 'Tickets' page. At the top, there's a tabbed interface with 'Accounts', 'Tickets', 'Billing', and 'Logs'. The 'Tickets' tab is active. Below the tabs, there's a 'Map Tickets' button. The main content area has columns: Backup Status, Service Board, Status, Priority, Required Date, and Service Type. A message states: 'There are no ticket mappings set up. Click the Map Tickets option above to map your first ticket.'

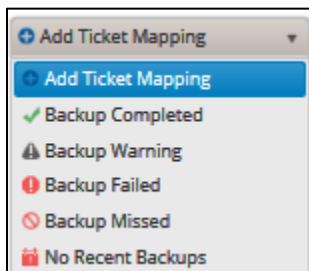
2. Click the **Map Tickets** button.

The Map Tickets page is displayed.



3. Select the **Add Ticket Mapping** drop-down arrow.

The Mapping Status Menu options are displayed.



4. Select the status options you want to map.

You can map the following backup statuses:

- Backup Complete
- Backup Warning
- Backup Failed
- Backup Missed
- No Recent Backups



- For each ticket that you would like to send to Connectwise, select the appropriate Service Board, Status, Priority, Priority, Due Date, and Service Type from your available options using the drop-down menus in each row.

The following example displays all the status options.

All backup statuses added. ▾

	Service Board	Status	Priority	Required Date	Service Type	
Backup Completed	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 <input type="text"/> Day(s)	<input type="text"/>	✕
Backup Failed	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 <input type="text"/> Day(s)	<input type="text"/>	✕
Backup Warning	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 <input type="text"/> Day(s)	<input type="text"/>	✕
Backup Missed	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 <input type="text"/> Day(s)	<input type="text"/>	✕
No Backups for 7 <input type="text"/> Day(s)	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 <input type="text"/> Day(s)	<input type="text"/>	✕

Cancel Save

**Note:** The Required Date fields range from 1 - 99 days.

The following example displays a completed ticket page.

All backup statuses added. ▾

	Service Board	Status	Priority	Required Date	Service Type	
Backup Completed	Intronis - Data Back...	Closed (resolved)	Priority 3 - Normal...	1 <input type="text"/> Day(s)	Proactive	✕
Backup Failed	Intronis - Data Back...	New (not responded)	Priority 1 - Emergen...	1 <input type="text"/> Day(s)	Reactive	✕
Backup Warning	Integration	Plan of Action	Priority 1 - Emergen...	1 <input type="text"/> Day(s)	Running	✕
Backup Missed	Intronis - Data Back...	Assigned (responded)	Priority 3 - Normal...	1 <input type="text"/> Day(s)	Break-fix	✕
No Backups for 7 <input type="text"/> Day(s)	Intronis - Data Back...	Closed (resolved)	Priority 3 - Normal...	1 <input type="text"/> Day(s)	Warranty	✕

Cancel Save

- When you are done, click the **Save** button.





## Billing Setup

This section includes the following topics:

- Overview
- Setting Up Billing

### Overview

ConnectWise billing integration allows you to bill directly from within ConnectWise for the following items:

- Backup usage
- Local backup subscriptions
- QuickSpin host licenses
- Imaging licenses
- Hyper-V licenses

### Setting up Billing

To set up billing, perform the following steps.

1. In the Portal, at the ConnectWise Integration page, click the **Billing** tab.

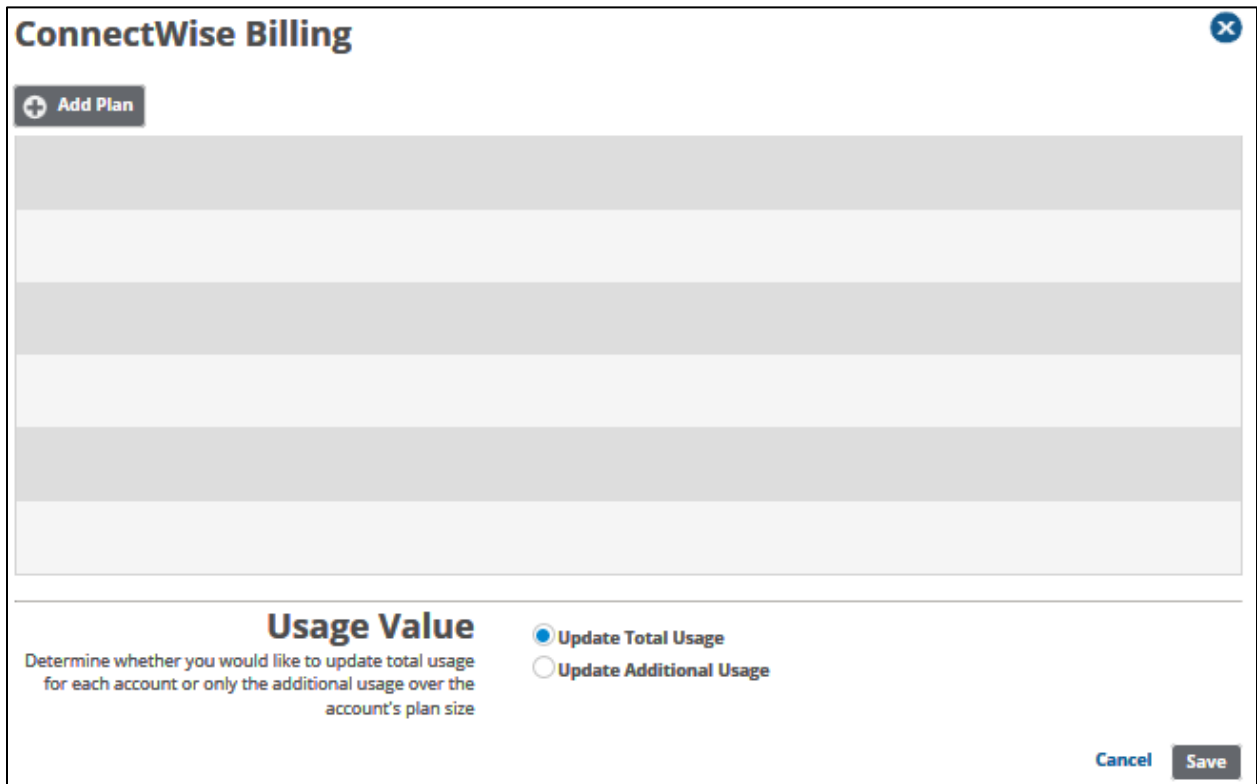
The Billing page is displayed.

The screenshot shows the 'ConnectWise Integration' page with the 'Billing' tab selected. The page is divided into several sections:

- CONNECTWISE INTEGRATION INFORMATION**: Contains 'Status' and 'Preferences' tabs. The 'Status' tab shows 'Integration status: Notices Present', 'Accounts: 1 Accounts are not linked', 'Tickets: No Notices in the last 24 hours', and 'Billing: Billing not set up'. The 'Preferences' tab shows 'Company name:', 'URL: staging.connectwisedev.com', 'ConnectWise username (email): pm', and 'Integration guide: Download'.
- Billing**: A section with a 'Set Up Billing' button. It includes a 'Plan' and 'Level' table with the message 'Billing is not yet set up. Click the Set up Billing option above to map your plans to ConnectWise services.'
- Usage**: A section with a 'Usage Value : Update total usage' button.

2. Click the **Set Up Billing** button.

The ConnectWise Billing page is displayed.



**ConnectWise Billing** [Close]

**+ Add Plan**

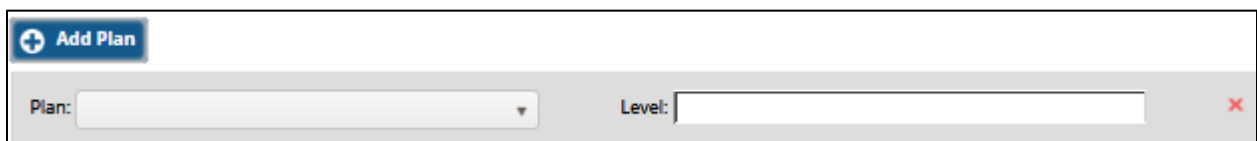
**Usage Value**  
Determine whether you would like to update total usage for each account or only the additional usage over the account's plan size

☒ Update Total Usage  
☐ Update Additional Usage

**Cancel** **Save**

- Click **Add Plan**.

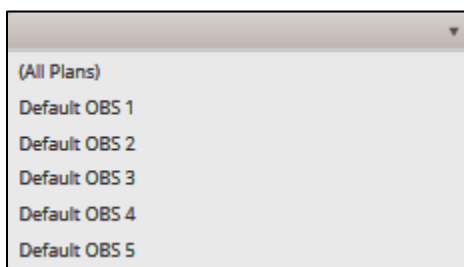
The plan fields are displayed.



**+ Add Plan**

Plan: [Dropdown] Level: [Text] [Close]

- Select the Plan drop-down arrow to display your plan options.



(All Plans)

- Default OBS 1
- Default OBS 2
- Default OBS 3
- Default OBS 4
- Default OBS 5



**Notes:**

- Selecting **(All plans)** means that every account is billed the same rate. Every account is updated with the same set of products on ConnectWise agreements.
- Other plan options are mapped to their own level. This means accounts update a different set of products based on the plan that they are on allowing you to charge different price points in ConnectWise.

5. At the Level field, enter a level for each plan being mapped.

**Requirement:** The level name must match a level set up in your Managed Devices Integration setup table Cross-References, and is case sensitive. See *Creating Cross-references*.

6. At the bottom of the page, select a Usage Value radio button.

**Note:** The following table provides descriptions of the Usage Value options.

Usage Value	Description
Update total usage	<p>This option sends the total amount of data (in GB) that each account is using to ConnectWise.</p> <p>This option is best used when billing a flat rate per GB. See <i>Universal Price-per-GB</i> or <i>Price - per-GB by Plan</i> billing strategies for an example of how this is used.</p>
Update additional usage	<p>This option sends only the usage over the base plan size for each account. For example, if an account has a 20 GB plan and uses 25 GB, only the 5 GB value is sent to ConnectWise.</p> <p>This option is best used when billing a base rate for a certain block of storage, and then billing overage using a per-GB rate See <i>Block Storage</i> billing strategy for an example.</p>

7. Click the **Save** button.

Your new billing plan is displayed.



## Billing Strategies

This section includes the following topics:

- Overview
- Universal Price-per-GB
- Price – per - GB by Plan
- Block Storage Billing

### Overview

The ConnectWise integration provides a flexible interface for setting up billing integration, which allows you to bill for your service the way you like. Outlined below are three potential billing strategies that you may choose to follow when billing for our services through ConnectWise.

**Note:** All strategies described below involve billing for usage. Local backup, QuickSpin Host Licenses, Hyper-V licenses, and Imaging licenses are billed at a price-per-license in all cases. These licenses require their own cross-references of type **LocalBackup**, **VMwareHostLicensing**, **Hyper-V**, and **ImageLicensing** for each level.

The billing strategies are as follows:

- Universal Price-per-GB
- Price-per-GB by plan
- Block storage

### Universal Price-per-GB

Use this billing strategy when choosing to bill at the same flat price-per-GB of backup storage for all of your backup customers.



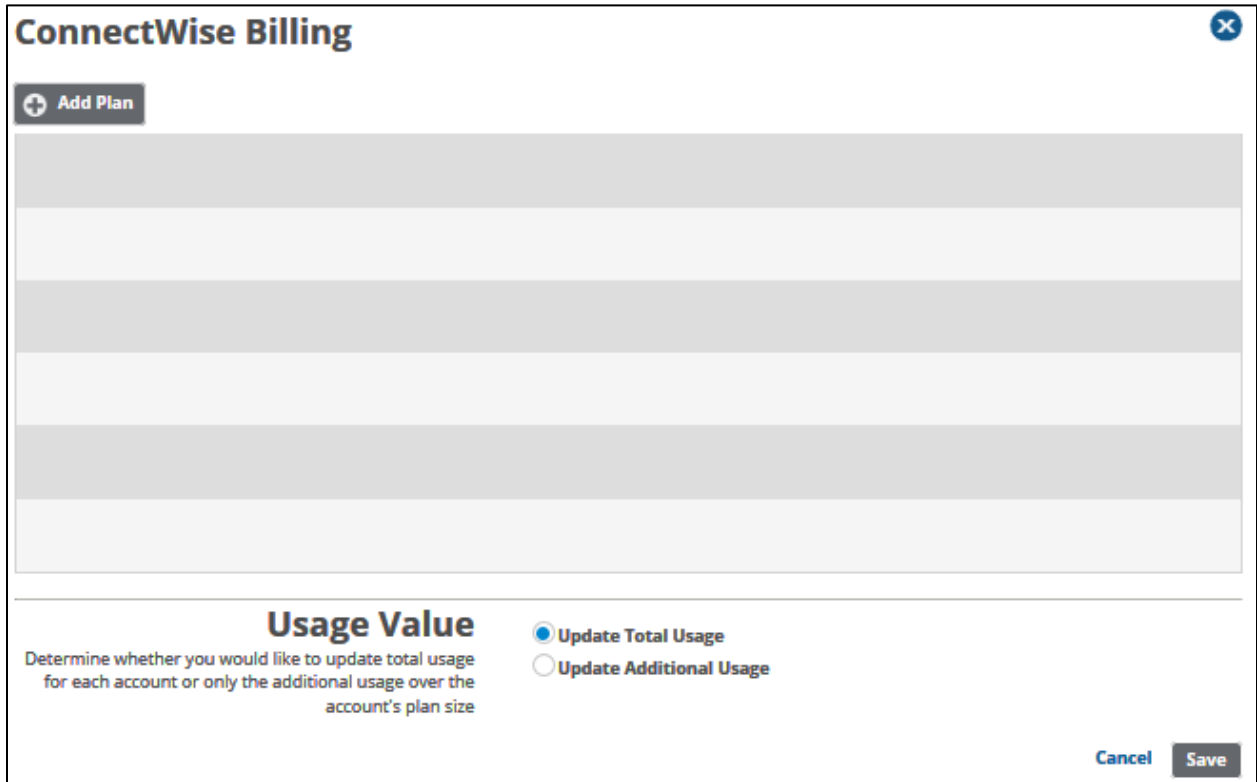
### Setting Up Universal Price-per-GB

To set up universal price-per-GB, perform the following steps.

1. At the ConnectWise Integration page, select the **Billing** tab, as shown below.

The screenshot shows the 'ConnectWise Integration' management interface. At the top, there's a search bar for accounts. Below it, the 'CONNECTWISE INTEGRATION INFORMATION' section is divided into 'Status' and 'Preferences'. The 'Status' section shows 'Integration status: Notices Present', 'Accounts: 1 Accounts are not linked', 'Tickets: No Notices in the last 24 hours', and 'Billing: Billing not set up'. The 'Preferences' section shows 'Company name:', 'URL: staging.connectwisedev.com', 'ConnectWise username (email): pm', and 'Integration guide:' with a 'Download' button. Below this is a navigation bar with tabs for 'Accounts', 'Tickets', 'Billing' (which is selected), and 'Logs'. The 'Billing' tab is active, showing a 'Billing' section with a 'Set Up Billing' button. Below that, there's a 'Usage' section with a 'Usage Value : Update total usage' button.

The ConnectWise Billing page is displayed.



**ConnectWise Billing**

**+ Add Plan**

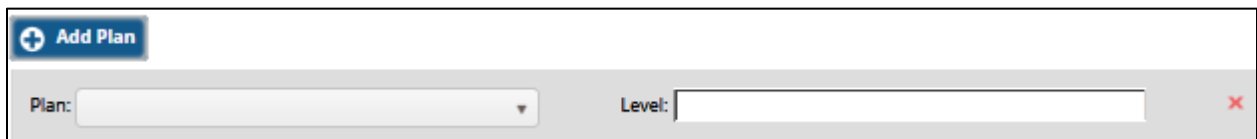
**Usage Value**  
Determine whether you would like to update total usage for each account or only the additional usage over the account's plan size

☒ Update Total Usage  
☐ Update Additional Usage

**Cancel** **Save**

- Click the **Add Plan** button.

The plan fields are displayed.



**+ Add Plan**

Plan:  Level:

- At the Plan drop-down menu, select **(All Plans)**.

**Note:** This selection ensures that every account is included in this mapping.

- At the Level field, type a level for this entry.
- At the bottom of the page, select the **Update Total Usage** radio button in the Usage Value section.

**Note:** This selection ensures that every account is billed per-GB for total usage value.

- Click the **Save** button.



The Plan is displayed on the Billing page.

7. In ConnectWise, create the cross-reference for this level and BackupUsage type with the correct agreement type and your chosen product. See *Creating Cross-references*.

## Price – per - GB by Plan

The Price-per-GB by Plan billing strategy allows you to bill at a flat price-per-GB. Different accounts can be billed at a different price-per-GB. The price-per-GB an account that is billed depends on the plan it is associated with, and the usage service to which that plan is mapped.

## Setting Up Price-per-GB by Plan

To set up the Price-Per-GB by Plan, perform the following steps.

1. Make sure you have products created in ConnectWise for each price point you would like to charge. See *Product Creation in ConnectWise*.

The following display is an example of three highlighted products (and a block storage product).

Products											
Products											
+ Actions Search Clear											
Export View (No View) 1 - 4 of 4											
Product ID	Description	Price	Cost	Taxable	Serialized	Serialized Cost	Type	Category	Subcategory	Class	SLA
World Backup											All
World Backup 20 GB Block	20 GB block						Fixed Cost Service	Managed Services	Managed Services	Non-Inventory	
World Backup Gold	per GB						Fixed Cost Service	Managed Services	Managed Services	Non-Inventory	
World Backup Platinum	per GB						Fixed Cost Service	Managed Services	Managed Services	Non-Inventory	
World Backup Silver	per GB						Fixed Cost Service	Managed Services	Managed Services	Non-Inventory	

**Note:** Each product has a different price.



- At the ConnectWise Integration page, select the **Billing** tab, as shown below.

The screenshot shows the 'ConnectWise Integration' page. At the top, there's a search bar and an 'Edit' button. Below this is a section for 'CONNECTWISE INTEGRATION INFORMATION' with two columns: 'Status' and 'Preferences'. The 'Status' column shows 'Integration status: Notices Present', 'Accounts: 1 Accounts are not linked', 'Tickets: No Notices in the last 24 hours', and 'Billing: Billing not set up'. The 'Preferences' column shows 'Company name:', 'URL: staging.connectwisedev.com', 'ConnectWise username (email): pm', and 'Integration guide: Download'. Below this is a tabbed interface with 'Accounts', 'Tickets', 'Billing' (selected), and 'Logs'. The 'Billing' tab shows a 'Billing' section with a 'Set Up Billing' button and a 'Usage' section with a 'Usage Value: Update total usage' button.

The ConnectWise Billing page is displayed.

The screenshot shows the 'ConnectWise Billing' page. At the top, there's a title bar with a close button. Below this is a section for 'Add Plan' with a plus icon. The main area is a large table with multiple rows and columns, currently empty. At the bottom, there's a 'Usage Value' section with a description: 'Determine whether you would like to update total usage for each account or only the additional usage over the account's plan size'. There are two radio buttons: 'Update Total Usage' (selected) and 'Update Additional Usage'. At the bottom right, there are 'Cancel' and 'Save' buttons.



- Click the **Add Plan** button.

The plan fields are displayed.



The screenshot shows a form titled 'Add Plan' with two dropdown menus: 'Plan:' and 'Level:'. Both are currently empty. There is a red 'X' icon to the right of the 'Level' dropdown.

- At the Plan drop-down menu, select a plan.
- At the Level field, type a level for this entry.

**Note:** The accounts associated with this plan have their usage sent to the products associated with this level through the cross-reference.

For this example, the following display corresponds to the ConnectWise plans highlighted in Step 1 of this procedure.



The screenshot shows the 'Add Plan' form with three rows of data. Each row has a 'Plan' dropdown and a 'Level' text input field. A red 'X' icon is to the right of each 'Level' field.

Plan	Level
Silver 10 GB	Silver
Gold 20 GB	Gold
Platinum 30 GE	Platinum

- Select the **Update Total Usage** radio button in the Usage Value section.

**Note:** This selection ensures that every account is billed per-GB for total usage value.

- Click the **Save** button.
- In ConnectWise, create the cross-reference for this level and BackupUsage type with the correct agreement type and your chosen product. See *Creating Cross-references*.

### Block Storage Billing

Block storage billing is useful for billing for a block of storage (for example, 20 GB) and then billing at a certain price-per-GB for any usage above that block size. This method is also useful for including a certain amount of storage at no cost, and billing at a certain price-per-GB after that cost-free storage block is used. The following example shows how to set up for a 20 GB plan/block size.



### Setting Up Block Storage Billing

To set up block storage billing, perform the following steps.

1. In ConnectWise, create a product to charge for the base 20 GB block. See *Product Creation in ConnectWise*.

The following display is a highlighted example of a block storage product.

Product ID	Description	Price	Cost	Taxable	Serialized	Serialized Cost	Type	Category	Subcategory	Class	SLA
World Backup											All
World Backup 20 GB Block	20 GB block						Fixed Cost Service	Managed Services	Managed Services	Non-Inventory	

2. At the portal, click **Preferences, Configure Billing Plan** and then set up a billing plan that with a Base Plan Size set to the size of the block (in this case, 20 GB).

**Note:** This setting ensures the usage value for overages that is sent to the service, does not start until the account reaches 20 GB.

An example of this plan's relevant fields is displayed below.

### New Billing Plan

**Billing Plan Name \*** World Backup 20 GB Block

**Base Plan**

**Base Plan Size(GB) \*** 20 ☐ Unlimited

**Note:** Only the Base Plan Size value has an impact on this billing strategy, the other values are ignored.



- At the ConnectWise Integration page, select the **Billing** tab, as shown below.

The screenshot shows the 'ConnectWise Integration' page. At the top, there's a search bar and a home icon. Below the header, there's a 'CONNECTWISE INTEGRATION INFORMATION' section with an 'Edit' button. This section is divided into 'Status' and 'Preferences'. The 'Status' section shows 'Integration status: Notices Present', 'Accounts: 1 Accounts are not linked', 'Tickets: No Notices in the last 24 hours', and 'Billing: Billing not set up'. The 'Preferences' section shows 'Company name:', 'URL: staging.connectwisedev.com', 'ConnectWise username (email): pm', and 'Integration guide: Download'. Below this is a tabbed interface with 'Accounts', 'Tickets', 'Billing' (selected), and 'Logs'. The 'Billing' tab shows a 'Set Up Billing' button and a message: 'Billing is not yet set up. Click the Set up Billing option above to map your plans to ConnectWise services.' At the bottom, there's a 'Usage' section with a 'Usage Value : Update total usage' button.

The ConnectWise Billing page is displayed.

The screenshot shows the 'ConnectWise Billing' page. At the top, there's a close button. Below the header, there's an 'Add Plan' button. The main area is a large table with multiple rows, currently empty. At the bottom, there's a 'Usage Value' section with a message: 'Determine whether you would like to update total usage for each account or only the additional usage over the account's plan size'. There are two radio buttons: 'Update Total Usage' (selected) and 'Update Additional Usage'. At the bottom right, there are 'Cancel' and 'Save' buttons.

4. Click the **Add Plan** button.

The plan fields are displayed.



5. At the Plan drop-down menu, select a plan that corresponds to the ConnectWise plans highlighted in Step 1 of this procedure.
6. At the Level field, type a level for this entry.

**Note:** The accounts associated with this plan have their usage sent to the products associated with this level through the cross-reference.

For this example, the following display corresponds to the ConnectWise plans highlighted in Step 1 of this procedure.



7. At the bottom of the page, select the **Update Additional Usage** radio button in the Usage Value section.

**Note:** This selection ensures that every account is billed per-GB for any usage that exceeds the Base Plan Size value on the specified plan.

8. Click the **Save** button.
9. In ConnectWise, create the cross-reference for this level and BackupUsage type with the correct agreement type and your chosen product. See *Creating Cross-references*.
10. In ConnectWise, select **Companies, Companies**, type your company name and then select **Agreements**, select your agreement and then select **Additions**.



- At the Total Quantity field, for any companies in ConnectWise billed for a 20-GB base block size, add an addition to their agreement for 1 unit of the 20 GB Block product you created, as shown below.

Company Search > Agreement Search > Additions > Agreement Addition

**Backup Test**

Agreement Additions 3 Adjustments 0 Agreements 0 Work Roles 0 Work Types 0 Sit

History

**Additions**

Product ID:	* World Backup 20 GB Block	Sequence:	4.00
Description:	20 GB block	Bill Customer:	* Billable
Total Quantity:	1	UOM:	Month
Less Included:	0	Ext Price:	0.00
Quantity to Bill:	0	Ext Cost:	0.00
Unit Price:	00	Margin:	0.00
Unit Cost:	00		
<input type="checkbox"/> Taxable			
Effective Date:	* Thu 09/01/2016		
Cancelled Date:			
Serial Number:		<input type="checkbox"/> Special Order	
Opportunity:		<input type="checkbox"/> Purchase Item	

Product Invoice Description:

20 GB block

**Note:** Un-mapping plans from your ConnectWise integration may generate Past Plans errors in your logs. For information on these errors as well as the steps for resolution, see the *ConnectWise Integration Guide*.



**Intronis**  
MSP Solutions by Barracuda

## New ConnectWise and Autotask Sections



## Chapter 2. Autotask

The following sections from the *Autotask Integration Guide* have been updated because of the Silverlight removal. Refer to the *Autotask Integration Guide* for more information.

This chapter includes the following topics:

- Ticketing Setup
- Billing Setup
- Billing Strategies

### Ticketing Setup

This section includes the following topics:

- Overview
- Mapping Tickets

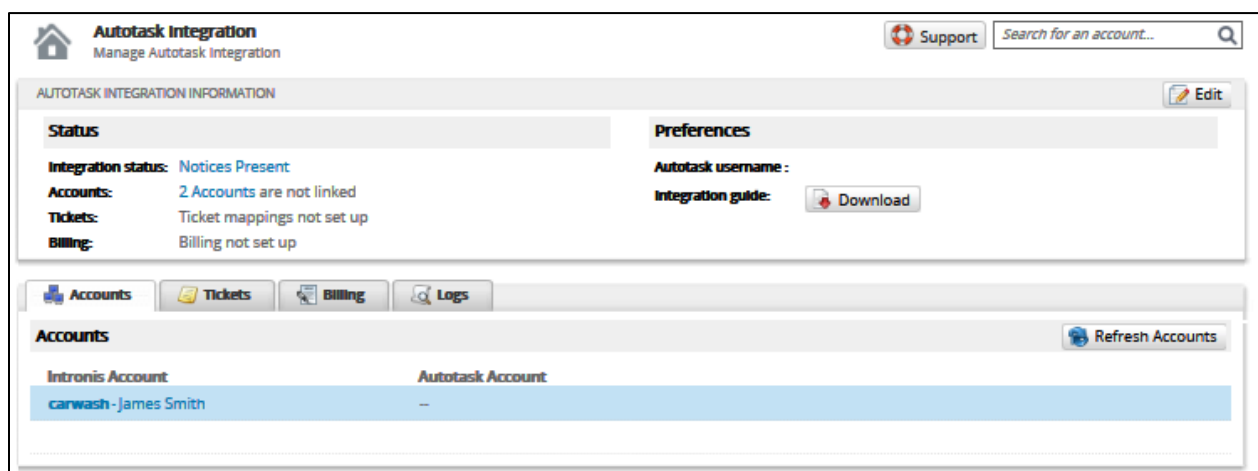
#### Overview

Setting up ticketing integration means that the current backup notifications can now be automatically sent to Autotask and assigned to specific statuses, priorities, and queues.

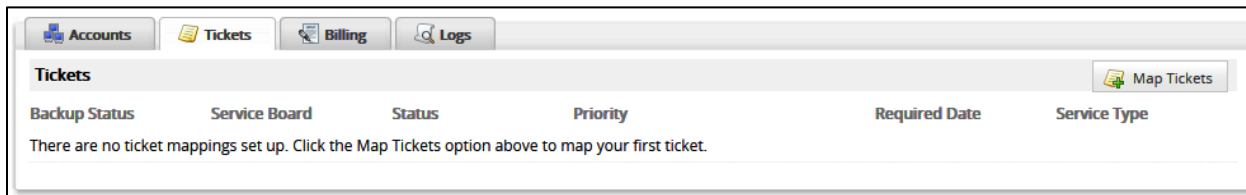
#### Mapping Tickets

To map tickets to Autotask companies, perform the following steps.

1. At the Autotask Integration page, click the **Tickets** tab.

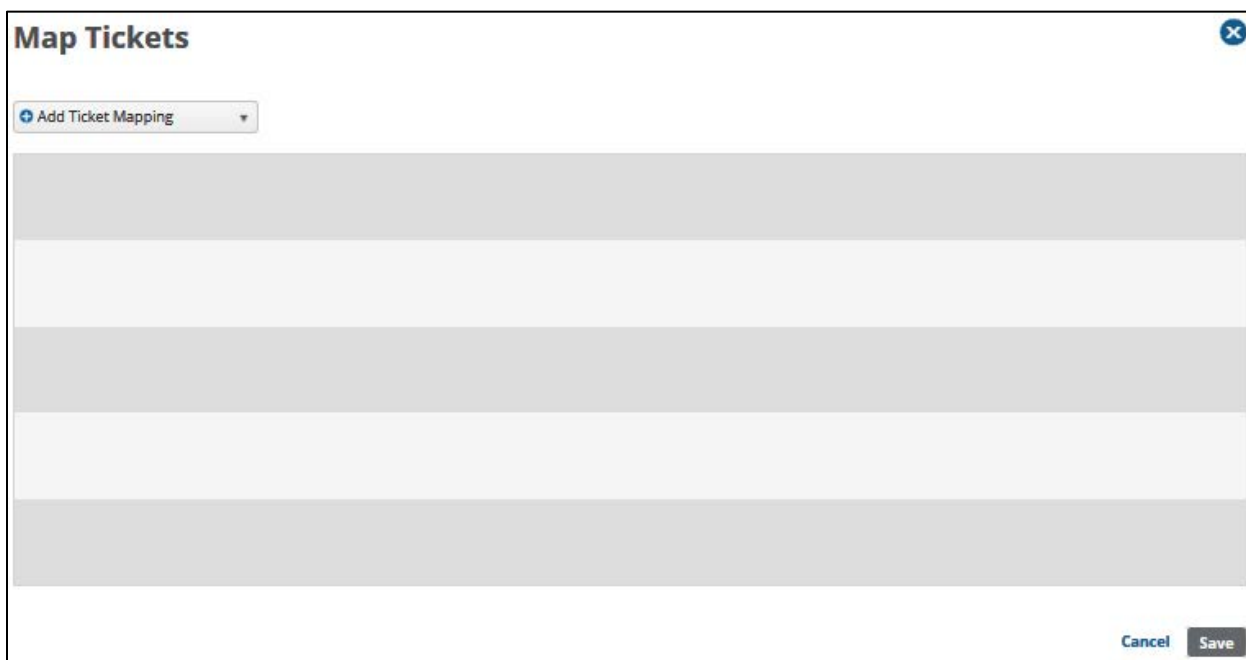


The Tickets page is displayed.



2. Click the **Map Tickets** button.

The Map Tickets page is displayed.

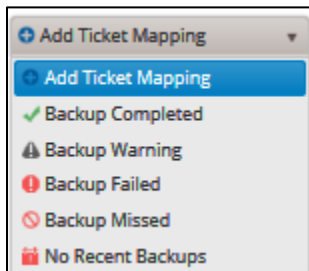


3. Select the **Add Ticket Mapping** drop-down arrow.





The Mapping Status Menu options are displayed.



4. Select the status options you want to map.

You can map the following backup statuses:

- Backup Complete
  - Backup Warning
  - Backup Failed
  - Backup Missed
  - No Recent Backups
5. For each ticket that you would like to send to Autotask, select the appropriate Service Board, Status, Priority, Priority, Due Date, and Service Type from your available options using the drop-down menus in each row.

The following example displays all the status options.

	Service Board	Status	Priority	Required Date	Service Type	
Backup Completed	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 <input type="text"/> Day(s)	<input type="text"/>	✖
Backup Failed	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 <input type="text"/> Day(s)	<input type="text"/>	✖
Backup Warning	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 <input type="text"/> Day(s)	<input type="text"/>	✖
Backup Missed	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 <input type="text"/> Day(s)	<input type="text"/>	✖
No Backups for 7 <input type="text"/> Day(s)	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 <input type="text"/> Day(s)	<input type="text"/>	✖

Cancel Save



**Note:** The Required Date fields range from 1 - 99 days.  
The following example displays a completed ticket page.

ⓘ All backup statuses added. ▼

Backup Completed	Service Board Intronis - Data Back... ▼	Status Closed (resolved) ▼	Priority Priority 3 - Normal... ▼	Required Date 1 ▲ ▼ Day(s)	Service Type Proactive ▼	✖
Backup Failed	Service Board Intronis - Data Back... ▼	Status New (not responded) ▼	Priority Priority 1 - Emergen... ▼	Required Date 1 ▲ ▼ Day(s)	Service Type Reactive ▼	✖
Backup Warning	Service Board Integration ▼	Status Plan of Action ▼	Priority Priority 1 - Emergen... ▼	Required Date 1 ▲ ▼ Day(s)	Service Type Running ▼	✖
Backup Missed	Service Board Intronis - Data Back... ▼	Status Assigned (responded) ▼	Priority Priority 3 - Normal... ▼	Required Date 1 ▲ ▼ Day(s)	Service Type Break-fix ▼	✖
No Backups for 7 ▲ ▼ Day(s)	Service Board Intronis - Data Back... ▼	Status Closed (resolved) ▼	Priority Priority 3 - Normal... ▼	Required Date 1 ▲ ▼ Day(s)	Service Type Warranty ▼	✖

Cancel Save

6. When you are done, click the **Save** button.

## Billing Setup

This section includes the following topics:

- Overview
- Setting Up Billing
- Billing Strategies

### Overview

Autotask billing integration allows you to bill directly from within Autotask for the following items:

- Backup usage
- Local backup subscriptions
- QuickSpin host licenses
- Imaging licenses
- Hyper-V licenses

Each plan is mapped to its own set of services for usage, local backup, and VM host licenses. This feature is useful if you have deferent services set up for different package amounts or a different price-per GB.



### Setting up Billing

To set up billing, perform the following steps.

1. In the Portal, at the Autotask Integration page, click the **Billing** tab.

The Billing page is displayed.

**Billing**

Accounts Tickets **Billing** Logs

**Billing** Set Up Billing

Plan Usage Service

Billing is not yet set up. Click the Set up Billing option above to map your plans to Autotask services.

**Settings**

Contract Name: Intronis Backup

Usage Value: Update total usage

Rounding: Round to nearest whole number

2. Click the **Set Up Billing** button.

The Autotask Billing page is displayed.

**Autotask Billing**

+ Add Service

**Contract Name** Intronis Backup

Set the contract name. The name of the contract created for each account in Autotask must match this exactly.

**Usage Value** ☒ Update Total Usage ☐ Update Additional Usage

Determine whether you would like to update total usage for each account or only the additional usage over the account's plan size

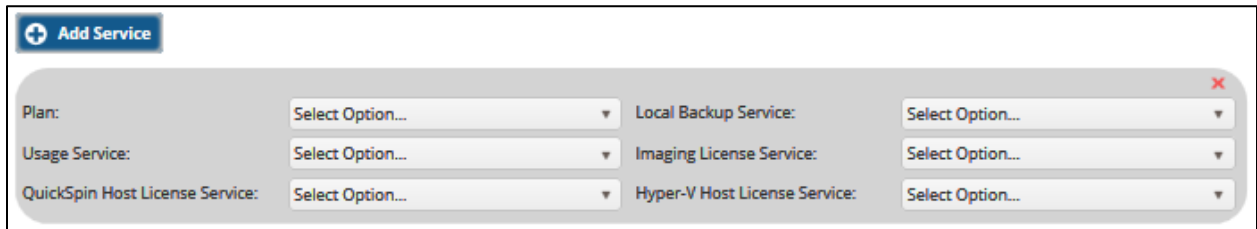
**Rounding** ☒ Round to Nearest Whole Number ☐ Round Usage Up ☐ Round Usage Down

Autotask only accepts whole numbers. Determine how you would like to round usage values

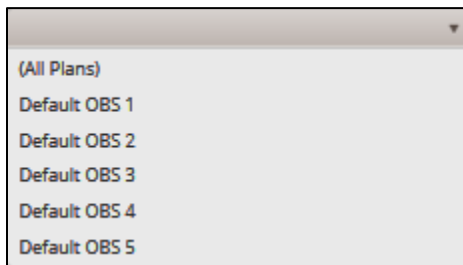
Cancel Save

3. Click **Add Service**.

The plan fields are displayed.



4. Select the Plan drop-down arrow to display your plan options.



**Notes:**

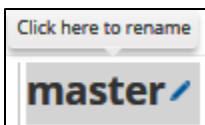
- Selecting **(All plans)** means that every account is billed the same rate. Every account is updated with the same set of products on Autotask agreements.
  - Other plan options are mapped to their own level. This means accounts update a different set of products based on the plan that they are on allowing you to charge different price points in Autotask.
5. For each plan you would like to map to a set of services, choose the appropriate services from the drop-down menus in each row.

These will be populated with your available Autotask services. The services you choose are automatically added to the Backup contract you created for each account if they do not already exist.

- At the Usage Service field, select an option from the drop-down menu.
- At the QuickSpin Host License Service field, select an option from the drop-down menu.
- At the Local Backup Service field, select an option from the drop-down menu.
- At the Imaging License Service field, select an option from the drop-down menu.
- At the Hyper-V Host License Service field, select an option from the drop-down menu.


- At the Contract Name section, to type a new name for the contract, click the currently displayed name.

**Requirement:** The name of the contract created for each account in Autotask must match this name exactly.





The name field is activated and the edit icons are displayed.



- Click the delete  icon to erase the current name.

The name is erased.

- Type the new name, and then click the confirm  icon.

**Note:** To cancel the name change and restore the current name, click the escape  icon.

The name is displayed.

- Select a Usage Value radio button.

**Note:** The following table provides descriptions of the Usage Value options.

Usage Value	Description
<b>Update Total Usage</b>	<p>This option sends the total amount of data (in GB) that each account is using to Autotask.</p> <p>This option is best used when billing a flat rate per GB. See <i>Universal Price-per-GB</i> or <i>Price - per-GB by Plan</i> billing strategies for an example of how this is used.</p>
<b>Update Additional Usage</b>	<p>This option sends only the usage over the base plan size for each account. For example, if an account has a 20 GB plan and uses 25 GB, only the 5 GB value is sent to Autotask.</p>

Usage Value	Description
	This option is best used when billing a base rate for a certain block of storage, and then billing overage using a per-GB rate See <i>Block Storage</i> billing strategy for an example of how this is used.

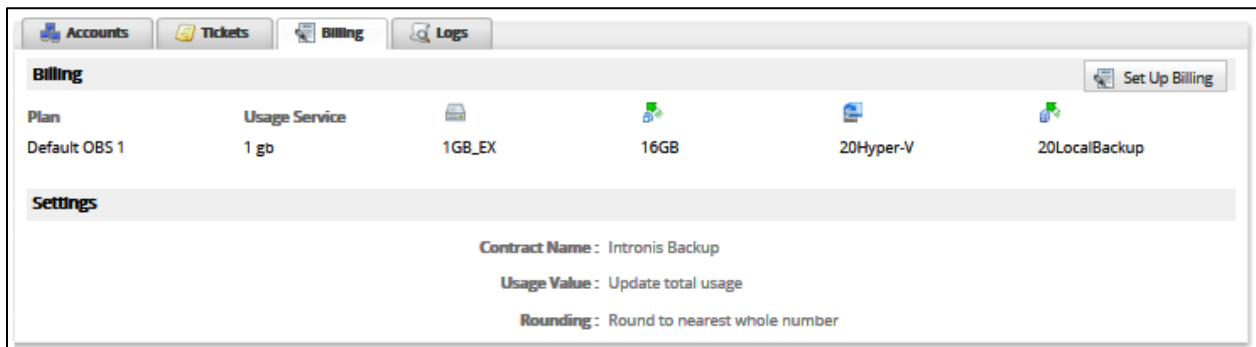
10. At the Rounding section, select one of the following round usage values radio buttons:

- **Round to Nearest Whole Number**
- **Round Usage Up**
- **Round Usage Down**

**Note:** Autotask only accepts whole numbers

11. Click the **Save** button.

Your new billing plan is displayed.



The screenshot shows the Autotask Billing configuration window. At the top, there are tabs for Accounts, Tickets, Billing, and Logs. The Billing tab is active. Below the tabs, there is a 'Set Up Billing' button. The main area is divided into two sections: 'Billing' and 'Settings'. The 'Billing' section contains a table with columns: Plan, Usage Service, and a list of services. The 'Settings' section contains fields for Contract Name, Usage Value, and Rounding.

Plan	Usage Service	1GB_EX	16GB	20Hyper-V	20LocalBackup
Default OBS 1	1 gb				

**Settings**

Contract Name : Intronis Backup  
Usage Value : Update total usage  
Rounding : Round to nearest whole number

## Billing Strategies

This section includes the following topics:

- Overview
- Universal Price-per-GB
- Price – per - GB by Plan
- Block Storage Billing

### Overview

The Autotask integration provides a flexible interface for setting up billing integration, which allows you to bill for your service the way you like. Outlined below are three potential billing strategies that you may choose to follow when billing for our services through Autotask.

**Note:** All strategies described below involve billing for usage. Local backup, QuickSpin Host Licenses, Hyper-V licenses, and Imaging licenses are billed at a price-per-license in all cases. These licenses require



their own cross-references of type **LocalBackup**, **VMwareHostLicensing**, **Hyper-V**, and **ImageLicensing** for each level.

The billing strategies are as follows:

- Universal Price-per-GB
- Price-per-GB by plan
- Block storage

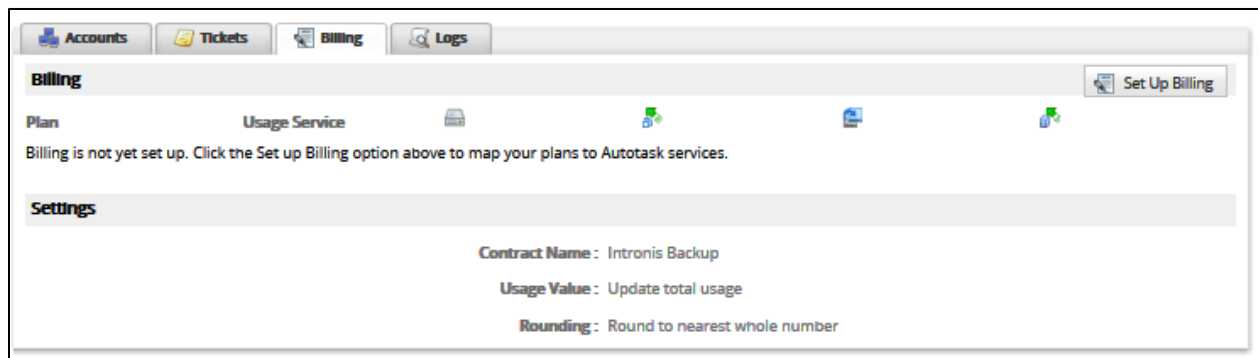
### Universal Price-per-GB

Use this billing strategy when choosing to bill at the same flat price-per-GB of backup storage for all of your backup customers.

### Setting Up Universal Price-per-GB

To set up universal price-per-GB, perform the following steps.

1. In Autotask, create the properly named contract with no services as outlined in the Billing Setup section.
2. At the Autotask Integration page, select the **Billing** tab, as shown below.





The Autotask Billing page is displayed.

**Autotask Billing** ✕

+ Add Service

---

**Contract Name**  
Set the contract name. The name of the contract created for each account in Autotask must match this exactly.  
**Intronis Backup**

---

**Usage Value**  
Determine whether you would like to update total usage for each account or only the additional usage over the account's plan size  
☒ Update Total Usage  
☐ Update Additional Usage

---

**Rounding**  
Autotask only accepts whole numbers. Determine how you would like to round usage values  
☒ Round to Nearest Whole Number  
☐ Round Usage Up  
☐ Round Usage Down

Cancel Save

- Click the **Add Service** button.

The plan fields are displayed.

+ Add Service

Plan: Select Option... Local Backup Service: Select Option...

Usage Service: Select Option... Imaging License Service: Select Option...

QuickSpin Host License Service: Select Option... Hyper-V Host License Service: Select Option...

✕

- At the Plan drop-down menu, select **(All Plans)**.

**Note:** This selection ensures that every account is included in this mapping.

- Select a usage service.

**Note:** The usage for all accounts updates this service on the correct contract.

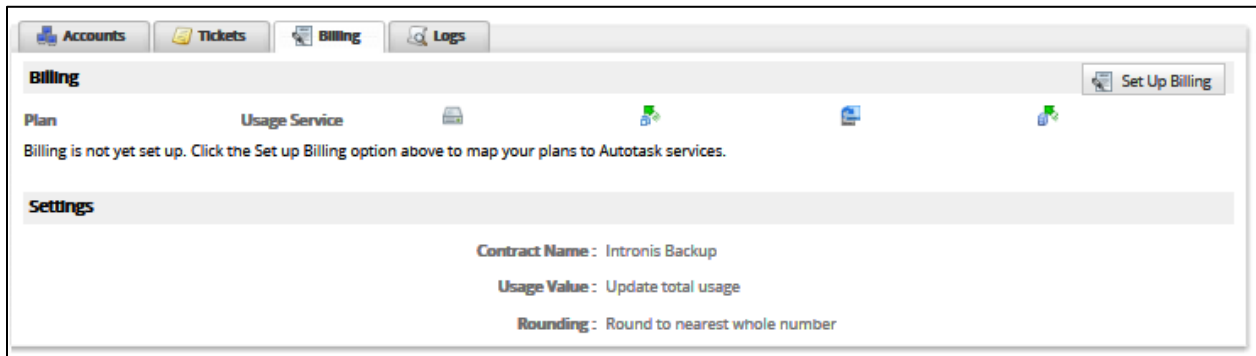


- At the bottom of the page, select the **Update Total Usage** radio button in the Usage Value section.

**Note:** This selection ensures that every account is billed per-GB for total usage value.

- Click the **Save** button.

The Plan is displayed on the Billing page.



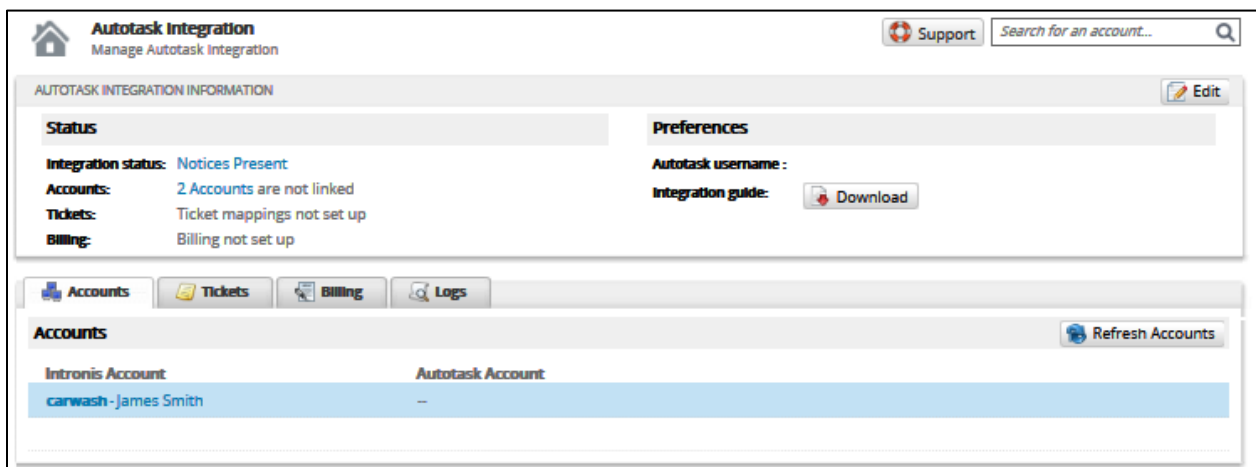
## Price – per - GB by Plan

The Price-per-GB by Plan billing strategy allows you to bill at a flat price-per-GB. Different accounts can be billed at a different price-per-GB. The price-per-GB an account that is billed depends on the plan it is associated with, and the usage service to which that plan is mapped.

## Setting Up Price-per-GB by Plan

To set up the Price-Per-GB by Plan, perform the following steps.

- Make sure you have products created in Autotask for each price point you would like to charge.
- At the Autotask Integration page, select the **Billing** tab, as shown below.





The Autotask Billing page is displayed.

**Autotask Billing**

**Add Service**

**Contract Name**  
Set the contract name. The name of the contract created for each account in Autotask must match this exactly.  
**Intronis Backup**

**Usage Value**  
Determine whether you would like to update total usage for each account or only the additional usage over the account's plan size.  
☒ Update Total Usage  
☐ Update Additional Usage

**Rounding**  
Autotask only accepts whole numbers. Determine how you would like to round usage values.  
☒ Round to Nearest Whole Number  
☐ Round Usage Up  
☐ Round Usage Down

**Cancel** **Save**

- Click the **Add Service** button.

The plan fields are displayed.

**Add Service**

Plan: Select Option... Local Backup Service: Select Option...

Usage Service: Select Option... Imaging License Service: Select Option...

QuickSpin Host License Service: Select Option... Hyper-V Host License Service: Select Option...

**X**

- At the Plan drop-down menu, select a plan.

**Note:** The accounts associated with this plan have their usage and local backup information set to the services specified on this line.

- Select a usage service for this particular plan.

**Note:** The usage for all accounts associated with the specified plan updates this service on the correct contract.

6. Select the **Update Total Usage** radio button in the Usage Value section.

**Note:** This selection ensures that every account is billed per-GB for total usage value.

7. Click the **Save** button.

### Block Storage Billing

Block storage billing is useful for billing for a block of storage (for example, 20 GB) and then billing at a certain price-per-GB for any usage above that block size. This method is also useful for including a certain amount of storage at no cost, and billing at a certain price-per-GB after that cost-free storage block is used. The following example shows how to set up for a 20 GB plan/block size.

### Setting Up Block Storage Billing

To set up block storage billing, perform the following steps.

1. In Autotask, create two contracts for each account to be billed for a 20 GB block of storage.

**Note:** When creating this contract, add a 20 GB block service to the contract. This service remains on the contract but is not updated by the integration. This first contract must remain separate from the contract the integration updates daily.

2. On the second contract, create a properly named contract with no services as outlined in the Billing Setup section.

**Note:** It is important that this contract matches the name you set in the billing tab in the portal, since this is the contract being updated. The block plan contract should be named something else.

3. At the portal, click **Preferences, Configure Billing Plan** and then set up a billing plan that with a Base Plan Size set to the size of the block (in this case, 20 GB).

**Note:** This setting ensures the usage value for overages that is sent to the service, does not start until the account reaches 20 GB.



## New ConnectWise and Autotask Sections

An example of this plan's relevant fields is displayed below.

New Billing Plan

Billing Plan Name \*

World Backup 20 GB Block

Base Plan

Base Plan Size(GB) \*

20

☐ Unlimited

**Note:** Only the Base Plan Size value has an impact on this billing strategy, the other values are ignored.

4. At the Autotask Integration page, select the **Billing** tab, as shown below.

Accounts
Tickets
Billing
Logs

Billing

Set Up Billing

Plan	Usage Service				
Default OBS 1	1 gb	1GB_EX	16GB	20Hyper-V	20LocalBackup

Settings

Contract Name : Intronis Backup

Usage Value : Update total usage

Rounding : Round to nearest whole number



The Autotask Billing page is displayed.

5. Click the **Add Services** button.

The plan fields are displayed.

6. At the Plan drop-down menu, select a plan.

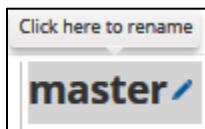
**Note:** The accounts associated with this plan have their usage and local backup information set to the services specified on this line.

7. Select a usage service for this particular plan.

**Note:** The usage for all accounts associated with the specified plan updates this service on the correct contract.


- a. At the Usage Service field, select an option from the drop-down menu.
  - b. At the QuickSpin Host License Service field, select an option from the drop-down menu.
  - c. At the Local Backup Service field, select an option from the drop-down menu.
  - d. At the Imaging License Service field, select an option from the drop-down menu.
  - e. At the Hyper-V Host License Service field, select an option from the drop-down menu.
8. At the Contract Name section, to type a new name for the contract, click the currently displayed name.

**Requirement:** The name of the contract created for each account in Autotask must match this name exactly.





The name field is activated and the edit icons are displayed.



9. Click the delete  icon to erase the current name.

The name is erased.

10. Type the new name, and then click the confirm  icon.

**Note:** To cancel the name change and restore the current name, click the delete  icon.  
The name is displayed.

11. Select the **Update Additional Usage** radio button.
12. At the Rounding section, select the **Round to Nearest Whole Number** radio buttons:
13. Click the **Save** button.



Your new billing plan is displayed.

Accounts

Tickets

Billing

Logs

Billing

Set Up Billing

Plan	Usage Service				
Default OBS 1	1 gb	1GB_EX	16GB	20Hyper-V	20LocalBackup

Settings

Contract Name : Intronis Backup

Usage Value : Update total usage

Rounding : Round to nearest whole number



**Intronis**  
MSP Solutions by Barracuda

## New ConnectWise and Autotask Sections





## PART IV. FILES AND FOLDERS BACKUP AND RESTORE

This part includes the following chapters:

- Files and Folders Backup
- Files and Folders Restore
- Files and Folders Delete

### Chapter 1. Files and Folders Backup

This chapter includes the following topics:

- Files and Folders Backup Tabs
- Backing Up Files and Folders
- Editing Files and Folders Backup Sets
- Removing Files and Folders Backup Sets

See *Backup Agent Software Requirements* for more information.

#### Files and Folders Backup Tabs

Figure 15 displays the backup tabs.

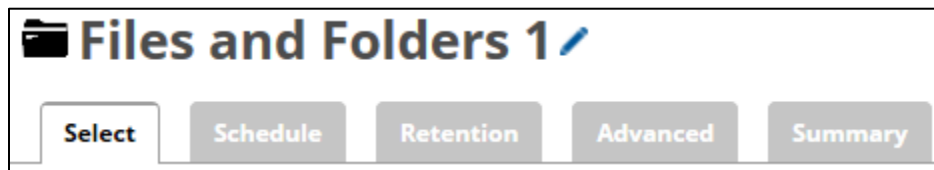


Figure 15. Files and Folders Backup Tabs.

The following table provides a description of the page features.

Page	Description
Select	You are required to select at least one File or Folder.
Schedule	Optionally edit the schedule. The default schedule is daily every weekday starting at 11 p.m. and the <b>Allow to Finish</b> check box is enabled.
Retention	Optionally determine how many versions of each file you would like to retain. The default is 30 retained versions and no fewer than 10 versions.
Advanced	<b>Temporary Folder</b> lets you specify where the temporary folder used in backing up resides.



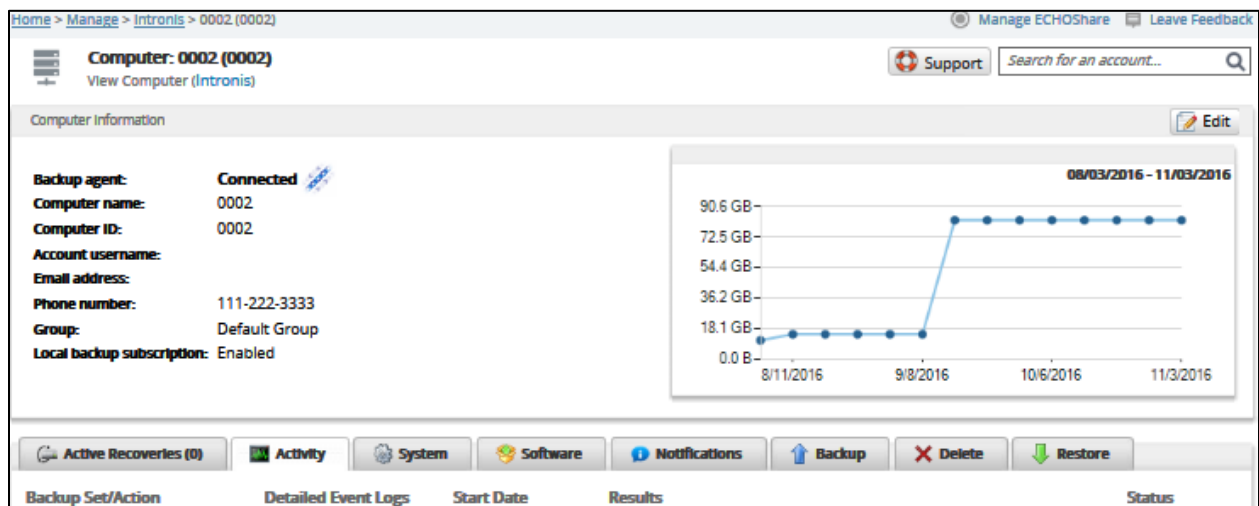
Page	Description
	<p><b>Snapshot Mode</b> ensures all files are backed up from the same volume snapshot (recommended).</p> <p><b>Failed File Behavior</b> determines how you want backups to handle failed files.</p> <p><b>Wildcard Inclusions</b> let you set wildcard inclusions to back up only certain file types.</p> <p><b>Archive Bit</b> enables the agent to skip files with an unset archive bit.</p>
Summary	A list of your selections is displayed.

## Backing Up Files and Folders

To back up Files and Folders, perform the following steps.

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

The Computer page is displayed.



2. Click the **Backup** tab.



The Backup Selections page is displayed.

Backup Selections

Export Backup Selection

Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove
+  Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM		
+  Physical Imaging (2)		Files and Folders 2		--		
+  Hyper-V Standard		Files and Folders 3		--		
+  Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM		
+  VMware Standard (1)		Physical Imaging 1		--		
+  VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM		
+  SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM		
+  Exchange Mailbox Level		VMWare QuickSpin 1		--		
		VMWare QuickSpin 2		--		
		VMWare QuickSpin 3		--		
		SQL 1		--		
		SQL 2		--		

1

1 - 12 of 12 items

3. In the Backup Type pane, click the select  icon beside **Files and Folders** to run the backup type.



The Select page is displayed.

**Create Backup**

**Files and Folders 1**

Select | Schedule | Retention | Advanced | Summary

**Select Storage Location**

☐ Local Only  
Local Vault must be enabled and a local subscription is required.

☒ Online Only

☐ Online and Local  
Local Vault must be enabled.

**What Files & Folders Would You Like to Backup?**  
Select from the available Files & Folders below to backup


**Select Your Files and/or Folders:**

**Current selection:**

- TRAINING

Type network location if it is not listed above (for example, \\server\share):  
Path:

Select the items on the left you want to include in this backup set.

Exclusions are marked in red.  
Directories marked with  indicate that any new items added to them will be automatically backed up.

[Next >](#)

[Cancel](#) [Create Backup Set](#)

- Click the Backup Name to provide a new name for your backup set, or accept the default.  
See *Changing Backup Set Names*.
- At the Select Storage Location, click one of the following options.

**Note:** This procedure applies to all options. See *Backup Options* for more information.

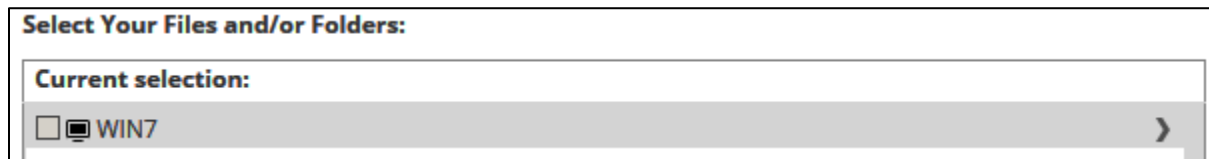
- Local Only** (Local Vault must be enabled and a local subscription is required. Data is not backed up to the cloud.)



- **Online Only** (An enabled Local Vault disables this option.)
- **Online and Local** (Local Vault must be enabled.)

The selection is highlighted and the file and folders are displayed in the Current Selection pane.

6. In the Current Selection pane, select the row of the files and folders you would like to back up, as shown below.



The computer where the agent is installed, and the available files and folders for backup are displayed.



7. To back up files and folders on another network location that is not listed, perform the step below; else proceed to next step.

### Adding a Network Location

- a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

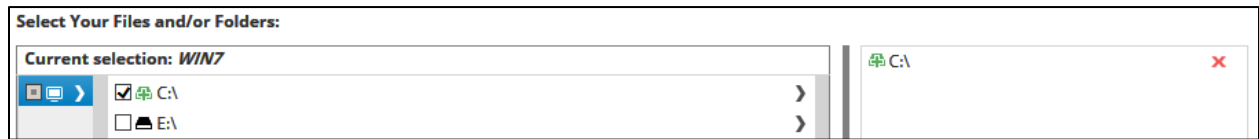



The add button is activated.


- b. Click the add  button.

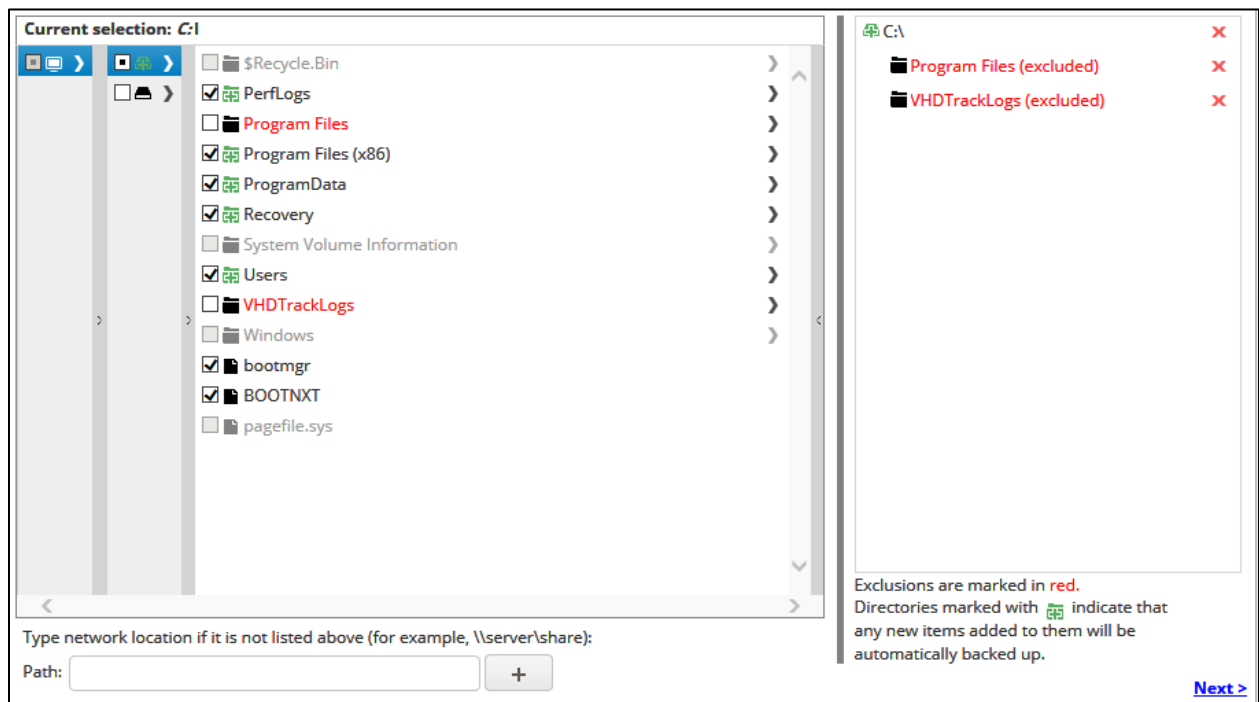



8. Click the check box of the files and folders you would like to back up, as shown below.



Clicking the arrow  at the right of the items displays more files and folders.

Your selections are displayed in the far right pane. Click the remove  icon to remove any selections, or clear the item check box.



The green  icon indicates that new items are automatically backed up. By default, selecting a folder displays the green icon. Selecting files directly under the folder, does not display the icon. Items marked in red are excluded from the back up.



**TIP:** If you want to accept the default settings for the Schedule, Retention, and Advanced pages, you can back up now by clicking the **Create Backup Set** button.

To change the default settings, continue with the following steps.

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

The Schedule page is displayed.

10. Accept or edit the default schedule. See *Backup Schedules* for more information.

#### Notes:

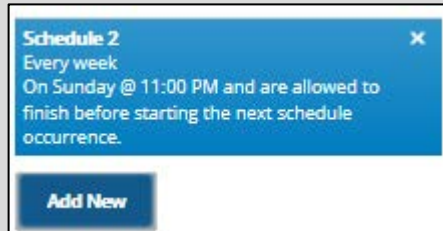
- Multiple daily/weekly schedules are permitted (as long as they do not overlap).
- Minutely and hourly recurrences cannot be mixed with daily/weekly recurrences.
- Only one minutely or hourly schedule can be configured.

#### Adding a New Daily or Weekly Schedule

- a. To add additional daily or weekly schedules, click the **Add New** button.




The new Schedule is displayed and the **Add New** button is highlighted, as shown below.



b. Make your selections.

The new schedule details are displayed.

Click the remove  icon to delete the schedule.

### Editing Existing Daily or Weekly Schedules

a. To edit existing schedules, in the Schedule column, click the schedule details.

The Schedule is highlighted.

b. Select your new daily or weekly times.

11. Clearing the **Allow To Finish** check box allows you to assign an End time to cancel a running backup the following day. You must select a time before the Start time.

Your schedule is displayed in the Schedule column.

12. After setting your schedule, click **Next**.





The Retention page is displayed.

13. Optionally, select the number of days and versions you wish to archive.
14. Optionally, select the **Enable Advanced Archiving** check box. For Advanced Archiving information, see *Archiving Rules*

The Advanced Archiving fields are displayed.

**Example:** The setting of a daily backup kept for 30 days and no fewer than 10 versions mean that 30 versions are kept. However, a setting of once a week means that after 10 weeks, 10 versions are kept.

15. Make your selections, click **Save Rule**, and then click **Next**.



The Advanced page is displayed.

SelectScheduleRetentionAdvancedSummary

**Temporary Folder**  
Define where the temporary folder that's used in backing up files & folders resides. Manually type in a path or browse to the desired location.  
Path:

**Snapshot Mode**  
Snapshot mode ensures all files are backed up from the same volume snapshot (recommended).  
☒ Enable Snapshot Mode ☐ Cancel Backup if Snapshot Mode fails

**Failed File Behavior**  
Determine how you want your backups to handle failed files.  
☒ Retry Failed Files ☒ Retry Locked Files

**Wildcard Inclusions**  
Set wildcard inclusions to back up only certain file types. Separate each phrase with commas. Commit each phrase by pressing Enter.  
Include:

**Archive Bit**  
The agent skips files with an unset archive bit.  
☐ Enable Archive Bit

< Previous

Next >

16. Use the following table to help make optional selections.

<b>Temporary Folder</b>	Optionally, specify where the temporary folder that is used in backing up files & folders resides. <b>Requirement:</b> You must specify a temporary folder located on a disk with sufficient space.
<b>Snapshot Mode</b>	Snapshot mode ensures all files are backed up from the same volume snapshot (recommended).
<b>Failed File Behavior</b>	Specify how you want backups to handle failed files by retrying failed files and/or retrying locked files.
<b>Wildcard Inclusions</b>	Set wildcard inclusions to back up only certain file types.  Separate each phrase with commas. Commit each phrase by pressing <b>Enter</b> . <b>Example:</b> To include files that have the <i>.jpg</i> extension or have file names that end with <i>2016</i> , enter the following filter: <b>*.jpg, *2016</b> .
<b>Archive Bit</b>	When disabled, the agent skips files with an unset archive bit. Select the <b>Enable Archive Bit</b> check box to enable archive bit.



17. At the Temporary Folder field, accept the default, type a new path, or click the **Browse** button to locate the temporary folder that is used in backing up.

## Browse option

- a. Click the **Browse** button.

The folder options are displayed.

Please select a folder below:

Current selection:

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:  +

Cancel OK

- b. Select the destination.

The OK button is activated.

- c. Click **OK**.

The address is displayed in the Path field.



Path:

d. To add a network location that is not listed, perform the step below.

**Adding a Network Location**

a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):


Path:

The add button is activated.

b. Click the add  button.

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

The Summary page is displayed.

Select	Schedule	Retention	Advanced	Summary
<b>Select</b>	Contains: <b>12,353 File(s)</b> selected, size: <b>7.44 GB</b>			
	Destination  <b>Online</b>			
<b>Schedule</b>	<b>Schedule 1</b> Every Weekday Running Backups are allowed to finish before starting the next schedule occurrence.			
<b>Retention</b>	Keep at least <b>30 day(s)</b> and no fewer than <b>10 version(s)</b> . Apply this rule to <b>All</b> files.			
<b>Advanced</b>	Temp Location: <b>C:\Windows\TEMP\BackupAgent</b> Enable Snapshot Mode Retry Failed Files Retry Locked Files			
<a href="#">&lt; Previous</a>				
				<input type="button" value="Cancel"/> <input type="button" value="Create Backup Set"/>

19. Verify your selections, and then click **Create Backup Set**.



The Backup Selections page is displayed with your latest backup set.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+ Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
+ Physical Imaging (2)		Files and Folders 2		--	<input type="checkbox"/>		
+ Hyper-V Standard		Files and Folders 3		--	<input type="checkbox"/>		
+ Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ VMware Standard (1)		Physical Imaging 1		--	<input type="checkbox"/>		
+ VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ Exchange Mailbox Level		VMWare QuickSpin 1		--	<input type="checkbox"/>		
		VMWare QuickSpin 2		--	<input type="checkbox"/>		
		VMWare QuickSpin 3		--	<input type="checkbox"/>		
		SQL 1		--	<input type="checkbox"/>		
		SQL 2		--	<input type="checkbox"/>		
<div>  1  </div>							1 - 12 of 12 items



## Editing Files and Folders Backup Sets





































To edit a Files and Folders backup, perform the following steps.

1. Navigate to the Backup Selections page. See *Backing Up Files and Folders* for instructions.


The Backup Selections page is displayed.

Backup Selections

Export Backup Selection

Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove
+ Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>	
+ Physical Imaging (2)		Files and Folders 2		--	<input type="checkbox"/>	
+ Hyper-V Standard		Files and Folders 3		--	<input type="checkbox"/>	
+ Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	
+ VMware Standard (1)		Physical Imaging 1		--	<input type="checkbox"/>	
+ VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	
+ SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	
+ Exchange Mailbox Level		VMWare QuickSpin 1		--	<input type="checkbox"/>	
		VMWare QuickSpin 2		--	<input type="checkbox"/>	
		VMWare QuickSpin 3		--	<input type="checkbox"/>	
		SQL 1		--	<input type="checkbox"/>	
		SQL 2		--	<input type="checkbox"/>	

1 - 12 of 12 items

2. Click the edit  icon to edit your backup selection.



The Backup Set Summary page is displayed.

## Edit Backup

**Files and Folders 1**

SelectScheduleRetentionAdvancedSummary

**Select**

Contains: **2 File(s)** selected, size: **884.50 KB**

Destination **Online**

**Schedule**

**Schedule 1** Every Weekday  
Running Backups are allowed to finish before starting the next schedule occurrence.

**Retention**

Keep at least **30 day(s)** and no fewer than **10 version(s)**. Apply this rule to **All** files.

**Advanced**

Temp Location: **C:\Windows\TEMP\BackupAgent**  
Enable Snapshot Mode  
Retry Failed Files  
Retry Locked Files

[< Previous](#)

[Cancel](#) [Update Backup Set](#)

3. Select any of the tabs to display and edit your current settings. See *Backing Up Files and Folders* for details.

**Note:** The backup set name may be edited. See *Changing Backup Set Names*.



If you have removed some selections from your backup set, the following message is displayed on the Advanced page (shown below):

The screenshot shows the 'Advanced' configuration page in Intronis. It includes sections for 'Temporary Folder', 'Snapshot Mode', and 'Determine how you want your backup'. A large modal dialog box is centered on the screen with the following text: 'You have removed some selections from your backup set. Would you like to run a stray file delete to remove any files that have been removed from the backup sets?'. Below this dialog, a red rectangular box highlights a checkbox labeled 'Delete stray files from online servers'.

4. To delete stray files from online servers, select the **Delete stray files from online servers** check box, as shown below.

A close-up of the checkbox labeled 'Delete stray files from online servers', which is currently checked.

All versions of those files are set for removal during the next backup from the Cloud and/or local vault.

5. After making all your edits, click the **Update Backup** button at the bottom of any page, as shown below.

Two buttons are shown side-by-side: a blue 'Cancel' button and a grey 'Update Backup Set' button.

The Your Backup Sets page is displayed with your updated backup set.





## 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 asking if you would like to remove that file or folder from the backup set. Note that the backup set cannot be saved without removing those files or folders.

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.

### 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 asking if you would like to remove that file or folder from the backup set.

The following items in this backup set no longer exist or cannot be found:

C:\Test1.txt

These items will be removed from the backup set upon saving. Failing to save this backup set and remove these items will result in errors in your logs.

Continue

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.

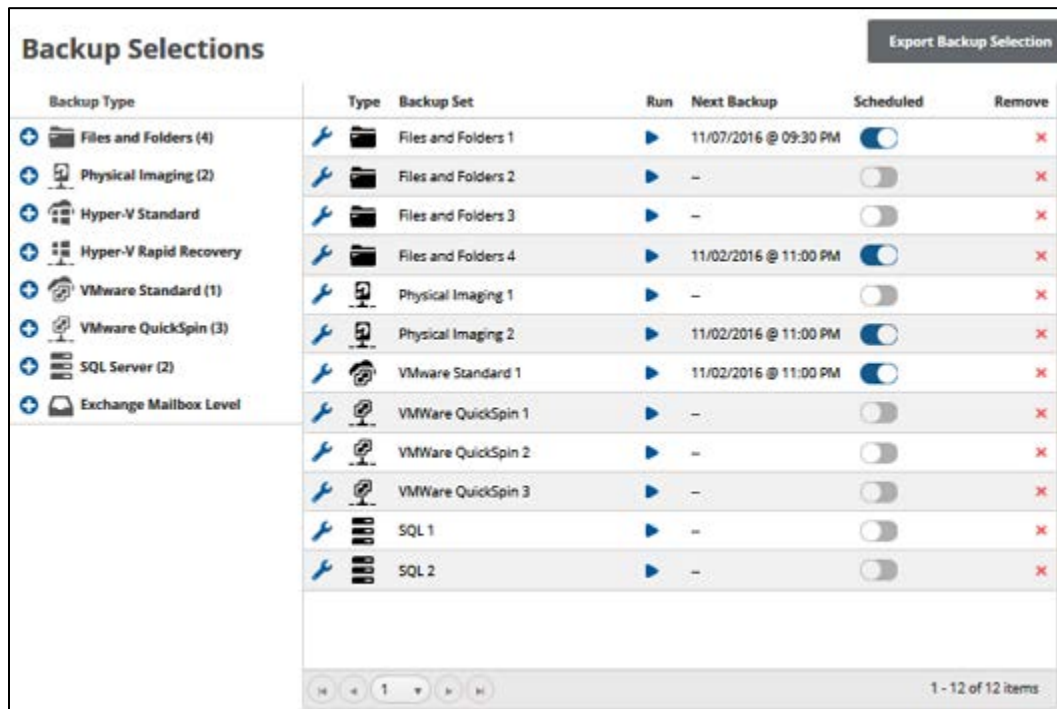


## Removing Files and Folders Backup Sets


To remove a Files and Folders backup set, perform the following steps.

1. Navigate to the Backup Selections page. See *Backing Up Files and Folders* for instructions.

The Backup Selections page is displayed.



Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove
Files and Folders (4)	Files and Folders	Files and Folders 1	▶	11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>	✕
Physical Imaging (2)	Files and Folders	Files and Folders 2	▶	—	<input type="checkbox"/>	✕
Hyper-V Standard	Files and Folders	Files and Folders 3	▶	—	<input type="checkbox"/>	✕
Hyper-V Rapid Recovery	Files and Folders	Files and Folders 4	▶	11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	✕
VMware Standard (1)	Physical Imaging	Physical Imaging 1	▶	—	<input type="checkbox"/>	✕
VMware QuickSpin (3)	Physical Imaging	Physical Imaging 2	▶	11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	✕
SQL Server (2)	VMware Standard	VMware Standard 1	▶	11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	✕
Exchange Mailbox Level	VMware QuickSpin	VMware QuickSpin 1	▶	—	<input type="checkbox"/>	✕
	VMware QuickSpin	VMware QuickSpin 2	▶	—	<input type="checkbox"/>	✕
	VMware QuickSpin	VMware QuickSpin 3	▶	—	<input type="checkbox"/>	✕
	SQL	SQL 1	▶	—	<input type="checkbox"/>	✕
	SQL	SQL 2	▶	—	<input type="checkbox"/>	✕

2. At the relevant backup set row, click the remove  icon to remove the backup set.

The confirmation pop-up is displayed.

**Remove Backup Set**  
Removing a backup set does not automatically delete the associated data from the server or your Local Vault.  
**Are you sure that you would like to remove this backup set?**  

No Yes

3. Click **Yes**.

The backup set is removed.



## Chapter 2. Files and Folders Restore

This chapter includes the following topics:

- Overview
- Files and Folders Restore Tabs
- Restoring Files and Folders by Folder Hierarchy
- Restoring Files and Folders by Daily Snapshots
- Restoring Files and Folders by Backup Sets

### Overview

You can restore Files and Folders by:

- Folder Hierarchy
- Daily Snapshots
- Backup Sets

### Folder Hierarchy

Restoring by Folder Hierarchy lets you restore files and folders from the hierarchy that you originally backed up. Each file may have been backed up multiple times and therefore have multiple revisions. By default, the most recent revision is selected, but you can choose any revision that is displayed.

### Daily Snapshots

Restoring by Daily Snapshots lets you restore a version of files and folders from a specific date. Seven of the most recent daily snapshots are available for restore. You can only restore from one daily snapshot at a time.

### Backup Sets

Restoring by Backup Sets lets you restore files and folders organized by the backup sets you have created.

### Files and Folders Restore Tabs

Figure 16 displays the restore tabs.

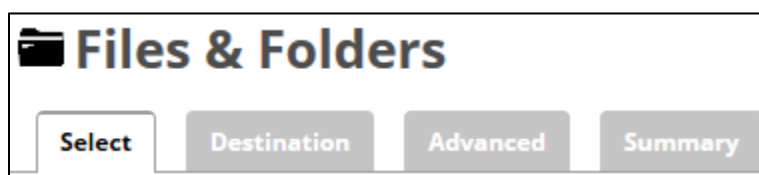


Figure 16. Files and Folders Restore Tabs.



The following table provides a description of the page features.

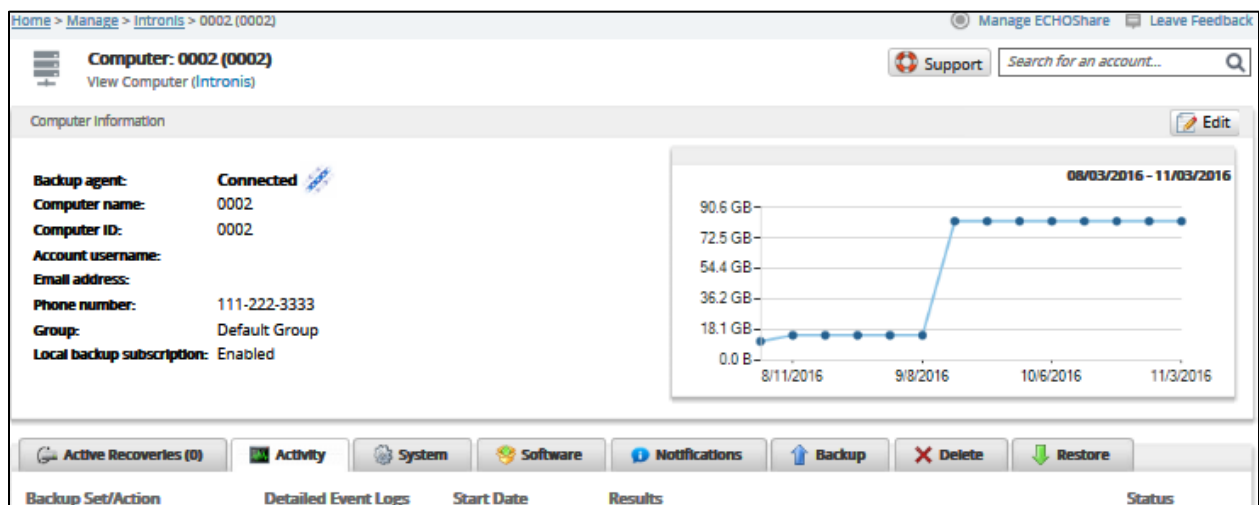
Page	Description
Select	You are required to select at least one File or Folder.
Destination	<p>Select the destination of your restore and how existing files are treated.</p> <p>Destination: Choose where the data is restored: Original Path or Alternate Path.</p> <p>Select from the following options to specify how are existing files treated during restoration:</p> <ul style="list-style-type: none"><li>• Do not overwrite any existing files with restored files</li><li>• Overwrite existing files with restored files</li><li>• If a file already exists, rename the restored file – The files you are restoring are renamed <i>FileName (2).</i>*</li></ul>
Advanced	<p>Select from the following options to specify the advanced features of the restore:</p> <ul style="list-style-type: none"><li>• Restore NTFS File Permissions</li><li>• Restore File Attributes</li><li>• Restore Last Modified Date</li></ul>
Summary	A list of your selections is displayed.

## Restoring Files and Folders by Folder Hierarchy

To restore Files and Folders by Folder Hierarchy, perform the following steps.

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

The Computer page is displayed.





2. Click the **Restore** tab.

The Restore Selections page is displayed.

### Restore Selections

Viewing Original Catalog

Backed Up Data Type

Files and Folders

VMware Standard


VMware QuickSpin

Physical Imaging

Type	Status	Completed
Files and Folders	0 Item(s) Restored	01/04/2017 @ 12:43 PM

1

1 - 1 of 1 items

3. Click the restore  icon of the backup type you want to restore.



The Select page is displayed with **By Folder Hierarchy** selected as the default.


4. In the Current Selection pane, select the row of the files and folders you would like to restore, as shown below.




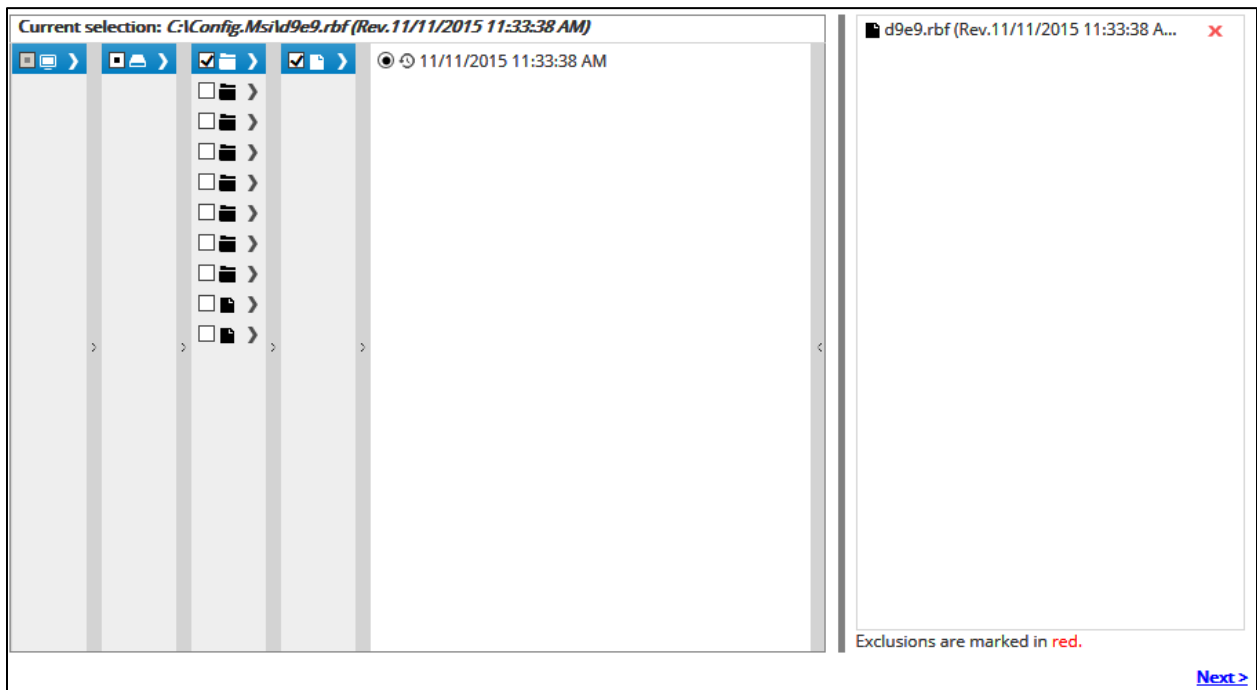
The folders available for restore are displayed.



5. Click the check box of the folder you would like to restore.

Clicking the arrow  at the right of the items displays more files and folders.

Your selections are displayed in the right pane. Click the remove  icon to remove any selections, or clear the item check box.





**TIP:** If you want to accept the default settings for Destination and Advanced pages, you can restore now by clicking the **Restore** button.

**Important:** If the default setting on the Destination page is selected, then any existing files are not overwritten with restored files. The result may be that no files are restored.

To change the default settings, continue with the following steps, or select a page tab.

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

The Destination page is displayed.

7. At the Destination section, to select the original destination path, click the **Original Path** radio button.
8. To select an alternate path, click the **Alternate Path** radio button, and then browse to the destination.

### Selecting an Alternate Path

- a. Click the **Alternate Path** radio button.

The following field is displayed.





☒ Alternate Path

Path:  **Browse...**

b. Click the **Browse** button to locate the destination.

The folder options are displayed.

Please select a folder below:

**Current selection:**

- Local Disk(C:\) >
- New Volume(E:\) >

Type network location if it is not listed above (for example, \\server\share):

Path:

c. Select the destination.

The OK button is activated.

d. Click **OK**.

The address is displayed in the Path field.



Path:

To add a network location that is not listed, perform the step below.

**Adding a Network Location**

a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:

The add button is activated.

b. Click the add  button.

9. At the Existing Files section, select one of the following radio buttons regarding the restoration of existing files:
- Do not overwrite any existing files with restored files
  - Overwrite existing files with restored files
  - If a file already exists, rename the restored file
10. After making your selection, click **Next**.



The Advanced page is displayed.

The screenshot shows the 'Advanced' tab of the Intronis restore interface. At the top, there are four tabs: 'Select', 'Destination', 'Advanced' (which is active), and 'Summary'. The main content area is titled 'Restore Options' with the subtitle 'Choose where the data is restored'. On the right side, there are three checkboxes: 'Restore NTFS File Permissions' (unchecked), 'Restore File Attributes' (checked), and 'Restore Last Modified Date' (checked). At the bottom left, there is a '< Previous' link, and at the bottom right, there is a 'Next >' link.

11. Optionally, select from the following options to specify the advanced features of the restore:

- Restore NTFS File Permissions
- Restore File Attributes
- Restore Last Modified Date

12. Click **Next**.

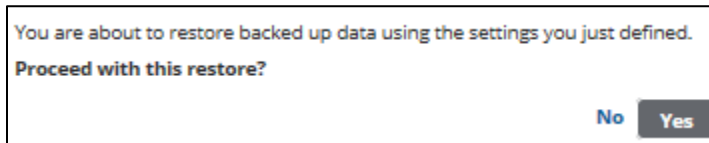
The Summary page is displayed.

The screenshot shows the 'Summary' tab of the Intronis restore interface. At the top, there are four tabs: 'Select', 'Destination', 'Advanced', and 'Summary' (which is active). The main content area is divided into three sections: 'Select' showing 'Recovering: 2 File(s) selected, size: 884.50 KB', 'Destination' showing 'Your file(s) will be restored to the Original Path', and 'Advanced' showing 'Restore File Attributes' and 'Restore Last Modified Date'. At the bottom left, there is a '< Previous' link. At the bottom right, there are two buttons: 'Cancel' and 'Restore'.



13. Verify your selections, and then click the **Restore** button.

The confirmation pop-up is displayed.



14. Click **Yes**.

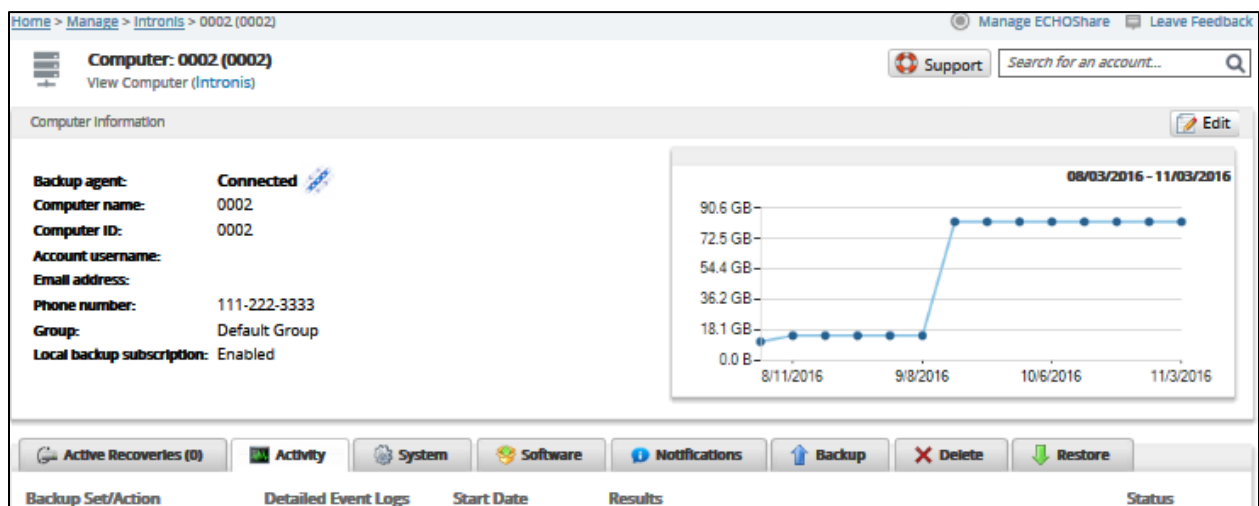
The Restore Selections page is displayed with the latest status.

## Restoring Files and Folders by Daily Snapshots

To restore Files and Folders by Daily Snapshots, perform the following steps.

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

The Computer page is displayed.



2. Click the **Restore** tab.



The Restore Selections page is displayed.

### Restore Selections

Viewing Original Catalog

Backed Up Data Type

Files and Folders

VMware Standard


VMware QuickSpin

Physical Imaging

Type	Status	Completed
Files and Folders	0 Item(s) Restored	01/04/2017 @ 12:43 PM

1

1 - 1 of 1 items

- Click the restore  icon of the backup type you want to restore.



The Select page is displayed.

## Restore

Files & Folders

Select

Destination

Advanced

Summary

☒ By Folder Hierarchy

☐ By Daily Snapshots

☐ By Backup Sets

**What Files & Folders Would You Like to Restore?**

Select from the available Files & Folders below to restore

Select Your Files and/or Folders:

Current selection:

☐ WIN7

Select the items on the left you want to restore.

Exclusions are marked in red.

Next >

Cancel

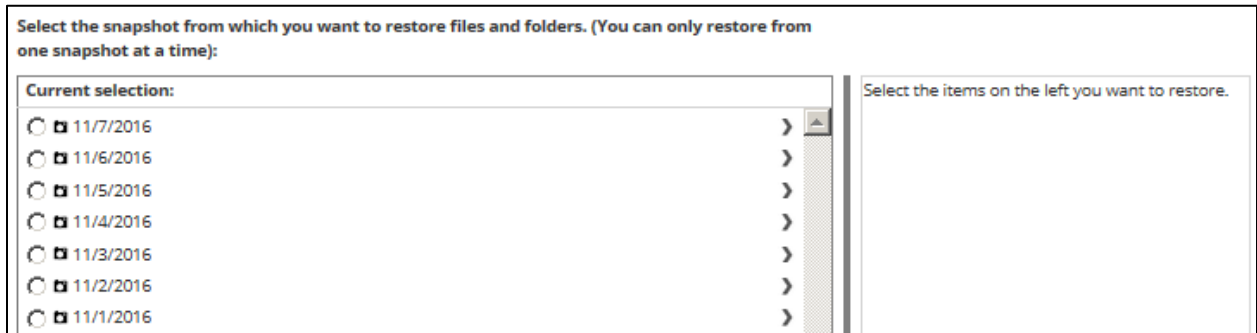
Restore

- Click the **By Daily Snapshots** radio button.





The available snapshots are displayed.

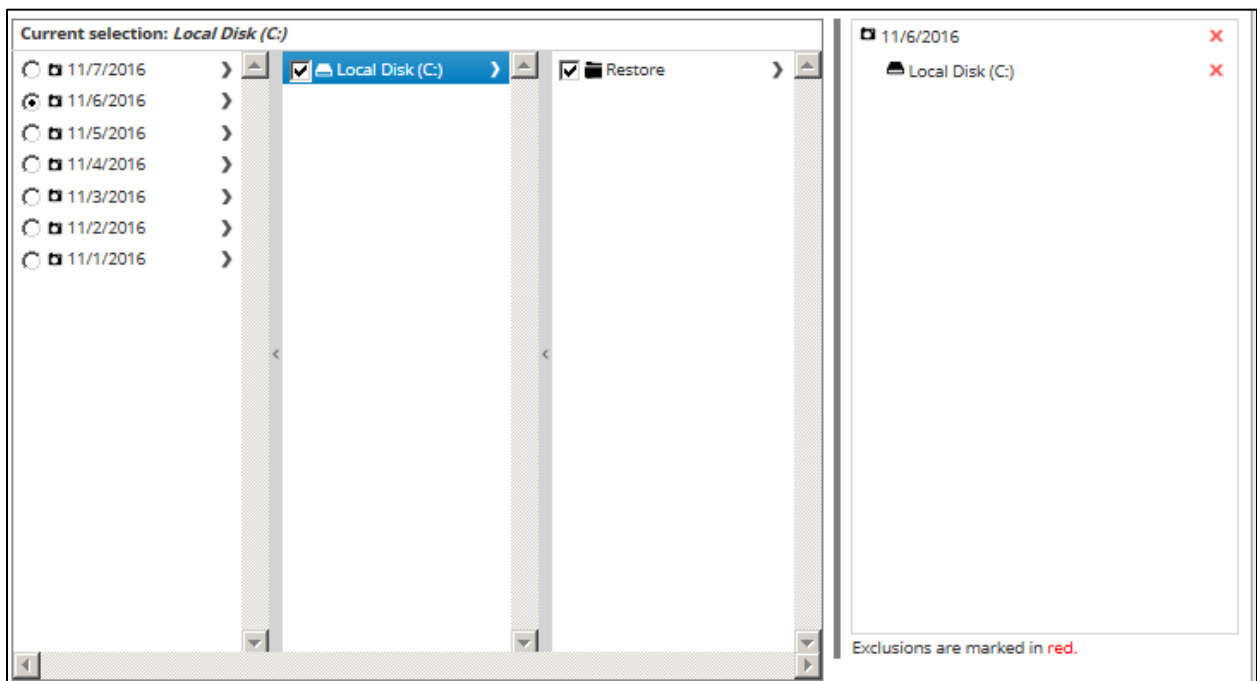
**Note:** Seven of the most recent daily snapshots are available for restore. You can only restore from one daily snapshot at a time. Selecting a different snapshot clears your current selection.



5. In the Current Selection pane, click the radio button of the snapshot you would like to restore.

Clicking the arrow  at the right of the items displays more files and folders. Exclusions are marked in red.

Your selections are displayed in the right pane. Click the remove  icon to remove any selections, or clear the item radio button or check box.





**TIP:** If you want to accept the default settings for the Destination and Advanced pages, you can restore now by clicking the **Restore** button.

**Important:** If the default setting on the Destination page is selected, then any existing files are not overwritten with restored files. The result may be that no files are restored.

To change the default settings, continue with the following steps, or select a page tab.

6. After making your selection, click **Next**.

The Destination page is displayed.

The screenshot shows the 'Destination' page of the Intronis backup and restore interface. At the top, there are four tabs: 'Select', 'Destination' (which is active), 'Advanced', and 'Summary'. Below the tabs, the heading 'Where Do You Want To Restore?' is followed by the instruction 'Select the destination of your restore and how existing files will be treated.' The page is divided into two main sections. The first section, 'Destination', has the sub-heading 'Choose where the data is restored' and two radio buttons: 'Original Path' (which is selected) and 'Alternate Path'. The second section, 'Existing Files', has the sub-heading 'How are existing files treated during restoration?' and three radio buttons: 'Do not overwrite any existing files with restored files' (which is selected), 'Overwrite existing files with restored files', and 'If a file already exists, rename the restored file'. At the bottom left, there is a '< Previous' link, and at the bottom right, there is a 'Next >' link.

7. At the Destination section, to select the original destination path, click the **Original Path** radio button.
8. To select an alternate path, click the **Alternate Path** radio button, and then browse to the destination.

### Selecting an Alternate Path

- a. Click the Alternate Path radio button.

The following field is displayed.





☒ Alternate Path

Path:

b. Click the Browse button to locate the destination.

The folder options are displayed.

Please select a folder below:

Current selection:

- Local Disk(C:\) >
- New Volume(E:\) >

Type network location if it is not listed above (for example, \\server\share):

Path:

c. Select the destination.

The OK button is activated.

d. Click OK.

The address is displayed in the Path field.



Path:

To add a network location that is not listed, perform the step below.

**Adding a Network Location**

a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:

The add button is activated.

b. Click the add  button.

9. At the Existing Files section, select one of the following radio buttons regarding the restoration of existing files:
  - Do not overwrite any existing files with restored files
  - Overwrite existing files with restored files
  - If a file already exists, rename the restored file
10. After making your selection, click **Next**.



The Advanced page is displayed.

Select Destination **Advanced** Summary

### Restore Options

Choose where the data is restored

- ☐ Restore NTFS File Permissions
- ☒ Restore File Attributes
- ☒ Restore Last Modified Date

[< Previous](#) [Next >](#)

11. Optionally, select from the following options to specify the advanced features of the restore:

- Restore NTFS File Permissions
- Restore File Attributes
- Restore Last

12. Click **Next**.



The Summary page is displayed.

The screenshot shows the 'Restore' window with the 'Files & Folders' section selected. The 'Summary' tab is active, showing the following information:

- Select:** Recovering: 2 File(s) selected, size: 884.50 KB
- Destination:** Your file(s) will be restored to the Original Path
- Advanced:** Restore File Attributes, Restore Last Modified Date

At the bottom left, there is a '< Previous' link. At the bottom right, there are 'Cancel' and 'Restore' buttons.

13. Verify your selections, and then click the **Restore** button.

The confirmation pop-up is displayed.

The confirmation pop-up dialog displays the following text:

You are about to restore backed up data using the settings you just defined.  
**Proceed with this restore?**

At the bottom right, there are 'No' and 'Yes' buttons.

14. Click **Yes**.

The Restore Selections page is displayed with the latest restore.

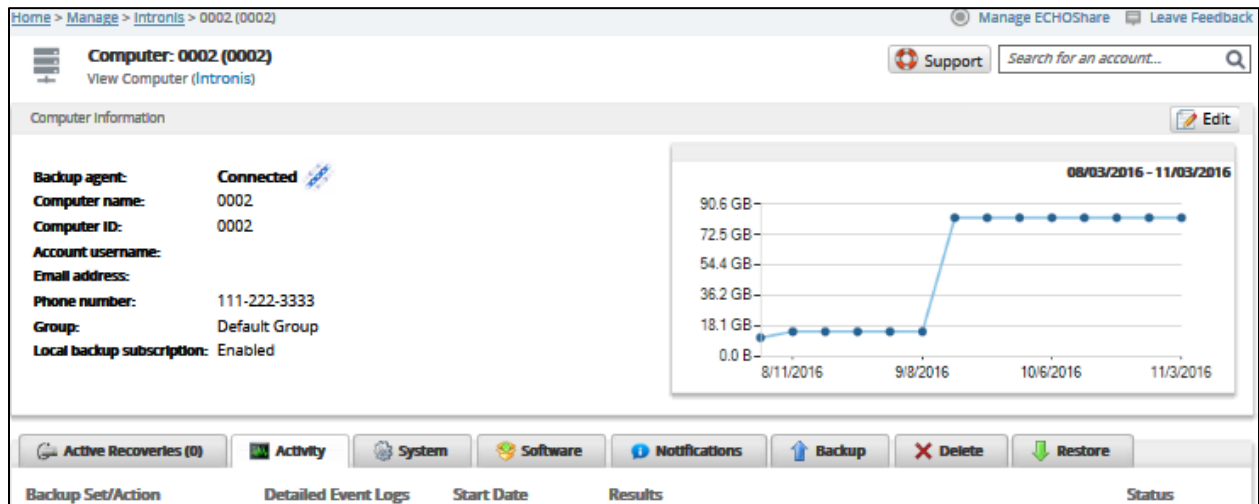


### Restoring Files and Folders by Backup Sets

To restore Files and Folders by Backup Sets, perform the following steps.

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

The Computer page is displayed.



2. Click the **Restore** tab.



The Restore Selections page is displayed.

### Restore Selections

Viewing Original Catalog

Backed Up Data Type

Files and Folders

VMware Standard


VMware QuickSpin

Physical Imaging

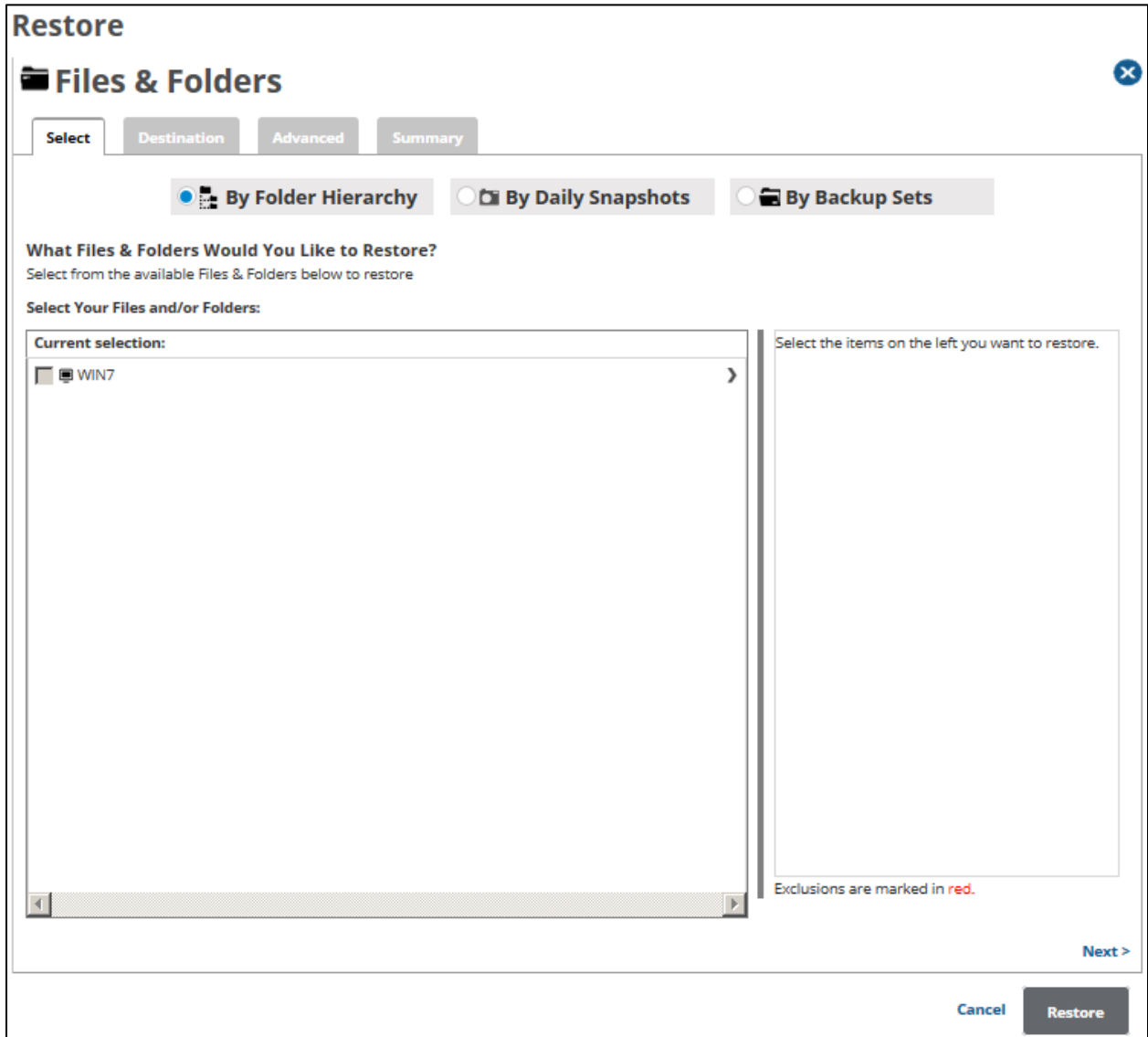
Type	Status	Completed
Files and Folders	0 Item(s) Restored	01/04/2017 @ 12:43 PM

1

1 - 1 of 1 items

- Click the restore  icon of the backup type you want to restore.

The Select page is displayed.



**Restore**

**Files & Folders**

Select Destination Advanced Summary

☒ By Folder Hierarchy ☐ By Daily Snapshots ☐ By Backup Sets

**What Files & Folders Would You Like to Restore?**  
Select from the available Files & Folders below to restore

**Select Your Files and/or Folders:**

Current selection:

- WIN7

Select the items on the left you want to restore.

Exclusions are marked in red.

Next > Cancel Restore

- Click the **By Backup Sets** radio button.



The available Backup Sets are displayed.

☐ By Folder Hierarchy ☐ By Daily Snapshots ☒ By Backup Sets

**What Files & Folders Would You Like to Restore?**  
Select from the available Files & Folders below to restore

Select the backup set from which you want to restore files and folders. (You can only restore from one backup set at a time):

**Current selection:**

- ☐ File and Folder Backup
- ☐ Files and Folders 1

Select the items on the left you want to restore.


Exclusions are marked in red.


Next >

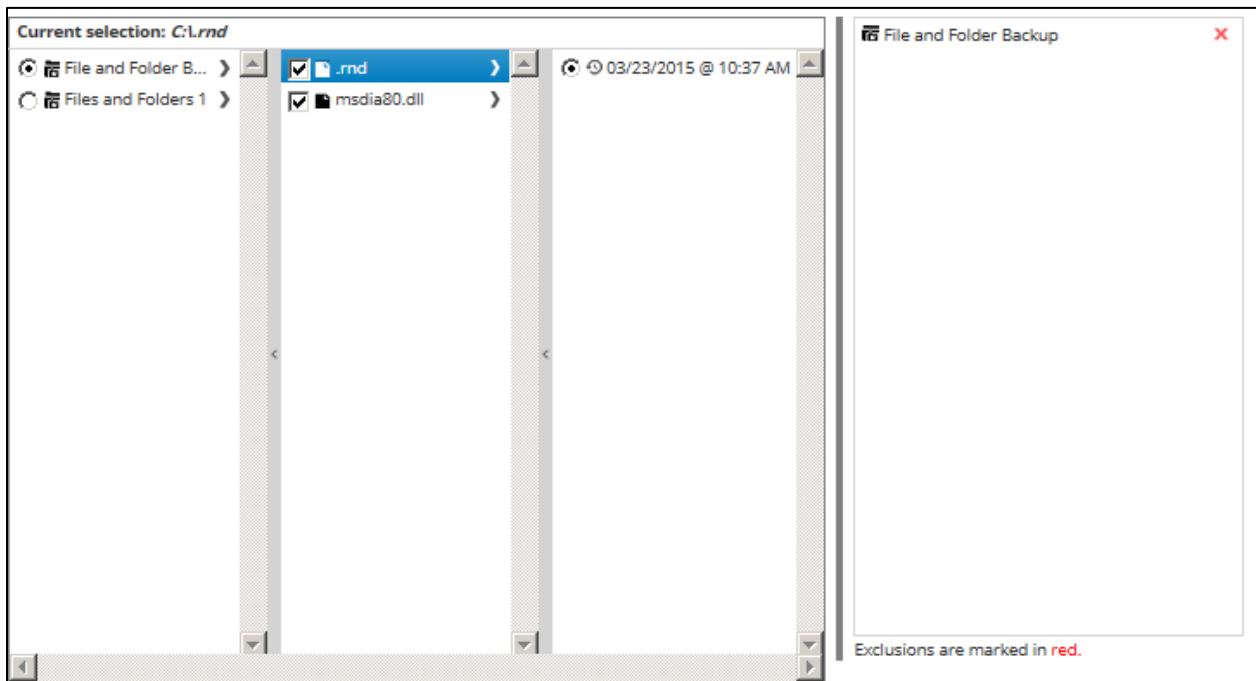
5. In the Current Selection pane, click the radio button of the Backup Set you would like to restore.





Clicking the arrow  at the right of the items displays more files and folders.

Your selections are displayed in the right pane. Click the remove  icon to remove any selections, or clear the item radio button or check box.



**TIP:** If you want to accept the default settings for the Destination and Advanced pages, you can restore now by clicking the **Restore** button.

**Important:** If the default setting on the Destination page is selected, then any existing files are not overwritten with restored files. The result may be that no files are restored.

To change the default settings, continue with the following steps, or select a page tab.

6. After making your selection, click **Next**.



The Destination page is displayed.

The screenshot shows the 'Destination' tab of a multi-step wizard. The first section, 'Where Do You Want To Restore?', has a sub-header 'Destination' and the instruction 'Choose where the data is restored'. It contains two radio buttons: 'Original Path' (selected) and 'Alternate Path'. The second section, 'Existing Files', has a sub-header 'Existing Files' and the instruction 'How are existing files treated during restoration?'. It contains three radio buttons: 'Do not overwrite any existing files with restored files' (selected), 'Overwrite existing files with restored files', and 'If a file already exists, rename the restored file'. Navigation links '< Previous' and 'Next >' are at the bottom.

7. At the Destination section, to select the original destination path, click the **Original Path** radio button.
8. To select an alternate path, click the **Alternate Path** radio button, and then browse to the destination.

### Selecting an Alternate Path

- a. Click the **Alternate Path** radio button.

The following field is displayed.

The screenshot shows the 'Alternate Path' radio button selected. Below it is a text input field labeled 'Path:' followed by a 'Browse...' button.

- b. Click the **Browse** button to locate the destination.

The folder options are displayed.



Please select a folder below:

**Current selection:**

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:

c. Select the destination.

The OK button is activated.

d. Click **OK**.

The address is displayed in the Path field.

Path:

To add a network location that is not listed, perform the step below.

### **Adding a Network Location**



- a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:  ✕ +

The add button is activated.

- b. Click the add  button.

9. At the Existing Files section, select one of the following radio buttons regarding the restoration of existing files:

- Do not overwrite any existing files with restored files
- Overwrite existing files with restored files
- If a file already exists, rename the restored file

10. After making your selection, click **Next**.

The Advanced page is displayed.

Select

Destination

Advanced

Summary

## Restore Options

Choose where the data is restored

☐ Restore NTFS File Permissions

☒ Restore File Attributes

☒ Restore Last Modified Date

< Previous

Next >



11. Optionally, select from the following options to specify the advanced features of the restore:

- Restore NTFS File Permissions
- Restore File Attributes
- Restore Last

12. Click **Next**.

The Summary page is displayed.

The image shows a software window with four tabs: 'Select', 'Destination', 'Advanced', and 'Summary'. The 'Summary' tab is active. It displays the following information:

- Select:** Recovering: 2 File(s) selected, size: 884.50 KB
- Destination:** Your file(s) will be restored to the **Original Path**
- Advanced:** Restore File Attributes, Restore Last Modified Date

At the bottom left, there is a '< Previous' link. At the bottom right, there are 'Cancel' and 'Restore' buttons.

13. Verify your selections, and then click the **Restore** button.

The confirmation pop-up is displayed.

The image shows a confirmation dialog box with the text: 'You are about to restore backed up data using the settings you just defined. Proceed with this restore?' At the bottom right, there are 'No' and 'Yes' buttons.

14. Click **Yes**.

The Restore Selections page is displayed with the latest restore.



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## Files and Folders Backup and Restore



## Chapter 3. Files and Folders Delete

This chapter includes the following topics:

- About Deleting by Daily Snapshots
- About Deleting by Backup Sets
- Deleting Files and Folders Backups

### About Deleting by Daily Snapshots

You can only delete from a single snapshot and device/share at a time.

### About Deleting by Backup Sets

You can only delete from a single backup set at a time.

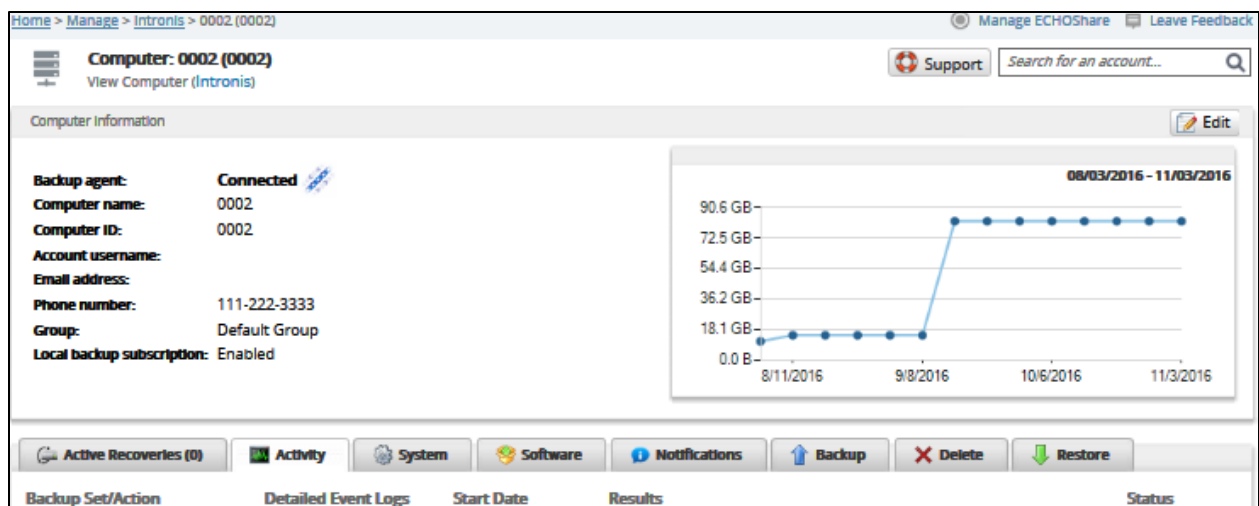
### Deleting Files and Folders Backups

**CAUTION!** Deleted data is completely purged and cannot be accessed or restored.

To delete a Files and Folders backup, perform the following steps.

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












The Computer page is displayed.




2. Select the **Delete** tab.



The Delete Selections page is displayed.

Delete Selections			
Backed Up Data Type	Type	Status	Completed
  Files and Folders	 Files & Folders	4 Item(s) Deleted	11/04/2016 @ 10:33 AM
  SQL Server			
  VMware Standard			
  VMware QuickSpin			
  Physical Imaging			

3. Select the delete  icon beside the backup type you want to delete.





The Delete page is displayed.

## Delete

### Files & Folders

☒ By Folder Hierarchy☐ By Daily Snapshots☐ By Backup Sets☐ Stray Files

**What Files & Folders Would You Like to Delete?**  
Choose how to browse the Files and Folders you want to delete:

Select Your Files and/or Folders:

Current selection:

WIN7

Select the items on the left you want to delete.

Exclusions are marked in red.

CancelDelete

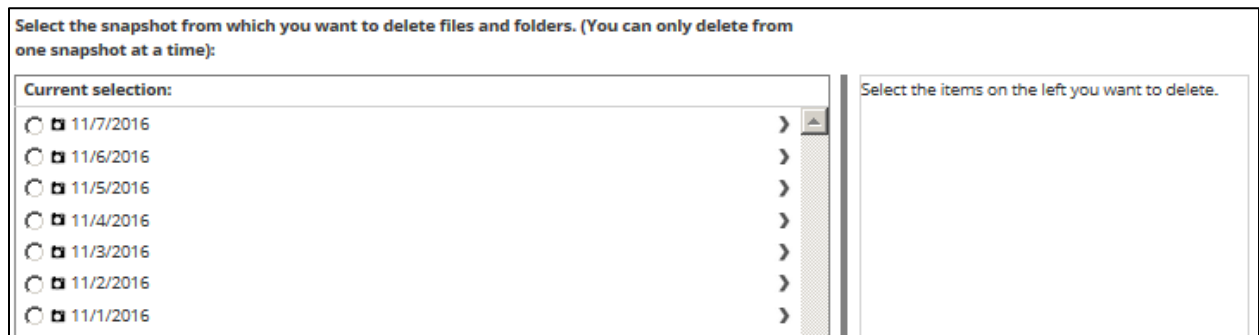
4. Select the backup type you want to browse by clicking the relevant radio button as described in the following table.

<b>By Folder Hierarchy</b>	Browse the hierarchy of the files and folders you originally backed up to select the data you want to delete.
<b>By Daily Snapshots</b>	View data by dates and delete specific instances.
<b>By Backup Sets</b>	Browse the files and folders you want to delete by viewing them organized by the backup sets you created.
<b>Stray Files</b>	Delete files no longer being backed up.





5. For example, select the **Daily Snapshots** banner.

The Snapshots from the last 7 days are displayed in the Current Selections panel.

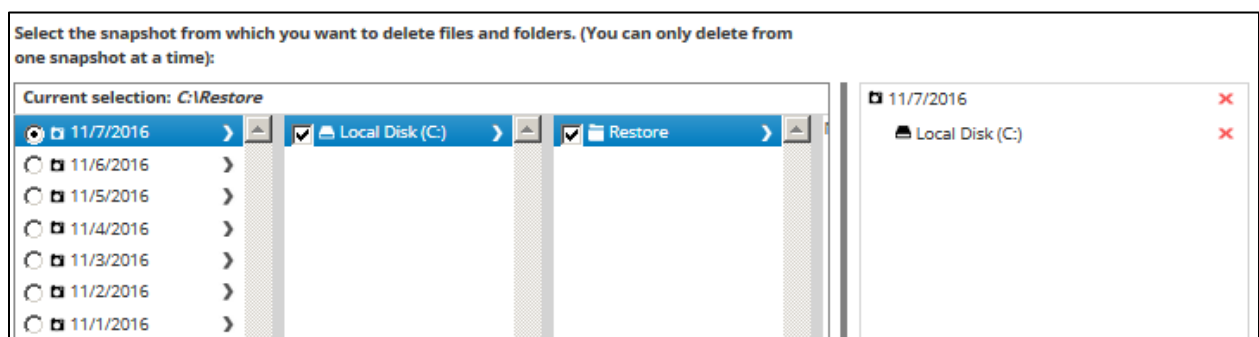


6. Select the Snapshot radio button of the file you want to delete.

Clicking the arrow  at the right of the items displays more files and folders.

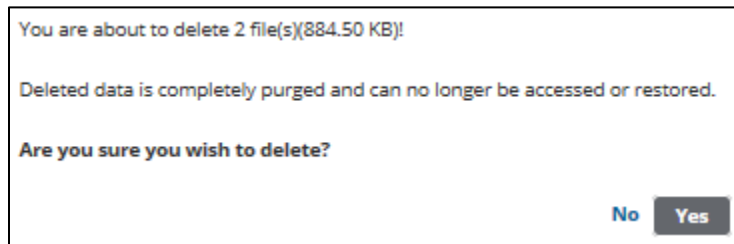
Your selections for deletion are displayed in the right pane. Click the remove  icon to remove any selections for deletion, or clear the item check box.

**Note:** You can only delete from one daily snapshot and device/share at a time. Selecting a different snapshot clears your current selection.



7. When satisfied with your selection, click the **Delete** button.

The Delete confirmation pop-up is displayed.



8. Click the **Yes** button.

The Deletes Selections page is displayed with the latest deletion.



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## Files and Folders Backup and Restore



## PART V. VMWARE STANDARD BACKUP AND RESTORE

This section includes the following chapters:

- VMware Standard Backup
- VMware Standard Restore
- VMware Standard Delete

### Chapter 1. VMware Standard Backup

This chapter includes the following topics:

- VMware Standard Backup Overview
- Backing up VMware Standard
- Editing VMware Standard Backup Sets
- Removing VMware Standard Backup Sets

See *Backup Agent Software Requirements* for more information.

#### VMware Standard Backup Overview

VMware Standard allows you to select VMs running on supported multiple managed and unmanaged ESXi hosts to do the following:

- Back up to the customer's local vault, to the cloud, or both
- Back up VMs in clustered environments

A VM cannot be part of more than 1 backup set at a time. However, a VM can be part of a VMware Standard and a VMware QuickSpin backup set simultaneously.

#### VMware Standard Backup Tabs

Figure 17 displays the backup tabs.

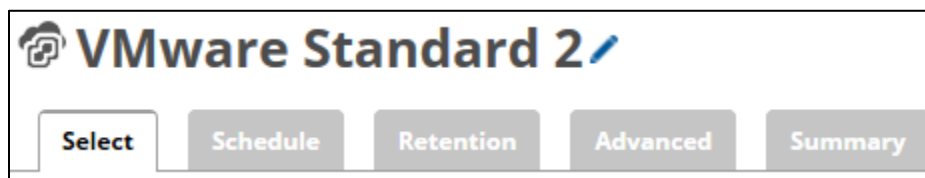


Figure 17. VMware Standard Backup Tabs.

The following table provides a description of the page features.



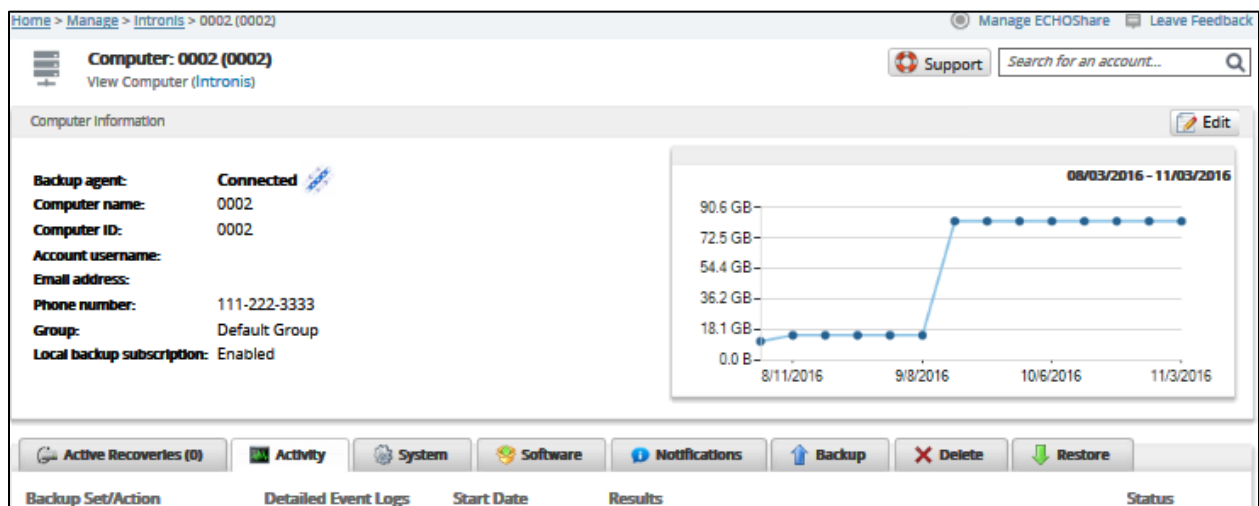
Page	Description
Select	You are required to select at least one VM.
Schedule	Optionally select the schedule. The default is once per day.
Retention	Optionally determine how many versions of each VM you would like to retain. The default is no fewer than 4 recoverable versions of backups at the destination for 28 days.  The backup set preserves the current state of the virtual machines only. User-generated snapshots are not saved.
Advanced	Temporary Folder:  Specify where the temporary folder used in backing up the VM resides.
Summary	A list of your selections is displayed.  Changed locations of the destination hosts of the recovery VMs, are not changed until the next backup set is run.

## Backing up VMware Standard

To back up VMware Standard, perform the following steps.

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

The Computer page is displayed.



2. Click the **Backup** tab.



The Backup Selections page is displayed.

Backup Selections

Export Backup Selection

Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove
<div><div><div></div><div>Files and Folders (4)</div></div><div><div></div><div>Physical Imaging (2)</div></div><div><div></div><div>Hyper-V Standard</div></div><div><div></div><div>Hyper-V Rapid Recovery</div></div><div><div></div><div>VMware Standard (1)</div></div><div><div></div><div>VMware QuickSpin (3)</div></div><div><div></div><div>SQL Server (2)</div></div><div><div></div><div>Exchange Mailbox Level</div></div></div>	<div></div>	Files and Folders 1	<div></div>	11/07/2016 @ 09:30 PM	<div></div>	<div></div>
	<div></div>	Files and Folders 2	<div></div>	--	<div></div>	<div></div>
	<div></div>	Files and Folders 3	<div></div>	--	<div></div>	<div></div>
	<div></div>	Files and Folders 4	<div></div>	11/02/2016 @ 11:00 PM	<div></div>	<div></div>
	<div></div>	Physical Imaging 1	<div></div>	--	<div></div>	<div></div>
	<div></div>	Physical Imaging 2	<div></div>	11/02/2016 @ 11:00 PM	<div></div>	<div></div>
	<div></div>	VMware Standard 1	<div></div>	11/02/2016 @ 11:00 PM	<div></div>	<div></div>
	<div></div>	VMware QuickSpin 1	<div></div>	--	<div></div>	<div></div>
	<div></div>	VMware QuickSpin 2	<div></div>	--	<div></div>	<div></div>
	<div></div>	VMware QuickSpin 3	<div></div>	--	<div></div>	<div></div>
	<div></div>	SQL 1	<div></div>	--	<div></div>	<div></div>
	<div></div>	SQL 2	<div></div>	--	<div></div>	<div></div>

1

1 - 12 of 12 items

3. In the Backup Type pane, click the select  icon beside **VMware Standard** to run the backup type.



The Select page is displayed.

**Create Backup**

**VMware Standard 2**

**Select** | Schedule | Retention | Advanced | Summary

**Select Storage Location**

☐ Local Only  
Local Vault must be enabled and a local subscription is required.

☒ Online Only

☐ Online and Local  
Local Vault must be enabled.

**What Virtual Machines Would You Like to Backup?**  
Select from the available Virtual Machines below to backup.

**Select Your Virtual Machines:**

**Current selection:**

- ☒ TRAINING

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:

Path:

**Next >**

**Cancel** **Create Backup Set**

- Click the Backup Name to provide a new name for your backup set, or accept the default.  
See *Changing Backup Set Names*.
- At the Select Storage Location, click one of the following radio button options.

**Note:** This procedure applies to all options. See *Backup Options* for more information.






- **Local Only** (Local Vault must be enabled and a local subscription is required. Data is not backed up to the cloud.)
  - **Online Only** (An enabled Local Vault disables this option.)
  - **Online and Local** (Local Vault must be enabled.)
6. To add a new unmanaged ESXi host or vCenter, perform the steps below; else proceed to next step.

### Add New Server

a. At the Path field, type the IP address of the server you want to add.

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:

Path:  

**Note:** If the host is managed by vCenter, type the vCenter's IP address. You can then navigate to the host you want.

After entering the IP address, you are prompted for authenticating with the host or vCenter. You need to provide administrator level permissions to the host or vCenter. It is important that the account credentials should not expire frequently or else the backup fails.

The add button is activated.

Path:   

b. Click the add  button.

The new server address is displayed.

- To change server credentials, perform the steps below; else proceed to next step.  
**Note:** Changing server credentials is primarily used in the event that admin credentials on the host or vCenter have changed since the last backup set was created.

### Change Server Credentials

To change Server Credentials, perform the following steps.



a. At the Confirm selection pane, select a virtual machine.

The Change Server Credentials button is enabled.

b. Click the **Change Server Credentials** button.

The credentials pop-up is displayed.

Please sign into the server:

Username:

Password:

Cancel OK

c. Make your changes.

**Note 1:** The backup set relies on these credentials to perform the backup. Use credentials that do not change often, else the backup fails.

**Note 2:** You can authenticate to the following:


- Unmanaged ESX host
- vCenter that manages one or more ESXi hosts

d. Click **OK**.


The new server address is displayed.

7. At the Current selection pane, select the VMs to be backed up.

**Note:** Any VMs that already are included in other backup sets are grayed out.

Clicking the arrow  at the right of the items displays more revisions of the VM.





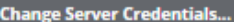
Your selection is displayed in the right pane. Click the remove  icon to remove any selections, or clear the item check box.

**Note:** vApps are currently not supported for backup.


Select Your Virtual Machines:

Current selection: *Andreea*

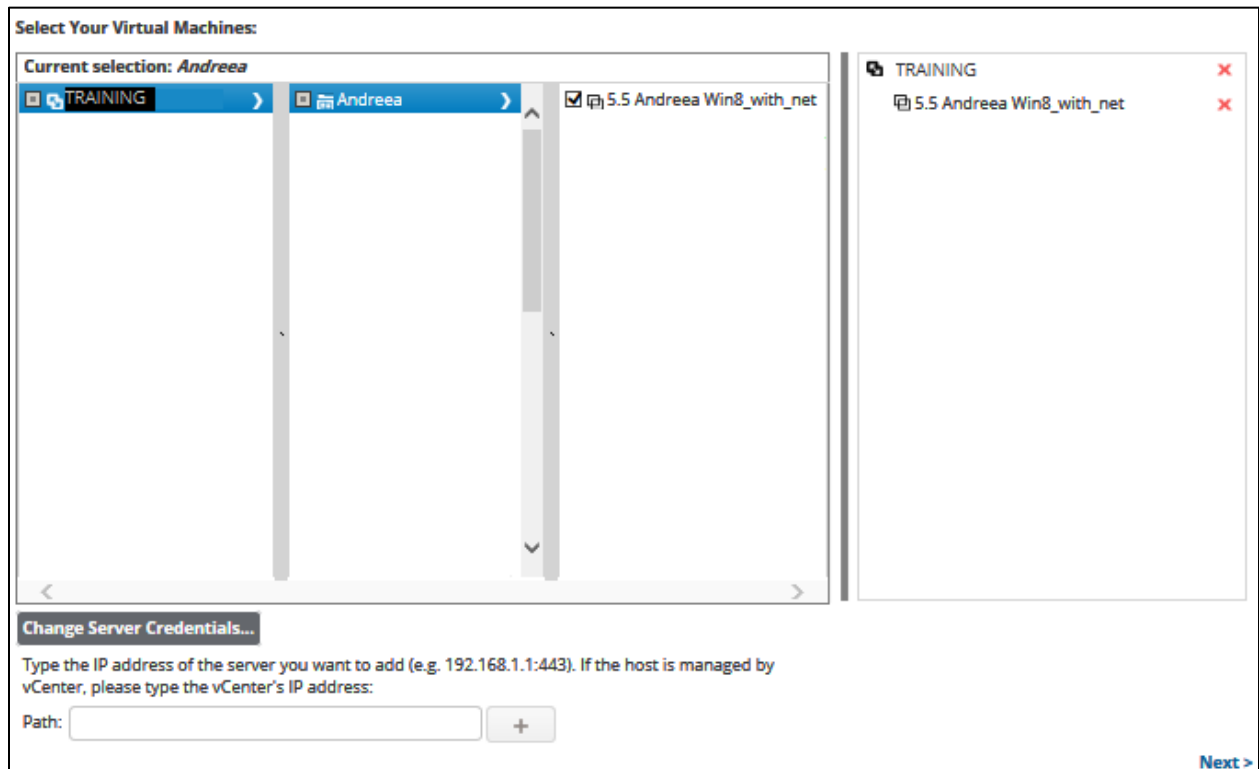
 TRAINING >  Andreea > ☒ 5.5 Andreea Win8\_with\_net



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:

Path:  

[Next >](#)



**TIP:** If you want to accept the default settings for the Schedule, Retention, and Advanced pages, you can back up now by clicking the **Create Backup Set** button.

To change the default settings, continue with the following steps.

8. Click **Next**.



The Schedule page is displayed.

9. Accept or edit the default schedule. See *Backup Schedules* for more information.

#### Notes:

- Multiple daily/weekly schedules are permitted (as long as they do not overlap).
- The **Allow to Finish** check box is always selected and grayed-out.

#### Adding a New Daily or Weekly Schedule

a. To add additional daily or weekly schedules, click the **Add New** button.

The new Schedule is displayed and the **Add New** button is highlighted, as shown below.

b. Make your selections.



The new schedule details are displayed.

### Editing Existing Daily or Weekly Schedules

a. To edit existing schedules, in the Schedule column, click the schedule details.

The Schedule is highlighted.

b. Select your new daily or weekly times.

10. After setting your schedule, click **Next**.

Your schedule is displayed in the Schedule column. Click the remove  icon to delete schedule.

11. Click **Next**.

The Retention page is displayed.

Select Schedule **Retention** Advanced Summary

**Archiving Rules**  
Determine how many versions of each VM you would like to retain

Keep 28 Day(s) and no fewer than 4 version(s).

☐ Enable Advanced Archiving Start From a Template

< Previous Next >

12. Select the number of versions you wish to archive.

**Note:** The default retention for VMware Standard is 28 days and no fewer than 4 versions.

13. Optionally, select the **Enable Advanced Archiving** check box. For Advanced Archiving information, see *Archiving Rules*



The Advanced Archiving fields are displayed.

14. Make your selections, click **Save Rule**, and then click **Next**.

The Advanced page is displayed.

**Requirement:** You must specify a temporary folder located on a disk with sufficient space.

15. At the Temporary Folder field, accept the default, type a new path, or click the **Browse** button to locate the temporary folder that is used in backing up.

#### Browse option

- a. Click the **Browse** button.

The folder options are displayed.



Please select a folder below:

**Current selection:**

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:

b. Select the destination.

The OK button is activated.

c. Click **OK**.

The address is displayed in the Path field.

Path:

d. To add a network location that is not listed, perform the step below.

### **Adding a Network Location**



- a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:  ✕ +

The add button is activated.

- b. Click the add  button.

16. At the Force Full Backups section, use the arrows to specify how often full backups are performed after incremental backups.

**Note:** The default setting is a full backup is forced every 21 incremental backups.


**TIP:** Taking a full backup periodically ensures the stability of the backup chain. Full backups take longer to run but result in shorter incremental chains and potentially shorter recovery times.

The Summary page is displayed.

SelectScheduleRetentionAdvancedSummary

Select

The Standard backup set contains **1 VM(s)**.

Destination  Online

Schedule

The backup will run **7 day(s)** a week, running a total of **7 time(s)** per week.

Retention

Keep all versions from now to **28 Day(s)**. After **28 Day(s)** keep nothing. Keep no fewer than **4 version(s)**.

Advanced

Temp Location: **C:\Windows\TEMP\BackupAgent**  
A full backup is forced every **21** incremental backup(s).

< Previous

CancelCreate Backup Set

17. Verify your selections, and then click **Create Backup Set**.





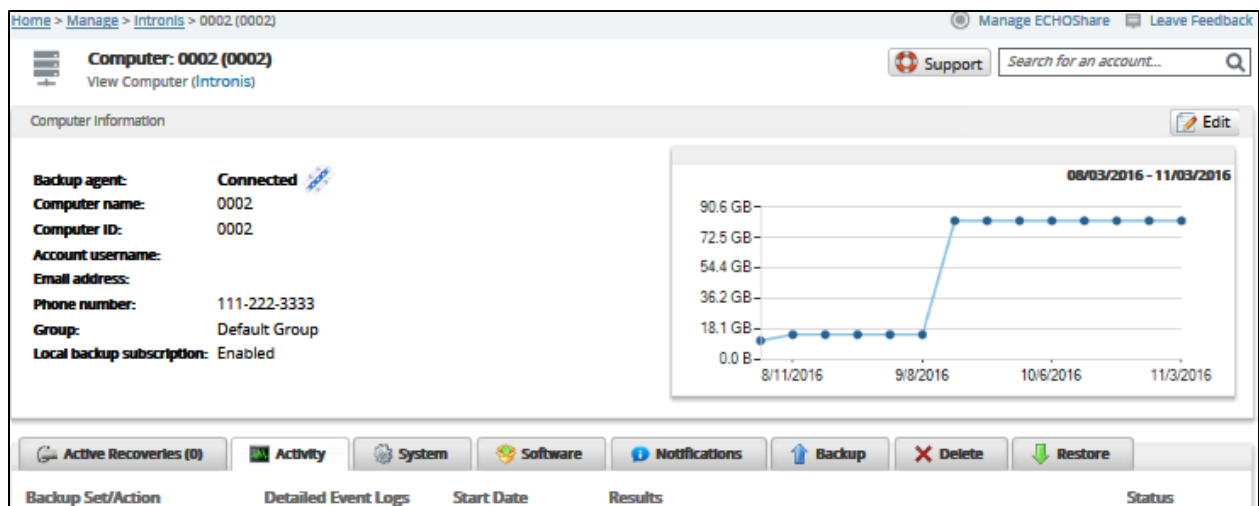
Your scheduled backup is displayed on the Backup Selections page.

## Editing VMware Standard Backup Sets

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

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

The Computer page is displayed.




2. Click the **Backup** tab.



The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
<div><div></div><div>Files and Folders (4)</div></div> <div><div></div><div>Physical Imaging (2)</div></div> <div><div></div><div>Hyper-V Standard</div></div> <div><div></div><div>Hyper-V Rapid Recovery</div></div> <div><div></div><div>VMware Standard (1)</div></div> <div><div></div><div>VMware QuickSpin (3)</div></div> <div><div></div><div>SQL Server (2)</div></div> <div><div></div><div>Exchange Mailbox Level</div></div>	<div></div>	Files and Folders 1	<div></div>	11/07/2016 @ 09:30 PM	<div></div>	<div></div>	<div></div>
	<div></div>	Files and Folders 2	<div></div>	--	<div></div>	<div></div>	<div></div>
	<div></div>	Files and Folders 3	<div></div>	--	<div></div>	<div></div>	<div></div>
	<div></div>	Files and Folders 4	<div></div>	11/02/2016 @ 11:00 PM	<div></div>	<div></div>	<div></div>
	<div></div>	Physical Imaging 1	<div></div>	--	<div></div>	<div></div>	<div></div>
	<div></div>	Physical Imaging 2	<div></div>	11/02/2016 @ 11:00 PM	<div></div>	<div></div>	<div></div>
	<div></div>	VMware Standard 1	<div></div>	11/02/2016 @ 11:00 PM	<div></div>	<div></div>	<div></div>
	<div></div>	VMware QuickSpin 1	<div></div>	--	<div></div>	<div></div>	<div></div>
	<div></div>	VMware QuickSpin 2	<div></div>	--	<div></div>	<div></div>	<div></div>
	<div></div>	VMware QuickSpin 3	<div></div>	--	<div></div>	<div></div>	<div></div>
	<div></div>	SQL 1	<div></div>	--	<div></div>	<div></div>	<div></div>
	<div></div>	SQL 2	<div></div>	--	<div></div>	<div></div>	<div></div>
<div><div></div><div></div><div>1</div><div></div><div></div></div>							1 - 12 of 12 items

3. Click the edit  icon of the backup selection to edit.



The Backup Set Summary page is displayed.

**Edit Backup**

**VMware Standard 1**

Select Schedule Retention Advanced **Summary**

**Select** The Standard backup set contains **1 VM(s)**.

Destination Online

**Schedule** The backup will run **7 day(s)** a week, running a total of **7 time(s)** per week.

**Retention** Keep all versions from now to **28 Day(s)**. After **28 Day(s)** keep nothing. Keep no fewer than **4 version(s)**.

**Advanced** Temp Location: **C:\Windows\TEMP\BackupAgent**  
A full backup is forced every **21** incremental backup(s).

[< Previous](#)

[Cancel](#) [Update Backup Set](#)

4. Select any of the tabs to display and edit your current settings. See *Backing up VMware Standard* for details.

**Note:** The backup set name may be edited. See *Changing Backup Set Names*.

5. After making all your edits, click the **Update Backup Set** button at the bottom of any page, as shown below.

[Cancel](#) [Update Backup Set](#)

The Backup Selections page is displayed with your current backup status.



## Removing VMware Standard Backup Sets

To remove a VMware Standard backup set, perform the following steps.

1. Navigate to the Backup Selections page. See *Backing up VMware Standard* for instructions.

The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+ Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
		Files and Folders 2		--	<input type="checkbox"/>		
		Files and Folders 3		--	<input type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ Hyper-V Standard		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ VMware Standard (1)		Physical Imaging 1		--	<input type="checkbox"/>		
+ VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ Exchange Mailbox Level		VMware QuickSpin 1		--	<input type="checkbox"/>		
		VMware QuickSpin 2		--	<input type="checkbox"/>		
		VMware QuickSpin 3		--	<input type="checkbox"/>		
		SQL 1		--	<input type="checkbox"/>		
		SQL 2		--	<input type="checkbox"/>		
<div>1 - 12 of 12 items</div>							

2. At the relevant backup set row, click the remove icon to remove the backup set.



The confirmation pop-up is displayed.

**Remove Backup Set**

By default, deleting this backup set will not delete the VM(s) from the cloud or local vault. Deleting the backup set simply stops backing up the VM(s) contained in this backup set. However, you can choose to delete the VM(s) from the cloud and the local vault too.

☐ Delete the VM(s) from the cloud and local vault

**Do you really want to delete the standard backup set "VMware Standard 1"?**

No Yes

**Note:** By default, deleting the backup set does not delete the VMs from the cloud or local vault. Deleting the backup set only stops backing up the VMs contained in this backup set.

3. Optionally select the **Delete the VM(s) from the cloud and local vault** check box, and then click **Yes**.

The backup set is removed.



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## VMware Standard Backup and Restore



## Chapter 2. VMware Standard Restore

This chapter includes the following topics:

- Overview
- Restoring VMware Standard Backups

### Overview

With VMware Standard restores, you can perform the following actions:

- Restore VMs locally or from the cloud
- Restore VMs in a sandboxed test mode or production mode
- Choose to start the VMs automatically upon restore or not

### VMware Standard Restore Tabs

Figure 18 displays the restore tabs.



Figure 18. VMware Standard Restore Tabs.

The following table provides a description of the page features.

Page	Description
Select	Select at least one available VM to restore.
Recovery Type	<p>Select how to verify and recover your data to the restore destination.</p> <ul style="list-style-type: none"><li>• <i>Sandboxed Test Recovery</i> is a non-destructive means for you to verify the integrity of your backed-up VMs without affecting normal business operation. Your production VMs remain powered on and operational. The selected recovery VMs are powered on within an isolated VLAN.</li><li>• <i>Production Recovery</i> performs an instant recovery of your production VMs with selected recovery VMs. If the production VM is still running, it is shut down before powering up the recovery VMs.</li></ul> <p>When enabled, Auto Start starts the VMs automatically upon restore.</p>
Recovery VM Destination	<p>You are required to select a Destination Host and Datastore of the recovery VM for each selected VM source.</p> <p>The Resource Pool and VM Folder selections are optional, but you must select the <b>None</b> option.</p>



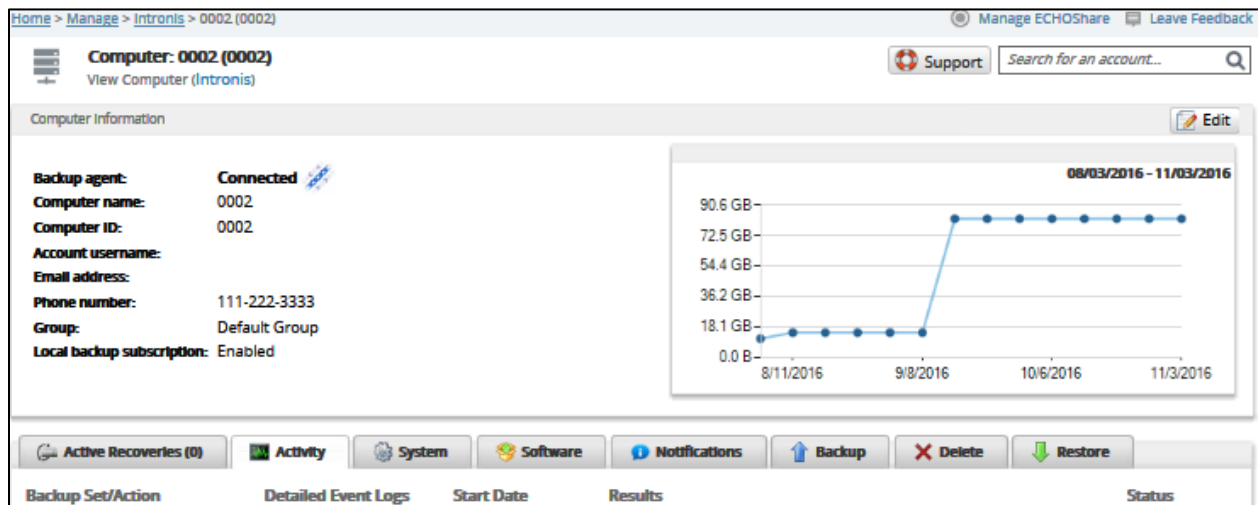
Page	Description
Summary	A list of your selections is displayed.

## Restoring VMware Standard Backup Sets

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

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

The Computer page is displayed.



2. Click the **Restore** tab.





The Restore Selections page is displayed.

### Restore Selections

Viewing Original Catalog

Backed Up Data Type


Files and Folders

VMware Standard

VMware QuickSpin

Physical Imaging

Type	Status	Completed
Files and Folders	0 Item(s) Restored	01/04/2017 @ 12:43 PM

3. Click the restore  icon of the backup type you want to restore.

The Select page is displayed

### Restore

VMWare Standard

Select

Recovery Type

Recovery VM Destination

Summary

What VMware Standard VM(s) Would You Like To Restore?

Select from the available revisions and/or VMs to restore

Select Your Revisions and/or VM(s):

Current selection:

☐ [Dan] XP\_Recovery\_1\_Recovery

Select the items on the left you want to restore.


Next >


Cancel

Restore



4. In the Current Selection pane, select the VMs and revisions to be restored.



Clicking the arrow  at the right of the VM displays more revisions of the VM.



Your selection is displayed in the right pane. Click the remove  icon to remove any selections, or clear the item check box.

**What VMware Standard VM(s) Would You Like To Restore?**  
Select from the available revisions and/or VMs to restore

Select Your Revisions and/or VM(s):

**Current selection:**

☒  [Dan] XP\_Recovery\_1\_Recovery (Latest Revision) 

 [Dan] XP\_Recovery\_1\_Recovery (Latest Revision) 

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



The Recovery Type page is displayed.

6. 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 on the production network. They assume the role of the original production VMs.

7. Optionally, select the **After the VM(s) is restored, automatically start it** check box, and then click **Next**.



The Recovery VM Destination page is displayed.

Virtual Machine/VM(s)	Source Host IP	Destination Host	Resource Pool	VM Folder	Datastore	
[Dan] XP_Recovery_...	192.168.1.1:443	Choose Destin...	No Destination Host	No Destination Host	No Destination Host	✓

**Requirements:** You must select the Destination Host and the Datastore that is hosting the recovery VMs. The Resource Pool and VM Folder are optional; however, you must select **None** on the Destination page if you do not want these options.

8. To add a new destination host server, perform the following steps; else proceed to next step.

**Add New Server**

a. To add a new server, click the **Add New Server** button.

The address field is displayed.

Type the IP Address of the server you want to add (e.g. 192.168.1.1:443).

Note: If the host is managed by vCenter, type the vCenter's IP address. You will then be able to navigate to the host you want.

Cancel Add



b. Type the IP address of the server you want to add.

**Note:** If the host is managed by vCenter, type the vCenter's IP address. You can then navigate to the host you want.

The Add button is activated.

Type the IP Address of the server you want to add (e.g. 192.168.1.1:443).


Note: If the host is managed by vCenter, type the vCenter's IP address. You will then be able to navigate to the host you want.

192.168.1.1

Cancel Add

c. Click the **Add** button.



The new server address is displayed.

9. Select the ellipsis  in the Destination Host column.

The Destination Host pop up is displayed.

Select a Destination Host:

Current selection:

  . 192.168.1.1:443

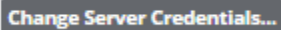
Change Server Credentials... Cancel OK



**CAUTION!** As a best practice, select a host for your restore destination that does not already contain the protected VM. If the same host is selected and fails, both the protected VM and the recovery VM are lost.

10. Select the Destination Host.

Note that the Change Server Credentials option is activated.



11. To change server credentials, perform the steps below; else proceed to next step.

### Change Server Credentials

To change Server Credentials, perform the following steps.

a. At the Confirm selection pane, select a host.

The Change Server Credentials button is enabled.

b. Click the **Change Server Credentials** button.

The credentials pop-up is displayed.



Please sign into the server:  
Username:   
Password:   
Cancel OK

c. Make your changes.

**Note 1:** The backup set relies on these credentials to perform the backup. Use credentials that do not change often, else the backup fails.

**Note 2:** You can authenticate to the following:

- Unmanaged ESX host
- vCenter that manages one or more ESXi hosts

d. Click **OK**.

The new server address is displayed.




12. Select the Destination Host.

The ellipses are displayed for the other options.

**Where Would You Like to Direct Your Recovery VM Destination?**  
Select Destination Host, Resource Pool, VM Folder & Datastore of each VM below. Completed configurations are denoted with a ✓ after them.

Virtual Machine/VM(s)	Source Host IP	Destination Host	Resource Pool	VM Folder	Datastore	✓			
☞ Steve - Win XP Thin	.192.168.1.1:443	.192.168.1.1:443	...	Choose Resourc...	...	Choose VM Folder	...	Choose a Datast...	...

13. Select the ellipsis  in the Resource Pool column.

The Resource Pool pop up is displayed.

**Select a Resource Pool:**

Current selection:

☒ None

☐ test

☐ test2

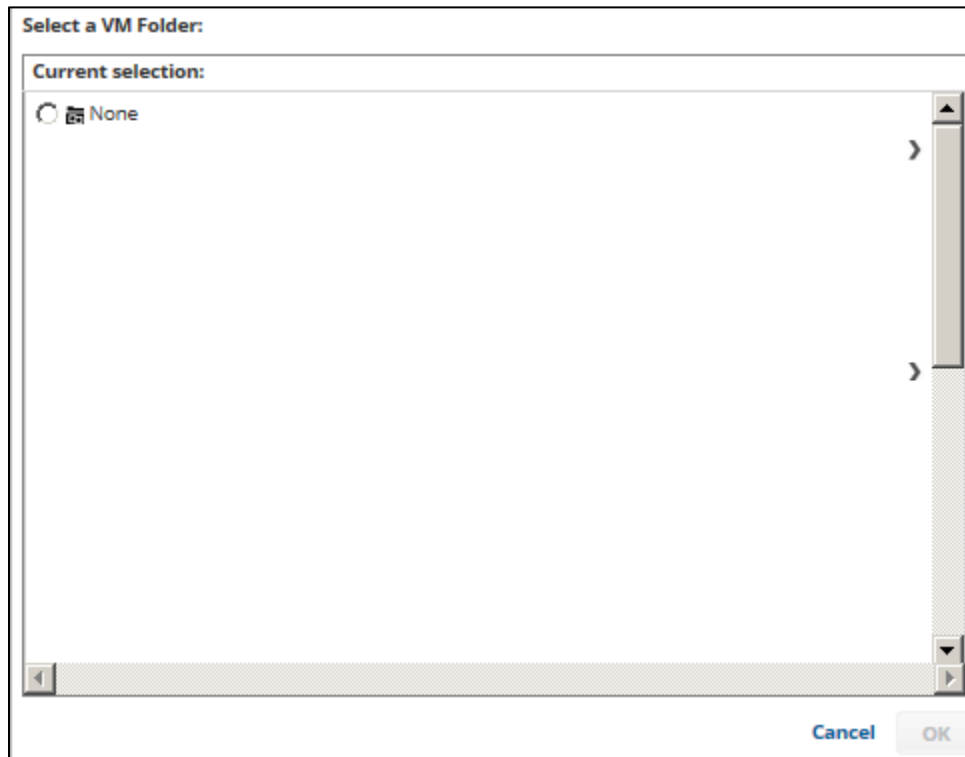
Cancel OK


14. Select the Resource Pool radio button or the **None** radio button, if you do not want a Resource Pool, and then click **OK**.

15. Select the ellipsis  in the VM Folder column.



The VM Folder pop up is displayed.



16. Select the VM Folder radio button or the **None** radio button, if you do not want a VM Folder, and then click **OK**.
17. Select the ellipsis  in the Datastore column.





The Datastore pop up is displayed.

The dialog box titled "Select a Datastore:" contains a section labeled "Current selection:". Below this section are two radio button options: "New Primary (13.67 TB Total, 2.51 TB Free)" and "New Secondary (8.79 TB Total, 5.73 TB Free)". At the bottom right of the dialog are "Cancel" and "OK" buttons.

18. Select a Datastore radio button, and then click **OK**.

**Recommendation:** As a best practice, do not choose the same Datastore as the source VM. If the recovery VM is placed on the same Datastore as the source VM and that Datastore fails, both VMs are lost.

After making your selections, the completed configuration is denoted with a check mark ✓ as shown below.

Where Would You Like to Direct Your Recovery VM Destination?							
Select Destination Host, Resource Pool, VM Folder & Datastore of each VM below. Completed configurations are denoted with a ✓ after them.							
Virtual Machine/VM(s)	Source Host IP	Destination Host	Resource Pool	VM Folder	Datastore		
☐ Steve - Win XP Thin	.192.168.1.1:443	.192.168.1.1:443	...	None	...	None	...
						New Primary	...

19. Click **Next**.



The Summary page is displayed

20. Verify your selections, and then click the **Restore** button.

If you selected Production Recovery at the Destination page, then the following confirmation pop-up is displayed.

By selecting the checkbox and selecting **Yes**, the currently running Production VM(s) are shut down and replaced by the VMware QuickSpin VMs you have selected to restore.







21. Click the **Yes, restore the selected VM(s)** check box, and then click **Yes**.

If you selected Sandboxed Test Recovery at the Destination page, then the following confirmation pop-up is displayed.








22. Click **Yes**.

The Restores Selections page is displayed with the restore running.

Restore Selections			
Restore Type	Type	Status	Completed
 <b>Files and Folders</b>	 VMware Standard	 Restoring...	<b>Click to Stop</b> 
 <b>SQL Server</b>			
 <b>VMware Standard</b>			

**Note:** To stop the restore, click the **Click to Stop** icon.

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

Restore Selections			
Restore Type	Type	Status	Completed
 <b>Files and Folders</b>	 VMware Standard	<b>1 Item(s)</b> Restored	10/13/2016 @ 10:39 AM
 <b>SQL Server</b>			
 <b>VMware Standard</b>			
 <b>VMware QuickSpin</b>			

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



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## VMware Standard Backup and Restore



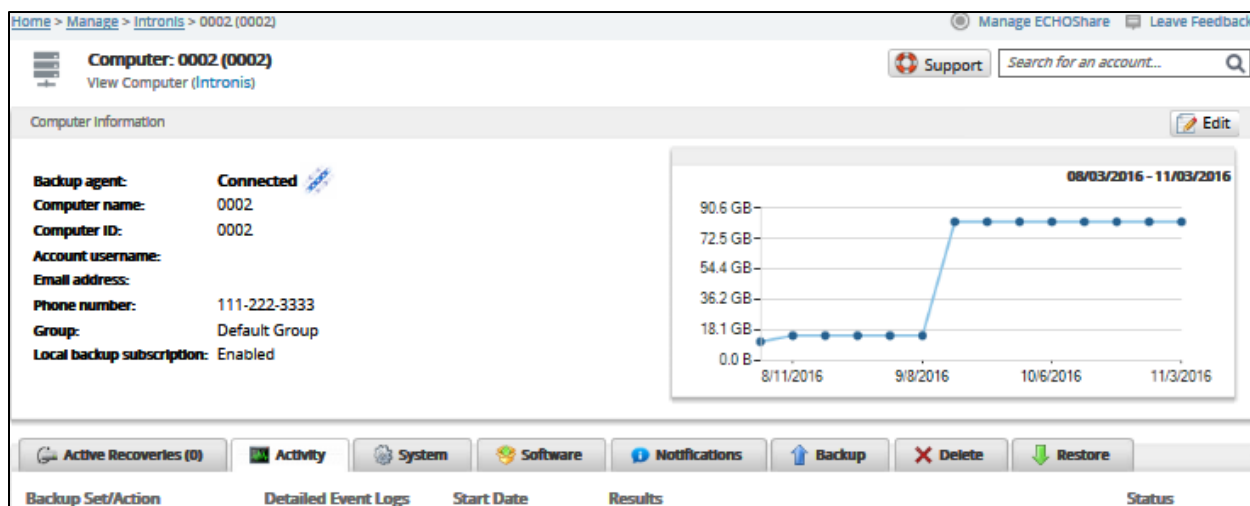
## Chapter 3. VMware Standard Delete

**CAUTION!** Deleted data is completely purged and can no longer be accessed or restored.

To delete a Physical Imaging backup, perform the following steps.

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


The Computer page is displayed.



2. Select the **Delete** tab.

The Delete Selections page is displayed.

Delete Selections			
Backed Up Data Type	Type	Status	Completed
Files and Folders	Files & Folders	4 Item(s) Deleted	11/04/2016 @ 10:33 AM
SQL Server			
VMware Standard			
VMware QuickSpin			
Physical Imaging			

3. Select the delete  icon beside the backup type you want to delete.



The Delete page is displayed.

## Delete

**VMware Standard**

**What VMware Standard Recovery VM(s) Would You Like To Delete?**  
Select from the available VMware Standard Recovery VM(s) to delete.

**Select Your Standard Recovery VM(s) and Revisions:**

Current selection:

☐ Steve - Win XP Thin

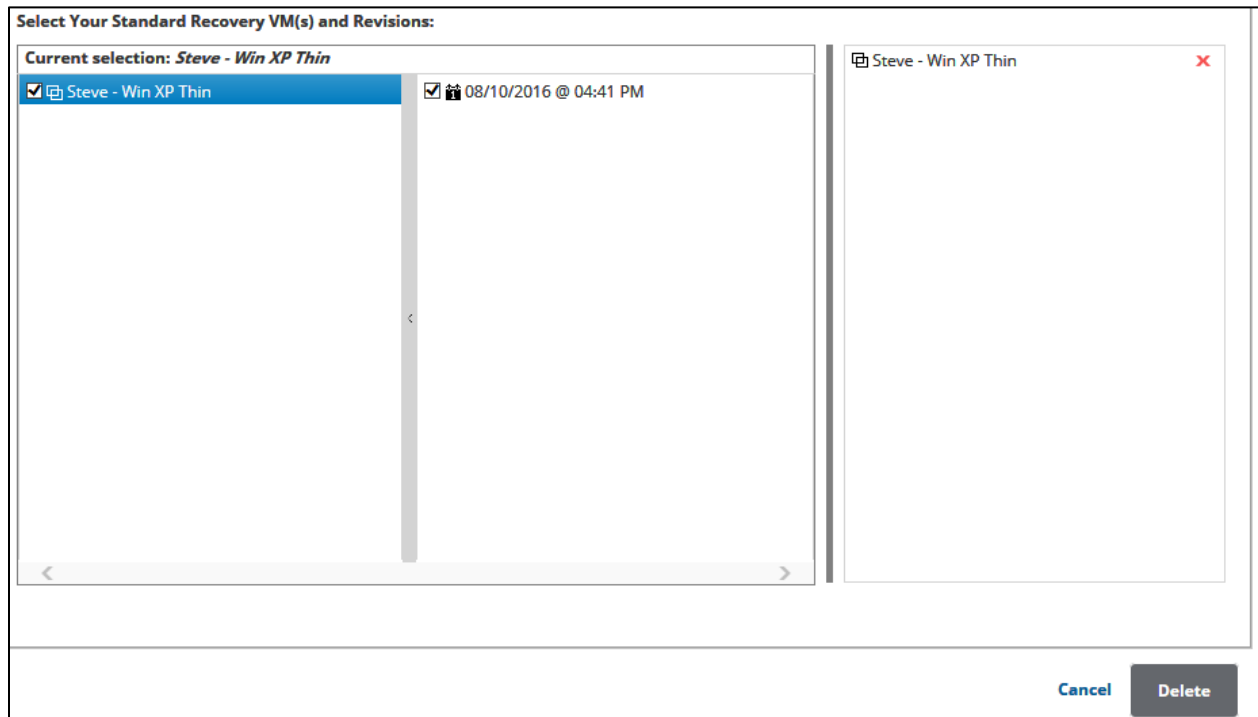
Select the items on the left you want to delete.

Cancel Delete

4. Select the VM for which you want to delete revisions.

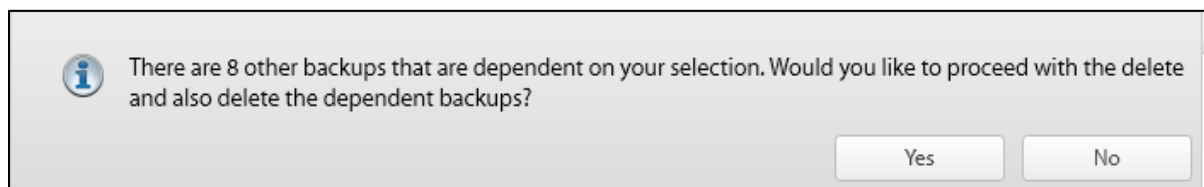


The selections for deletion are displayed in the right panel.



**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.

5. When satisfied with your selection, click the **Delete** button.



The Delete Confirmation pop-up is displayed.

You have chosen to delete **1 item(s)**, totaling **19.01 KB**.

☐ **Retain backup data for 7 days.**  
Would you like to retain VM backup data for the next seven days? This option is useful if you will be backing up VMs on this machine and would like to use the existing blocks for de-duplication purposes. At the end of 7 days, this data will be deleted.

☐ **Delete all de-duplication data.**  
Would you like to delete all de-duplication data that is currently not in use? This option is useful if you don't want to use existing blocks for de-duplication purposes anymore and you want to delete them immediately.

Deleted data is completely purged and can no longer be accessed or restored.

**Are you sure you wish to delete?**

[Cancel](#) [Delete](#)

6. Select the check box of one of the options. See *VMware Standard Delete Options* for more information.
7. Click the **Delete** button.

The Delete Selections page is displayed with the latest status.





## VMware Standard Delete Options

VMware Standard backup sets use deduplication and block-level processing. For these backup sets, the following options are available on the Delete Selection screen:

- Retain backup data for 7 days
- Delete all deduplication data

### Retain Backup Data for 7 Days

By selecting the **Retain backup data for 7 days** check box, you can retain deleted data in your Local Vault for deduplication purposes for seven days. At the end of seven days, this data is deleted from your Local Vault.

This option is useful if you are backing up VMs on this machine and would like to use the existing blocks for de-duplication purposes. At the end of 7 days, this data is deleted.

If you choose not to select this option, the data that you have selected is deleted from the Local Vault immediately.

### Delete All Deduplication Data

By selecting the **Delete all deduplication data** check box, you can immediately delete any deduplication data not being used. This option forces a block-level cleanup when the delete finishes.

This option is useful if you do not want to use existing blocks for de-duplication purposes anymore and you want to delete them immediately.

**Note:** You cannot select both check boxes at the same time; selecting one disables the other.



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## VMware Standard Backup and Restore



## PART VI. VMWARE QUICKSPIN BACKUP AND RESTORE

This part includes the following chapters:

- VMware QuickSpin Backup
- VMware QuickSpin Restore
- VMware QuickSpin Delete

See *Backup Agent Software Requirements* for more information.

### Chapter 1. VMware QuickSpin Backup

This chapter includes the following topics:

- VMware QuickSpin Backup Overview
- Backing up VMware QuickSpin
- Editing VMware QuickSpin Backup Sets
- Removing VMware QuickSpin Backup Sets

#### VMware QuickSpin Backup Overview

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 must select the Destination Host and the Datastore that is hosting the recovery VMs. The Resource Pool and VM Folder are optional; however, you must select **None** on the Destination page if you do not want these options.

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.

A VM cannot be part of more than 1 backup set at a time. However, a VM can be part of a VMware Standard and a VMware QuickSpin backup set simultaneously.

#### VMware QuickSpin Licensing

License fees for VMware QuickSpin are charged per host. For example, if backup one VM is on a host then a fee is charged for a license for that host. If you back up 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.



## VMware QuickSpin Backup Tabs

Figure 19 displays the backup tabs.

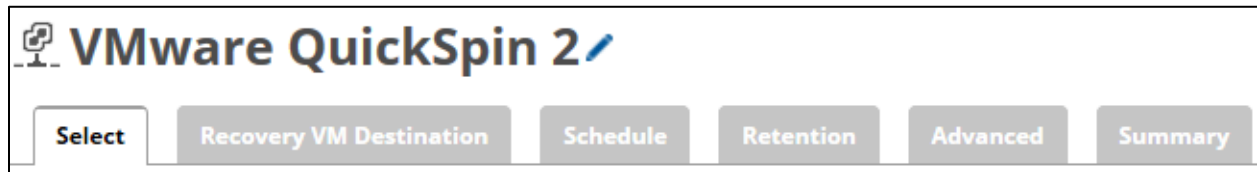


Figure 19. VMware QuickSpin Backup Tabs.

The following table provides a description of the page features.

Page	Description
Select	You are required to select at least one VM.
Recovery VM Destination	You are required to select a Destination Host and Datastore of the recovery VM for each selected VM source. The Resource Pool and VM Folder are optional, but you must select the <b>None</b> option.
Schedule	Optionally select the schedule. The default is every 1 hour.
Retention	<p>Optionally determine how many versions of each file you would like to retain. The default is 96 recoverable versions of backups at the destination.</p> <p>The backup set preserves the current state of the virtual machines only. User-generated snapshots are not saved.</p>
Advanced	<p>Temporary Folder:</p> <p>Specify where the temporary folder used in backing up VMware QuickSpin VM resides.</p> <p>Incremental Version Storage Location:</p> <p>Specify the path where the incremental versions of your recovery VM are to be stored. This data is used to recover previous versions of VMware QuickSpin recovery VMs. To restore a recovery VM successfully, you need both the recovery VM snapshot information (in vSphere) and the incremental version information stored in this location.</p> <p>If you want to change the location of the incremental versions, specify a path that cannot be compromised, deleted, or moved.</p>
Summary	<p>A list of your selections is displayed.</p> <p>Changed locations of the destination hosts of the recovery VMs, are not changed until the next backup set is run.</p>

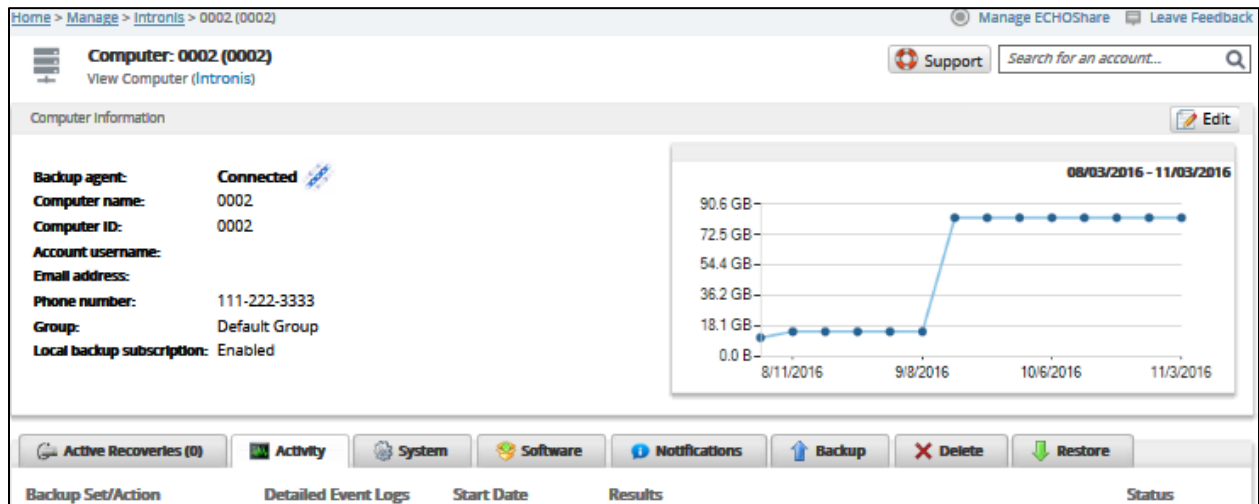


### Backing up VMware QuickSpin

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

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

The Computer page is displayed.



2. Click the **Backup** tab.



The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+ Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
+ Physical Imaging (2)		Files and Folders 2		--	<input type="checkbox"/>		
+ Hyper-V Standard		Files and Folders 3		--	<input type="checkbox"/>		
+ Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ VMware Standard (1)		Physical Imaging 1		--	<input type="checkbox"/>		
+ VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ Exchange Mailbox Level		VMware QuickSpin 1		--	<input type="checkbox"/>		
		VMware QuickSpin 2		--	<input type="checkbox"/>		
		VMware QuickSpin 3		--	<input type="checkbox"/>		
		SQL 1		--	<input type="checkbox"/>		
		SQL 2		--	<input type="checkbox"/>		
							1 - 12 of 12 items

3. In the Backup Type pane, click the select icon beside **VMware QuickSpin** to run the backup type.



The Select page is displayed.

**Create Backup**

**VMware QuickSpin 2**

**Select** | Recovery VM Destination | Schedule | Retention | Advanced | Summary

**What Virtual Machines Would You Like to Backup?**  
Select from the available Virtual Machines below to backup.

**Select Your Virtual Machines:**

**Current selection:**

- ☒ 192.168.1.1:443

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:

Path:

**Next >**

**Cancel** **Create Backup Set**

- Click the Backup Name to provide a new name for your backup set, or accept the default.  
See *Changing Backup Set Names*.
- To add a new server, perform the steps below; else proceed to next step.

#### Add New Server

- At the Path field, type the IP address of the server you want to add.



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:

Path:  +

**Note:** If the host is managed by vCenter, type the vCenter's IP address. You can then navigate to the host you want.

After entering the IP address, you are prompted for authenticating with the host or vCenter. You need to provide administrator level permissions to the host or vCenter. It is important that the account credentials should not expire frequently or else the backup fails.

The add button is activated.

Path:  x +

b. Click the add  button.

The change server credentials pop-up is displayed.

6. To change server credentials, perform the steps below; else proceed to next step.

## Change Server Credentials

To change Server Credentials, perform the following steps.

- a. At the Confirm selection pane, select a virtual machine.

The Change Server Credentials button is enabled.

- b. Click the **Change Server Credentials** button.

The credentials pop-up is displayed.

Please sign into the server:

Username:

Password:

Cancel OK





c. Make your changes.

**Note 1:** The backup set relies on these credentials to perform the backup. Use credentials that do not change often, else the backup fails.

**Note 2:** You can authenticate to the following:


- Unmanaged ESX host
- vCenter that manages one or more ESXi hosts

d. Click **OK**.


The new server address is displayed.

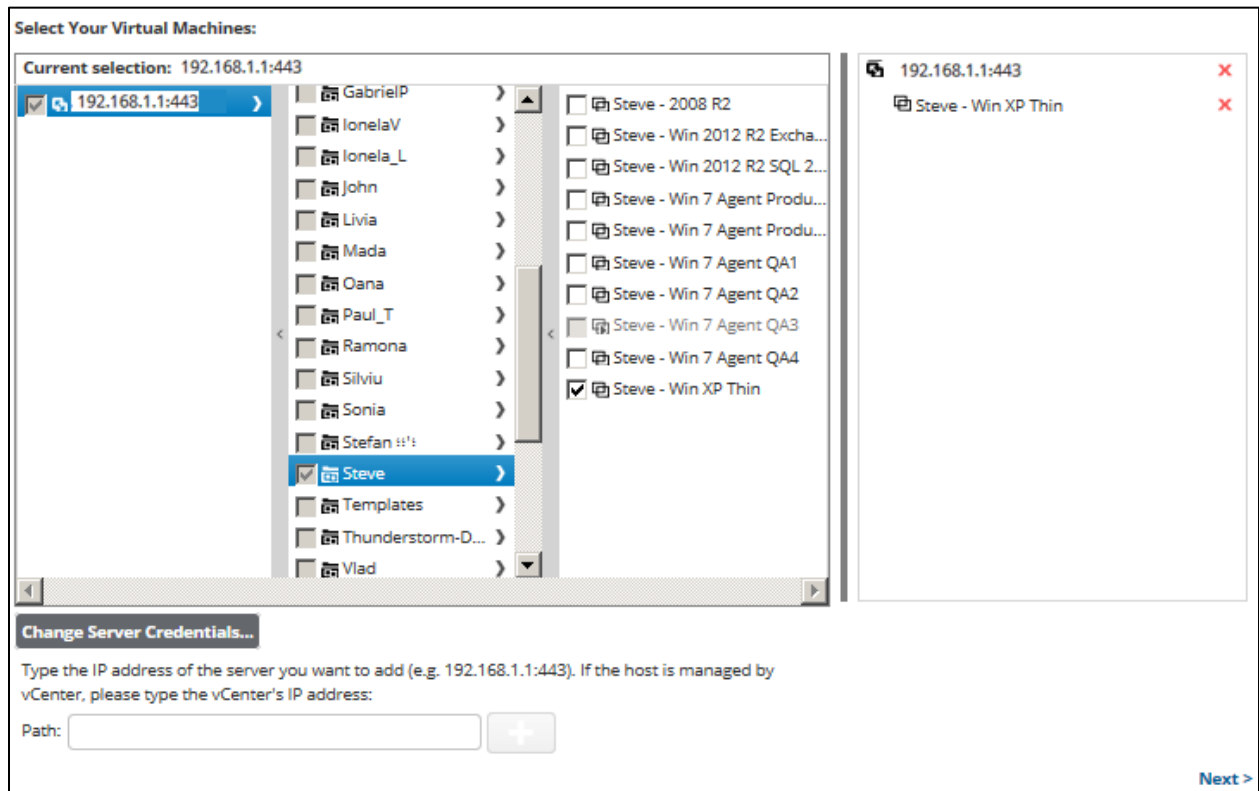
7. Select the VMs to be backed up.

**Note:** Any VMs that already are included in other backup sets are grayed out.

Clicking the arrow  at the right of the VM displays more revisions of the VM.



Your selections are displayed in the far right pane. Click the remove  icon to remove any selections, or clear the item check box.



8. Click **Next**.



The Recovery VM Destination page is displayed.

Virtual Machine/VM(s)	Source Host IP	Destination Host	Resource Pool	VM Folder	Datastore	✓
-----------------------	----------------	------------------	---------------	-----------	-----------	---

**Requirements:** You must select the Destination Host and the Datastore that is hosting the recovery VMs. The Resource Pool and VM Folder selections are optional; however, you must select **None** on the Destination page if you do not want these options.

9. To add a new server, perform the following steps; else proceed to next step.

### Add New Server

- a. At the Path field, type the IP address of the server you want to add.

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:

Path:


**Note:** If the host is managed by vCenter, type the vCenter's IP address. You can then navigate to the host you want.


After entering the IP address, you are prompted for authenticating with the host or vCenter. You need to provide administrator level permissions to the




host or vCenter. It is important that the account credentials should not expire frequently or else the backup fails.

The add button is activated.

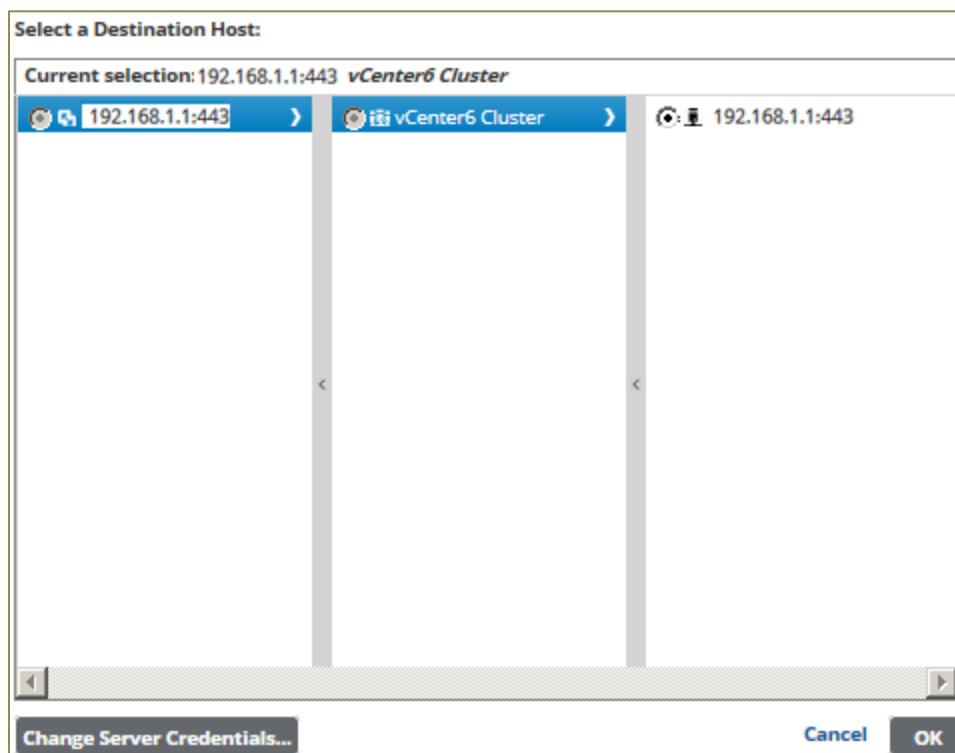
Path:  

b. Click the add  button.

The new server address is displayed.

10. Select the ellipsis  in the Destination Host column.

The Destination Host pop up is displayed.





## CAUTIONS!

- As a best practice, select a host for your restore destination that does not already contain the protected VM. If the same host is selected and fails, both the protected VM and the recovery VM are lost.
- To increase the recoverability of the VM, protect it by using a VMware Standard backup set in addition to this VMware QuickSpin backup set. This action protects the VM(s) in case the host encounters a catastrophic failure.

11. Click the Destination Host.

The Change Server Credentials option is activated.



12. To change server credentials, perform the steps below; else proceed to next step.

### Change Server Credentials

To change Server Credentials, perform the following steps.

a. At the Confirm selection pane, select a virtual machine.

The Change Server Credentials button is enabled.

b. Click the **Change Server Credentials** button.

The credentials pop-up is displayed.

Please sign into the server:

Username:

Password:

[Cancel](#) [OK](#)

c. Make your changes.

**Note 1:** The backup set relies on these credentials to perform the backup. Use credentials that do not change often, else the backup fails.

**Note 2:** You can authenticate to the following:

- Unmanaged ESX host

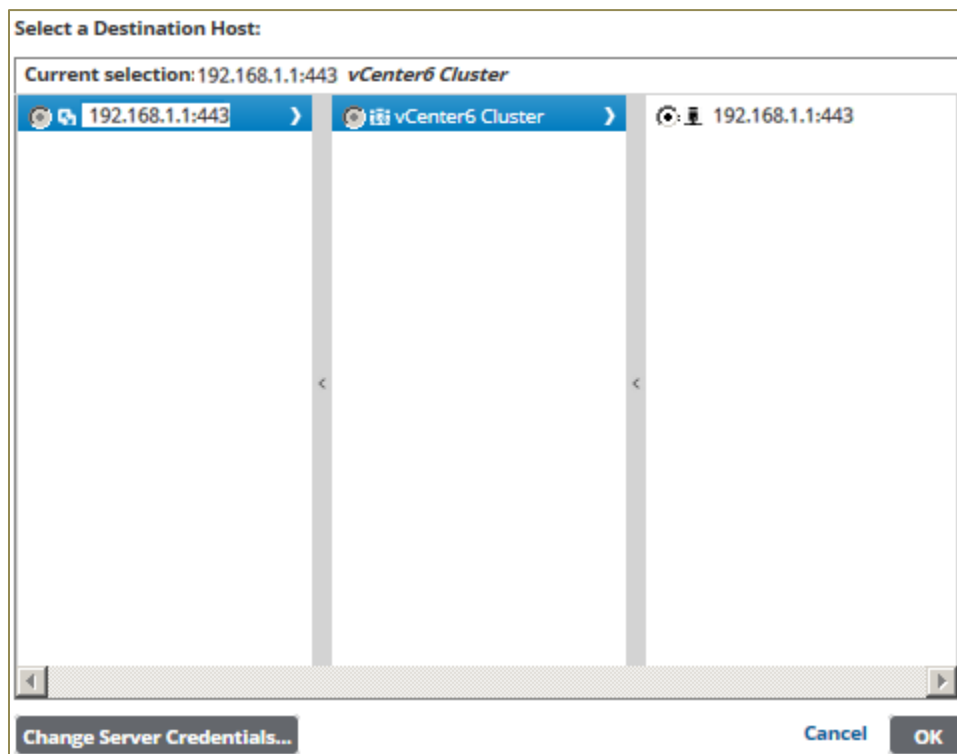


- vCenter that manages one or more ESXi hosts

d. Click **OK**.

The new server address is displayed.


13. Select the Destination Host, and then click **OK**.





The ellipses are displayed for the other options.

Where Would You Like to Direct Your Recovery VM Destination?						
Select Destination Host, Resource Pool, VM Folder & Datastore of each VM below. Completed configurations are denoted with a ✓ after them.						
Virtual Machine/VM(s)	Source Host IP	Destination Host	Resource Pool	VM Folder	Datastore	✓
Steve - Win XP Thin	.192.168.1.1:443	.192.168.1.1:443	...	Choose Resourc...	...	Choose a Datast...

14. Select the ellipsis  in the Resource Pool column.

The Resource Pool pop up is displayed.

Select a Resource Pool:

Current selection:

☐ None

☒ livia test 1

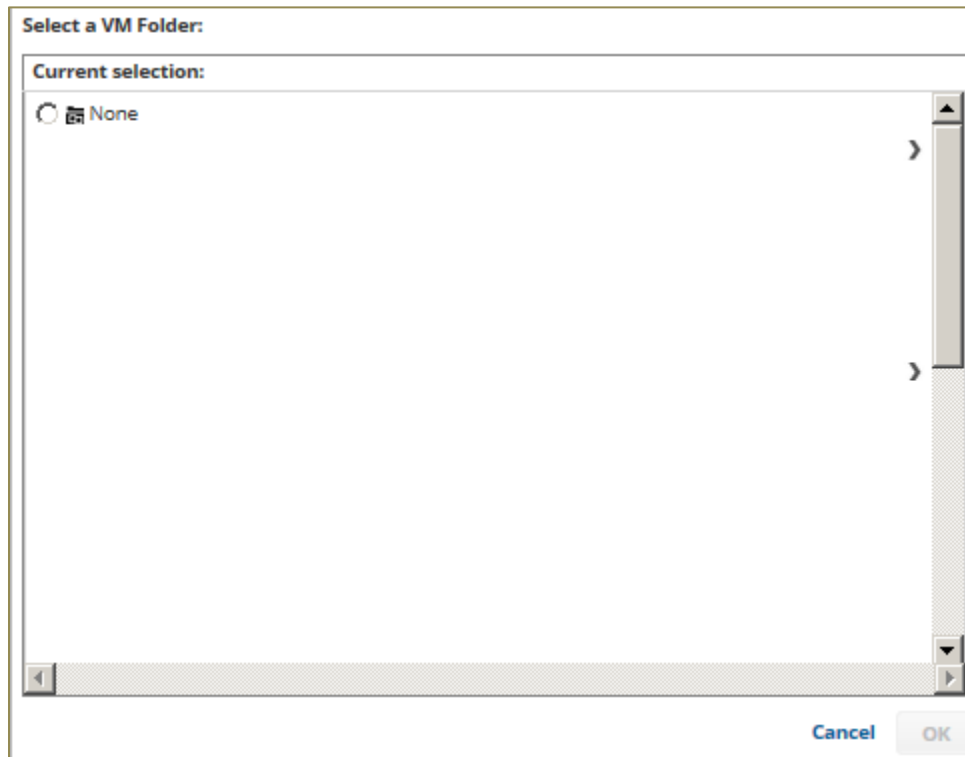
Cancel OK


15. Select the Resource Pool radio button or the **None** radio button, if you do not want a Resource Pool, and then click **OK**.

16. Select the ellipsis  in the VM Folder column.



The VM Folder pop up is displayed.



17. Select the VM Folder radio button or the **None** radio button, if you do not want a VM Folder, and then click **OK**.
18. Select the ellipsis  in the Datastore column.





The Datastore pop up is displayed.

Select a Datastore:

Current selection:

☒ New Primary (13.67 TB Total, 2.85 TB Free)

☐ New Secondary (8.79 TB Total, 5.99 TB Free)

Cancel OK

19. Select a Datastore radio button, and then click **OK**.

**Recommendation:** As a best practice, do not choose the same Datastore as the source VM.

After making your selections, the completed configuration is denoted with a green check mark ✓ as shown below.

Where Would You Like to Direct Your Recovery VM Destination?							
Select Destination Host, Resource Pool, VM Folder & Datastore of each VM below. Completed configurations are denoted with a ✓ after them.							
Virtual Machine/VM(s)	Source Host IP	Destination Host	Resource Pool	VM Folder	Datastore		
☞ Steve - Win XP Thin	.192.168.1.1:443	.192.168.1.1:443	...	None	...	None	...
						New Primary	...



**TIP:** If you want to accept the default settings for the Schedule, Retention, and Advanced pages, you can back up now by clicking the **Create Backup Set** button.

To change the default settings, continue with the following steps.

20. Click **Next**.

The Schedule page is displayed.

21. Accept or edit the default schedule. See *Backup Schedules* for more information.

**Notes:**

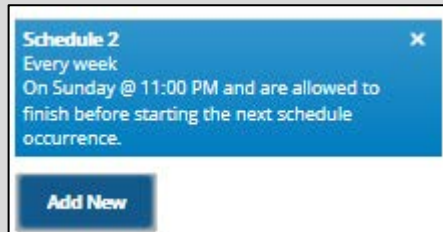
- An hourly backup is the default schedule for the backup set.
- Multiple weekly schedules are permitted (as long as they do not overlap).
- Minutely, hourly or daily recurrences cannot be mixed with weekly recurrences.
- Only one minutely, hourly or daily schedule can be configured.
- The **Allow to Finish** check box is selected and grayed-out.

**Adding a New Daily or Weekly Schedule**



a. To add additional daily or weekly schedules, click the **Add New** button.

The new Schedule is displayed and the **Add New** button is highlighted, as shown below.



b. Make your selections.

The new schedule details are displayed.

### Editing Existing Daily or Weekly Schedules

a. To edit existing schedules, in the Schedule column, click the schedule details.

The Schedule is highlighted.

b. Select your new daily or weekly times.

Your schedule is displayed in the Schedule column. Click the remove  icon to delete schedule.

22. After setting your schedule, click **Next**.



The Retention page is displayed.

**Notes:**

- The backup default schedule is every 1 hour. Keeping 96 versions retains 4 days of recoverable versions at the destination.
- The backup set preserves the current state of the virtual machines only. User generated snapshots are not saved.

23. Optionally, select how many versions of each file you would like to keep, and then click **Next**.

**Note:** The number of revisions can be set to any number between 1 and 99.

The Advanced page is displayed.

**Requirement:** You must specify a temporary folder located on a disk with sufficient space.



24. At the Temporary Folder field, accept the default, type a new path, or click the **Browse** button to locate the temporary folder that is used in backing up.

## Browse option

- a. Click the **Browse** button.

The folder options are displayed.

Please select a folder below:

Current selection:

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:  +

Cancel OK

- b. Select the destination.

The OK button is activated.

- c. Click **OK**.

The address is displayed in the Path field.



Path:

d. To add a network location that is not listed, perform the step below.

**Adding a Network Location**

a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:

The add button is activated.

b. Click the add  button.

**Requirement:** You must specify a location for the local storage of the incremental backups.

**Note:** Refer to the Browse option steps above for the next step.

25. Type the path or browse to where the incremental versions of your recovery VMs are to be stored, and then click **Next**.

**Notes:** To restore a recovery VM successfully, you need both the recovery VM snapshot information (in vSphere) and the incremental version information stored in this location.

This data is used to recover previous versions of VMware QuickSpin recovery VMs.



The Summary page is displayed.

SelectRecovery VM DestinationScheduleRetentionAdvancedSummary

Select

The QuickSpin backup set contains **1 VM(s)**.  
You are backing up this VM(s) from the following **1 licensed host(s)**:

Licensed QuickSpin Source Host	VM
192.168.1.1:443	[Dan] XP Recovery_1 Recovery

Schedule

The QuickSpin backup set will run every **1 hour(s)**.

Retention

You will be able to recover up to **96 versions(s)** from the past **4 day(s)**.

Advanced

Temp Location: C:\Windows\TEMP\BackupAgent  
Incremental Version Storage Location: C:\\$Recycle.Bin

Notes

- If you have changed the locations of the destination hosts of the recovery VM(s), they will not be changed until the backup set is next scheduled to run.

< Previous

CancelCreate Backup Set

26. Verify your selections, and then click **Create Backup Set**.

**Licensing Note:** If you added an unlicensed host and added a VM to back up, the following message is displayed on the Summary page indicating a licensing fee charge. See *VMware QuickSpin Licensing* for more information.

The following VM(s) from the following **1 unlicensed host(s)** requires an additional monthly license fee in order to create this QuickSpin backup set:

Unlicensed QuickSpin Source Host	VM
192.168.1.1:443	Steve - Win XP Thin

Your scheduled backup is displayed on the Backup Selections page.






































































































## Editing VMware QuickSpin Backup Sets

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

1. Navigate to the Backup Selections page. See *Backing up VMware QuickSpin* for instructions.

The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+ Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
		Files and Folders 2		--	<input type="checkbox"/>		
		Files and Folders 3		--	<input type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ Hyper-V Standard		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ VMware Standard (1)		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ VMware QuickSpin (3)		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ SQL Server (2)		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ Exchange Mailbox Level		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		

2. Click the edit  icon to edit the backup set.





The Backup Set Summary page is displayed.

## Edit Backup

VMware QuickSpin 1

Select

Recovery VM Destination

Schedule

Retention

Advanced

Summary

Select

The QuickSpin backup set contains 1 VM(s).  
You are backing up this VM(s) from the following 1 licensed host(s):

Licensed QuickSpin Source Host	VM
192.168.1.1:443	[Dan] XP_Recovery_1_Recovery

Schedule

The QuickSpin backup set will run every 1 hour(s).

Retention

You will be able to recover up to 96 versions(s) from the past 4 day(s).

Advanced

Temp Location: C:\Windows\TEMP\BackupAgent  
Incremental Version Storage Location: C:\\$Recycle.Bin

Notes

- If you have changed the locations of the destination hosts of the recovery VM(s), they will not be changed until the backup set is next scheduled to run.

< Previous

Cancel

Update Backup Set

3. Select any of the tabs to display and edit your current settings. See *Backing up VMware QuickSpin* for details.

#### Notes:

- The backup set name may be edited. See *Changing Backup Set Names*.
  - Any changes to the locations of the destination hosts of the recovery VMs are not effective until the next backup runs.
4. After making all your edits, click the **Update Backup** button at the bottom of any page, as shown below.

Cancel

Update Backup Set

The Backup Selections page is displayed with the updated backup set.



## Changing a VMware QuickSpin Destination Host

To change a VMware QuickSpin Destination Host, perform the following steps.

1. Navigate to the VMware QuickSpin Recovery VM Destination page. See *Editing VMware QuickSpin Backup Sets* for instructions.

The Recovery VM Destination page is displayed.

**Edit Backup**

VMware QuickSpin 1

Select Recovery VM Destination Schedule Retention Advanced Summary


**Where Would You Like to Direct Your Recovery VM Destination?**  
Select Destination Host, Resource Pool, VM Folder & Datastore of each VM below. Completed configurations are denoted with a ✓ after them.

Virtual Machine/VM(s)	Source Host IP	Destination Host	Resource Pool	VM Folder	Datastore	✓		
[Dan] XP_Recovery_...	192.168.1.1:443	192.168.1.1:443	...	None	...	New Primary	...	✓

Add New Server...

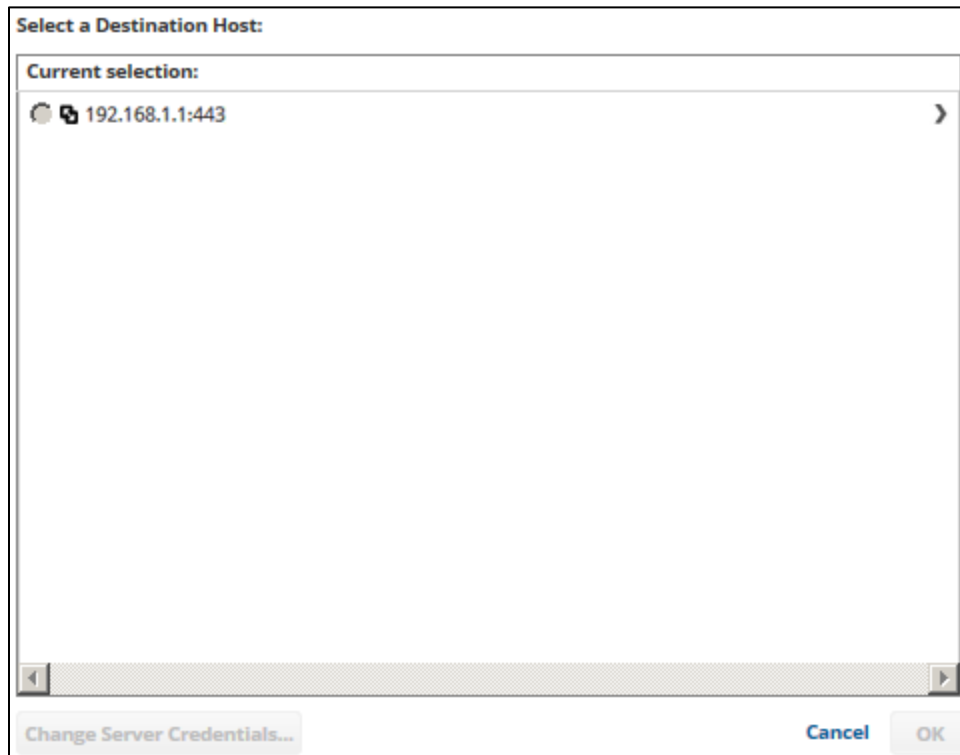
< Previous Next >

Cancel Update Backup Set

2. Select the ellipsis  icon in the column of the Destination Host.



The following pop up with your current selection is displayed.

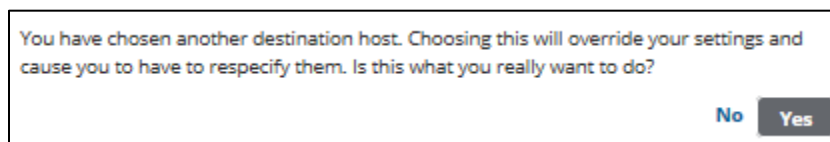


## CAUTIONS!

- As a best practice, select a host for your restore destination that does not already contain the protected VM. If the same host is selected and fails, both the protected VM and the recovery VM are lost.
- To increase the recoverability of the VM, protect it by using a VMware Standard backup set in addition to this VMware QuickSpin backup set. This action protects the VMs in case the host encounters a catastrophic failure.

3. Select the new Destination Host.

The following pop-up is displayed.



4. Click **Yes**.



The other destination options ellipses are displayed.

5. Select your other configuration options. See *Backing up VMware QuickSpin* for details.
6. When finished with your changes, click **Update Backup**.

The following pop-up is displayed.

The destination host(s) of one or more of the VMs in this backup set has changed. These VMs will now be backed up to the newly specified destination host. Additionally, existing VM backups in the previous host destination will either be deleted (if moved to another vCenter or unmanaged host) or moved (if moved within the same vCenter) the next time this backup set runs.

Is this what you really want to do?

☐ Yes, delete previous recovery VM(s) and create new VM(s) in the new destination or move the recovery VM(s)

No Yes

7. Click the **Yes** check box.

The **Yes** button is activated.

The destination host(s) of one or more of the VMs in this backup set has changed. These VMs will now be backed up to the newly specified destination host. Additionally, existing VM backups in the previous host destination will either be deleted (if moved to another vCenter or unmanaged host) or moved (if moved within the same vCenter) the next time this backup set runs.

Is this what you really want to do?

☒ Yes, delete previous recovery VM(s) and create new VM(s) in the new destination or move the recovery VM(s)

No Yes

8. Click the **Yes** button.

The Backup Selections page is displayed.

## Changing a VMware QuickSpin Incremental Version Storage Location

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

To change an Incremental Version Storage Location, perform the following steps.

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1. Navigate to the VMware QuickSpin Advanced page. See *Editing VMware QuickSpin Backup Sets* for details.

The Advanced page is displayed.

2. At the Incremental Version Storage Location Path field, type or browse to where the incremental versions of your recovery VMs are to be stored.

### Browse option

- a. Click the **Browse** button.

The folder options are displayed.



Please select a folder below:

**Current selection:**

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:

b. Select the destination.

The OK button is activated.

c. Click **OK**.

The address is displayed in the Path field.

Path:

d. To add a network location that is not listed, perform the step below.

## Adding a Network Location



- a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:  × +

The add button is activated.

- b. Click the add  button.

3. Click **Update Backup**.

The Backup Selections page is displayed.



## Removing VMware QuickSpin Backup Sets

To remove a VMware QuickSpin backup set, perform the following steps.

1. Navigate to the Backup Selections page. See *Backing up VMware QuickSpin* for instructions.

The Backup Selections page is displayed.

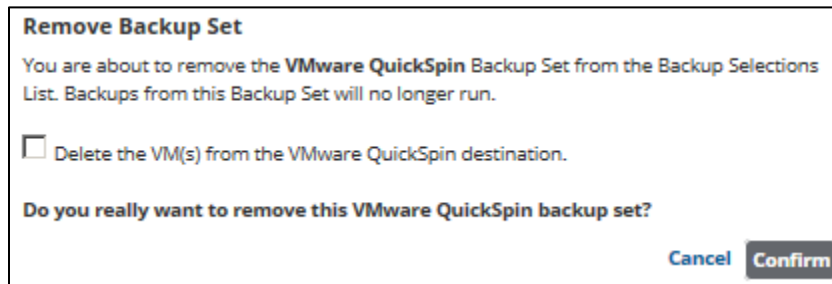
Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+ Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
		Files and Folders 2		--	<input type="checkbox"/>		
		Files and Folders 3		--	<input type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ Hyper-V Standard		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ VMware Standard (1)		Physical Imaging 1		--	<input type="checkbox"/>		
+ VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ Exchange Mailbox Level		VMware QuickSpin 1		--	<input type="checkbox"/>		
		VMware QuickSpin 2		--	<input type="checkbox"/>		
		VMware QuickSpin 3		--	<input type="checkbox"/>		
		SQL 1		--	<input type="checkbox"/>		
		SQL 2		--	<input type="checkbox"/>		

2. At the relevant backup set row, click the remove icon to remove the backup set.





The following pop-up is displayed.



3. Optionally, click the **Delete the VM(s) from the VMware QuickSpin destination** check box, and then click **Confirm**.

The recovery VM, any stored increments, and the backup set is deleted.



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## VMware QuickSpin Backup and Restore



## Chapter 2. VMware QuickSpin Restore

This chapter includes the following topics:

- Overview
- Restoring VMware QuickSpin Backups

### Overview

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

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

### VMware QuickSpin Restore Tabs

Figure 20 displays the restore tabs.

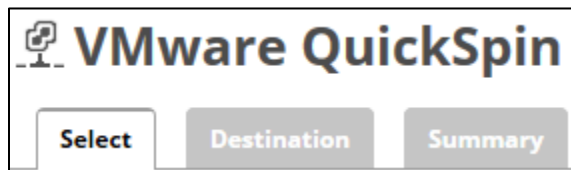


Figure 20. VMware QuickSpin Restore Tabs.

The following table provides a description of the page features.

Page	Description
Select	Select at least one available revision and/or VM to restore.
Recovery Type	Select how to verify and recover your data to the restore destination. <ul style="list-style-type: none"><li>• <i>Sandboxed Test Recovery</i> is a non-destructive means for you to verify the integrity of your backed-up VMs without affecting normal business operation. Your production VMs remain powered on and operational. The selected recovery VMs are powered on within an isolated VLAN.</li><li>• <i>Production Recovery</i> performs an instant recovery of your production VMs with selected recovery VMs. If the production VM is still running, it is shut down before powering up the recovery VMs.</li></ul>
Summary	A list of your selections is displayed.  If necessary, power off non-critical VMs on the destination to ensure sufficient resources are available to start the recovery VMs.  If the VMs you have chosen to restore are currently being backed up, the backup of the VMs are canceled to allow the restore to proceed.



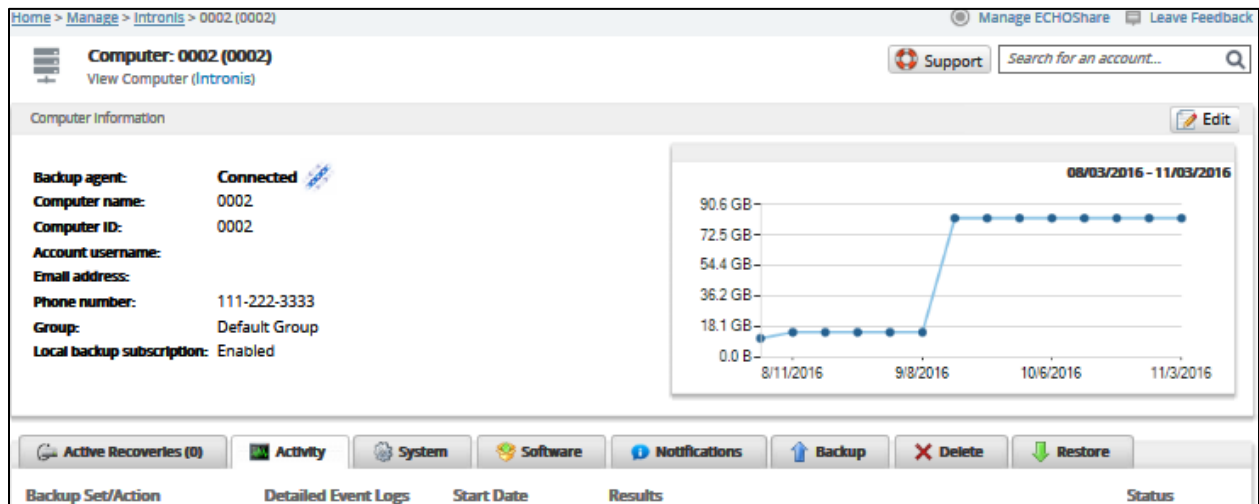
Page	Description
	<p>You need to add the VMs to an existing backup set or create a new one to ensure that the VM is protected.</p> <p>Ensure you remove the original VMs from the backup sets to avoid unnecessary errors.</p>

## Restoring VMware QuickSpin

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

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

The Computer page is displayed.




2. Click the **Restore** tab.

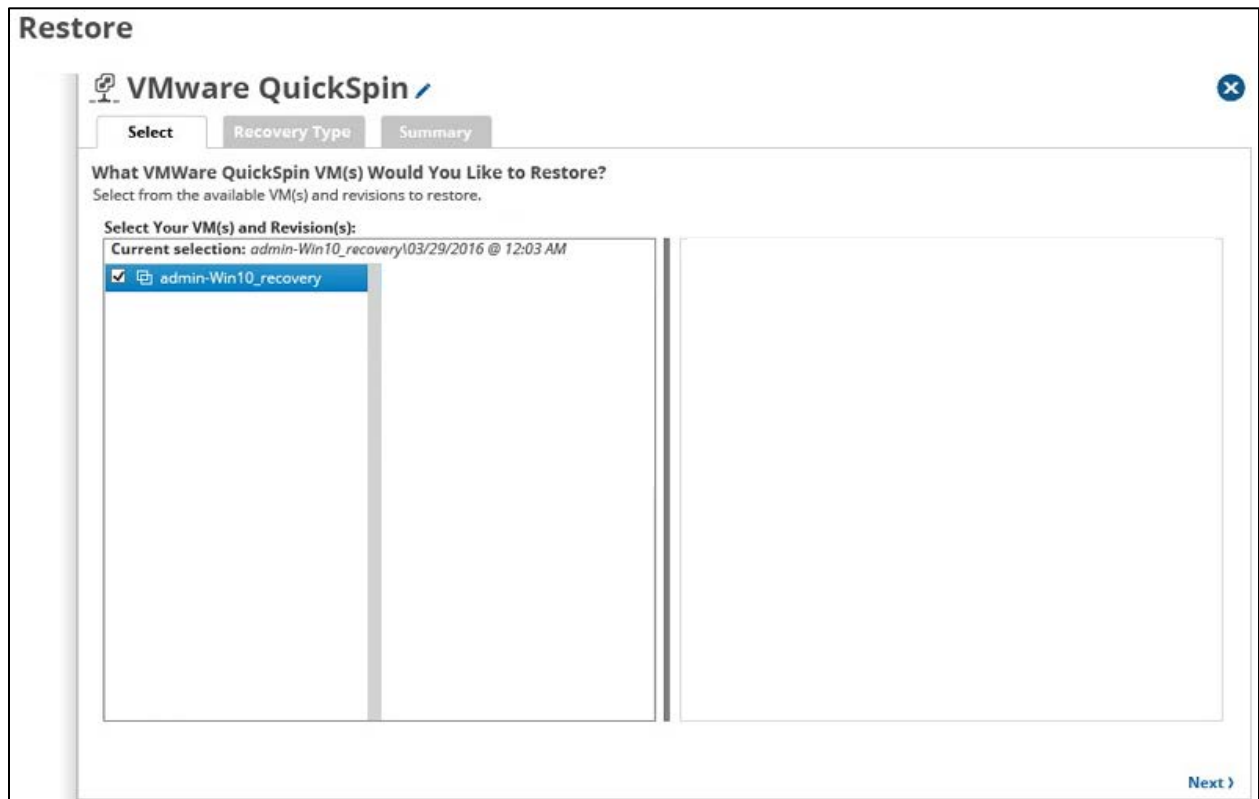
The Restore Selections page is displayed.

Restore Selections			
Viewing Original Catalog	Type	Status	Completed
Backed Up Data Type	Files and Folders	0 Item(s) Restored	01/04/2017 @ 12:43 PM
Files and Folders			
VMware Standard			
VMware QuickSpin			
Physical Imaging			




3. Click the restore  icon of the backup type you want to restore.


The Select page is displayed.





4. In the Current Selection pane, select the VMs and revisions to be restored.

Clicking the arrow  at the right of the VM displays more revisions of the VM.



Your selection is displayed in the right pane. Click the remove  icon to remove any selections, or clear the item check box.

## Restore

 VMware QuickSpin 

SelectRecovery TypeSummary

What VMWare QuickSpin VM(s) Would You Like to Restore?  
Select from the available VM(s) and revisions to restore.

Select Your VM(s) and Revision(s):

Current selection: admin-Win10\_recovery\03/29/2016 @ 12:03 AM

☒ admin-Win10\_recovery

☐ 03/29/2016 @ 12:03 AM

☐ 03/28/2016 @ 12:01 AM

☐ 03/27/2016 @ 12:06 AM


☐ 03/26/2016 @ 12:06 AM

☐ 03/25/2016 @ 12:02 AM

☐ 03/24/2016 @ 12:11 AM

☐ 03/23/2016 @ 12:03 AM

☐ 03/22/2016 @ 12:00 AM

admin-Win10\_recovery (03/29/2016 @ 12:03 AM (Lastest Revision)) 

[Next >](#)

5. Click **Next**.



The Recovery Type page is displayed.

**Notes:**

- Use **Sandboxed test recovery** as a non-destructive means for you to verify the integrity of your backed-up VMs without affecting normal business operation. Your production VMs remain powered on and operational. The selected recovery VMs are powered on within an isolated VLAN.

Use **Production recovery** to perform an instant recovery of your production VMs with selected recovery VMs. If still running, the production VM is shut down before powering up the recovery VMs.

6. 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 the production network. They assume the role of the original production VMs.
- Backups to the recovery VMs do not continue as long as the recovery VMs are powered on.



7. Click **Next**.

The Summary page is displayed.

**Note:** For this example, the Production Recovery option is displayed.

**Select**   **Destination**   **Summary**

**Select**   Recovering **1 VM(s)**  
The following VM(s) are being recovered:  
[Dan] XP\_Recovery\_1\_Recovery\_Recovery\_2

**Destination**   Sandboxed Test Recovery

**Notes**

- If necessary, power off non-critical VM(s) on the destination to make sure that you have sufficient resources available to start the recovery VM(s).
- If the VM(s) you have chosen to restore is currently in the process of being backed up, the backup of the VM(s) will be cancelled in order to allow the restore to proceed.
- You need to add the VM(s) to an existing backup set or create a new one to ensure that the VM(s) is protected.
- Make sure that you remove the original VM(s) from the backup set(s) so that you don't receive unnecessary errors.

[< Previous](#)

[Cancel](#)   [Restore](#)

**Notes:**

- If necessary, power off non-critical VMs at the destination so sufficient resources are available to start the recovery VMs.
- If the VMs selected for restore are currently being backed up, the backup of the VMs are canceled to allow the restore to proceed.
- Add the VMs to an existing backup set or create a new one to ensure that the VMs are protected.
- Remove the original VMs from the backup sets to avoid unnecessary errors.

8. Verify your selections, and then click the **Restore** button.





If you selected Production Recovery at the Destination page, then the following confirmation pop-up is displayed.

**Do You Really Want to Restore the Recovery VM(s)?**

By checking the checkbox and selecting **Yes**, the currently running **Production VM(s)** will be shut down and replaced by the **VMware QuickSpin VM(s)** you have selected to restore.

☐ **Yes, restore the selected VM(s)**

No Yes

By checking the checkbox and selecting Yes, the currently running Production VM(s) are shut down and replaced by the VMware QuickSpin VMs you have selected to restore.

9. Click the **Yes, restore the selected VM(s)** check box, and then click **Yes**.

If you selected Sandboxed Test Recovery at the Destination page, then the following confirmation pop-up is displayed.

You are about to restore backed up data using the settings you just defined.

**Proceed with this restore?**

No Yes

10. Click **Yes**.

The Restore Selections page is displayed the latest restore.



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## VMware QuickSpin Backup and Restore



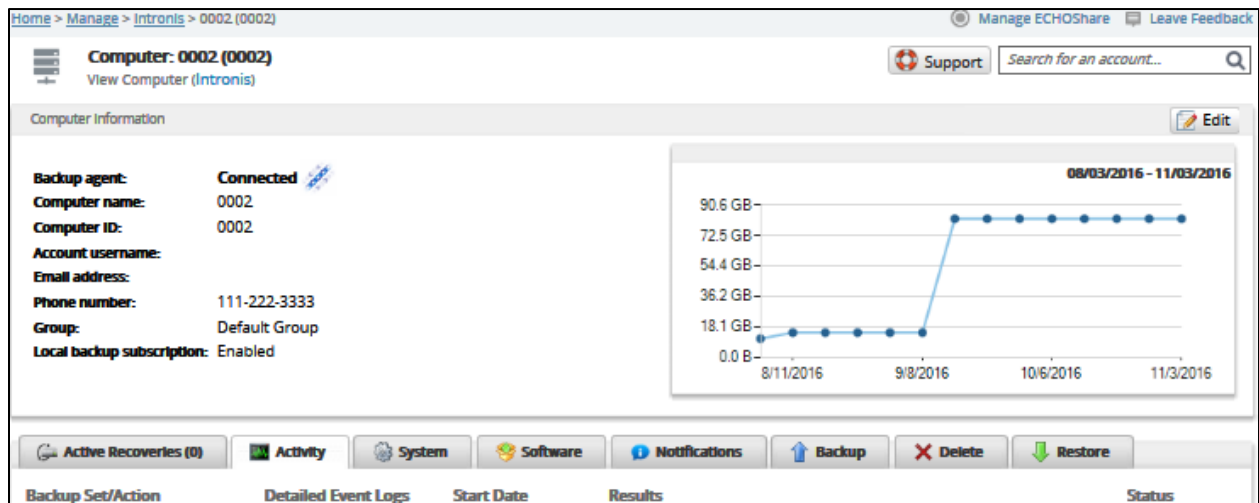
## Chapter 3. VMware QuickSpin Delete

**CAUTION!** The Delete function deletes the VMware QuickSpin backup data. Deleted data is completely purged and cannot be accessed or restored. The Delete function removes all historical revisions. You cannot delete specific revisions.

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

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


The Computer page is displayed.



2. Select the **Delete** tab.

The Delete Selections page is displayed.

Delete Selections			
Backed Up Data Type	Type	Status	Completed
Files and Folders	Files & Folders	4 Item(s) Deleted	11/04/2016 @ 10:33 AM
SQL Server			
VMware Standard			
VMware QuickSpin			
Physical Imaging			


3. Select the delete  icon beside the backup type you want to delete.



**Note:** This action deletes both the recovery VM and any increments that are stored.

The Delete page is displayed.

## Delete

 **VMware QuickSpin**

**What QuickSpin Recovery VM(s) Would You Like To Delete?**  
Select from the available QuickSpin Recovery VM(s) to delete.

**Select Your QuickSpin VM(s) and Revisions:**

**Current selection:**

☐ [Dan] XP\_Recovery\_1\_Recovery\_Recovery\_2


Select the items on the left you want to delete.

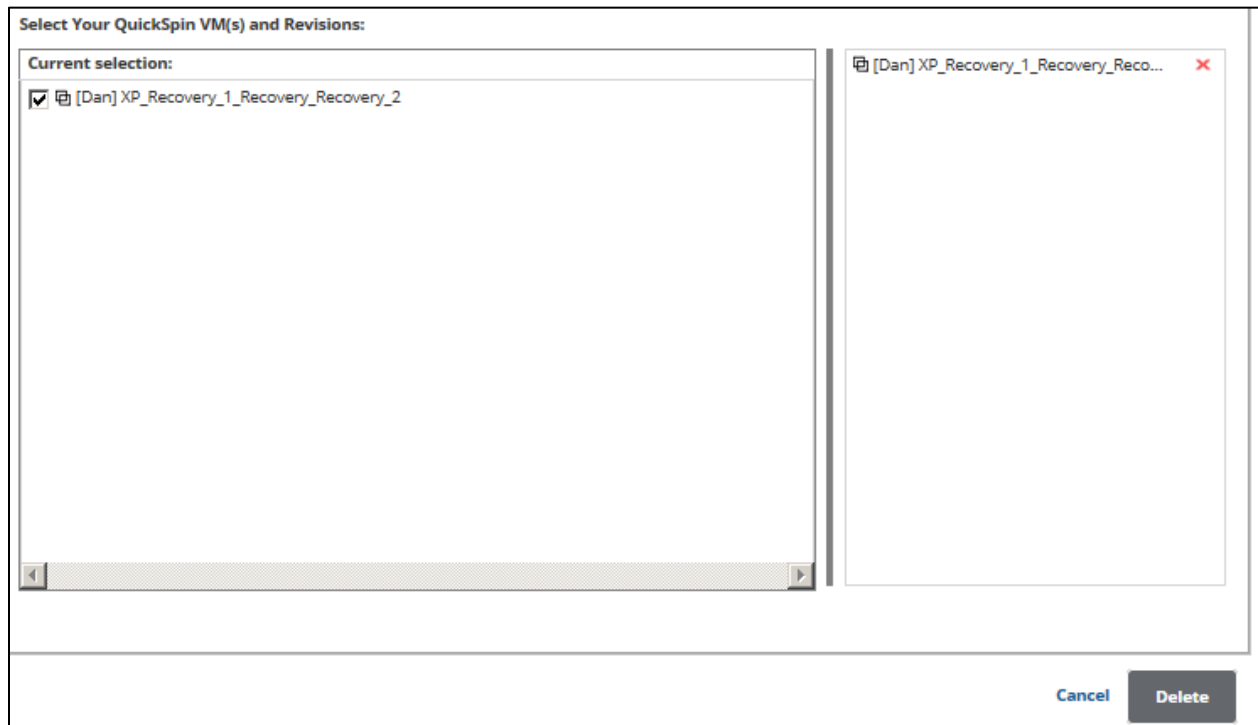
Cancel

Delete

4. Select the check box of the VM you want to delete.

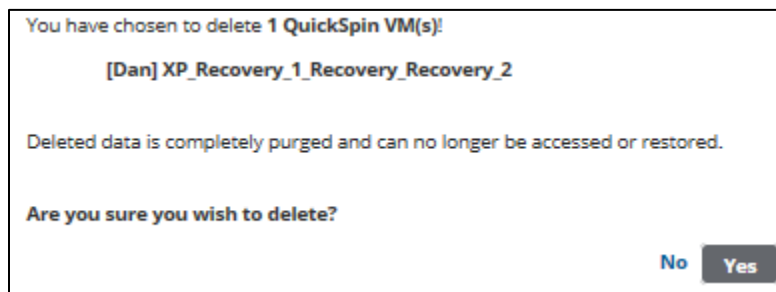


Your selections for deletion are displayed in the right panel. Click the remove  icon to remove any selections for deletion, or clear the VM check box.



5. When satisfied with your selection, click the **Delete** button.

The Delete Confirmation pop-up is displayed.



6. Click the **Yes** button.

When the delete is complete, the Deletes Selections page is displayed with the latest deletion.



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## VMware QuickSpin Backup and Restore



## PART VII. SQL SERVER BACKUP AND RESTORE

This chapter includes the following topics:

- SQL Server Backup
- SQL Server Restore
- SQL Server Delete

See *Backup Agent Software Requirements* for more information.

### Chapter 1. SQL Server Backup

This chapter includes the following topics:

- SQL Server Backup Tabs
- Backing Up a SQL Server
- Editing SQL Server Backup Sets
- Removing SQL Server Backup Sets

#### SQL Server Backup Tabs

Figure 21 displays the backup tabs.

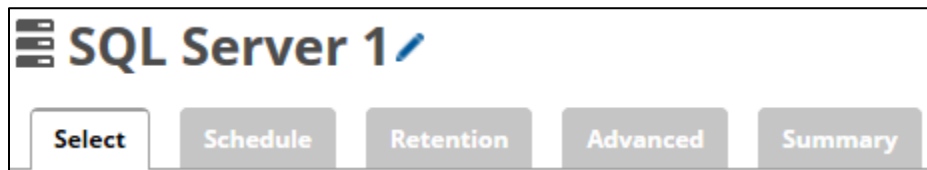


Figure 21. SQL Server Backup Tabs.

The following table provides a description of the page features.

Page	Description
Select	You are required to select at least one SQL Server.
Schedule	<ul style="list-style-type: none"><li>• Optionally select the schedule. The default is nightly with once a week being a full.</li><li>• Select a full or differential backup for each scheduled action. For example, if the backup runs nightly, for each night you would select a full or a differential.</li></ul>
Retention	Determine how many versions of each file you would like to retain and for how long.  The default is 4 recoverable versions of backups at the destination



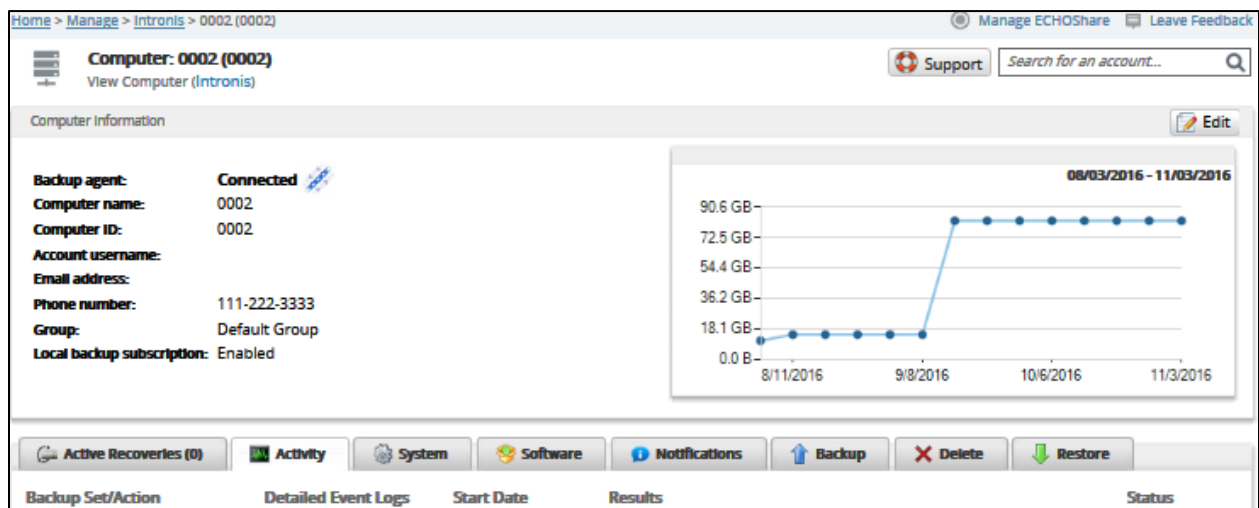
Page	Description
	retained for no fewer than 4 weeks.
Advanced	<ul style="list-style-type: none"><li>Temporary Folder lets you specify where the temporary folder used in backing up SQL Servers resides.</li><li>Take copy-only backups of the selected servers. These backups require a full backup each time but do not truncate the transaction logs or affect the server.</li></ul>
Summary	A list of your selections is displayed.

## Backing up a SQL Server

To back up a SQL Server, perform the following steps.

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

The Computer page is displayed.







2. Click the **Backup** tab.

The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+  Files and Folders (4)	Files and Folders 1	Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
+  Physical Imaging (2)	Files and Folders 2	Files and Folders 2		--	<input type="checkbox"/>		
+  Hyper-V Standard	Files and Folders 3	Files and Folders 3		--	<input type="checkbox"/>		
+  Hyper-V Rapid Recovery	Files and Folders 4	Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+  VMware Standard (1)	Physical Imaging 1	Physical Imaging 1		--	<input type="checkbox"/>		
+  VMware QuickSpin (3)	Physical Imaging 2	Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+  SQL Server (2)	VMware Standard 1	VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+  Exchange Mailbox Level	VMWare QuickSpin 1	VMWare QuickSpin 1		--	<input type="checkbox"/>		
	VMWare QuickSpin 2	VMWare QuickSpin 2		--	<input type="checkbox"/>		
	VMWare QuickSpin 3	VMWare QuickSpin 3		--	<input type="checkbox"/>		
	SQL 1	SQL 1		--	<input type="checkbox"/>		
	SQL 2	SQL 2		--	<input type="checkbox"/>		
							1 - 12 of 12 items

3. In the Backup Type pane, click the select icon beside **SQL Server** to run the backup type.



The Select page is displayed.

**Create Backup**

**SQL Server 1**

Select Schedule Retention Advanced Summary

**Select Storage Location**

☐ Local Only  
Local Vault must be enabled and a local subscription is required.

☒ Online Only

☐ Online and Local  
Local Vault must be enabled.

**What SQL Databases Would You Like to Backup?**  
Select from the available SQL Databases below to Backup

**Select Your SQL Databases:**

**Discover SQL Servers**  
Click to find all available SQL instances on this network.  
If you do not see all of your SQL databases listed to the right, please ensure that the Backup Agent service is running as a user that has access permissions to them.

☐ Exclude databases subsequently added to the server after backup creation.

**Current selection:**

Enter a SQL Server instance on the network:  
Address:

Next >

Cancel Create Backup Set

- Click the Backup Name to provide a new name for your backup set, or accept the default.  
See *Changing Backup Set Names*.
- At the Select Storage Location section, click one the following options.

**Note:** This procedure applies to all options. See *Backup Options* for more information.

- Local Only** (Local Vault must be enabled and a local subscription is required. Data is not backed up to the cloud.)

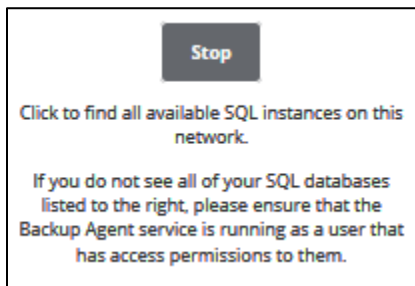


- **Online Only** (An enabled Local Vault disables this option.)
- **Online and Local** (Local Vault must be enabled.)

The selection is highlighted.

6. At the SQL Servers section, click the **Discover SQL Servers** button.

The following Stop button is displayed.



7. Optionally, click the **Exclude servers subsequently added to the server after backup creation** check box.



The SQL server instances are displayed in the Current Selection pane.

**What SQL Databases Would You Like to Backup?**  
Select from the available SQL Databases below to Backup

**Select Your SQL Databases:**

**Discover SQL Servers**

Click to find all available SQL instances on this network.

If you do not see all of your SQL databases listed to the right, please ensure that the Backup Agent service is running as a user that has access permissions to them.

☐ Exclude databases subsequently added to the server after backup creation.

**Current selection:**

- ☐ QA-2012-HYPERV1\ADK
- ☐ QA-2012-HYPERV1\VEEAMSQL2012
- ☐ QAVCENTER41\SQLEXP\_VIM
- ☐ QAVCENTER41\VIM\_SQLEXP
- ☐ TRAINING\local
- ☐ WINDOWS2016\local
- ☐ WIN-J0UCVTQNN1H\local

Enter a SQL Server instance on the network:

Address:

[Next >](#)

8. To add a SQL Server instance on the network, perform the following steps.

**Add a New SQL Server Instance**

To add a new server instance, at the Address field, type the IP address of the server you want to add, and then click the add  button.

Enter a SQL Server instance on the network:

Address:

The new server address is displayed in the Current Selection pane.

9. Click the arrow  icon to display the SQL server folders available for backup.



The authentication pop-up is displayed.

Enter your username and password to authenticate.

Username:

Password:

[Cancel](#) [OK](#)

10. Provide your credentials, and then click **OK**.

The SQL Instances and Servers available for backup are displayed.

**What SQL Databases Would You Like to Backup?**  
Select from the available SQL Databases below to Backup

[Discover SQL Servers](#)

Click to find all available SQL instances on this network.

If you do not see all of your SQL databases listed to the right, please ensure that the Backup Agent service is running as a user that has access permissions to them.

☐ Exclude databases subsequently added to the server after backup creation.

**Select Your SQL Databases:**

Current selection: *TRAINING\local*

SQL Instance	Database
<input type="radio"/> QA-2012-HYPERV1\ADK	<input checked="" type="checkbox"/> master
<input type="radio"/> QA-2012-HYPERV1\VEEAMSQL2012	<input checked="" type="checkbox"/> model
<input type="radio"/> QAVCENTER41\SQLEXP_VIM	<input checked="" type="checkbox"/> msdb
<input type="radio"/> QAVCENTER41\VIM_SQLEXP	<input checked="" type="checkbox"/> ReportServer
<input checked="" type="radio"/> TRAINING\local	<input checked="" type="checkbox"/> ReportServerTempDB
<input type="radio"/> WINDOWS2016\local	<input checked="" type="checkbox"/> ReportServerTempDB diff 2
<input type="radio"/> WIN-J0UCVTQNN1H\local	<input checked="" type="checkbox"/> ReportServerTempDB restored erer
	<input checked="" type="checkbox"/> ReportServerTempDB test
	<input checked="" type="checkbox"/> test
	<input checked="" type="checkbox"/> testDB

Enter a SQL Server instance on the network:

Address:  [+](#)

[Next >](#)

**TIP:** If you want to accept the default settings for the Schedule, Retention, and Advanced pages, you can back up now by clicking the **Create Backup Set** button.



To change the default settings, continue with the following steps.

11. Click the radio button of the SQL Instances and/or Servers you would like to back up, and then click **Next**.

The Schedule page is displayed.

12. Accept or edit the default schedule. See *Backup Schedules* for more information.

**Note:** Multiple daily/weekly schedules are permitted (as long as they do not overlap).

### Adding a New Daily or Weekly Schedule

- a. To add additional daily or weekly schedules, click the **Add New** button.

The new Schedule is displayed and the **Add New** button is highlighted, as shown below.



b. Make your selections.

The new schedule details are displayed.

### **Editing Existing Daily or Weekly Schedules**

a. To edit existing schedules, in the Schedule column, click the schedule details.

The Schedule is highlighted.

b. Select your new daily or weekly times.

13. Select the method, **Differential** or **Full**, by which you would like to back up your server.

Your schedule is displayed in the Schedule column. Click the remove  icon to delete schedule.

14. After setting your schedule, click **Next**.



The Retention page is displayed.

15. Select the number of days and versions you wish to archive.
16. Optionally, select the **Enable Advanced Archiving** check box. For Advanced Archiving information, see *Archiving Rules*

The Advanced Archiving fields are displayed.

**Example:** The setting of a daily backup kept for 30 days and no fewer than 10 versions mean that 30 versions are kept. However, a setting of once a week means that after 10 weeks, 10 versions are kept.

17. Make your selections, click **Save Rule**, and then click **Next**.





The Advanced page is displayed.

**Select** **Schedule** **Retention** **Advanced** **Summary**

**Temporary Folder**  
Define where the temporary folder that's used in backing up SQL databases resides. Manually type in a path or browse to the desired location.

Path:  **Browse...**

**Copy Mode**  
Take copy-only backups of the selected databases. These backups require a full backup each time but do not truncate the transaction logs or affect the database.

☐ Take copy-only backups

[< Previous](#) [Next >](#)

**Requirement:** You must specify a temporary folder located on a disk with sufficient space.

18. At the Temporary Folder field, accept the default, type a new path, or click the **Browse** button to locate the temporary folder that is used in backing up.

**Browse option**

- a. Click the **Browse** button.

The folder options are displayed.



Please select a folder below:

**Current selection:**

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:

b. Select the destination.

The OK button is activated.

c. Click **OK**.

The address is displayed in the Path field.

Path:

d. To add a network location that is not listed, perform the step below.

## Adding a Network Location



- a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:

The add button is activated.

- b. Click the add  button.

19. To run copy-only backups of the selected servers, select the **Take copy-only backups** check box.

**Note:** These backups require a full backup each time but do not truncate the transaction logs or affect the server.

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

The Summary page is displayed.

The Summary page displays the following configuration:

Section	Details
<b>Select</b>	Contains: <b>10 Database(s)</b> selected, size: <b>2.46 GB</b>
	Destination: <b>Online</b>
<b>Schedule</b>	<b>Schedule 1</b> : Every week On Saturday @ 11:00 PM and are backed up in full.
	<b>Schedule 2</b> : Every week On Sunday, Monday, Tuesday, Wednesday, Thursday, Friday @ 11:00 PM and are backed up differentially.
<b>Retention</b>	Keep at least <b>4 Week(s)</b> and no fewer than <b>4 version(s)</b> .
<b>Advanced</b>	Temp Location: <b>C:\Windows\TEMP\BackupAgent</b>

< Previous

Cancel Create Backup Set

21. Review your selections, and then click the **Create Backup Set** button.

The backup is displayed on the Backup Selections page.

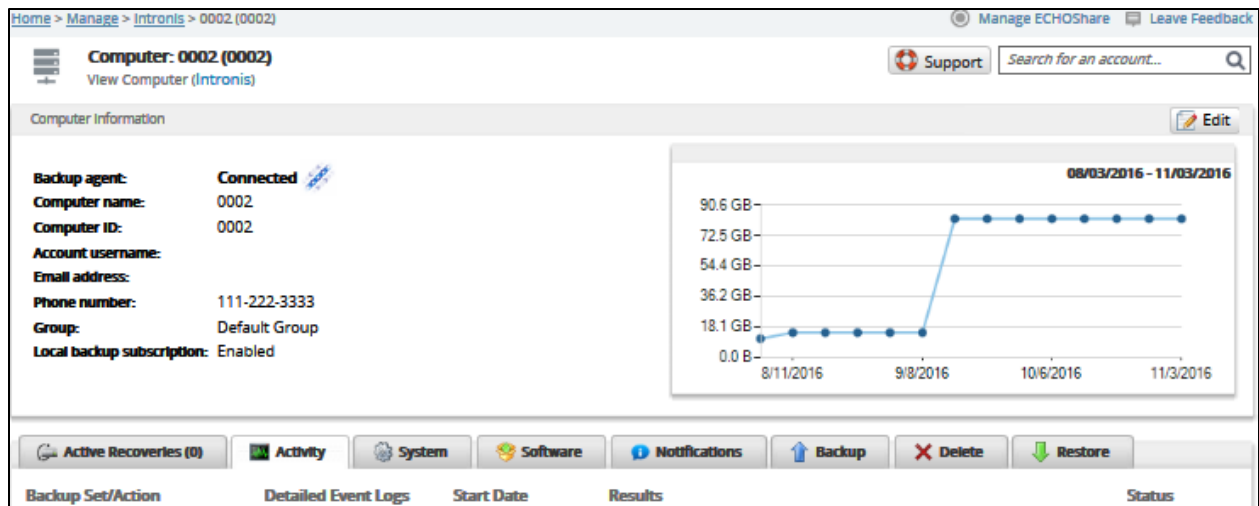


## Editing SQL Server Backup Sets

To edit a SQL Server backup, perform the following steps.

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

The Computer page is displayed.




2. Click the **Backup** tab.



The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
<div><div><div></div><div>Files and Folders (4)</div></div><div><div></div><div>Physical Imaging (2)</div></div><div><div></div><div>Hyper-V Standard</div></div><div><div></div><div>Hyper-V Rapid Recovery</div></div><div><div></div><div>VMware Standard (1)</div></div><div><div></div><div>VMware QuickSpin (3)</div></div><div><div></div><div>SQL Server (2)</div></div><div><div></div><div>Exchange Mailbox Level</div></div></div>		Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
		Files and Folders 2		--	<input type="checkbox"/>		
		Files and Folders 3		--	<input type="checkbox"/>		
		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		Physical Imaging 1		--	<input type="checkbox"/>		
		Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
		VMWare QuickSpin 1		--	<input type="checkbox"/>		
		VMWare QuickSpin 2		--	<input type="checkbox"/>		
		VMWare QuickSpin 3		--	<input type="checkbox"/>		
		SQL 1		--	<input type="checkbox"/>		
		SQL 2		--	<input type="checkbox"/>		
<div><div></div><div></div><div></div><div>1</div><div></div><div></div></div>							1 - 12 of 12 items

3. Click the edit  icon of the backup selection to edit.



The Backup Set Summary page is displayed.

**Edit Backup**

**SQL Server 1**

Select Schedule Retention Advanced **Summary**

**Select** Contains: **10 Database(s)** selected, size: **2.46 GB**

Destination **Online**

**Schedule**

**Schedule 1** Every week  
On Saturday @ 11:00 PM and are backed up in full.

**Schedule 2** Every week  
On Sunday, Monday, Tuesday, Wednesday, Thursday, Friday @ 11:00 PM and are backed up differentially.

**Retention** Keep at least **4 Week(s)** and no fewer than **4 version(s)**.

**Advanced** Temp Location: **C:\Windows\TEMP\BackupAgent**

< Previous

Cancel Update Backup Set

4. Select any of the tabs to display and edit your current settings. See *Backing Up a SQL Server* for details.

**Note:** The backup set name may be edited. See *Changing Backup Set Names*.

5. After making all your edits, click the **Update Backup Set** button at the bottom of any page, as shown below.

Cancel Update Backup Set

To remove a SQL Server backup set, perform the following steps.

- The Backup Selections page is displayed.

- At the relevant backup set row, click the remove  icon to remove the backup set.

Remove Backup Set

Removing a backup set does not automatically delete the associated data from the server or your Local Vault.

Are you sure that you would like to remove this backup set?

NoYes

- The backup set is removed.



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## SQL Server Backup and Restore





## Chapter 2. SQL Server Restore

This chapter includes the following topics:

- SQL Server Restore Tabs
- Restoring SQL Server Backups

### SQL Server Restore Tabs

Figure 22 displays the restore tabs.

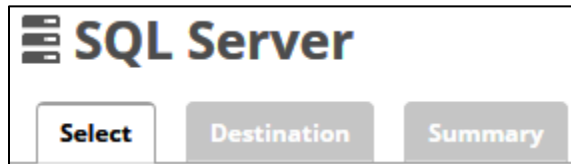


Figure 22. SQL Server Restore Tabs.

The following table provides a description of the page features.

Page	Description
Select	Select an SQL Server to restore.
Destination	Select the destination of your restored SQL server.
Summary	A list of your selections is displayed.

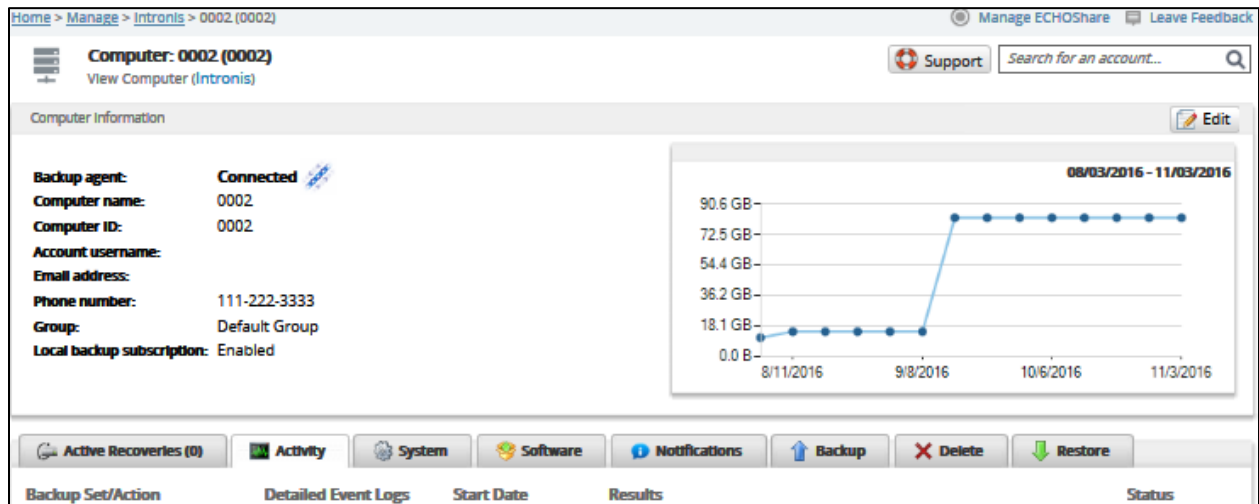


## Restoring a SQL Server Backup

To restore a SQL Server, perform the following steps.

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

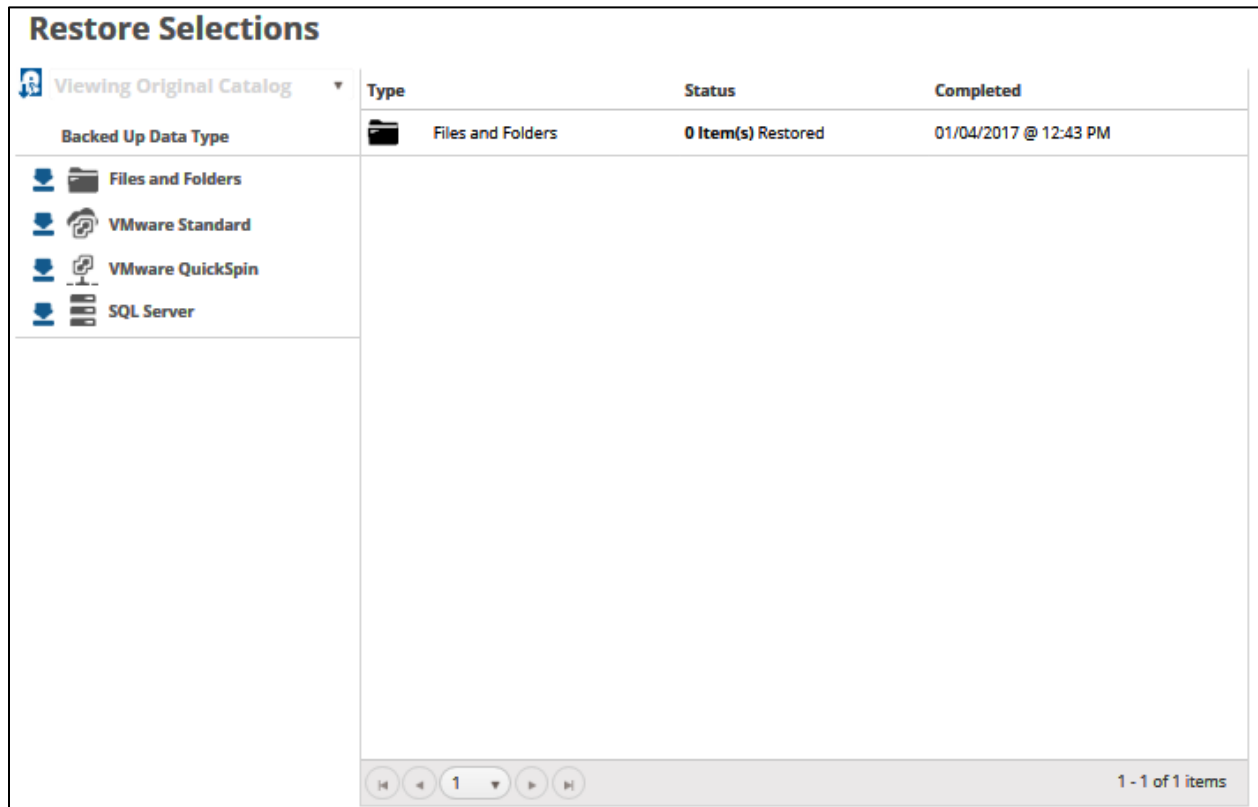
The Computer page is displayed.




2. Click the **Restore** tab.



The Restore Selections page is displayed.



3. Click the restore  icon of the backup type you want to restore.



The Select page is displayed.

**Restore**

**SQL Server**

Select Destination Summary

**What SQL Databases Would You Like to Restore?**  
Select from the available SQL databases below to restore

Select Your SQL Databases:

Current selection:

☒ TRAINING\local

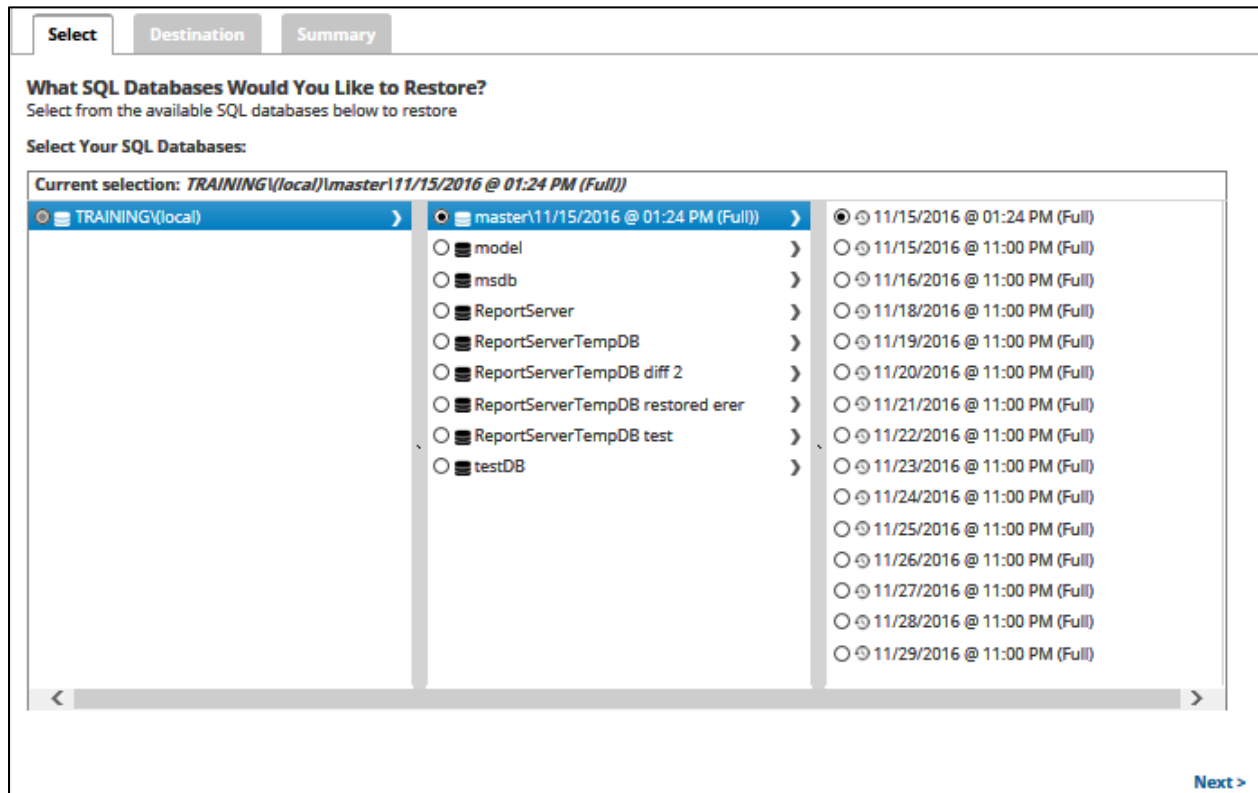
Next >


Cancel Restore

4. In the Current Selection pane, click the radio button of the backup set you would like to restore.



The selection is displayed in the right pane.



Clicking the arrow  at the right of the items displays more databases.

5. Click **Next**.



The Destination page is displayed.

Select Destination Summary

**Where Do You Want To Restore?**  
Select the destination of your restored SQL database.

**Destination**  
Choose where the data is restored

Path:  **Browse...**

**Restore DB Name**  
Give your restored database a name.

master ✓

< Previous Next >

6. At the Path field, type or browse to the destination of your restore.

#### Browse option

- a. Click the **Browse** button.

The folder options are displayed.



Please select a folder below:

**Current selection:**

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:

b. Select the destination.

The OK button is activated.

c. Click **OK**.

The address is displayed in the Path field.

Path:

d. To add a network location that is not listed, perform the step below.

## Adding a Network Location



- a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

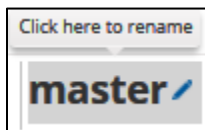
Type network location if it is not listed above (for example, \\server\share):

Path:  ✕ +

The add button is activated.

- b. Click the add + button.

7. To type a new name for the restored server, click the currently displayed name.



The name field is activated and the edit icons are displayed.

✓ ✕

8. Click the delete ✕ icon to erase the current name.

The name is erased.

9. Type the new name, and then click the confirm ✓ icon.

**Note:** To cancel the name change and restore the current name, click the escape ✕ icon.

The name is displayed.

10. Click **Next**.





The Summary screen is displayed.

The Summary screen is displayed with three tabs: **Select**, **Destination**, and **Summary**. The **Summary** tab is active. It shows the following information:

Section	Details
<b>Select</b>	1 Database(s) selected, size: 4.13 MB
<b>Destination</b>	Restored to: C:\Recovery Named master

At the bottom left, there is a link: [< Previous](#). At the bottom right, there are two buttons: **Cancel** and **Restore**.

11. Verify your selections, and then click the **Restore** button.

The confirmation pop-up is displayed.

You are about to restore backed up data using the settings you just defined.  
**Proceed with this restore?**

[No](#) [Yes](#)

12. Click **Yes**.

The Restores Selections page is displayed with the status.



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## SQL Server Backup and Restore



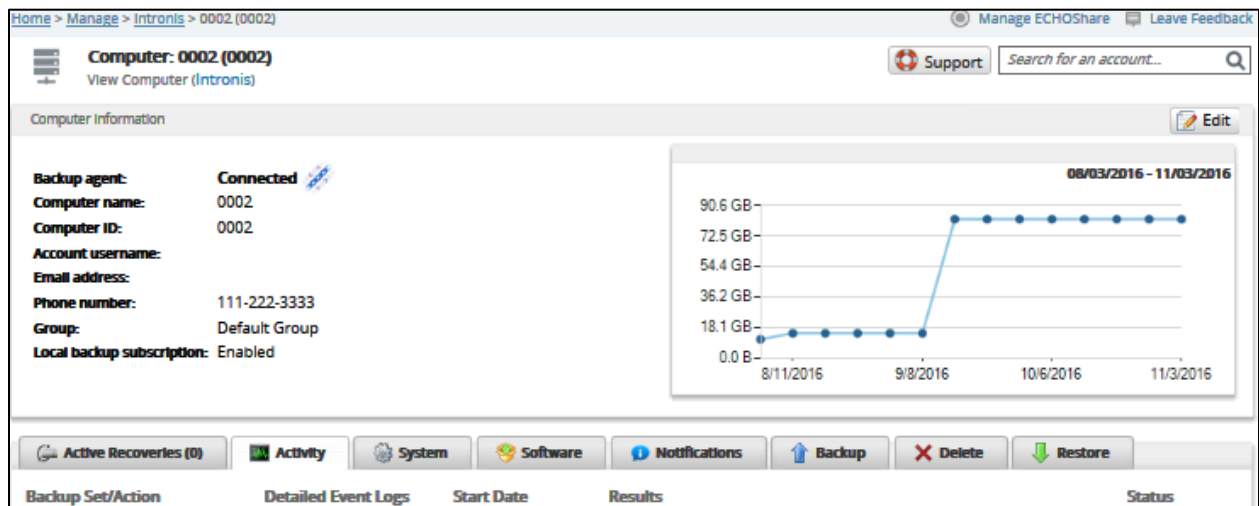
## Chapter 3. SQL Server Delete

**CAUTION!** Deleted data is completely purged and can no longer be accessed or restored.

To delete a SQL Server Backup, perform the following steps.

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


The Computer page is displayed.



2. Select the **Delete** tab.

The Delete Selections page is displayed.

Delete Selections			
Backed Up Data Type	Type	Status	Completed
Files and Folders	Files & Folders	4 Item(s) Deleted	11/04/2016 @ 10:33 AM
SQL Server			
VMware Standard			
VMware QuickSpin			
Physical Imaging			

3. Select the delete  icon beside the backup type you want to delete.



The Delete Backup page is displayed.

**Delete**

**SQL Server**

**What SQL Databases Would You Like to Delete?**  
Select from the backed up SQL databases and revisions to delete

**Select Your SQL Databases:**

**Current selection:**


- ☐ TRAINING\{local}

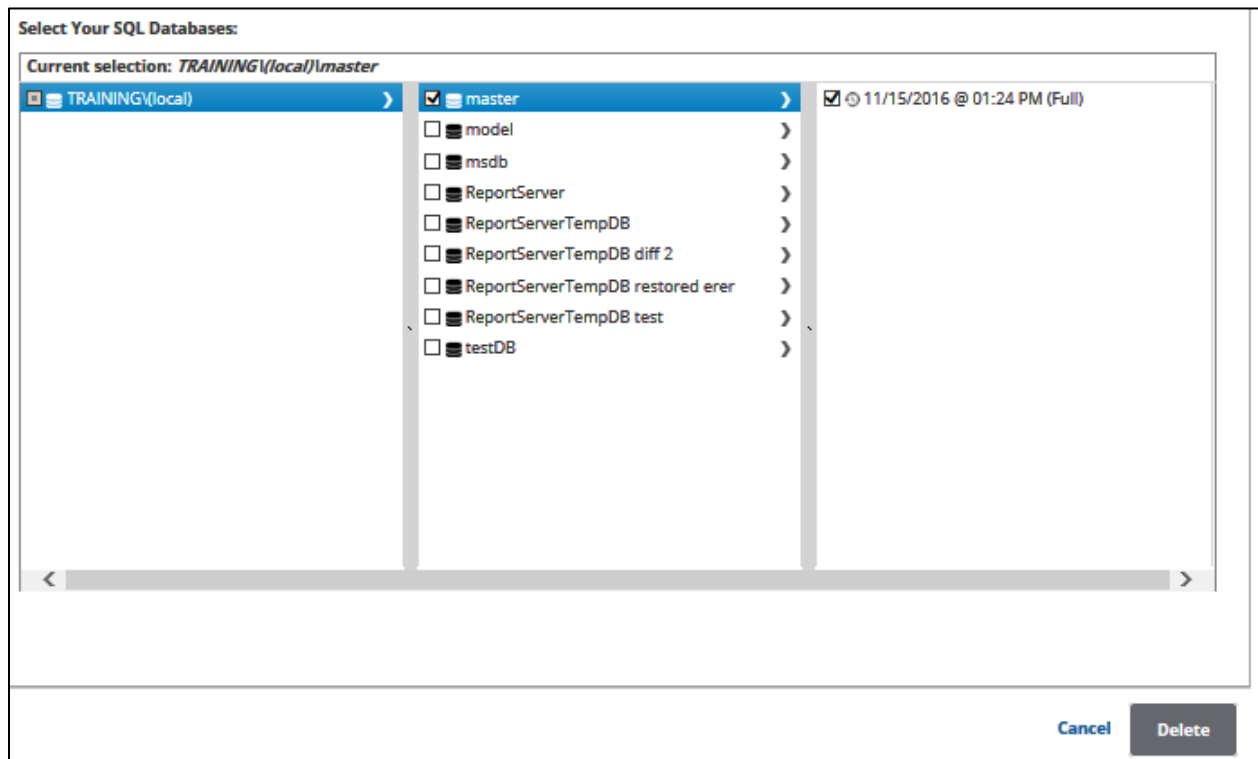
**Cancel** **Delete**

4. Select the row of the server you want to delete.

The backed up SQL servers and revisions are displayed in the Current Selection panel.



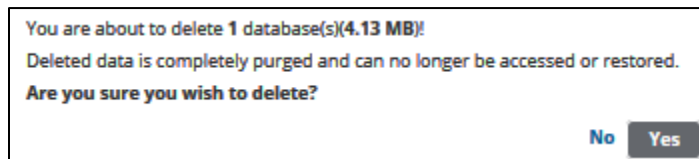
Clicking the arrow  at the right of the items displays more databases.



Your selections for deletion are displayed in the right panel.

5. Make your selection, and then click the **Delete** button.

If you click **OK**, then the final Delete Confirmation pop-up is displayed.



6. Click the **Yes** button.

The Delete Selections page is displayed with the latest status.



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## SQL Server Backup and Restore



## PART VIII. PHYSICAL IMAGING BACKUP AND RESTORE

This section includes the following chapters:

- Physical Imaging Backup
- Physical Imaging Restore
- Physical Imaging Delete

See *Backup Agent Software Requirements* for more information.

### Chapter 1. Physical Imaging Backup

This chapter includes the following topics:

- Physical Imaging Backup Overview
- Creating Physical Imaging Backups
- Editing Physical Imaging Backup Sets
- Removing Physical Imaging Backup Sets

#### Physical Imaging Backup Overview

To protect against user error, disk, or total system failure, you can back up and protect all local NTFS volumes, including system/boot, to a local storage destination. The Backup Agent lets you back up servers, desktops, or laptops as volume-level Physical Imaging locally.

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

Backups 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 *Backup Schedules* for more information.

**Requirement:** An agent must be installed on each physical machine that needs protection.

#### Volume capacity limits

When you perform a backup the Physical Imaging is stored locally, uncompressed, and unencrypted so you must ensure that enough disk space is available. You can also store revisions. See *Backup Agent Software Requirements*.

The agent cannot back up volumes over two TB on Windows 7, 2008, and 2011.

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

#### Volume Shadow Copy Service

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The Physical Imaging feature uses volume shadow copy service (VSS) to quiesce the system on backup. All VSS writers are involved in this process. Ensure the writers are in a correct state before running a backup.

## Physical Imaging Backup Tabs

Figure 23 displays the backup tabs.



Figure 23. Physical Imaging Backup Tabs.

The following table provides a description of the page features.

Page	Description
Select	You are required to select at least one Volume.
Schedule	Optionally select the schedule. The default is weekly.
Retention	Determine how many versions of each file you would like to retain. The default is 7 recoverable versions of backups at the destination.
Advanced	Specify where the temporary folder used in backing up volumes resides.
Summary	A list of your selections is displayed.

## Creating Physical Imaging Backups

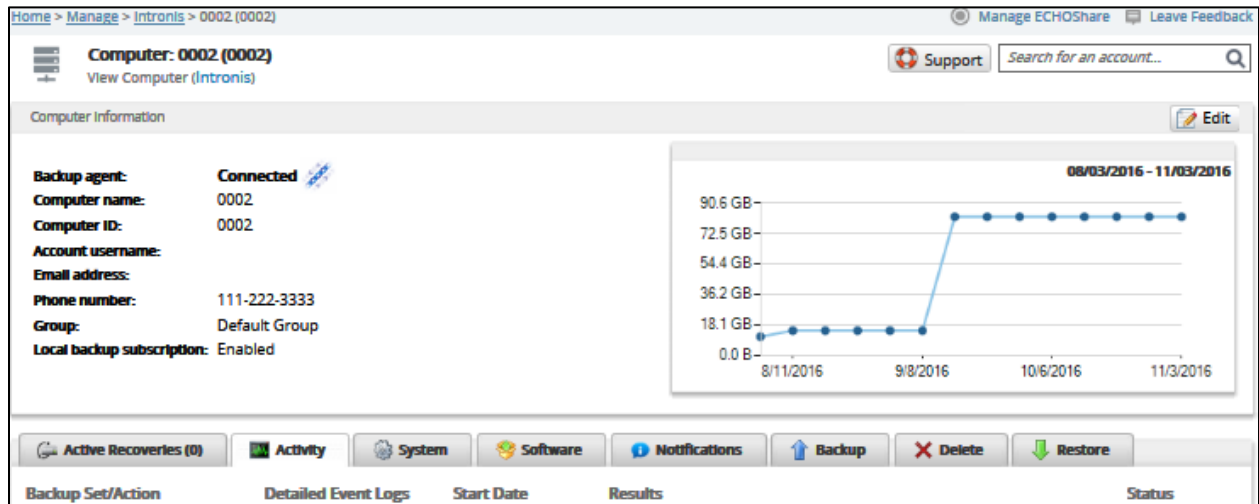
To create a Physical Imaging backup, perform the following steps.

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





The Computer page is displayed.



- Click the **Backup** tab.

The Backup Selections page is displayed.

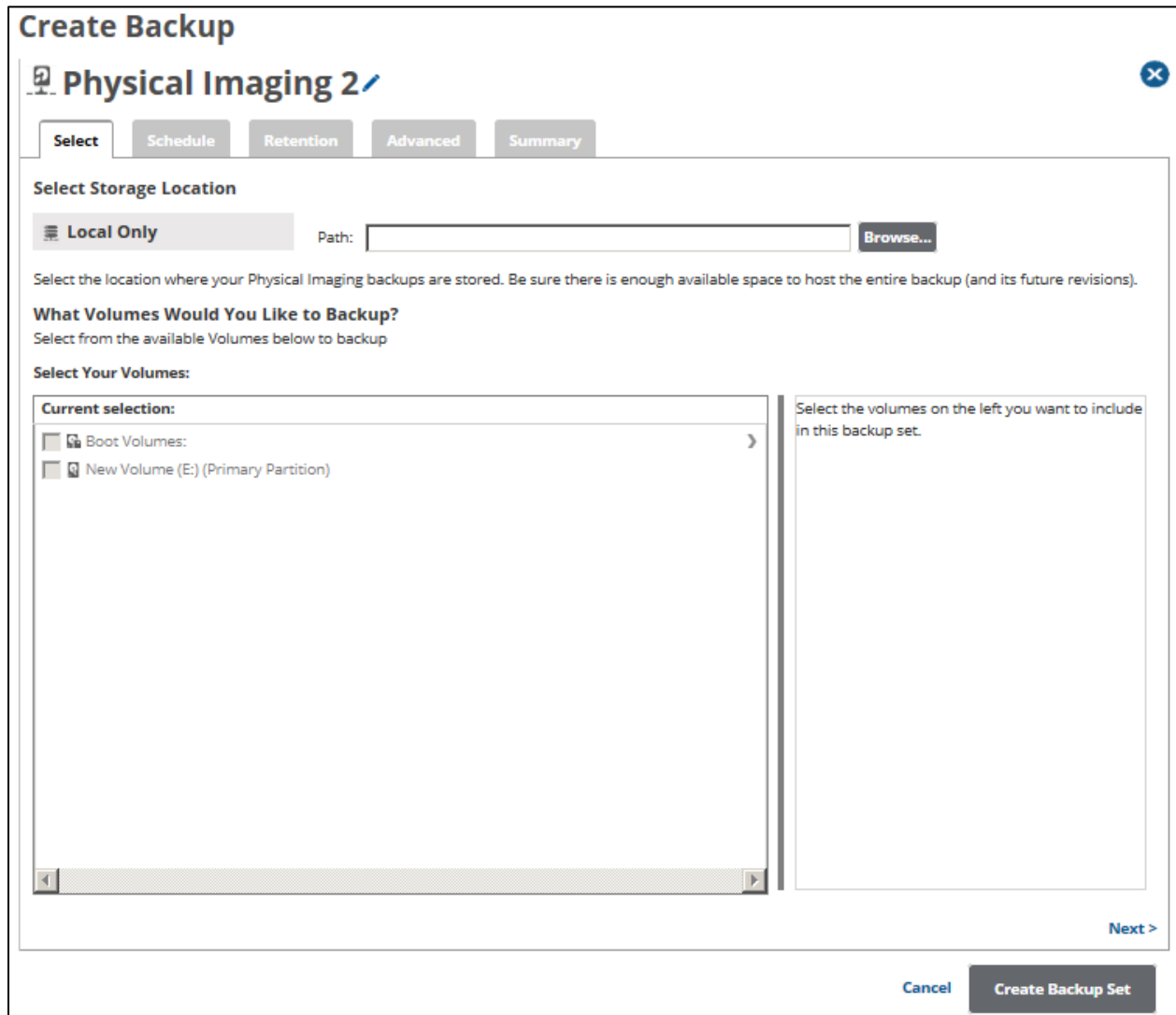
Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+ Files and Folders (4)	🔧 📁	Files and Folders 1	▶	11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>	✖	
+ Physical Imaging (2)	🔧 📁	Files and Folders 2	▶	--	<input type="checkbox"/>	✖	
+ Hyper-V Standard	🔧 📁	Files and Folders 3	▶	--	<input type="checkbox"/>	✖	
+ Hyper-V Rapid Recovery	🔧 📁	Files and Folders 4	▶	11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	✖	
+ VMware Standard (1)	🔧 📁	Physical Imaging 1	▶	--	<input type="checkbox"/>	✖	
+ VMware QuickSpin (3)	🔧 📁	Physical Imaging 2	▶	11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	✖	
+ SQL Server (2)	🔧 🗄	VMware Standard 1	▶	11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	✖	
+ Exchange Mailbox Level	🔧 📁	VMware QuickSpin 1	▶	--	<input type="checkbox"/>	✖	
	🔧 📁	VMware QuickSpin 2	▶	--	<input type="checkbox"/>	✖	
	🔧 📁	VMware QuickSpin 3	▶	--	<input type="checkbox"/>	✖	
	🔧 🗄	SQL 1	▶	--	<input type="checkbox"/>	✖	
	🔧 🗄	SQL 2	▶	--	<input type="checkbox"/>	✖	

1 - 12 of 12 items



3. In the Backup Type pane, click the select  icon beside **Physical Imaging** to run the backup type.

The Select page is displayed.



The screenshot shows the 'Create Backup' wizard for 'Physical Imaging 2'. The 'Select' tab is active, showing options for 'Local Only' storage. Below this, there's a 'Path' field and a 'Browse...' button. A message states: 'Select the location where your Physical Imaging backups are stored. Be sure there is enough available space to host the entire backup (and its future revisions).' The section 'What Volumes Would You Like to Backup?' asks to 'Select from the available Volumes below to backup'. Under 'Select Your Volumes:', there's a list of 'Current selection:' including 'Boot Volumes:' and 'New Volume (E:) (Primary Partition)'. To the right, a larger box says 'Select the volumes on the left you want to include in this backup set.' At the bottom right, there are 'Next >', 'Cancel', and 'Create Backup Set' buttons.

4. Click the Backup Name to provide a new name for your backup set, or accept the default.  
See *Changing Backup Set Names*.
5. At the Select Storage Location Path field, type or browse to the destination of your backup.

#### **Browse option**

- a. Click the **Browse** button.



The folder options are displayed.

Please select a folder below:

**Current selection:**

- Local Disk(C:\) >
- New Volume(E:\) >

Type network location if it is not listed above (for example, \\server\share):

Path:

b. Select the destination.

The OK button is activated.

c. Click **OK**.

The address is displayed in the Path field.

Path:



d. To add a network location that is not listed, perform the step below.

### **Adding a Network Location**



a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:   

The add button is activated.

b. Click the add  button.

### Requirements

Physical Imaging 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

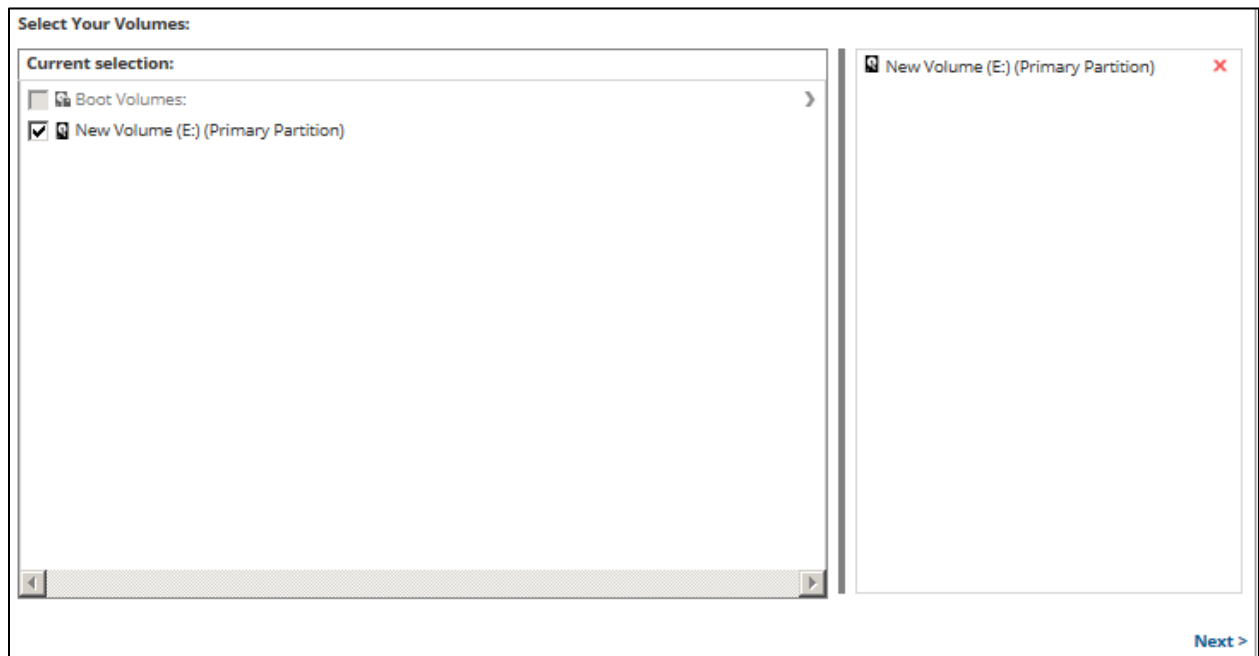
**Important:** Because you are backing up the full volume and creating a VHD, ensure that you have enough local storage space for a full backup of each selected volume (it should be roughly equal to the used size of the volume) and any incremental changes.

6. In the Current Selection pane, select the volumes you would like to back up.

Clicking the arrow  at the right of the items displays more volumes.



The selection is displayed in the far right pane. Click the remove  icon to remove any selections.



**Requirements:** The following volume sets cannot be selected for backup:

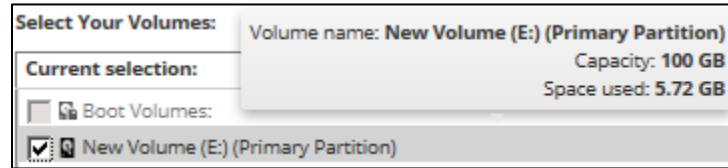
- Volumes with non-NTFS file systems
- Remote volumes / network shares
- Volumes that are already included in an Physical Imaging backup set (grayed-out)
- Volumes greater than or equal to 2 TB in size on the following operating systems: Windows7, 2008, and 2011
- Volumes that are encrypted

**Notes:**

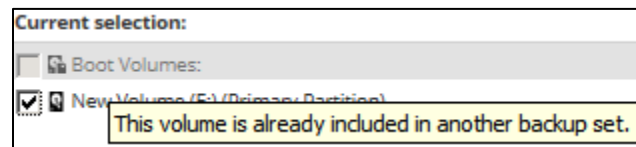
- The boot volumes group allows easy selection of any volume required to perform a restore of the physical system as a functional virtual machine.
- The boot volumes must be selected together. If you do not choose the boot volumes, then restoring to a VM is not possible, though you can restore a given volume or files from it.



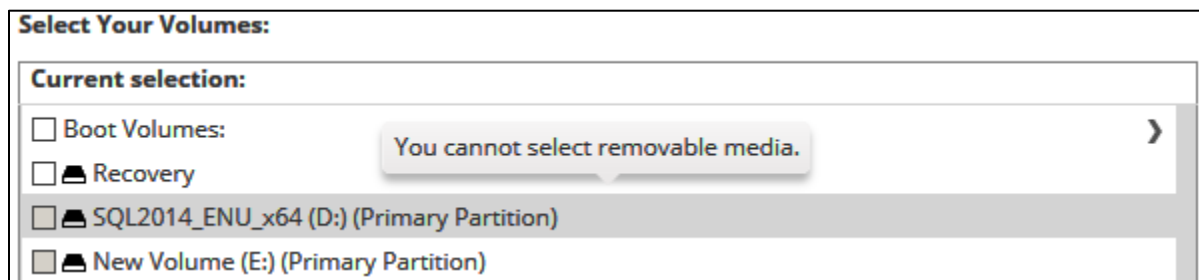
- Hovering over an available selection displays its capacity and spaced used, as shown below.



- Hovering over an unavailable volume, displays its status, as shown below.



- You cannot select removable media for backup. If attempted, the following error message is displayed.



**TIP:** If you want to accept the default settings for the Schedule, Retention, and Advanced pages, you can back up now by clicking the **Create Backup Set** button.

To change the default settings, continue with the following steps.

7. When done making your selections, click **Next**.



The Schedule page is displayed.

8. Accept or edit the default schedule. See *Backup Schedules* for more information.

#### Notes:

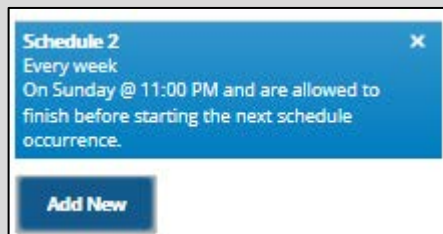
- A once daily backup is the default schedule for a Physical Imaging backup set.
- Multiple weekly schedules are permitted (as long as they do not overlap).
- Hourly and daily recurrences cannot be mixed with weekly recurrences
- Only one daily or hourly schedule can be configured.



#### **Adding a New Daily or Weekly Schedule**

- a. To add additional daily or weekly schedules, click the **Add New** button.

The new Schedule is displayed and the **Add New** button is highlighted, as shown below.



- b. Make your selections.

The new schedule details are displayed.

#### **Editing Existing Daily or Weekly Schedules**

- a. To edit existing schedules, in the Schedule column, click the schedule details.

The Schedule is highlighted.

- b. Select your new daily or weekly times.

Your schedule is displayed in the Schedule column. Click the remove  icon to delete schedule.

9. After setting your schedule, click **Next**.





The Retention page is displayed.

The screenshot shows the 'Retention' tab selected in a navigation bar with options: Select, Schedule, Retention, Advanced, and Summary. The main content area is titled 'Archiving Rules' and contains the text: 'Determine how many versions of each data you would like to retain.' To the right, there is a 'Keep' field with a value of '7' and a spinner control, followed by the text 'recoverable versions of backups at the destination.' Below this, it states 'The backup will run 7 day(s) a week, running a total of 7 time(s) per week.' At the bottom left is a '< Previous' link and at the bottom right is a 'Next >' link.

10. Select the number of versions you wish to archive, and then click **Next**.

**Note:** The default is the backup runs 7 days a week, running 7 times per week.

The Advanced page is displayed.

The screenshot shows the 'Advanced' tab selected in the navigation bar. The main content area is titled 'Temporary Folder' and contains the text: 'Define where the temporary folder that's used in backing up Physical Images resides. Manually type in a path or browse to the desired location.' To the right, there is a 'Path:' label followed by a text input field containing 'C:\Windows\TEMP\BackupAgent' and a 'Browse...' button. At the bottom left is a '< Previous' link and at the bottom right is a 'Next >' link.

**Requirement:** You must specify a temporary folder located on a disk with sufficient space.



11. At the Temporary Folder field, accept the default, type a new path, or click the **Browse** button to locate the temporary folder that is used in backing up.

## Browse option

- a. Click the **Browse** button.

The folder options are displayed.

Please select a folder below:

Current selection:

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:

- b. Select the destination.

The OK button is activated.

- c. Click **OK**.

The address is displayed in the Path field.



Path:  **Browse...**

d. To add a network location that is not listed, perform the step below.


**Adding a Network Location**

a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:  **x** **+**

The add button is activated.

b. Click the add  button.


12. After selecting the destination of your restore, click **Next**.

The Summary page is displayed.

Select Schedule Retention Advanced **Summary**

**Select** This backup set contains 1 volume(s), currently totaling 7.57 GB with a capacity of 100 GB

- New Volume (E:) (Primary Partition)

Destination  C:\\$Recycle.Bin

**Schedule** The backup will run 7 day(s) a week, running a total of 7 time(s) per week.

**Retention** You will be able to recover up to 7 versions(s) from the past 7 day(s).

**Advanced** C:\Windows\TEMP\BackupAgent

< Previous

Cancel **Create Backup Set**

13. After reviewing your selections, click the **Create Backup Set** button.

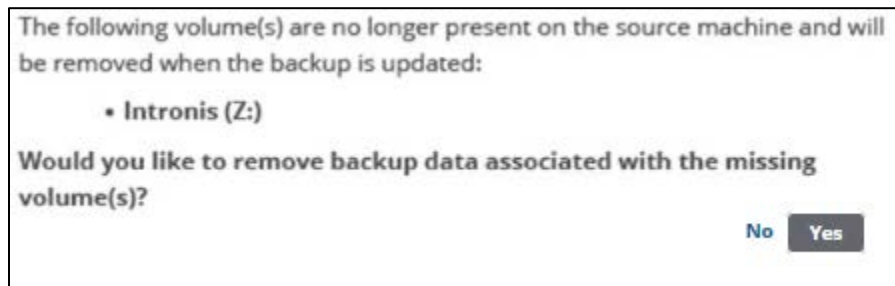
Your schedule backup is displayed on the Backup Selections page.



## About Editing Physical Imaging Backup Sets

### A Physical Imaging Source Volume Is No Longer Present

If a source volume is no longer present, the following prompt asks you whether you would like to keep it in the backup set.



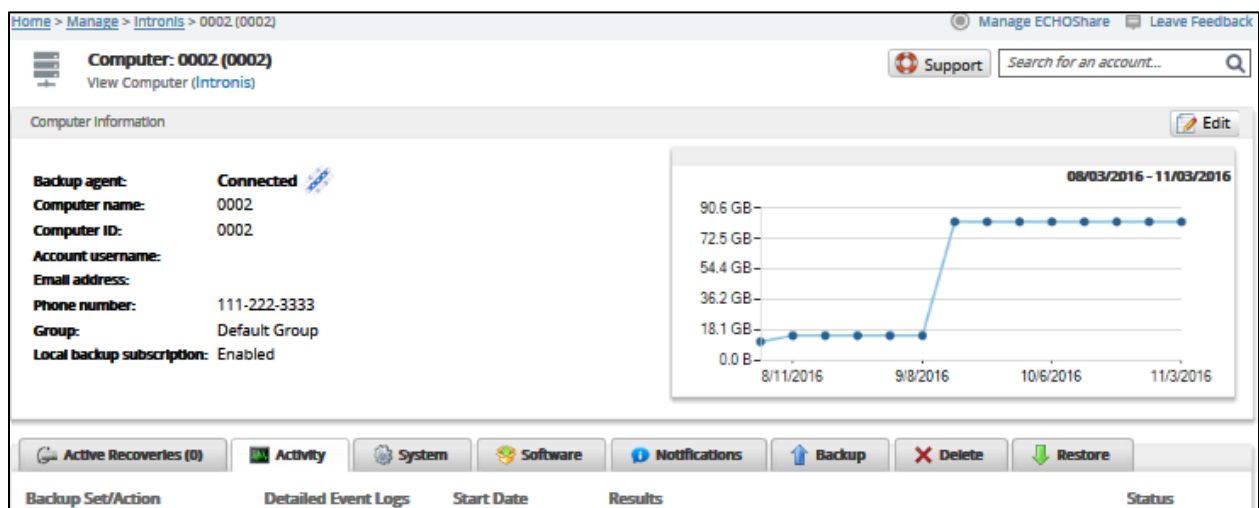
**CAUTION!** Only click **Yes** if you are certain you do not need to retain backups related to these volumes. You can always remove backup data from these volumes later using the delete function.

## Editing Physical Imaging Backup Sets

To edit a Physical Imaging backup, perform the following steps.

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

The Computer page is displayed.




2. Click the **Backup** tab.



The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+ Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
+ Physical Imaging (2)		Files and Folders 2		--	<input type="checkbox"/>		
+ Hyper-V Standard		Files and Folders 3		--	<input type="checkbox"/>		
+ Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ VMware Standard (1)		Physical Imaging 1		--	<input type="checkbox"/>		
+ VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ Exchange Mailbox Level		VMware QuickSpin 1		--	<input type="checkbox"/>		
		VMware QuickSpin 2		--	<input type="checkbox"/>		
		VMware QuickSpin 3		--	<input type="checkbox"/>		
		SQL 1		--	<input type="checkbox"/>		
		SQL 2		--	<input type="checkbox"/>		
							1 - 12 of 12 items

3. Click the edit  icon to edit the backup selection.



The Backup Set Summary page is displayed.

## Edit Backup

Physical Imaging 1

Select

Schedule

Retention

Advanced

Summary

**Select**

This backup set contains **1 volume(s)**, currently totaling **5.72 GB** with a capacity of **100 GB**

- New Volume (E:) (Primary Partition)

Destination C:\\$Recycle.Bin

**Schedule**

The backup will run **7 day(s)** a week, running a total of **7 time(s)** per week.

**Retention**

You will be able to recover up to **7 versions(s)** from the past **7 day(s)**.

**Advanced**

C:\Windows\TEMP\BackupAgent

[< Previous](#)

[Cancel](#) [Update Backup Set](#)

4. Select any of the tabs to display and edit your current settings. See *Creating Physical Imaging Backups* for details.



## Notes:

- The backup set name can be edited. See *Changing Backup Set Names*.
- The Storage Location Destination can be changed after creation. However, to restore files, the old destination must be moved to the new location. When the storage location is changed the following pop-up is displayed:

Changing the Local Storage path will make any data there unavailable for restore. New backups will continue to this location.

Historical backups will be invalidated at the time of the next backup if the backup destination is changed.

To continue incremental backups, copy the contents of your original **Local** storage location to the new location before resuming backups. Otherwise, a **full backup** will be taken in the new storage location.

It is recommended that you set your backup set to Manual ( ☐ ) so that the backup does not run during the copy. You can set the backup set back to Automatic ( ☒ ) once the copy is complete.

**Would you like to proceed?**

No

5. After making all your edits, click the **Update Backup Set** button at the bottom of any page, as shown below.

The Backup Selections page is displayed with your current backup status.



## Removing Physical Imaging Backup Sets

To remove a Physical Imaging backup set, perform the following steps.

1. Navigate to the Backup Selections page. See *Creating Physical Imaging Backups* for instructions.

The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+ Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM			
		Files and Folders 2		--			
		Files and Folders 3		--			
		Files and Folders 4		11/02/2016 @ 11:00 PM			
+ Hyper-V Standard		Files and Folders 4		11/02/2016 @ 11:00 PM			
+ Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM			
+ VMware Standard (1)		Physical Imaging 1		--			
+ VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM			
+ SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM			
+ Exchange Mailbox Level		VMware QuickSpin 1		--			
		VMware QuickSpin 2		--			
		VMware QuickSpin 3		--			
		SQL 1		--			
		SQL 2		--			
							1 - 12 of 12 items

2. At the relevant backup set row, click the remove icon to remove the backup set.





The confirmation pop-up is displayed.

**Remove Backup Set**

In addition to deleting the backup set, you can also delete the volume(s) from the backup destination by checking the checkbox below.

☐ Delete the volume(s) from the backup destination. If any VMs are in an active recovery, they will not be deleted.

Are you sure that you would like to remove this backup set?

No Yes

3. Optionally select the **Delete the volume(s) from the backup destination** check box, and then click **Yes**.

**Note:** VMs in active recovery are not deleted.  
The backup set is removed.



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## Physical Imaging Backup and Restore



## Chapter 2. Physical Imaging Restore

This chapter includes the following topics:

- Rapid Recovery
- VHD/VHDX File Restore
- Object-level Restore
- Bare Metal Recovery Restore

### Rapid Recovery

This section includes the following topics:

- Rapid Recovery Overview
- Managing Rapid Recoveries
- Physical Imaging Rapid Recovery Restore Tabs
- Rapid Recovery Restore

#### Rapid Recovery Overview

Rapid Recovery is a restore option that allows you to recover a failed system as a Hyper-V virtual machine in fifteen minutes or less from local storage.

Rapid Recovery is available at no additional cost to any partner who has run an image backup of the source machine's boot volume.

After you select Rapid Recovery, two recovery settings are displayed:

- Sandboxed test recovery
- Production recovery

#### *Sandboxed Test Recovery*

Sandboxed test recovery is useful during tests or demonstrations because a recovery VM that is disconnected from the production network is created. This option ensures the production system's network connectivity is not interrupted by the test restore.

#### *Production Recovery*

Production recovery is used to minimize downtime during a disaster. The recovered VM can be set to connect to a user-defined external virtual switch. This feature ensures that the recovered VM is connected to the appropriate network when powered on.

#### Managing Rapid Recoveries

After performing a Rapid Recovery, if the Manage Recovery action is not performed, you cannot run a backup/restore for the volumes that were restored using the Rapid Recovery type.



Active Recoveries can be viewed at the Computer's Active Recoveries page. See *Managing an Active Recovery for Production Recovery*.

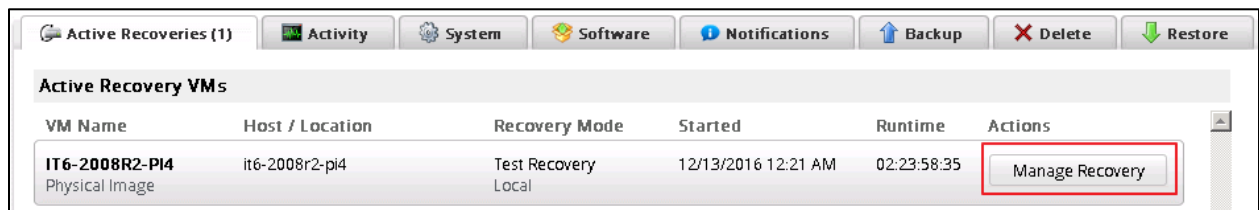
The following table displays the status you can view for each recovery VM.

Column	What is Displayed
VM Name	Recovery VM's name.
Host/Location	IP address of the host running the recovery VM.
Recovery Mode	Recovery mode (sandboxed test or production).
Start Time	Time the Rapid Recovery restore was initiated.
Runtime	Uptime of the recovery VM.
Actions	Manage Recovery button that allows you to finalize or cancel a recovery.

### *Managing an Active Recovery for Production Recovery*

To manage an active recovery, perform the following steps.

1. At the Computer page, click the **Active Recoveries** tab, and then click the **Manage Recovery** button, as shown in the example below.





The Manage Active Recovery page is displayed.

**Manage Active Recovery**

Manage the recovery of the VM DT-CHJBCZ1 :

☒ **Finalize Recovery**  
Completes the active recovery process and optimizes performance of the recovery VM.

File Destination:

Choose where to move the VM's restored virtual hard disk(s).

VM Name:

Choose a name for the VM that will be created.

☐ **Cancel Recovery**  
Any changes made to the VM while in recovery mode will be lost, and the VM, associated differencing disk and config files will be removed from the host.

You must check the box below to continue:

☐ Delete VM changes made during recovery mode and resume backup schedule.

2. To finalize recovery, click the **Finalize Recovery** radio button.

**Note:** The Finalize Recovery option completes the active recovery process and optimizes the performance of the recovery VM.

3. Optionally, click the **Browse** button, and then select the file destination for the VM's restored virtual hard disk.
4. Optionally, type a name for the VM in the **VM Name** field.
5. To cancel recovery, click the **Cancel Recovery** radio button.

**Note:** If the VM was created as a sandboxed test or production recovery, you can cancel the recovery. This action powers off and deletes the recovery VM. Any files created as a part of the test restore are removed from the user-defined location and the recovery VM is deleted from the selected host's inventory.

6. Ensure the differencing disks are not mounted or in use by any powered-on VM, or the delete operation fails.



7. Select the **Delete VM changes made during recovery mode and resume backup schedule** check box.

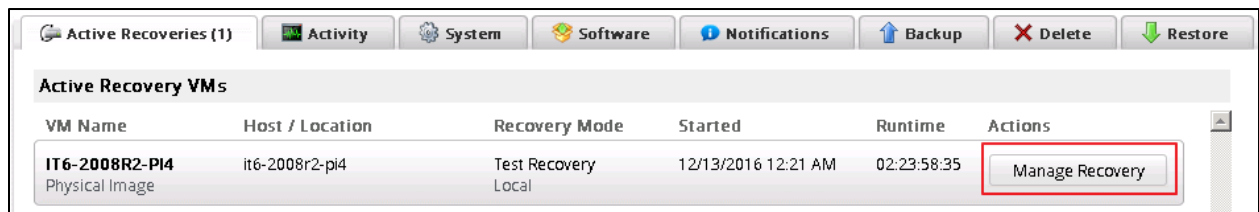
If enabled, the following occurs:

- Any changes made to this VM or its disks while in recovery mode are lost.
- The differencing disks created during recovery are deleted.
- The recovery VM is powered off and deleted.
- All files created as a part of the test restore are removed from the user-defined location.
- The recovery VM is deleted from the selected host's inventory.

### *Managing an Active Recovery for Sandbox Recovery*

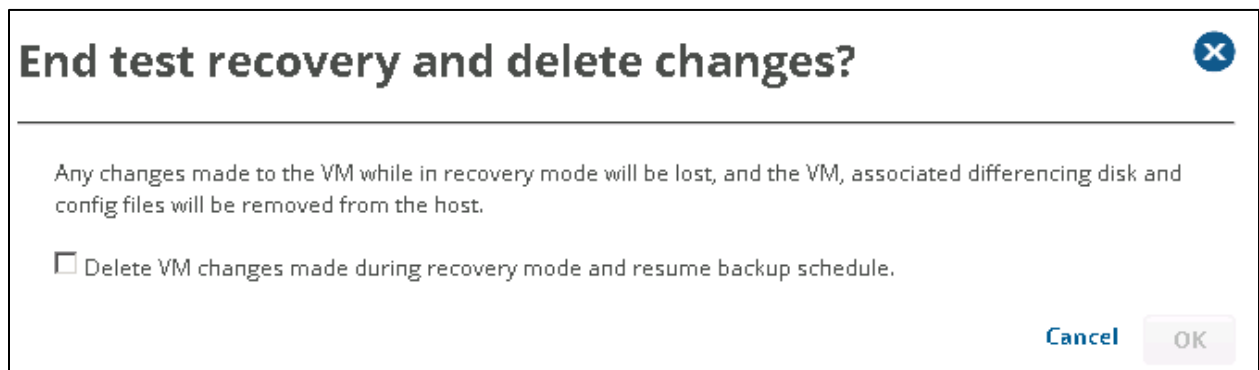
To manage an active recovery, perform the following steps.

1. At the Computer page, click the **Active Recoveries** tab, and then click the **Manage Recovery** button, as shown in the example below.



Active Recoveries (1)	Activity	System	Software	Notifications	Backup	Delete	Restore
Active Recovery VMs							
VM Name	Host / Location	Recovery Mode	Started	Runtime	Actions		
IT6-2008R2-PI4 Physical Image	it6-2008r2-pi4	Test Recovery Local	12/13/2016 12:21 AM	02:23:58:35	Manage Recovery		

The End test recovery and delete changes page is displayed.



## End test recovery and delete changes?

Any changes made to the VM while in recovery mode will be lost, and the VM, associated differencing disk and config files will be removed from the host.

☐ Delete VM changes made during recovery mode and resume backup schedule.

Cancel OK

2. Ensure the differencing disks are not mounted or in use by any powered-on VM, or the delete operation fails.
3. Select the **Delete VM changes made during recovery mode and resume backup schedule** check box.



If enabled, the following occurs:

- Any changes made to this VM or its disks while in recovery mode are lost.
- The differencing disks created during recovery are deleted.
- The recovery VM is powered off and deleted.
- All files created as a part of the test restore are removed from the user-defined location.
- The recovery VM is deleted from the selected host's inventory.

## Rapid Recovery Restore Tabs

Figure 24 displays the restore tabs.



Figure 24. Rapid Recovery Restore Tabs.

The following table provides a description of the page features.

Page	Description
Select	Select at least one available VM to restore.
Destination	<p>Choose where the data is restored.</p> <p>Select how to verify and recover your data to the restore destination.</p> <ul style="list-style-type: none"><li>• <i>Sandboxed Test Recovery</i> is a non-destructive means for you to verify the integrity of your backed-up images without affecting normal business operation. Your production images remain powered on and operational.</li><li>• <i>Production Recovery</i> performs a recovery of your production images with selected recovery images.</li></ul>
Summary	A list of your selections is displayed.

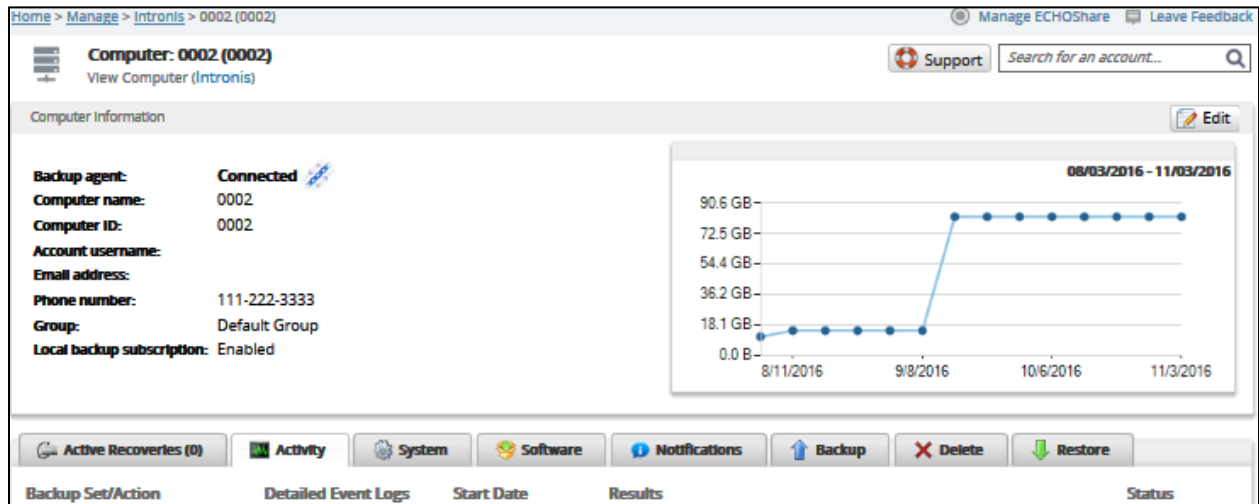
## Rapid Recovery Restore

To restore using Rapid Recovery, perform the following steps.

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



The Computer page is displayed.




2. Click the **Restore** tab.

The Restore Selections page is displayed.

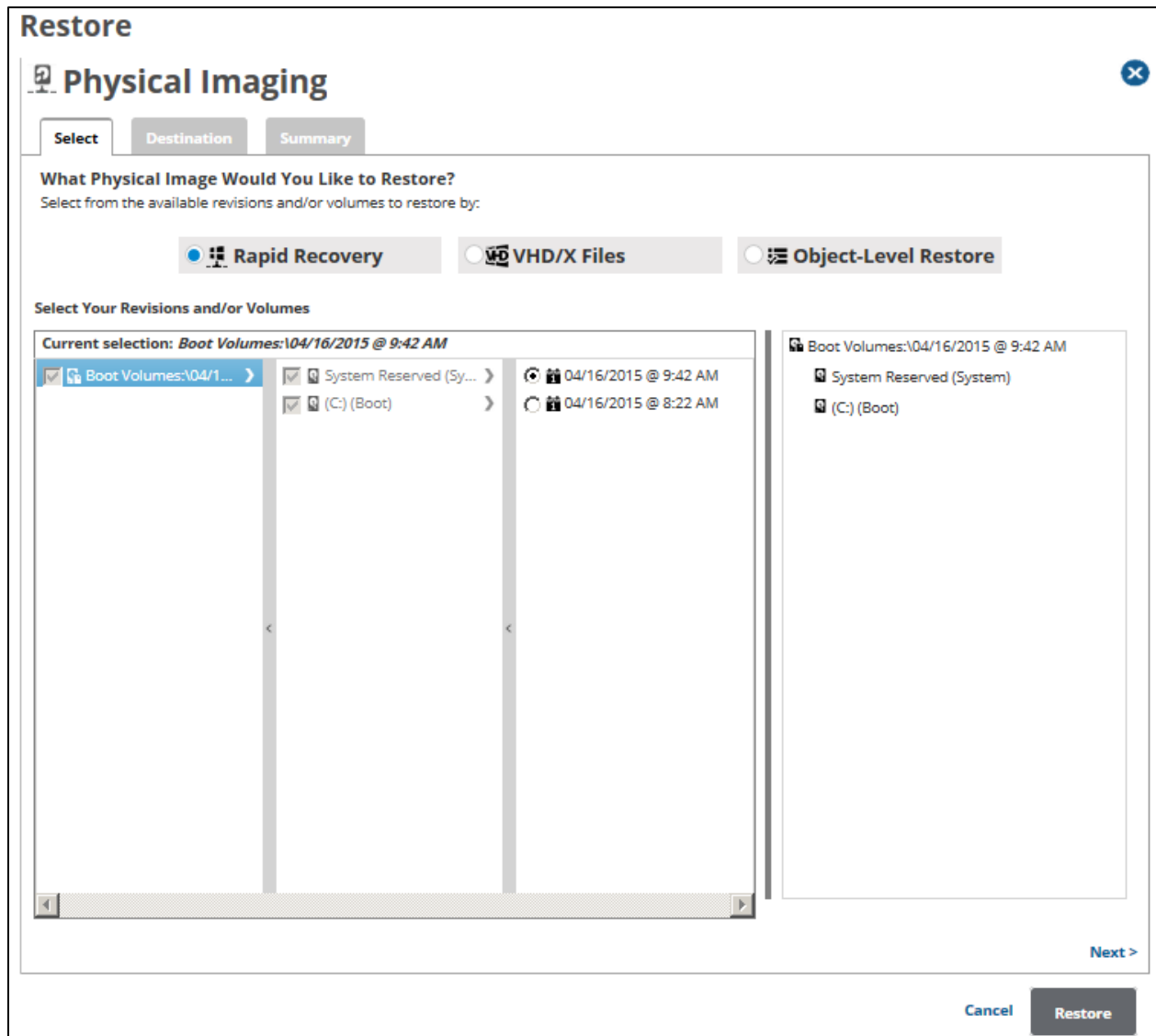
Restore Selections			
Viewing Original Catalog			
Backed Up Data Type	Type	Status	Completed
Files and Folders	Files and Folders	0 Item(s) Restored	01/04/2017 @ 12:43 PM
VMware Standard			
VMware QuickSpin			
Physical Imaging			
1 - 1 of 1 items			






3. Click the restore  icon of the backup type you want to restore.

The Select page is displayed with Rapid Recovery selected as the default.



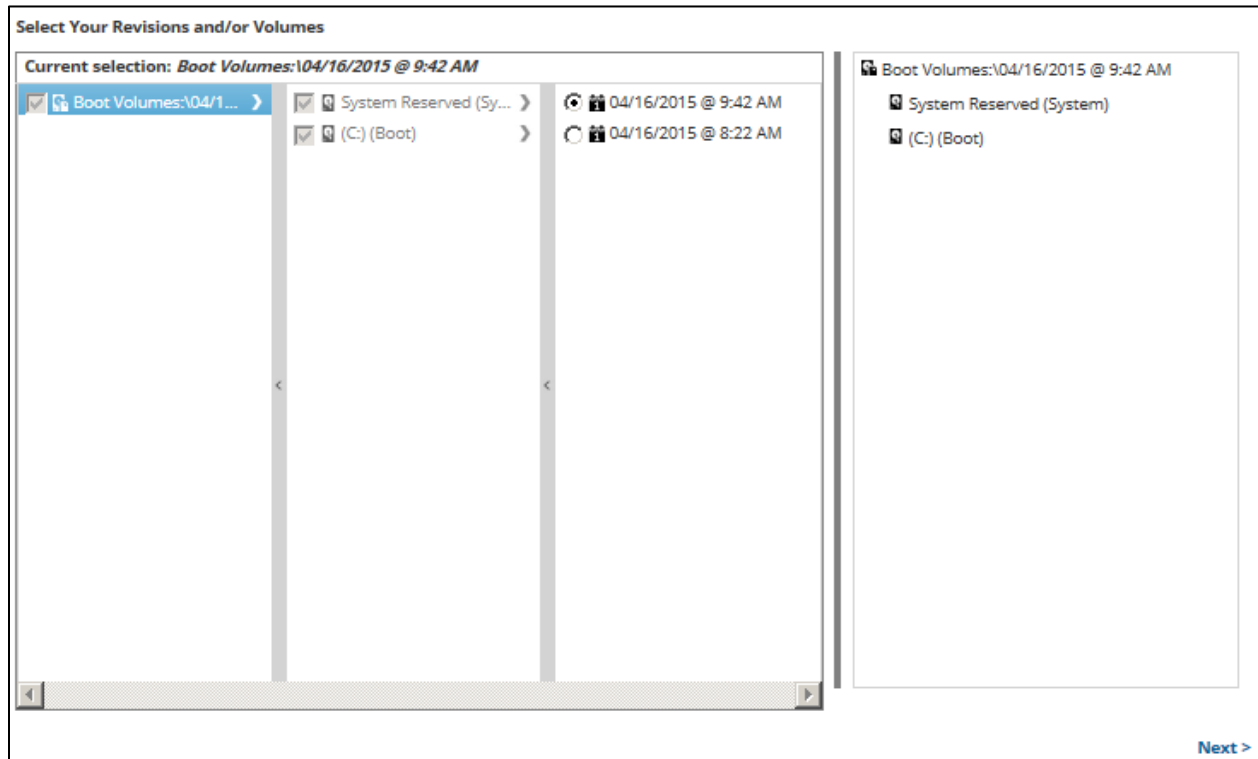
In the Current Selection pane, the boot volume is selected by default (it is grayed out).

4. Select any other volumes and revisions to be restored.

Clicking the arrow  at the right of the items displays more files and folders.

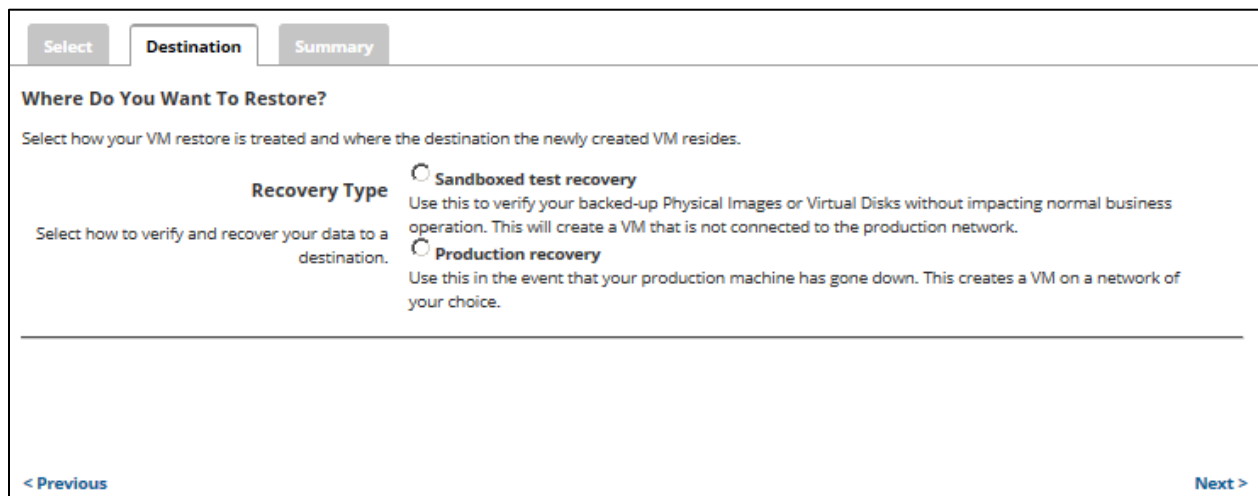


The selection is displayed in the far right pane. Click the remove  icon to remove any selections.



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

The Destination page is displayed.





**Notes:**

- Use Sandboxed test recovery to verify your backed-up Physical Images or Virtual Disks without affecting normal business operation. This option creates a VM that is not connected to the production network.  
Sandboxed Test Recovery is a non-destructive means for you to verify the integrity of your backed-up images without affecting normal business operation. Your production images remain powered on and operational.
- Use Production recovery in the event that your production machine has gone down. Production Recovery performs a recovery of your production images with selected recovery images.

6. Select a Restore type radio button.

If you select **Sandboxed test recovery**:

- The source/production images are not shut down.
- The recovery VMs created 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.
- The recovery VMs selected are started on the production network. They assume the role of the original production machines.



**Note:** For this example, the Production Recovery option is displayed, as shown below. The following steps are valid for the Sandboxed test recovery option as well, with the exception of the Virtual Switch field.

**Where Do You Want To Restore?**

Select how your VM restore is treated and where the destination the newly created VM resides.

**Recovery Type**  
Select how to verify and recover your data to a destination.

☐ **Sandboxed test recovery**  
Use this to verify your backed-up Physical Images or Virtual Disks without impacting normal business operation. This will create a VM that is not connected to the production network.

☒ **Production recovery**  
Use this in the event that your production machine has gone down. This creates a VM on a network of your choice.

---

**Destination**  
Choose where the data is restored

**Select Destination Host For VM**

**Specify Details For:**

CPU

RAM    GB

Virtual Switch

---

**Select File Destination:**

Path:

**Information**

- The File Destination is where we create differencing disks on the chosen host as part of the restore process.
- For best performance, the File Destination should be on the selected Hyper-V host. The Hyper-V Machine Management service must have access to this location.

[< Previous](#) [Next >](#)

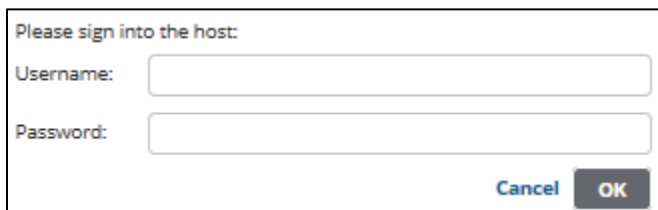
- At the Select Destination Host for VM pane, click the **Add New Host** button.

The Server IP Address pop-up is displayed.

Type the IP Address of the Hyper-V host you want to add (e.g. 192.168.1.1:443).

- Type the IP address of the Hyper-V host, and then click **OK**.

The sign-in pop-up is displayed.



Please sign into the host:

Username:

Password:

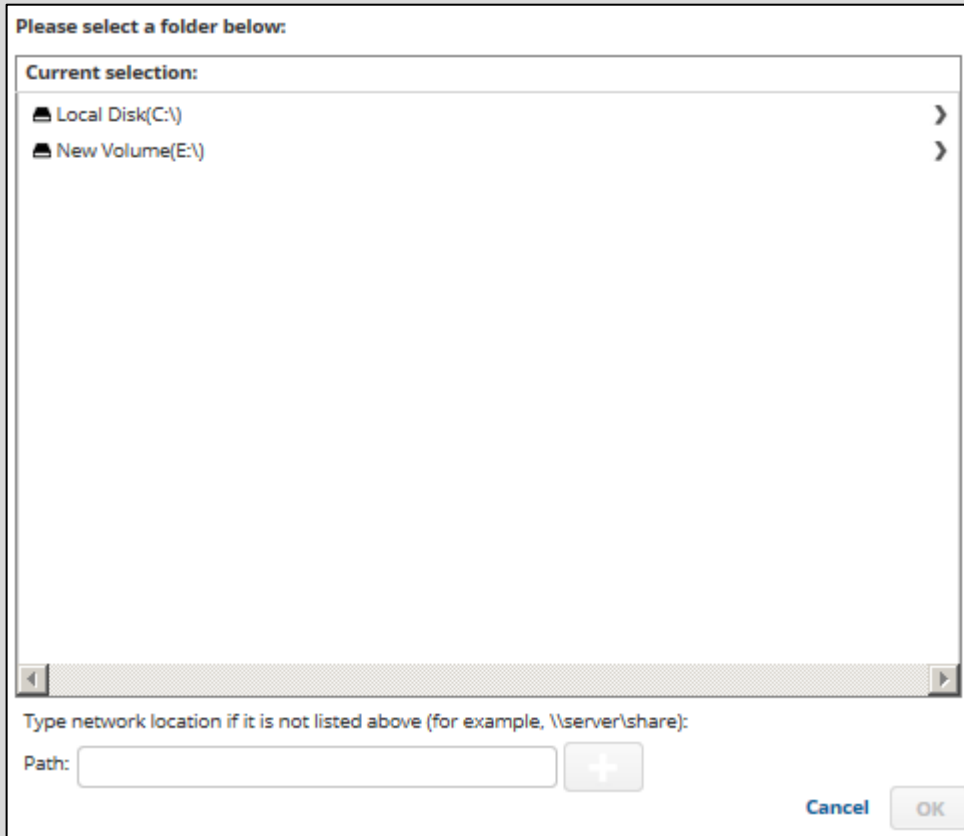
[Cancel](#) [OK](#)

9. Sign in, and then click **OK**.
10. At the Specify details for Host VM panel, select the CPU and the RAM size.
11. If you selected the Production Recovery option, select the Virtual Switch.
12. At the Path field, type or browse to the destination of your restore.

**Browse option**

a. Click the **Browse** button.

The folder options are displayed.



Please select a folder below:

**Current selection:**

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:  [+](#)

[Cancel](#) [OK](#)



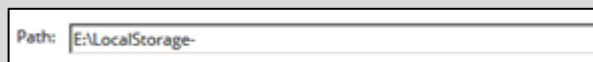
b. Select the destination.

The OK button is activated.



c. Click OK.

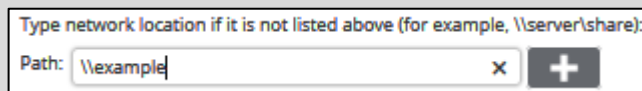
The address is displayed in the Path field.



To add a network location that is not listed, perform the step below.

### **Adding a Network Location**

a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.



The add button is activated.

b. Click the add  button.

### **Notes:**

- The File Destination is where differencing disks are created on the selected host as part of the restore process.
- For best performance, set the File Destination on the selected Hyper-V host. The Hyper-V Machine Management service must have access to this location.
- If you select a remote host and the backup destination is a local non-shared folder, the following pop-up is displayed asking to share the backup destination. Canceling this pop-up deselects the remote host.



**When restoring to a remote host, the backup storage locations need to be available in the network.**

Share the following locations in the network and enter the share path in the table below. Share path must have \\localhost\sharename format. Provide the host 192.168.1.1:443 with read access to the share.

Path:	Network path:
F:\bootls\LocalStorage-9fc	<input type="text"/>

[Cancel](#) [Confirm](#)

13. After selecting the destination of your restore, click **Next**.



The Summary page is displayed.

The Summary page shows the progress of the restore operation. It has three tabs: Select, Destination, and Summary. The Summary tab is active, displaying the following information:

- Select:** Recovering 2 Volume(s) selected, size : 10.97 GB
  - System Reserved
  - (C:)
- Destination:** Restored to E:\LocalStorage

At the bottom left, there is a link for "< Previous". At the bottom right, there are two buttons: "Cancel" and "Restore".

14. Verify your selections, and then click the **Restore** button.

The confirmation pop-up is displayed.

You are about to restore backed up data using the settings you just defined.  
**Proceed with this restore?**

Buttons: No, Yes

15. Click **Yes**.

The Restore Selections page is displayed with the status and a record is created in the Active Recovery tab, as shown below.

Active Recoveries (1)						
Active Recovery VMs						
VM Name	Host / Location	Recovery Mode	Started	Runtime	Actions	
IT6-2008R2-PI4 Physical Image	it6-2008r2-pi4	Test Recovery Local	12/13/2016 12:21 AM	02:23:58:35	Manage Recovery	

If the Manage Recovery action is not performed, you cannot run a backup/restore for the volumes that were restored using Rapid Recovery type.





## VHD/VHDX File Restore

This section includes the following topics:

- VHD/VHDX File Restore Overview
- Restoring VHD/VHDX Files

### VHD/VHDX File Restore Overview

VHD/VHDX is the virtual hard disk file type used by Microsoft's Hyper-V hypervisor. This restore type restores a VHD/X for each volume that you select.

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 vice-versa.

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

### Physical Imaging VHD/VHDX File Restore Tabs

Figure 25 displays the restore tabs.

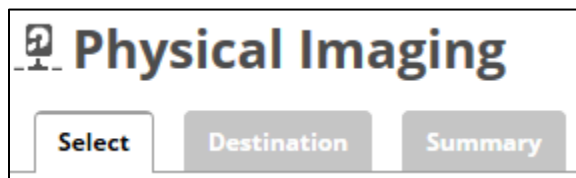


Figure 25. Physical Imaging VHD/VHDX File Restore Tabs.



The following table provides a description of the page features.

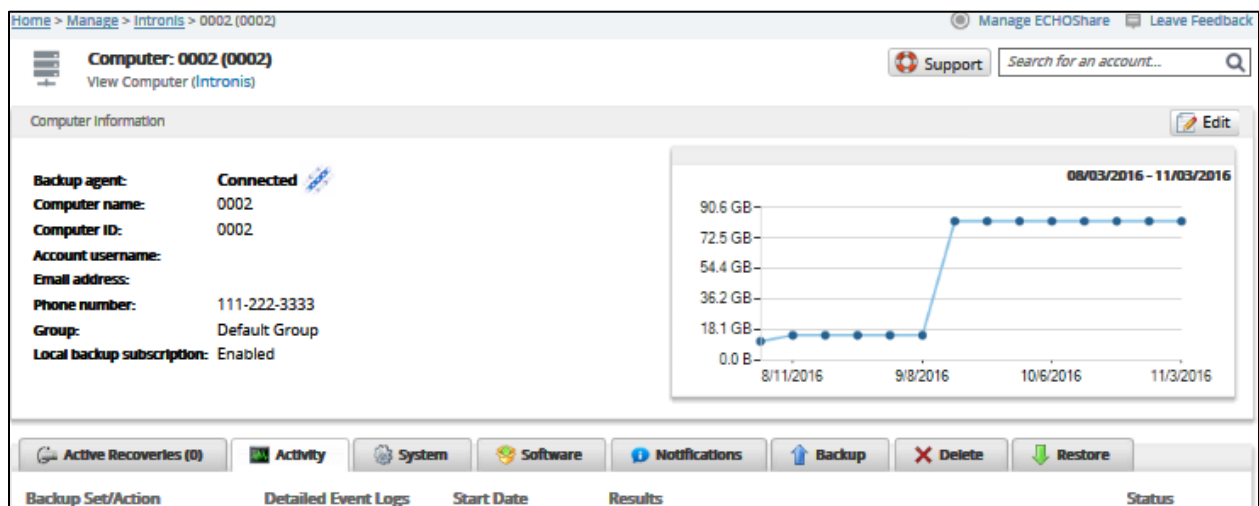
Page	Description
Select	Select at least one available volume to restore.
Destination	Choose where the data is restored.
Summary	A list of your selections is displayed.

## Restoring VHD/VHDX Files

To restore VHD/VHDX Files, perform the following steps.

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


The Computer page is displayed.



2. Click the **Restore** tab.


The Restore Selections page is displayed.


### Restore Selections





Viewing Original Catalog


Backed Up Data Type

 Files and Folders

 VMware Standard

 VMware QuickSpin

 Physical Imaging

Type	Status	Completed
 Files and Folders	0 Item(s) Restored	01/04/2017 @ 12:43 PM

⏮


⏪

1

⏩

⏭

1 - 1 of 1 items

- Click the restore  icon of the backup type you want to restore.



The Select page is displayed.

**Restore**

**Physical Imaging**

**Select** Destination Summary

What Physical Image Would You Like to Restore?  
Select from the available revisions and/or volumes to restore by:

☒ Rapid Recovery ☐ VHD/X Files ☐ Object-Level Restore

Select Your Revisions and/or Volumes

Current selection: *Boot Volumes:\04/16/2015 @ 9:42 AM*

Volume	Revision
<input checked="" type="checkbox"/> Boot Volumes:\04/16/2015 @ 9:42 AM	<input checked="" type="checkbox"/> System Reserved (System)
<input checked="" type="checkbox"/> (C:) (Boot)	<input checked="" type="checkbox"/> 04/16/2015 @ 9:42 AM
	<input type="checkbox"/> 04/16/2015 @ 8:22 AM

Next >

Cancel Restore

- Click the **VHD/X files** radio button.



The Restore VHD/X files page is displayed.

**What Physical Image Would You Like to Restore?**  
Select from the available revisions and/or volumes to restore by:

☐ Rapid Recovery ☒ VHD/X Files ☐ Object-Level Restore

Select Your Revisions and/or Volumes


**Current selection:**

☐ Boot Volumes: >

Select the volumes on the left that you want to restore.

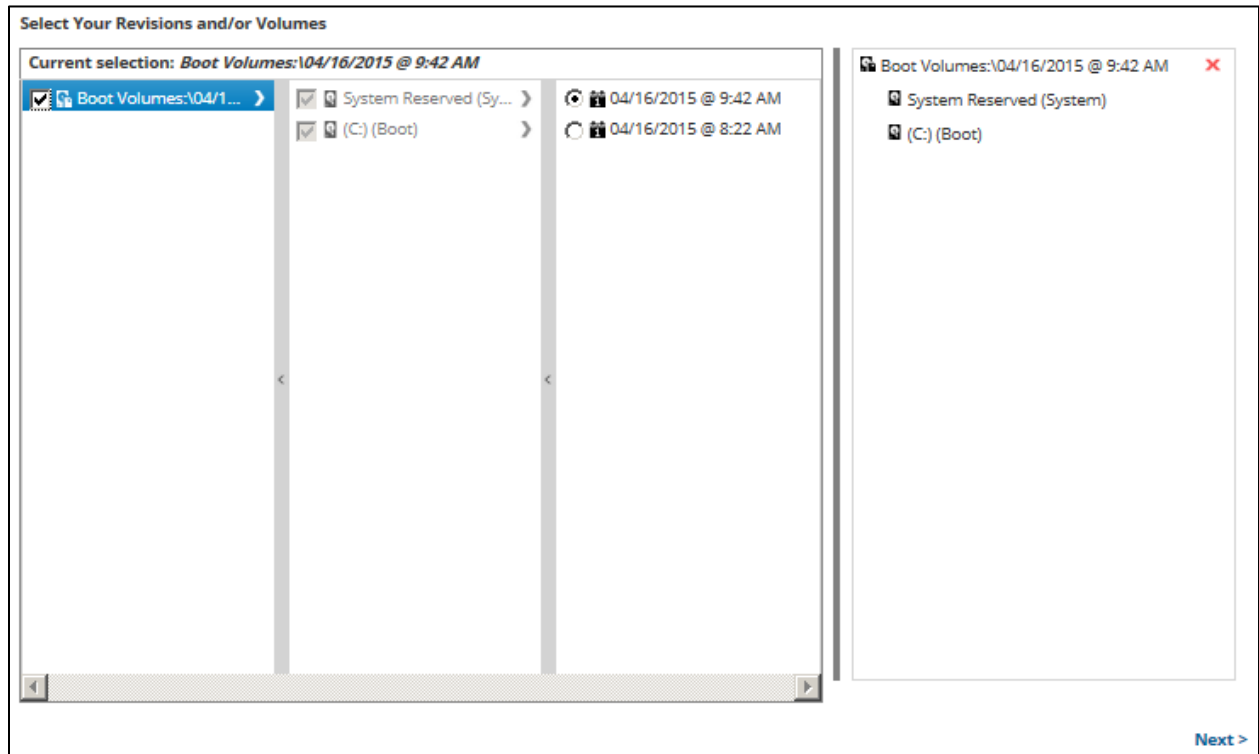
Next >

5. In the Current Selection pane, select the revision and/or volumes you would like to restore.

Clicking the arrow  at the right of the items displays more revisions/volumes.



The selection is displayed in the right pane. Click the remove  icon to remove any selections



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

The Destination page is displayed.



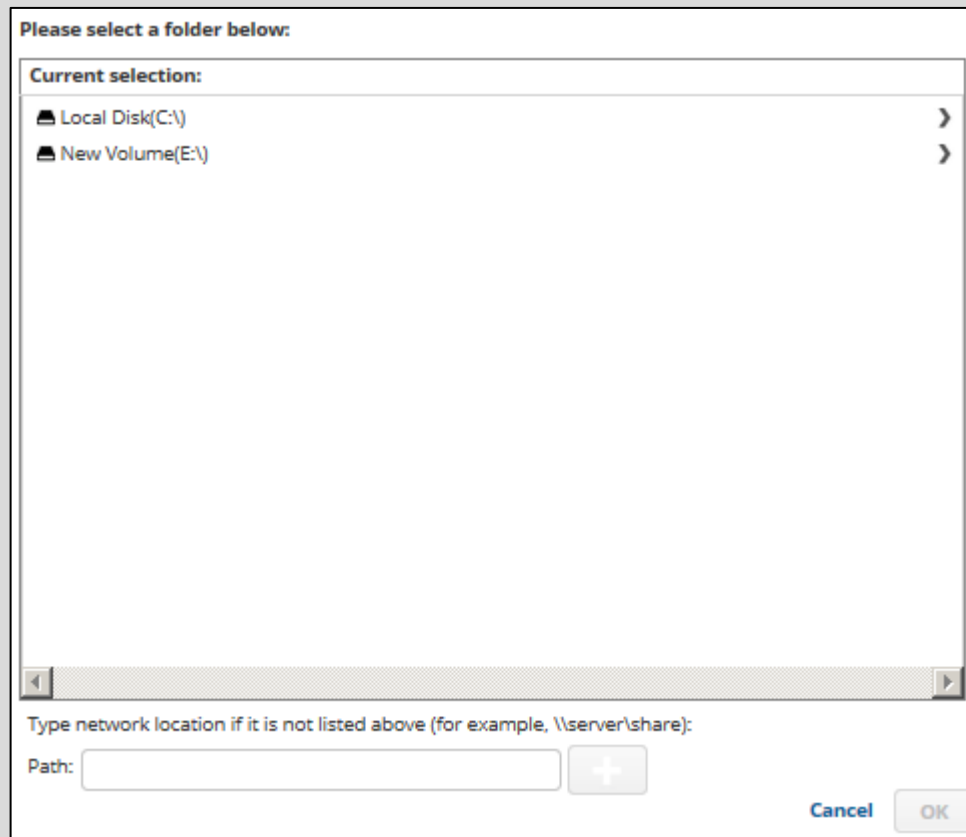
7. At the Path field, type a path, or click the **Browse** button to select the destination of your restore.



## Browse option

a. Click the **Browse** button.

The folder options are displayed.



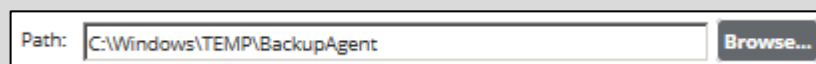
b. Select the destination.

The OK button is activated.



c. Click **OK**.

The address is displayed in the Path field.





d. To add a network location that is not listed, perform the step below.

### Adding a Network Location

a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:

The add button is activated.

b. Click the add  button.

8. After selecting the destination of your restore, click **Next**.

The Summary page is displayed.

Select

Destination

Summary

Select

Recovering 2 Volume(s) selected, size : 10.97 GB

- System Reserved
- (C:)

Destination

Restored to C:\Recovery

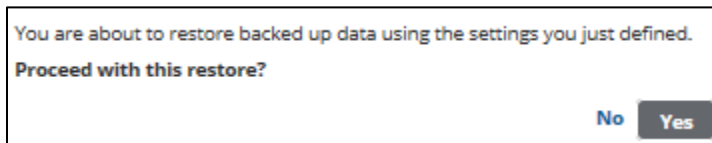
< Previous

Cancel Restore

9. Verify your selections, and then click the **Restore** button.



The confirmation pop-up is displayed.



10. Click **Yes**.

The Restore Selections page is displayed with the status.

## Object-level Restore

This section includes the following topics:

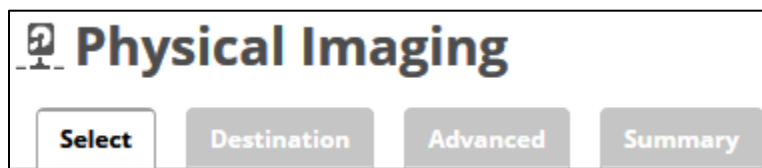
- Object-level Restore Overview
- Restoring at the Object-level

### Object-level Restore Overview

At the Object-level, you can browse all the files of the volumes that you backed up and select individual files from those volumes to restore. This feature allows you to recover individual files and folders from a local Physical Imaging backup directly through the management portal. This granular restore of data is performed without having to explicitly mount the disks and display their contents with Windows explorer.

### *Physical Imaging Object-level Restore Tabs*

Figure 26 displays the restore tabs.



**Figure 26. Physical Imaging Object-level File Restore Tabs.**



The following table provides a description of the page features.

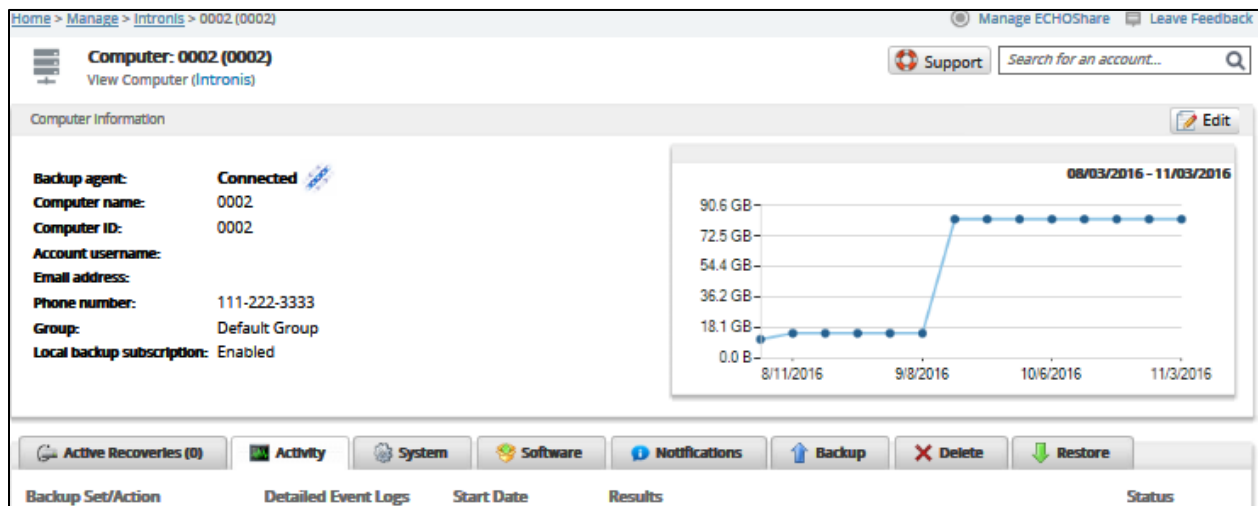
Page	Description
Select	Select at least one available volume to restore.
Destination	Select the destination of your restore and determine how existing files are treated.
Advanced	Select from the following options to dictate the advanced features of the restore: <ul style="list-style-type: none"><li>• Restore NTFS File Permissions</li><li>• Restore File Attributes</li><li>• Restore Last Modified Date</li></ul>
Summary	A list of your selections is displayed.

## Restoring at the Object-level

To restore at the Object-level, perform the following steps.

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

The Computer page is displayed.



2. Click the **Restore** tab.



The Restore Selections page is displayed.

### Restore Selections

Viewing Original Catalog

Backed Up Data Type

Files and Folders

VMware Standard


VMware QuickSpin

Physical Imaging

Type	Status	Completed
Files and Folders	0 Item(s) Restored	01/04/2017 @ 12:43 PM

1

1 - 1 of 1 items

- Click the restore  icon of the backup type you want to restore.



The Select page is displayed.

**Restore**

**Physical Imaging**

**Select** Destination Summary

What Physical Image Would You Like to Restore?  
Select from the available revisions and/or volumes to restore by:

☒ Rapid Recovery ☐ VHD/X Files ☐ Object-Level Restore

Select Your Revisions and/or Volumes

Current selection: *Boot Volumes: 04/16/2015 @ 9:42 AM*

Volume	Revision
<input checked="" type="checkbox"/> Boot Volumes: 04/16/2015 @ 9:42 AM	<input checked="" type="checkbox"/> System Reserved (System)
<input checked="" type="checkbox"/> (C:) (Boot)	<input type="checkbox"/> 04/16/2015 @ 9:42 AM
	<input type="checkbox"/> 04/16/2015 @ 8:22 AM

Next >

Cancel Restore

4. Select the **Object-level Restore** radio button.



The Object-level selections are displayed.

**What Physical Image Would You Like to Restore?**  
Select from the available revisions and/or volumes to restore by:

☐ **Rapid Recovery**    ☐ **VHD/X Files**    ☒ **Object-Level Restore**

Select Your Revisions, Volumes, and/or Files and Folders

**Current selection:**


☐ (C:) (Boot) >

Select the items on the left that you want restore.

Exclusions are marked in red.

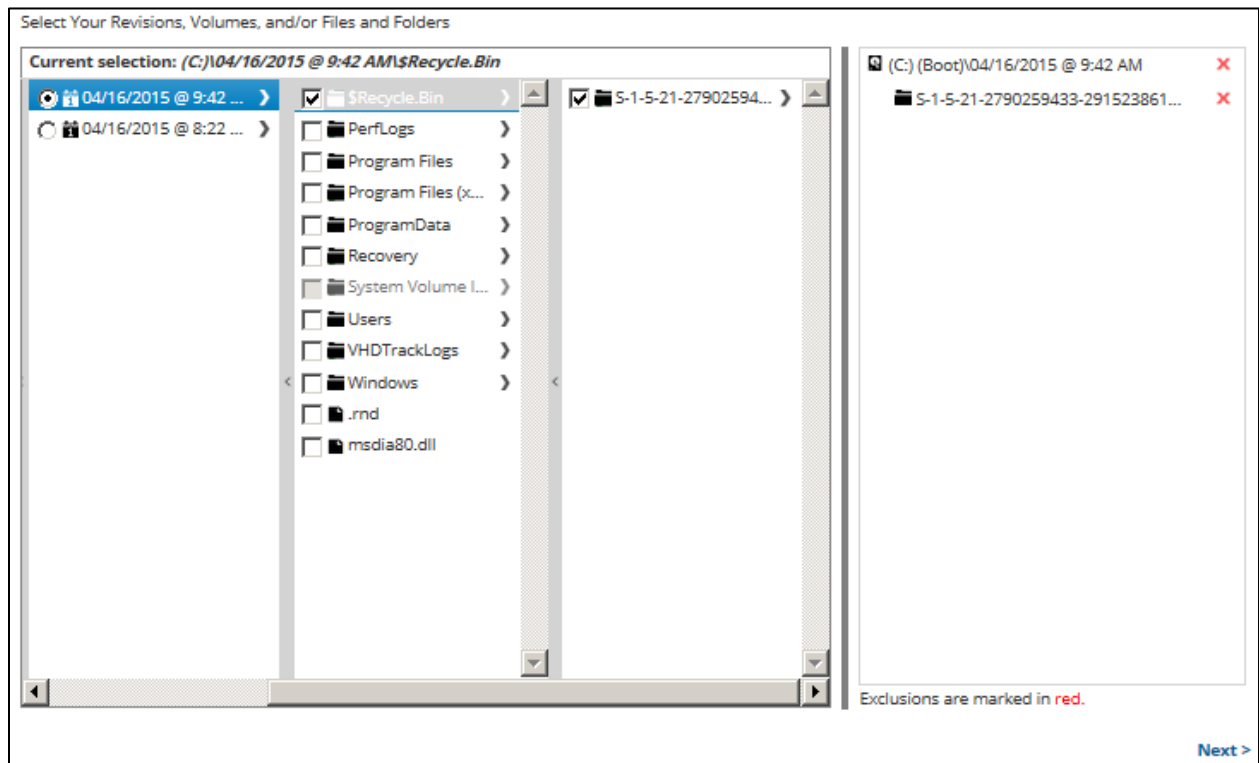
[Next >](#)

5. In the Current Selection pane, select the revisions/volumes to be restored.

Clicking the arrow  at the right of the items displays more revisions/volumes.

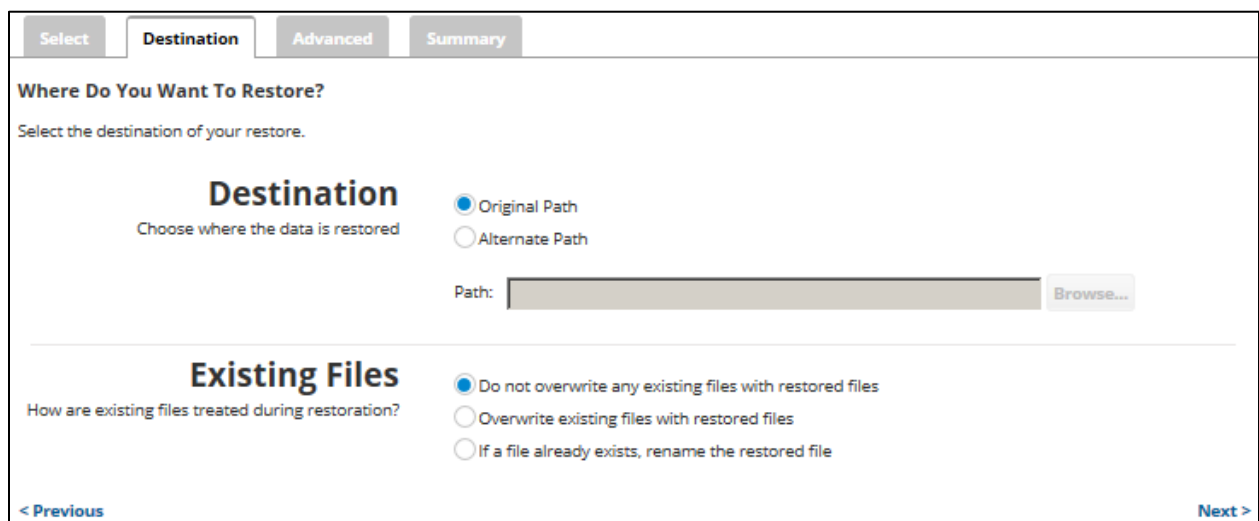


The selection is displayed in the far right pane. Click the remove  icon to remove any selections.



6. Click **Next**.

The Destination page is displayed.





7. At the Destination section, to select the original destination path, click the **Original Path** radio button.
8. To select an alternate path, click the **Alternate Path** radio button, and then browse to the destination.

### Selecting an Alternate Path

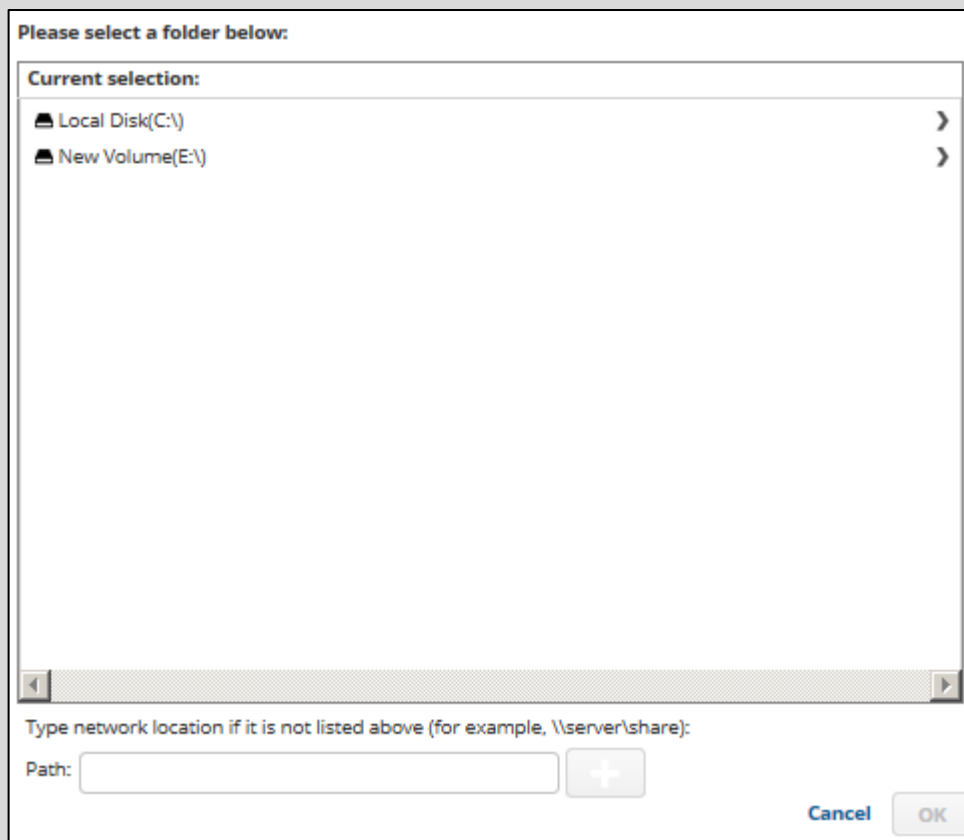
- a. Click the **Alternate Path** radio button.

The following field is displayed.



- b. Click the **Browse** button to locate the destination.

The folder options are displayed.





c. Select the destination.

The OK button is activated.



d. Click **OK**.

The address is displayed in the Path field.

To add a network location that is not listed, perform the step below.

### Adding a Network Location

a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

The add button is activated.

b. Click the add  button.

9. At the Restore Options section, select your preferences.
10. At the Existing Files section, select one of the following radio buttons regarding the restoration of existing files:
  - Do not overwrite any existing files with restored files
  - Overwrite existing files with restored files
  - If a file already exists, rename the restored file
11. After making your selections, click **Next**.





The Advanced page is displayed.

Select Destination **Advanced** Summary

**What Advanced Behaviors Do You Want Your Restore to Have?**

Select from multiple options to dictate the advanced features of the restore.

**Restore Options**  
Choose additional options for your restore.

- ☐ Restore NTFS File Permissions
- ☒ Restore File Attributes
- ☒ Restore Last Modified Date

[< Previous](#) [Next >](#)

12. Optionally, select the following options to specify the advanced features of the restore:

- Restore NTFS File Permissions
- Restore File Attributes
- Restore Last Modified Date

13. Click **Next**.

The Summary page is displayed.

Select Destination Advanced **Summary**

**Select**  
Recovering **712 file(s)** selected, size: **208.95 MB**

**Destination**  
Restored to your **Original Path**

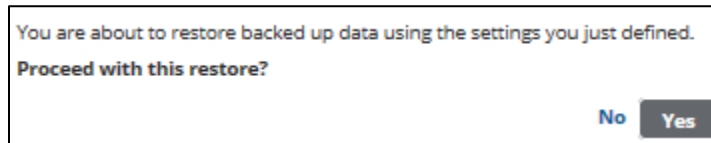
**Advanced**  
Restore File Attributes  
Restore Last Modified Date

[< Previous](#) [Cancel](#) [Restore](#)



14. Verify your selections, and then click the **Restore** button.

The confirmation pop-up is displayed.



15. Click **Yes**.

The Restore Selections page is displayed with the status.

## Bare Metal Recovery

This section includes the following topics:

- Overview
- Downloading the Recovery Environment Creator as an ISO File
- Downloading the Recovery Environment Creator as a USB Flash Drive
- Running Recovery Media

### Overview

Bare Metal Recovery (BMR) allows you to restore a physical image to either a similar or a dissimilar physical machine. You can create the Recovery Environment as a USB thumb drive or create the Recovery Environment as an .ISO file.

The following tasks are performed using BMR:

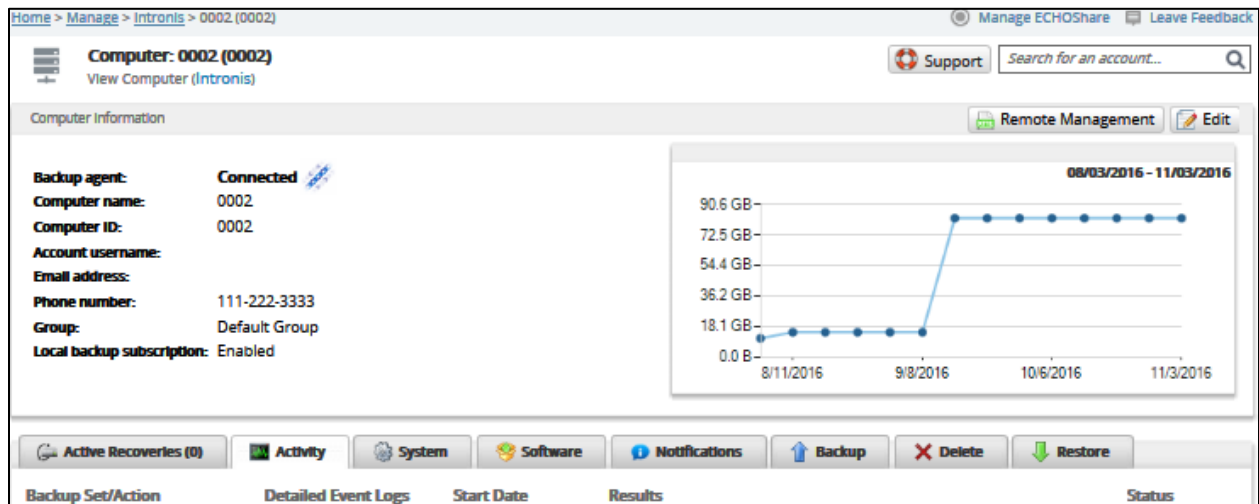
1. Downloading the BMR media creator.
2. Downloading and installing Microsoft ADK is required to create the pre-installation media required to perform a bare metal recovery.
3. Running recovery media creator generates the Recovery Environment restore.
4. Running the Recovery Environment restore.



### Downloading the Recovery Environment Creator as an ISO File

To download the Recovery Environment Creator, perform the following steps.

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



2. Select the **Restore** tab.



The Restore Selections page is displayed.

### Restore Selections

Viewing Original Catalog

Backed Up Data Type

Files and Folders

VMware Standard


VMware QuickSpin

Physical Imaging

Type	Status	Completed
Files and Folders	0 Item(s) Restored	01/04/2017 @ 12:43 PM

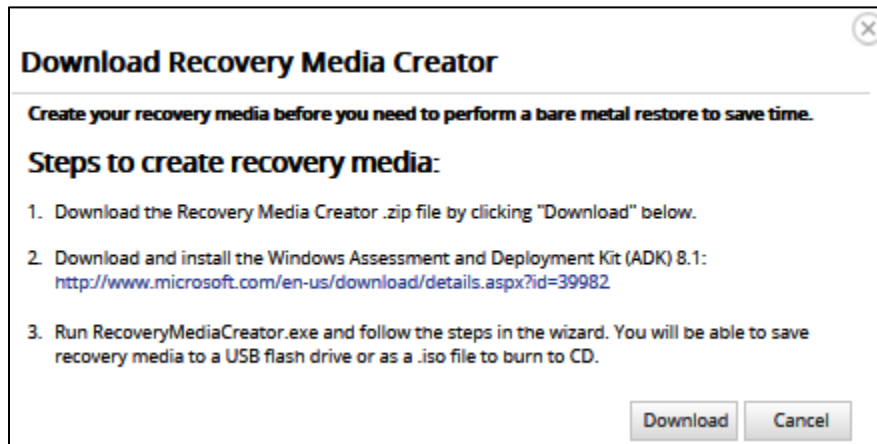
1

1 - 1 of 1 items

- At the Physical Imaging title, click the Recovery Media Creator  icon.



The Download Recovery Media Creator screen is displayed.

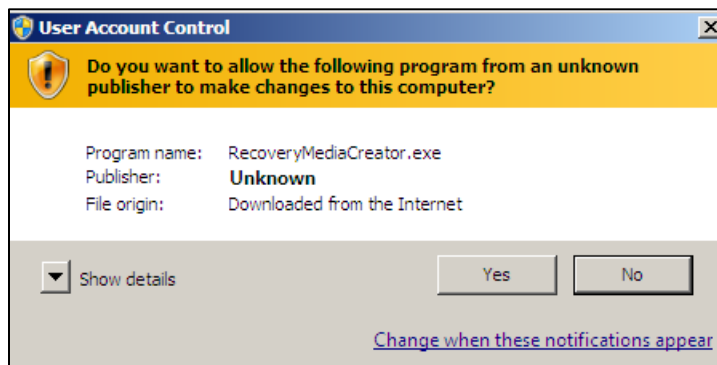


4. Click the **Download** button.

The Recovery Media Creator zip file is downloaded to your Downloads folder.

5. Open the Recovery Media Creator zip file and run the Recovery Media Creator executable (.exe).

The User Account Control pop-up is displayed.



6. Click the **Yes** button.

The Recovery Media options screen is displayed.



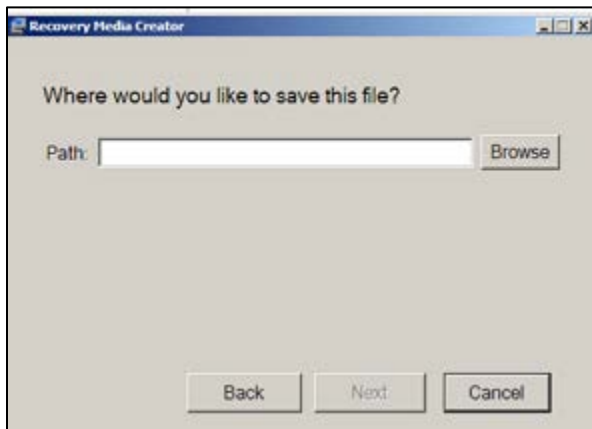
7. Select the **ISO File** radio button, and then click **Next**.

The Platform options screen is displayed.



8. Select your platform's radio button, and then click **Next**.

The Path screen is displayed.



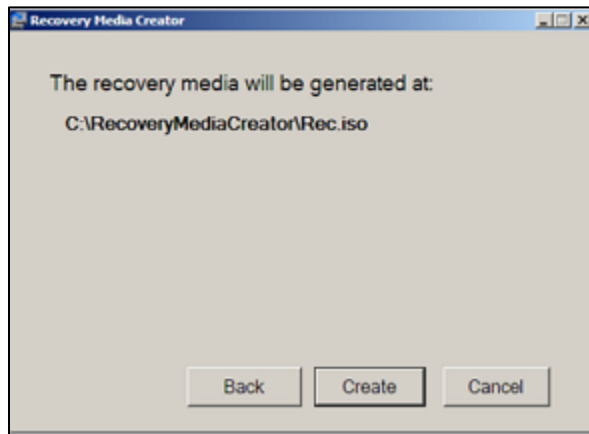
9. Select the **Browse** button to choose your folder location.

The Next button is activated.



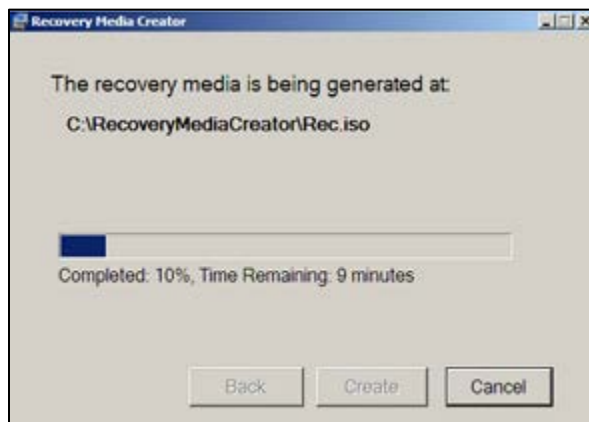
10. Click the **Next** button.

The Create screen is displayed.



11. Click the **Create** button.

The progress screen is displayed.







After the Recovery Media is created, the following screen is displayed.

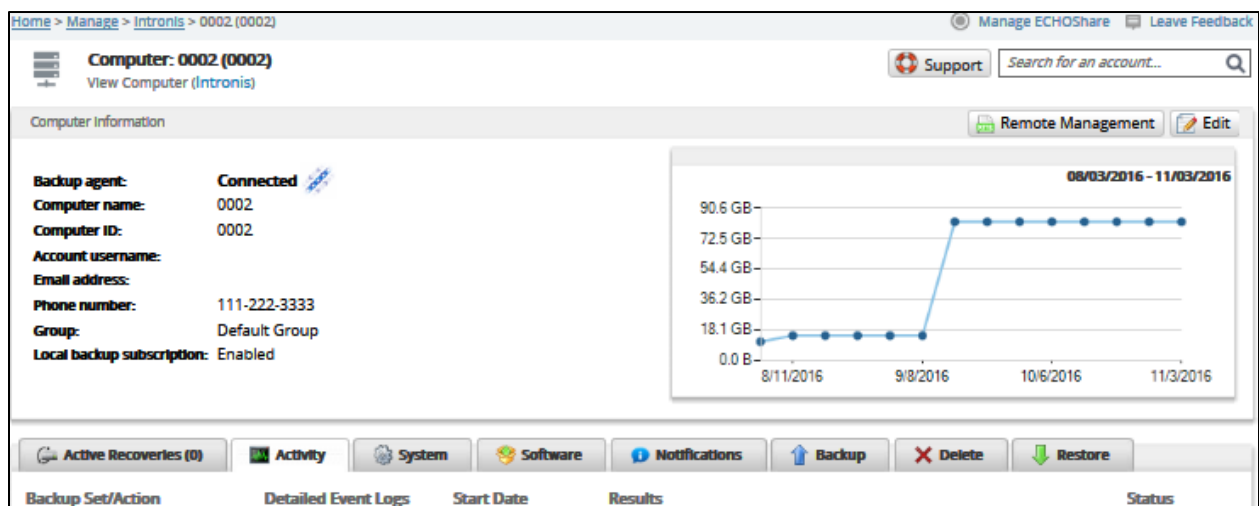


12. Click the **Close** button, and then burn the .iso file to CD or DVD.

### Downloading the Recovery Environment Creator as a USB Flash Drive

To download the Recovery Environment Creator, perform the following steps.

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



2. Select the **Restore** tab.



The Restore Selections page is displayed.

### Restore Selections

Viewing Original Catalog

Backed Up Data Type

Files and Folders

VMware Standard


VMware QuickSpin

Physical Imaging

Type	Status	Completed
Files and Folders	0 Item(s) Restored	01/04/2017 @ 12:43 PM

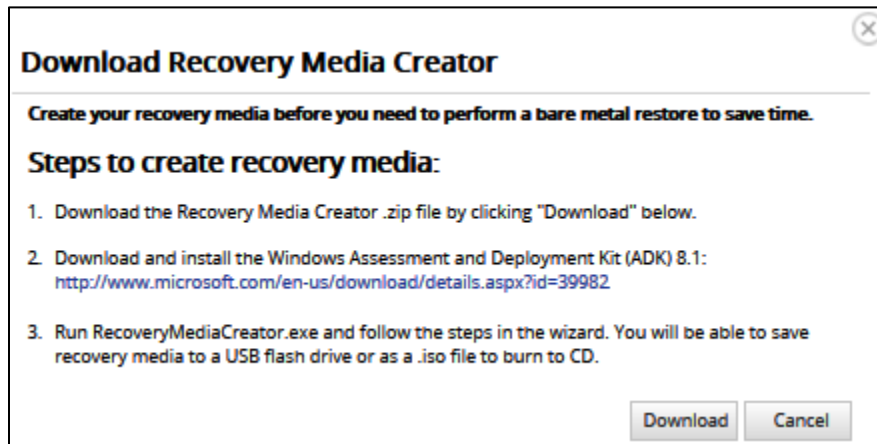
1

1 - 1 of 1 items

- At the Physical Imaging title, click the Recovery Media Creator  icon.



The Download Recovery Media Creator screen is displayed.

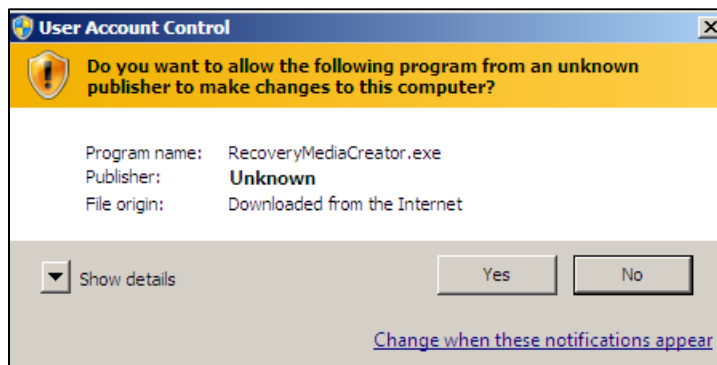


4. Click the **Download** button.

The Recovery Media Creator zip file is downloaded to your Downloads folder.

5. Open the Recovery Media Creator zip file and run the Recovery Media Creator executable (.exe).

The User Account Control pop-up is displayed.



6. Click the **Yes** button.

The Recovery Media options screen is displayed.



7. Select the **USB Flash Drive** radio button, and then click **Next**.

The Drive Destination screen is displayed.



8. Type the drive destination and click **Next**.



**CAUTION!** The following caution is displayed advising you to back up all the data before it is erased.



9. Back up your data, and then click the **Create** button.

The Progress screen is displayed.



After the Recovery Media is created, the following screen is displayed.



10. Click the **Close** button, and then boot your recovery machine from this USB flash drive to begin a bare-metal restore.

## Running Recovery Media

To run the Recovery Media, perform the following steps.

1. Boot your recovery machine.

The Windows Component Required screen is displayed If Windows 8.1 ADK is not installed.



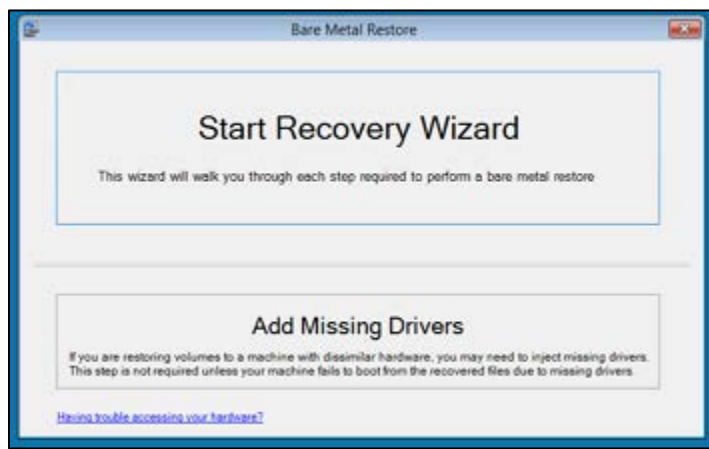
2. Click the link, download, and then run ADK.



**Note:** Ensure that the Deployment Tools and Windows PE check boxes are selected. Save disk space by deselecting the other options.

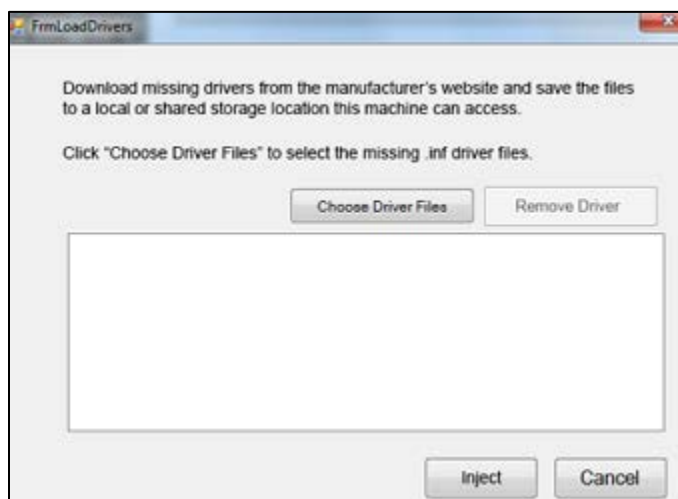
3. Click the **Close** button.
4. Boot the recovery machine from the disk or flash drive to start the recovery application.

The Start Recovery Wizard and Add Missing Drivers screen is displayed.



5. If the machine is rebooted after a BMR and does not boot because of a driver issue, click the **Add Missing Drivers** section.

The Missing Drivers screen is displayed.



6. Add missing drivers and click the **Inject** button.
7. Click **Start Recovery Wizard**.

The log in screen is displayed.



**User Login**

To ensure data security, you must enter the log-in credentials associated with this account/computer (not partner log-in credentials).

Username:

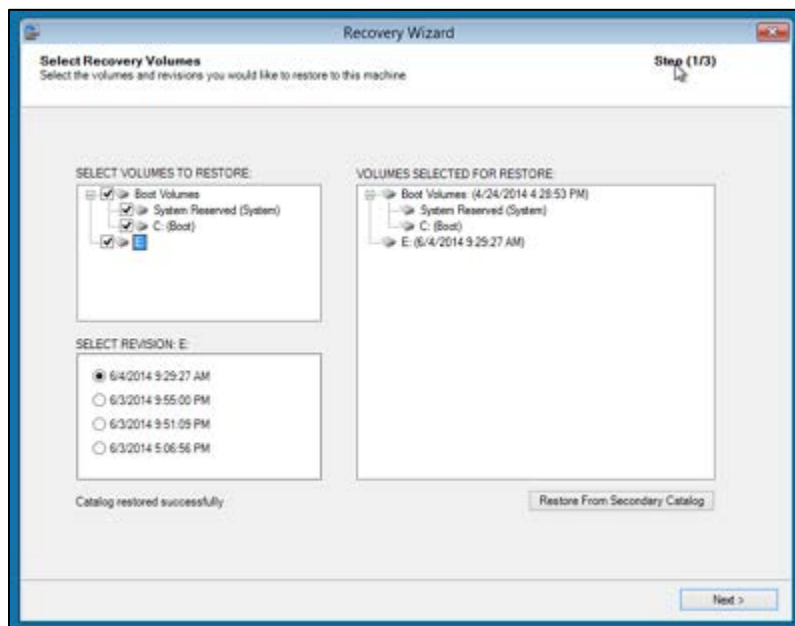
Password:  ?

Computer ID:

8. Type your credentials, select the Computer ID, and then click the **Login** button.

**Note:** If you have a private key associated to your computer, you are prompted to enter it.

The Select Recovery Volumes screen is displayed.



**Recovery Wizard** Step (1/3)

**Select Recovery Volumes**  
Select the volumes and revisions you would like to restore to this machine.

**SELECT VOLUMES TO RESTORE:**

- ☒ Boot Volumes
- ☒ System Reserved (System)
- ☒ C: (Boot)

**SELECT REVISION: E:**

- ☒ 6/4/2014 9:29:27 AM
- ☐ 6/3/2014 9:55:00 PM
- ☐ 6/3/2014 9:51:09 PM
- ☐ 6/3/2014 5:06:56 PM

**VOLUMES SELECTED FOR RESTORE:**

- Boot Volumes (4/24/2014 4:28:53 PM)
  - System Reserved (System)
  - C: (Boot)
- E: (6/4/2014 9:29:27 AM)

Catalog restored successfully

9. Select the volumes and the revisions to be restored.

The selections are displayed in the right pane.

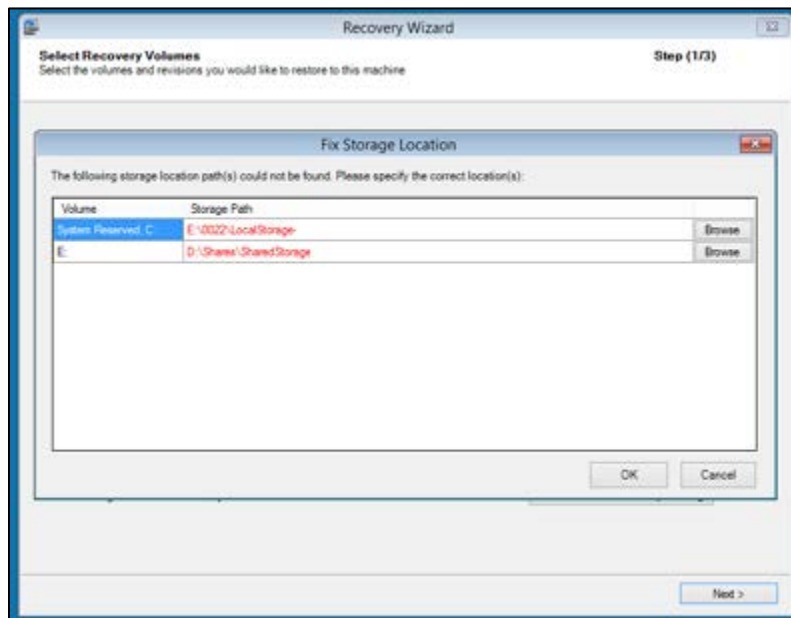




**Note:** The latest version of a selected volume is restored by default. You can restore older versions of volumes by clicking on the volume name and selecting the revision in the Select Revision box.

10. Click the **Next** button.

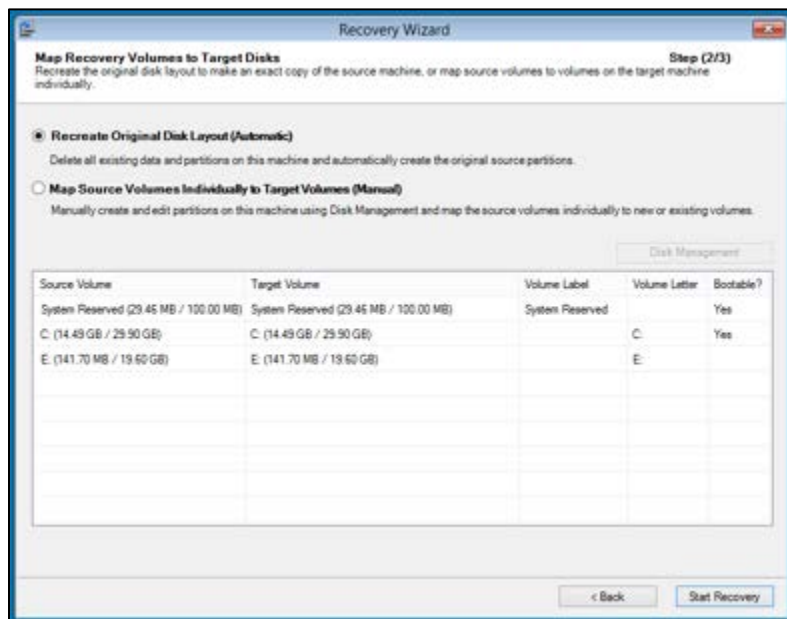
The Recovery Media searches for your local storage location as it existed as of the last backup. If Recovery Media cannot find the local storage, the Fix Storage Location screen is displayed.



11. Click the **Browse** button to select the local storage location for the selected volumes, click **OK**, and then click **Next**.



The Map Recovery Volumes to Target Disks screen is displayed.



12. Select the **Recreate Original Disk Layout (Automatic)** radio button to automatically restore all selected volumes to the target machine's first disk, provided that disk has enough space to store those volumes.

**Important** The automatic option erases all data on the target machine. You can retain data using the manual option, but as a best practice it is recommended to back up any data to be kept on the target machine before starting a bare metal restore.

OR

Select the **Map Source Volumes Individually to Target Volumes (Manual)** to manually create volumes on the target machine by clicking the Disk Management button and then, selecting which source volume to restore to which target volume.

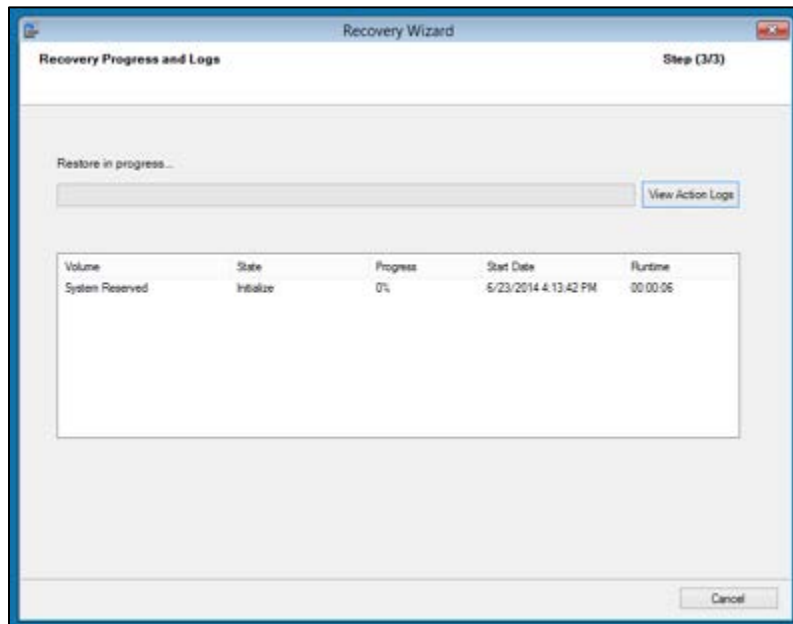
**Note:** This option allows for a higher degree of flexibility upon restore (for example, you can restore a source volume as a larger target volume; or change the layout of volumes across disks).

**Note:** If WinPE cannot recognize the target machine's disks and the target machine is using a RAID controller, you are asked to supply the RAID controller driver.

13. Click the **Start Recovery** button to begin the restore.

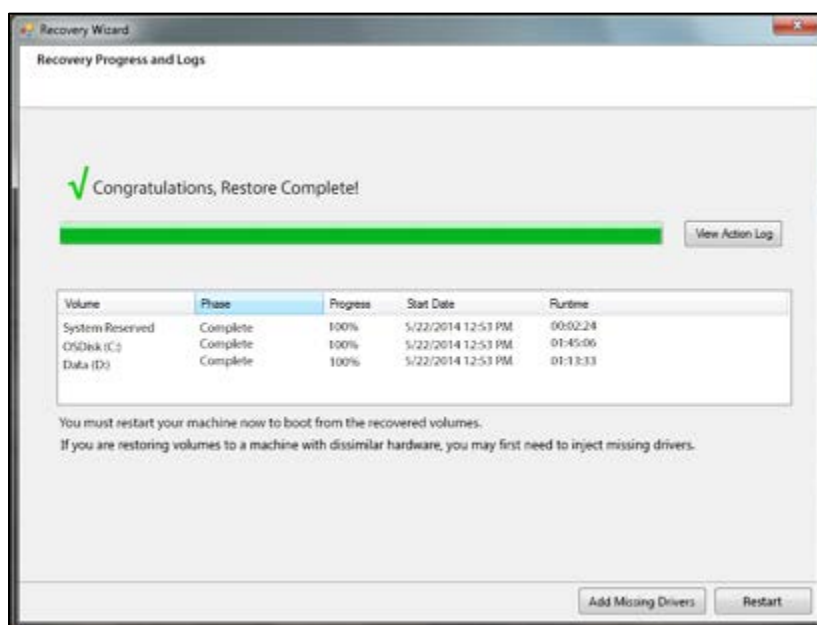


The Recovery Progress and Logs screen is displayed.



14. Click the **View Action Logs** button to observe progress.

When successfully restored, the following screen is displayed.





15. If you are restoring volumes to a machine with dissimilar hardware, inject missing drivers by rebooting the machine or clicking the **Add Missing Drivers** button.
16. Click the **Restart** button to boot from the recovered volumes.



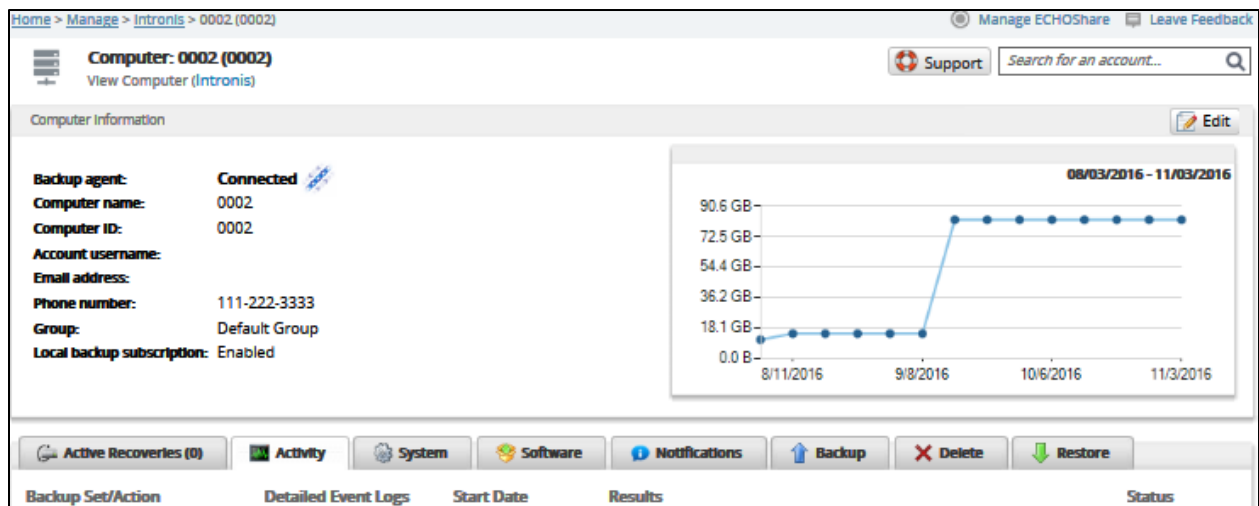
## Chapter 3. Physical Imaging Backup Delete

**CAUTION!** Deleted data is completely purged and can no longer be accessed or restored.

To delete a Physical Imaging backup, perform the following steps.

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

The Computer page is displayed.



2. Select the **Delete** tab.

The Delete Selections page is displayed.

Delete Selections			
Backed Up Data Type	Type	Status	Completed
Files and Folders	Files & Folders	4 Item(s) Deleted	11/04/2016 @ 10:33 AM
SQL Server			
VMware Standard			
VMware QuickSpin			
Physical Imaging			

3. Select the delete icon beside the backup type you want to delete.



The Delete Backup page is displayed.

## Delete

**Physical Imaging**

**What Physical Image Volumes Would You Like to Delete?**

Select from the backed up Volumes below to delete **All Revisions for each selected Volume are deleted**

Select Volumes to Delete(All Revisions)

**Current selection:**

☐ Boot Volumes

Select the items on the left you want to delete.

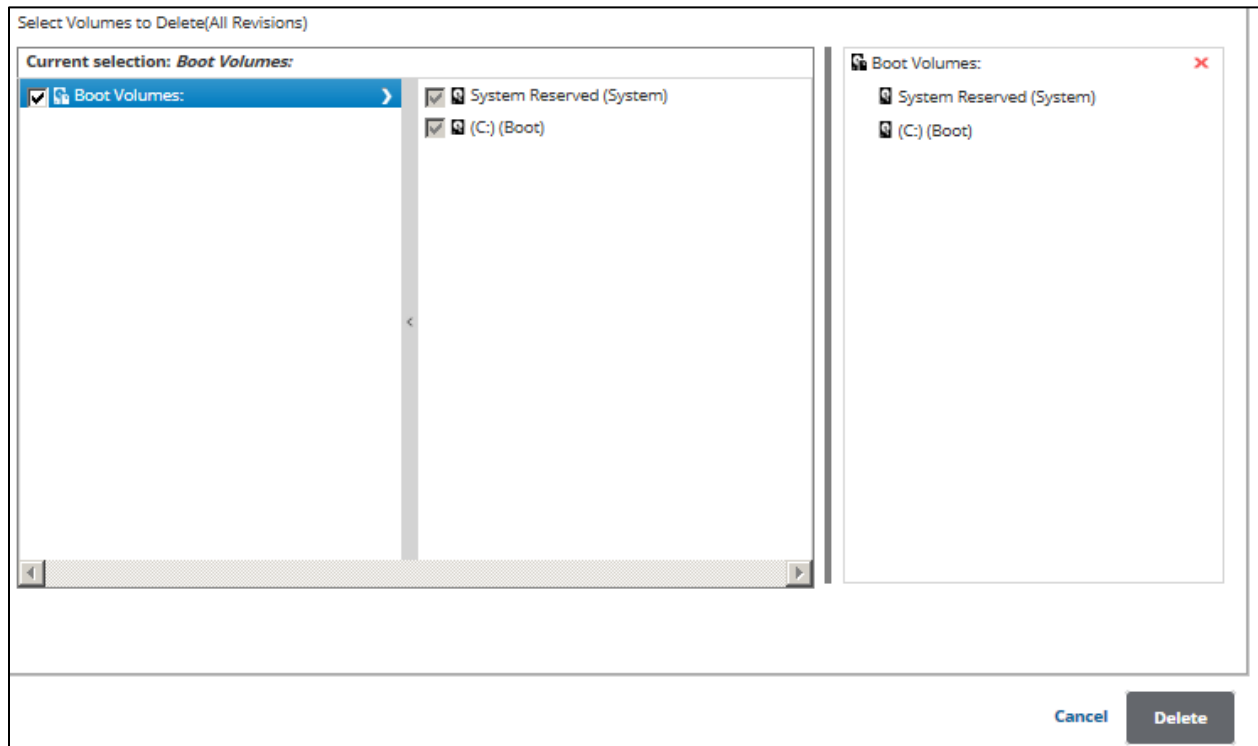
Cancel

Delete

4. Select the row of the image you want to delete.



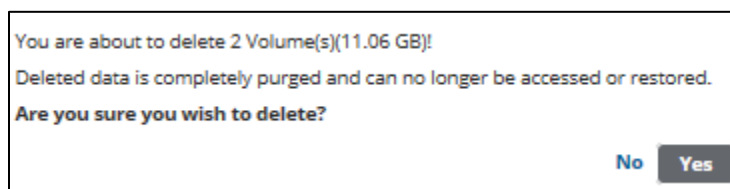
The selections for deletion are displayed in the right panel.



**Note:** Delete removes all revisions. You cannot delete specific revisions.

5. When satisfied with your selection, click the **Delete** button.

The Delete Confirmation pop-up is displayed.



6. Click the **Yes** button.

The Delete Selections page is displayed with the latest status.



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## Physical Imaging Backup and Restore





## **PART IX. HYPER-V STANDARD BACKUP AND RESTORE**

This section includes the following chapters:

- Hyper-V Standard Backup
- Hyper-V Standard Restore
- Hyper-V Standard Delete

See *Backup Agent Software Requirements* for more information.

### **Chapter 1. Hyper-V Standard Backup**

This chapter includes the following topics:

- Hyper-V Standard Backup Overview
- Backing Up Hyper-V Standard
- Editing Hyper-V Standard Backup Sets
- Removing Hyper-V Standard Backup Sets

#### **Hyper-V Standard Backup Overview**

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

Hyper-V backups protect multiple Hyper-V virtual machines with a single agent. The agent must be 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. However, a VM can only be included in one backup set at a time.

If you are backing online, then ensure the following that each VM you need to back up has the most recent version of Integration Services (IS) installed. The Hyper-V host's Integration Services also must be updated (if the host's IS is older, then the backup fails).

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

You can add more than one VM to a backup set but only one VM is processed at a time when the backup runs. By default, 3 VMs are set for concurrent backup, but you can select between 1 and 5. Using the default setting means 3 VMs are backed up simultaneously using a single disk. However, if a VM has more disks, a VM is used for each of the disks (provided the disks are initialized). See *Editing the System Page* to change settings.



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 (incremental backups).

**Note:** Because of a Microsoft limitation, Windows XP VMs are paused during backup. This pause interrupts any work in progress on Windows XP VMs.

## Hyper-V Standard Backup Tabs

Figure 27 displays the backup tabs.

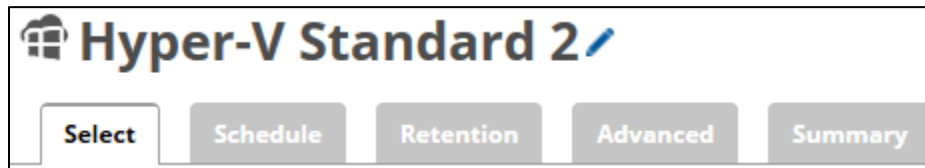


Figure 27. Hyper-V Standard Backup Tabs.

The following table provides a description of the page features.

Page	Description
Select	You are required to select at least one VM.
Schedule	Optionally select the schedule.
Retention	Optionally determine how many versions of each file you would like to retain. The default is 4 recoverable versions of backups at the destination that are retained for 28 days.  Optionally, enable advanced archiving.
Advanced	<ul style="list-style-type: none"><li>At the Temporary Folder section, specify where the temporary folder used in backing up the VM resides.</li><li>At the Force Full Backups section, specify how often full backups are performed after incremental backups.</li></ul> <p><b>Note:</b> Taking a full VM backup periodically ensures the stability of the backup chain. Full backups take longer to run but result in shorter incremental chains and potentially shorter recovery times.</p> <ul style="list-style-type: none"><li>At the Backup Mode section, optionally select the <b>Enable Offline Backup Support</b> check box.</li></ul> <p><b>Notes:</b></p> <ul style="list-style-type: none"><li>- When enabled, the virtual machine may become unavailable during the snapshot process.</li><li>- The software attempts an online backup first. If unable, an offline backup is created. The virtual machine is paused and put into a saved state while the snapshot is taken, and then the virtual machine resumes operation.</li></ul>



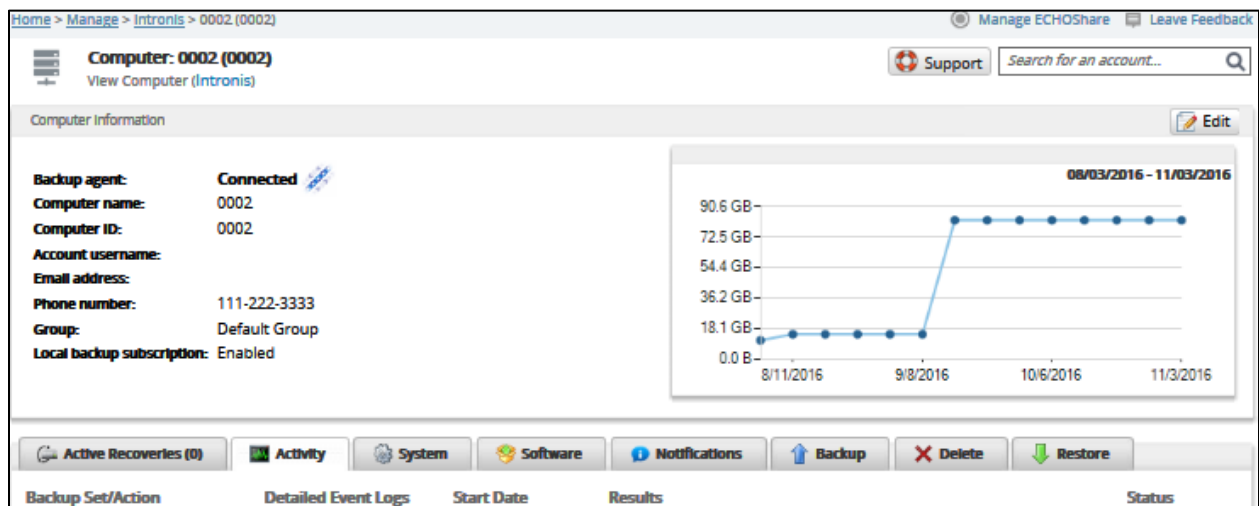
Page	Description
Summary	A list of your selections is displayed.

## Backing up Hyper-V Standard

To back up Hyper-V Standard, perform the following steps.

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

The Computer page is displayed.





2. Click the **Backup** tab.

The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+  Files and Folders (4)	Files and Folders 1	Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
+  Physical Imaging (2)	Files and Folders 2	Files and Folders 2		--	<input type="checkbox"/>		
+  Hyper-V Standard	Files and Folders 3	Files and Folders 3		--	<input type="checkbox"/>		
+  Hyper-V Rapid Recovery	Files and Folders 4	Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+  VMware Standard (1)	Physical Imaging 1	Physical Imaging 1		--	<input type="checkbox"/>		
+  VMware QuickSpin (3)	Physical Imaging 2	Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+  SQL Server (2)	VMware Standard 1	VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+  Exchange Mailbox Level	VMWare QuickSpin 1	VMWare QuickSpin 1		--	<input type="checkbox"/>		
	VMWare QuickSpin 2	VMWare QuickSpin 2		--	<input type="checkbox"/>		
	VMWare QuickSpin 3	VMWare QuickSpin 3		--	<input type="checkbox"/>		
	SQL 1	SQL 1		--	<input type="checkbox"/>		
	SQL 2	SQL 2		--	<input type="checkbox"/>		
							1 - 12 of 12 items

3. In the Backup Type pane, click the select icon beside **Hyper-V Standard** to run the backup type.



The Select page is displayed.

4. Click the Backup Name to provide a new name for your backup set, or accept the default.  
See *Changing Backup Set Names*.
5. At the Select Storage Location, click one of the following radio button options.

**Note:** This procedure applies to all options. See *Backup Options* for more information.

- **Local Only** (Local Vault must be enabled and a local subscription is required. Data is not backed up to the cloud.)
- **Online Only** (An enabled Local Vault disables this option.)
- **Online and Local** (Local Vault must be enabled.)





The selection is highlighted and the VMs are displayed in the Current Selection pane, as shown in the example below.

The 'Select Storage Location' dialog box contains three radio button options: 'Local Only', 'Online Only', and 'Online and Local'. The 'Online Only' option is selected and highlighted with a red rectangular box. Below the 'Local Only' option, it states 'Local Vault must be enabled and a local subscription is required.' Below the 'Online and Local' option, it states 'Local Vault must be enabled.'

6. In the Current Selection pane, select the available virtual machines you would like to back up.

**Note:** Any VMs that already are included in other backup sets are grayed out.

Clicking the arrow  at the right of the items displays more VMs, or files and folders.

Your selections are displayed in the right pane. Click the remove  icon to remove any selections, or clear the item check box.

The 'Select Your Virtual Machines' dialog box is split into two panes. The left pane, titled 'Current selection:', shows a tree view with 'hyper-v2012r2-4' selected, which contains 'Windows 7' (checked) and 'Windows 8.1' (unchecked). A right-pointing arrow is next to the 'hyper-v2012r2-4' item. The right pane shows the selected items: 'hyper-v2012r2-4' and 'Windows 7', each with a red 'X' remove icon to its right. A 'Next >' button is located at the bottom right of the dialog.

**TIP:** If you want to accept the default settings for the Schedule, Retention, and Advanced pages, you can back up now by clicking the **Create Backup Set** button.

To change the default settings, continue with the following steps, or select a settings tab.



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

The Schedule page is displayed.

8. Accept or edit the default schedule. See *Backup Schedules* for more information.

#### Notes:

- The default schedule is by the week on every day starting at 11 p.m.
- Multiple daily/weekly schedules are permitted (as long as they do not overlap).
- The **Allow to Finish** check box is always selected and grayed-out.

#### Adding a New Daily or Weekly Schedule

- a. To add additional daily or weekly schedules, click the **Add New** button.

The new Schedule is displayed and the **Add New** button is highlighted, as shown below.



b. Make your selections.

The new schedule details are displayed.

### Editing Existing Daily or Weekly Schedules

a. To edit existing schedules, in the Schedule column, click the schedule details.

The Schedule is highlighted.

b. Select your new daily or weekly times.

Your schedule is displayed in the Schedule column. Click the remove  icon to delete schedule.

9. After setting your schedule, click **Next**.

The Retention page is displayed.

Select Schedule **Retention** Advanced Summary

**Archiving Rules**  
Determine how many versions of each VM you would like to retain

Keep 28 Day(s) and no fewer than 4 version(s).

☐ Enable Advanced Archiving Start From a Template

< Previous Next >

10. Select the number of versions you wish to archive.

**Note:** The default retention for Hyper-V Standard is 28 days.

11. Optionally, select the **Enable Advanced Archiving** check box. For Advanced Archiving information, see *Archiving Rules*





The Advanced Archiving fields are displayed.

**Archiving Rules**  
Determine how many versions of each VM you would like to retain

Keep 28 Day(s) and no fewer than 4 version(s).

☒ Enable Advanced Archiving

Start From a Template

Cancel Save Rule

Keep all versions from now to 28 Day(s)

After 28 Day(s) keep nothing.

Keep no fewer than 4 version(s)

**Example:** The setting of a daily backup kept for 30 days and no fewer than 10 versions mean that 30 versions are kept. However, a setting of once a week means that after 10 weeks, 10 versions are kept.

12. Make your selections, click **Save Rule**, and then click **Next**.

The Advanced page is displayed.

Select Schedule Retention **Advanced** Summary

**Temporary Folder**  
Define where the temporary folder that's used in backing up VM(s) resides. Manually type in a path or browse to the desired location.

Path: C:\Windows\TEMP\BackupAgent Browse...

**Force Full Backups**  
Define how often full backups are performed after incremental backups.

A full backup is forced every 21 incremental backup(s).

**Backup Mode**  
This software will attempt to make an online backup first. If unable, an offline backup is created, pausing the virtual machine into a saved state while the snapshot is taken and the virtual machine is resumed.

☐ Enable Offline Backup Support  
When enabled, the virtual machine may become unavailable during the snapshot process.

**Notes**

- Taking a full VM backup periodically ensures the stability of the backup chain. Full backups take longer to run but result in shorter incremental chains and potentially shorter recovery times.

< Previous Next >

**Requirement:** You must specify a temporary folder located on a disk with sufficient space.

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

13. At the Temporary Folder field, accept the default, type a new path, or click the **Browse** button to locate the temporary folder that is used in backing up.



## Browse option

a. Click the **Browse** button.

The folder options are displayed.

Please select a folder below:

Current selection:

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:  +

Cancel OK

b. Select the destination.

The OK button is activated.

c. Click **OK**.

The address is displayed in the Path field.

Path:  Browse...



To add a network location that is not listed, perform the step below.

### Adding a Network Location

a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):  
Path: \\example x +

The add button is activated.

b. Click the add  button.

14. At the Force Full Backups section, use the arrows to specify how often full backups are performed after incremental backups.

### Notes:

- The default full backup is every 21 incremental backups.
- Taking a full VM backup periodically ensures the stability of the backup chain. Full backups take longer to run but result in shorter incremental chains and potentially shorter recovery times.

15. At the Backup Mode section, optionally select the **Enable Offline Backup Support** check box.

### Notes:

- When enabled, the virtual machine may become unavailable during the snapshot process.
- The software attempts an online backup first. If unable, an offline backup is created. The virtual machine is paused and put into a saved state while the snapshot is taken, and then the virtual machine resumes operation.

16. Click **Next**.



The Summary page is displayed.

SelectScheduleRetentionAdvancedSummary

Select

The Standard backup set contains **1 VM(s)**.  
Destination Online

Schedule

The backup will run **7 day(s)** a week, running a total of **7 time(s)** per week.

Retention

Keep all versions from now to **28 Day(s)**. After **28 Day(s)** keep nothing. Keep no fewer than **4 version(s)**.

Advanced

Temp Location: **C:\Windows\TEMP\BackupAgent**  
A full backup is forced every **21** incremental backup(s).  
**Enable** Offline Backup Support

< Previous

CancelCreate Backup Set

17. Verify your selections, and then click **Create Backup Set**.

Your scheduled backup is displayed on the Backup Selections page.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
Files and Folders		Hyper-V Standard 1		11/16/2016 @ 11:00 PM			
Physical Imaging							
Hyper-V Standard (1)							

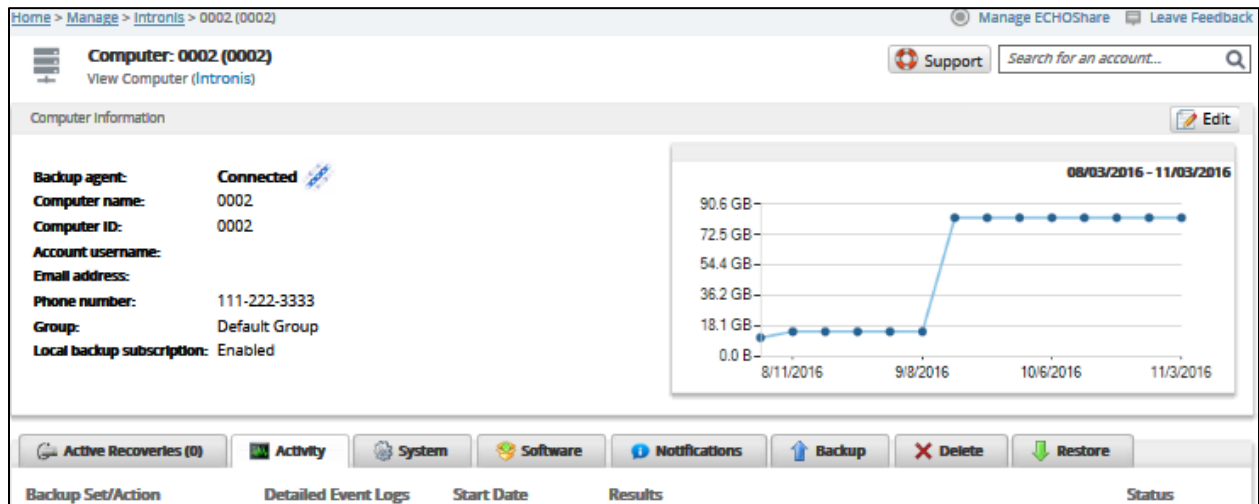


## Editing Hyper-V Standard Backup Sets

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

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

The Computer page is displayed.






2. Click the **Backup** tab.

The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+ Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
+ Physical Imaging (2)		Files and Folders 2		--	<input type="checkbox"/>		
+ Hyper-V Standard		Files and Folders 3		--	<input type="checkbox"/>		
+ Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ VMware Standard (1)		Physical Imaging 1		--	<input type="checkbox"/>		
+ VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ Exchange Mailbox Level		VMWare QuickSpin 1		--	<input type="checkbox"/>		
		VMWare QuickSpin 2		--	<input type="checkbox"/>		
		VMWare QuickSpin 3		--	<input type="checkbox"/>		
		SQL 1		--	<input type="checkbox"/>		
		SQL 2		--	<input type="checkbox"/>		
							1 - 12 of 12 items

3. In the Backup Set column, click the edit  icon of the backup type to edit.



The Backup Set Summary page is displayed.

**Edit Backup**

**Hyper-V Standard 1**

Select Schedule Retention Advanced **Summary**

**Select** The Standard backup set contains 1 VM(s).  
Destination Online

**Schedule** The backup will run 7 day(s) a week, running a total of 7 time(s) per week.

**Retention** Keep all versions from now to 28 Day(s). After 28 Day(s) keep nothing. Keep no fewer than 4 version(s).

**Advanced** Temp Location: C:\Windows\TEMP\BackupAgent  
A full backup is forced every 21 incremental backup(s).

< Previous

Cancel Update Backup Set

4. Select any of the tabs to display and edit your current settings. See *Backing Up Hyper-V Standard* for details.

**Note:** The backup set name may be edited. See *Changing Backup Set Names*.

5. After making all your edits, click the **Update Backup Set** button at the bottom of any page, as shown below.

Cancel Update Backup Set

The Backup Selections page is displayed with your current backup status.



## Removing Hyper-V Standard Backup Sets

To remove a Hyper-V Standard backup set, perform the following steps.

1. Navigate to the Backup Selections page. See *Backing up Hyper-V Standard* for instructions.

The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+ Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM			
		Files and Folders 2		--			
		Files and Folders 3		--			
		Files and Folders 4		11/02/2016 @ 11:00 PM			
+ Hyper-V Standard		Files and Folders 4		11/02/2016 @ 11:00 PM			
+ Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM			
+ VMware Standard (1)		Physical Imaging 1		--			
+ VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM			
+ SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM			
+ Exchange Mailbox Level		VMware QuickSpin 1		--			
		VMware QuickSpin 2		--			
		VMware QuickSpin 3		--			
		SQL 1		--			
		SQL 2		--			

2. At the relevant backup set row, click the remove icon to remove the backup set.





The confirmation pop-up is displayed.

**Remove Backup Set**

By default, deleting this backup set will not delete the VM(s) from the cloud or local vault. Deleting the backup set simply stops backing up the VM(s) contained in this backup set. However, you can choose to delete the VM(s) from the cloud and the local vault too.

☐ Delete the VM(s) from the cloud and local vault

Do you really want to delete the standard backup set "Hyper-V Standard 1"?

No Yes

**Note:** By default, deleting the backup set does not delete the VMs from the cloud or local vault. Deleting the backup set only stops backing up the VMs contained in this backup set.

3. Optionally select the **Delete the VM(s) from the cloud and local vault** check box, and then click **Yes**.

Note: It is recommended to select this option to free up disk space by deleting unnecessary data. The backup set is removed.



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## Hyper-V Standard Backup and Restore



## Chapter 2. Hyper-V Standard Restore

This chapter includes the following topics:

- Overview
- Restoring Hyper-V Standard Backups

### Overview

This section includes the following topics:

- Hyper-V Standard Restore Tabs
- About Restoring to a Folder
- Hyper-V Manager Virtual Machines Import Options
- Backup States of Imported VMs
- Hyper-V Replication
- Managing an Active Recovery
- Restoring Hyper-V Standard Backups
- Restoring VMs to a Windows Server 2008, or Windows Server 2008 R2 Hypervisor
- Restoring VMs to a Windows Server 2012, 2012 R2, or Windows 8 Hypervisor

### Hyper-V Standard Restore Tabs

Figure 28 displays the restore tabs.

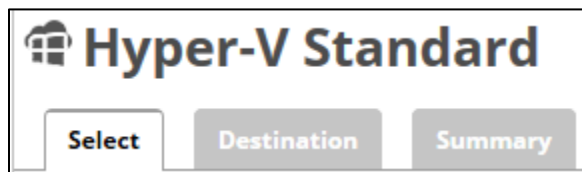


Figure 28. Hyper-V Standard Restore Tabs.

The following table provides a description of the page features.

Page	Description
Select	Select at least one available VM to restore.
Destination	Select the destination of your restore
Summary	A list of your selections is displayed.



## About Restoring to a Folder

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/VHDX 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.

## Hyper-V Manager Virtual Machines Import Options

Hyper-V lets you restore virtual machines to any system for import into Hyper-V, or mount them as virtual disks.

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 three virtual machines import options in Hyper-V Manager:

- Register
- Restore
- Copy

### 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.

### Restore

Choose this option if the destination you selected for the recovered virtual machines are a temporary location (for example, on a share or removable drive) and you want Hyper-V to move the restored files to the appropriate location and register the virtual machines for you.

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

### Copy

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.



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

## 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 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.

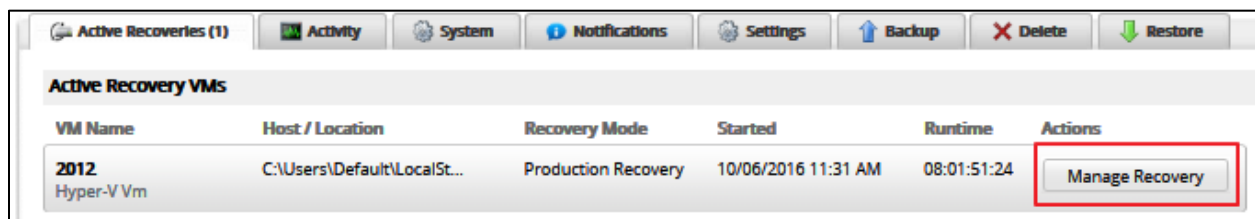
If you are using Hyper-V replication, it is recommended that the agent is installed on the recovery host and backs up the recovery VMs. This method puts less of a load on the production server. This method also provides more data protection.

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

## Managing an Active Recovery

To manage an active recovery, perform the following steps.

1. At the Computer page, click the **Active Recoveries** tab, and then click the **Manage Recovery** button, as shown in the example below.





The End test recovery and delete changes page is displayed.

## End test recovery and delete changes?

Any changes made to the VM while in recovery mode will be lost, and the VM, associated differencing disk and config files will be removed from the host.

☐ Delete VM changes made during recovery mode and resume backup schedule.

[Cancel](#) [OK](#)

2. Ensure the differencing disks are not mounted or in use by any powered-on VM, or the delete operation fails.

If you end the active recovery, the following occurs:

3. Select the **Delete VM changes made during recovery mode and resume backup schedule** check box.

If enabled, the following occurs:

- Any changes made to this VM or its disks while in recovery mode are lost.
- The differencing disks created during recovery are deleted.
- The recovery VM is powered off and deleted.
- All files created as a part of the test restore are removed from the user-defined location.
- The recovery VM is deleted from the selected host's inventory.

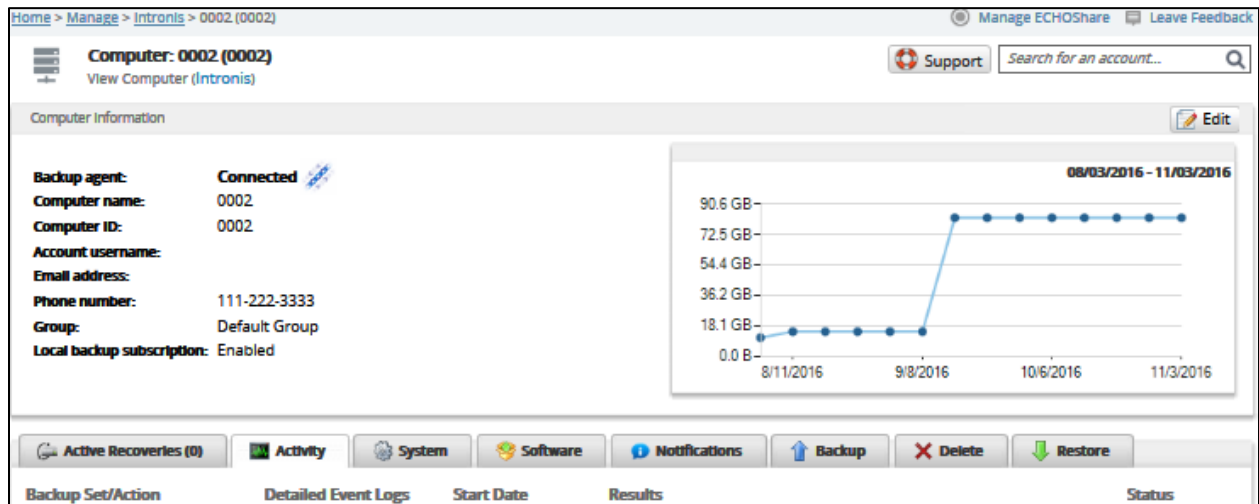


## Restoring Hyper-V Standard Backups

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

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

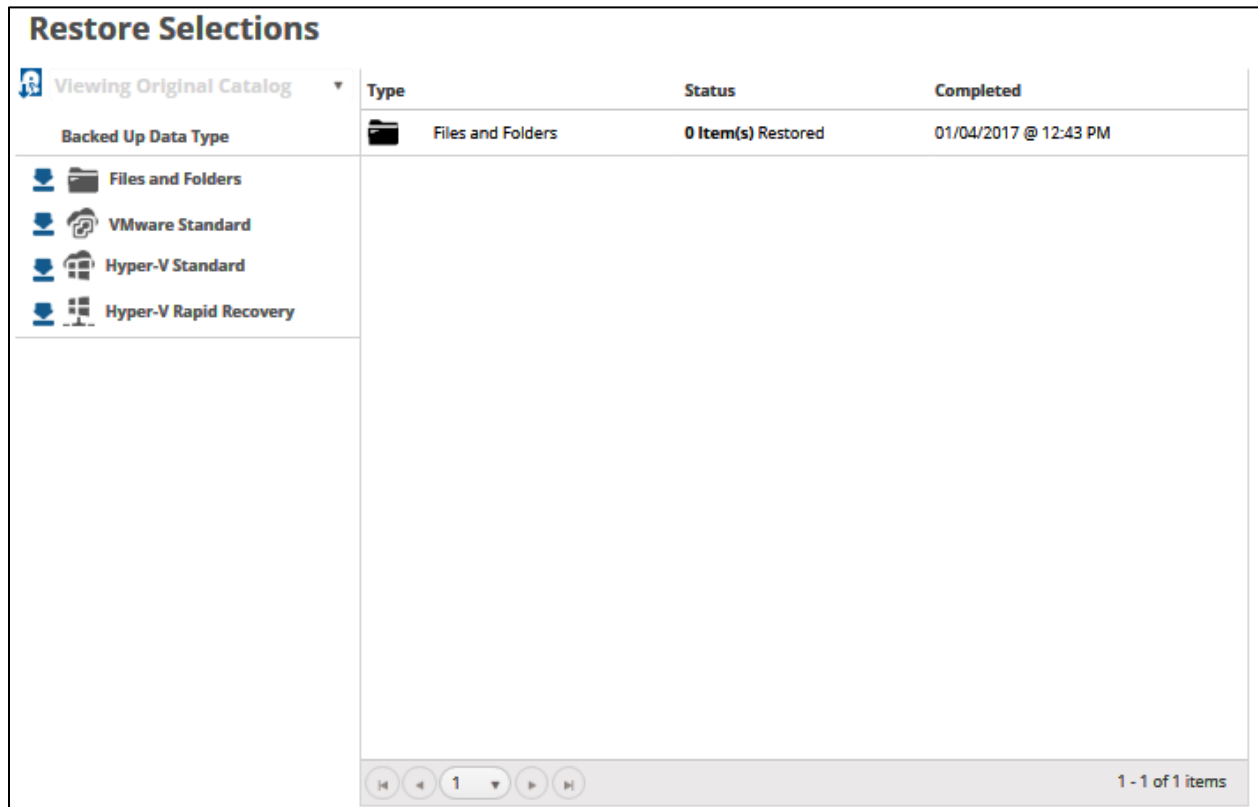
The Computer page is displayed.




2. Click the **Restore** tab.



The Restore Selections page is displayed.



3. Click the restore  icon of the backup type you want to restore.






The Select page is displayed.


4. In the Current Selection pane, select the VMs and revisions you would like to restore.

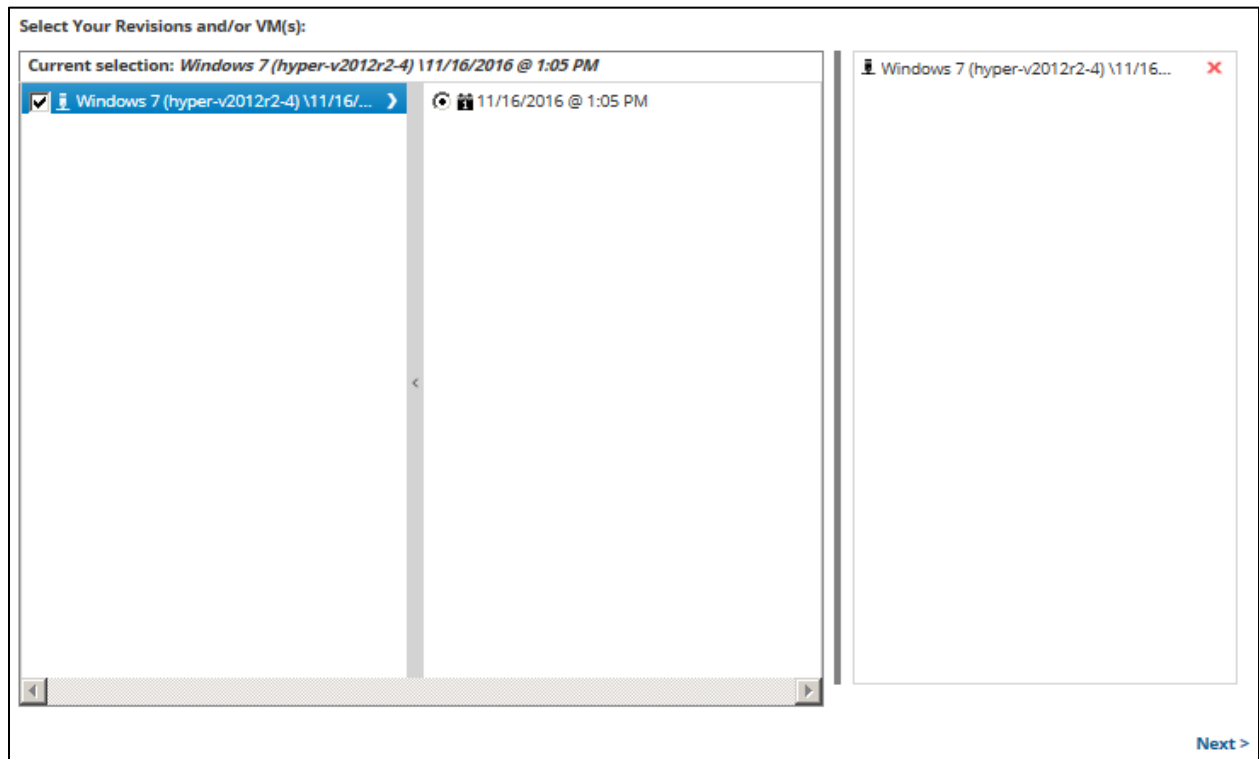
**Notes:**

- You can choose only one revision to restore per selected VM.
- The same revision can be restored multiple times in different locations.
- Multiple VMs can be restored simultaneously.

Clicking the arrow  at the right of the items displays more revisions.



The selection is displayed in the far right pane. Click the remove  icon to remove any selections, or clear the item check box.



5. Click **Next**.



The Destination page is displayed.

Select Destination Summary

**Where Do You Want To Restore?**  
Select the destination of your restore.

**Destination**  
Choose where the data is restored

Path:  **Browse...**

**Information**

- Upon restore, a new directory for each selected VM is created in the destination directory and each VM's associated files are restored into their respective, created directory.
- Once restored, the VM files can be imported into Hyper-V

< Previous Next >

**Notes:**

- Upon restore, a new directory for each selected VM is created in the destination directory and each VM's associated files are restored into their respective, created directory.
- Once restored, the VM files can be imported into Hyper-V.

6. At the Path field, type a path, or click the **Browse** button to select the destination of your restore.

**Browse option**

- a. Click the **Browse** button.

The folder options are displayed.



Please select a folder below:

**Current selection:**

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:

b. Select the destination.

The OK button is activated.

c. Click **OK**.

The address is displayed in the Path field.

Path:

To add a network location that is not listed, perform the step below.

### **Adding a Network Location**



- a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:  ✕ +

The add button is activated.

- b. Click the add  button.

7. After selecting the destination of your restore, click **Next**.

The Summary page is displayed.

Select

Destination

Summary

Select

Destination

Hyper-V Manager

Recovering 1 VM(s)

C:\System Volume Information

If you are restoring VM(s) to a **Windows Server 2008** or **Windows Server 2008 R2** hypervisor:

**Step 1:** Create a VM using the **New Virtual Machine** wizard.

**Step 2:** In the **New Virtual Machine** wizard, attach the VHD from the restore directory to the VM you're creating.

If you are restoring VM(s) to a **Windows Server 2012**, **2012 R2** or **Windows 8** hypervisor:

**Step 1:** Use the **Import Virtual Machine** feature in the **Action** menu.

**Step 2:** Choose one of the following import options:

- **Register:** Choose this option if you are restoring to the destination from which you will run the VM(s). The recovered VM will retain its original ID.
- **Restore:** Choose this option if you are restoring a VM(s) to a temporary location. Hyper-V will move the files to the appropriate location and register the VM(s) for you. The recovered VM(s) retain its original ID.
- **Copy:** Choose this option if you intend to import the recovered VM(s) multiple times (e.g. you are using the VM as a template). A new ID will be generated and used to register the VM.

Notes

- Please make sure to add the recovered VM(s) to a backup set to ensure that they are backed up properly.

< Previous

Cancel

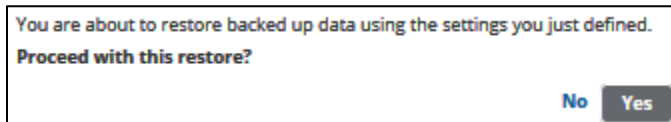
Restore



**Important:** Make sure to add the recovered VMs to a backup set so they are backed up properly. See *Hyper-V Manager Virtual Machines Import Options* for more information.

8. Verify your selections, and then click the **Restore** button.

The confirmation pop-up is displayed.



9. Click **Yes**.

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

## Restoring VMs to a Windows Server 2008, or Windows Server 2008 R2 Hypervisor

If you are restoring VMs to a Windows Server 2008, or Windows Server 2008 R2 hypervisor, perform the following tasks.

1. Create a VM using the New Virtual Machine wizard.
2. In the New Virtual Machine wizard, attach the VHD files from the restore directory to the VM you are creating.



## Restoring VMs to a Windows Server 2012, 2012 R2, or Windows 8 Hypervisor

If you are restoring VMs to a Windows Server 2012, 2012 R2, or Windows 8 hypervisor, perform the following tasks.

1. Use the Import Virtual Machine feature in the Actions menu.
2. Choose one of the following import options:
  - **Register:** Choose this option if you are restoring to the destination from which to run the VM). The recovered VM retains its original ID.
  - **Restore:** Choose this option if you are restoring a VMs to a temporary location. Hyper-V moves the files to the appropriate location and registers the VMs. The recovered VM retains its original ID.
  - **Copy:** Choose this option if you intend to import the recovered VMs multiple times (for example, you are using the VM as a template). A new ID is generated and used to register the VM.



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## Hyper-V Standard Backup and Restore





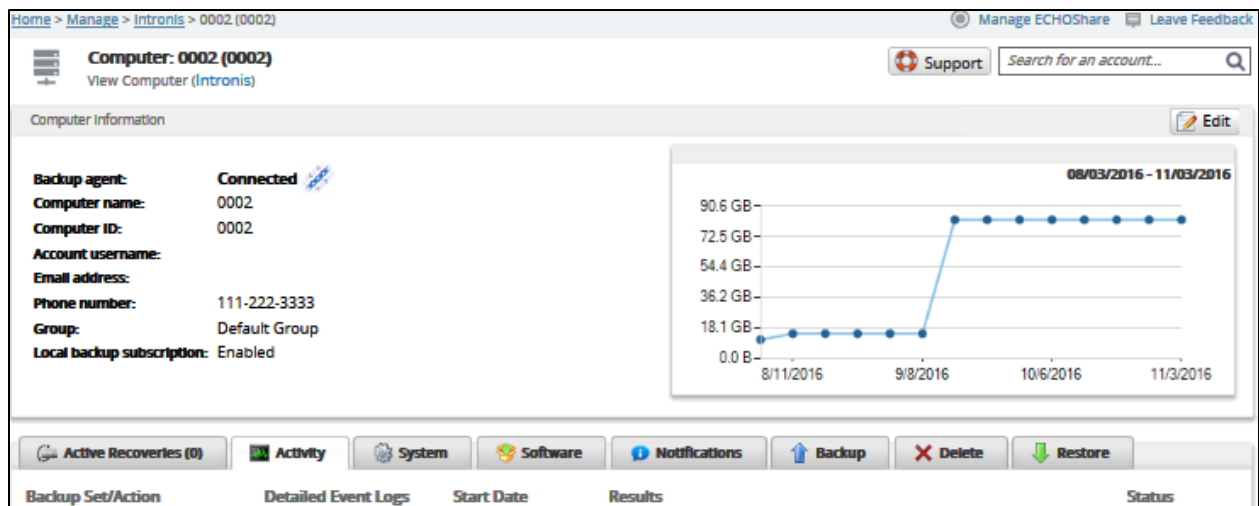
## Chapter 3. Hyper-V Standard Delete

**CAUTION!** Deleted data is completely purged and can no longer be accessed or restored.

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

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


The Computer page is displayed.



2. Select the **Delete** tab.

The Delete Selections page is displayed.

Delete Selections			
Backed Up Data Type	Type	Status	Completed
Files and Folders	Files & Folders	4 Item(s) Deleted	11/04/2016 @ 10:33 AM
SQL Server			
VMware Standard			
VMware QuickSpin			
Physical Imaging			

3. Select the delete  icon beside the backup type you want to delete.



The Delete page is displayed.

## Delete

**Hyper-V Standard**

**What Hyper-V Standard Recovery VM(s) Would You Like to Delete?**  
Select from the available Hyper-V Standard Recovery VM(s) to delete

**Select Your Standard Recovery VM(s) and Revisions:**

Current selection:

☐ Windows 7(hyper-v2012r2-4)

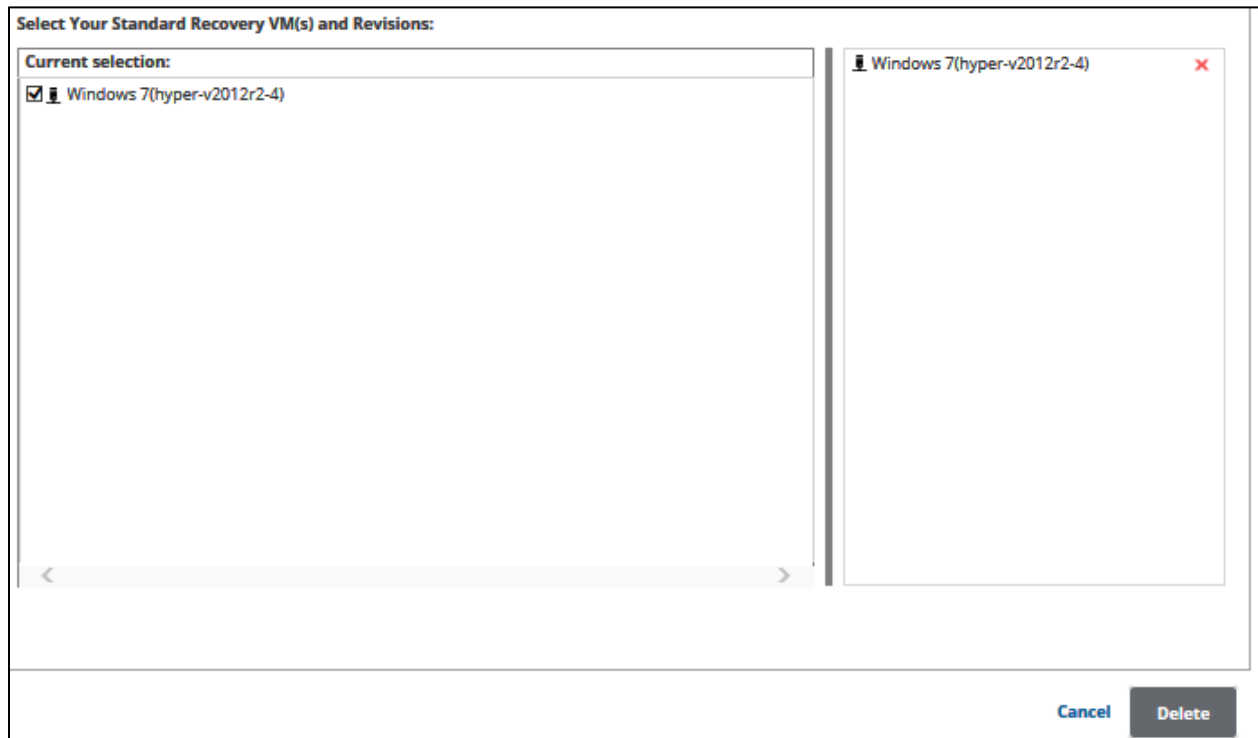
Select the items on the left you want to delete.

Cancel Delete

4. Select the check box of the VM you want to delete.



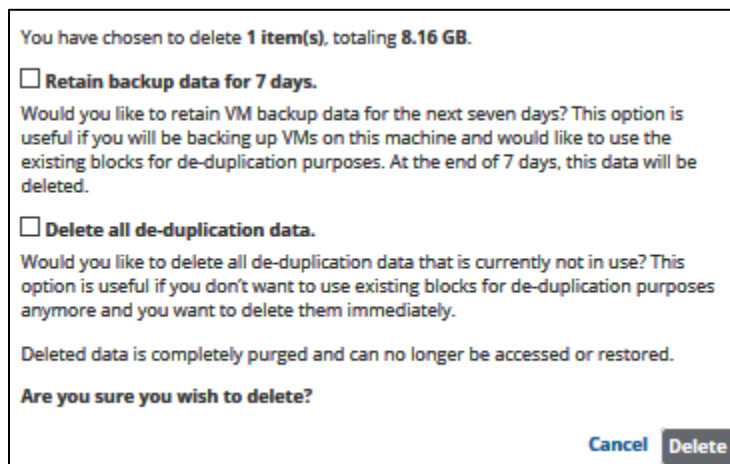
The selections for deletion are displayed in the right panel.



**Note:** Delete removes all revisions. You cannot delete specific revisions.

5. When satisfied with your selection, click the **Delete** button.

The Delete Confirmation pop-up is displayed.





6. Select the check box of one of the options. See *Hyper-V Standard Delete Options* for more information.
7. Click the **Delete** button.

The Delete Selections page is displayed with the latest status.

## Hyper-V Standard Delete Options

Hyper-V Standard backup sets use deduplication and block-level processing. For these backup sets, the following options are available on the Delete Selection screen:

- Retain backup data for 7 days
- Delete all deduplication data

### Retain Backup Data for 7 Days

By selecting the **Retain backup data for 7 days** check box, you can retain deleted data in your Local Vault for deduplication purposes for seven days. At the end of seven days, this data is deleted from your Local Vault.

This option is useful if you are backing up VMs on this machine and would like to use the existing blocks for de-duplication purposes. At the end of 7 days, this data is deleted.

If you choose not to select this option, the data that you have selected is deleted from the Local Vault immediately.

### Delete All Deduplication Data

By selecting the **Delete all deduplication data** check box, you can immediately delete any deduplication data not being used. This option forces a block-level cleanup when the delete finishes.

This option is useful if you do not want to use existing blocks for de-duplication purposes anymore and you want to delete them immediately.

**Note:** You cannot select both check boxes at the same time; selecting one disables the other.



## **PART X. HYPER-V RAPID RECOVERY BACKUP AND RESTORE**

This section includes the following chapters:

- Hyper-V Rapid Recovery Backup
- Hyper-V Rapid Recovery Restore
- Hyper-V Rapid Recovery Delete

See *Backup Agent Software Requirements* for more information.

### **Chapter 1. Hyper-V Rapid Recovery Backup**

This chapter includes the following topics:

- Hyper-V Rapid Recovery Backup Overview
- Backing Up Hyper-V Rapid Recovery
- Editing Hyper-V Rapid Recovery Backup Sets
- Removing Hyper-V Rapid Recovery Backup Sets

#### **Hyper-V Rapid Recovery Backup Overview**

Hyper-V Rapid Recovery is a backup set type that backs up full Hyper-V VMs to local storage and allows you to recover important servers quickly.

The recovery backs up the changes to protected VMs in a reverse incremental manner. This method allows the most recent state (and the one most likely to be recovered in a disaster) to be recovered in the shortest amount of time. In addition, this method provides a more stable revision chain and requires no scheduled consolidation.

With changed block tracking and an improved recovery point objective, the rapid recovery backup set tracks changes on protected VMs efficiently. This efficiency allows you to schedule VM backups up to every 15 minutes. In the case of a disaster, almost no data is lost because the recent known good state is only a few minutes.

The backup destination is where all your backup data (fulls and incrementals) are stored locally.

Local Storage can be on the following:

- Directly attached storage location
- Network share
- Remote share
- Standard disk (512)



- 4Kn disk
- Sparse file

When backing up a VHD disk on a 4Kn disk, the backup data is converted to a VHDX format.

Temporary space of 1 GB is recommended for Hyper-V backups.

**Note:** The agent must be installed on the Hyper-V host.

## Hyper-V Rapid Recovery Backup Tabs

Figure 29 displays the backup tabs.

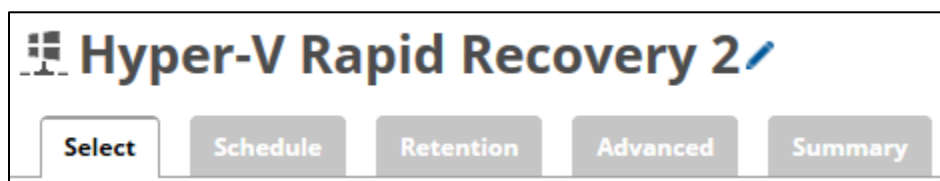


Figure 29. Hyper-V Rapid Recovery Backup Tabs.

The following table provides a description of the page features.

Page	Description
Select	You are required to select at least one VM.
Schedule	Optionally select the schedule.
Retention	<p>Optionally determine how many versions of each file you would like to retain.</p> <p>You can retain up to 99 revisions per virtual machine. With the default schedule of backing up every 1 hour and keeping 96 versions, up to 4 days of recoverable versions are retained at the destination.</p> <p>The backup set preserves the current state of the virtual machines only. User generated snapshots are not saved.</p> <p>Optionally, enable advanced archiving.</p>
Advanced	<p>At the Temporary Folder section, specify where the temporary folder used in backing up the VM resides.</p> <p>At the Backup Mode section, optionally select the <b>Enable Offline Backup Support</b> check box.</p> <p><b>Notes:</b></p> <p>When enabled, the virtual machine may become unavailable during the snapshot process.</p> <p>The software attempts an online backup first. If unable, an offline backup is created.</p>



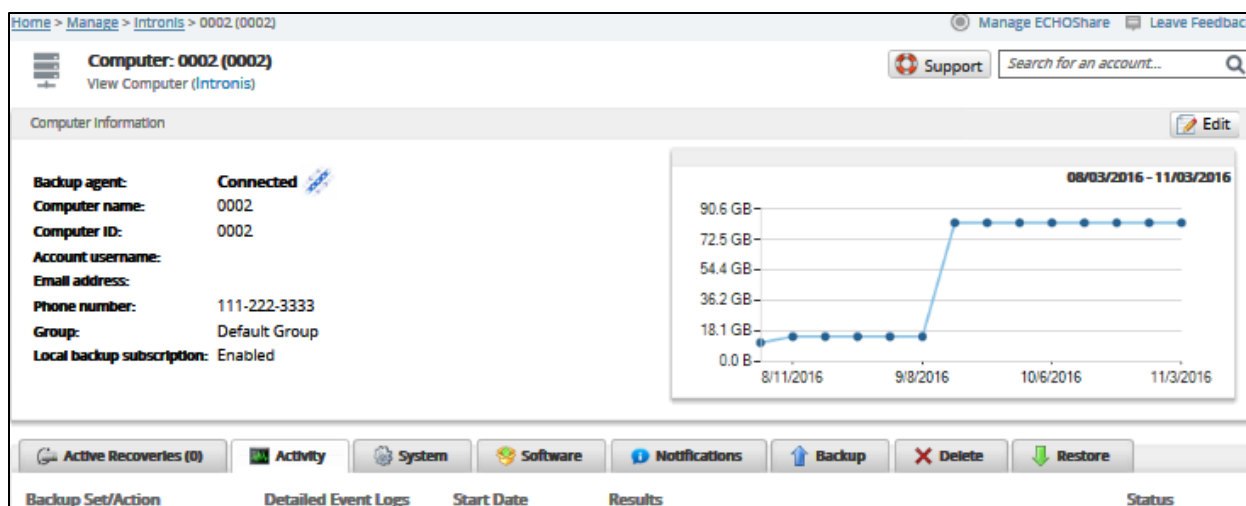
Page	Description
	The virtual machine is paused and put into a saved state while the snapshot is taken, and then the virtual machine resumes operation.
Summary	<p>A list of your selections is displayed.</p> <p>Changed locations of the destination hosts of the recovery VMs, are not changed until the next backup set is run.</p>

### Backing up Hyper-V Rapid Recovery

To back up Hyper-V Rapid Recovery, perform the following steps.

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

The Computer page is displayed.





2. Click the **Backup** tab.

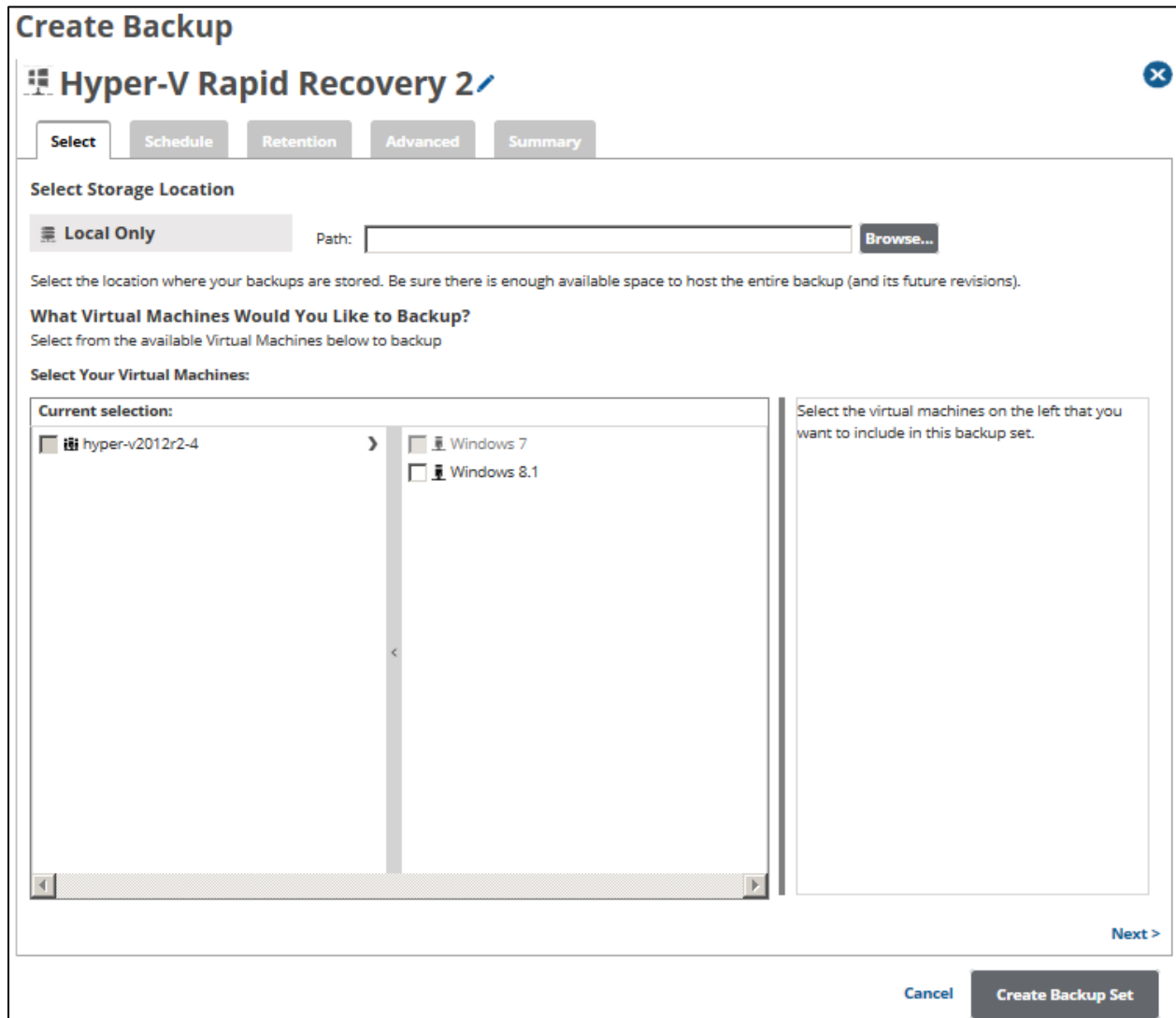
The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+  Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
+  Physical Imaging (2)		Files and Folders 2		--	<input type="checkbox"/>		
+  Hyper-V Standard		Files and Folders 3		--	<input type="checkbox"/>		
+  Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+  VMware Standard (1)		Physical Imaging 1		--	<input type="checkbox"/>		
+  VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+  SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+  Exchange Mailbox Level		VMWare QuickSpin 1		--	<input type="checkbox"/>		
		VMWare QuickSpin 2		--	<input type="checkbox"/>		
		VMWare QuickSpin 3		--	<input type="checkbox"/>		
		SQL 1		--	<input type="checkbox"/>		
		SQL 2		--	<input type="checkbox"/>		
							1 - 12 of 12 items

3. In the Backup Type pane, click the select icon beside **Hyper-V Rapid Recovery** to run the backup type.



The Select page is displayed.



**Create Backup**

**Hyper-V Rapid Recovery 2**

Select Schedule Retention Advanced Summary

**Select Storage Location**

Local Only Path:  Browse...

Select the location where your backups are stored. Be sure there is enough available space to host the entire backup (and its future revisions).

**What Virtual Machines Would You Like to Backup?**

Select from the available Virtual Machines below to backup

**Select Your Virtual Machines:**

**Current selection:**

- ☒ hyper-v2012r2-4
- ☐ Windows 7
- ☐ Windows 8.1

Select the virtual machines on the left that you want to include in this backup set.

Next >

Cancel Create Backup Set

- Click the Backup Name to provide a new name for your backup set, or accept the default.  
See *Changing Backup Set Names*.
- At the Select Storage Location Path field, type a path, or click the **Browse** button to select the destination of your backup.

### Browse option

- Click the **Browse** button.

The folder options are displayed.



Please select a folder below:

**Current selection:**

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:

b. Select the destination.

The OK button is activated.

c. Click **OK**.

The address is displayed in the Path field.

Path:

To add a network location that is not listed, perform the step below.

### **Adding a Network Location**



- a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):


Path:  ✕ +


The add button is activated.

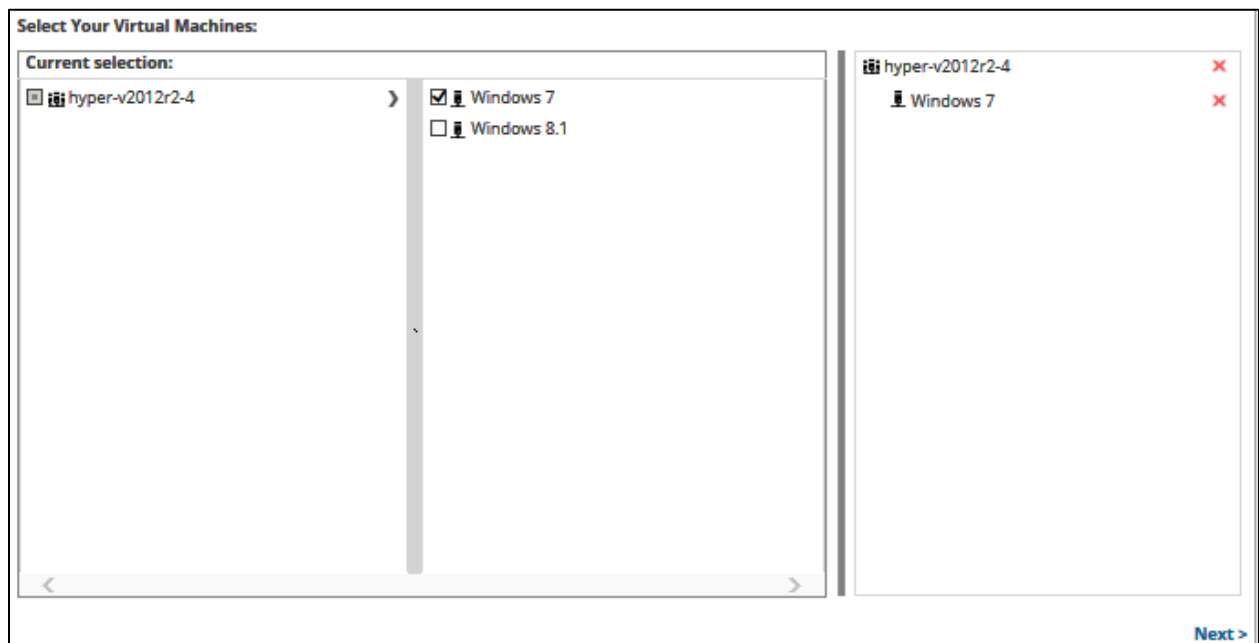
- b. Click the add  button.

6. In the Current selection pane, select the virtual machines you would like to back up.

**Note:** Any VMs that already are included in other backup sets are grayed out. Multiple VMs can be included in the same backup set.

Clicking the arrow  at the right of the VM displays more revisions of the VM.

Your selections are displayed in the far right pane. Click the remove  icon to remove any selections, or clear the item check box.





**TIP:** If you want to accept the default settings for the Schedule, Retention, and Advanced pages, you can back up now by clicking the **Create Backup Set** button.

To change the default settings, continue with the following steps, or select a settings tab.

7. At the Name field, type a unique name for the backup set. See *Changing Backup Set Names*.
8. After making your selections, click **Next**.

The Schedule page is displayed.

See *Backup Schedules* for more information.

9. Accept or edit the default schedule. See *Backup Schedules* for more information.

**Notes:**

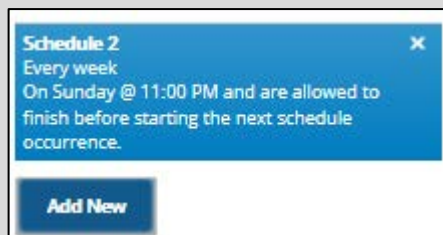
- The default schedule is every hour.
- Multiple weekly schedules are permitted (as long as they do not overlap).
- Minutely and hourly and daily recurrences cannot be mixed with weekly recurrences.
- There can only be one minutely or hourly or daily schedule configured.
- The **Allow to Finish** check box is always selected and grayed-out.



### **Adding a New Daily or Weekly Schedule**

a. To add additional daily or weekly schedules, click the **Add New** button.

The new Schedule is displayed and the **Add New** button is highlighted, as shown below.



b. Make your selections.

The new schedule details are displayed.

### **Editing Existing Daily or Weekly Schedules**

a. To edit existing schedules, in the Schedule column, click the schedule details.

The Schedule is highlighted.

b. Select your new daily or weekly times.

Your schedule is displayed in the Schedule column. Click the remove  icon to delete schedule.

10. After setting your schedule, click **Next**.



The Retention page is displayed.

Select Schedule **Retention** Advanced Summary

**Archiving Rules**  
Determine how many versions of each data you would like to retain. Keep  recoverable versions of backups at the destination.

**Notes**

- 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.
- The backup set preserves the current state of the virtual machine(s) only. User generated snapshots are not saved.

< Previous Next >

**Note:** The default retention is 96 recoverable versions of backups at the destination. The number of revisions can be set to any number between 1 and 99.

11. Specify how many versions of each data you would like to retain, and then click **Next**.

The Advanced page is displayed.

Select Schedule Retention **Advanced** Summary

**Temporary Folder**  
Define where the temporary folder that's used in backing up VM(s) resides. Manually type in a path or browse to the desired location. Path:  Browse...

**Backup Mode**  
This software will attempt to make an online backup first. If unable, an offline backup is created, pausing the virtual machine into a saved state while the snapshot is taken and the virtual machine is resumed.

☐ **Enable Offline Backup Support**  
When enabled, the virtual machine may become unavailable during the snapshot process.

< Previous Next >

**Requirement:** You must specify a temporary folder located on a disk with sufficient space.



12. At the Temporary Folder field, accept the default, type a new path, or click the **Browse** button to locate the temporary folder that is used in backing up.

## Browse option

- a. Click the **Browse** button.

The folder options are displayed.

Please select a folder below:

Current selection:

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:  +

Cancel OK

- b. Select the destination.

The OK button is activated.

- c. Click **OK**.

The address is displayed in the Path field.



Path:

d. To add a network location that is not listed, perform the step below.

**Adding a Network Location**

a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:

The add button is activated.

b. Click the add  button.

13. At the Backup Mode section, optionally select the **Enable Offline Backup Support** check box.

**Notes:**

- When enabled, the virtual machine may become unavailable during the snapshot process.
- The software attempts an online backup first. If unable, an offline backup is created. The virtual machine is paused and put into a saved state while the snapshot is taken, and then the virtual machine resumes operation. VMs in a saved or a paused state can be backed up. The imported recovery VMs are in a saved state in both cases.

14. Click **Next**.





The Summary page is displayed.

SelectScheduleRetentionAdvancedSummary

Select

Contains: 1 VM(s) selected, size: 8.32 GB (estimated).  
This host (hyper-v2012r2-4) is subject to a Hyper-V host license.

Destination C:\System Volume Information

Schedule

Schedule 1 Every 1 hour(s) and are allowed to finish before starting the next schedule occurrence.

Retention

You will be able to recover up to 96 versions(s) from the past 4 day(s).

Advanced

Temp Location: C:\Windows\TEMP\BackupAgent

Enable Offline Backup Support

< Previous

CancelCreate Backup Set

15. Verify your selections, and then click **Create Backup Set**.

Your scheduled backup is displayed on the Backup Selections page.

Backup Selections						
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove
Files and Folders		Hyper-V Standard 1		10/05/2016 @ 11:00 PM		
Physical Imaging		Hyper-V Rapid Recovery 1		Recurring		
Hyper-V Standard (1)						

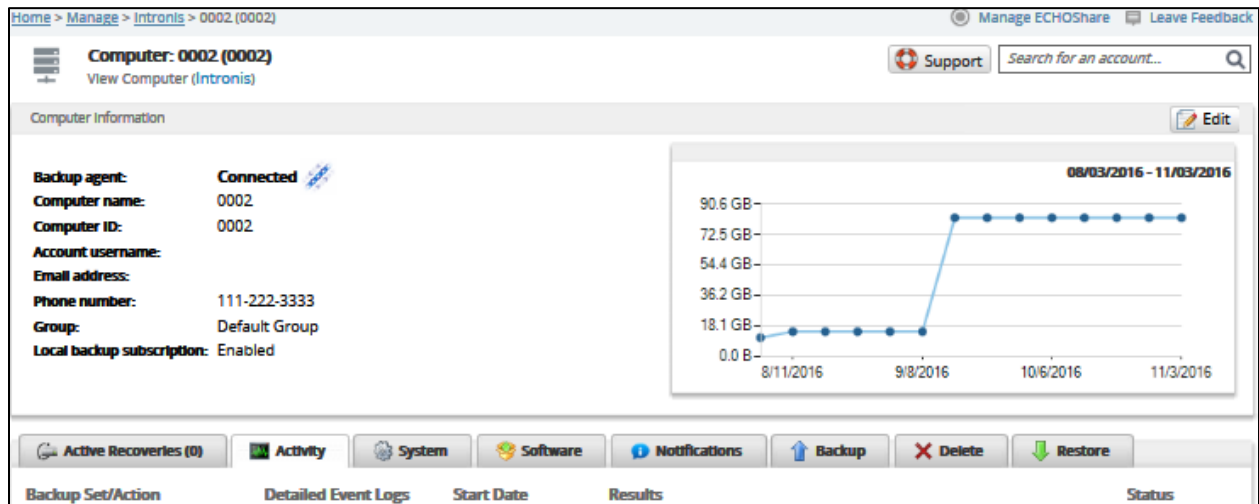


### Editing Hyper-V Rapid Recovery Backup Sets

To edit a Hyper-V Rapid Recovery backup, perform the following steps.

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

The Computer page is displayed.




2. Click the **Backup** tab.

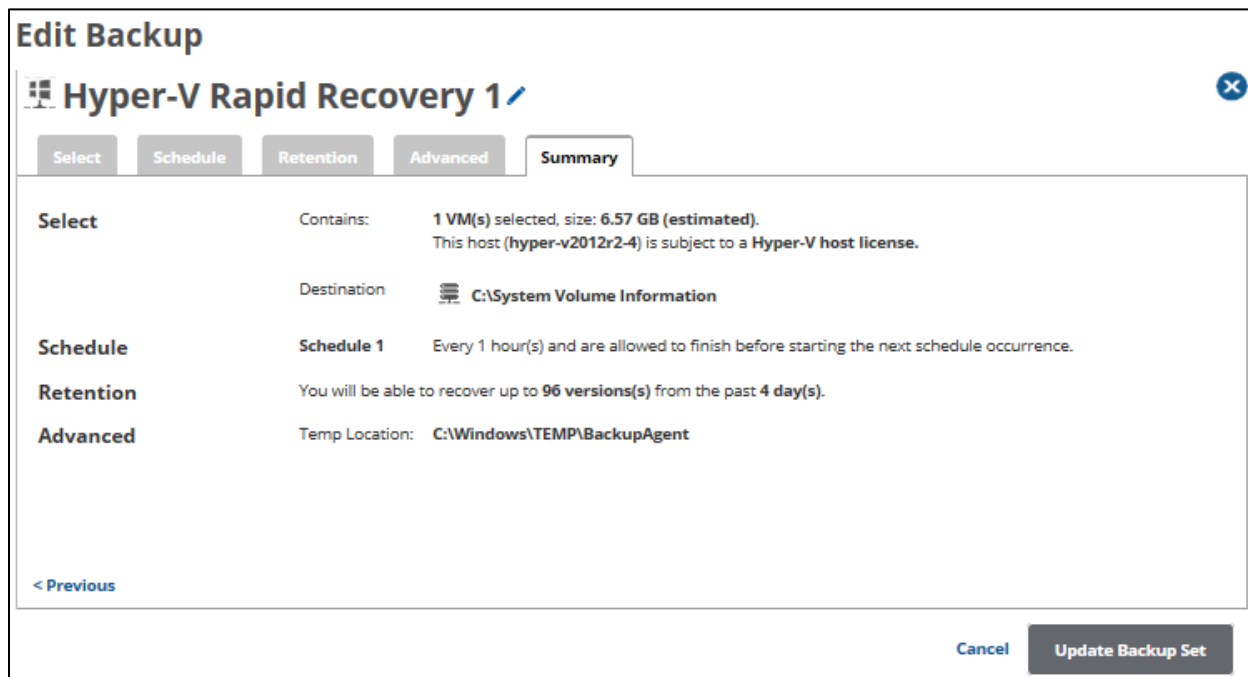


The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+ Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
+ Physical Imaging (2)		Files and Folders 2		--	<input type="checkbox"/>		
+ Hyper-V Standard		Files and Folders 3		--	<input type="checkbox"/>		
+ Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ VMware Standard (1)		Physical Imaging 1		--	<input type="checkbox"/>		
+ VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ Exchange Mailbox Level		VMware QuickSpin 1		--	<input type="checkbox"/>		
		VMware QuickSpin 2		--	<input type="checkbox"/>		
		VMware QuickSpin 3		--	<input type="checkbox"/>		
		SQL 1		--	<input type="checkbox"/>		
		SQL 2		--	<input type="checkbox"/>		
<div>  1  </div>							1 - 12 of 12 items

3. Click the edit  icon of the backup selection to edit.

The Backup Set Summary page is displayed.




**Edit Backup**

**Hyper-V Rapid Recovery 1**

Select Schedule Retention Advanced **Summary**

**Select** Contains: **1 VM(s)** selected, size: **6.57 GB (estimated)**.  
This host (hyper-v2012r2-4) is subject to a Hyper-V host license.

Destination  **C:\System Volume Information**

**Schedule** **Schedule 1** Every 1 hour(s) and are allowed to finish before starting the next schedule occurrence.

**Retention** You will be able to recover up to **96 versions(s)** from the past **4 day(s)**.

**Advanced** Temp Location: **C:\Windows\TEMP\BackupAgent**

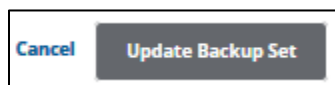
< Previous

Cancel Update Backup Set

- Select any of the tabs to display and edit your current settings. See *Backing Up Hyper-V Rapid Recovery* for details.

**Notes:**

- The backup set name may be edited. See *Changing Backup Set Names*.
  - The Storage Location Destination options on the Select page cannot be changed.
- After making all your edits, click the **Update Backup Set** button at the bottom of any page, as shown below.



Cancel Update Backup Set

The Backup Selections page is displayed with your current backup status.




## Removing Hyper-V Rapid Recovery Backup Sets

To remove a Hyper-V Rapid Recovery backup set, perform the following steps.

1. Navigate to the Backup Selections page. See *Backing up Hyper-V Rapid Recovery* for instructions.

The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+ Files and Folders (4)	🔧 📁	Files and Folders 1	▶	11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>	✕	
		Files and Folders 2	▶	--	<input type="checkbox"/>	✕	
		Files and Folders 3	▶	--	<input type="checkbox"/>	✕	
		Files and Folders 4	▶	11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	✕	
+ Hyper-V Standard	🔧 📁	Files and Folders 4	▶	11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	✕	
+ Hyper-V Rapid Recovery	🔧 📁	Files and Folders 4	▶	11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	✕	
+ VMware Standard (1)	🔧 🖥	Physical Imaging 1	▶	--	<input type="checkbox"/>	✕	
+ VMware QuickSpin (3)	🔧 🖥	Physical Imaging 2	▶	11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	✕	
+ SQL Server (2)	🔧 🗄	VMware Standard 1	▶	11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	✕	
+ Exchange Mailbox Level	🔧 🗄	VMware QuickSpin 1	▶	--	<input type="checkbox"/>	✕	
	🔧 🗄	VMware QuickSpin 2	▶	--	<input type="checkbox"/>	✕	
	🔧 🗄	VMware QuickSpin 3	▶	--	<input type="checkbox"/>	✕	
	🔧 🗄	SQL 1	▶	--	<input type="checkbox"/>	✕	
	🔧 🗄	SQL 2	▶	--	<input type="checkbox"/>	✕	

2. At the relevant backup set row, click the remove  icon to remove the backup set.

The confirmation pop-up is displayed.

**Delete Rapid Recovery Backup Set "Hyper-V Rapid Recovery 1" ?**

In addition to deleting the backup set, you can also delete the VM(s) from the Rapid Recovery destination by checking the checkbox below.

☐ Delete the VM(s) from the Rapid Recovery destination

**Do you really want to delete this Rapid Recovery backup set?**

No Yes



3. Optionally select the **Delete the VM(s) from the Rapid Recovery destination** check box, and then click **Yes**.

The backup set is removed.



## Chapter 2. Hyper-V Rapid Recovery Restore

This chapter includes the following topics:

- Overview
- Hyper-V Rapid Recovery Restore Tabs
- Restoring Hyper-V Rapid Recovery Backups
- Hyper-V Object-level Rapid Recovery Restore Tabs
- Restoring Hyper-V Object-level Rapid Recovery

### Overview

Rapid Recovery is a restore option that allows you to recover a failed system as a Hyper-V virtual machine in fifteen minutes or less from local storage.

The major benefit of Hyper-V Rapid Recovery is the new set of recovery options afforded to the small business to recover from any local business outage. Each option covers specific customer use cases and insures against business downtime. These options include:

- Rapid Recovery – recovery-in-place
- Rapid Recovery – object-level recovery
- Copy-mode recovery

### Rapid Recovery – Recovery-in-Place

The main Rapid Recovery option for these backups is a recovery-in-place, in which your Hyper-V files are made available very quickly so that they can be imported into Hyper-V Manager and booted.

### Rapid Recovery – Object-level Recovery

This option allows you to recover individual files and folders from a customer's local Hyper-V backup directly through the management portal. This feature allows granular restore of data in protected Hyper-V VMs without having to mount the disks and explore their contents through Windows explorer.

### Copy-mode Recovery

You also can do a full-copy restore of VM data to another location. This type of restore is useful for providing a more permanent recovery solution. The full contents of the VM's disks (not just a differencing disk) are copied to a location that can serve as better permanent storage from which to run a production VM. This restore is useful for getting a copy of a VM from a certain point-in-time to either run or store elsewhere.



## Hyper-V Rapid Recovery Restore Tabs

Figure 30 displays the restore tabs.

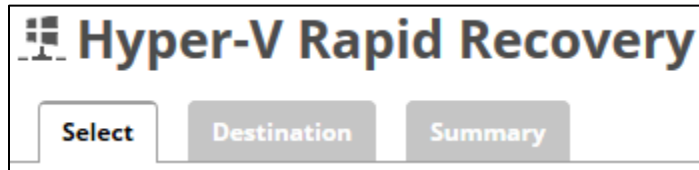


Figure 30. Hyper-V Rapid Recovery Restore Tabs.

The following table provides a description of the page features.

Page	Description
Select	Select at least one available VM to restore.
Destination	<p>Choose where the data is restored:</p> <p><b>Rapid Recovery of VM files at the original storage location</b></p> <p>This option is the quickest and makes the VM files accessible at their current storage location for import into Hyper-V manager.</p> <p><b>Restore all VM files to this destination</b></p> <p>This option performs a full copy of the data from storage and is slower than the Rapid Recovery option.</p>
Summary	A list of your selections is displayed.



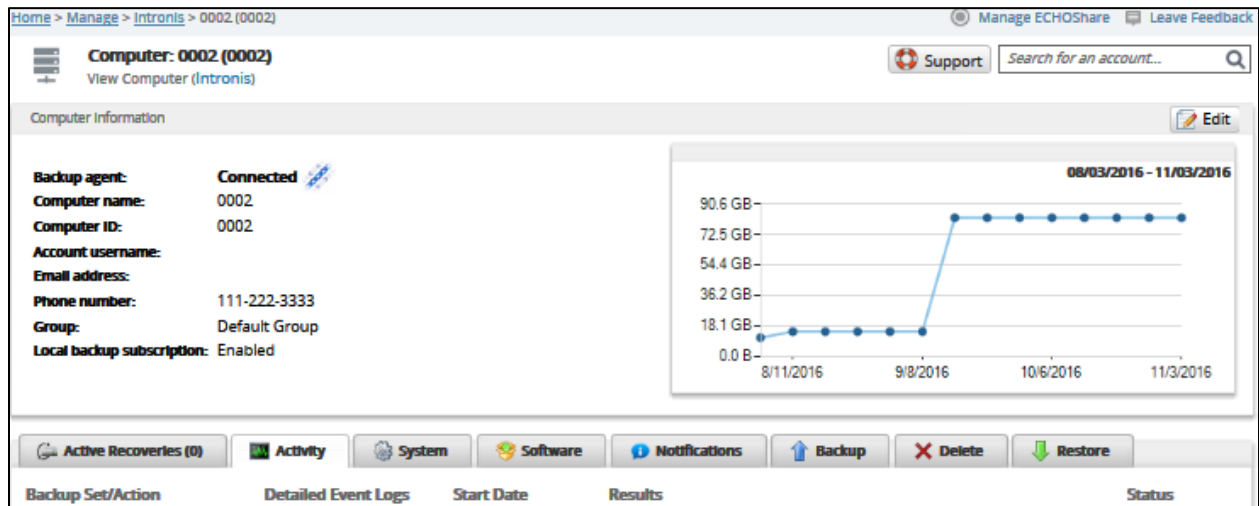


### Restoring Hyper-V Rapid Recovery Backups

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

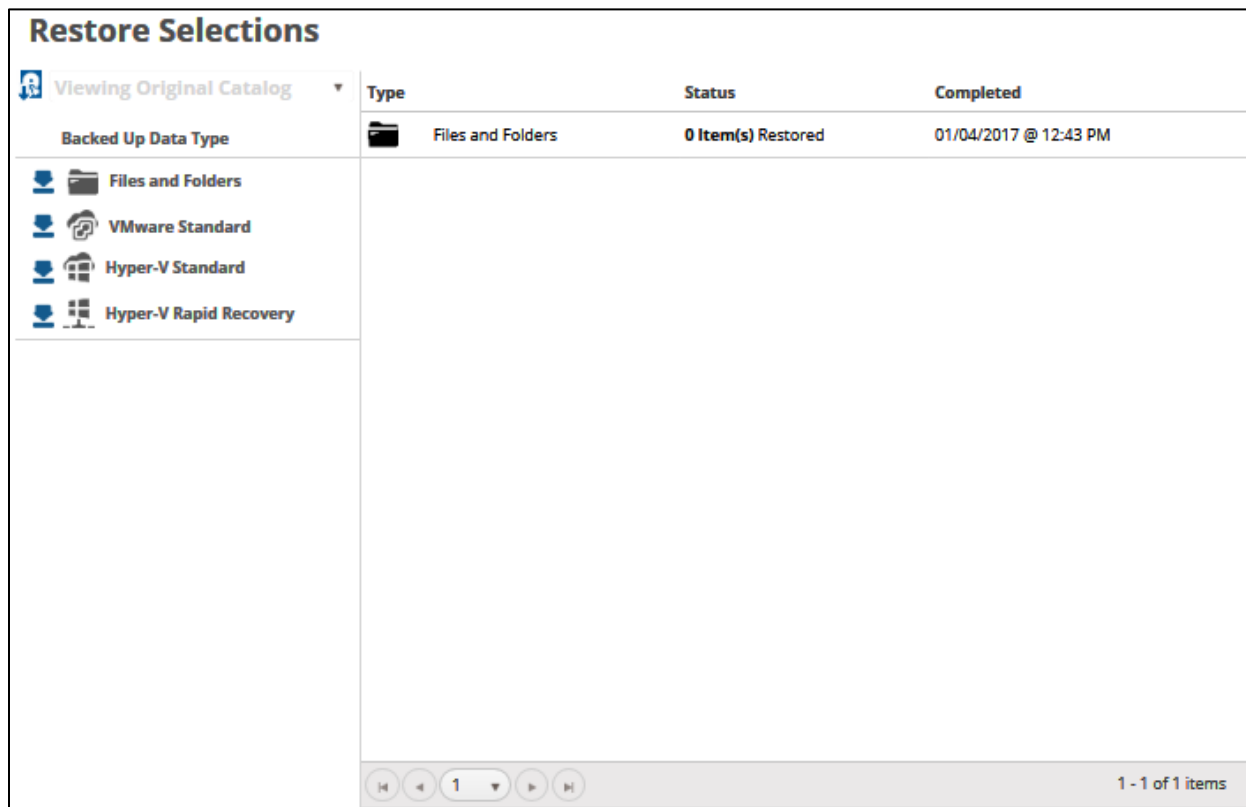
1. Navigate to the Computer page. See *Navigating to the Computer Page* for instructions.


The Computer page is displayed.



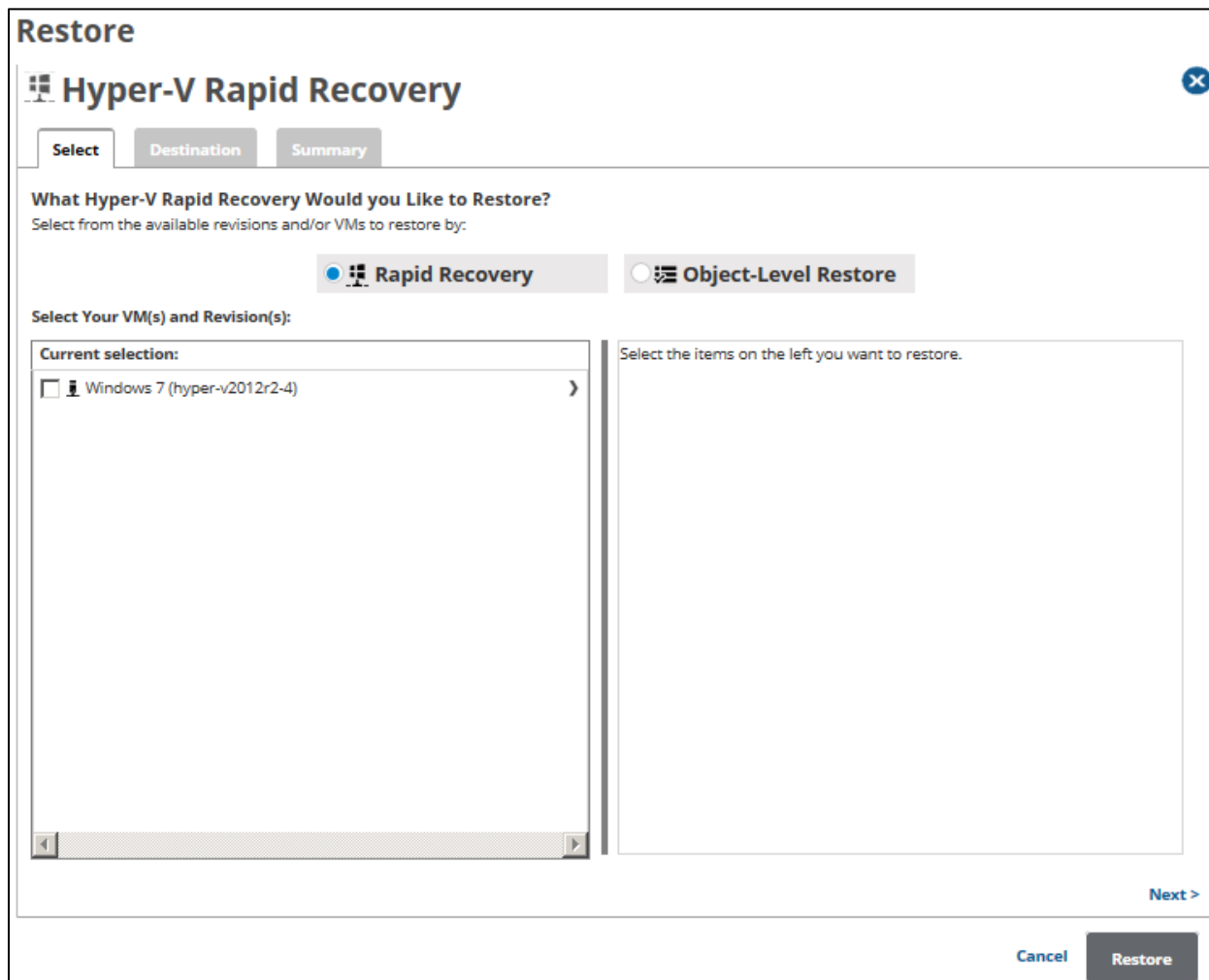
2. Click the **Restore** tab.

The Restore Selections page is displayed.




- Click the restore  icon of the backup type you want to restore.

The Select page is displayed with **Rapid Recovery** selected as the default.




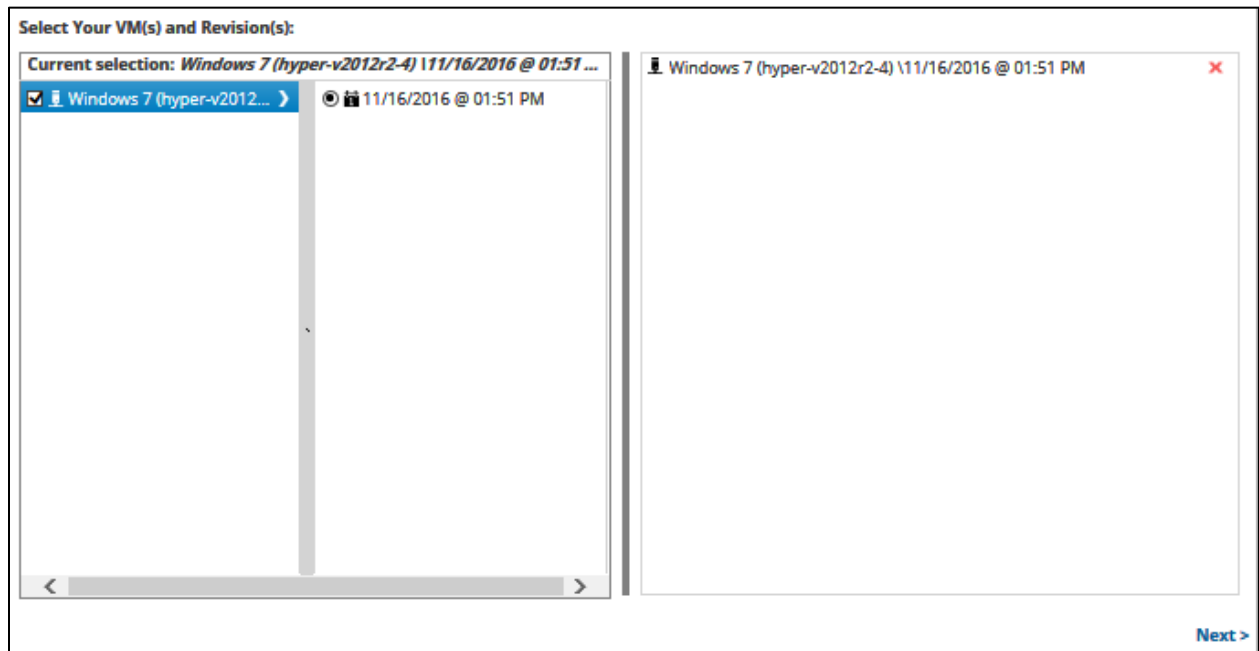
4. In the Current Selection pane, select the VM and revisions you would like to restore.

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

Clicking the arrow  at the right of the items displays more revisions.

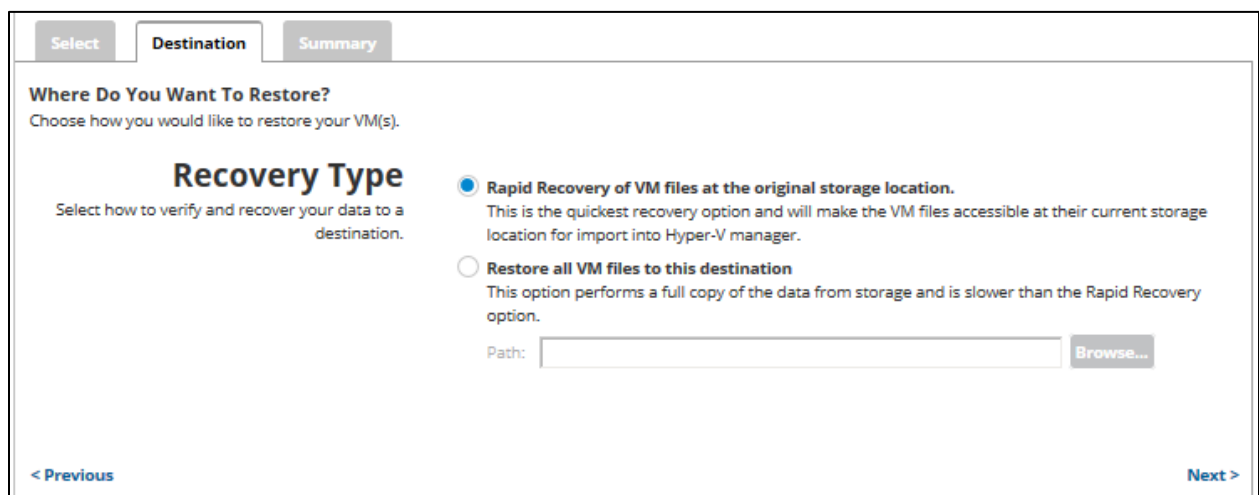


The selection is displayed in the far right pane. Click the remove  icon to remove any selections, or clear the item check box.



5. Click **Next**.

The Destination page is displayed.





**Note:** The following table provides a description of the restore options.

Restore Option	Description
<b>Rapid Recovery of VM files at the original storage location.</b>	This option provides the fastest recovery time. A differencing disk and configuration file in the existing local storage destination are created that can be imported into Hyper-V Manager.
<b>Restore all VM files to this destination.</b>	This option recovers the full VMs files (virtual hard disks and configuration) to an alternate location. Because it performs a copy process, it takes longer. Use this option to archive a copy of your VM or to restore to a storage more suited to run the VM."

6. Select a restore option radio button.
7. If you selected the **Restore all VM files to this destination** option, at the Path field, type a path, or click the **Browse** button to select the destination of your restore.

**Browse option**

- a. Click the **Browse** button.

The folder options are displayed.



Please select a folder below:

**Current selection:**

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:

b. Select the destination.

The OK button is activated.

c. Click **OK**.

The address is displayed in the Path field.

Path:

To add a network location that is not listed, perform the step below.

### **Adding a Network Location**



- a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:  X +

The add button is activated.

- b. Click the add + button.

8. After selecting the destination of your restore, click **Next**.

The Summary page is displayed.

Select

Destination

Summary

Select

Destination

Hyper-V Manager

Recovering 1 VM(s), size: 6.48 GB (estimated).

Virtual Machine	Location
Windows 7	C:\System Volume Information\LocalStorage-a71...

**Rapid Recovery of VM files at the original storage location.**

If you are restoring VM(s) to a **Windows Server 2008** or **Windows Server 2008 R2** hypervisor:

**Step 1:** Create a VM using the **New Virtual Machine** wizard.

**Step 2:** In the **New Virtual Machine** wizard, attach the **VHD** files from the restore directory to the VM you're creating.

If you are restoring VM(s) to a **Windows Server 2012**, **2012 R2** or **Windows 8** hypervisor:

**Step 1:** Use the **Import Virtual Machine** feature in the **Actions** menu.

**Step 2:** Choose one of the following import options:

- **Register:** Choose this option if you are restoring to the destination from which you will run the VM(s). The recovered VM will retain its original ID
- **Restore:** Choose this option if you are restoring a VM(s) to a temporary location. Hyper-V will move the files to the appropriate location and register the VM(s) for you. The recovered VM(s) retains its original ID
- **Copy:** Choose this option if you intend to import the recovered VM(s) multiple times (e.g. you are using the VM as a template). A new ID will be generated and used to register the VM

**Notes**

- Subsequent backups of the VM(s) selected for recovery will fail as long as the recovery is active. In order to resume backups you have to end the recovery.

[< Previous](#)

Cancel

Restore

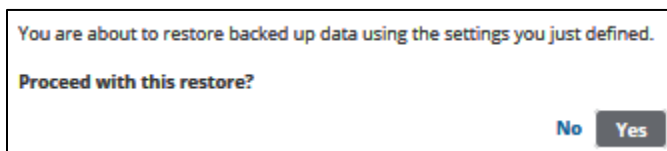
**Important:** Make sure to add the recovered VMs to a backup set so they are backed up properly. See *Hyper-V Manager Virtual Machines Import Options* for more information.

**Notes:**

- Subsequent backups of the VMs selected for recovery fail as long as the recovery is active. To resume backups, you must end the recovery.
- Subsequent restores also fail for active recoveries.





9. Verify your selections, and then click the **Restore** button.

The confirmation pop-up is displayed.



10. Click **Yes**.

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

Restore Selections			
Restore Type	Type	Status	Completed
 Hyper-V Standard	 Hyper-V Rapid Recovery	1 Item(s) Restored	10/6/2016 @ 11:31 AM
 Hyper-V Rapid Recovery	 Hyper-V Standard	1 Item(s) Restored	10/5/2016 @ 12:53 PM

## Restoring VMs to a Windows Server 2008, or Windows Server 2008 R2 Hypervisor

If you are restoring VMs to a Windows Server 2008, or Windows Server 2008 R2 hypervisor, perform the following tasks.

1. Create a VM using the New Virtual Machine wizard.
2. In the New Virtual Machine wizard, attach the VHD files from the restore directory to the VM you are creating.





## Restoring VMs to a Windows Server 2012, 2012 R2, or Windows 8 Hypervisor

If you are restoring VMs to a Windows Server 2012, 2012 R2, or Windows 8 hypervisor, perform the following tasks.

1. Use the Import Virtual Machine feature in the Actions menu.
2. Choose one of the following import options:
  - **Register:** Choose this option if you are restoring to the destination from which to run the VM). The recovered VM retains its original ID.
  - **Restore:** Choose this option if you are restoring a VMs to a temporary location. Hyper-V moves the files to the appropriate location and registers the VMs. The recovered VM retains its original ID.
  - **Copy:** Choose this option if you intend to import the recovered VMs multiple times (for example, you are using the VM as a template). A new ID is generated and used to register the VM.

## Hyper-V Object-level Rapid Recovery Restore Tabs

Figure 31 displays the restore tabs.

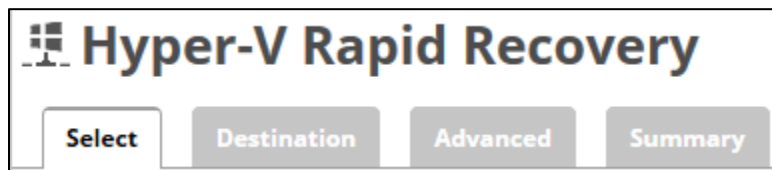


Figure 31. Hyper-V Object-level File Restore Tabs.



The following table provides a description of the page features.

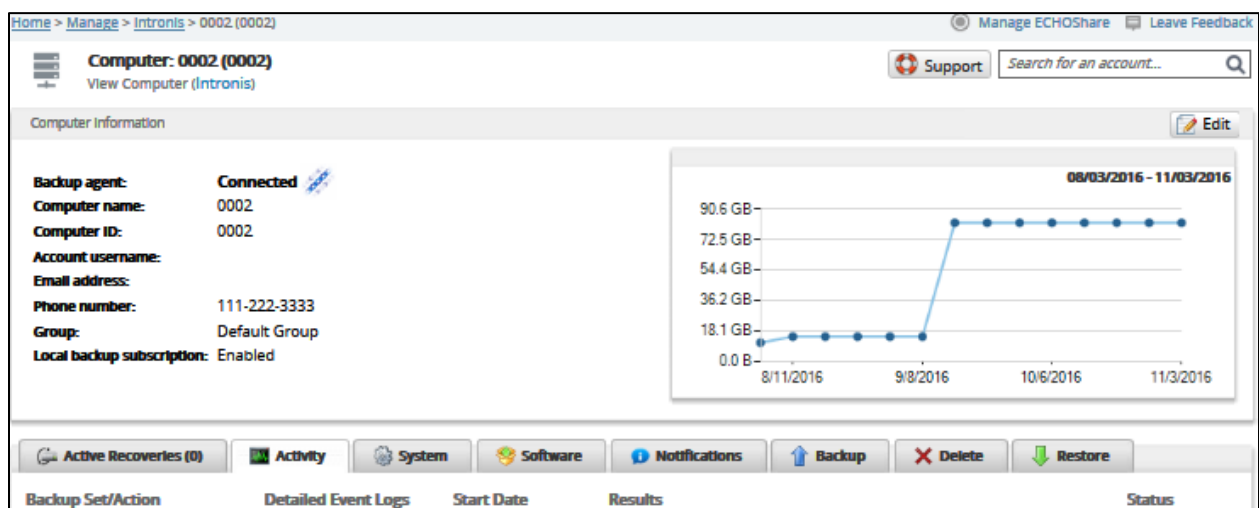
Page	Description
Select	Select at least one available VM to restore.
Destination	Select the destination of your restore.
Advanced	Select from the following options to dictate the advanced features of the restore: <ul style="list-style-type: none"><li>• Restore NTFS File Permissions</li><li>• Restore File Attributes</li><li>• Restore Last Modified Date</li></ul>
Summary	A list of your selections is displayed.

## Restoring Hyper-V Object-level Rapid Recovery

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

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

The Computer page is displayed.



2. Click the **Restore** tab.



The Restore Selections page is displayed.


### Restore Selections

Viewing Original Catalog

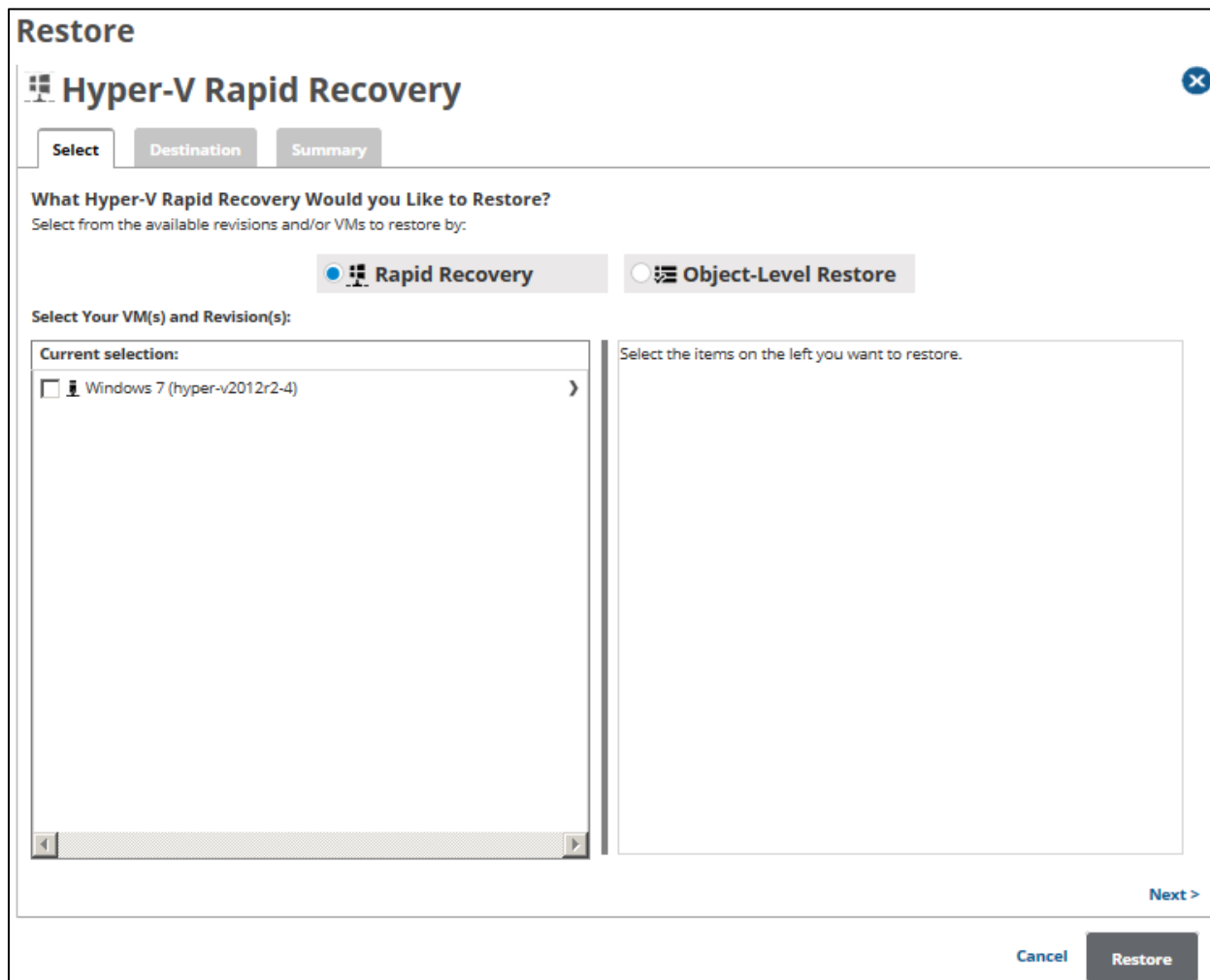
Backed Up Data Type	Type	Status	Completed
Files and Folders	Files and Folders	0 Item(s) Restored	01/04/2017 @ 12:43 PM
VMware Standard			
Hyper-V Standard			
Hyper-V Rapid Recovery			

1

1 - 1 of 1 items

3. Click the restore  icon of the backup type you want to restore.

The Select page is displayed with Rapid Recovery selected as the default.




4. Select the **Object-Level Restore** radio button.




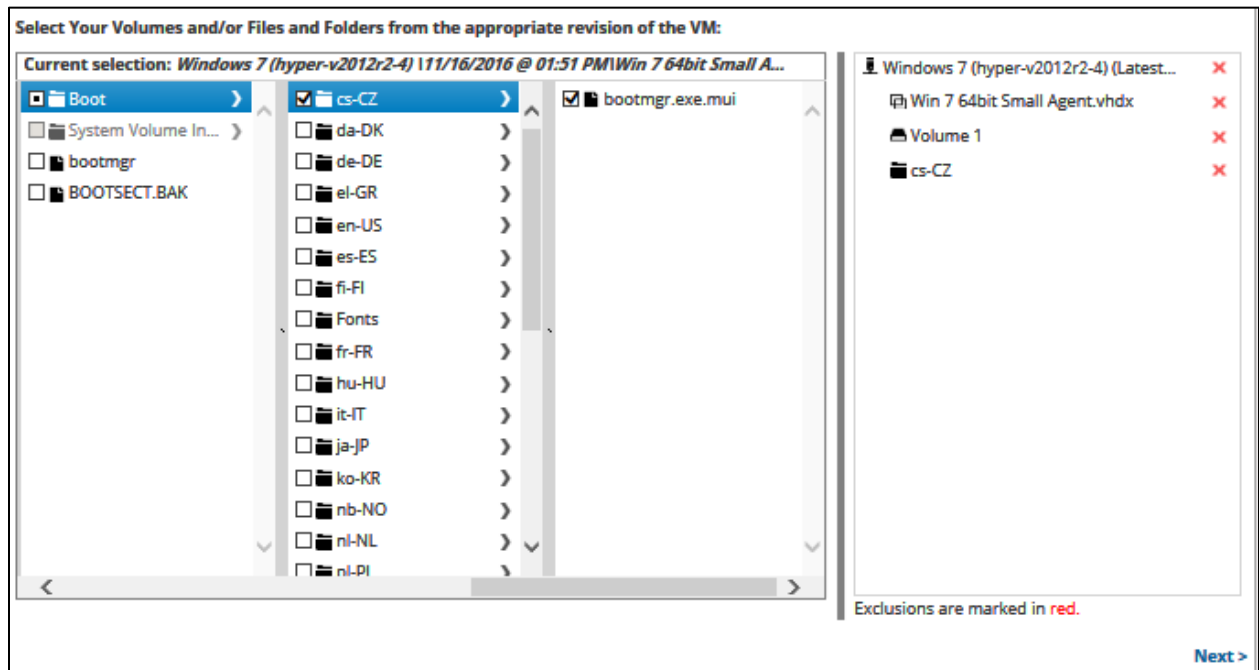
5. In the Current Selection pane, select the VM, the disks, and revisions you would like to restore.

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

Clicking the arrow  at the right of the items displays more files and folders.



The selection is displayed in the far right pane. Click the remove  icon to remove any selections, or clear the item check box.



6. Click **Next**.

The Destination page is displayed.



7. At the Path field, type a path, or click the **Browse** button to select the destination of your restore.



## Browse option

a. Click the **Browse** button.

The folder options are displayed.

Please select a folder below:

Current selection:

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:

b. Select the destination.

The OK button is activated.

c. Click OK.

The address is displayed in the Path field.

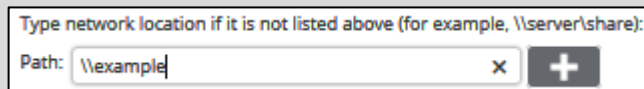
Path:

To add a network location that is not listed, perform the step below.



## Adding a Network Location

a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

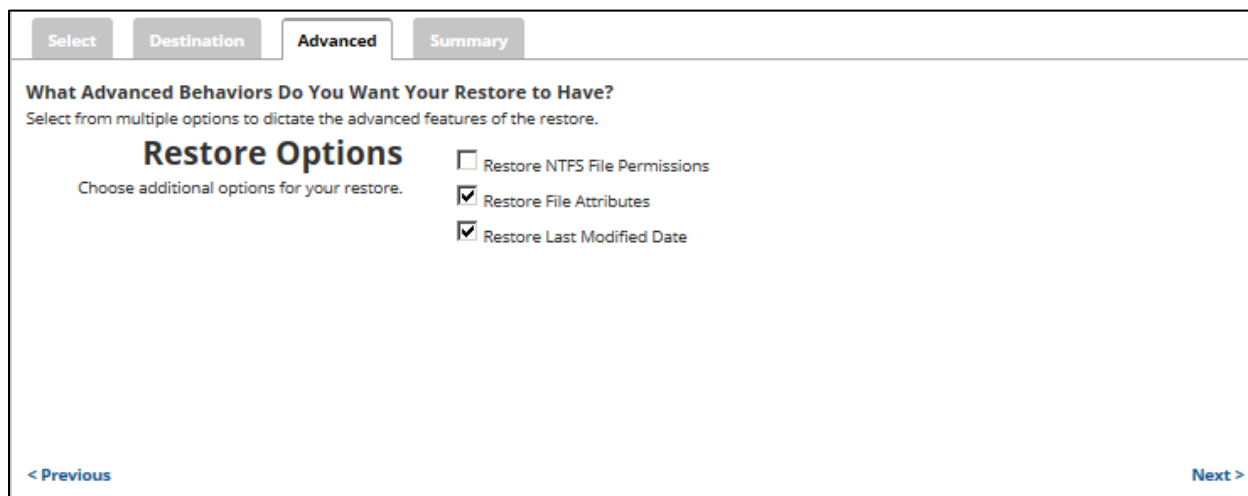


The add button is activated.

b. Click the add  button.

8. After selecting the destination, click **Next**.

The Advanced page is displayed.



9. Optionally, select any of the following options to specify the advanced features of the restore:

- Restore NTFS File Permissions
- Restore File Attributes
- Restore Last Modified Date

10. Click **Next**.



The Summary page is displayed.

The Summary page displays the following information:

- Select:** Recovering 37 File(s), size: 14.29 MB
- Destination:** C:\System Volume Information
- Advanced:** Restore File Attributes, Restore Last Modified Date

Navigation links: < Previous, Cancel, Restore

11. Verify your selections, and then click the **Restore** button.

The confirmation pop-up is displayed.

You are about to restore backed up data using the settings you just defined.

Proceed with this restore?

No Yes

12. Click **Yes**.

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

Restore Selections			
Restore Type	Type	Status	Completed
Hyper-V Standard	Hyper-V Rapid Recovery	1 Item(s) Restored	10/6/2016 @ 11:31 AM
Hyper-V Rapid Recovery	Hyper-V Standard	1 Item(s) Restored	10/5/2016 @ 12:53 PM





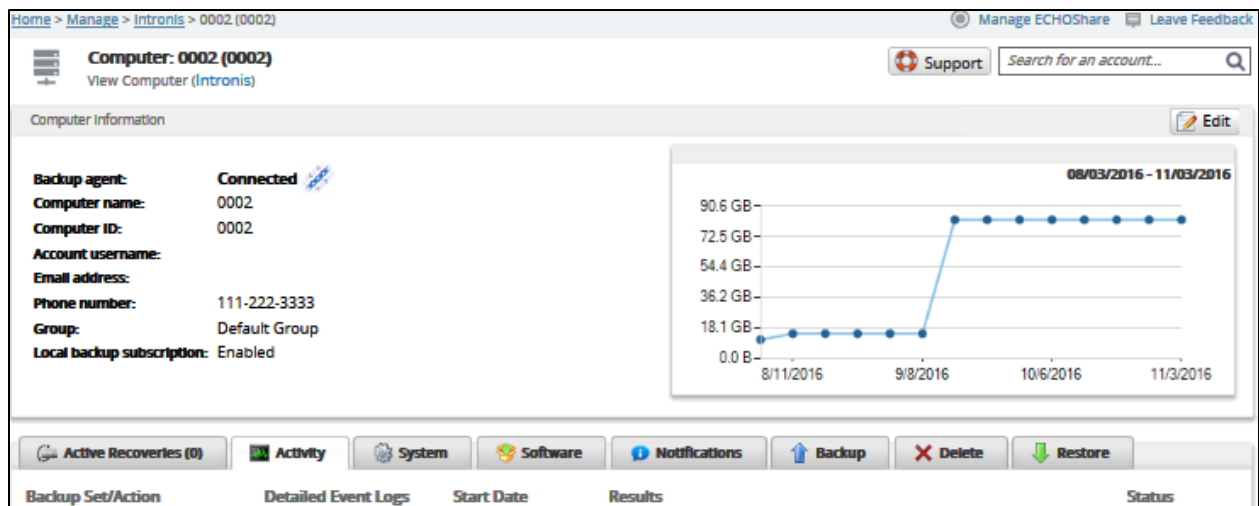
## Chapter 3. Hyper-V Rapid Recovery Delete

**CAUTION!** Deleted data is completely purged and can no longer be accessed or restored.

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

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

The Computer page is displayed.



2. Select the **Delete** tab.

The Delete Selections page is displayed.

Delete Selections			
Backed Up Data Type	Type	Status	Completed
Files and Folders	Files & Folders	4 Item(s) Deleted	11/04/2016 @ 10:33 AM
SQL Server			
VMware Standard			
VMware QuickSpin			
Physical Imaging			


3. Select the delete icon beside the backup type you want to delete.

The Delete Backup page is displayed.



**CAUTION!** All backup data associated with the selected VMs are deleted from local storage. Any subsequent backup needs to start with a full backup.

## Delete



### Hyper-V Rapid Recovery

**What Hyper-V Rapid Recovery VM(s) Would You Like to Delete?**  
Select from the available Hyper-V Rapid Recovery VM(s) to delete.

**Select Your Rapid Recovery VM(s):**

**Current selection:**

☐ Windows 7 (hyper-v2012r2-4)

Select the items on the left you want to delete.

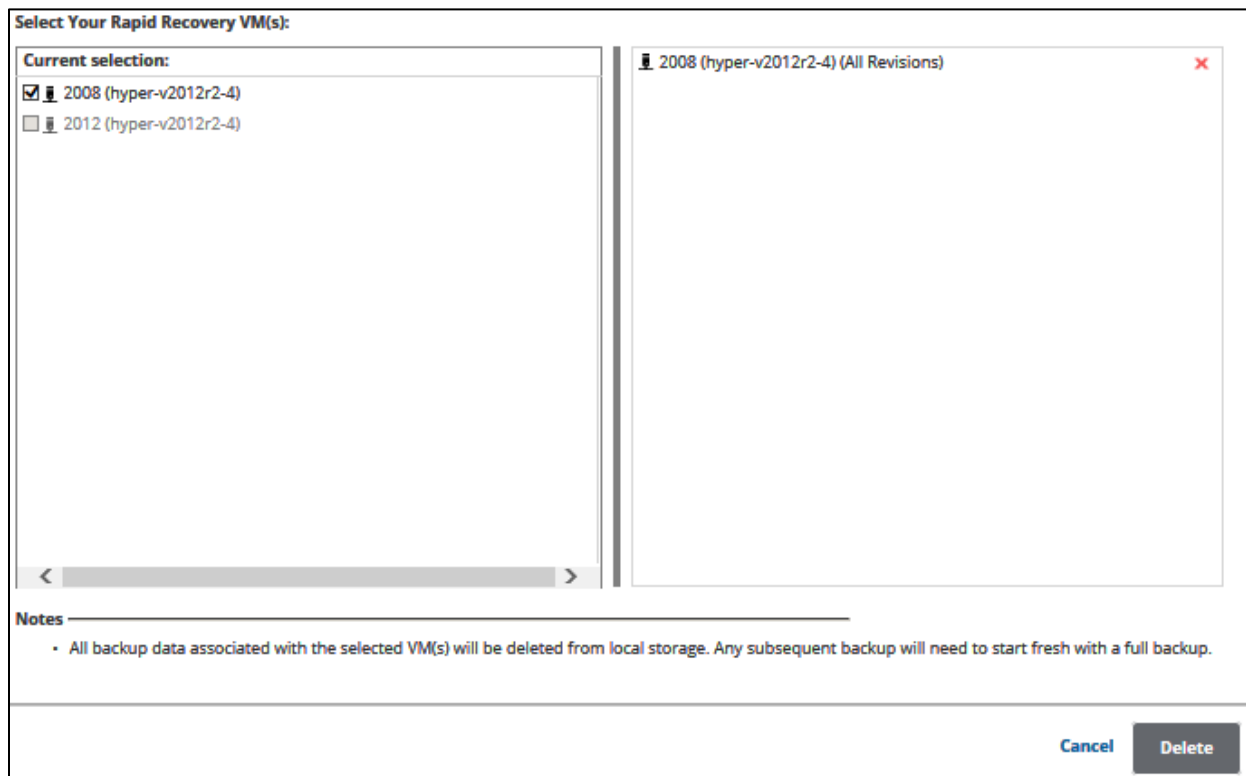
**Notes**

- All backup data associated with the selected VM(s) will be deleted from local storage. Any subsequent backup will need to start fresh with a full backup.

CancelDelete

4. Select the check box of the VM you want to delete.

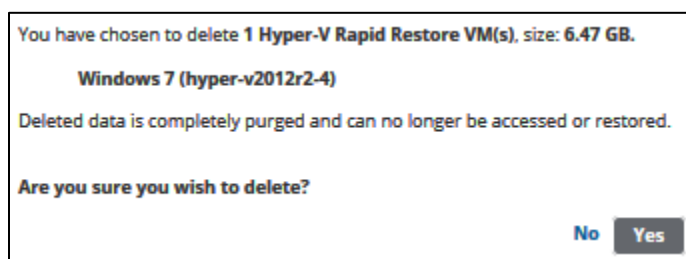
The selections for deletion are displayed in the right panel.



**Note:** **Delete** removes all revisions. You cannot delete specific revisions.

- When satisfied with your selection, click the **Delete** button.

The Delete Confirmation pop-up is displayed.



- Click the **Yes** button.

The Delete Selections page is displayed with the latest status.



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## Hyper-V Rapid Recovery Backup and Restore



## **PART XI. EXCHANGE MAILBOX LEVEL BACKUP and RESTORE**

This section includes the following chapters:

- Exchange Mailbox Level Backup
- Exchange Mailbox Level Restore
- Exchange Mailbox Level Delete

See *Backup Agent Software Requirements* for more information.

### **Chapter 1. Exchange Mailbox Level Backup**

This chapter includes the following topics:

- Exchange Mailbox Level Overview
- Creating Exchange Mailbox Level Backups
- Editing Exchange Mailbox Level Backup Sets
- Removing Exchange Mailbox Level Backups

#### **Exchange Mailbox Level Overview**

This section includes the following topics:

- Exchange Mailbox Level Features
- Exchange Mailbox Level Known Issues
- Exchange Mailbox Level Settings
- Exchange Mailbox Level Backup Tabs

#### **Exchange Mailbox Level Features**

With Exchange Mailbox Level backups, you can:

- Use Exchange Web Services (EWS) that allows multi-threading.
- Restore directly to a mail message (.msg) file or to an Outlook Personal Storage Table (.pst) file.
- Run the software from any computer with web access so the agent does not need to be installed on the Exchange server.

Exchange Mailbox Level backups allow you to back up users' mailbox data for granular restores. Mailboxes, contacts, and even individual mail messages for a user can be restored on an individual basis, or in bulk, to provide flexibility in the choices you have when reinstating a user's email.



Mailbox level backup sets are best used as a data-archiving utility, to keep a record of the emails sent and received (as well as contacts and calendars) over a long period. It is not recommend using mailbox level backups as a disaster recovery method since restoring an entire information store via a Mailbox Level backup is much slower than from an Information Store backup.

The Backup Agent only supports backing up mailboxes from a single domain. If you would like to back up data from a different domain using an existing sub-account, then you need to delete the backup set and backed up data before you can edit the URL. If you would like to back up from a second domain, create a new sub-account and install the backup agent on the second system.

### Exchange Mailbox Level Known Issues

The following table lists the known issues for Exchange Mailbox Level:

Exchange Object	Issue
Public folder	Public folder permission must be configured separately. Ensure you use the <b>EditAll</b> permission to avoid the following error message:  Access is denied. Check credentials and try again.
Public folder item's property	EWS does not support directly setting the date and time stamp.
Email's, Meeting, Appointment, Task, Contact fields	Body and Note properties do not support RTF format, tables, WordArt, illustrations or images during restore to Exchange.
Meeting's properties	EWS does not support the following Meeting properties: Accepted, Declined Email, Tentative, Declined, New Time Proposed email, Current or Proposed.
Appointment's deleted occurrences	EWS does not support updates to the Deleted Occurrences field.
Attachment's size	The limitation to attachments is 100 MB.
Outlook display after a restore	<ul style="list-style-type: none"><li>• The first line in an email body aligns to the left.</li><li>• Email's Subject, Location and When properties display a format that is different from the original.</li></ul>
Outlook	Does not support Attachments in attachments.
Contact's business card	Not supported for restore to file or PST.



### Exchange Mailbox Level Settings

The following application settings are required for Exchange Mailbox Level.

Application	Required Settings
Exchange 2010/2013/2016	Create a Service Account with the following permissions: <ul style="list-style-type: none"><li>• Organization Management Role</li><li>• Application Impersonation Role</li><li>• Discovery Management Role (2013 &amp; 2016 only)</li></ul> Disable EWS Throttling for all users for performance.
Exchange 2007	Create a Service Account with the following permissions: <ul style="list-style-type: none"><li>• Organization Administrator</li><li>• Application Impersonation Role</li></ul> Disable EWS Throttling for all users for performance. Enable PowerShell Remoting with the following settings: <ul style="list-style-type: none"><li>• Basic Authentication</li><li>• Encrypted Only (https)</li></ul>

The following server settings are required for Exchange Mailbox Level.

Server	Required Settings
Windows Server 2008	Must have the following: <ul style="list-style-type: none"><li>• Windows PowerShell 2.0</li><li>• Agent machine must belong to the same domain as the Exchange Server</li></ul>

### Exchange Mailbox Level Backup Tabs

Figure 32 displays the backup tabs.



Figure 32. Exchange Mailbox Level Backup Tabs.



The following table provides a description of the page features.

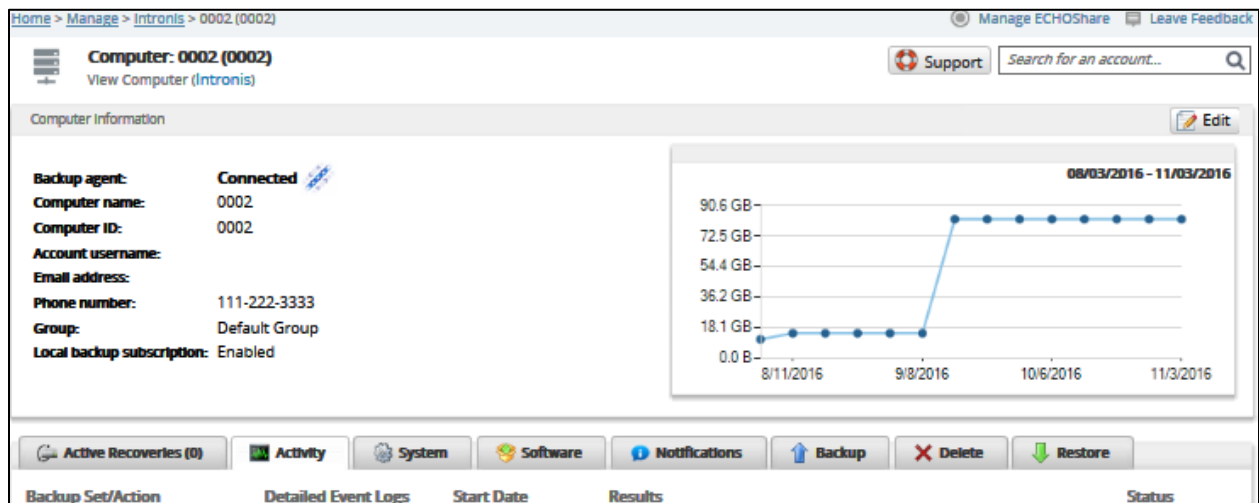
Page	Description
Select	You are required to select at least one mailbox.
Schedule	Optionally select the schedule. The default is daily.
Advanced	<ul style="list-style-type: none"><li>• Temporary Folder: Specify where the temporary folder used in backing up resides.</li><li>• Folder Exclusions: Specify the folders to exclude.</li></ul>
Summary	A list of your selections is displayed.

## Creating Exchange Mailbox Level Backups

To create an Exchange Mailbox Level backup, perform the following steps.

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

The Computer page is displayed.







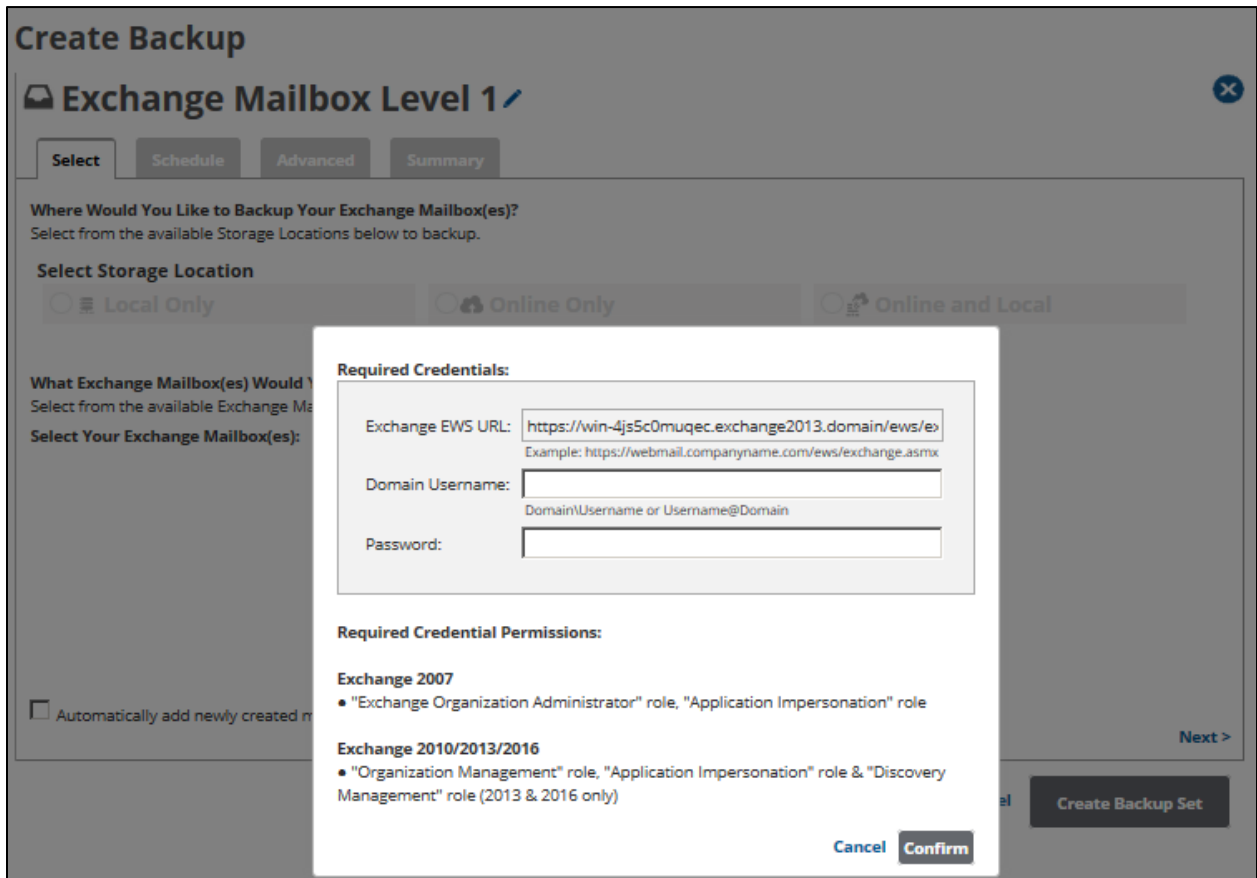
2. Click the **Backup** tab.

The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+  Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
+  Physical Imaging (2)		Files and Folders 2		--	<input type="checkbox"/>		
+  Hyper-V Standard		Files and Folders 3		--	<input type="checkbox"/>		
+  Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+  VMware Standard (1)		Physical Imaging 1		--	<input type="checkbox"/>		
+  VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+  SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+  Exchange Mailbox Level		VMWare QuickSpin 1		--	<input type="checkbox"/>		
		VMWare QuickSpin 2		--	<input type="checkbox"/>		
		VMWare QuickSpin 3		--	<input type="checkbox"/>		
		SQL 1		--	<input type="checkbox"/>		
		SQL 2		--	<input type="checkbox"/>		
1							1 - 12 of 12 items

3. In the Backup Type pane, click the select icon beside **Exchange Mailbox Level** to run the backup type.

The credentials pop-up is displayed.



**Create Backup**

**Exchange Mailbox Level 1**

Select Schedule Advanced Summary

Where Would You Like to Backup Your Exchange Mailbox(es)?  
Select from the available Storage Locations below to backup.

Select Storage Location

☐ Local Only ☐ Online Only ☐ Online and Local

What Exchange Mailbox(es) Would You Like to Backup?  
Select from the available Exchange Mailboxes below to backup.

Select Your Exchange Mailbox(es):

☐ Automatically add newly created mailboxes

**Required Credentials:**

Exchange EWS URL:   
Example: https://webmail.companyname.com/ews/exchange.asmx

Domain Username:   
Domain\Username or Username@Domain

Password:

**Required Credential Permissions:**

**Exchange 2007**

- "Exchange Organization Administrator" role, "Application Impersonation" role

**Exchange 2010/2013/2016**

- "Organization Management" role, "Application Impersonation" role & "Discovery Management" role (2013 & 2016 only)

Cancel Confirm

Next >

Create Backup Set

**Note:** Ensure you type the required credential permissions based on the Exchange version you are backing up. You can back up mailboxes from a single domain only. If you would like to back up data from a different domain using this subaccount, you must delete the backup data and the backup set before you can edit the URL.

If you would like to back up from a second domain, create a new subaccount and install the backup agent on a second system.

4. Type your credentials, and then click **Confirm**.



The Select page is displayed.

**Where Would You Like to Backup Your Exchange Mailbox(es)?**  
Select from the available Storage Locations below to backup.

**Select Storage Location**

☐ **Local Only**  
Destination cannot be changed after creation.

☒ **Online Only**  
Destination cannot be changed after creation.

☐ **Online and Local**  
Destination cannot be changed after creation.

**What Exchange Mailbox(es) Would You Like to Backup?**  
Select from the available Exchange Mailbox(es) below.

**Select Your Exchange Mailbox(es): 12R2-570**

**Current selection: Mailboxes**

☒ Mailboxes

- ☐ 56CDBE3C-LGU000000
- ☐ 56CDBE3C-LGU000001
- ☐ 56CDBE3C-LGU000002
- ☐ 56CDBE3C-LGU000003
- ☐ 56CDBE3C-LGU000004
- ☐ 56CDBE3C-LGU000005
- ☐ 56CDBE3C-LGU000006
- ☐ 56CDBE3C-LGU000007
- ☐ 56CDBE3C-LGU000008
- ☐ 56CDBE3C-LGU000009
- ☐ 56CDBE3C-LGU000010
- ☐ 56CDBE3C-LGU000011
- ☐ 56CDBE3C-LGU000012
- ☐ 56CDBE3C-LGU000013
- ☐ 56CDBE3C-LGU000014
- ☐ 56CDBE3C-LGU000015
- ☐ 56CDBE3C-LGU000016

☐ Automatically add newly created mailboxes to the backup set.


**Next >**


- Click the Backup Name to provide a new name for your backup set, or accept the default.  
See *Changing Backup Set Names*.
- At the Select Storage Location, click one of the following radio button options.

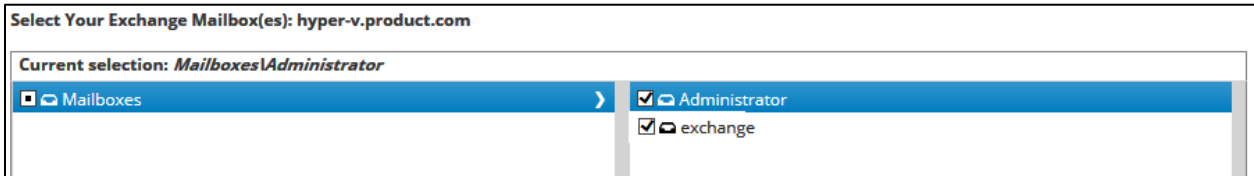
**Note:** This procedure applies to all options. See *Backup Options* for more information.

- Local Only** (Local Vault must be enabled and a local subscription is required. Data is not backed up to the cloud.)
- Online Only** (An enabled Local Vault disables this option.)
- Online and Local** (Local Vault must be enabled.)

- At the Current Selection pane, select the mailboxes to be backed up.

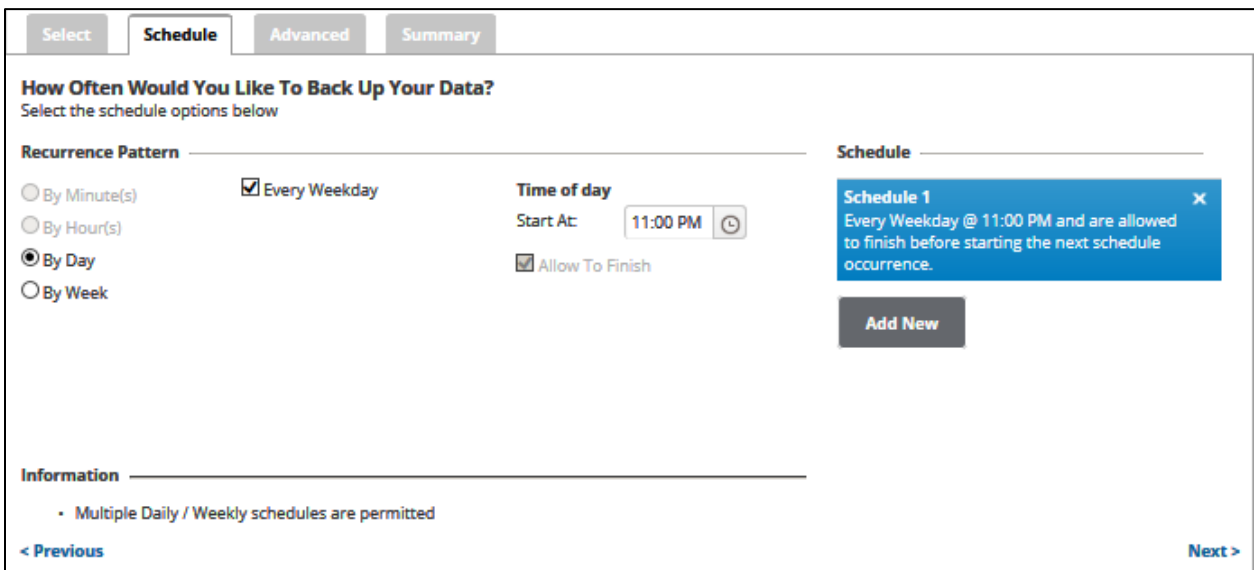
Clicking the arrow  at the right of the items displays more mailboxes.

Your selection is displayed in the right pane. Click the remove  icon to remove any selections, or clear the item check box.



8. Optionally select the **Automatically back up newly created mailboxes** check box at the bottom of the page, and then click **Next**.

The Schedule page is displayed.



9. Accept or edit the default schedule. See *Backup Schedules* for more information.

## Notes:

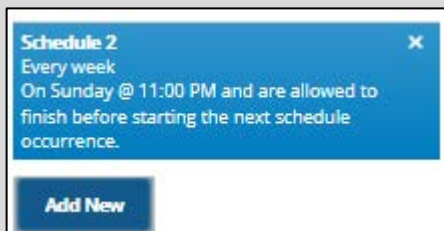
- Multiple daily/weekly schedules are permitted (as long as they do not overlap).
- The **Allow to Finish** check box is always selected and grayed-out.

### Adding a New Daily or Weekly Schedule

- a. To add additional daily or weekly schedules, click the **Add New** button.



The new Schedule is displayed and the **Add New** button is highlighted, as shown below.



b. Make your selections.

The new schedule details are displayed.

#### Editing Existing Daily or Weekly Schedules

a. To edit existing schedules, in the Schedule column, click the schedule details.

The Schedule is highlighted.

b. Select your new daily or weekly times.

Your schedule is displayed in the Schedule column. Click the remove  icon to delete schedule.

10. After setting your schedule, click **Next**.

The Advanced page is displayed.

**Requirement:** You must specify a temporary folder located on a disk with sufficient space..

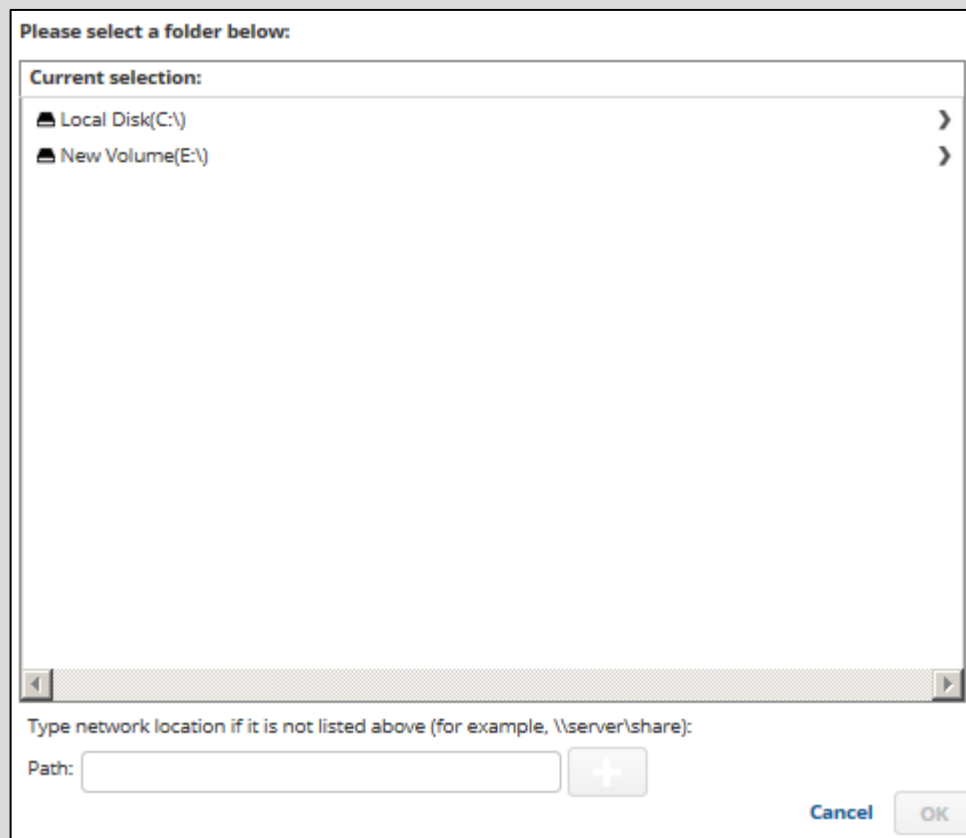


11. At the Temporary Folder field, accept the default, type a new path, or click the **Browse** button to locate the temporary folder that is used in backing up.

**Browse option**

- a. Click the **Browse** button.

The folder options are displayed.



- b. Select the destination.

The OK button is activated.



- c. Click **OK**.

The address is displayed in the Path field.



Path:  **Browse...**

To add a network location that is not listed, perform the step below.


**Adding a Network Location**

a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:  **x** **+**

The add button is activated.


b. Click the add  button.

12. At the Folder Exclusions section, select the check boxes of folders to exclude, and then click **Next**.

The Summary page is displayed.

**Select** **Schedule** **Advanced** **Summary**

**Select** Contains 1 Exchange Mailbox(es) selected, size 164.74 MB (estimated)

Destination  **Online**

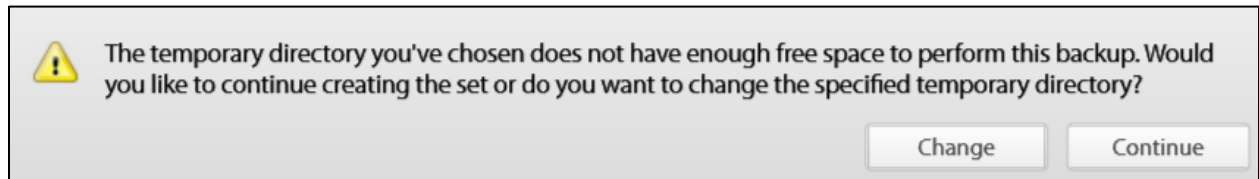
**Schedule** **Schedule 1** Every Weekday @ 11:00 PM and are allowed to finish before starting the next schedule occurrence.

**Advanced** Temporary Folder: C:\Windows\TEMP\BackupAgent

[< Previous](#)

[Cancel](#) **Create Backup Set**

**Note:** If the directory you have chosen does not have enough free space, the following pop up is displayed.



13. To change your directory, click the **Change** button. To continue with the backup, click **Continue**.
14. At the Summary page, verify your backup selections, and then click **Create Backup Set**.

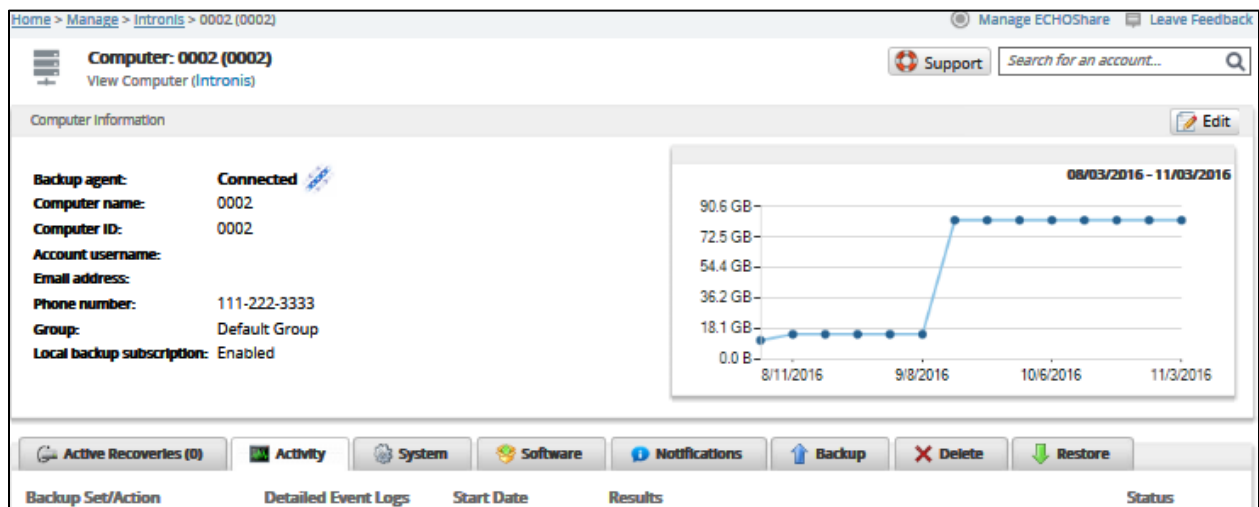
The Backup Selections page is displayed with your current backup status.

## Editing Exchange Mailbox Level Backup Sets

To edit an Exchange Mailbox Level backup, perform the following steps.

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

The Computer page is displayed.








2. Click the **Backup** tab.

The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+ Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
+ Physical Imaging (2)		Files and Folders 2		--	<input type="checkbox"/>		
+ Hyper-V Standard		Files and Folders 3		--	<input type="checkbox"/>		
+ Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ VMware Standard (1)		Physical Imaging 1		--	<input type="checkbox"/>		
+ VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+ Exchange Mailbox Level		VMWare QuickSpin 1		--	<input type="checkbox"/>		
		VMWare QuickSpin 2		--	<input type="checkbox"/>		
		VMWare QuickSpin 3		--	<input type="checkbox"/>		
		SQL 1		--	<input type="checkbox"/>		
		SQL 2		--	<input type="checkbox"/>		
							1 - 12 of 12 items

3. Click the edit  icon of the backup selection to edit.



The credentials pop-up is displayed.

**Required Credentials:**

Exchange EWS URL:   
Example: https://webmail.companyname.com/ews/exchange.asmx

Domain Username:   
Domain\Username or Username@Domain

Password:

**Required Credential Permissions:**

**Exchange 2007**

- "Exchange Organization Administrator" role, "Application Impersonation" role

**Exchange 2010/2013/2016**

- "Organization Management" role, "Application Impersonation" role & "Discovery Management" role (2013 & 2016 only)

[Cancel](#) [Confirm](#)

4. Type your credentials, and then click **Confirm**.

The Backup Set Summary page is displayed.

**Edit Backup**

**Exchange Mailbox Level 1**

[Select](#) [Schedule](#) [Advanced](#) [Summary](#)

**Select**

Contains **1 Exchange Mailbox(es)** selected, size **164.74 MB** (estimated)  
Destination **Online**

**Schedule**

**Schedule 1** Every Weekday @ 11:00 PM and are allowed to finish before starting the next schedule occurrence.

**Advanced**

Temporary Folder: **C:\Windows\TEMP\BackupAgent**

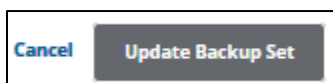
[< Previous](#)

[Cancel](#) [Update Backup Set](#)

5. Select any of the tabs to display and edit your current settings. See *Creating Exchange Mailbox Level Backups* for details.

## Notes:

- The backup set name may be edited. See *Changing Backup Set Names*.
  - The Storage Location Destination options on the Select page cannot be changed.
6. After making all your edits, click the **Update Backup Set** button at the bottom of any page, as shown below.



The Backup Selections page is displayed with your current backup status.


## Removing Exchange Mailbox Level Backup Sets

To remove an Exchange Mailbox Level backup set, perform the following steps.

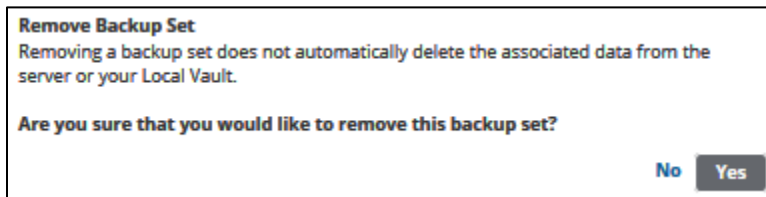
1. Navigate to the Backup Selections page. See *Creating Exchange Mailbox Level Backups* for instructions.

The Backup Selections page is displayed.

Backup Selections <span>Export Backup Selection</span>						
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove
+ Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>	
+ Physical Imaging (2)		Files and Folders 2		--	<input type="checkbox"/>	
+ Hyper-V Standard		Files and Folders 3		--	<input type="checkbox"/>	
+ Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	
+ VMware Standard (1)		Physical Imaging 1		--	<input type="checkbox"/>	
+ VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	
+ SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	
+ Exchange Mailbox Level		VMWare QuickSpin 1		--	<input type="checkbox"/>	
		VMWare QuickSpin 2		--	<input type="checkbox"/>	
		VMWare QuickSpin 3		--	<input type="checkbox"/>	
		SQL 1		--	<input type="checkbox"/>	
		SQL 2		--	<input type="checkbox"/>	

2. At the relevant backup set row, click the remove  icon to remove the backup set.

The confirmation pop-up is displayed.



3. Click **Yes**.

The backup set is removed.



## Chapter 2. Exchange Mailbox Level Restore

This chapter includes the following topics:

- Exchange Mailbox Level Restore Tabs
- Restoring Exchange Mailbox Level Backups

### Exchange Mailbox Level Restore Tabs

Figure 33 displays the restore tabs.



Figure 33. Exchange Mailbox Level Restore Tabs.

The following table provides a description of the page features.

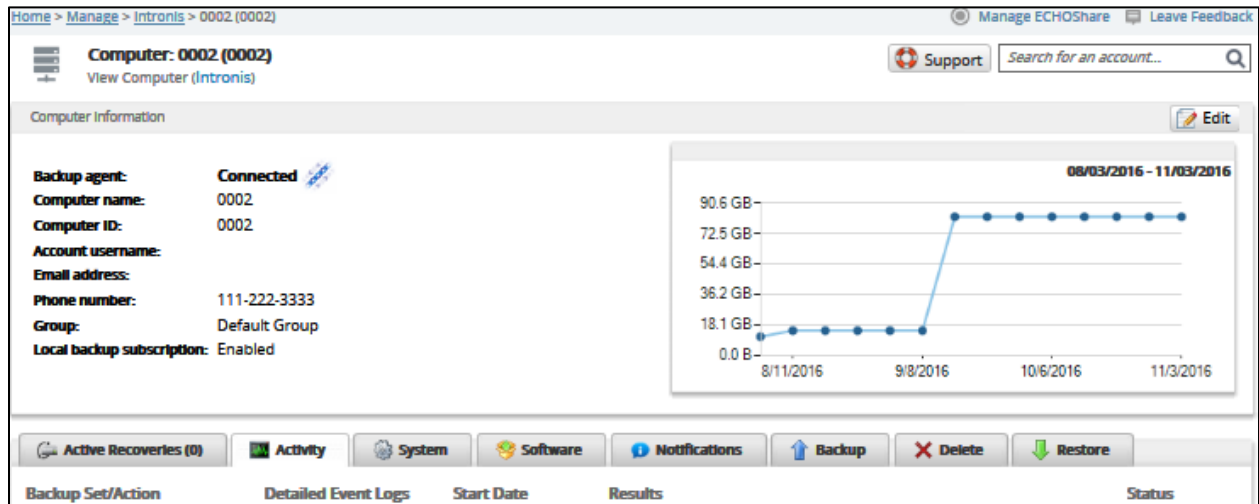
Page	Description
Select	You are required to select at least one Exchange Mailbox Level.
Destination	<p>Select the destination of your restore, the method by which to restore, and how existing data are treated.</p> <p>Restore Method options include:</p> <ul style="list-style-type: none"><li>• Restore to file(s)</li><li>• Restore to .PST file</li><li>• Restore to Exchange</li></ul> <p>Select from the following options to specify how are existing files treated during restoration:</p> <ul style="list-style-type: none"><li>• Do not overwrite any existing files with restored files</li><li>• Overwrite existing files with restored files</li><li>• Do not restore deleted items</li><li>• Restore deleted items</li></ul>
Summary	A list of your selections is displayed.

### Restoring Exchange Mailbox Level Backups

To restore an Exchange Mailbox Level backup, perform the following steps.

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


The Computer page is displayed.



- Click the **Restore** tab.

The Restore Selections page is displayed.



- Click the restore  icon of the backup type you want to restore.

The Select page is displayed

## Restore

### Exchange Mailbox Level

Select

Destination

Summary

**What Exchange Mailbox(es) Would You Like to Restore?**  
Select from the available Exchange Server(s) & Mailbox(es) to restore. **Only one Exchange Server may be selected at a time.**

Select the exchange server from which you want to restore mail items:

Current selection:

☐ exchange2013.domain

Select the items on the left you want to restore.


Exclusions are marked in red.

Next >

Cancel

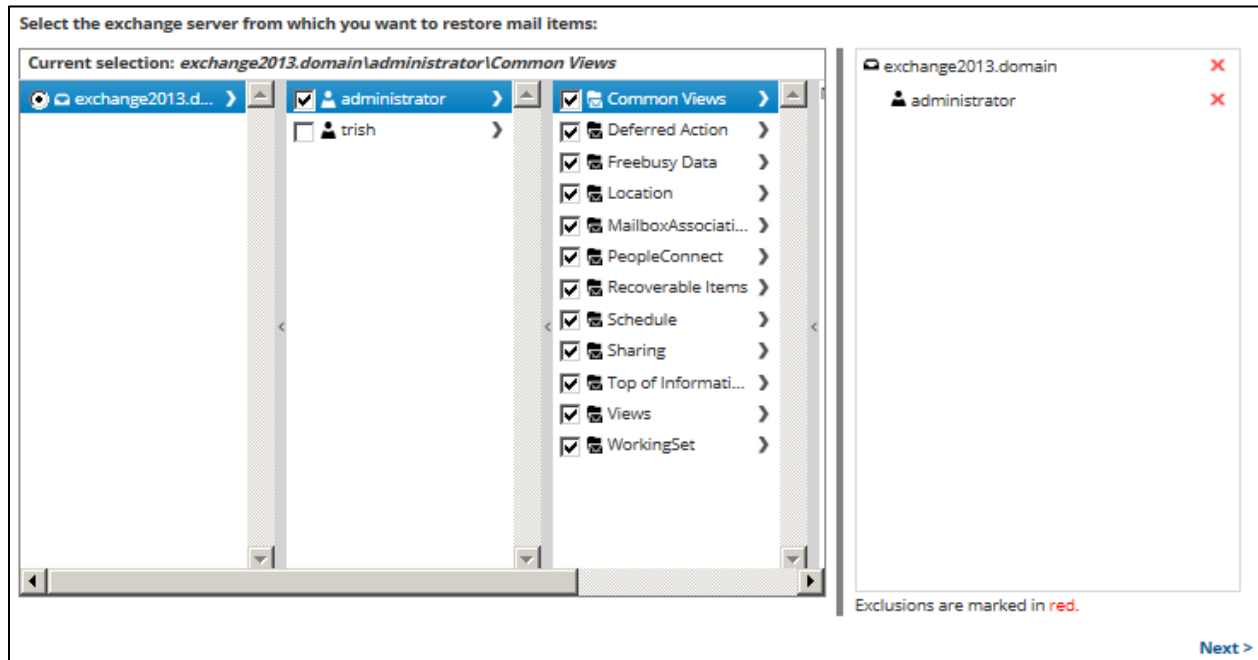
Restore

- In the Current Selection pane, select the mailboxes to be restored.

Clicking the arrow  at the right of the items displays more mailboxes.



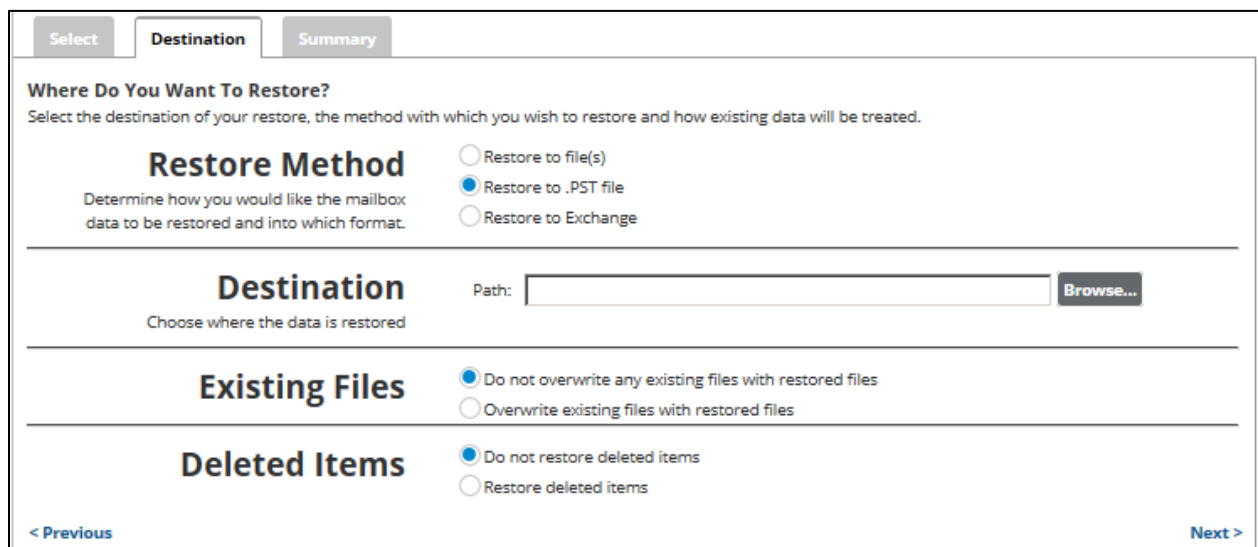
The selection is displayed in the far right pane. Click the remove  icon to remove any selections.



**Note:** You can only restore from one Exchange Server at a time.

5. After confirming your selections, click **Next**.

The Destination page is displayed.



6. Select a **Restore Method** radio button.



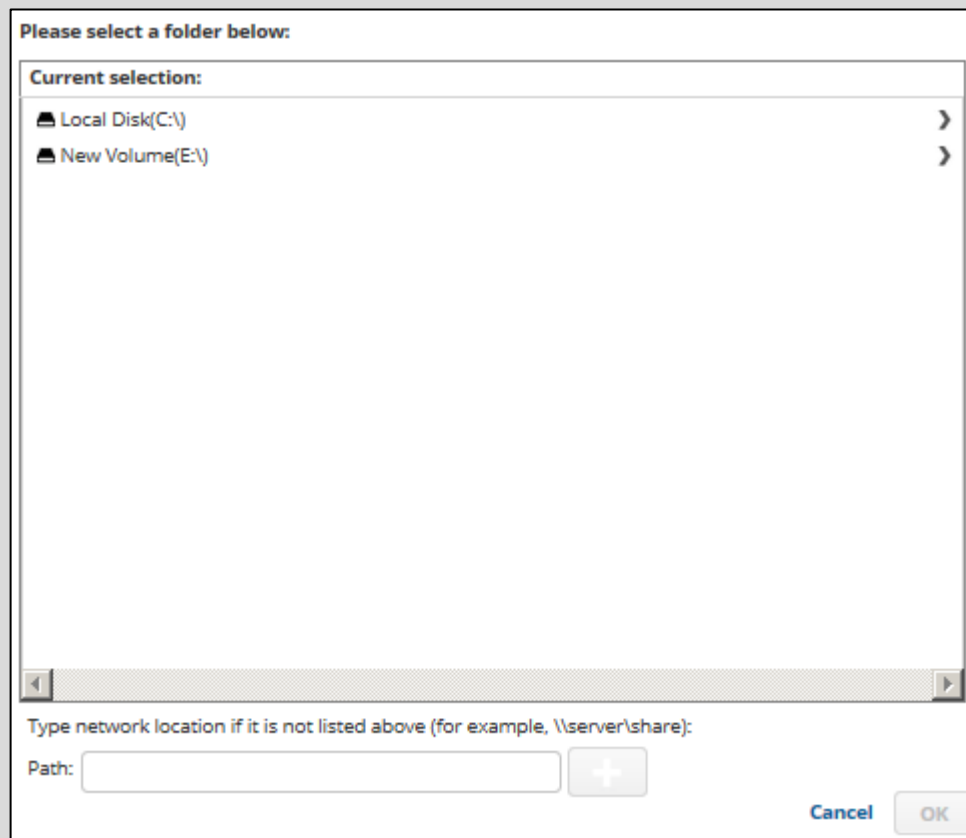


- If you select **Restore to file(s)** or **Restore to .PST file**, then at the Destination path field, type a path, or click the Browse button, and perform the following steps.

**Browse option**

(a). Click the **Browse** button.

The folder options are displayed.



(b). Select the destination.

The OK button is activated.



(c). Click **OK**.

The address is displayed in the Path field.



### Destination

Choose where the data is restored

Path: E:\LocalStorage-

(d). To add a network location that is not listed, perform the step below.

#### Adding a Network Location


a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):


Path: \\example



The add button is activated.

b. Click the add  button.

- If you select **Restore Exchange**, the following fields are displayed.

 **Restore to Exchange**

Exchange Service Uri:

User:

7. At the Existing Files section, select either **Do not overwrite any existing files with restored files** or **Overwrite existing files with restored files** radio button,
8. At the Deleted Items section, select **Do not restore deleted items** or **Restore deleted items**, and then click **Next**.



The Restore Summary page is displayed.

**Select**   **Destination**   **Summary**

**Select**   Recovering **3 mail item(s)**, size: **73.75 KB (estimated)**

**Destination**   Restore to **C:\Recovery**

Do not overwrite any existing files with restored files  
Do not restore deleted items

[< Previous](#)

[Cancel](#)   [Restore](#)

9. Verify the restore selections, and then click **Restore**.

The confirmation pop-up is displayed.

You are about to restore backed up data using the settings you just defined.  
**Proceed with this restore?**

[No](#)   [Yes](#)

10. Click **Yes**.

The Restore Selections page is displayed with the status.



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## Exchange Mailbox Level Backup and Restore



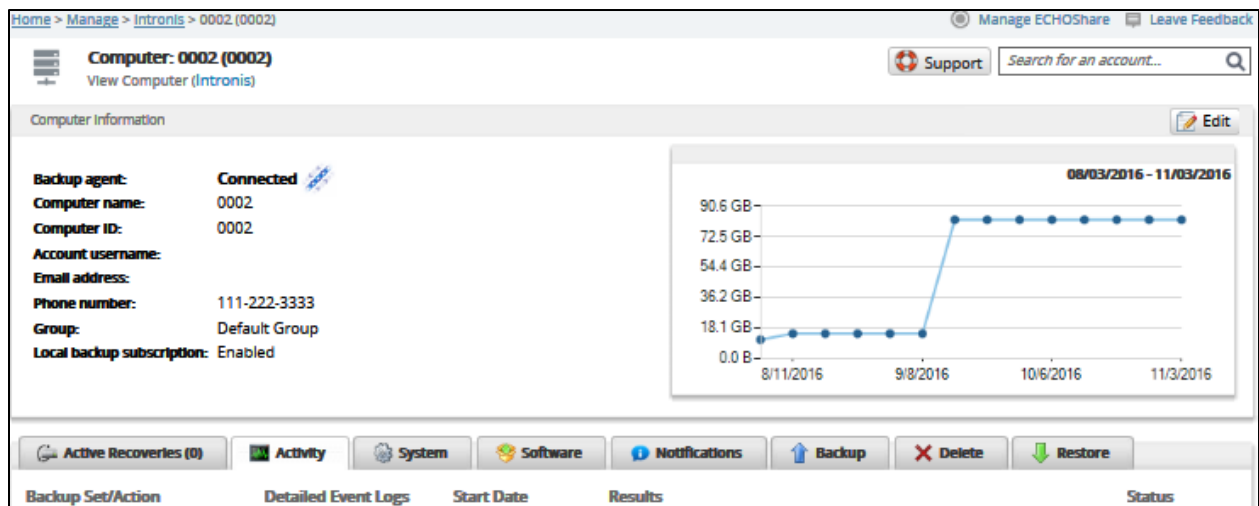
## Chapter 3. Exchange Mailbox Level Delete

**CAUTION!** Deleted data is completely purged and can no longer be accessed or restored.

To delete an Exchange Mailbox Level backup, perform the following steps.

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


The Computer page is displayed.



2. Select the **Delete** tab.


The Delete Selections page is displayed.

Delete Selections			
Backed Up Data Type	Type	Status	Completed
Files and Folders	Files & Folders	4 Item(s) Deleted	11/04/2016 @ 10:33 AM
SQL Server			
VMware Standard			
VMware QuickSpin			
Physical Imaging			

3. Select the delete  icon beside the backup type you want to delete.

The Delete page is displayed.


### Delete

 **Exchange Mailbox Level**

**What Exchange Mailbox Item(s) Would You Like To Delete?**  
Select from the available Exchange Mailbox Item(s) to delete.

**Select Your Exchange Mailbox Item(s):**

Current selection:

☐  exchange2013.domain

Select the items on the left you want to delete.

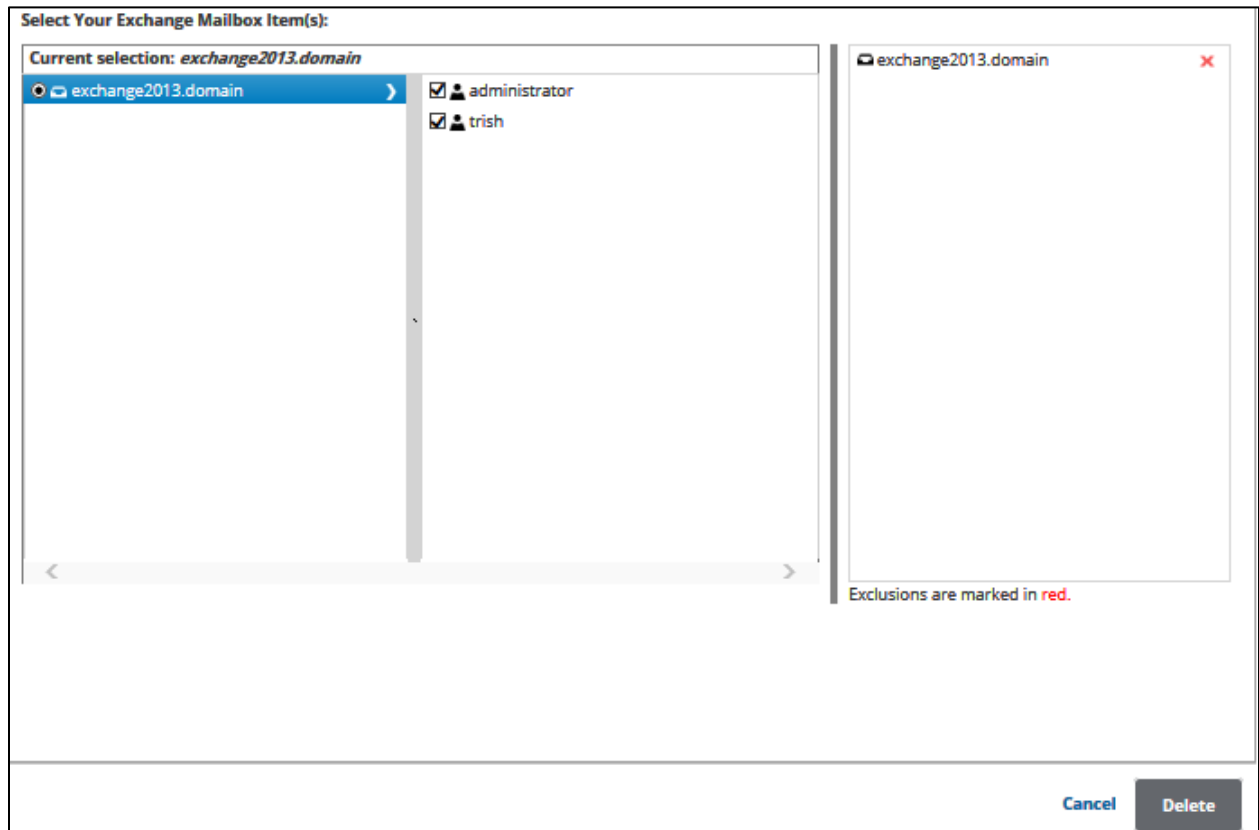
Exclusions are marked in red.

Cancel Delete

4. Select the radio button of the mailboxes to be deleted.

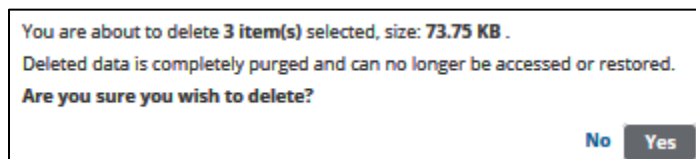


The delete selections are displayed in the right panel.



5. After making your selections, click **Delete**.

The confirmation pop-up is displayed.



6. Confirm your selection, and then click **Yes**.

The Deletes Selections page is displayed with the latest status.



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## Exchange Mailbox Level Backup and Restore





## PART XII. EXCHANGE INFORMATION STORE BACKUP AND RESTORE

This section includes the following chapters:

- Exchange Information Store Backup
- Exchange Information Store Restore
- Exchange Information Store Delete

See *Backup Agent Software Requirements* for more information.

### Chapter 1. Exchange Information Store Backup

This chapter includes the following topics:

- Exchange Information Store Backup Tabs
- Creating Exchange Information Store Backups
- Editing Exchange Information Store Backup Sets
- Removing Exchange Information Store Backups

#### Exchange Information Store Backup Tabs

Figure 34 displays the backup tabs.

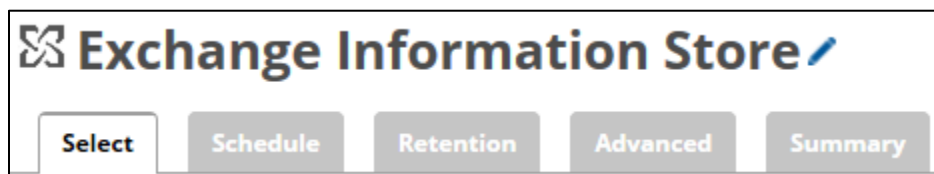


Figure 34. Exchange Information Store Backup Tabs.

The following table provides a description of the page features.

Page	Description
Select	You are required to select at least one mailbox.
Schedule	Optionally select the schedule. The default is daily.
Retention	The default retention is keep 4 weeks and no fewer than 4 versions.
Advanced	<ul style="list-style-type: none"><li>• Temporary Folder: Specify where the temporary folder used in backing up resides.</li><li>• Folder Exclusions: Specify the folders to exclude.</li></ul>
Summary	A list of your selections is displayed.

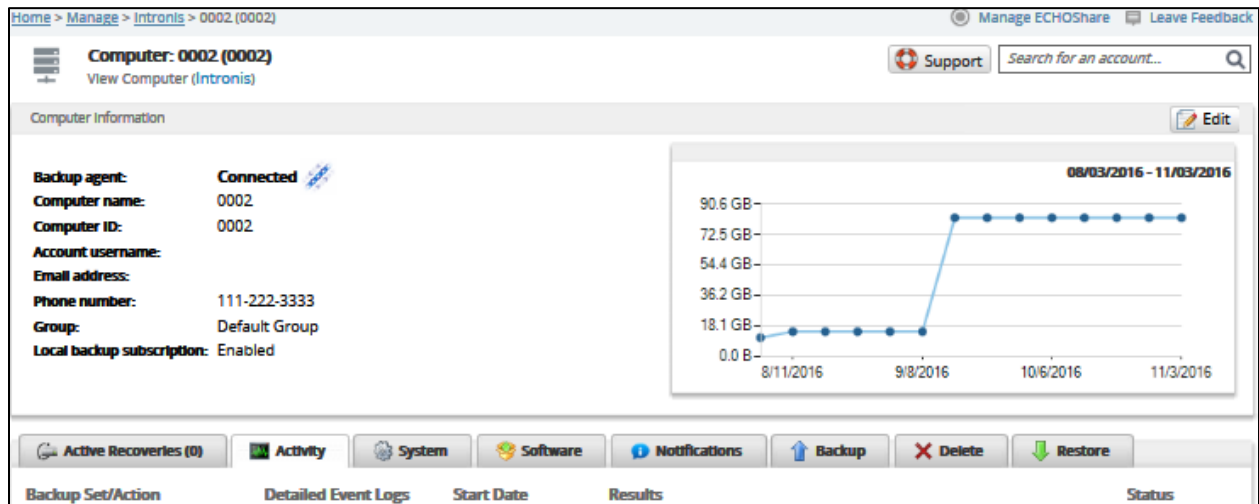


### Creating Exchange Information Store Backups

To create an Exchange Information Store backup, perform the following steps.

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

The Computer page is displayed.





2. Click the **Backup** tab.

The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
+  Files and Folders (4)	Files and Folders 1	Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
+  Physical Imaging (2)	Files and Folders 2	Files and Folders 2		--	<input type="checkbox"/>		
+  Hyper-V Standard	Files and Folders 3	Files and Folders 3		--	<input type="checkbox"/>		
+  Hyper-V Rapid Recovery	Files and Folders 4	Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+  VMware Standard (1)	Physical Imaging 1	Physical Imaging 1		--	<input type="checkbox"/>		
+  VMware QuickSpin (3)	Physical Imaging 2	Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+  SQL Server (2)	VMware Standard 1	VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
+  Exchange Mailbox Level	VMWare QuickSpin 1	VMWare QuickSpin 1		--	<input type="checkbox"/>		
	VMWare QuickSpin 2	VMWare QuickSpin 2		--	<input type="checkbox"/>		
	VMWare QuickSpin 3	VMWare QuickSpin 3		--	<input type="checkbox"/>		
	SQL 1	SQL 1		--	<input type="checkbox"/>		
	SQL 2	SQL 2		--	<input type="checkbox"/>		
							1 - 12 of 12 items

3. In the Backup Type pane, click the select icon beside **Exchange Information Store** to run the backup type.



The Select page is displayed.

**Create Backup**

**Exchange Information Store 2**

Select | Schedule | Retention | Advanced | Summary

**Select Storage Location**

☐ Local Only  
Local Vault must be enabled and a local subscription is required.

☒ Online Only

☐ Online and Local  
Local Vault must be enabled.

**What Exchange Info. Store Storage Groups Would You Like to Backup?**  
Select from the available Info. Store Storage Groups below to backup.

**Select A Storage Group**

Current selection:

- ☐ Mailbox Database 0090191139

Size: --

Next >

Cancel Create Backup Set


- Click the Backup Name to provide a new name for your backup set, or accept the default.  
See *Changing Backup Set Names*.
- At the Select Storage Location, click one of the following radio button options.

**Note:** This procedure applies to all options. See *Backup Options* for more information.

- Local Only** (Local Vault must be enabled and a local subscription is required. Data is not backed up to the cloud.)
- Online Only** (An enabled Local Vault disables this option.)
- Online and Local** (Local Vault must be enabled.)



6. At the Current Selection pane, select the storage group to be backed up.

Clicking the arrow  at the right of the items displays more storage groups.  
The storage group's name and size is displayed at the far right.



**Select A Storage Group**

**Current selection:**

-  Mailbox Database 1933967427

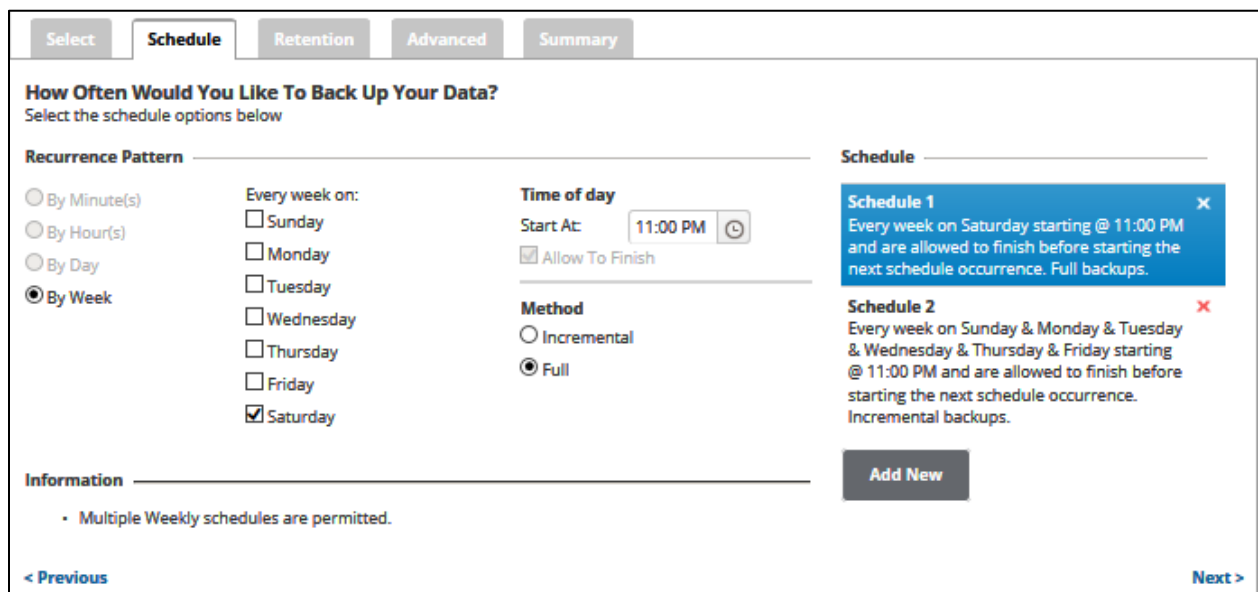
**Mailbox Database 1933967427**

Size:	<b>120 MB</b>
-------	---------------

Size listed includes mail database and all associated logs

7. Click **Next**.

The Schedule page is displayed.



**Select** **Schedule** Retention Advanced Summary

**How Often Would You Like To Back Up Your Data?**  
Select the schedule options below


**Recurrence Pattern**

- ☐ By Minute(s)
- ☐ By Hour(s)
- ☐ By Day
- ☒ By Week

Every week on:

- ☐ Sunday
- ☐ Monday
- ☐ Tuesday
- ☐ Wednesday
- ☐ Thursday
- ☐ Friday
- ☒ Saturday

**Time of day**

Start At:  

☒ Allow To Finish


**Method**

- ☐ Incremental
- ☒ Full


**Information**

- Multiple Weekly schedules are permitted.

**Schedule**

**Schedule 1** 

Every week on Saturday starting @ 11:00 PM and are allowed to finish before starting the next schedule occurrence. Full backups.

**Schedule 2** 

Every week on Sunday & Monday & Tuesday & Wednesday & Thursday & Friday starting @ 11:00 PM and are allowed to finish before starting the next schedule occurrence. Incremental backups.

**Add New**

[< Previous](#) [Next >](#)

8. Accept or edit the default schedule. See *Backup Schedules* for more information.



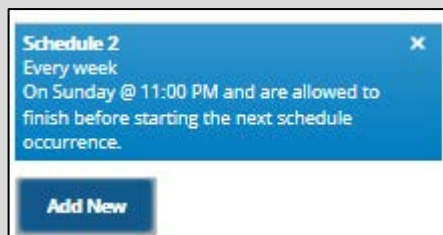
**Notes:**

- Multiple weekly schedules are permitted (as long as they do not overlap).
- The **Allow to Finish** check box is always selected and grayed-out.

**Adding a New Weekly Schedule**

a. To add additional weekly schedules, click the **Add New** button.

The new Schedule is displayed and the **Add New** button is highlighted, as shown below.



b. Make your selections.

The new schedule details are displayed.

**Editing Existing Weekly Schedules**

a. To edit existing schedules, in the Schedule column, click the schedule details.

The Schedule is highlighted.

b. Select your new daily or weekly times.

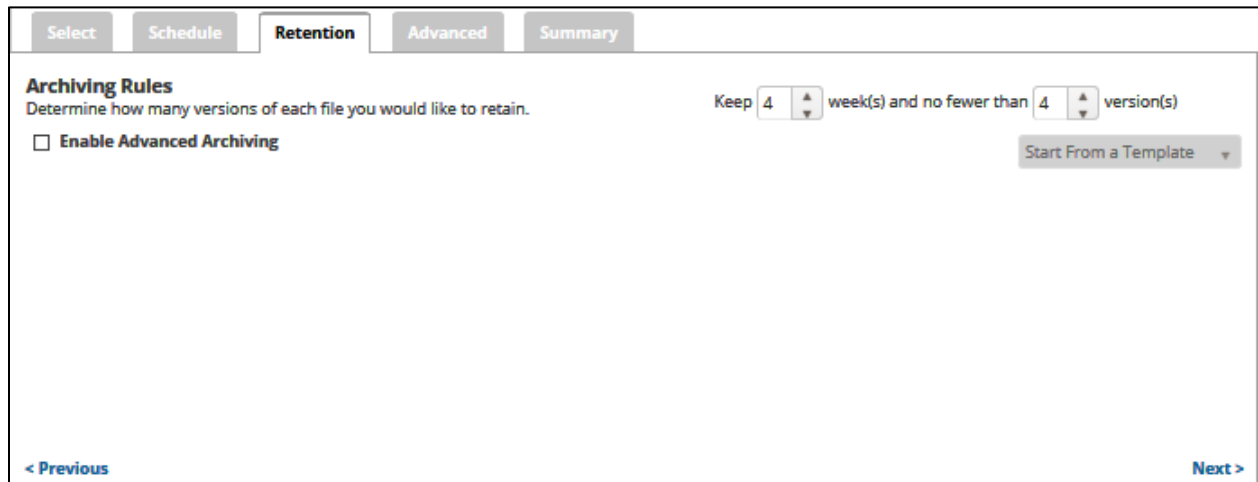
9. Select a backup method radio button, **Incremental** or **Full**.

**Note:** If you choose **Full**, every backup runs a full. If you choose **Incremental**, the first backup is a full and the subsequent backups are incremental.

Your schedule is displayed in the Schedule column. Click the remove  icon to delete schedule.

10. After setting your schedule, click **Next**.

The Retention page is displayed.

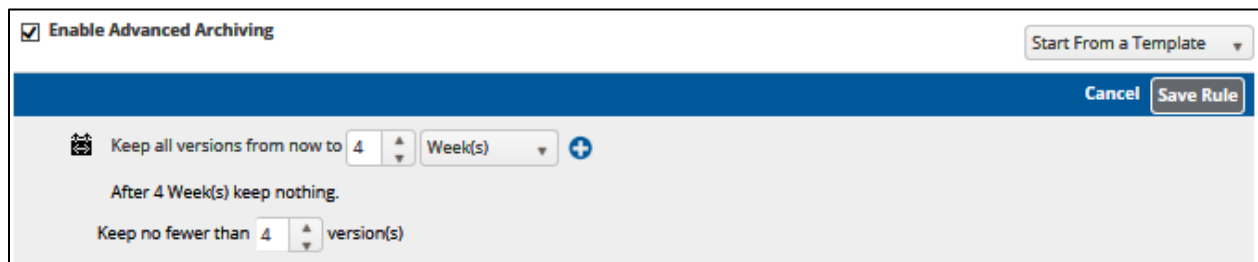


11. Select the number of versions you wish to archive.

**Note:** The default retention is keep 4 weeks and no fewer than 4 versions.

12. Optionally, select the **Enable Advanced Archiving** check box. For Advanced Archiving information, see *Archiving Rules*

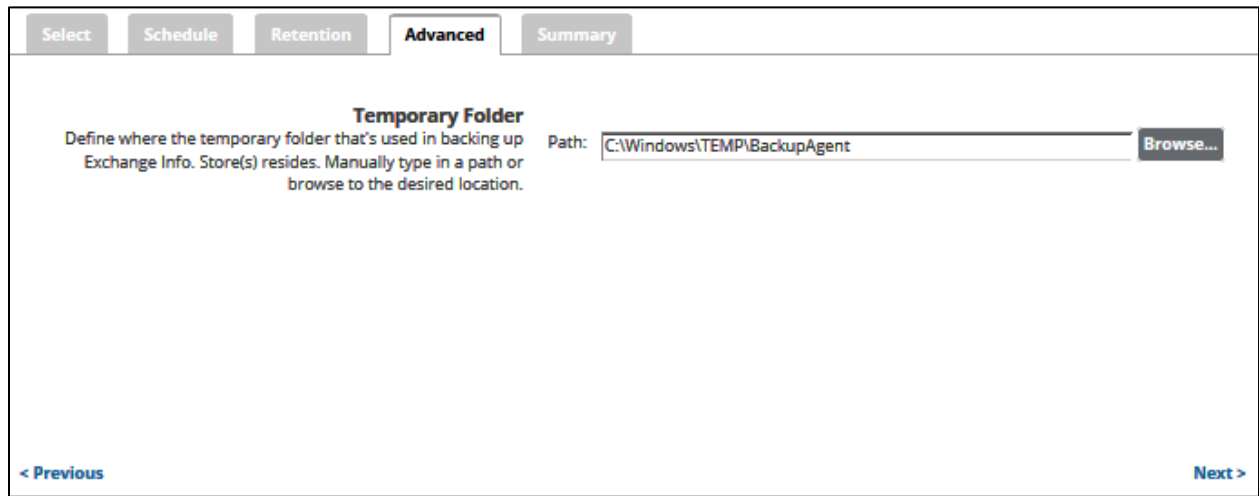
The Advanced Archiving fields are displayed.



**Example:** The setting of a daily backup kept for 30 days and no fewer than 10 versions mean that 30 versions are kept. However, a setting of once a week means that after 10 weeks, 10 versions are kept.

13. Make your selections, click **Save Rule**, and then click **Next**.

The Advanced page is displayed.



**Requirement:** You must specify a temporary folder located on a disk with sufficient space..

14. At the Temporary Folder field, accept the default, type a new path, or click the **Browse** button to locate the temporary folder that is used in backing up.

**Browse option**

- a. Click the **Browse** button.

The folder options are displayed.





Please select a folder below:

**Current selection:**

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:

b. Select the destination.

The OK button is activated.

c. Click **OK**.

The address is displayed in the Path field.

Path:

To add a network location that is not listed, perform the step below.

#### **Adding a Network Location**



- a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):


Path:  ✕ +

The add button is activated.

- b. Click the add  button.

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

The Summary page is displayed.

Select	Schedule	Retention	Advanced	Summary
<b>Select</b>	Contains: <b>1 Database(s)</b> selected, size: <b>10.19 GB (estimated)</b>			
	Destination:  <b>Online</b>			
<b>Schedule</b>	<b>Schedule 1</b> Every week on Saturday starting @ 11:00 PM and are allowed to finish before starting the next schedule occurrence. Full backups.			
	<b>Schedule 2</b> Every week on Sunday & Monday & Tuesday & Wednesday & Thursday & Friday starting @ 11:00 PM and are allowed to finish before starting the next schedule occurrence. Incremental backups.			
<b>Retention</b>	Keep at least <b>4 Week(s)</b> and no fewer than <b>4 version(s)</b> .			
<b>Advanced</b>	Temporary Folder: <b>C:\Windows\TEMP\BackupAgent</b>			
<a href="#">&lt; Previous</a>				
				<a href="#">Cancel</a> <a href="#">Create Backup Set</a>

16. At the Summary page, verify your backup selections, and then click **Create Backup Set**.

The Backup Selections page is displayed with your current backup status.

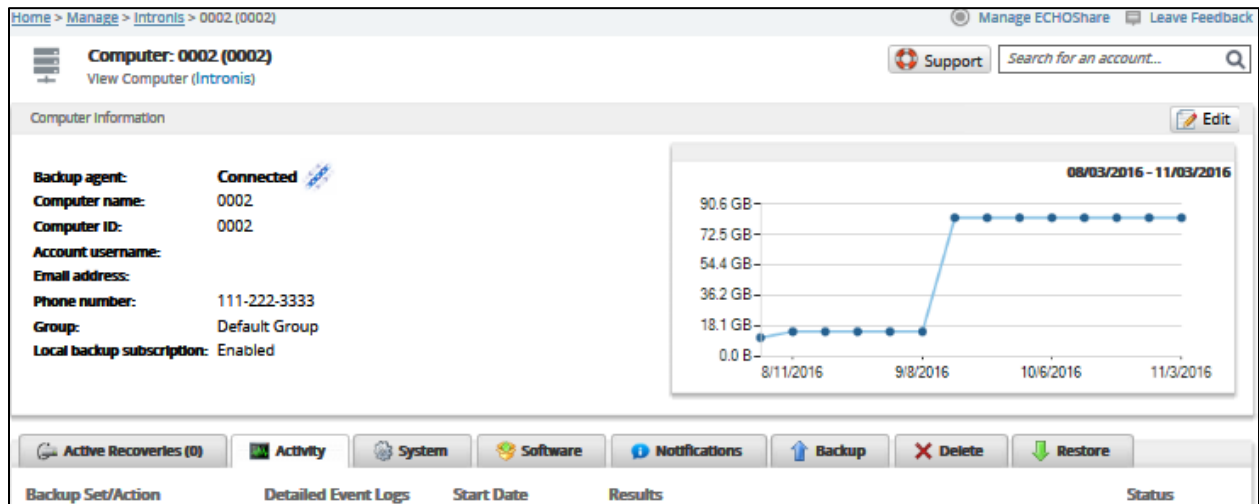


### Editing Exchange Information Store Backup Sets

To edit an Exchange Information Store backup, perform the following steps.

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

The Computer page is displayed.





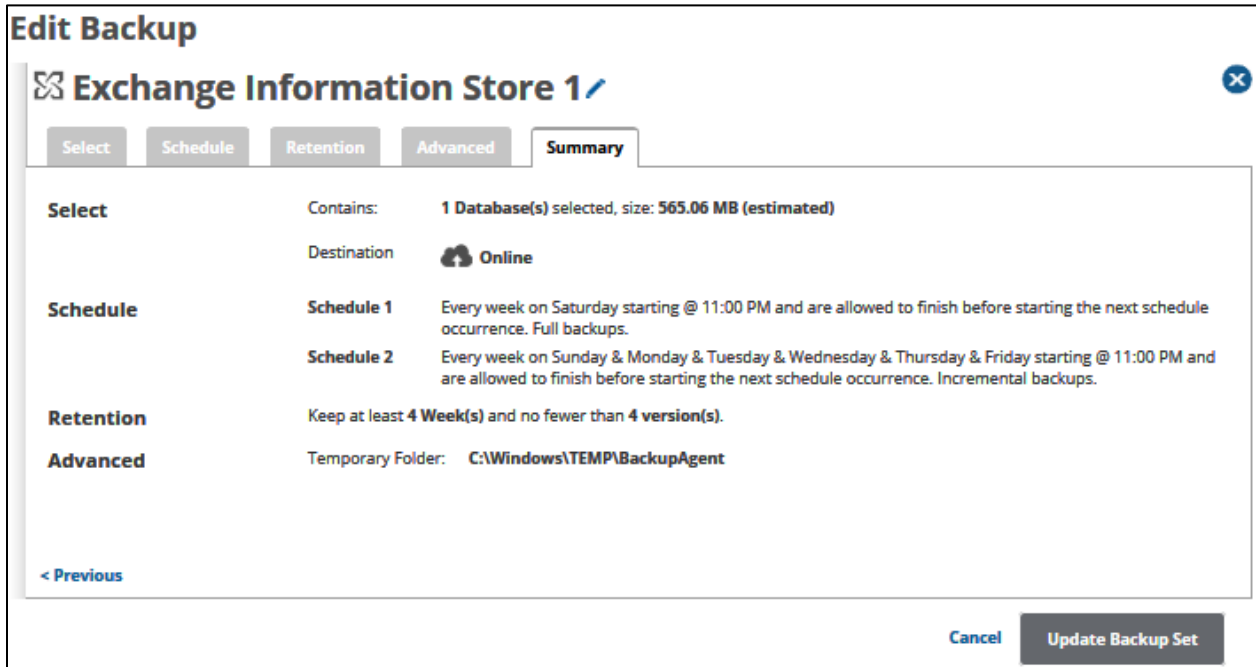
2. Click the **Backup** tab.

The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
Files and Folders (4)		Files and Folders 1		11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>		
Physical Imaging (2)		Files and Folders 2		--	<input type="checkbox"/>		
Hyper-V Standard		Files and Folders 3		--	<input type="checkbox"/>		
Hyper-V Rapid Recovery		Files and Folders 4		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
VMware Standard (1)		Physical Imaging 1		--	<input type="checkbox"/>		
VMware QuickSpin (3)		Physical Imaging 2		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
SQL Server (2)		VMware Standard 1		11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>		
Exchange Mailbox Level		VMWare QuickSpin 1		--	<input type="checkbox"/>		
		VMWare QuickSpin 2		--	<input type="checkbox"/>		
		VMWare QuickSpin 3		--	<input type="checkbox"/>		
		SQL 1		--	<input type="checkbox"/>		
		SQL 2		--	<input type="checkbox"/>		
1							1 - 12 of 12 items

3. Click the edit icon of the backup selection to edit.

The Backup Set Summary page is displayed.



**Edit Backup**

**Exchange Information Store 1**

Select Schedule Retention Advanced **Summary**

**Select** Contains: **1 Database(s)** selected, size: **565.06 MB (estimated)**  
Destination: **Online**

**Schedule**  
**Schedule 1** Every week on Saturday starting @ 11:00 PM and are allowed to finish before starting the next schedule occurrence. Full backups.  
**Schedule 2** Every week on Sunday & Monday & Tuesday & Wednesday & Thursday & Friday starting @ 11:00 PM and are allowed to finish before starting the next schedule occurrence. Incremental backups.

**Retention** Keep at least **4 Week(s)** and no fewer than **4 version(s)**.

**Advanced** Temporary Folder: **C:\Windows\TEMP\BackupAgent**

< Previous

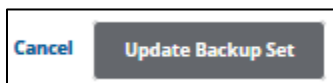
Cancel **Update Backup Set**

- Select any of the tabs to display and edit your current settings. See *Creating Exchange Information Store Backups* for details.

**Notes:**

- The backup set name may be edited. See *Changing Backup Set Names*.
- The Storage Location Destination options on the Select page cannot be changed.

- After making all your edits, click the **Update Backup Set** button at the bottom of any page, as shown below.



Cancel **Update Backup Set**

The Backup Selections page is displayed with your current backup status.




## Removing Exchange Information Store Backup Sets

To remove an Exchange Information Store backup set, perform the following steps.

1. Navigate to the Backup Selections page. See *Creating Exchange Information Store Backups* for instructions.

The Backup Selections page is displayed.

Backup Selections							Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove	
Files and Folders (4)	Files and Folders 1	Files and Folders 1	▶	11/07/2016 @ 09:30 PM	<input checked="" type="checkbox"/>	✕	
Physical Imaging (2)	Files and Folders 2	Files and Folders 2	▶	--	<input type="checkbox"/>	✕	
Hyper-V Standard	Files and Folders 3	Files and Folders 3	▶	--	<input type="checkbox"/>	✕	
Hyper-V Rapid Recovery	Files and Folders 4	Files and Folders 4	▶	11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	✕	
VMware Standard (1)	Physical Imaging 1	Physical Imaging 1	▶	--	<input type="checkbox"/>	✕	
VMware QuickSpin (3)	Physical Imaging 2	Physical Imaging 2	▶	11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	✕	
SQL Server (2)	VMware Standard 1	VMware Standard 1	▶	11/02/2016 @ 11:00 PM	<input checked="" type="checkbox"/>	✕	
Exchange Mailbox Level	VMware QuickSpin 1	VMware QuickSpin 1	▶	--	<input type="checkbox"/>	✕	
	VMware QuickSpin 2	VMware QuickSpin 2	▶	--	<input type="checkbox"/>	✕	
	VMware QuickSpin 3	VMware QuickSpin 3	▶	--	<input type="checkbox"/>	✕	
	SQL 1	SQL 1	▶	--	<input type="checkbox"/>	✕	
	SQL 2	SQL 2	▶	--	<input type="checkbox"/>	✕	

2. At the relevant backup set row, click the remove  icon to remove the backup set.

The confirmation pop-up is displayed.

**Remove Backup Set**

Removing a backup set does not automatically delete the associated data from the server or your Local Vault.

**Are you sure that you would like to remove this backup set?**

3. Click **Yes**.

The backup set is removed.



## Chapter 2. Exchange Information Store Restore

This chapter includes the following topics:

- Exchange Information Store Restore Tabs
- Restoring Exchange Information Store

### Exchange Information Store Restore Tabs

Figure 35 displays the restore tabs.

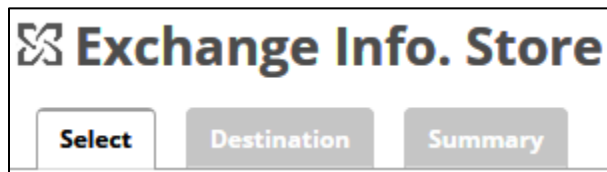


Figure 35. Exchange Information Store Restore Tabs.

The following table provides a description of the page features.

Page	Description
Select	You are required to select at least one Exchange Information Store.
Destination	Select from the following options to specify how are existing files treated during restoration: <ul style="list-style-type: none"><li>• Download to a temporary local folder</li><li>• Restore over the current Information Store</li><li>• Restore to a Recovery Information Store</li></ul> Destination: Choose where the data is restored.
Summary	A list of your selections is displayed.

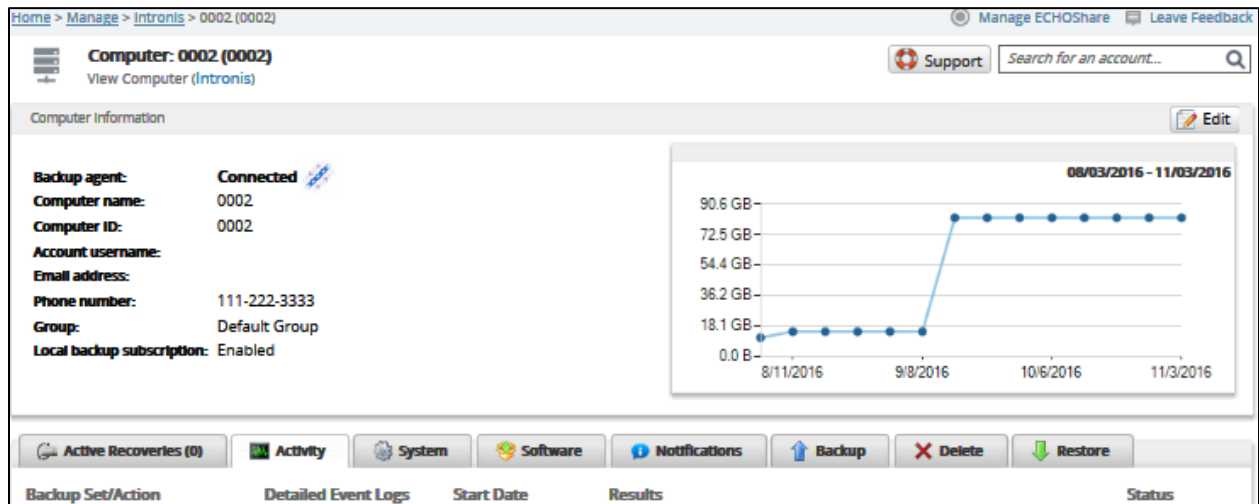


### Restoring Exchange Information Store

To restore an Exchange Information Store, perform the following steps.

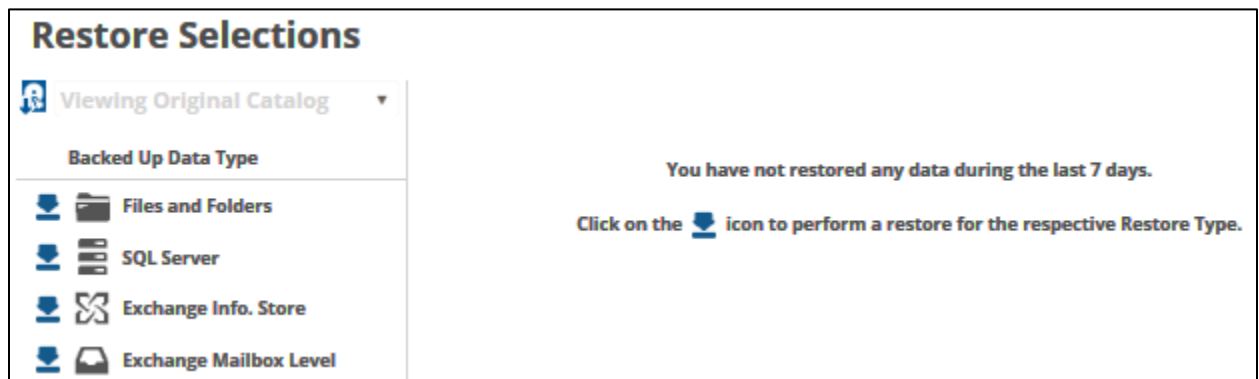
1. Navigate to the Computer page. See *Navigating to the Computer Page* for instructions.


The Computer page is displayed.



2. Click the **Restore** tab.

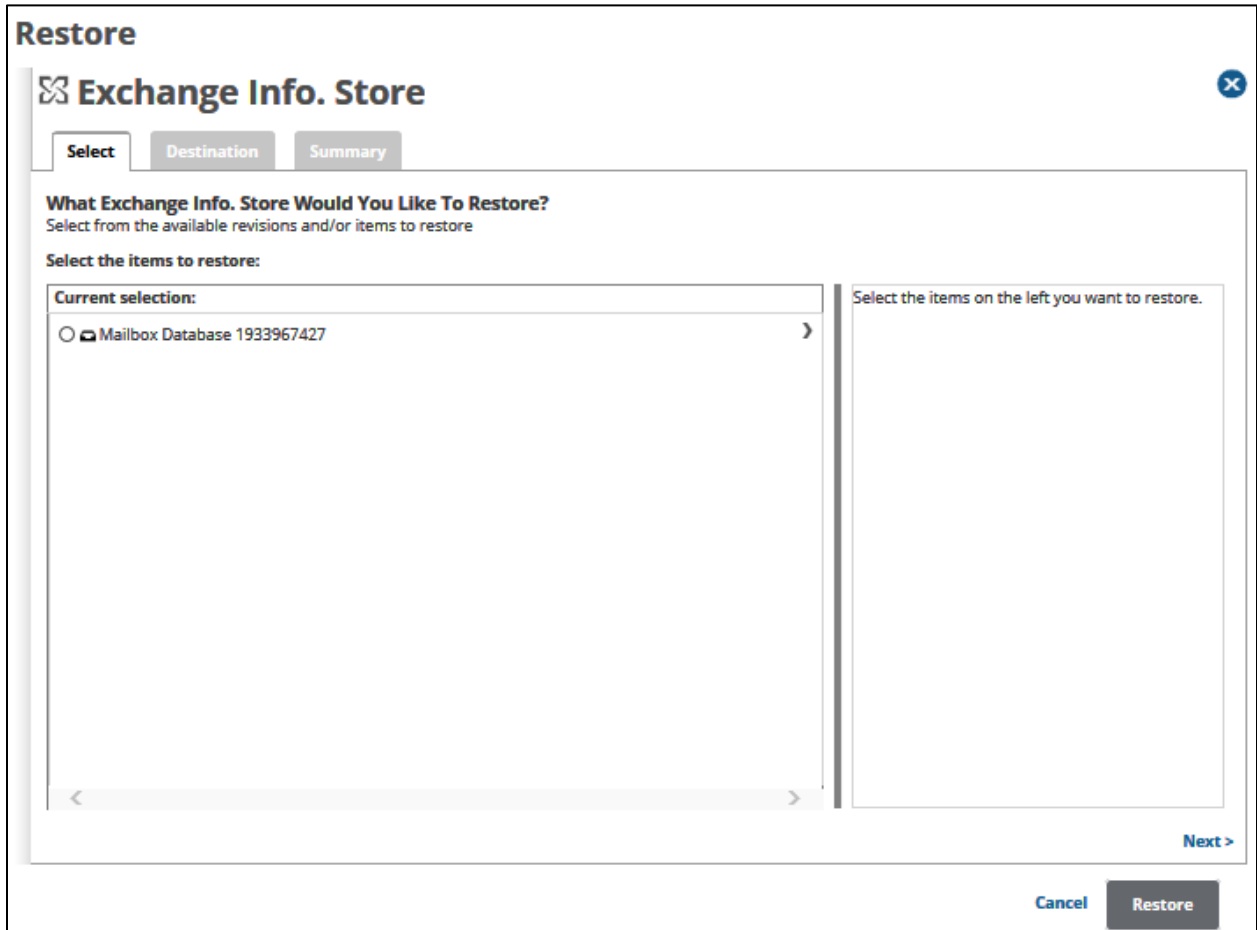
The Restore Selections page is displayed.



3. Click the restore  icon of the backup type you want to restore.



The Select page is displayed



**Restore**

**Exchange Info. Store**

**Select** Destination Summary

**What Exchange Info. Store Would You Like To Restore?**  
Select from the available revisions and/or items to restore

**Select the items to restore:**

**Current selection:**


☐ Mailbox Database 1933967427

Select the items on the left you want to restore.

[Next >](#)

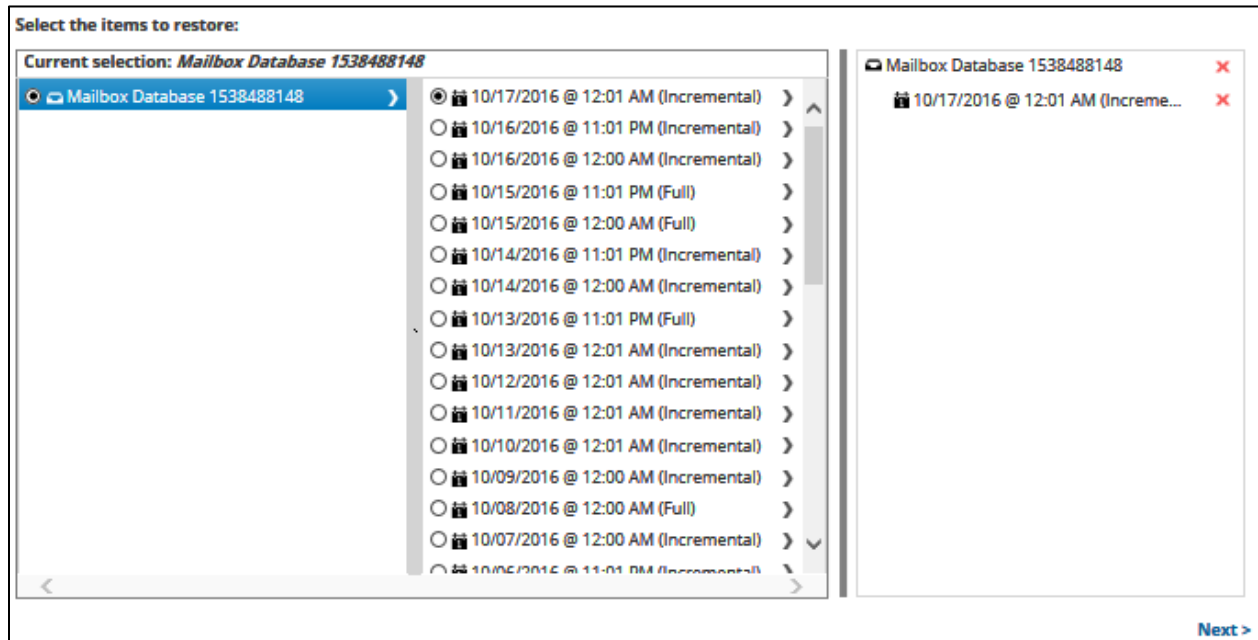
[Cancel](#) [Restore](#)

4. Select from the available revisions and/or items to restore.

Clicking the arrow  at the right of the items displays more revisions and items.



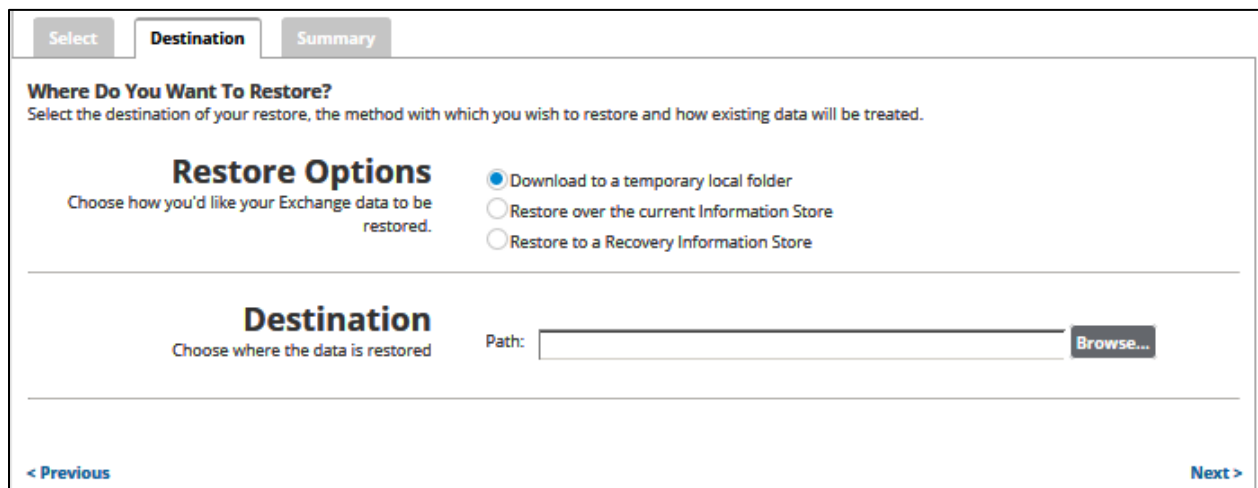
The selection is displayed in the far right pane. Click the remove  icon to remove any selections.



**Note:** You can only restore from one Exchange Server at a time.

5. After confirming your selections, click **Next**.

The Destination page is displayed.



6. Select a **Restore Option** radio button.

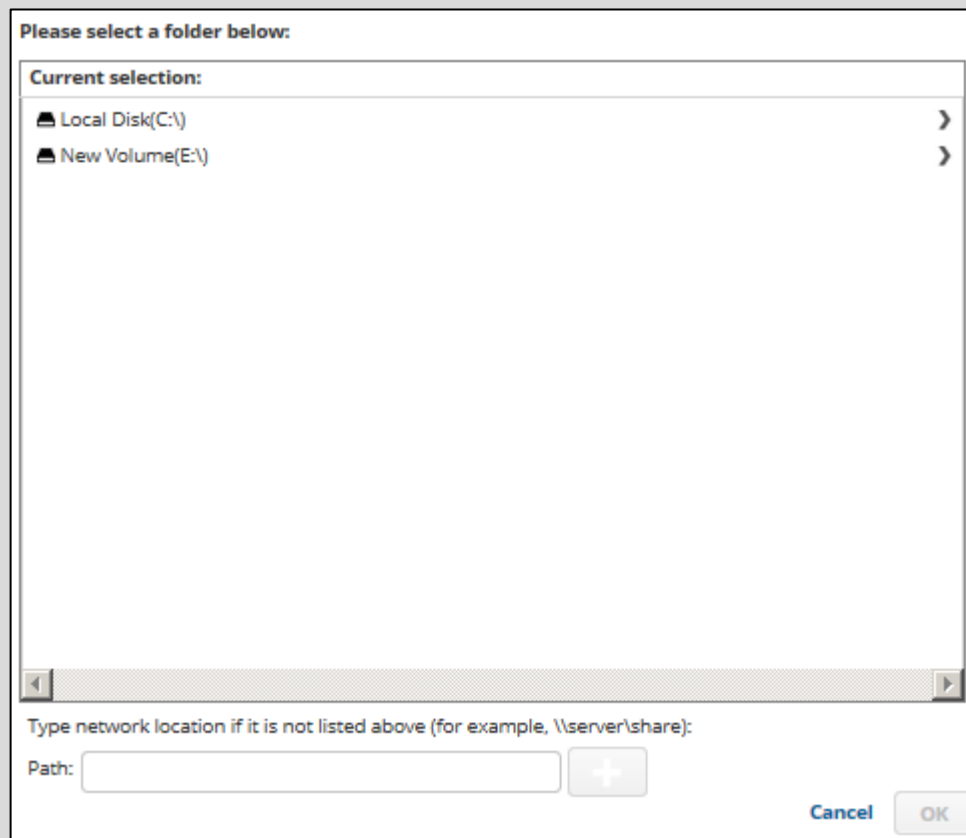


- If you select **Download to a temporary local folder**, then at the Destination path field, type a path, or click the **Browse** button, and perform the following steps.

**Browse option**

- a. Click the **Browse** button.

The folder options are displayed.



- b. Select the destination.

The OK button is activated.



- c. Click **OK**.

The address is displayed in the Path field.



**Destination** Path:

Choose where the data is restored

To add a network location that is not listed, perform the step below.

**Adding a Network Location**

a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:  × +

The add button is activated.

b. Click the add + button.

- If you select **Restore over the current Information Store**, the Path field is disabled.
- If you select **Restore to a Recovery Information Store**, the Path field is disabled.

7. When your selections are complete, click **Next**.

The Summary page is displayed.

Select

Destination

**Summary**

**Select**

Recovering **Mailbox Database 1538488148**, totaling **391.01 MB (estimated)**

**Destination**

Your Exchange data will be restored to **the current Information Store**.

**Advanced**

Restore over **the current Information Store**

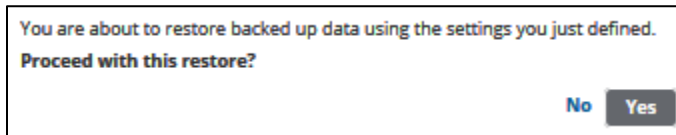
[< Previous](#)

Cancel

Restore

8. Verify the restore selections, and then click **Restore**.

The confirmation pop-up is displayed.



9. Click **Yes**.

The Restore Selections page is displayed with the status.



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## Exchange Information Store Backup and Restore



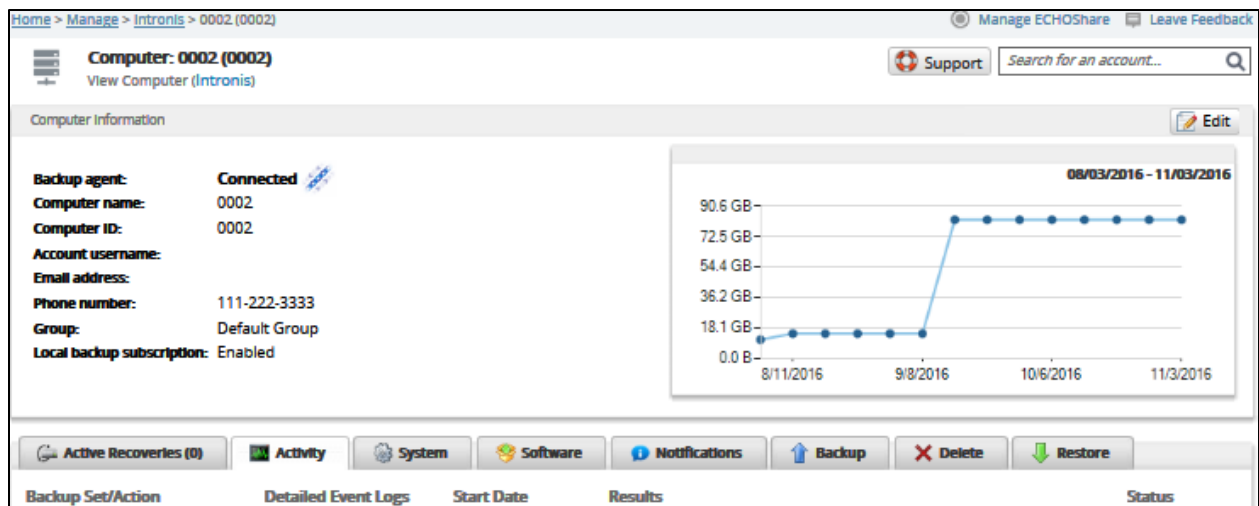
## Chapter 3. Exchange Information Store Delete

**CAUTION!** Deleted data is completely purged and can no longer be accessed or restored.

To delete an Exchange Information Store backup, perform the following steps.

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


The Computer page is displayed.



2. Select the **Delete** tab.


The Delete Selections page is displayed.

Delete Selections			
Backed Up Data Type	Type	Status	Completed
Files and Folders	Files & Folders	4 Item(s) Deleted	11/04/2016 @ 10:33 AM
SQL Server			
VMware Standard			
VMware QuickSpin			
Physical Imaging			

3. Select the delete  icon beside the backup type you want to delete.

The Delete page is displayed.

Delete


Exchange Information Store

**What Exchange Info. Store Item(s) Would You Like To Delete?**  
Select from the available Exchange Info. Store item(s) to delete.

**Select Your Exchange Info. Store Item(s):**

Current selection:


☐ Mailbox Database 1538488148

Select the items on the left you want to delete.

Exclusions are marked in red.

Cancel
Delete

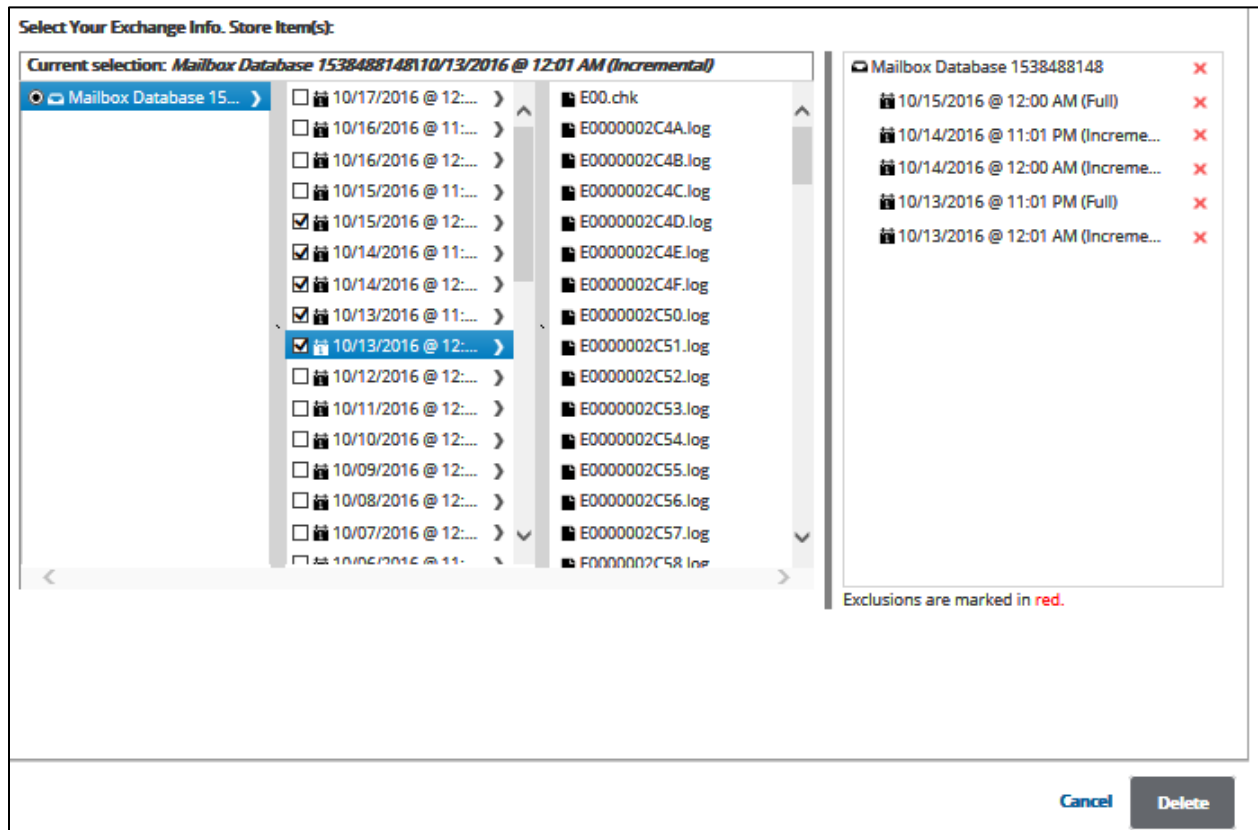
4. Select the radio button of the items to be deleted.

Clicking the arrow  at the right of the items displays more information store items



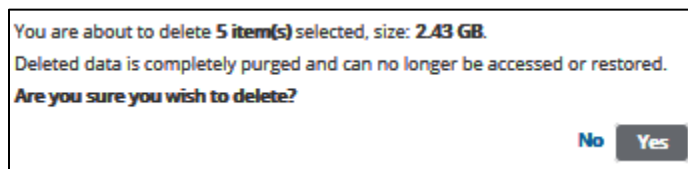


The delete selections are displayed in the right panel.



5. After making your selections, click **Delete**.

The confirmation pop-up is displayed.



6. Confirm your selection, and then click **Yes**.

The Deletes Selections page is displayed with the latest status.



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## Exchange Information Store Backup and Restore



## PART XIII. SYSTEM STATE BACKUP AND RESTORE

This section includes the following chapters:

- System State Backup
- System State Restore
- System State Delete

See *Backup Agent Software Requirements* for more information.

### Chapter 1. System State Backup

This chapter includes the following topics:

- System State Backup Tabs
- Creating System State Backups
- Editing System State Backup Sets
- Removing System State Backups

#### System State Backup Tabs

Figure 36 displays the backup tabs.



Figure 36. System State Backup Tabs.

The following table provides a description of the page features.

Page	Description
Select	You are required to select a storage destination for the System State backup.
Schedule	Optionally select the schedule. The default is every week on Sunday at 11:00 p.m. The backup is allowed to finish before starting the next schedule occurrence.
Retention	The default retention is keep 4 weeks and no fewer than 4 versions.
Advanced	The following items are required: <ul style="list-style-type: none"><li>• Temporary Folder: Specify where the temporary folder used in backing up resides.</li></ul>



Page	Description
	<ul style="list-style-type: none"><li>Scratch Drive: Select a non-critical drive with enough free space to host the system state backup.</li></ul>
Summary	A list of your selections is displayed.

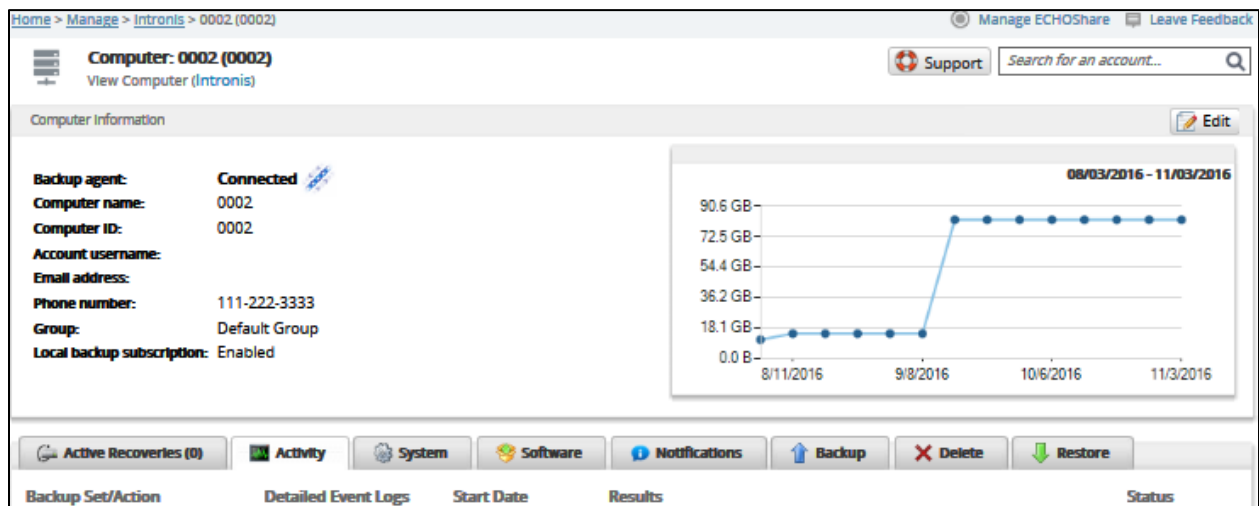
### Creating System State Backups

**Note:** Only one System State backup set may exist on a computer.

To create a System State backup, perform the following steps.

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

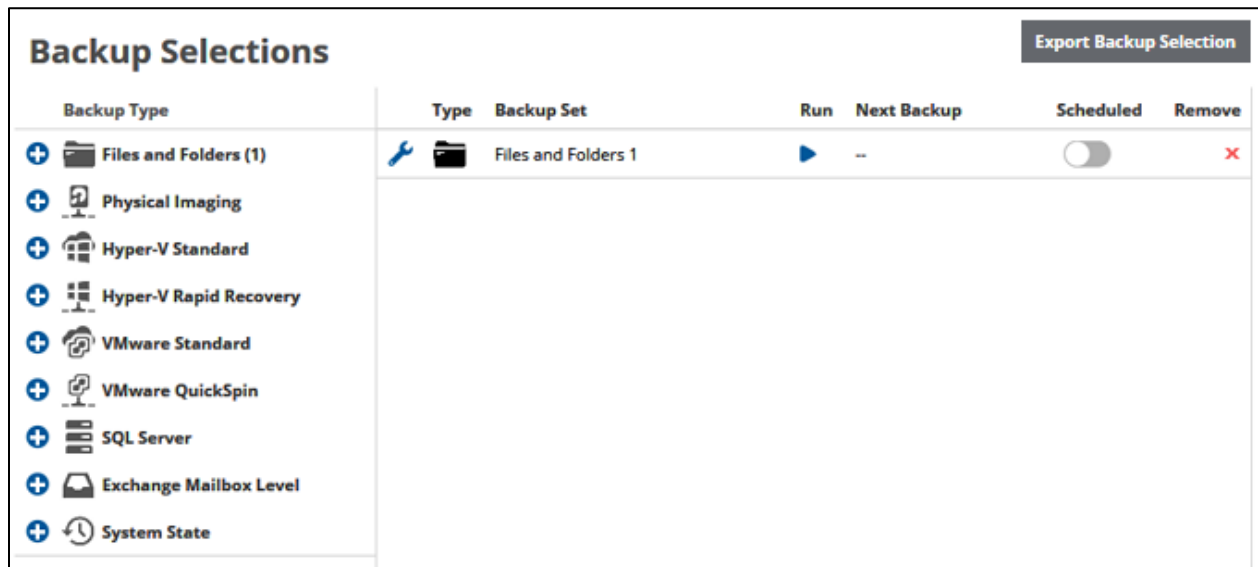
The Computer page is displayed.





2. Click the **Backup** tab.

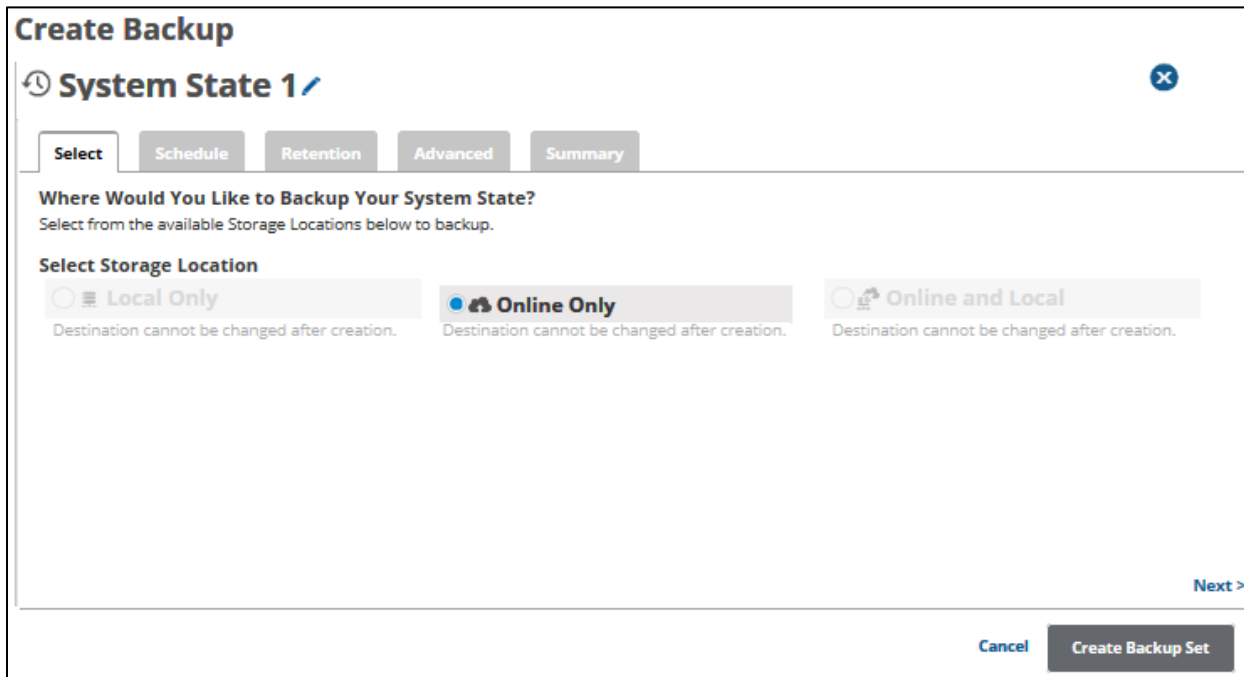
The Backup Selections page is displayed.



**Note:** The System State backup type is available only for agents of version 5.5.4 or above that have a supported operating system (Windows Server) and the Windows Server Backup feature enabled.

3. In the Backup Type pane, click the select  icon beside **System State** to run the backup type.

The Select page is displayed.



**Create Backup**

⌚ **System State 1** ✕

Select Schedule Retention Advanced Summary

**Where Would You Like to Backup Your System State?**  
Select from the available Storage Locations below to backup.

**Select Storage Location**

☐ Local Only  
Destination cannot be changed after creation.

☒ Online Only  
Destination cannot be changed after creation.

☐ Online and Local  
Destination cannot be changed after creation.

Next >

Cancel Create Backup Set

4. Click the Backup Name to provide a new name for your backup set, or accept the default.  
See *Changing Backup Set Names*.
5. At the Select Storage Location, click one of the following radio button options.

**Note:** This procedure applies to all options. See *Backup Options* for more information.

- **Local Only** (Local Vault must be enabled and a local subscription is required. Data is not backed up to the cloud.)
- **Online Only** (An enabled Local Vault disables this option.)
- **Online and Local** (Local Vault must be enabled.)

6. Click **Next**.



The Schedule page is displayed.

7. Accept or edit the default schedule. See *Backup Schedules* for more information.

#### Notes:

- Multiple daily/weekly schedules are permitted (as long as they do not overlap).
- The **Allow to Finish** check box is always selected and grayed-out.

#### Adding a New Daily or Weekly Schedule

a. To add additional daily or weekly schedules, click the **Add New** button.

The new Schedule is displayed and the **Add New** button is highlighted, as shown below.

b. Make your selections.




The new schedule details are displayed.

### Editing Existing Daily or Weekly Schedules

a. To edit existing schedules, in the Schedule column, click the schedule details.

The Schedule is highlighted.

b. Select your new daily or weekly times.

Your schedule is displayed in the Schedule column. Click the remove  icon to delete schedule.

8. After setting your schedule, click **Next**.

The Retention page is displayed.

Select Schedule **Retention** Advanced Summary

**Archiving Rules**  
Determine how many versions of each backup you would like to retain.

Keep 4 week(s) and no fewer than 4 version(s)

☐ Enable Advanced Archiving

Start From a Template

< Previous Next >

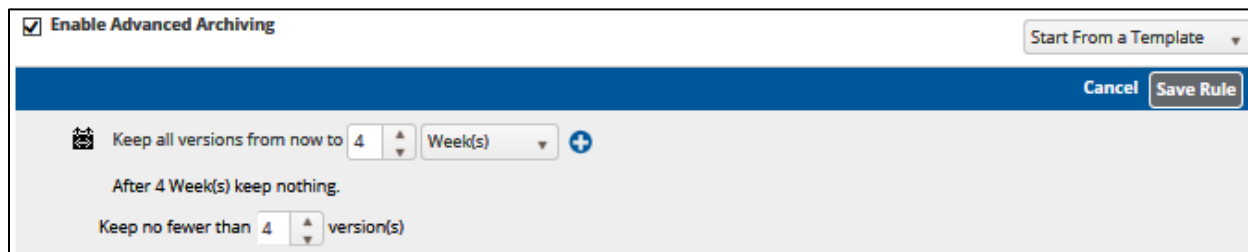
9. Select the number of versions you wish to archive.

**Note:** The default retention is keep 4 weeks and no fewer than 4 versions.

10. Optionally, select the **Enable Advanced Archiving** check box. For Advanced Archiving information, see *Archiving Rules*



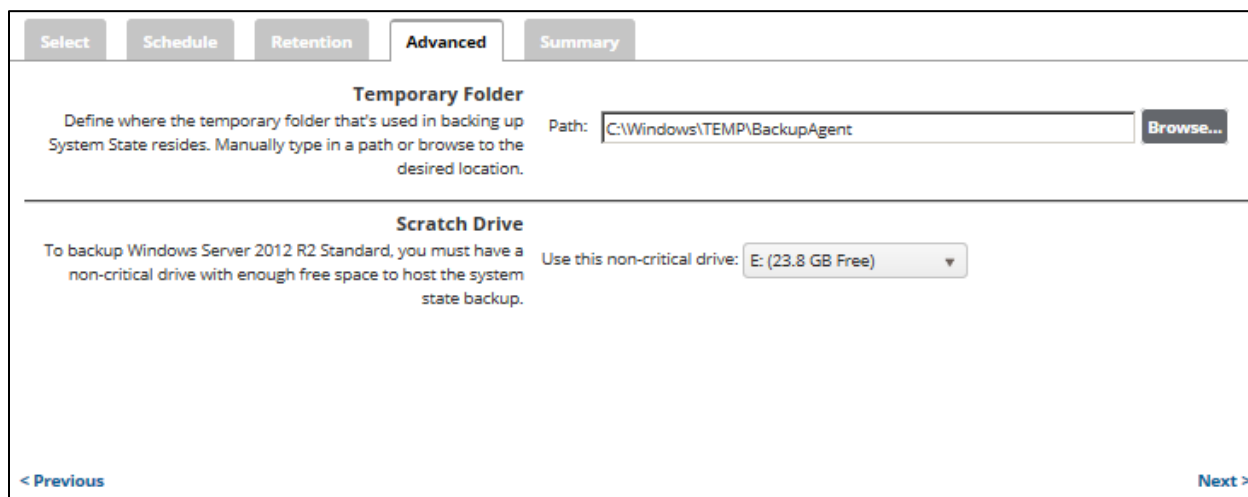
The Advanced Archiving fields are displayed.



**Example:** The setting of a daily backup kept for 30 days and no fewer than 10 versions mean that 30 versions are kept. However, a setting of once a week means that after 10 weeks, 10 versions are kept.

11. Make your selections, click **Save Rule**, and then click **Next**.

The Advanced page is displayed.



**Requirement:** You must specify a temporary folder and a scratch drive located on a disk with sufficient space.

12. At the Temporary Folder field, accept the default, type a new path, type a new path, or click the **Browse** button to locate the temporary folder that is used in backing up.

### Browse option

- a. Click the **Browse** button.

The folder options are displayed.



Please select a folder below:

**Current selection:**

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:

b. Select the destination.

The OK button is activated.

c. Click **OK**.

The address is displayed in the Path field.

Path:

To add a network location that is not listed, perform the step below.

### **Adding a Network Location**



- a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:  ✕ +

The add button is activated.

- b. Click the add  button.

**Note:** To back up Windows Server 2012 R2 Standard and Windows Server 2008 and above, you must have a non-critical drive with enough free space to host the system state backup.

13. At the Scratch Drive section, click the down-arrow to display non-critical drives, select a drive, and then click **Next**.

The Summary page is displayed.

SelectScheduleRetentionAdvancedSummary

Select

Destination

Online

Schedule

Schedule 1

Every week  
On Sunday @ 11:00 PM and are allowed to finish before starting the next schedule occurrence.

Retention

Keep at least 4 Week(s) and no fewer than 4 version(s).

Advanced

Temp Location:

C:\Windows\TEMP\BackupAgent

Scratch Drive:

E: (23.8 GB Free)

< Previous

CancelCreate Backup Set

14. At the Summary page, verify your backup selections, and then click **Create Backup Set**.

The Backup Selections page is displayed with your current backup status.

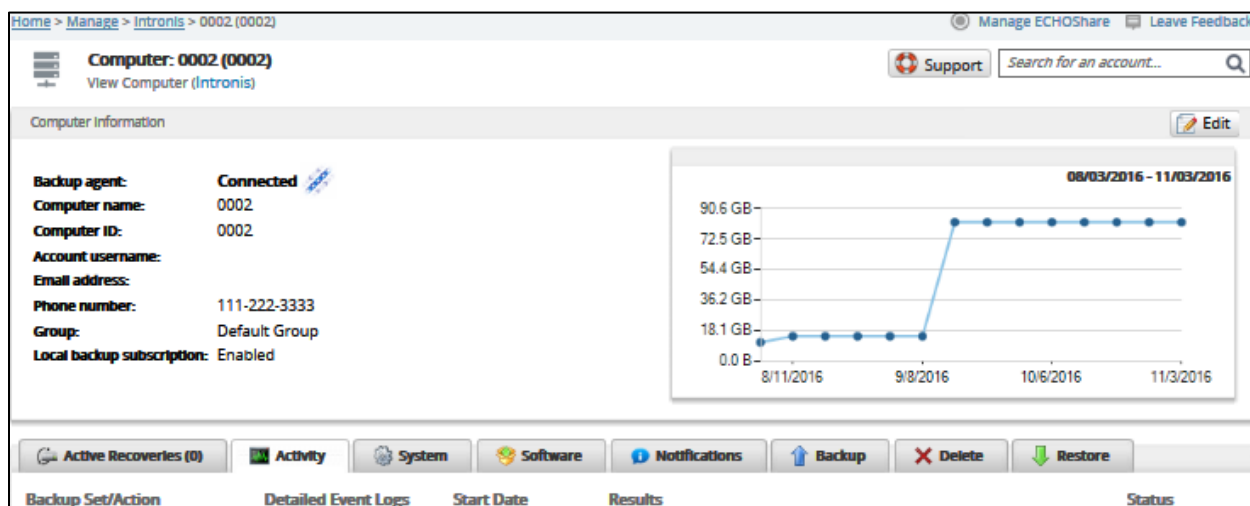
Backup Selections						Export Backup Selection
Backup Type	Type	Backup Set	Run	Next Backup	Scheduled	Remove
 Files and Folders		System State 1		11/20/2016 @ 11:00 PM		

## Editing System State Backup Sets

To edit a System State backup, perform the following steps.

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

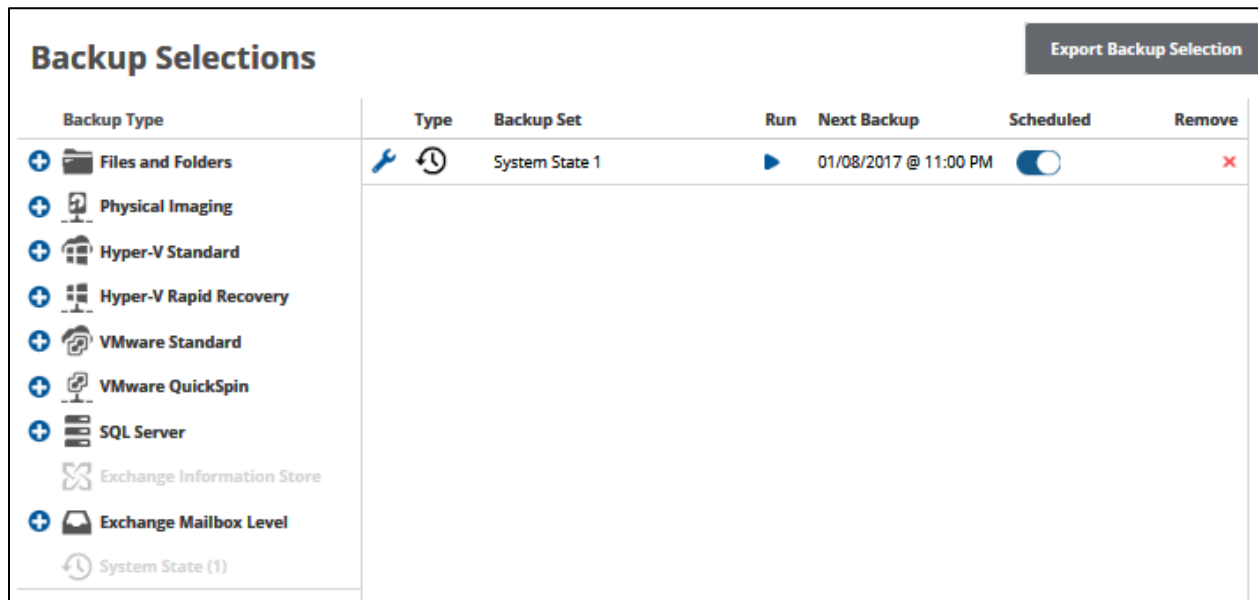
The Computer page is displayed.





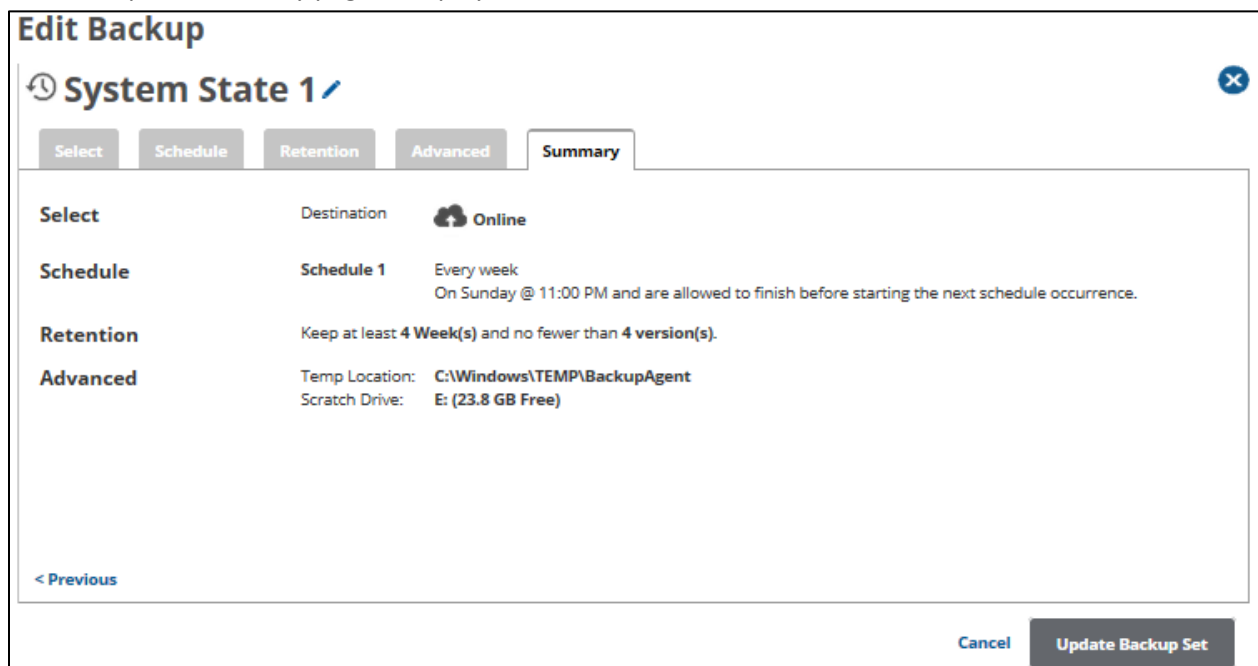
2. Click the **Backup** tab.

The Backup Selections page is displayed.



3. Click the edit icon of the backup selection to edit.

The Backup Set Summary page is displayed.

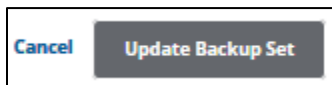




4. Select any of the tabs to display and edit your current settings. See *Creating System State Backups* for details.

**Notes:**

- The backup set name may be edited. See *Changing Backup Set Names*.
  - The Storage Location Destination options on the Select page cannot be changed.
5. After making all your edits, click the **Update Backup Set** button at the bottom of any page, as shown below.



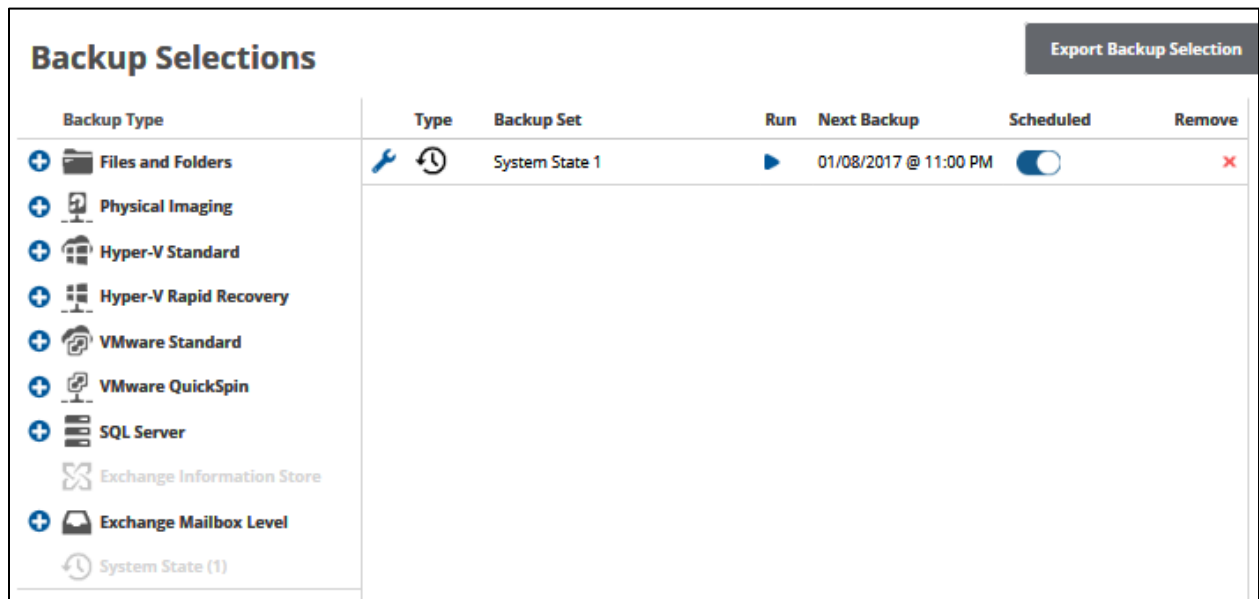
The Backup Selections page is displayed with your current backup status.


## Removing System State Backup Sets

To remove a System State backup set, perform the following steps.

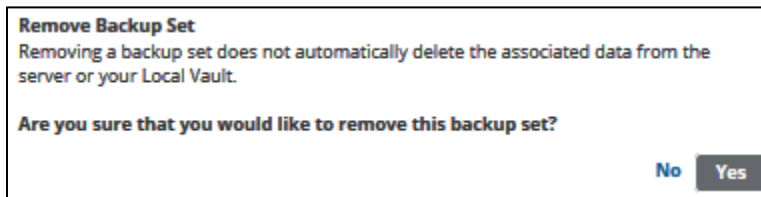
1. Navigate to the Backup Selections page. See *Creating System State Backups* for instructions.

The Backup Selections page is displayed.




2. At the relevant backup set row, click the remove  icon to remove the backup set.

The confirmation pop-up is displayed.



3. Click **Yes**.

The backup set is removed.

The System State backup type is enabled with the Add  button displayed so you can create a new System State backup set.



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## System State Backup and Restore





## Chapter 2. System State Restore

This chapter includes the following topics:

- System State Restore Tabs
- Restoring System State

### System State Restore Tabs

Figure 37 displays the restore tabs.

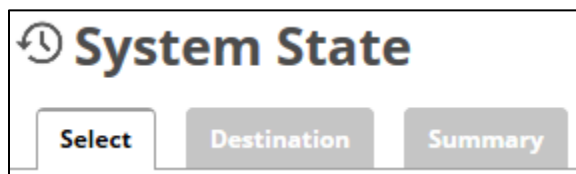


Figure 37. System State Restore Tabs.

The following table provides a description of the page features.

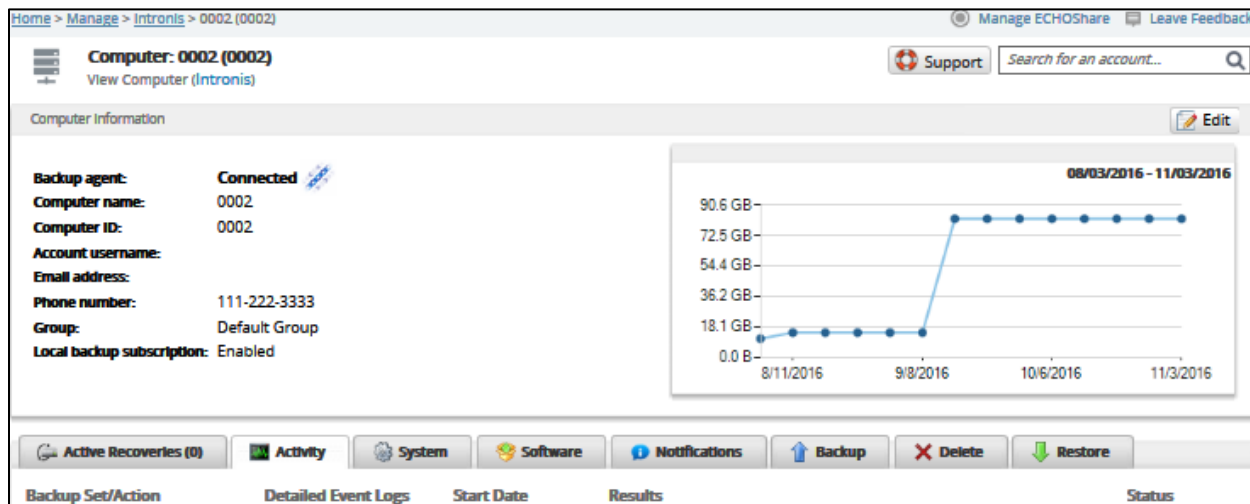
Page	Description
Select	You are required to select one System State revision.
Destination	Choose where the data is restored.
Summary	A list of your selections is displayed.

### Restoring System State

To restore a System State, perform the following steps.

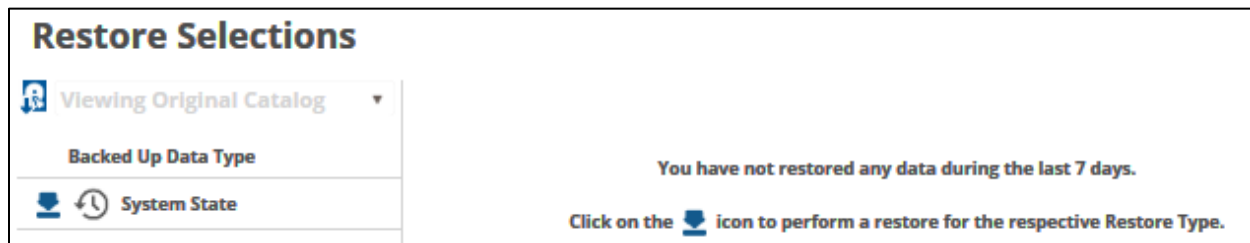
1. Navigate to the Computer page. See *Navigating to the Computer Page* for instructions.


The Computer page is displayed.



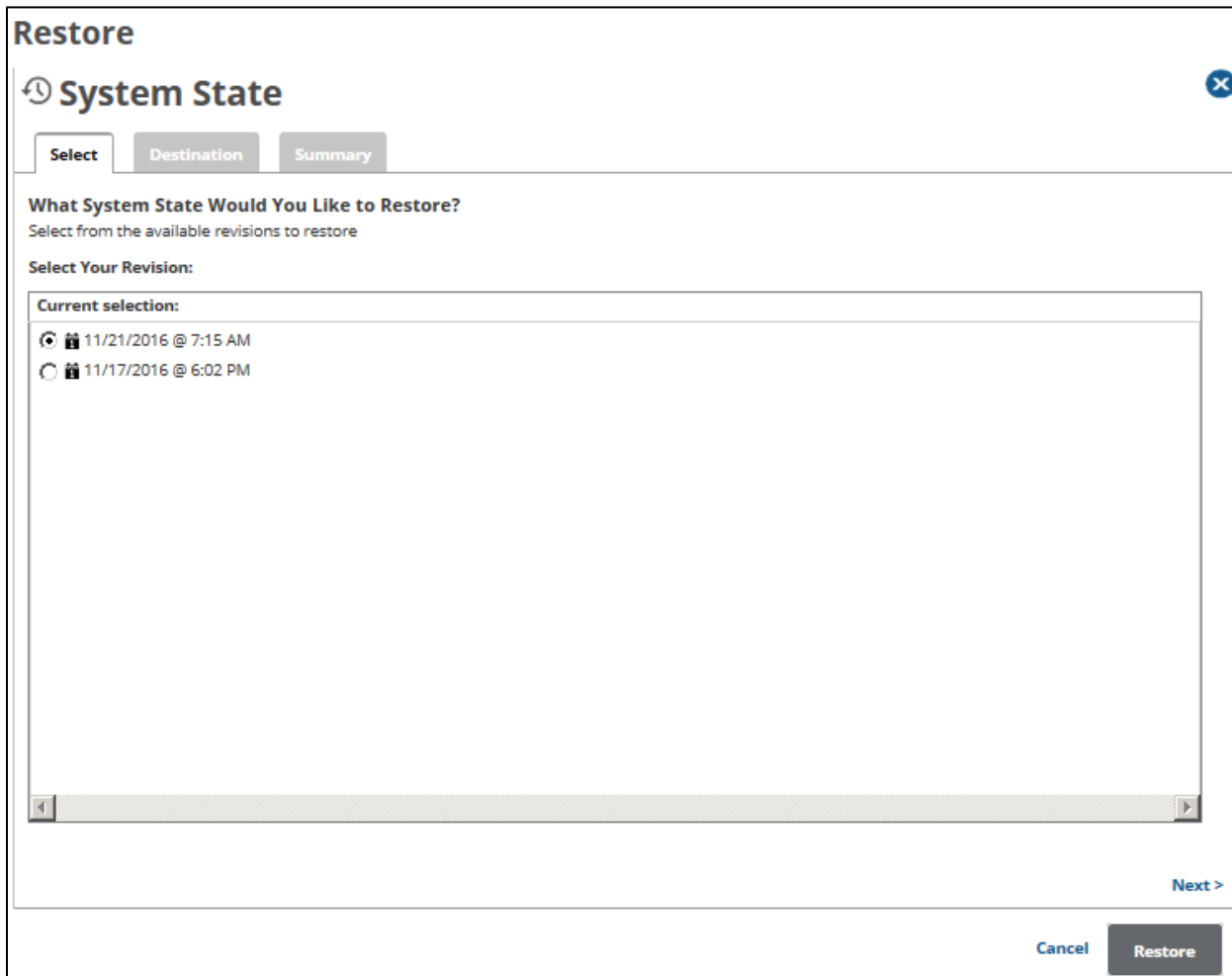
- Click the **Restore** tab.

The Restore Selections page is displayed.



- Click the restore  icon of the backup type you want to restore.

The Select page is displayed

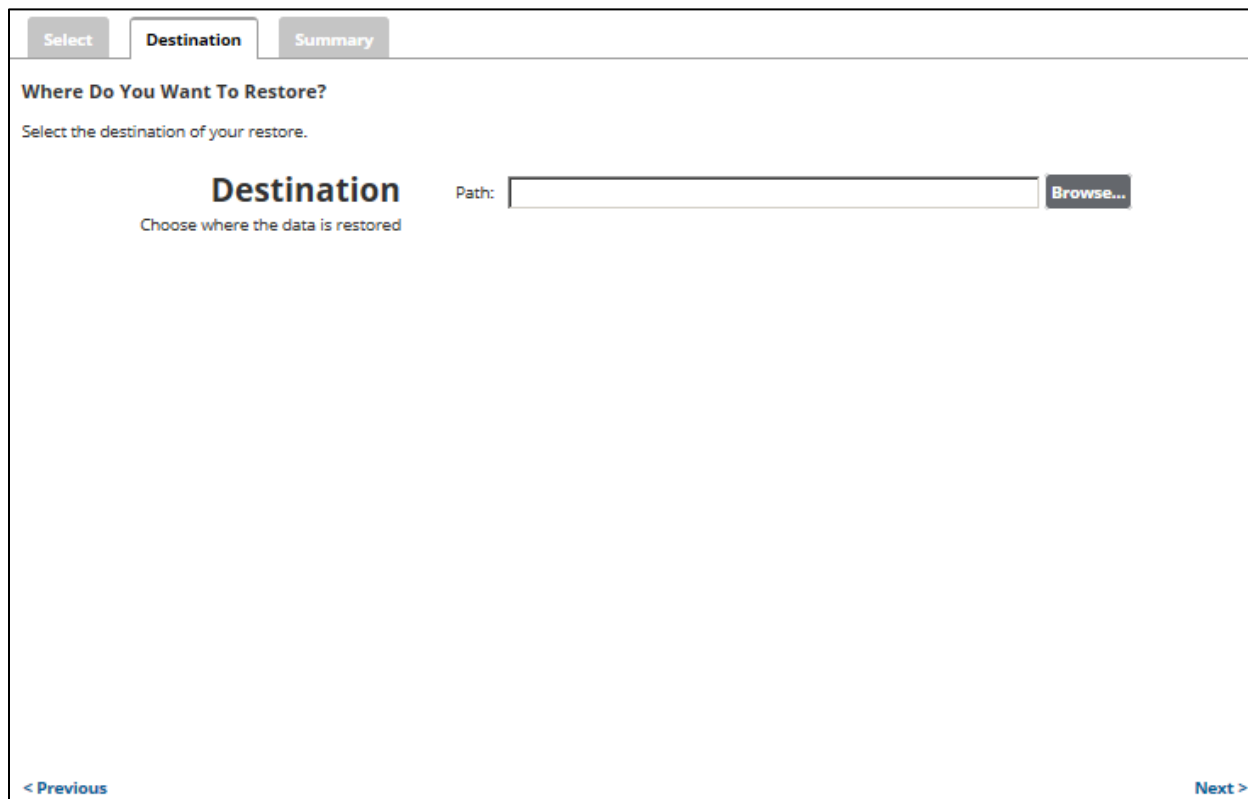


The screenshot shows the 'Restore' window with the 'System State' tab selected. The 'Select' sub-tab is active, displaying the question 'What System State Would You Like to Restore?' and the instruction 'Select from the available revisions to restore'. Below this, the 'Select Your Revision:' section contains a list of two revisions: '11/21/2016 @ 7:15 AM' (selected with a radio button) and '11/17/2016 @ 6:02 PM' (unselected). At the bottom right, there are 'Cancel' and 'Restore' buttons, and a 'Next >' link.

**Note:** You can only restore from one System State at a time.

4. In the Current Selection pane, select from the available revisions to restore, and then click **Next**.

The Destination page is displayed.



The screenshot shows the 'Destination' tab of a wizard. At the top are three tabs: 'Select', 'Destination' (active), and 'Summary'. Below the tabs is the heading 'Where Do You Want To Restore?' followed by the instruction 'Select the destination of your restore.' The main content area has the heading 'Destination' and the subtext 'Choose where the data is restored'. To the right of this text is a 'Path:' label followed by a text input field and a 'Browse...' button. At the bottom left is a '< Previous' link, and at the bottom right is a 'Next >' link.

5. At the Path field, type a path, or click the **Browse** button to select the destination of your restore.

#### **Browse option**

- a. Click the **Browse** button.

The folder options are displayed.



Please select a folder below:

**Current selection:**

- Local Disk(C:\)
- New Volume(E:\)

Type network location if it is not listed above (for example, \\server\share):

Path:

b. Select the destination.

The OK button is activated.

c. Click **OK**.

The address is displayed in the Path field.

**Destination** Path:

Choose where the data is restored

d. To add a network location that is not listed, perform the step below.

### Adding a Network Location



- a. To back up files and folders on another network location that is not listed, type the network path address in the **Path** field as shown in the example below.

Type network location if it is not listed above (for example, \\server\share):

Path:  ✕ +

The add button is activated.

- b. Click the add  button.

6. After your selection is complete, click **Next**.

The Summary page is displayed.

Select

Destination

Summary

Select

Recovering this computer's **System State**, size: **8.2 GB**

Destination

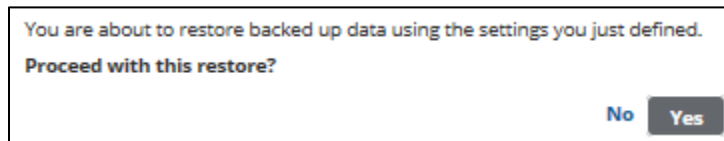
C:\System Volume Information

< Previous

Cancel Restore

7. Verify the restore selections, and then click **Restore**.

The confirmation pop-up is displayed.



8. Click **Yes**.

The Restore Selections page is displayed with the status.



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## System State Backup and Restore





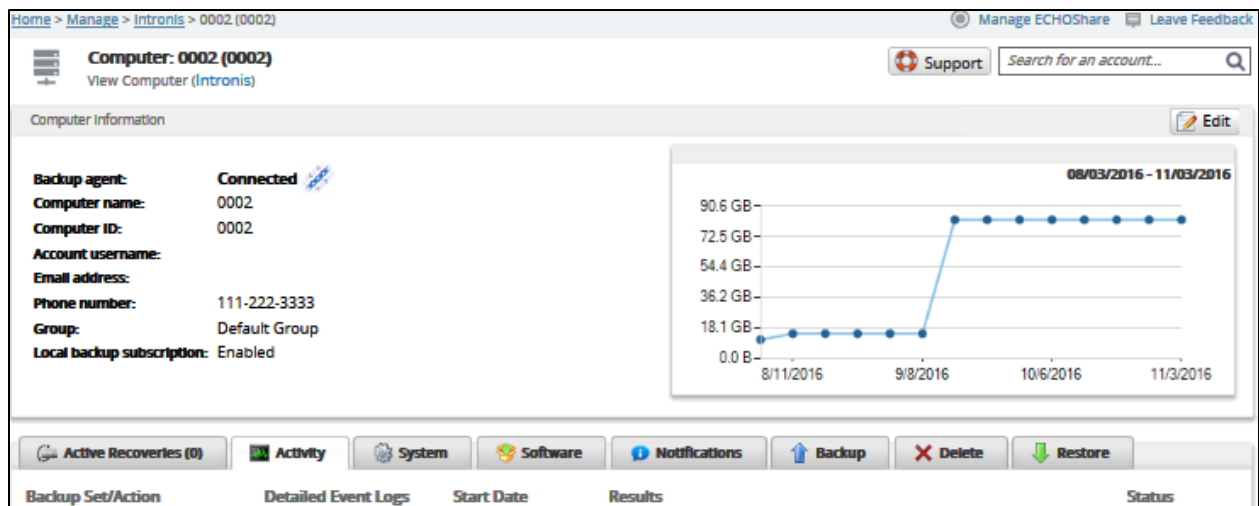
## Chapter 3. System State Delete

**CAUTION!** Deleted data is completely purged and can no longer be accessed or restored.

To delete a System State backup, perform the following steps.

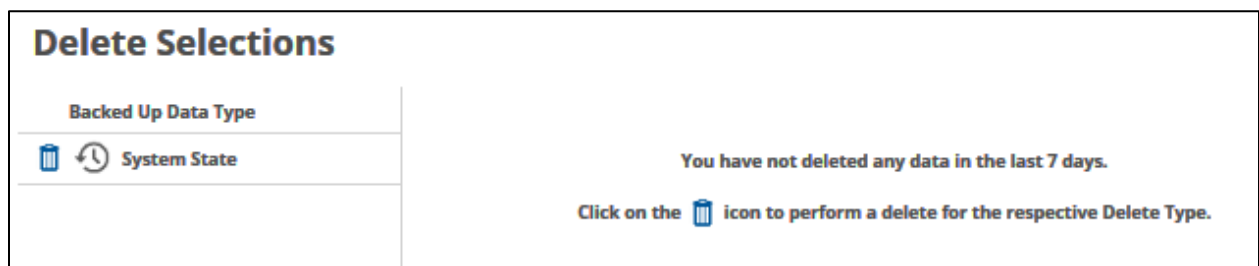
1. Navigate to the Computer page. See *Navigating to the Computer Page* for instructions.


The Computer page is displayed.



2. Select the **Delete** tab.

The Delete Selections page is displayed.



3. Select the delete  icon beside the backup type you want to delete.

The Delete page is displayed.



**Delete**

**System State**

What System State(s) Would You Like to Delete?  
Select from the available System State revisions to delete.

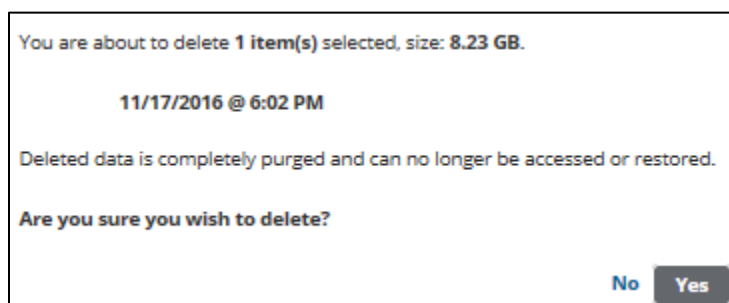
Select Your Revision(s):

Current selection:
<input type="checkbox"/> 11/17/2016 @ 6:02 PM

[Cancel](#) [Delete](#)

4. Select the check boxes of the items to be deleted, and then click **Delete**.

The confirmation pop-up is displayed.



You are about to delete **1 item(s)** selected, size: **8.23 GB**.

**11/17/2016 @ 6:02 PM**

Deleted data is completely purged and can no longer be accessed or restored.

Are you sure you wish to delete?

[No](#) [Yes](#)

5. Confirm your selection, and then click **Yes**.

The Deletes Selections page is displayed with the latest status.



## PART XIV. CONTACTING PARTNER SUPPORT

This chapter includes the following topics:

- How and When to Contact Partner Support
- Common Issues You Can Check
- Preparing for Support

### How and When to Contact Partner Support

Partner Support hours are Monday – Friday 8 am – 9 pm EST. Contact Partner Support by:

- Phone at 1-800-569-0155, option 1.
- Live chat from the website or management portal.
- Emailing support@intronis.com.

During weekends and holidays, coverage during business hours is provided via email only.

Before contacting the Partner Support Team, attempt level-one troubleshooting of the issue.

### Common Issues You Can Check

Here are some common issues you can check before seeking support.

- Access the logs for flagged issues through the management portal or on the local software.
- When a failed backup notice is received, try to reproduce the issue or manually run a backup.
- Check the network and environmental variables that could cause a backup to fail.
  - Check Event Viewer for corresponding errors
  - VSS writers
  - Permissions
  - Connection/Firewall/Anti-virus
- Check the Knowledge Base for relevant articles.

### Preparing for Support

When you contact the Partner Support Team, be ready to provide the following:

- The user name of the account with the issue and the computer ID.
- Any warnings, exceptions, or error messages.

If an existing case, have that case number available so Support can access it to find all relevant information. Depending on the backup solution, a remote connection to the machine may be necessary.



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## Contacting Partner Support

## PART XV. APPENDIX

This appendix includes the following topics:

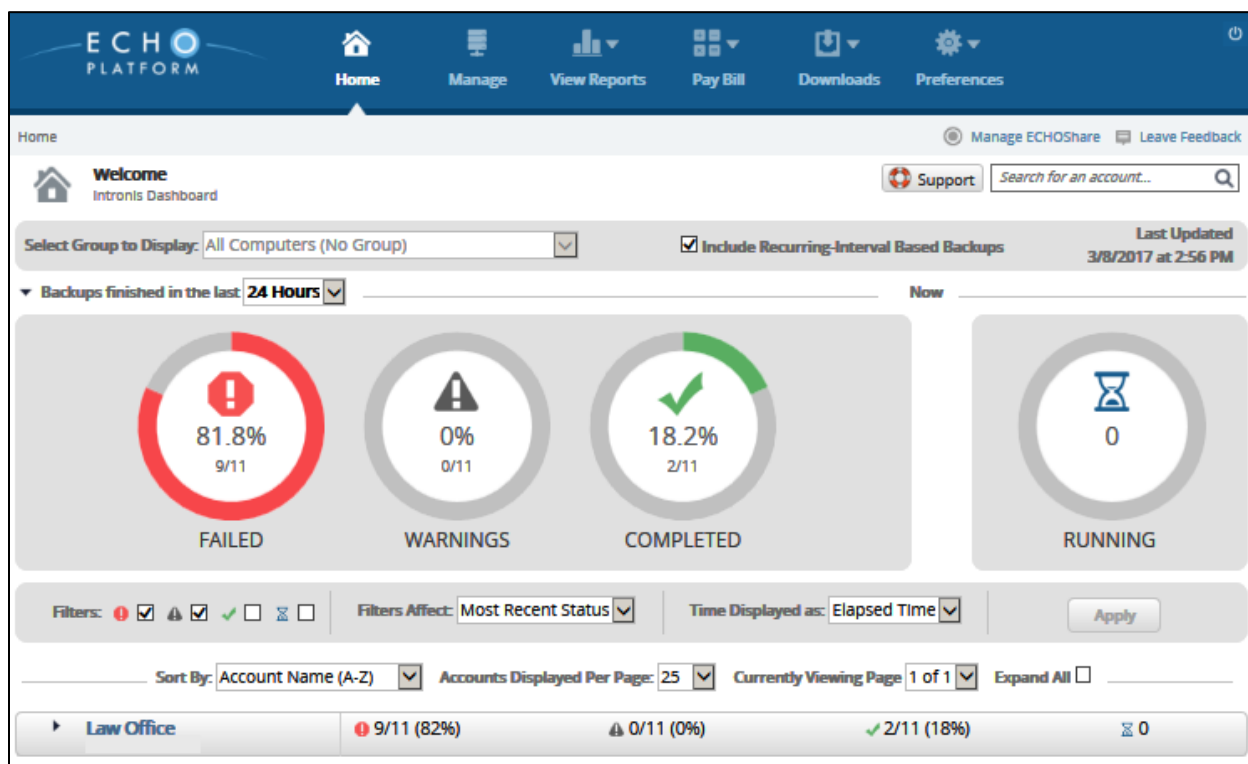
- Navigating to the Computer Page
- Backup Options
- Archiving Rules
- Backup Schedules
- VMware Clusters

### Navigating to the Computer Page

To navigate to the Computer page, perform the following steps.

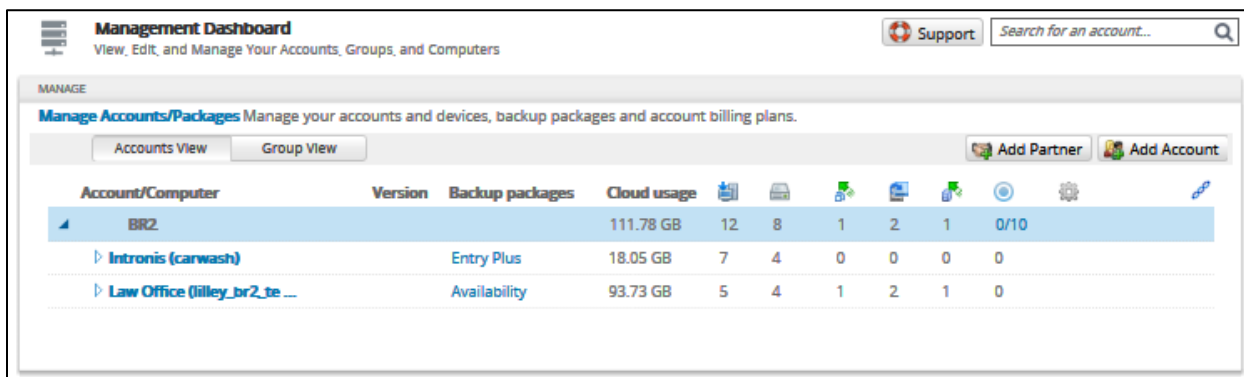
1. Log into your account.

The Home page is displayed.



- At the ECHOshare ribbon, click **Manage**.

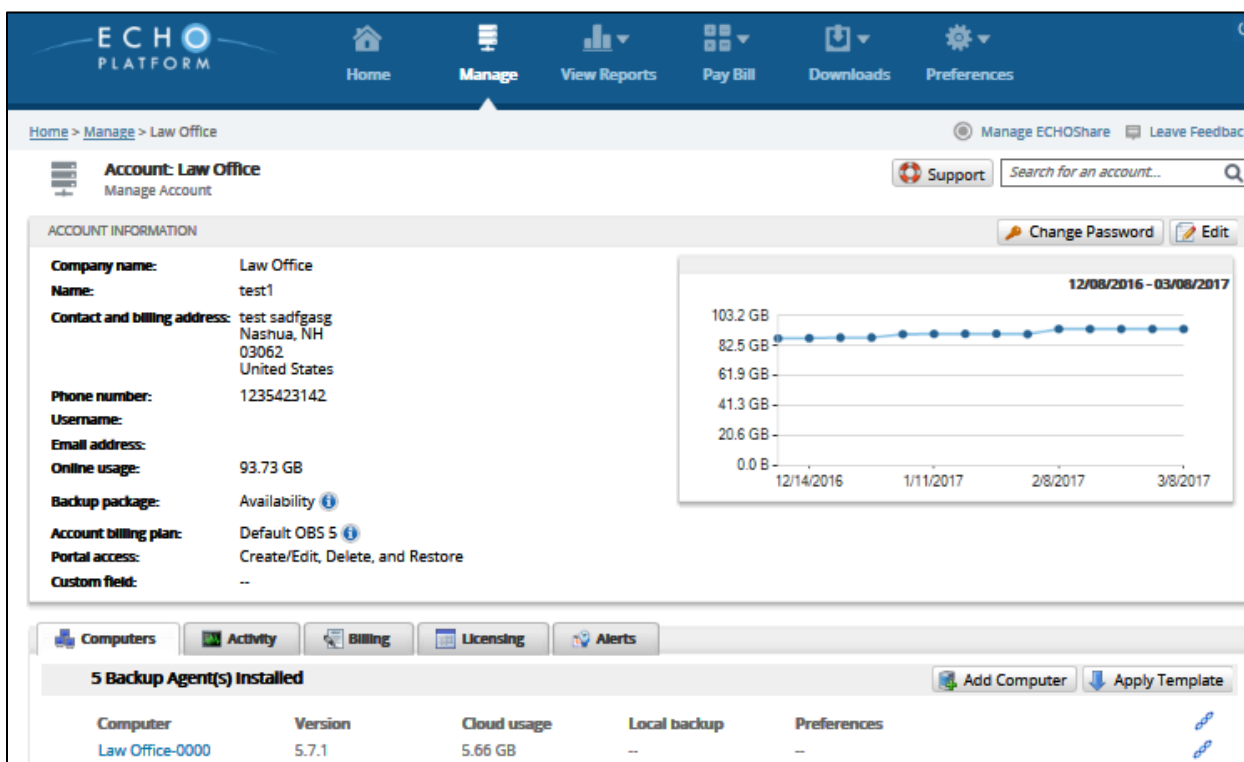
The Management Dashboard is displayed.



The screenshot shows the 'Management Dashboard' with the title 'View, Edit, and Manage Your Accounts, Groups, and Computers'. It features a 'MANAGE' section with a sub-header 'Manage Accounts/Packages' and a description 'Manage your accounts and devices, backup packages and account billing plans.' Below this are tabs for 'Accounts View' and 'Group View', along with 'Add Partner' and 'Add Account' buttons. A table lists accounts and computers with columns for 'Account/Computer', 'Version', 'Backup packages', 'Cloud usage', and various status icons. The table includes entries for 'BR2', 'Intronis (carwash)', and 'Law Office (lilley\_br2\_te ...)'. The 'Law Office' entry is highlighted.

- Click the Account/Computer you want to access.

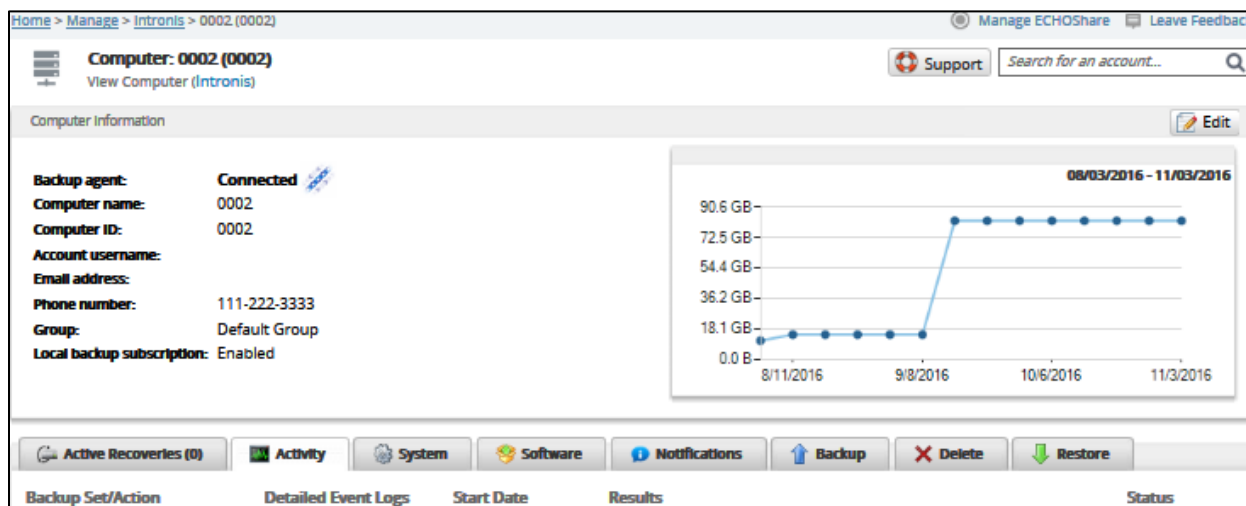
The Manage Account page is displayed.



The screenshot shows the 'Manage Account' page for 'Law Office'. The top navigation bar includes 'Home', 'Manage', 'View Reports', 'Pay Bill', 'Downloads', and 'Preferences'. The 'Manage' tab is active. The page title is 'Account: Law Office' with a subtitle 'Manage Account'. It includes a 'Support' button and a search bar. The 'ACCOUNT INFORMATION' section displays details such as 'Company name: Law Office', 'Name: test1', 'Contact and billing address: test sadfgasg, Nashua, NH 03062, United States', 'Phone number: 1235423142', 'Username:', 'Email address:', 'Online usage: 93.73 GB', 'Backup package: Availability', 'Account billing plan: Default OBS 5', 'Portal access: Create/Edit, Delete, and Restore', and 'Custom field: --'. A line graph shows 'Cloud usage' from 12/14/2016 to 03/08/2017, with values ranging from 0.0 GB to 103.2 GB. Below the graph are tabs for 'Computers', 'Activity', 'Billing', 'Licensing', and 'Alerts'. The 'Computers' tab is active, showing '5 Backup Agent(s) Installed'. A table lists computers with columns for 'Computer', 'Version', 'Cloud usage', 'Local backup', and 'Preferences'. The table includes an entry for 'Law Office-0000' with version 5.7.1 and cloud usage of 5.66 GB.

- Select a computer from the Computer list.

The Computer page is displayed.



- Follow the procedures in this guide to perform your backups, restores, and deletes.

## Backup Options

During the backup procedure, you can select one of the following backup options:

- Online only
- Local only (Data is not backed up to the cloud.)
- Online and local

**Note:** Online and Local is shown only 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

Data is remotely stored on the cloud. An active Local Vault disables this option.

### Local Only

Local only backup works in conjunction with an existing feature called the *Local Vault*. These backups are not stored on support servers and do not count toward your remote storage. Local Only also requires a local backup subscription. Without a local backup subscription, the local only option is unavailable.

Local Only backup sets are stored only on:

- The original machine
- A NAS device
- Another local location

- A network share

For Local Only backups, the local backup subscription and the Local Vault must be enabled.

Local-Only backups are 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 that do not change and do not need daily revisions, such as .mp3s, .movs, .jpgs.
- Non- critical personal data.
- Data that the client does not want to pay for but still wants backed up (music and/or video libraries).
- Exchange Mailbox backups – the messages are available locally in the event that a client is missing an e-mail (the recommendation is to back up the Exchange Info Store servers online for Disaster Recovery).

Changing the Local Vault after a local backup is run means losing the backed up data if the data is:

- not manually moved to a new location.
- not stored in the cloud, (online and local backup set).

### Online and Local

Online and Local backup sets are stored locally and online. The Local Vault must be enabled.

## Archiving Rules

This section includes the following topics:

- Setting Archiving Rules
- Advanced Archiving Retention Parameters
- Daily, Weekly, Monthly and Yearly Calculations
- How Archiving Rules Work for Files and Folders
- Setting the Advanced Archiving Rules for Files and Folders
- Advanced Archiving Rules Templates

### Setting Archiving Rules

Archiving rules are specific to each type of backup set and must be configured while creating or editing the backup set.

You can set the number of days that the backup sets are kept, and set the number of versions that are kept. Archiving rules dictate how many versions of each file are kept. The maximum number of versions that can be kept is 99. The maximum length of time a version can be kept is Forever.

The more versions you keep, the higher the storage usage.

If changed, the Archiving Rule applies to the data you back up when the next backup runs. Previous backup sets are not affected.





## Advanced Archiving Retention Parameters

Advanced archiving rules can be set based on the following parameters:

- Days
- Weeks
- Months
- Years
- Forever

## Daily, Weekly, Monthly and Yearly Calculations

### Daily

A daily revision is the latest revision from a calendar day, or the closest to 23:59:59 time of day.

### Weekly

A weekly revision can be set on any day of the week. The default value for weekly revisions is Sunday to follow the ISO date standard. If no revision exists on Sunday, a search for the closest one from Saturday is performed.

### Monthly

A monthly revision is determined by the latest from a month (or closest to it). During monthly intervals the last Sunday from a month back up is kept, instead of the last day.

### Yearly

The latest revision for that year is kept, or the closest to it. The revision day always starts on a Sunday.

## How Archiving Rules Work for Files and Folders

The archiving rules for Files and Folders can be selectively applied to particular files and folders as shown in Figure 38. The **This rule applies to** field accepts wildcard filters using commas.

The default is to keep no fewer than 10 versions for at least 30 days.

Figure 38. Files and Folders Advanced Archiving Settings.

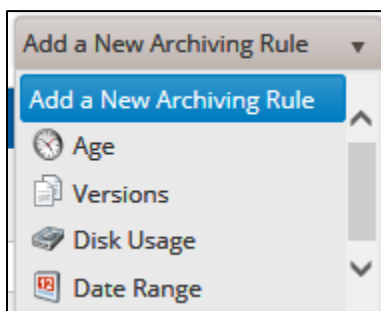
You also have the option of applying template options as described in the following sections:

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- Add a New Archiving Rule
- Start from a Template

## *Add a New Archiving Rule*

Selecting the drop-down arrow from Add a New Archiving Rule displays the following menu.

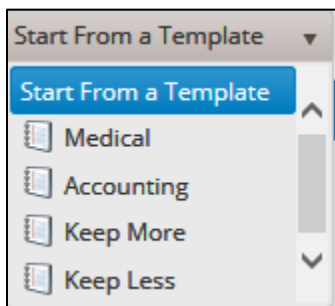


The options available allow you to create a template based on the following parameters:

- Age
- Versions
- Disk Usage
- Date Range

## *Start from a Template*

Selecting the drop-down arrow from Start From a Template displays the following menu.



The options available allow you to create a template based on the following parameters:

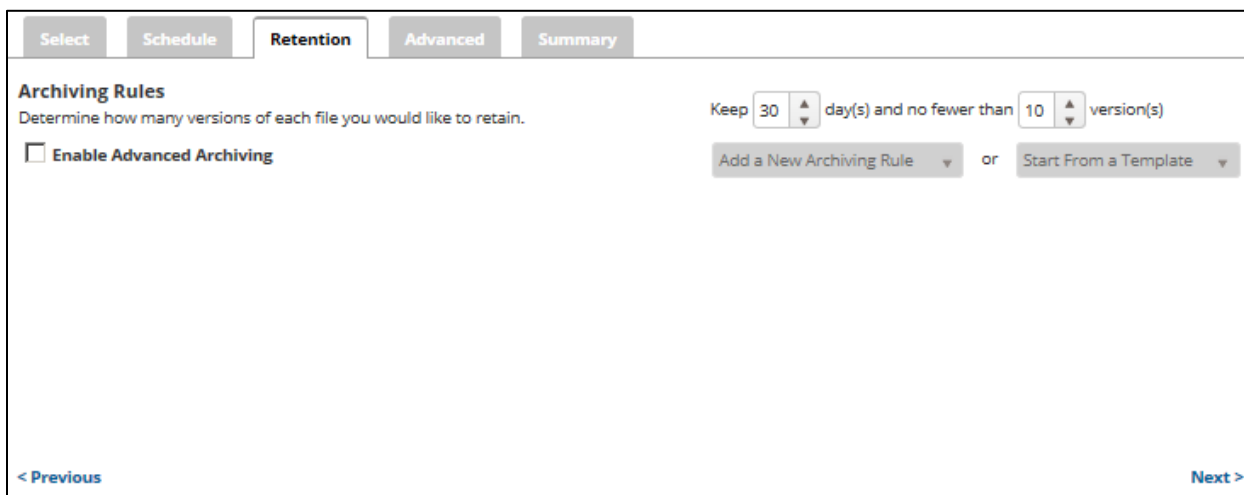
- Medical
- Accounting
- Keep More
- Keep Less

See *Advanced Archiving Rules Templates* for more information.

## Setting the Advanced Archiving Rules for Files and Folders

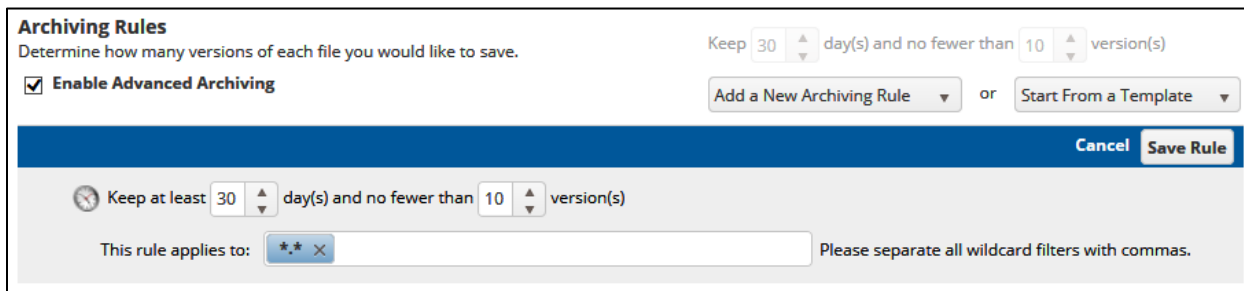
To set advanced archiving rules, perform the following steps.

1. At the Retention page, click the **Enable Advanced Archiving** check box.



The screenshot shows the 'Archiving Rules' configuration page with the 'Retention' tab selected. The 'Enable Advanced Archiving' checkbox is currently unchecked. The page includes navigation tabs (Select, Schedule, Retention, Advanced, Summary) and a 'Next >' button at the bottom right.

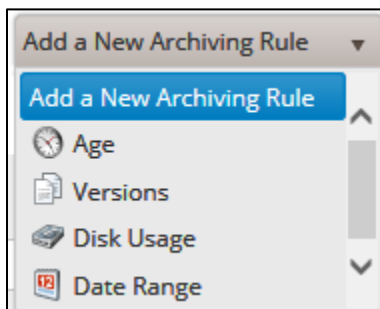
The advanced archiving options are displayed.



This screenshot shows the same 'Archiving Rules' configuration page, but now the 'Enable Advanced Archiving' checkbox is checked. A blue bar at the bottom contains 'Cancel' and 'Save Rule' buttons. Below this, there is a field for the rule name and a note: 'Please separate all wildcard filters with commas.'





2. To change the times and version fields, click the arrows to a setting, and then click **Save Rule**.
3. To add a new archiving rule, click the **Add a New Archiving Rule** down arrow.

The rules menu is displayed.

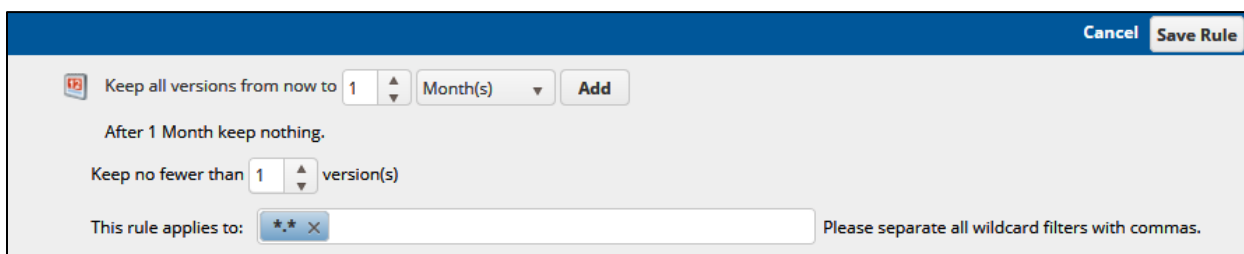


4. Select a menu option.

The following table provides the displays for each option.

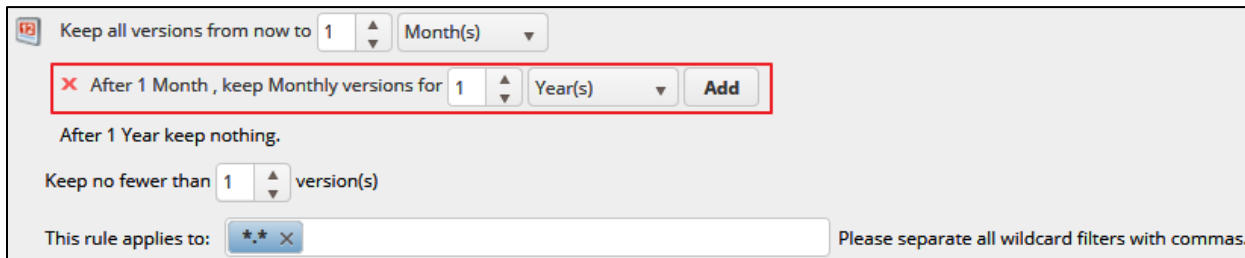
If you select...	Then the following is displayed...
<b>Age</b>	 Keep at least <input type="text" value="30"/> day(s) and no fewer than <input type="text" value="10"/> version(s) This rule applies to: <input type="text" value="*. *"/> Please separate all wildcard filters with commas.
<b>Version</b>	 Keep <input type="text" value="10"/> version(s) of each file. This rule applies to: <input type="text" value="*. *"/> Please separate all wildcard filters with commas.
<b>Disk Usage</b>	 Keep as many versions as possible using no more than <input type="text" value="100"/> MB This rule applies to: <input type="text" value="*. *"/> Please separate all wildcard filters with commas.
<b>Date Range</b>	 Keep all versions from now to <input type="text" value="1"/> Month(s) <b>Add</b> After 1 Month keep nothing. Keep no fewer than <input type="text" value="1"/> version(s) This rule applies to: <input type="text" value="*. *"/> Please separate all wildcard filters with commas.

5. If you selected **Date Range**, then click the **Add** button to display additional rule fields that can be applied, as shown below.



6. To add another rule to this selection, click the **Add** button.

Another rule field is displayed with an incremental time span (years), as shown below.



Keep all versions from now to 1 Month(s)

✗ After 1 Month, keep Monthly versions for 1 Year(s) Add

After 1 Year keep nothing.

Keep no fewer than 1 version(s)


This rule applies to: \*\*\* Please separate all wildcard filters with commas.

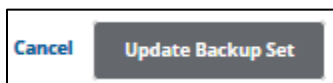
7. Make your selections, and then click the **Save Rule** button.

Your selection is summarized in the Advanced Archiving row, as show in the following example.



Keep all versions from now to 1 Month. After 1 Month, keep Monthly versions for 1 Year. After 1 Year keep nothing. Keep no fewer than 1 version(s). Apply this rule to All files. ✗

8. Click the remove  icon to remove any unwanted selections.
9. When satisfied with your selections, click **Update Backup Set**.



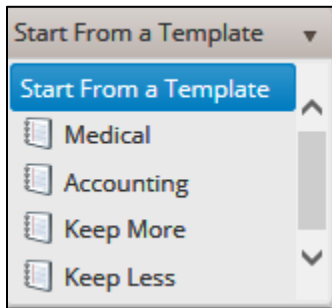
Cancel Update Backup Set

The Backup Selections page is displayed.

### Advanced Archiving Rules Templates

To display the template menu, perform the following steps.

1. At the Retention page, select the **Enable Advanced Archiving** check box, and then select the **Start from a Template** drop-down arrow.



2. Select the template to create an archiving rule.

The values of the templates are listed below:

#### Medical

- Line 1: Keep all versions from now until 1 (days, weeks, months, years, forever).
- Line 2: After 1 (x), keep (x) versions for (x).
- Line 3: After 1 (x), keep (x) versions for (x).
- Line 4: After (x), keep nothing.
- Keep no less than: (1 to 99) versions.
- Applies to: All

**Note:** For Files and Folders, you can selectively apply the rules to particular files and folders using the **This rule applies to** field.



### Accounting

- Line 1: Keep all versions from now to 1 (days, weeks, months, years, forever).
- Line 2: After 1 (x), keep (x) versions for (x).
- Line 3: After 1 (x), keep (x) versions for (x).
- Line 4: After(x), keep nothing.
- Keep no less than: (1 to 99) versions.
- Applies to: All

**Note:** For Files and Folders, you can selectively apply the rules to particular files and folders using the Apply field.

### Keep More

- Line 1: Keep all versions from now until 1 (days, weeks, months, years, forever).
- Line 2: After 1 (x), keep (x) versions for (x).
- Line 3: After 1 (x), keep (x) versions for (x).
- Line 4: After(x), keep nothing.
- Keep no less than: (1 to 99) versions.
- Applies to: All

### Keep Less

- Line 1: Keep all versions from now until 1 (days, weeks, months, years, forever).
- Line 2: After 1 (x), keep (x) versions for (x).
- Line 3: After 1 (x), keep (x) versions for (x).
- Line 4: After(x), keep nothing.
- Keep no less than: (1 to 99) versions.
- Applies to: All

## Backup Schedules

The schedule page allows the scanning for, and backing up of, new and modified files at the following specific time intervals:

- Minutely: 1 minute to 59 minutes
- Hourly: 1 hour to 23 hours
- Daily: every weekday
- Weekly: selected weekdays.

### Minutely and Hourly

You cannot select a minutely or an hourly recurrence with a daily or weekly schedule.

Only one minutely or hourly recurrence can be scheduled.

You cannot select a minutely or an hourly recurrence with a daily or weekly schedule.

Only one minutely or hourly recurrence can be scheduled.

### Daily and Weekly

You can set multiple daily and weekly schedules.

To set backups to run every day, clear the **Every Weekday** check box.

### Start and End times

Select the clock  icon to set Start and End times.

**End At** times cancel a running backup the following day. You must clear the **Allow To Finish** checkbox to set a new End time. Select a time before the **Start At** time.

Select the **Allow To Finish** checkbox to allow active backups to complete before starting the next scheduled backup. Allow To Finish runs the backup until completion regardless of End Time.

Clearing **Allow To Finish** check box stops the backup at the End Time, even if the backup set is not completely backed up.

### Add New button

The **Add New** button allows you to set multiple schedules.



## VMware Clusters

Clusters are a group of hosts linked 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
- vMotion

### 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 be load balanced across hosts to utilize efficiently 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.



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## Appendix



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