CARBONITE™

Carbonite Server Backup vSphere Recovery Agent 8.8

User Guide

Carbonite makes no representations or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for any particular purpose. Furthermore, Carbonite reserves the right to revise this publication and to make changes from time to time in the content hereof without obligation of Carbonite to notify any person of such revision of changes. All companies, names and data used in examples herein are fictitious unless otherwise noted.

Carbonite, Inc.
Two Avenue de Lafayette
Boston, MA 02111
www.carbonite.com

Acknowledgements: Two encryption methods, DES and TripleDES, include cryptographic software written by Eric Young. The Windows versions of these algorithms also include software written by Tim Hudson. Bruce Schneier designed Blowfish encryption.

The Carbonite Server Backup Agent, Carbonite Server Backup CentralControl, and Carbonite Server Backup Director applications have the encryption option of AES (Advanced Encryption Standard). Advanced Encryption Standard algorithm (named Rijndael, pronounced “Rain Doll”) was developed by cryptographers Dr. Joan Daemen and Dr. Vincent Rijmen. This algorithm was chosen by the National Institute of Standards and Technology (NIST) of the U.S. Department of Commerce to be the new Federal Information Processing Standard (FIPS).

The Carbonite Server Backup Agents and Carbonite Server Backup Director applications also have the added security feature of an over the wire encryption method.

Document History

Version	Date	Description
1	December 2019	Initial guide provided for vSphere Agent 8.8.

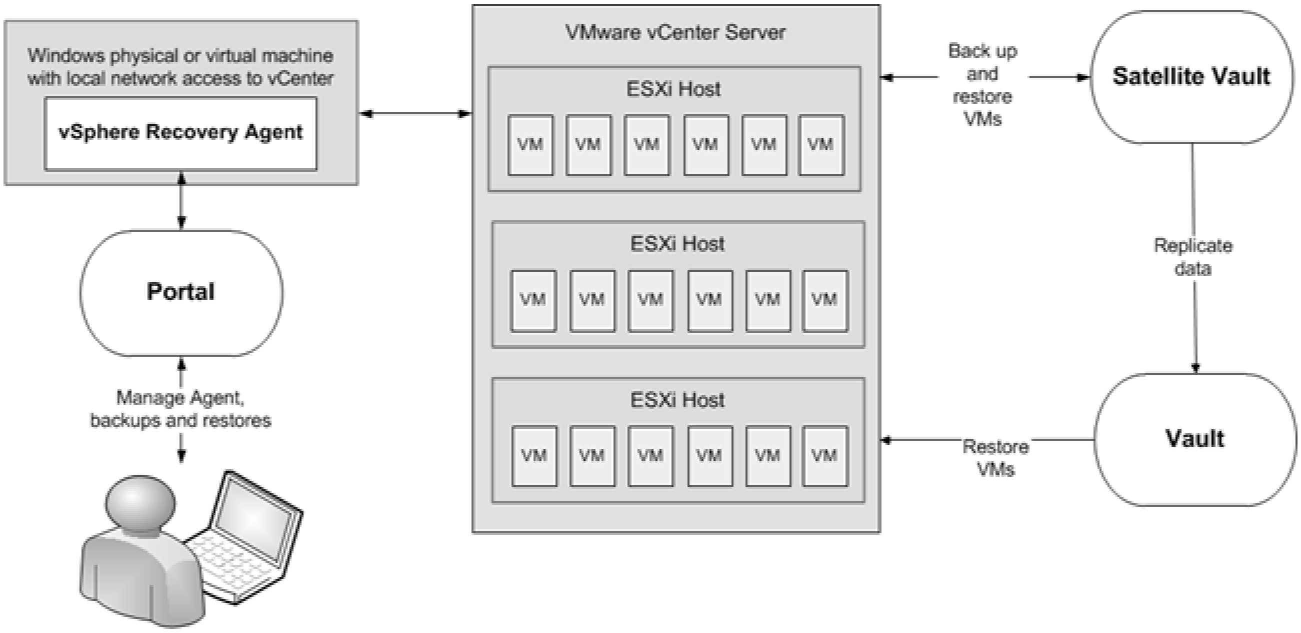
Contents

1 Introduction to the vSphere Recovery Agent

The vSphere Recovery Agent (VRA) provides data protection for VMware vSphere version 6.7, 6.5 and 6.0 environments.

A single VRA can back up virtual machines (VMs) and templates across all hosts managed by a vCenter Server. The VRA must be installed on a Windows physical or virtual machine with local network access to the vCenter you want to protect.

As shown in the following diagram, you must use Portal to configure and manage the VRA, back up VMs and templates to a secure vault, and restore vSphere data. You cannot manage the VRA using the legacy Windows CentralControl interface.



To minimize backup time and required vault space, the VRA only reads and backs up disk blocks that are being used on each VM. To improve the performance of delta backups, the VRA can use Changed Block Tracking (CBT): a VMware feature that tracks changed disk sectors.

VRA can back up and restore:

- VMs with VMDKs that are as large as 10 TB.
- VMs that reside partly or completely on vSAN storage. The VRA can back up and restore VMs on vSAN storage as long as the minimum number of nodes required for the vSAN cluster are up.
- VMs in vSAN stretched clusters.

You can restore entire VMs using the VRA, and restore specific files and folders from Windows VMs. Beginning with VRA version 8.80, you can also restore a VM within minutes using the Rapid VM Restore feature.

2 Prepare for a vSphere Recovery Agent installation

Before installing a vSphere Recovery Agent, you must do the following:

- Obtain a Portal account for managing the Agent. See Portal for managing a vSphere Recovery Agent.
- Determine the destination vaults for vSphere backups. See Vaults for vSphere Recovery Agent backups.
- Determine where to install the Agent. See Recommended vSphere Recovery Agent deployment.

If you want to restore VMs within minutes using the Rapid VM Restore feature, make sure that your environment meets the requirements described in Rapid VM Restore requirements.

If you are upgrading a vSphere environment that was previously protected by vSphere Agent 7.3*x* to vSphere version 6.7 or 6.5, you must plan how to upgrade the environment and install the vSphere Recovery Agent. See Plan a VMware vSphere environment upgrade.

For best practices in a protected VMware vSphere environment, see vSphere Recovery Agent limitations and best practices.

2.1 Portal for managing a vSphere Recovery Agent

You must manage a vSphere Recovery Agent using Carbonite Server Backup Portal. You cannot manage a vSphere Recovery Agent using the legacy Windows CentralControl interface.

You must have a Portal account before you can install a vSphere Recovery Agent. The account can be on a Portal instance that is hosted by Carbonite, or installed on-premises.

2.2 Vaults for vSphere Recovery Agent backups

To provide fast, local vault access for backups and restores, back up vSphere data to a Carbonite appliance. A local vault is also required for restoring VMs within minutes using the Rapid VM Restore feature. See Rapid VM Restore requirements.

The data can then be replicated to the Carbonite cloud to ensure offsite protection in the case of a disaster.

If you choose not to use a Carbonite appliance, consider using a standalone vault to seed and restore large backups.

For system requirements and supported platform information, see the vSphere Recovery Agent release notes.

2.3 Recommended vSphere Recovery Agent deployment

The vSphere Recovery Agent must be installed on a Windows physical or virtual machine that has network access to the vCenter that you want to protect. For best performance, install the vSphere Recovery Agent on a machine in the same subnet as the vCenter.

IMPORTANT: To back up or restore VMs, the VRA must have access to a vCenter.

To distribute the workload, up to five vSphere Recovery Agents can protect VMs in a single vCenter.

In a vSAN stretched cluster, each VM has a preferred site. Ideally, have one local VRA in each site that backs up preferred VMs for that site. If a VM is moved to a different site (e.g., because of maintenance or failures), back up performance may be degraded but acceptable.

For system requirements and supported platforms, see the vSphere Recovery Agent release notes. For additional requirements for the Rapid VM Restore feature, see Rapid VM Restore requirements.

Carbonite recommends using firewalls or other mechanisms to isolate VRA and the vCenter from the Internet.

2.4 Rapid VM Restore requirements

Using Rapid VM Restore, you can restore a virtual machine (VM) to a vSphere host in your configured vCenter within minutes. See Restore a vSphere VM within minutes using Rapid VM Restore.

The following table lists and describes requirements for Rapid VM Restores. If the vSphere Recovery Agent (VRA), Portal and Vault requirements are not met, Rapid VM Restore does not appear as a restore option in Portal. If vSphere environment requirements are not met, you can start a Rapid VM Restore but it will not finish successfully.

Component	**Rapid VM Restore requirement**
VRA	vSphere Recovery Agent version 8.80 or later, installed on a supported Windows Server platform. Windows File and Storage Services with the iSCSI Target Server feature must be installed on the server. If you install the iSCSI Target Server feature after installing VRA, you must stop and restart the vSphere Recovery Agent services (BUAgent and VVAgent) before you can perform a Rapid VM Restore.
Portal	Portal version 8.84 or later.
Director	A version 8.50 or later vault that is installed locally (i.e., not on a cloud server or in a remote datacenter). The Rapid VM Restore feature must be enabled on the vault. This feature is enabled by default on Satellite vaults (e.g., on appliances). If you have a local Base vault, you can enable the Rapid VM Restore feature by running a script. See Enable the Rapid VM Restore feature on a vault.

Component	Rapid VM Restore requirement
vSphere environment	
ESXi hosts	Each ESXi host must have the Software iSCSI Adapter installed and bound to a network port group that the VRA can reach. To migrate VMs restored using Rapid VM Restore to permanent storage, each ESXi host must have access to two datastores: one for writing changes while the VM runs using Rapid VM Restore, and one for permanent storage. Each datastore must have enough space for the restored VM.
Datastores	We recommend using supported storage from the VMware Hardware Compatibility Guide: https://www.vmware.com/resources/compatibility/search.php When you restore a VM using Rapid VM Restore, you must choose a datastore for writing changes while the VM runs using Rapid VM Restore. This datastore can be local, iSCSI or vSAN storage, but cannot be NFS storage. When you migrate a VM to permanent storage, the destination datastore can be local, iSCSI, vSAN or NFS storage.

2.4.1 Enable the Rapid VM Restore feature on a vault

To restore a VM within minutes using Rapid VM Restore, the VM backup must be saved in a local version 8.50 or later vault that has the Rapid VM Restore feature enabled. See Rapid VM Restore requirements and Restore a vSphere VM within minutes using Rapid VM Restore.

The Rapid VM Restore feature is enabled by default on Satellite vaults (e.g., on appliances). On Base vaults that are installed locally, you must enable the Rapid VM Restore feature using the following procedure.

To enable the Rapid VM Restore feature on a vault:

1. On the server where the vault is installed, open a Powershell window as administrator, and navigate to the Scripts subfolder in the Director installation directory.
2. Run the following command:

   ```
   .\VaultSettings.ps1 set IsRVMRAllowed 1
   ```

2.5 vSphere Recovery Agent ports

The following table shows ports that must be open for the vSphere Recovery Agent to communicate with other systems:

Agent Port	Communication	Protocol
Outbound: 8086, 8087	To Portal	TCP
Outbound: 2546	To vault	TCP

Agent Port	Communication	Protocol
Outbound: 443	To vCenter	TCP
Outbound: 902	To ESXi	TCP/UDP
Inbound: 3260	iSCSI connections (for Rapid VM Restores)	TCP

2.6 Plan a VMware vSphere environment upgrade

If a vSphere environment is protected by vSphere Agent 7.3*x*, you cannot upgrade the vSphere Agent to vSphere Recovery Agent 8.*x*. However, you can re-register VRA 8.*x* with a vault as a version 7.3x vSphere Agent. You can then run backup jobs from the version 7.3x Agent without reseeding, and restore VMs and files and folders from existing backups. See Re-register a vSphere Recovery Agent as an existing vSphere Agent.

Notes:

- You cannot use Rapid VM Restore to restore a VM from a backup created with vSphere Agent 7.3*x*. Before restoring a VM using Rapid VM Restore, you must run the backup job using vSphere Recovery Agent 8.*x*.
- The first backup after a re-registration will not reseed, but the backup could take longer than a normal delta backup. The VRA cannot use Changed Block Tracking (CBT) for the first backup, and has to read all VM data.

2.7 vSphere Recovery Agent limitations and best practices

The VRA can back up and restore VMs with VMDKs that are as large as 10 TB in size. Avoid using VMDKs that are larger than 10 TB.

The VRA skips physical Raw Device Mapping (pRDM), shared disks and independent disks when backing up VMs, because VMware does not allow them to be included in snapshots for VM-level backups. To back up data on these disks, you must install an Agent within the VM. During backup, the VRA skips disks with these features with a warning message. If a VM contains one or more disks that can be protected, the VM will still be backed up.

3 Install, upgrade or uninstall the vSphere Recovery Agent

The vSphere Recovery Agent (VRA) is a Windows application. You can install the VRA on a Windows physical or virtual machine that has local network access to the vCenter that you want to protect. See Install the vSphere Recovery Agent.

After installing VRA, you can configure vCenter, vault and other settings for the Agent. See Configure a vSphere Recovery Agent.

You can upgrade VRA from version 8.4 or 8.6 to version 8.8. See Upgrade a vSphere Recovery Agent. You cannot upgrade a vSphere Agent version 7.3*x* or earlier to VRA 8.*x*. However, you can re-register VRA 8.*x* with a vault as a version 7.3x vSphere Agent, run backup jobs from the version 7.3x Agent without reseeding, and restore VMs and files and folders from backups. See Re-register a vSphere Recovery Agent as an existing vSphere Agent.

You cannot modify a VRA installation. To change the Portal registration for a VRA, you must uninstall the VRA, reinstall it with the new Portal registration, and then re-register the VRA with the vault. See Change the Portal registration for a vSphere Recovery Agent.

Note: We recommend using firewalls or other mechanisms to isolate VRA and the vCenter from the Internet.

3.1 Install the vSphere Recovery Agent

To protect a VMware vSphere environment, you must install the vSphere Recovery Agent (VRA) on a Windows physical or virtual machine that has local network access to the vCenter. For best performance, install vSphere Recovery Agent on a machine in the same subnet as the vCenter.

IMPORTANT: To back up or restore VMs, the VRA must have access to a vCenter.

Ensure that power management is disabled on the machine where you install VRA.

To install the vSphere Recovery Agent:

1. On a physical or virtual machine with a supported Windows platform, double-click the VRA installation kit.
2. On the Terms of Service page, read the license agreement. Click **I agree to the license terms and conditions**, and then click **Install**.
3. On the Welcome page, click **Next**.
4. On the Destination Folder page, do one of the following:
    - To install the VRA in the default location, click **Next**.
    - To install the VRA in another location, click **Change**. In the Change destination folder dialog box, browse to the new installation folder, or enter it in the **Folder name** box. Click **OK**. On the Destination Folder page, click **Next**.

5. On the Register Agent with Portal page, specify the following information:
   - In the **Network Address** box, type the host name or IPV4 address of the Portal for managing the VRA.

     Note: We recommend specifying the Portal host name when you register an agent to Portal. If the Portal IP address changes in the future, DNS can handle the change and you will not have to manually register the agent to Portal again.
   - In the **Port** box, type the port number for communicating with the Portal.
   - In the **Username** box, type the name of the Portal user for managing the VRA.

     After the VRA is installed, the VRA appears on the Computers page of the Portal for this user and other Admin users in the user's site.
   - In the **Password** box, type the password of the specified Portal user.
6. Click **Next**.
7. When the installation has finished, click **Finish**.
8. Click **Close**.

3.1.1 Install the vSphere Recovery Agent in silent mode

To install the vSphere Recovery Agent in silent mode, run the following command with administrative rights in the directory where the installation kit is located:

```
installKitName /install /quiet [AGENTDIR="installPath"]
PORTAL_ADDRESS=PortalAddress [PORTAL_PORT=portNumber]
PORTAL_USER=PortalUser PORTAL_PASSWORD=PortalPassword
```

Where *installKitName* is the name of the vSphere Recovery Agent installation kit.

The following table lists and describes command parameters:

Parameter	**Description**
AGENTDIR="*installPath*"	Optional. Specifies the installation location for the Agent. If you do not include this parameter, the default installation location is used: C:\Program Files\Carbonite Server Backup\vSphere Recovery Agent
PORTAL_ADDRESS=*PortalAddress*	Specifies the host name or IPV4 address of the Portal for managing the Agent. Example: PORTAL_ADDRESS=portal.site.com Specifying the host name is recommended. This will allow DNS to handle IP address changes.

Parameter	Description
PORTAL_PORT=*portNumber*	Optional. Specifies the port number for communicating with Portal. If you do not include this parameter, the default value (8086) is used.
PORTAL_USER=*PortalUser*	Specifies the name of the Portal user associated with the Agent. Example: PORTAL_USER=user@site.com
PORTAL_PASSWORD=*PortalPassword*	Specifies the password of the Portal user. Example: PORTAL_PASSWORD=password1234

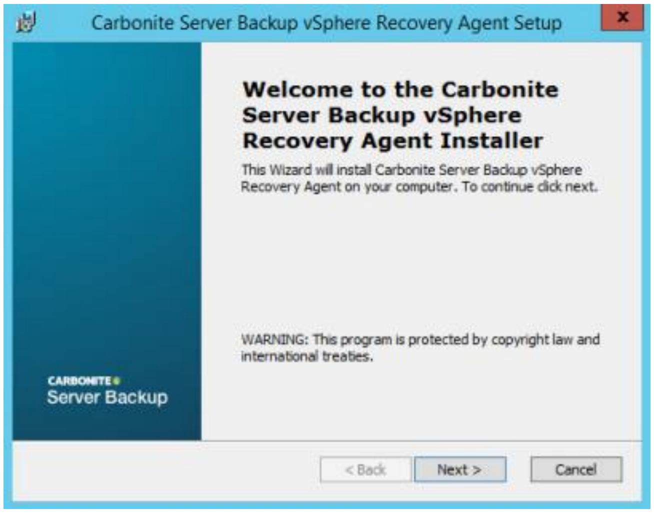
3.2 Upgrade a vSphere Recovery Agent

You can upgrade a vSphere Recovery Agent from version 8.4 or 8.6 to version 8.8.

You cannot upgrade vSphere Agent 7.3*x* to vSphere Recovery Agent 8.*x*. However, you can re-register VRA with a vault as a version 7.3x vSphere Agent. See Re-register a vSphere Recovery Agent as an existing vSphere Agent.

To upgrade a vSphere Recovery Agent:

1. On the machine where VRA 8.4 or 8.6 is installed, double-click the VRA 8.8 installation kit.
2. On the Terms of Service page, read the license agreement. Click **I agree to the license terms and conditions**, and then click **Install**.
3. On the confirmation page, click **Yes**.
4. On the Welcome page, click **Next.**



Welcome to the Carbonite Server Backup vSphere Recovery Agent Installer

This Wizard will install Carbonite Server Backup vSphere Recovery Agent on your computer. To continue click next.

WARNING: This program is protected by copyright law and international treaties.

5. When the upgrade is complete, click **Finish**.
6. Click **Close**.

3.2.1 Upgrade a vSphere Recovery Agent in silent mode

You can upgrade a vSphere Recovery Agent from version 8.4 or 8.6 to version 8.8.

To upgrade the vSphere Recovery Agent in silent mode, run the following command with administrative rights in the directory where the installation kit is located:

```
installKitName /install /quiet
```

3.3 Uninstall the vSphere Recovery Agent

Note: To change the Portal registration for a VRA, you must uninstall the VRA, reinstall it with the new Portal registration, and then re-register the VRA with the vault. See Change the Portal registration for a vSphere Recovery Agent. You cannot modify a VRA installation.

To uninstall a vSphere Recovery Agent, do one of the following:

- Double-click the VRA installer. In the Modify Setup box, click **Uninstall**. When the VRA has been uninstalled, click **Close**.
- In the Control Panel, uninstall the vSphere Recovery Agent.

3.3.1 Uninstall the vSphere Recovery Agent in silent mode

To uninstall a vSphere Recovery Agent in silent mode, run the following command with administrative rights in the directory where the installation kit is located:

```
installKitName /uninstall /quiet
```

4 Re-register a vSphere Recovery Agent as an existing vSphere Agent

You cannot upgrade vSphere Agent 7.3*x* to vSphere Recovery Agent (VRA) version 8.*x*. However, you can re-register VRA with a vault as a version 7.3x vSphere Agent, run backup jobs from the version 7.3x Agent without reseeding, and restore VMs and files and folders from existing backups.

Notes:

- You cannot use Rapid VM Restore to restore a VM from a backup created with vSphere Agent 7.3*x*. Before restoring a VM using Rapid VM Restore, you must run the backup job using vSphere Recovery Agent 8.*x*.
- The first backup after a re-registration will not reseed, but the backup could take longer than a normal delta backup. The VRA cannot use Changed Block Tracking (CBT) for the first backup, and has to read all VM data.

If the version 7.3x vSphere Agent backed up data to multiple vaults, you can re-register VRA to multiple vaults using Portal version 8.50 or later.

When you re-register a VRA as a version 7.3*x* vSphere Agent, the vCenter address and backup jobs are automatically populated for the VRA. You must then specify credentials for authenticating with the vCenter, credentials for sending email notifications, and the encryption password for each backup job.

IMPORTANT: To avoid reseeding a job, you must enter the encryption password that was used when vSphere Agent 7.3*x* ran the backup job.

To re-register a vSphere Recovery Agent as a vSphere Agent:

1. Capture all logs from the version 7.3*x* vSphere Agent in a support bundle. To do this, run one of the following commands on the vSphere Agent:

   - To save the logs to a Windows share, run the following command:

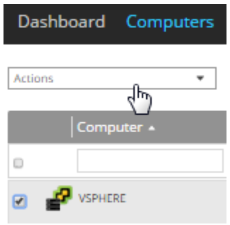
     ```
     support logs copy //hostnameOrIPaddress/share
     ```

   - To save the logs on a Linux server, run the following command:

     ```
     support logs scp hostnameOrIPaddress:/nfsshare
     ```

   You will then be prompted to enter a username and password for accessing the share.

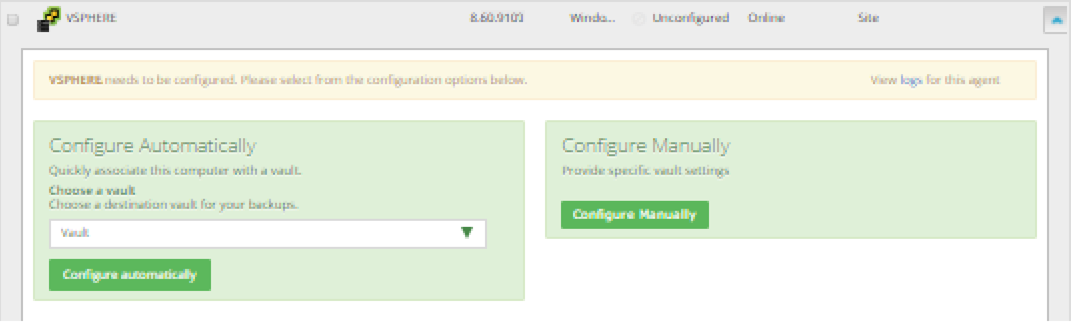
2. Disable all scheduled jobs for the version 7.3*x* vSphere Agent. To do this, on the Computers page in Portal, select the check box to the left of the version 7.3*x* vSphere Agent. In the **Actions** list, click **Disable Scheduled Jobs**.



3. Power off or delete the version 7.3*x* vSphere Agent.
4. Install VRA on a Windows physical or virtual machine with local network access to the vCenter that you want to protect. See Install the vSphere Recovery Agent.
5. On the navigation bar in Portal, click **Computers**.

   The Computers page shows registered computers.
6. Find the VRA that you installed, and expand its view by clicking its row.

   The Configure Automatically and Configure Manually boxes appear.



VSPHERE needs to be configured. Please select from the configuration options below.

Configure Automatically

Quickly associate this computer with a vault.

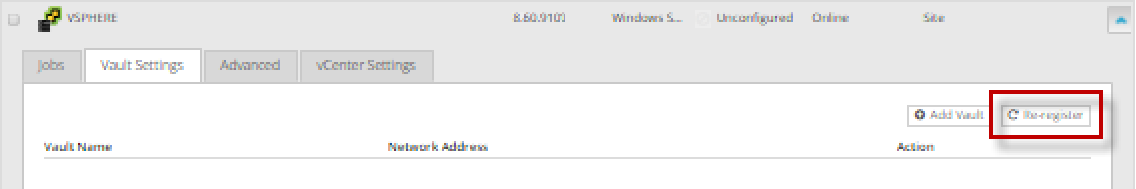
Choose a vault

Choose a destination vault for your backups.

Configure Manually

Provide specific vault settings

7. Click **Configure Manually**.
8. On the Vault Settings tab, click **Re-register**.



9. In the Vault Settings dialog box, do one of the following:
   - In the **Vault Profile** list, select a vault with backups from the original vSphere Agent. Vault information and credentials are then populated in the dialog box.
   - In the **Vault Name** box, enter a name for the vault. In the **Address** box, enter the host name or IPV4 address of the vault with backups from the original vSphere Agent. In the **Account**, **Username**, and **Password** boxes, enter an account and credentials for backing up data to and restoring data from the vault.

     Specifying the host name of the vault is recommended. This will allow DNS to handle IP address changes.
10. Click **Load Computers**.
11. In the list of computers, click the name of the version 7.3*x* vSphere Agent that previously backed up VMs in the vCenter. Click **Save**.
12. In the Confirmation message box, click **Yes**.
13. If the version 7.3*x* vSphere Agent backed up data to another vault, repeat Steps 7 to 11 to re-register the VRA to the other vault.

14. On the vCenter Settings tab, type the username and password for authenticating with the vCenter.
15. Confirm that the Changed Block Tracking (CBT) setting is correct.
16. Click **Save**. A Success message appears. Click **Okay**.
17. On the Advanced tab, if a Notifications tab appears and you can edit SMTP settings, enter and save SMTP credentials. Click **Save**.
18. On the Jobs tab, do the following for each backup job:
    a. In the **Select Action** menu for the job, click **Edit Job**.
    b. In the Edit Job dialog box, re-enter the encryption password for the job in the **Password** and **Confirm Password** boxes.

       IMPORTANT: To avoid reseeding the job, you must enter the encryption password that was used when the version 7.3*x* vSphere Agent ran the backup job.
    c. Save the job.
    d. In the **Select Action** menu for the job, click **Synchronize**.

5 Configure a vSphere Recovery Agent

Note: This section describes how to configure a VRA to protect a new vCenter. To replace a version 7.3*x* vSphere Agent and run existing jobs without reseeding, see Re-register a vSphere Recovery Agent as an existing vSphere Agent.

After a VRA is installed and registered with Portal, you must configure the Agent by doing the following (as described in this section):

- Provide information and credentials for the vCenter that you want to protect. The user should have administrative rights to the vCenter.
- Change the CBT setting. Changed Block Tracking (CBT) is a VMware feature that tracks changed disk sectors and improves the performance of VM backups. By default, the vSphere Agent enables Changed Block Tracking (CBT) for VMs.
- Add a vault connection. A vault connection provides vault information and credentials so that the Agent can back up data to and restore data from the vault.

You can also change these settings after the initial configuration. See Change vCenter information for a vSphere Recovery Agent, Change the CBT Setting for a vSphere Recovery Agent and Add vault settings.

Optionally, you can do the following:

- Add a description for the Agent. The description appears for the vSphere environment on the Computers page. See Add a description.
- Add retention types that specify how long backups are kept on the vault. See Add retention types.
- Configure email notifications so that users receive emails when backups complete, fail, or have errors. See Monitor backups using email notifications.
- Specify the amount of bandwidth consumed by backups. See Configure bandwidth throttling.

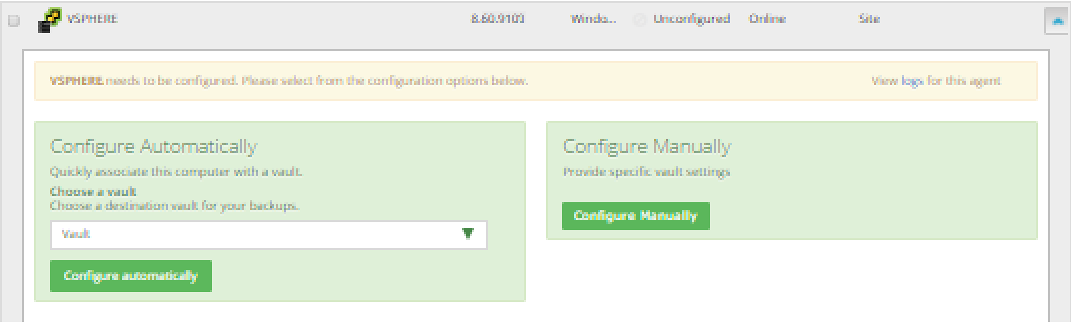
To configure the vSphere Recovery Agent:

1. On the navigation bar, click **Computers**.

   The Computers page shows registered computers.

2. Find the unconfigured vSphere Recovery Agent, and expand its view by clicking its row.

   If the Agent has not been configured, the Configure Automatically and Configure Manually boxes appear.



VSPHERE needs to be configured. Please select from the configuration options below.

Quickly associate this computer with a vault.

Choose a vault
Choose a destination vault for your backups.

Provide specific vault settings

3. If an **Associate this computer with a site** list appears, choose a site for the Agent.

   The site list appears if you are signed in as an Admin user in a parent site that has child sites. The list includes the parent site if it has a vault profile, and all child sites in the parent site.

4. To add a vault connection for the Agent, do one of the following:

   - Choose a vault from the **Choose a vault** list, and then click **Configure Automatically**. If the vault connection is added successfully, a message appears. Click **Go to Agent**.

     If the vault connection is not added successfully, you can add the vault connection manually.

   - Click **Configure Manually**. On the Vault Settings tab, click **Add Vault**. In the Vault Settings dialog box, do the following:

     - In the **Vault Name** box, enter a name for the vault connection.
     - In the **Address** box, enter the vault host name or IPV4 address.

       Specifying the host name is recommended. This will allow DNS to handle IP address changes.

     - In the **Account**, **Username**, and **Password** boxes, enter an account name and credentials for backing up data to and restoring data from the vault.

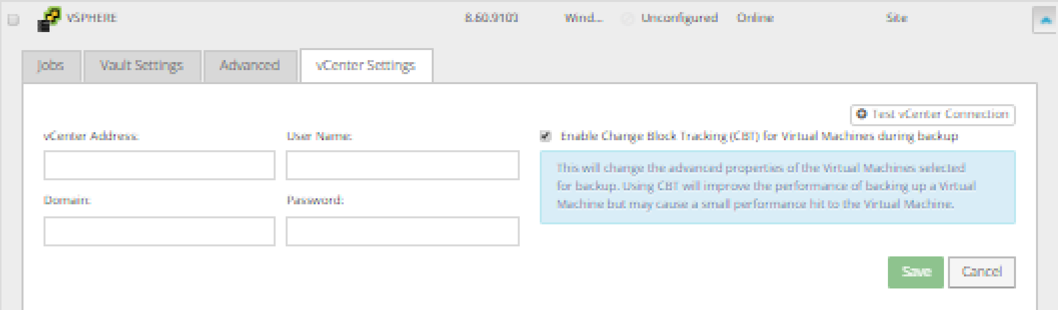
     Click **Save**.

5. On the vCenter Settings tab, do the following:

   - In the **vCenter Address** box, type the host name or IPV4 address of the vCenter that you want to protect. Specifying the host name is recommended. This will allow DNS to handle IP address changes.
   - In the **Domain** box, type the domain of the account for authenticating with the vCenter. The domain is not required if you specify the domain in the **Username** box.
   - In the **Username** box, type the account that is used to authenticate with the vCenter. You can type the account as *username, domain\username,* or *username@domain.*

     The account must have administrator permissions for the vCenter.

   - In the **Password** box, type the password for the specified user.



☑ Enable Change Block Tracking (CBT) for Virtual Machines during backup

This will change the advanced properties of the Virtual Machines selected for backup. Using CBT will improve the performance of backing up a Virtual Machine but may cause a small performance hit to the Virtual Machine.

6. To validate the vCenter settings, click **Test vCenter Connection**. If the credentials are valid, a Success message appears. Click **Okay**.

7. Do one of the following:

- To enable CBT for VMs that do not have it enabled, select Enable Change Block Tracking (CBT) for Virtual Machines during backup.
- To stop the VRA from enabling CBT for VMs, clear Enable Change Block Tracking (CBT) for Virtual Machines during backup.

8. Click **Save**. A Success message appears. Click **Okay**.

   The VRA is now ready for creating backup jobs. See Add a vSphere backup job.

5.1 Change vCenter information for a vSphere Recovery Agent

To change vCenter information for a vSphere Recovery Agent:

1. In Portal, on the navigation bar, click **Computers**.

   The Computers page shows registered computers.

2. Find the vSphere Recovery Agent, and expand its view by clicking its row.
3. On the vCenter Settings tab, do the following:
   - In the **vCenter Address** box, enter the host name or IP address of the vCenter that you want to protect. Specifying the host name is recommended. This will allow DNS to handle IP address changes.
   - In the **Domain** box, type the domain of the account for authenticating with the vCenter. The domain is not required if you specify the domain in the **Username** box.
   - In the **Username** box, type the account that is used to authenticate with the vCenter. You can type the account as *username, domain\username,* or *username@domain***.**

     The user must have administrator permissions for the vCenter.

   - In the **Password** box, type the password for the specified user.
4. Click **Save**. A Success message appears. Click **Okay**.

5.2 Change the CBT Setting for a vSphere Recovery Agent

Changed Block Tracking (CBT) is a VMware feature that tracks changed disk sectors and improves the performance of VM backups. By default, the vSphere Agent enables Changed Block Tracking (CBT) for VMs.

However, because CBT requires some virtual disk processing overhead, you can stop the Agent from enabling CBT for VMs. This does not disable CBT for VMs that already have it enabled through the Agent or another mechanism. It only stops the Agent from enabling CBT in the future for VMs that do not already have it enabled.

To change the CBT setting for a vSphere Recovery Agent:

1. In Portal, on the navigation bar, click **Computers**.

   The Computers page shows registered computers.

2. Find the vSphere Recovery Agent, and expand its view by clicking its row.

3. On the vCenter Settings tab, do one of the following:
   - To enable CBT for VMs that do not have it enabled, select Enable Change Block Tracking (CBT) for Virtual Machines during backup.
   - To stop the VRA from enabling CBT for VMs, clear Enable Change Block Tracking (CBT) for Virtual Machines during backup.
4. Click **Save**.

5.3 Change the Portal registration for a vSphere Recovery Agent

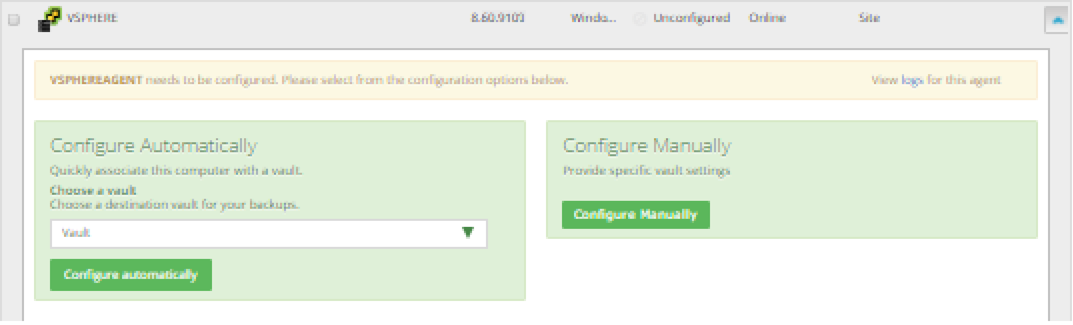
You cannot change the Portal registration of a VRA by running the installation kit. To change the Portal address or user information for a vSphere Recovery Agent, you must uninstall the VRA, reinstall it with the new Portal registration, and then re-register the VRA with the vault.

To change the Portal registration for a vSphere Recovery Agent:

1. On the machine where the VRA is installed, back up the log files in the folder where the Agent is installed (by default, C:\Program Files\Carbonite Server Backup\VMware Recovery Agent).
2. Uninstall the VRA. See Uninstall the vSphere Recovery Agent.
3. Reinstall the VRA. When prompted to register the Agent with Portal, enter the new Portal registration information. See Install the vSphere Recovery Agent.
4. On the navigation bar in Portal, click **Computers**.

   The Computers page shows registered computers.
5. Find the VRA that you installed, and expand its view by clicking its row.

   The Configure Automatically and Configure Manually boxes appear.



VSPHERE 8.60.9103 Windo... Unconfigured Online Site

VSPHEREAGENT needs to be configured. Please select from the configuration options below.

Configure Automatically

Quickly associate this computer with a vault.

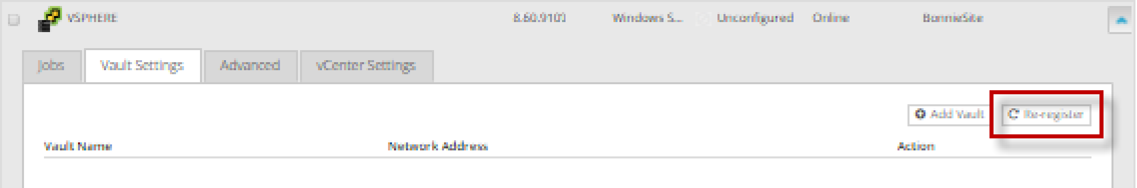
Choose a vault

Choose a destination vault for your backups.

Configure Manually

Provide specific vault settings

6. Click **Configure Manually**.
7. On the Vault Settings tab, click **Re-register**.



VSPHERE 8.60.9103 Windows S... Unconfigured Online BonnieSite

Vault Name	Network Address	Action

8. In the Vault Settings dialog box, do one of the following:
    - In the **Vault Profile** list, select the vault with backups from the original vSphere Agent. Vault information and credentials are then populated in the dialog box.
    - In the **Vault Name** box, enter a name for the vault. In the **Address** box, enter the host name or IPV4 address of the vault with backups from the original VRA. In the **Account**, **Username**, and **Password** boxes, enter an account and credentials for backing up data to and restoring data from the vault.

      Specifying the host name of the vault is recommended. This will allow DNS to handle IP address changes.
9. Click **Load Computers**.
10. In the list of computers, click the name of the original VRA. Click **Save**.
11. In the Confirmation message box, click **Yes**.
12. On the vCenter Settings tab, type the username and password for authenticating with the vCenter.
13. Click **Save**. A Success message appears. Click **Okay**.
14. On the Jobs tab, do the following for each backup job:
    a. In the **Select Action** menu for the job, click **Edit Job**.
    b. In the Edit Job dialog box, re-enter the encryption password for the job in the **Password** and **Confirm Password** boxes.

       IMPORTANT: To avoid reseeding the job, you must enter the encryption password that was used when the original VRA ran the backup job.
    c. Save the job.
    d. In the **Select Action** menu for the job, click **Synchronize**.
15. On the Advanced tab, if a Notifications tab appears and you can edit SMTP settings, enter and save SMTP credentials. Click **Save**.

5.4 Add vault settings

Before a VRA can back up data to or restore data from a vault, vault settings must be added for the VRA. Vault settings provide vault information, credentials, and Agent connection information required for accessing a vault.

When adding vault settings for a VRA, Admin users and regular users can manually enter vault information, or select a vault profile with vault information and credentials.

If a policy is assigned to a VRA, Admin users can select any vault profile from the policy. Regular users can only select policy vault profiles that are also assigned to them.

If a policy is not assigned to a VRA, Admin users can select any vault profile in the site. Regular users can only select vault profiles that are assigned to them.

In previous Portal versions, you could specify whether data is encrypted using AES encryption when it is transmitted to and from the vault. Over-the-wire encryption is now automatically enabled when you add vault settings or save existing vault settings.

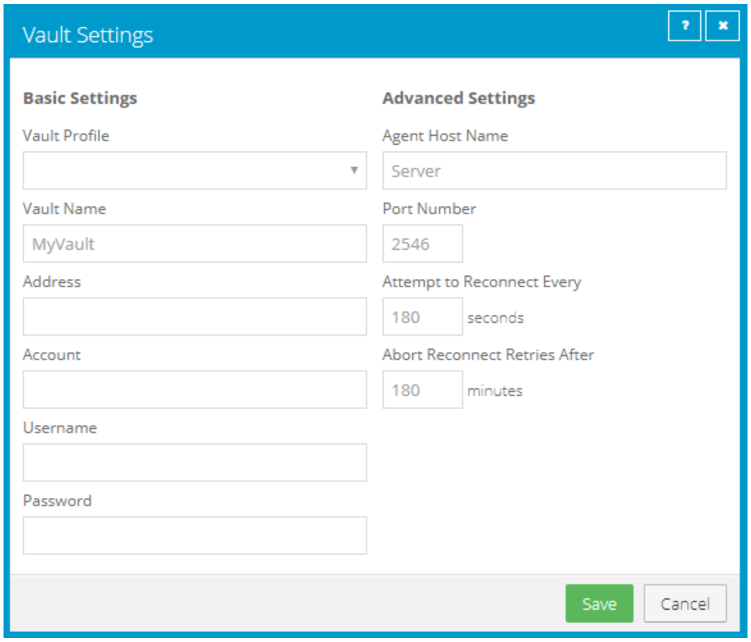
When an E2 appliance reports a new IP address, the IP address is updated in Portal vault settings for Agents that are registered to the E2, and in the E2 vault profile. Agent versions 8.10 and later contact Portal to check for vault IP address changes. If a Super user or Admin user changes the name of an E2 vault profile, the name is updated automatically in vault settings for Agents that are registered to the E2.

To add vault settings:

1. On the navigation bar, click **Computers**.
2. Find the VRA for which you want to add vault settings, and click the computer row to expand its view.

   If the Configure Manually box appears, click **Configure Manually**. The Configure Manually box appears for some computers where a backup job has not been created.
3. On the **Vault Settings** tab, click **Add Vault**.

   The Vault Settings dialog box appears.



Vault Settings

Basic Settings

Vault Profile

Vault Name: MyVault

Address

Account

Username

Password

Advanced Settings

Agent Host Name: Server

Port Number: 2546

Attempt to Reconnect Every: 180 seconds

Abort Reconnect Retries After: 180 minutes

4. Do one of the following:

   - In the **Vault Name** box, enter a name for the vault. In the **Address** box, enter the vault host name or IPV4 address. In the **Account**, **Username**, and **Password** boxes, enter an account and credentials for backing up data to and restoring data from the vault.

     Specifying the host name of the vault is recommended. This will allow DNS to handle IP address changes.

- Click the **Vault Profile** box. If one or more vault profiles appear, click the vault profile that you want to add for the computer. Vault information and credentials are then populated in the **Vault Settings** dialog box.

  If a policy is assigned, the **Vault Profile** list includes vault profiles from the policy. If a policy is not assigned, the list includes vault profiles from the site. For a regular user, the list only includes vault profiles that are also assigned to the user.

5. (Optional) Change one or more of the following Advanced Settings for the vault connection:
   - **Agent Host Name**. Name to use for the computer on the vault.
   - **Port Number**. Port used to connect to the vault. The default port is 2546.
   - **Attempt to Reconnect Every**. Specifies the number of seconds after which the Agent should try to connect to the vault, if the vault becomes unavailable during a backup or restore.
   - **Abort Reconnect Retries After**. Specifies the number of times the Agent tries to reconnect to the vault, if the vault becomes unavailable during a backup or restore. If the Agent cannot connect to the vault successfully in the specified number of tries, the backup or restore fails.
6. Click **Save**.

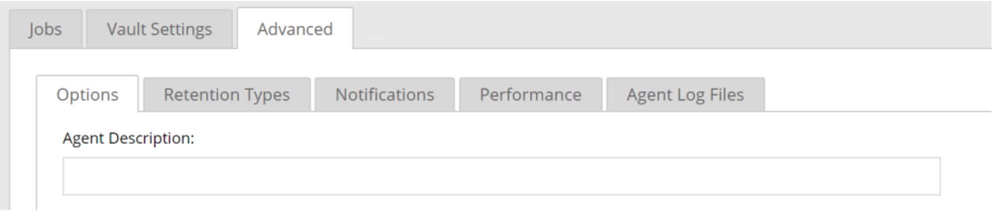
5.5 Add a description

You can add a description for a VRA in Portal. The description appears on the Computers page, and can help you find and identify a particular VRA.

To add a description:

1. On the navigation bar, click **Computers**.
2. Find the VRA for which you want to add a description, and click the row to expand its view.

   If the Configure Manually box appears, click **Configure Manually**. The Configure Manually box appears for some computers where a backup job has not been created.
3. On the **Advanced** tab, click the **Options** tab.
4. In the **Agent Description** box, enter a description for the VRA.



5. Click **Save**.

5.6 Add retention types

When you schedule or run a backup job, you must select a retention type for the resulting safeset. A retention type specifies the number of days a backup is kept on the vault, how many copies of a backup are stored online, and how long backup data is stored offline.

Portal Admin users and regular users can add retention types for a VRA where a policy is not assigned.

If a policy is assigned to a VRA, retention types cannot be added or modified on the Computers page. Instead, retention types can only be added or modified in the policy.

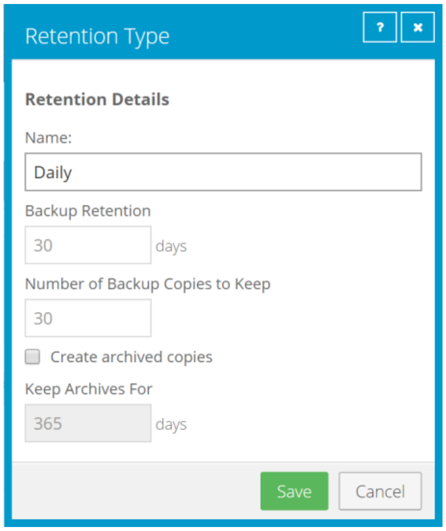
To add a retention type:

1. On the navigation bar, click **Computers**.
2. Find the VRA for which you want to add a retention type, and click the row to expand its view.

   If the Configure Manually box appears, click **Configure Manually**. The Configure Manually box appears for some computers where a backup job has not been created.
3. On the **Advanced** tab, click the **Retention Types** tab.

   If a policy is assigned to the VRA, you cannot add or change values on the **Retention Types** tab. Instead, retention types can only be added or modified in the policy.
4. Click **Create Retention Type**.

   The Retention Type dialog box appears.



Retention Type

Retention Details

Name: Daily

Backup Retention: 30 days

Number of Backup Copies to Keep: 30

☐ Create archived copies

Keep Archives For: 365 days

5. Complete the following fields:

Name	Specifies a name for the retention type.
Backup Retention	Specifies the number of days a safeset is kept on the vault. A safeset is deleted when its expiry date is reached. *Note:* Safesets are not deleted unless the specified number of copies online has also been exceeded.

Number of Backup Copies to Keep	Specifies how many safesets from a backup job are stored online. It functions in a first in/first out manner. Once the number of safesets is exceeded, the oldest safesets are automatically deleted until the actual number of safesets matches the definition. *Note:* Safesets are not deleted unless the specified number of days online has also been exceeded.
Create archived copies	Select this check box to create archived copies of safesets.
Keep Archives For	*Note:* If data archiving is disabled in your Portal instance, this value does not appear. Specifies how long the data is stored offline. Archive storage is used to store data offline for long periods of time. This data is not immediately accessible since it is stored remotely. A greater amount of time is required to restore from archive media. Typically, only long-term data archives are stored offline. The parameters for archived data are from 365 to 9999 days. Assuming that at least one successful backup has been completed for the job, there will never be less than one copy of its backup online. This is true even if all retention settings are zero, expiry conditions have been met, and the job definition is deleted from your system. Deleting the job does not affect data on the vault. Only your service provider can remove jobs and their associated data from the vault. This is a safeguard against accidental or malicious destruction of data.

6. Click **Save**.

5.7 Configure bandwidth throttling

Bandwidth throttling settings specify the amount of bandwidth consumed by an Agent for backups. For example, you might want to restrict the amount of bandwidth used for daytime backups so that online users are not affected, and allow unlimited bandwidth usage at night so that scheduled backups run as fast as possible.

Bandwidth settings include:

- Maximum bandwidth (upper limit), in megabits per second, to be consumed by the Agent for all backups and restores
- Period of time during the day that throttling is in effect. Only one time window can be specified. Outside the window, no throttling takes place.
- Days of the week that throttling is in effect

If the bandwidth throttling time period begins when a backup is underway, the maximum bandwidth is applied dynamically to the running backup. Similarly, if the bandwidth throttling time period ends when a backup is running, bandwidth throttling is ended for the backup.

If you edit an Agent's bandwidth settings while a backup is running, the new Agent settings do not affect the backup that is running. Bandwidth settings are applied when a backup starts, and are not applied to backups that are already running.

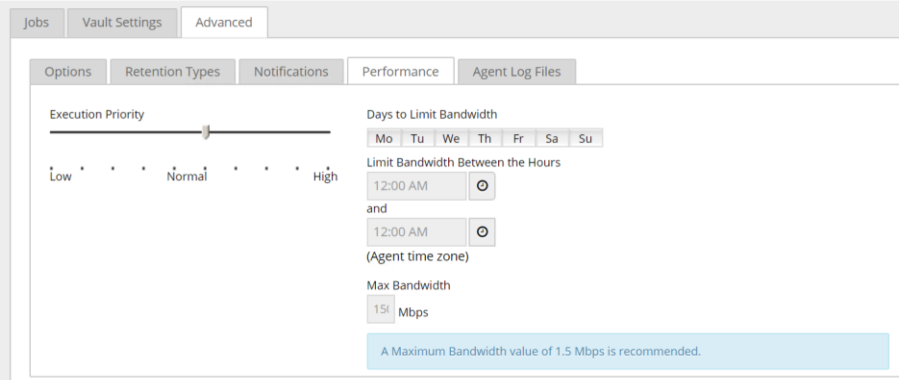
If a policy is assigned to a computer, bandwidth throttling settings cannot be modified on the Computers page. Instead, settings can only be added or modified in the policy.

To configure bandwidth throttling:

1. On the navigation bar, click **Computers**.
2. Find the VRA for which you want to configure bandwidth throttling, and click the row to expand its view.

   If the Configure Manually box appears, click **Configure Manually**. The Configure Manually box appears for some computers where a backup job has not been created.
3. Click the **Advanced** tab, click the **Performance** tab, and then edit the bandwidth settings.

   If a policy is assigned to the VRA or protected environment, you cannot add or change values on the **Performance** tab. Instead, bandwidth settings can only be modified in the policy.



Limit Bandwidth Between the Hours
12:00 AM
and
12:00 AM
(Agent time zone)

Max Bandwidth
15(Mbps

A Maximum Bandwidth value of 1.5 Mbps is recommended.

4. Click **Save**.

6 Add a vSphere backup job

After a VMware vSphere environment is added in Portal, you can create a backup job that specifies which virtual machines (VMs) to back up, and where to save the backup data.

You must add vault settings and vCenter information before you can add a backup job. See Configure a vSphere Recovery Agent.

To back up the data, you can run the backup job manually or schedule the backup job to run. See Run and schedule backups and synchronizations.

To add a vSphere backup job:

1. On the navigation bar, click **Computers**.

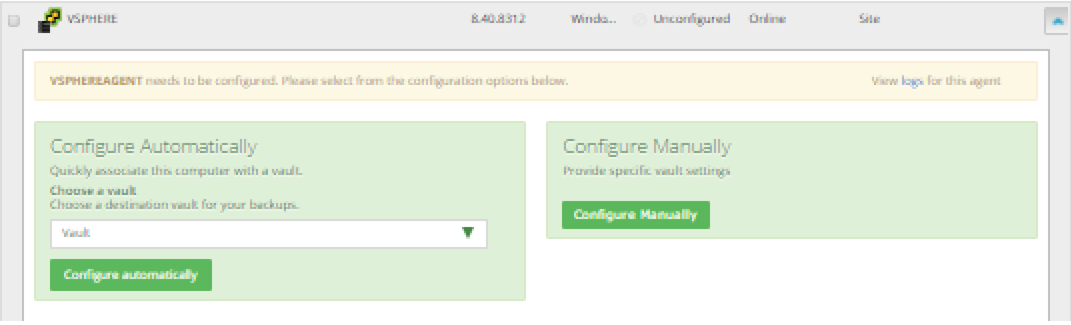
   The Computers page shows registered computers and environments.

2. Click the vSphere environment row.

   If a message states that the Agent needs to be configured, you must add vault settings and vCenter information before adding a backup job. See Configure a vSphere Recovery Agent.

   If the vSphere environment does not have vault settings, the Configure Manually box appears. To add vault settings manually, click **Configure Manually**, and add a vault on the Vault Settings tab. See Add vault settings.

   If the vSphere environment does not have vault settings and at least one vault profile is available, the Configure Automatically box appears. To add vault settings, choose a vault from the **Choose a vault** list. If the **Assign the computer to a site** list appears, you can also choose a child site for the computer. Click **Configure Automatically**.



VSPHERE 8.40.8312 Windo... Unconfigured Online Site

VSPHEREAGENT needs to be configured. Please select from the configuration options below.

View logs for this agent

Configure Automatically

Quickly associate this computer with a vault.

Choose a vault

Choose a destination vault for your backups.

Vault

Configure Manually

Provide specific vault settings

3. Click the **Jobs** tab.

4. In the **Select Job Task** menu, click **Create New VMware vCenter Job**.

5. In the **Create New Job** dialog box, specify the following information:

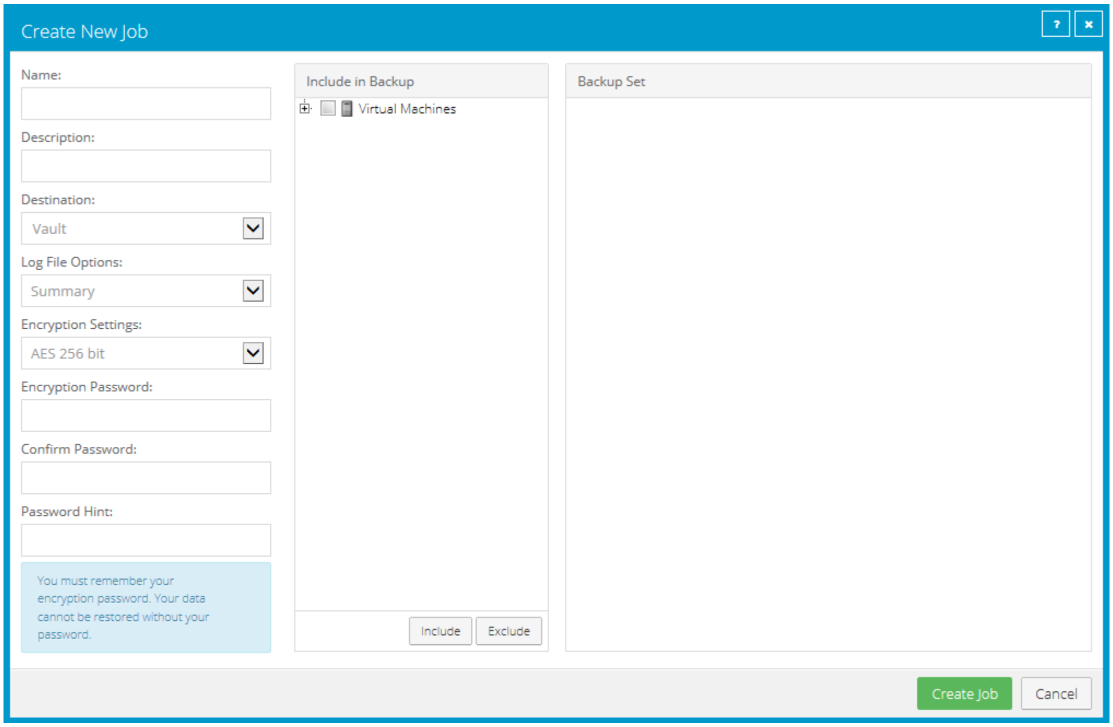
   - In the **Name** box, type a name for the backup job.

   - In the **Description** box, optionally type a description for the backup job.

   - In the **Destination** list, select the vault where you want to save the backup data.

A vault only appears in the list if it assigned to the user, or if the user added it on the computer's Vault Settings tab.

- In the **Log File Options** list, select the level of detail for job logging.
- For new backup jobs, the encryption method is AES 256 bit. Existing jobs can have other encryption methods.
- In the **Password** and **Confirm Password** boxes, enter an encryption password. You can also enter a password hint in the **Password Hint** box.



Create New Job

Name:

Description:

Destination: Vault

Log File Options: Summary

Encryption Settings: AES 256 bit

Encryption Password:

Confirm Password:

Password Hint:

You must remember your encryption password. Your data cannot be restored without your password.

6. In the **Include in Backup** box, do one or more of the following until the **Backup Set** box shows the VMs that you want to include and exclude in the backup job:

   - To add specific VMs to the backup job, select the check box for each VM, and then click **Include**.
   - To exclude specific VMs from the backup job, select the check box for each VM, and then click **Exclude**.
   - To add VMs to the backup job by name, select the **Virtual Machines** check box, and then click **Include**. In the **Filter** field, enter names of VMs to include. Separate multiple names with commas, and use asterisks (*) as wildcard characters. For example, to include VMs in a backup if their names end with "x64" or start with "SQL", enter the following filter: *x64, SQL*

     Note: Asterisks (*) are the only supported wildcards in filter fields.
   - To exclude VMs from the backup job by name, select the **Virtual Machines** check box, and then click **Exclude**. In the **Filter** field, enter names of VMs to exclude. Separate multiple names with commas, and use asterisks (*) as wildcard characters. For example, to exclude VMs from a backup if their names start with "test" or end with "x32", enter the following filter: test*, *x32

   - To remove an inclusion or exclusion record from the **Backup Set** box, click the Delete button beside the record. 🗑

   Click **Apply Now** to consolidate and simplify records in the **Backup Set** box, if changes need to be applied.

7. Click **Create Job**.

   The job is created, and the **View/Add Schedule** dialog box appears. Now you can create a schedule for running the backup. Click **Cancel** if you do not want to create a schedule at this time.

   For information about how to run and schedule the backup job, see Run and schedule backups and synchronizations.

6.1 Log file options

When you create or edit a backup job, you can specify the level of detail for job logging. Select one of the following job logging levels from the list:

- **Files** — Provides the most detailed information, and is typically used for troubleshooting. Provides information about files that are backed up.
- **Directory** — Provides less detail than the Files logging level. Provides information about folders that are backed up.
- **Summary** — Provides high-level information, including the vault and Agent version, and backup sizes.
- **Minimal** — Provides high-level information, including the vault and Agent version.

Changing the logging level only affects log files that are created from that point and after. It does not affect previously-created log files.

6.2 Encryption settings

Encryption settings specify the encryption type for backup data at rest on the vault. AES 256 bit encryption is the only encryption type available for new backup jobs.

If an existing job uses another encryption type (e.g., AES 128 bit, Blowfish, DES, Triple DES), you can continue to encrypt the job using that type. However, if you change the encryption type for an existing job, you cannot change the encryption type back to the original type. Only AES 256 bit will be available.

If you change encryption options for an existing job, it will force a new full backup (i.e., a reseed). The next backup will take longer than previous delta backups, and the amount of data stored on the vault will increase temporarily, depending on your retention settings.

Encryption password

You must enter a password for the encrypted backup data. The password is case-sensitive. To recover the data, you must provide the encryption password that was entered when the files were backed up.

You can also enter a password hint. When restoring data, you can view the password hint to remind you of the encryption password for this job.

IMPORTANT: The encryption password is required for restoring the data, so be sure to store it somewhere safe. If you forget your password, you will not be able to restore your data. The password is not maintained anywhere else and cannot be recovered.

7 Run and schedule backups and synchronizations

After a backup job is created, you can run it manually (ad-hoc) at any time and schedule it to run.

When running or scheduling a backup, you can specify the following settings:

- Retention type.
- Deferring. You can use deferring to prevent large backups from running at peak network times. When deferring is enabled, the backup job does not back up any new data after the specified amount of time and commits the safeset to the vault, even if some data in the job is not backed up. Changes to data that was previously backed up will be backed up, regardless of the specified amount of time.

  When the job runs again, the Agent checks for changes in data that was previously backed up, backs up those changes, and then backs up the remaining data.

For computers with Windows or Linux Agent version 8.60 or later, or environments with vSphere Recovery Agent version 8.80 or later, you can specify whether scheduled backups should automatically retry if they do not run successfully. You can also specify how many times a scheduled backup should retry after a failed attempt, and specify the amount of time between retries. See Specify whether scheduled backups retry after a failure.

When you schedule a job to run, you can also set the compression level for the data. The compression level optimizes the volume of data sent to the vault against the speed of processing. The default compression level is usually the optimal setting.

When a backup job first runs, all data selected in the job is backed up to the vault. This initial backup is called a “seed” backup. In subsequent backups, only data that has changed is backed up to the vault, unless a reseed is required (e.g., after a job’s encryption password has changed). In a reseed, all data selected in a backup job is sent to the vault again, even though it has already been backed up.

After running a backup, you can view logs to check whether the backup completed successfully.

In some cases, you must synchronize a backup job before you run it or restore data from the job. When you synchronize a job, the Agent checks which safesets for the job are online and available for restore. See Synchronize a job.

7.1 Schedule a backup

After creating a backup job, you can add one or more schedules for running the job automatically.

You can create complex schedules for a job by creating multiple schedules. For example, you can schedule a backup job to run at midnight every Friday, and schedule the job to run at 8 pm on the first day of every month.

If a job is scheduled to start at exactly the same time by multiple schedules, the job only runs once at the scheduled time. If the jobs have different retention types, the retention type of the schedule that is highest in the list is applied to the resulting safeset. For example, in the following screenshot, the job is scheduled to run at 12 AM each Saturday with the Weekly retention type, and every day at 12 AM with the Daily retention type. On Saturdays, the job runs only once at 12 AM. Because the schedule with the Weekly retention type is higher in the list than the schedule with the Daily retention type, the Weekly retention type is applied to the safeset.

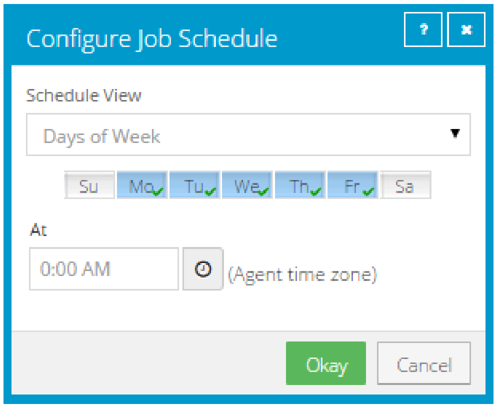
Note: If a job is scheduled to run at slightly different times, the Agent attempts to run the job according to each schedule. For example, if a job is scheduled to run at 11 PM by one schedule and 11:01 PM by another schedule, the Agent will attempt to run the job twice. Try to avoid overlapping schedules; problems can occur if a job is scheduled to run twice in a short period of time.

To schedule a backup:

1. Do one of the following:
   - On the navigation bar, click **Computers**. Find the computer with the backup job that you want to schedule, and click the computer row to expand its view. On the **Jobs** tab, find the job that you want to schedule. In its **Select Action** menu, click **View/Add Schedule**.
   - Create a new backup job. The **View/Add Schedule** dialog box appears when you save the job.
2. In the **View/Add Schedule** dialog box, click **Add Schedule**.

   A new row appears in the dialog box.
3. In the new schedule row, in the **Retention** list, click a retention type.
4. In the **Schedule** box, click the arrow.

   The **Configure Job Schedule** dialog box opens.
5. In the **Configure Job Schedule** dialog box, do one of the following:
   - To run the backup on specific days each week, select **Days of Week** in the **Schedule View** list. Select the days when you want to run the job. Then use the **At** field to specify the time when you want to run the job.



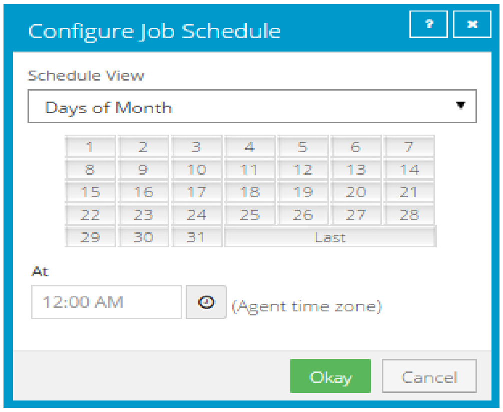
Configure Job Schedule

Schedule View: Days of Week

Su | Mo ✓ | Tu ✓ | We ✓ | Th ✓ | Fr ✓ | Sa

At: 0:00 AM (Agent time zone)

   - To run the backup on specific dates each month, select **Days of Month** in the **Schedule View** list. On the calendar, select the dates when you want to run the job. Then use the **At** field to specify the time when you want to run the job.



Configure Job Schedule

Schedule View

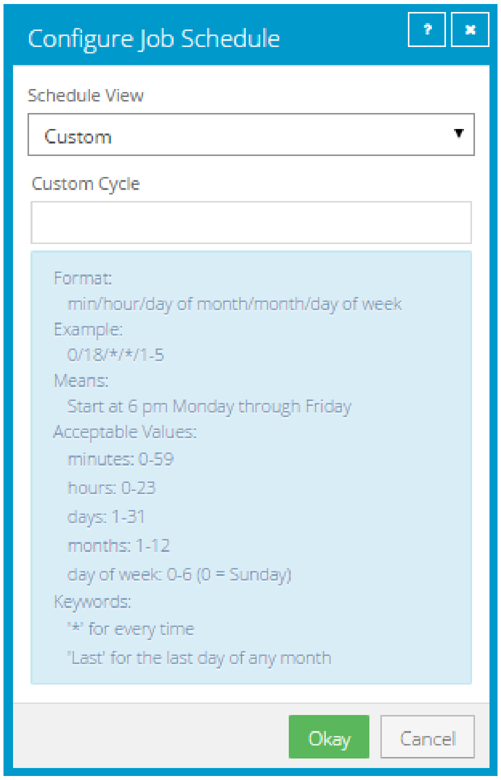
Days of Month

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	Last			

At

12:00 AM (Agent time zone)

- To create a custom schedule, select **Custom** in the **Schedule View** list. In the **Custom Cycle** dialog box, enter a custom schedule. Be sure to follow the format and notation as described.



Configure Job Schedule

Schedule View

Custom

Custom Cycle

Format:
min/hour/day of month/month/day of week
Example:
0/18/*/*/1-5
Means:
Start at 6 pm Monday through Friday
Acceptable Values:
minutes: 0-59
hours: 0-23
days: 1-31
months: 1-12
day of week: 0-6 (0 = Sunday)
Keywords:
'*' for every time
'Last' for the last day of any month

6. Click **Okay**.

   The new schedule appears in the **Schedule** box.

7. In the **Compression** list, click a compression level for the backup data. Compression levels optimize the volume of data sent against the speed of processing.

8. Do one of the following:

   - To allow the backup job to run without a time limit, click **None** in the Deferring list.
   - To specify a maximum amount of time that the backup job can run, click **Minutes** or **Hours** in the **Deferring** list. In the adjacent box, type the maximum number of minutes or hours that the job can run.

Note: When deferring is used, the backup job does not back up any new data after the specified amount of time, even if some data is not backed up. Changes to data that was previously backed up will be backed up, regardless of the amount of time specified.

9. To run the job on the specified schedule, select the **Enable** check box near the end of the row.
10. If there is more than one schedule row, you can use the **Priority** arrows to change the order of the schedule rows. Schedules higher in the list have a higher priority than schedules lower in the list.

    If a job is scheduled to run at the same time by multiple schedules, the job only runs once at the scheduled time. If the schedules have different retention types, the job only runs with the retention type of the schedule that is highest in the list.
11. If an Automatic Retry for Scheduled Backups section appears at the bottom of the View / Add Schedule dialog box, you can specify whether scheduled backups should retry after a failed backup. See Specify whether scheduled backups retry after a failure.
12. Click **Save**.

7.2 Specify whether scheduled backups retry after a failure

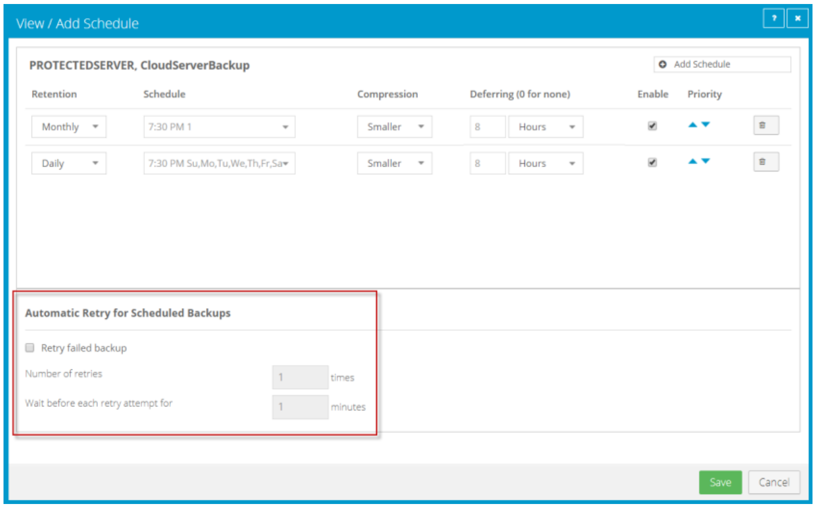
You can specify whether scheduled backups automatically retry if they do not run successfully.

You can also specify how many times a scheduled backup should retry after a failed attempt, and specify the amount of time between retries.

Note: Automatic retry settings only apply to scheduled backups. A backup will not retry automatically after a failed ad-hoc backup attempt.

To specify whether scheduled backups retry after a failure:

1. Do one of the following:
    - On the navigation bar, click **Computers**. Find the computer for specifying automatic retry settings, and click the computer row to expand its view. On the **Jobs** tab, in the **Select Action** menu for a job, click **View/Add Schedule**.
    - Create a new backup job. The **View/Add Schedule** dialog box appears when you save the job.
2. In the Automatic Retry for Scheduled Backups section, do one of the following:
    - To specify that scheduled backups should not retry after failed backup attempts, clear the **Retry failed job** check box.
    - To specify that scheduled backups should retry after failed backup attempts, select the **Retry failed job** check box. In the **Number of retries** box, enter the number of times the backup should try again**.** In the **Wait before each retry attempt for [ ] minutes** box, enter the number of minutes that the Agent should wait before the next backup attempt.



PROTECTEDSERVER, CloudServerBackup

Retention	Schedule	Compression	Deferring (0 for none)		Enable	Priority
Monthly	7:30 PM 1	Smaller	8	Hours	☑	▲▼
Daily	7:30 PM Su,Mo,Tu,We,Th,Fr,Sa	Smaller	8	Hours	☑	▲▼

Automatic Retry for Scheduled Backups

☐ Retry failed backup

Number of retries 1 times

Wait before each retry attempt for 1 minutes

3. Click **Save**.

7.3 Run an ad-hoc backup

After a backup job is created, you can run the backup at any time, even if the job is scheduled to run at specific times. When running an ad-hoc backup, you can back up the data to a vault or to SSI files (safeset image) on disk.

To run an ad-hoc backup:

1. On the navigation bar, click **Computers**.

   A grid lists available computers.

2. Find the computer with the backup job that you want to run, and expand its view by clicking the computer row.

3. Click the **Jobs** tab.

4. Find the job that you want to run, and click **Run Job** in its **Select Action** menu.

   The **Run Job** dialog box shows the default settings for the backup.

   Note: Beginning at this point, you can click **Start Backup** to immediately start the job. If you prefer, you can change backup options before running the job.

5. In the **Retention Scheme** list, click a retention type.

   The retention type specifies the number of days a backup is kept on the vault, how many copies of a backup are stored online, and how long backup data is stored offline.

6. Click Start Backup.

   The **Process Details** dialog box shows the backup progress, and indicates when the backup is completed. Other recent job processes might also be listed in the dialog box. See View current process information for a job.

7. If you want to stop the backup, click **Stop**.

8. To close the **Process Details** dialog box, click **Close**.

7.4 Synchronize a job

When a backup job is synchronized, the Agent checks which safesets for the job are online and available for restore.

A job is synchronized automatically when you restore data from the job. You can also synchronize a job manually at any time. A manual synchronization is recommended or required in the following cases:

- Before running backup jobs on re-registered computers. You must also enter the encryption passwords for the computer's existing backup jobs.
- Before restoring data from jobs that are backed up to a Satellite vault and replicated to the cloud or another vault.
- To rebuild a delta (.dta) file for a job. If an error message in a log file says that the delta mapping file is corrupt, delete the delta (.dta) file from the job folder on the protected computer and then synchronize the job to rebuild the delta file.

To synchronize a job:

1. On the navigation bar, click **Computers**.

   The Computers page shows registered computers.

2. Find the computer with the job that you want to synchronize. Expand its view by clicking its row.
3. Click the **Jobs** tab.
4. Find the job that you want to synchronize, and click **Synchronize** in its **Select Action** menu.

   The **Process Details** dialog box shows the backup progress, and indicates when the backup is completed. Other recent job processes might also be listed in the dialog box. See View current process information for a job.

5. If you want to stop the backup, click **Stop**.

   To close the **Process Details** dialog box, click **Close**.

8 Restore vSphere data

When VMs are protected in a vSphere environment, you can:

- Restore vSphere VMs
- Restore a vSphere VM within minutes using Rapid VM Restore
- Restore files and folders using a vSphere Recovery Agent

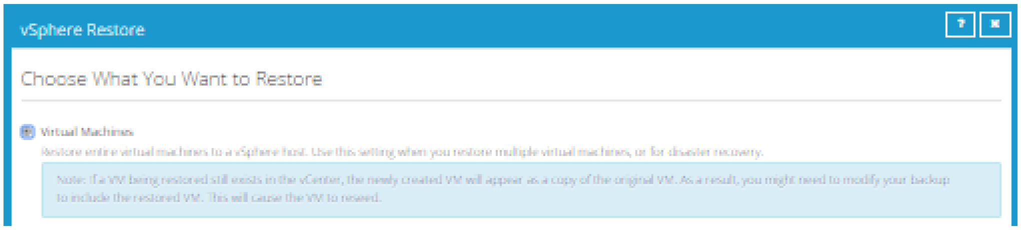
8.1 Restore vSphere VMs

To restore vSphere VMs:

1. On the navigation bar, click **Computers**.

   A grid lists available computers.

2. Find the vSphere environment with the VM that you want to restore, and expand its view by clicking the row.
3. Click the **Jobs** tab.
4. Find the backup job with the VM that you want to restore, and click **Restore** in the job's **Select Action** menu.
5. In the **Choose What You Want to Restore** dialog box, select **Virtual Machines**.

   vSphere Restore

   Choose What You Want to Restore

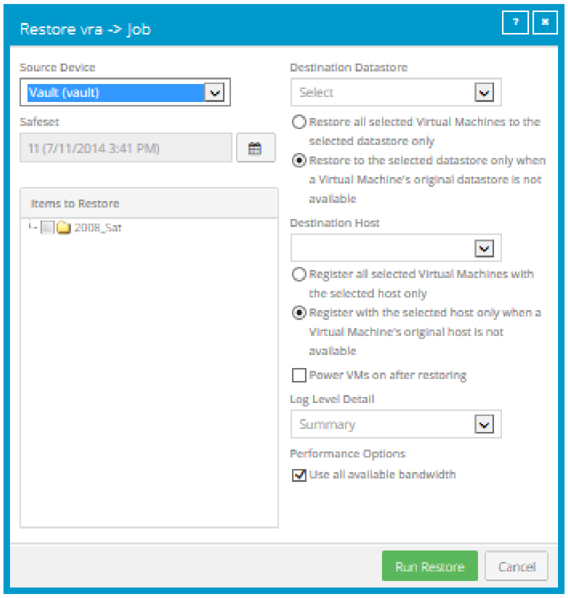
   ● Virtual Machines

   Restore entire virtual machines to a vSphere host. Use this setting when you restore multiple virtual machines, or for disaster recovery.

   Note: If a VM being restored still exists in the vCenter, the newly created VM will appear as a copy of the original VM. As a result, you might need to modify your backup to include the restored VM. This will cause the VM to reseed.

6. Click **Continue**.

   The **Restore** dialog box shows the most recent safeset for the job.



Restore vra -> Job

Source Device: Vault (vault)

Safeset: 11 (7/11/2014 3:41 PM)

Items to Restore

□ 2008_Sat

Destination Datastore: Select

○ Restore all selected Virtual Machines to the selected datastore only

● Restore to the selected datastore only when a Virtual Machine's original datastore is not available

Destination Host:

○ Register all selected Virtual Machines with the selected host only

● Register with the selected host only when a Virtual Machine's original host is not available

□ Power VMs on after restoring

Log Level Detail: Summary

Performance Options

☑ Use all available bandwidth

7. To restore data from another source, click a source (usually a vault) in the **Source Device** list.
8. To restore from an older safeset, click the **Browse Safesets** button. 📅 In the calendar that appears, click the date of the safeset from which you want to restore. To the right of the calendar, click the specific safeset from which you want to restore.
9. In the **Items to Restore** box, select the check box for each VM that you want to restore.
10. In the **Encryption Password** box, enter the data encryption password. To view the password hint, click the **Hint** button. ?
11. In the **Destination Datastore** list, click the datastore for the restored VMs.
12. Select one of the following options for restoring VMs to the selected datastore:

    - **Restore all selected Virtual Machines to the selected datastore only**
    - **Restore to the selected datastore only when a Virtual Machine's original datastore is not available**. If the backed-up VM contains multiple VMDKs that resided on two or more datastores, and one or more of the datastores is unavailable, the entire VM will be restored to the selected datastore.

    Note: If you restore a VM or template to a vCenter, and the original VM is present, the VM will be restored as a clone of the original with the following name: <*VMname*>-vra-restored-<*Date*>. The VM will be restored as a clone whether the original VM is powered on, off, or suspended. If the original VM is powered on and using a static IP address, you may encounter an IP address conflict when the newly-restored cloned VM is powered on.
13. In the **Destination Host** list, click the host where you want to register the VMs.

    The list only shows hosts that have access to the selected datastore.
14. Select one of the following options for registering restored VMs with the selected host:

    - **Register all selected Virtual Machines with the selected host only**

- **Register with the selected host only when a Virtual Machine's original host is not available**

15. To power on the VMs after they are restored, select **Power VMs on after restoring**.
16. In the **Log Level Detail** list, click the logging level. See Advanced restore options.
17. To use all available bandwidth for the restore, select **Use all available bandwidth**.

    To ensure the best possible performance for your restore, we recommend selecting **Use all available bandwidth**.
18. Click **Run Restore**.

8.2 Restore a vSphere VM within minutes using Rapid VM Restore

Using Rapid VM Restore, you can restore one virtual machine (VM) to a vSphere host in your configured vCenter within minutes. This can be useful:

- In a disaster recovery situation, where critical servers must be restored and available to users and applications as soon as possible.
- In a test restore, to quickly verify that a VM backup can be restored.

Rapid VM Restore is available with vSphere Recovery Agent (VRA) version 8.80 or later. For complete requirements, see Rapid VM Restore requirements.

When you first restore a vSphere VM using Rapid VM Restore, disks from the selected VM backup are mounted as storage devices (virtual RDMs) on a VM for immediate access. While the VM runs, changes are written to a temporary datastore. At this stage, the VM requires a running Rapid VM Restore process, requires connections to the VRA and vault, and is intended for temporary use. The longer a VM runs using Rapid VM Restore, the more its performance will degrade and the more Director and VRA resources it will use.

To restore the VM permanently, use Portal to migrate the VM to permanent storage. After migration, the VM does not require a running Rapid VM Restore process, and is independent from the VRA and vault. See Migrate a VM restored using Rapid VM Restore to permanent storage.

If you do not want to restore the VM permanently (e.g., when performing a test restore), you can cancel the Rapid VM Restore without migrating the VM to permanent storage. The VM will then be deleted from the vSphere environment.

To back up VMs that are restored using Rapid VM Restore, see Best practice: Back up VMs restored using Rapid VM Restore.

Note: If you restore a template using Rapid VM Restore, it is restored as a running virtual machine and not as a template.

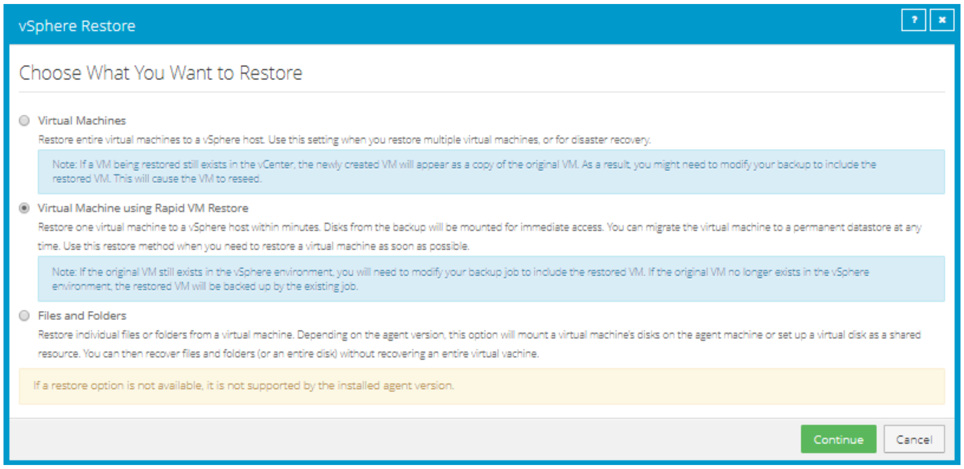
To restore a vSphere VM within minutes using Rapid VM Restore:

1. On the navigation bar, click **Computers**.

   A grid lists available computers.

2. Find the vSphere environment with the VM that you want to restore, and expand its view by clicking the row.
3. Click the **Jobs** tab.
4. Find the backup job with the VM that you want to restore, and click **Restore** in the job's **Select Action** menu.
5. In the **Choose What You Want to Restore** dialog box, select **Virtual Machine using Rapid VM Restore**.

   If the **Virtual Machine using Rapid VM Restore** option does not appear, this restore method is not available. This could occur with a VRA version earlier than 8.80, if backups are not available in a local vault, or if other requirements are not met. For complete requirements, see Rapid VM Restore requirements.



Choose What You Want to Restore

○ Virtual Machines

Restore entire virtual machines to a vSphere host. Use this setting when you restore multiple virtual machines, or for disaster recovery.

Note: If a VM being restored still exists in the vCenter, the newly created VM will appear as a copy of the original VM. As a result, you might need to modify your backup to include the restored VM. This will cause the VM to reseed.

● Virtual Machine using Rapid VM Restore

Restore one virtual machine to a vSphere host within minutes. Disks from the backup will be mounted for immediate access. You can migrate the virtual machine to a permanent datastore at any time. Use this restore method when you need to restore a virtual machine as soon as possible.

Note: If the original VM still exists in the vSphere environment, you will need to modify your backup job to include the restored VM. If the original VM no longer exists in the vSphere environment, the restored VM will be backed up by the existing job.

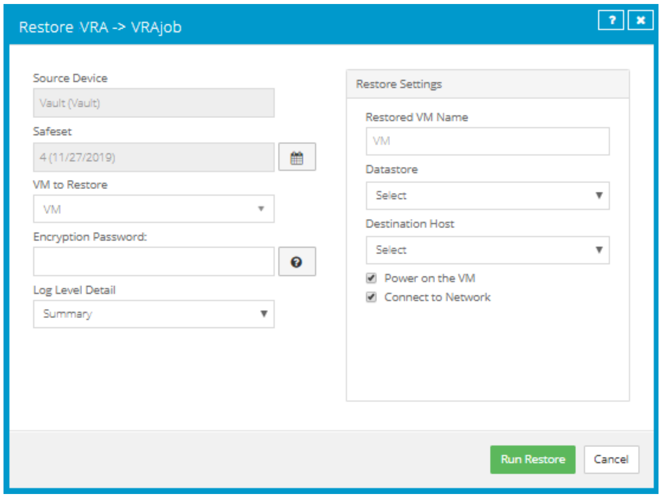
○ Files and Folders

Restore individual files or folders from a virtual machine. Depending on the agent version, this option will mount a virtual machine's disks on the agent machine or set up a virtual disk as a shared resource. You can then recover files and folders (or an entire disk) without recovering an entire virtual vachine.

If a restore option is not available, it is not supported by the installed agent version.

6. Click **Continue**.

   The Restore dialog box appears. The Safeset box shows the most recent safeset for the job.



Source Device: Vault (Vault)

Safeset: 4 (11/27/2019)

VM to Restore: VM

Encryption Password:

Log Level Detail: Summary

Restore Settings

Restored VM Name: VM

Datastore: Select

Destination Host: Select

☑ Power on the VM

☑ Connect to Network

7. To restore from an older safeset, click the **Browse Safesets** button. 📅 In the calendar that appears, click the date of the safeset from which you want to restore. To the right of the calendar, click the specific safeset from which you want to restore.

8. In the **VM to Restore** list, select the VM that you want to restore.
9. In the **Encryption Password** box, enter the data encryption password. To view the password hint, click the **Hint** button.
10. In the **Log Level Detail** list, select the level of detail for job logging. For more information, see Log file options.
11. In the Restore Settings box, do the following:
    - In the **Restored VM Name** box, type a name for the restored VM.

      If you specify the name of a VM that already exists in the vSphere environment (e.g., the VM that was backed up), the restored VM will have the following name: *VMname*-rvmr-*yyyy-Mon-dd--hh-mm-ss*, where *yyyy-Mon-dd--hh-mm-ss* is the date and time when the VM was restored (e.g., VM-rvmr-2019-Nov-27--06-14-09).
    - In the **Datastore** list, select a datastore for writing changes while the VM is restored using Rapid VM Restore (i.e., while disks from the selected backup are mounted as storage devices).

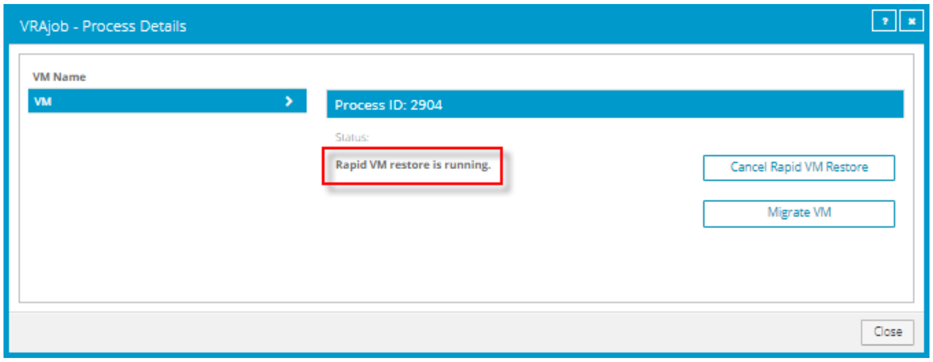
      If you later want to migrate the VM to permanent storage, do not choose the datastore that you want to use as permanent storage.
    - In the **Destination Host** list, select a host for running the restored VM.

      If you later want to migrate the VM to permanent storage, select a host that can access the permanent datastore.
    - Do one of the following:
        - To restore the VM with its power on, select the **Power on the VM** option.
        - To restore the VM powered off, clear the **Power on the VM** option.

          You might want to restore the VM with its power off, for example, so you can verify or change the VM settings before powering it on.
    - Do one of the following:
        - To connect the VM to the network, select **Connect to Network**.
        - To restore the VM without network connectivity, clear **Connect to Network**.

          You might want to restore the VM without network connectivity, for example, if you are restoring the VM to a vCenter that does not have the original network. You can then verify the VM settings before connecting the VM to the network.
12. Click **Run Restore**.

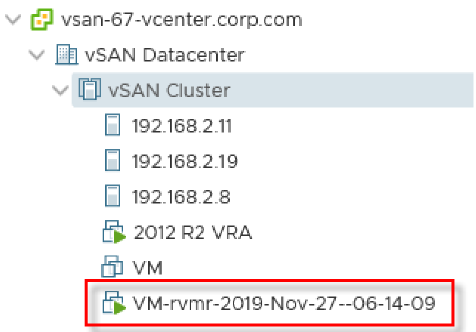
    The Process Details dialog box appears. When the VM is restored, the following Status message appears: *Rapid VM restore is running.*



Status:

Rapid VM restore is running.

The restored VM appears in the vSphere environment. You can access the VM and begin using it.



13. Do one or more of the following:

    - To close the Process Details dialog box, click **Close** in the dialog box. If you close the Process Details dialog box without canceling the Rapid VM Restore, the VM remains in the vSphere environment.
    - To reopen the Process Details dialog box, find the VM's VRA backup job on the Computers page or Monitor page. Click the Rapid VM Restore symbol that appears beside the VRA job name:
    - To migrate the VM to permanent storage, see Migrate a VM restored using Rapid VM Restore to permanent storage.
    - To remove the VM from the vSphere environment, click **Cancel Rapid VM Restore** in the Process Details dialog box.

8.2.1 Migrate a VM restored using Rapid VM Restore to permanent storage

When you first restore a vSphere VM to a vSphere host in your configured vCenter using Rapid VM Restore, the VM is dependent on the VRA and vault, and is intended for temporary use.

To restore the VM permanently, use Portal to migrate the VM to permanent storage. If the VM is powered on, you can continue to use the VM during the migration. After migration, the VM is independent from the VRA and vault, and its disks are restored with their original formats (e.g., thin- or thick- provisioned).

If you cancel a migration before a VM is fully migrated to the permanent datastore, the restored VM remains in the vSphere environment and continues running using the Rapid VM Restore process. If you do not cancel the Rapid VM Restore process, you can try to migrate the VM again.

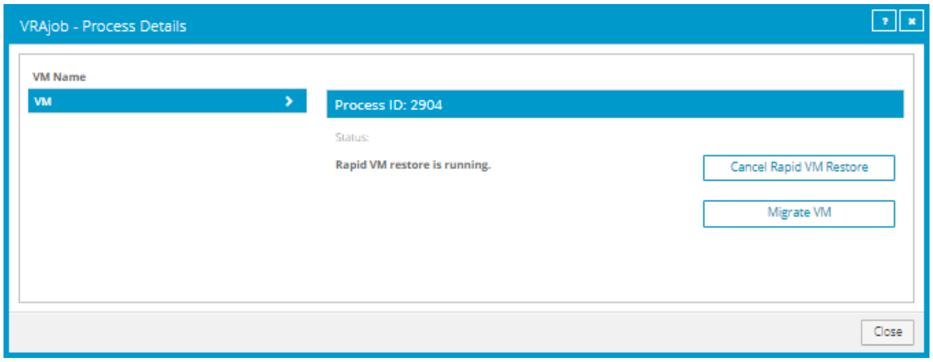
When migrating a VM that was restored using Rapid VM Restore to permanent storage, we recommend the following:

- Before running a migration, back up the VM that was restored using Rapid VM Restore. See Best practice: Back up VMs restored using Rapid VM Restore.
- Use Portal to migrate a VM to permanent storage rather than using the vSphere Client or Web Client. When migrating a VM to permanent storage, Portal ensures that all disks are migrated and converted to their original formats. If you try to migrate a VM to permanent storage without using Portal but do not migrate all disks and convert them to their original formats, you will not be able to migrate the VM using Portal. The VM might be deleted when you cancel the Rapid VM Restore process.
- Do not perform more than six migrations at one time, even if the migrations are distributed across hosts in the vSphere environment.
- During a migration, do not power off the VM from within the guest operating system or you might be locked out of the VM until the migration is complete. While a VM is being migrated, you cannot power on, power off, or suspend the VM using the vSphere client.

To migrate a VM restored using Rapid VM Restore to permanent storage:

1. Check that the VM is in the state that you want during the migration: powered on, powered off, or suspended.
2. If the Process Details dialog box is not open for the VM's Rapid VM Restore process, find the VM's VRA backup job on the Computers page or Monitor page. Click the Rapid VM Restore symbol that appears beside the VRA job name:

   The Process Details dialog box lists Rapid VM Restores that are running from the selected backup job.



VRAjob - Process Details

VM Name

VM

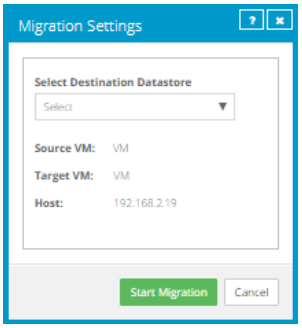
Process ID: 2904

Status:

Rapid VM restore is running.

3. If more than one VM appears in the VM Name list, select the VM that you want to migrate.
4. Click **Migrate VM**.

   The Migration Settings dialog box appears.



Migration Settings

Select Destination Datastore: Select

Source VM: VM

Target VM: VM

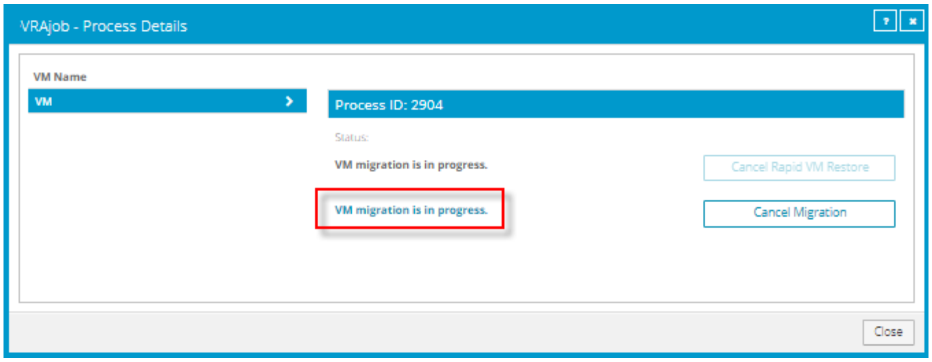
Host: 192.168.2.19

5. In the **Select Destination Datastore** list, select the permanent datastore for the VM.

   The list includes datastores that are accessible from the host selected for the Rapid VM Restore, but does not include the temporary datastore selected for the Rapid VM Restore.

6. Click **Start Migration**.

   The following Status message appears in the Process Details dialog box: *VM migration is in progress.*



VRAjob - Process Details

VM Name: VM

Process ID: 2904

Status:
VM migration is in progress.

VM migration is in progress.

If you click **Cancel Migration** while the migration is in progress, the restored VM remains in the vCenter and is still dependent on the VRA and vault. You can start the migration again, if desired.

When the VM is migrated to the permanent datastore, the following Status message appears in the Process Details dialog box: *VM has been migrated.* At this point, the VM is permanently restored and is no longer dependent on the VRA and vault. The Rapid VM Restore process ends and the Rapid VM Restore symbol no longer appears beside the job name on the Computers or Monitor page.

8.2.2 Best practice: Back up VMs restored using Rapid VM Restore

To prevent data loss, we highly recommend backing up virtual machines (VMs) that are restored using Rapid VM Restore.

When a VM is first restored using Rapid VM Restore, it is dependent on a running Rapid VM Restore process and connections to the VRA and vault. If the connection is lost to the VRA or vault, the VM could be lost.

We also recommend backing up a VM immediately before migrating it, in case a problem occurs during the migration.

If you restore a VM and the original VM still exists in the vSphere environment, you must modify your backup job to include the restored VM. If the original VM no longer exists in the vSphere environment, the restored VM will be backed up by the existing job.

In a disaster recovery situation, if multiple VMs from the same backup job no longer exist in the vSphere environment, restore all missing VMs using Rapid VM Restore before running the backup job. If you run the job when only some of the VMs have been restored, the backup will skip the missing VMs and they will reseed when the backup job next runs.

8.3 Restore files and folders using a vSphere Recovery Agent

You can restore files and folders from a protected Windows VM using the vSphere Recovery Agent (VRA).

Note: You cannot restore files and folders from Linux VMs using the VRA.

During a file and folder restore, volumes from the selected VM are mounted as drives on the machine where the VRA is running. You can then:

- Share some or all of the mounted drives so that users can copy files and folders from the drives.
- Sign in to the VRA machine and copy files and folders from the mounted drives. Files and folders on the disks will be accessible to anyone on the VRA system, including non-Admin users. If you are concerned about security, secure the Agent machine and prevent users from logging in to the machine locally.

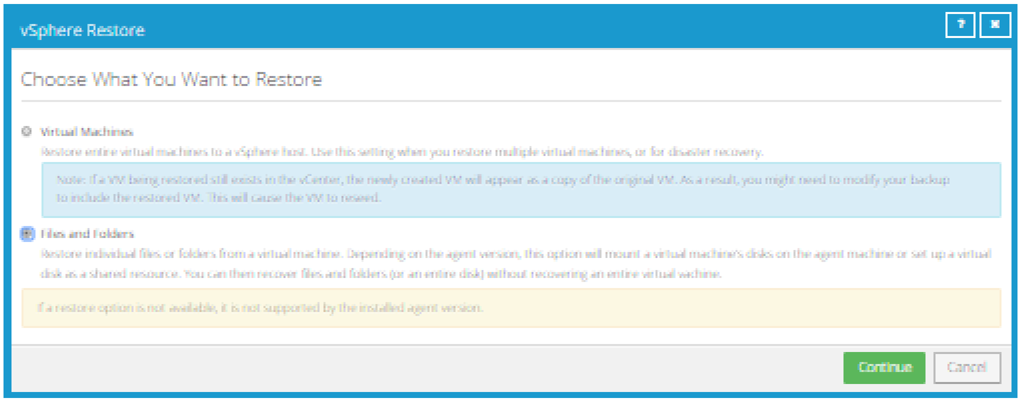
You can restore files and folders from more than one VM at the same time.

To restore files and folders using a vSphere Recovery Agent:

1. On the navigation bar, click **Computers**.

   A grid lists available computers.

2. Find the vSphere environment with the VM that you want to restore, and expand its view by clicking the row.
3. Click the **Jobs** tab.
4. Find the backup job with the VM that you want to restore, and click **Restore** in the job’s **Select Action** menu.
5. In the **Choose What You Want to Restore** dialog box, select **Files and Folders**.



vSphere Restore

Choose What You Want to Restore

○ Virtual Machines

Restore entire virtual machines to a vSphere host. Use this setting when you restore multiple virtual machines, or for disaster recovery.

Note: If a VM being restored still exists in the vCenter, the newly created VM will appear as a copy of the original VM. As a result, you might need to modify your backup to include the restored VM. This will cause the VM to reseed.

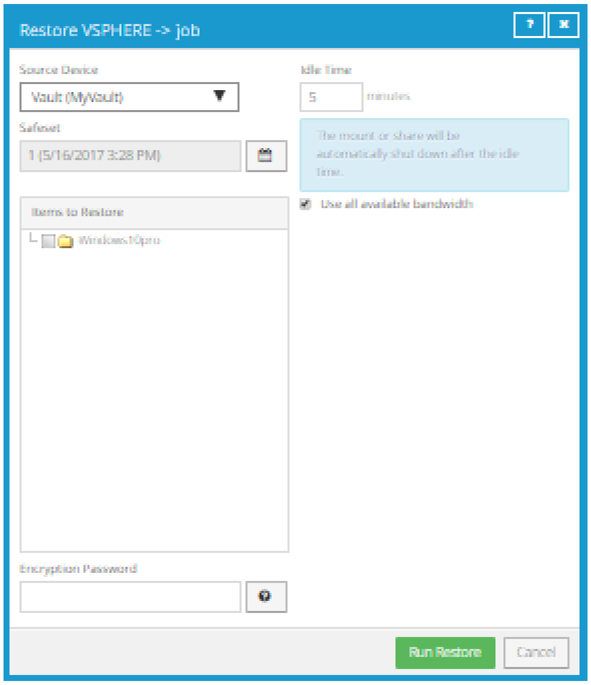
● Files and Folders

Restore individual files or folders from a virtual machine. Depending on the agent version, this option will mount a virtual machine's disks on the agent machine or set up a virtual disk as a shared resource. You can then recover files and folders (or an entire disk) without recovering an entire virtual machine.

If a restore option is not available, it is not supported by the installed agent version.

6. Click **Continue**.

   The Restore dialog box shows the most recent safeset for the job.



Restore VSPHERE -> job

Source Device: Vault (MyVault)

Safeset: 1 (5/16/2017 3:28 PM)

Items to Restore

□ Windows10pro

Encryption Password

Idle Time: 5 minutes

The mount or share will be automatically shut down after the idle time.

☑ Use all available bandwidth

7. To restore data from another source, click a source in the **Source Device** list.
8. To restore from an older safeset, click the **Browse Safesets** button. In the calendar that appears, click the date of the safeset from which you want to restore. To the right of the calendar, click the specific safeset from which you want to restore.
9. In the **Items to Restore** box, select the check box for the VM with files or folders that you want to restore.
10. In the **Encryption Password** box, enter the data encryption password. To view the password hint, click the **Hint** button.
11. In the **Idle Time** box, enter the number of minutes of inactivity after which the shared drive will automatically unshare. The **Idle time** can range from 2 to 180 minutes.

Note: The drive will not unshare as long as new data is being copied. If you copy the same data from a shared drive more than once, the system could time out because no new data is being read.

12. To use all available bandwidth for the restore, select **Use all available bandwidth**.

    To ensure the best possible performance for your restore, we recommend selecting **Use all available bandwidth**.

13. Click **Run Restore**.

    Volumes from the selected VM are mapped as drives on the machine where the VRA is running, and are available in a RestoreMount folder on the VRA machine.

14. On the machine where the VRA is running, do one of the following:

    - Copy files and folders that you want to restore from the mapped drives.
    - Share one or more mapped drives with other users. Users can then access the UNC share, and copy files and folders that they want to restore.
    - Share one or more directories from the RestoreMount folder on the VRA machine. Users can then access the UNC share, and copy files and folders that they want to restore.

8.4 Advanced restore options

When restoring vSphere VMs or files, you can specify the following options:

Log Options

Select one of the following job logging levels from the list:

- **Files** — Provides the most detailed information, and is typically used for troubleshooting. Provides information about files that are backed up.
- **Directory** — Provides less detail than the Files logging level. Provides information about folders that are backed up.
- **Summary** — Provides high-level information, including the vault and Agent version, and backup sizes.
- **Minimal** — Provides high-level information, including the vault and Agent version.

Changing the logging level only affects log files that are created from that point and after. It does not affect previously-created log files.

Performance Options

To use all available bandwidth for the restore, select **Use all available bandwidth**.

Bandwidth throttling settings specify the amount of bandwidth consumed by an Agent for backups. For example, you might want to restrict the amount of bandwidth used for daytime backups so that online users are not affected, and allow unlimited bandwidth usage at night so that scheduled backups run as fast as possible.

Bandwidth settings include:

- Maximum bandwidth (upper limit), in megabits per second, to be consumed by the Agent for all backups and restores
- Period of time during the day that throttling is in effect. Only one time window can be specified. Outside the window, no throttling takes place.
- Days of the week that throttling is in effect

If the bandwidth throttling time period begins when a backup is underway, the maximum bandwidth is applied dynamically to the running backup. Similarly, if the bandwidth throttling time period ends when a backup is running, bandwidth throttling is ended for the backup.

If you edit an Agent's bandwidth settings while a backup is running, the new Agent settings do not affect the backup that is running. Bandwidth settings are applied when a backup starts, and are not applied to backups that are already running.

9 Delete jobs and computers, and delete data from vaults

Regular users and Admin users can delete backup jobs from Portal without deleting associated data from vaults. See Delete a backup job without deleting data from vaults. Admin users can delete computers from Portal without deleting associated data from vaults. See Delete a computer without deleting data from vaults.

In a Portal instance where the data deletion feature is enabled, Admin users can also:

- Delete backup jobs from Portal and submit requests to delete the job data from vaults. See Delete a backup job and delete job data from vaults.
- Delete online computers from Portal and submit requests to delete the computer data from vaults. See Delete an online computer and delete computer data from vaults.

After an Admin user submits a request to delete job or computer data from vaults, there is a 72-hour waiting period before the data is deleted. During this waiting period, Admin users in the site can cancel the data deletion. See Cancel a scheduled job data deletion and Cancel a scheduled computer data deletion.

9.1 Delete a backup job without deleting data from vaults

Regular users and admin users can delete backup jobs from online computers without deleting the job data from vaults. If a job is deleted from Portal in this way, the data can still be restored using the *Restore from Another Computer* procedure.

In a Portal instance where the data deletion feature is enabled, Admin users can submit requests to delete job data from vaults when they delete jobs from Portal. See Delete a backup job and delete job data from vaults.

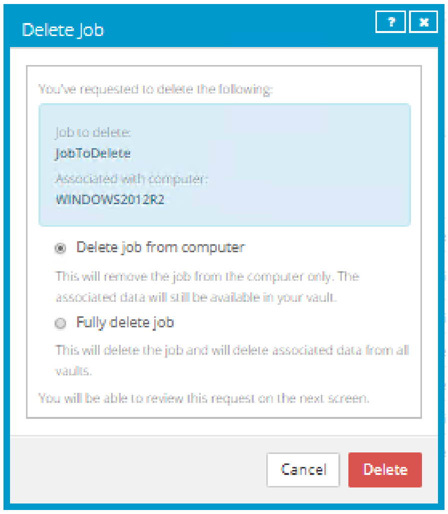
To delete a backup job without deleting data from vaults:

1. On the navigation bar, click **Computers**.

   The Computers page shows registered computers.

2. Find the online VRA with the job that you want to delete, and expand its view by clicking its row.
3. Click the **Jobs** tab.
4. In the **Select Action** menu of the job that you want to delete, click **Delete Job**.
5. If you are signed in as an Admin user in a Portal instance where the data deletion feature is enabled, a Delete Job dialog box appears.

   To delete the backup job without deleting data from vaults, click **Delete job from computer** and then click **Delete**.



You've requested to delete the following:

Job to delete:
JobToDelete
Associated with computer:
WINDOWS2012R2

● Delete job from computer

This will remove the job from the computer only. The associated data will still be available in your vault.

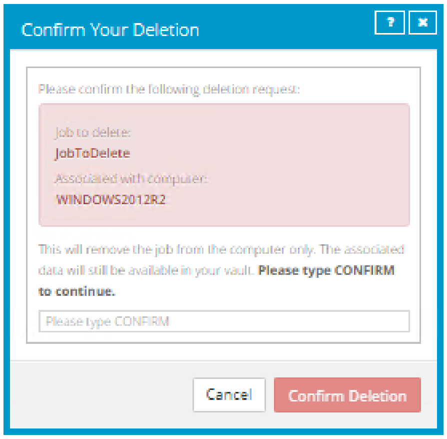
○ Fully delete job

This will delete the job and will delete associated data from all vaults.

You will be able to review this request on the next screen.

Note: The Delete Job dialog box does not appear if you cannot delete backup data in vaults because your Portal instance does not support vault data deletion or you are signed in as a regular user.

A confirmation dialog box asks you to confirm the deletion request.



Please confirm the following deletion request:

Job to delete:
JobToDelete
Associated with computer:
WINDOWS2012R2

This will remove the job from the computer only. The associated data will still be available in your vault. **Please type CONFIRM to continue.**

Please type CONFIRM

6. In the text box, type **CONFIRM.**

   Note: You must type **CONFIRM** in capital letters.

7. Click **Confirm Deletion**.

9.2 Delete a backup job and delete job data from vaults

In a Portal instance where the data deletion feature is enabled, Admin users can delete backup jobs and request that data for the jobs be deleted from all vaults. The data deletion is scheduled for 72 hours after the request is made and an email notification is sent to Admin users in the site and to Super users.

During the 72-hour waiting period before job data is deleted, Admin users can cancel scheduled job data deletions in their sites. See Cancel a scheduled job data deletion.

If a scheduled job data deletion is not canceled during the 72-hour waiting period, the job is deleted from Portal, the deletion request is sent to vaults and job data is automatically deleted from associated vaults. If data for a job cannot be deleted for some reason, an email notification is sent to a vault administrator. The vault administrator can then manually delete the data.

WARNING: Job data deletion is permanent. After the data is deleted from vaults, it cannot be recovered or restored.

To delete a backup job and delete job data from vaults:

1. When signed in as an Admin user, click **Computers** on the navigation bar.

   The Computers page shows registered computers.

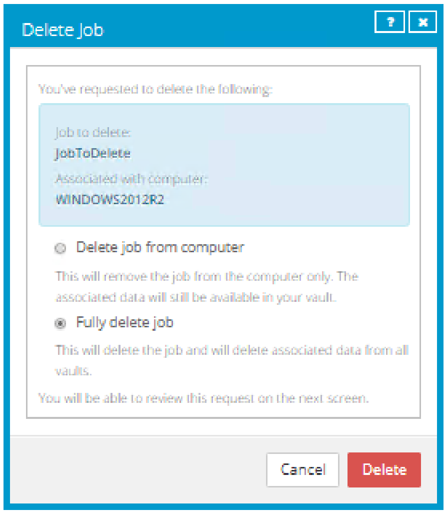
2. Find the VRA with the job that you want to delete, and expand its view by clicking its row.

3. Click the **Jobs** tab.

4. In the **Select Action** menu of the job that you want to delete, click **Delete Job**.

   A Delete Job dialog box appears if the data deletion feature is enabled in your Portal instance.

   Note: If the Delete Job dialog box does not appear, you cannot request that data for the job be deleted from vaults. You can only delete the job from Portal. See [Delete a backup job without deleting data from vaults]().

   Delete Job

   You've requested to delete the following:

   Job to delete:
   JobToDelete

   Associated with computer:
   WINDOWS2012R2

   ○ Delete job from computer

   This will remove the job from the computer only. The associated data will still be available in your vault.

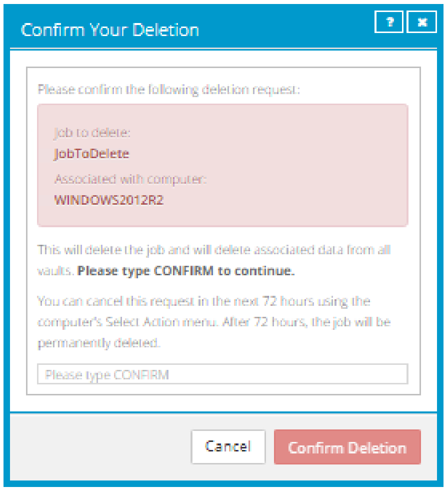
   ● Fully delete job

   This will delete the job and will delete associated data from all vaults.

   You will be able to review this request on the next screen.

5. Select **Fully delete job**, and then click **Delete**.

   A confirmation dialog box asks you to confirm the deletion request.



Confirm Your Deletion

Please confirm the following deletion request:

Job to delete:
JobToDelete

Associated with computer:
WINDOWS2012R2

This will delete the job and will delete associated data from all vaults. **Please type CONFIRM to continue.**

You can cancel this request in the next 72 hours using the computer's Select Action menu. After 72 hours, the job will be permanently deleted.

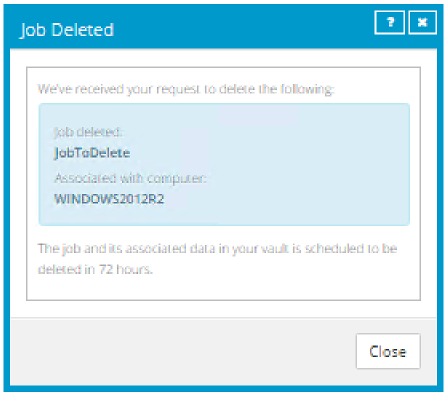
Please type CONFIRM

8. In the text box, type **CONFIRM.**

   Note: You must type **CONFIRM** in capital letters.

9. Click **Confirm Deletion**.

   A Job Deleted dialog box states that the job and associated data in your vaults is scheduled to be deleted.



Job Deleted

We've received your request to delete the following:

Job deleted:
JobToDelete

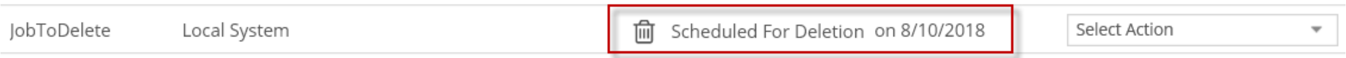
Associated with computer:
WINDOWS2012R2

The job and its associated data in your vault is scheduled to be deleted in 72 hours.

10. Click **Close**.

    The Last Backup Status column shows *Scheduled For Deletion* for the job. The Date column shows the date when the job will be deleted from Portal and job data will be deleted from vaults. Within a day of the scheduled deletion, the Date column will also show the time when the job and its data will be deleted.

    An email is sent to Admin users in the site and to Super users to indicate that the job deletion has been scheduled.



JobToDelete	Local System	Scheduled For Deletion on 8/10/2018	Select Action

9.3 Cancel a scheduled job data deletion

In a Portal instance where the data deletion feature is enabled, Admin users can delete a backup job and request that data for the job be deleted from all vaults. The data deletion is scheduled for 72 hours after the request is made and an email notification is sent to Admin users in the site and to Super users.

During the 72-hour period before a job is deleted from Portal and the job data is deleted from vaults, Admin users in the site can cancel the data deletion. If a scheduled data deletion is canceled, an email notification is sent to Admin users in the site and to Super users.

To cancel a scheduled job data deletion:

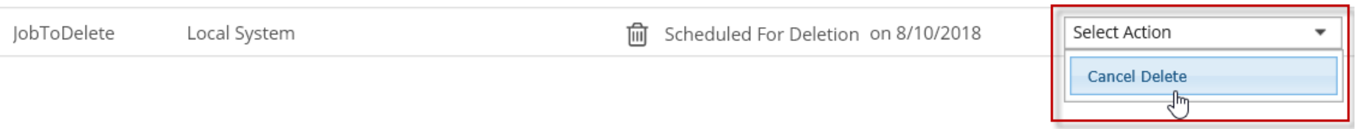
1. When signed in as an Admin user, click **Computers** on the navigation bar.

   The Computers page shows registered computers.

2. Find the VRA with the scheduled job data deletion that you want to cancel, and expand its view by clicking its row.

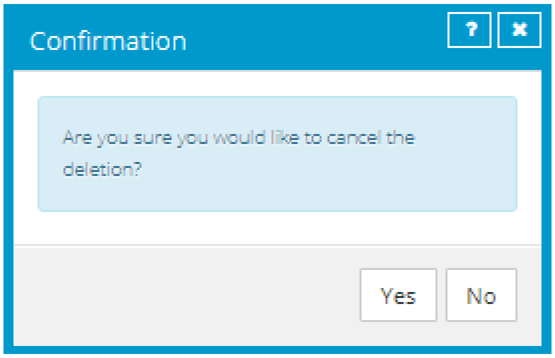
3. Click the **Jobs** tab.

4. In the Select Action menu of the job that is scheduled for deletion, click **Cancel Delete**.



JobToDelete Local System Scheduled For Deletion on 8/10/2018

   A confirmation dialog box asks whether you want to cancel the deletion.



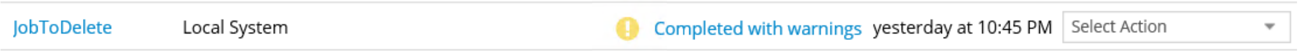
Confirmation

Are you sure you would like to cancel the deletion?

5. Click **Yes**.

   Values in the Last Backup Status and Date columns for the job revert to the values that appeared before the job was scheduled for deletion.

   An email is sent to Admin users in the site and to Super users to indicate that the scheduled job deletion has been canceled.



JobToDelete Local System Completed with warnings yesterday at 10:45 PM

9.4 Delete a computer without deleting data from vaults

Admin users can delete computers from Portal without deleting the computer data from vaults. If a computer is deleted from Portal in this way, the data can still be restored using the *Restore from Another Computer* procedure. You can delete both online and offline computers from Portal without deleting data from vaults.

To delete a computer without deleting data from vaults:

1. When signed in as an Admin user, click **Computers** on the navigation bar.

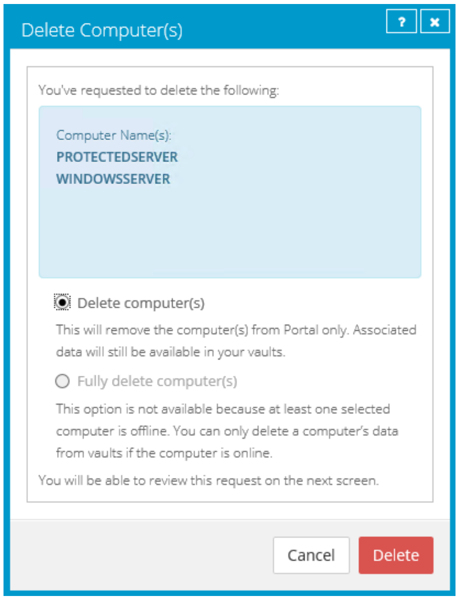
   The Computers page shows registered computers.

2. Select the check box for each computer that you want to delete.

3. In the **Actions** list, click **Delete Selected Computer(s)**.

4. If the data deletion feature is enabled in your Portal instance, a Delete Computer(s) dialog box appears.

   To delete the computer without deleting data from vaults, click **Delete computer(s)** and then click **Delete**.



Delete Computer(s)

You've requested to delete the following:

Computer Name(s):
PROTECTEDSERVER
WINDOWSSERVER

● Delete computer(s)

This will remove the computer(s) from Portal only. Associated data will still be available in your vaults.

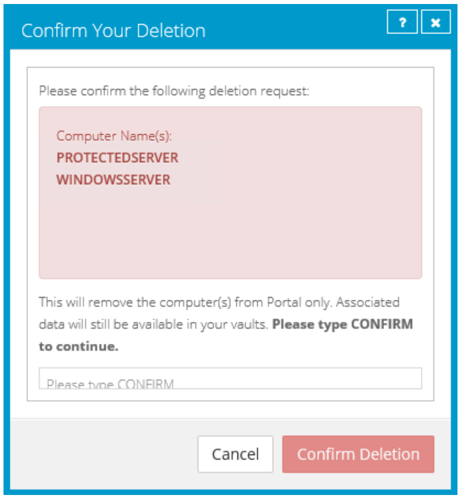
○ Fully delete computer(s)

This option is not available because at least one selected computer is offline. You can only delete a computer's data from vaults if the computer is online.

You will be able to review this request on the next screen.

   Note: The Delete Computer(s) dialog box only appears if your Portal instance supports vault data deletion.

   A confirmation dialog box asks you to confirm the deletion request.



Please confirm the following deletion request:

Computer Name(s):
PROTECTEDSERVER
WINDOWSSERVER

This will remove the computer(s) from Portal only. Associated data will still be available in your vaults. **Please type CONFIRM to continue.**

5. In the text box, type **CONFIRM**.

   Note: You must type **CONFIRM** in capital letters.

6. Click **Confirm Deletion**.

7. In the confirmation dialog box, click **Yes.**

8. In the Success dialog box, click **Okay**.

9.5 Delete an online computer and delete computer data from vaults

In a Portal instance where the data deletion feature is enabled, Admin users can delete online computers and request that data for the computers be deleted from all vaults. The data deletion is scheduled for 72 hours after the request is made and an email notification is sent to Admin users in the site and to Super users.

Note: You cannot delete data from vaults for offline computers, but you can delete offline computers from Portal. See Delete a computer without deleting data from vaults.

During the 72-hour waiting period before computer data is deleted, Admin users can cancel scheduled computer data deletions in their sites. See Cancel a scheduled computer data deletion.

If a scheduled computer data deletion is not canceled during the 72-hour waiting period, the computer is deleted from Portal, the deletion request is sent to vaults and job data is automatically deleted from associated vaults. If data for a computer cannot be deleted for some reason, an email notification is sent to a vault administrator. The vault administrator can then manually delete the data.

WARNING: Computer data deletion is permanent. After the data is deleted from vaults, it cannot be recovered or restored.

To delete an online computer and delete computer data from vaults:

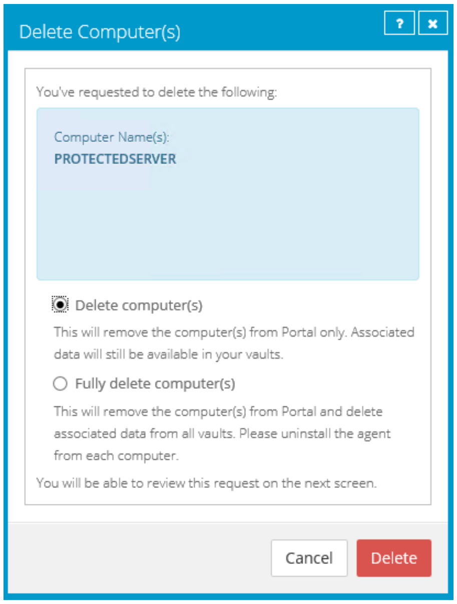
1. When signed in as an Admin user, click **Computers** on the navigation bar.

The Computers page shows registered computers.

2. Select the check box for each online computer that you want to delete.
3. In the **Actions** list, click **Delete Selected Computer(s)**.

   A Delete Computer(s) dialog box appears if the data deletion feature is enabled in your Portal instance. The **Fully delete computer(s)** option is available if no offline computers are selected.

   Note: If the Delete Computer(s) dialog box does not appear or the **Fully delete computer(s)** option is not available, you cannot request that data for the selected computers be deleted from vaults. You can only delete the selected computers from Portal. See [Delete a computer without deleting data from vaults]().



Delete Computer(s)

You've requested to delete the following:

Computer Name(s):
PROTECTEDSERVER

● Delete computer(s)

This will remove the computer(s) from Portal only. Associated data will still be available in your vaults.

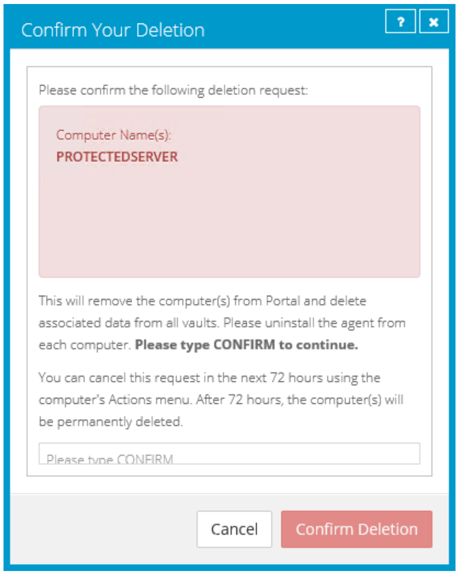
○ Fully delete computer(s)

This will remove the computer(s) from Portal and delete associated data from all vaults. Please uninstall the agent from each computer.

You will be able to review this request on the next screen.

4. Select **Fully delete computer(s)**, and then click **Delete**.

   A confirmation dialog box asks you to confirm the deletion request.



Confirm Your Deletion

Please confirm the following deletion request:

Computer Name(s):
PROTECTEDSERVER

This will remove the computer(s) from Portal and delete associated data from all vaults. Please uninstall the agent from each computer. **Please type CONFIRM to continue.**

You can cancel this request in the next 72 hours using the computer's Actions menu. After 72 hours, the computer(s) will be permanently deleted.

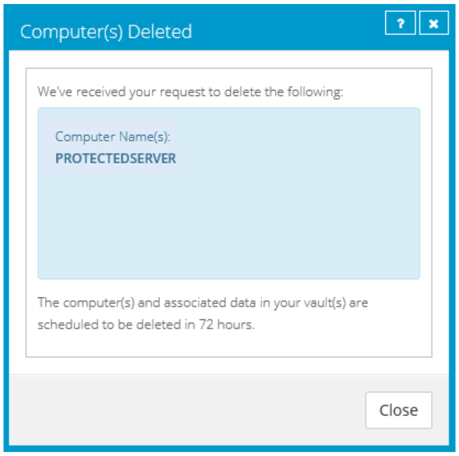
Please type CONFIRM

5. In the text box, type **CONFIRM**.

   Note: You must type **CONFIRM** in capital letters.

6. Click **Confirm Deletion**.

   A Computer(s) Deleted dialog box states that the computer(s) and associated data in your vault(s) are scheduled to be deleted.



Computer(s) Deleted

We've received your request to delete the following:

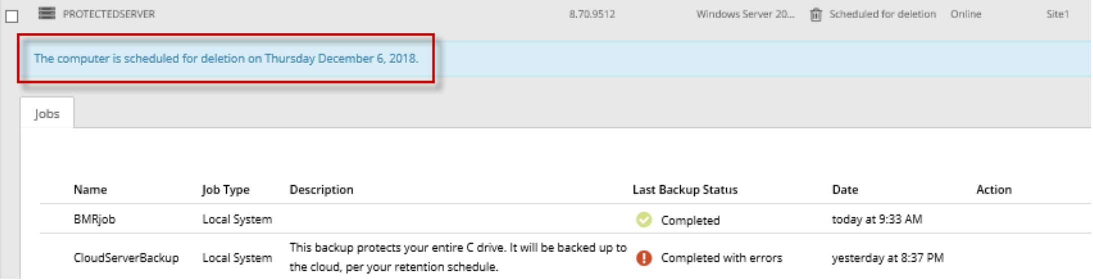
Computer Name(s):
PROTECTEDSERVER

The computer(s) and associated data in your vault(s) are scheduled to be deleted in 72 hours.

7. Click **Close**.

   The Status column shows *Scheduled for deletion* for the computer(s). If you expand the computer, a message indicates when the computer is scheduled to be deleted.

   You cannot add, edit, run, schedule or delete jobs for a computer that is scheduled for deletion. Existing backup jobs continue to run as scheduled until the computer is deleted.



□	PROTECTEDSERVER	8.70.9512	Windows Server 20...	Scheduled for deletion	Online	Site1

The computer is scheduled for deletion on Thursday December 6, 2018.

Name	Job Type	Description	Last Backup Status	Date	Action
BMRjob	Local System		✓ Completed	today at 9:33 AM	
CloudServerBackup	Local System	This backup protects your entire C drive. It will be backed up to the cloud, per your retention schedule.	! Completed with errors	yesterday at 8:37 PM	

9.6 Cancel a scheduled computer data deletion

In a Portal instance where the data deletion feature is enabled, Admin users can delete an offline computer and request that data for the computer be deleted from all vaults. The data deletion is scheduled for 72 hours after the request is made and an email notification is sent to Admin users in the site and to Super users.

During the 72-hour period before a computer is deleted from Portal and the computer data is deleted from vaults, Admin users in the site can cancel the data deletion. If a scheduled data deletion is canceled, an email notification is sent to Admin users in the site and to Super users.

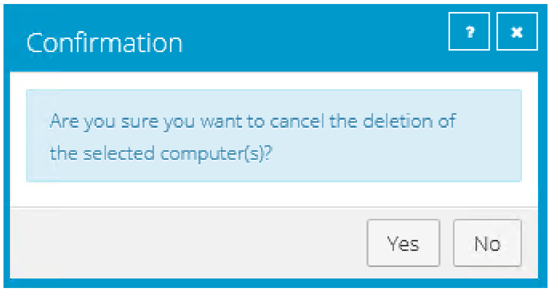
To cancel a scheduled computer data deletion:

1. When signed in as an Admin user, click **Computers** on the navigation bar.

   The Computers page shows registered computers.

2. Select the check box for each VRA for which you want to cancel the scheduled data deletion.

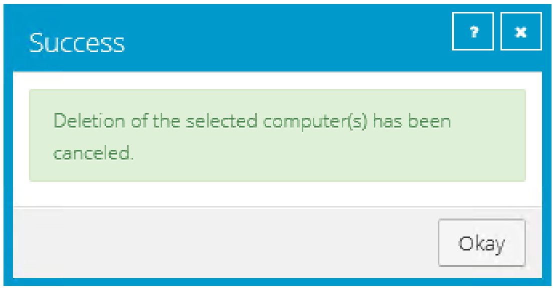
   A confirmation dialog box asks whether you want to cancel the deletion.

   Are you sure you want to cancel the deletion of the selected computer(s)?

3. Click **Yes**.

   A Success dialog box appears.

   Deletion of the selected computer(s) has been canceled.

4. Click **Okay**.

   The value in the Status column for each computer reverts to the value that appeared before the computer was scheduled for deletion.

   An email is sent to Admin users in the site and to Super users to indicate that the scheduled computer deletion has been canceled.

10 Monitor computers, jobs and processes

You can monitor backups, restores and protected environments using the following Portal features:

- Computer page. The Computer page shows status information for protected environments and their jobs. See View computer and job status information. You can also access logs for unconfigured computers from this page. See View an unconfigured computers logs.
- Process Details dialog box. This dialog box shows information about all running, queued and recently-completed processes for a job. See View current process information for a job.
- Email notifications. To make it easier to monitor backups, users can receive emails when backups finish or fail. See Monitor backups using email notifications.
- Process logs and safeset information. Process logs indicate whether each backup and restore completed successfully, and provide information about any problems that occurred. You can also view information about the safeset created by a specific backup. See View a jobs process logs and safeset information.
- Monitor page. The Monitor page shows the most recent backup status for each job, and allows you to navigate to the computer and job for each backup. See View and export recent backup statuses.

10.1 View computer and job status information

On the Computer page in Portal, you can view status information for protected environments and their jobs.

To view computer and job status information:

1. On the navigation bar, click **Computers**.

   The Computers page shows registered VRAs.

   The Availability column indicates whether each VRA is online or offline. Online computers are in contact with Portal, while offline computers are not currently available. A computer can be offline if it is turned off, if the Agent has been uninstalled from the system, or if the system has been lost.

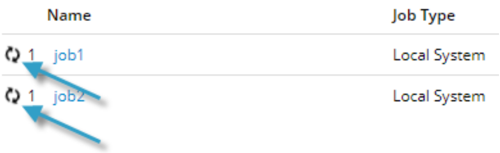
   The Status column shows the status of each computer. Possible statuses include:

   - ✓ OK — Indicates that all jobs on the computer ran without errors or warnings.
   - ! OK with warnings — Indicates that one or more of the computer’s jobs completed with warnings.
   - ! Attention — Indicates that one or more of the computer’s jobs failed or completed with errors.
   - ⊘ Unconfigured — Indicates that no jobs have been created for the computer.

   If you are signed in as an Admin user, the Version column shows the upgrade status of each computer.
2. Find the VRA for which you want to view logs, and click the row to expand its view.

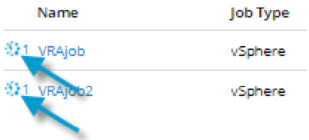
3. View the **Jobs** tab.

   If a backup or restore is running for a job, a Process Details symbol ⟳ appears beside the job name, along with the number of processes that are running.



Name	Job Type
⟳ 1 job1	Local System
⟳ 1 job2	Local System

   If a Rapid VM Restore is running for a VRA job, a Rapid VM Restore symbol ✲ appears beside the job name, along with the number of Rapid VM Restores that are running.



Name	Job Type
✲ 1 VRAjob	vSphere
✲ 1 VRAjob2	vSphere

   If you click the Process Details or Rapid VM Restore symbol, the **Process Details** dialog box shows information about processes for the job. See View current process information for a job.

   The **Last Backup Status** column shows the result of the last backup attempt for each job. Possible statuses include:

   - ✓ Completed — Indicates that the last backup completed successfully, and a safeset was created.
   - ! Completed with warnings — Indicates that the last backup completed and a safeset was created, but problems occurred during the backup. For example, a warning could indicate that a file or volume that was selected in the backup job was not available for backup.
   - ! Deferred — Indicates that the last backup was deferred. A safeset was created, but not all data that was selected was backed up.

     Deferring is used to prevent large backups from running at peak network times. When deferring is enabled, a backup job does not back up any new data after a specified amount of time.
   - ⊘ Never Run — Indicates that the backup job has never run.
   - ! Missed — Indicates that the job has not run for 7 days.
   - ! Completed with errors — Indicates that the backup completed and a safeset is available for restore, but problems occurred.
   - !
   - ! Failed — Indicates that the backup failed and no safeset was created.
   - ! Cancelled

- 🗑 Scheduled for Deletion — Indicates that the job is scheduled to be deleted from Portal and job data is scheduled to be deleted from all vaults on the date shown in the Date column. This backup status is only possible in Portal instances where the data deletion feature is enabled.

To view logs for a job, click the job status. For more information, see View a jobs process logs and safeset information.

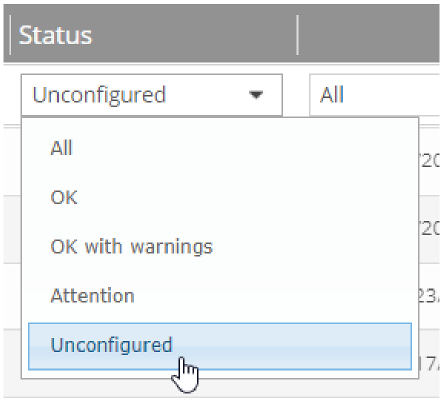
10.2 View an unconfigured computer's logs

You can view logs for unconfigured computers that are online. Unconfigured computers do not have any backup jobs.

To view an unconfigured computer's logs:

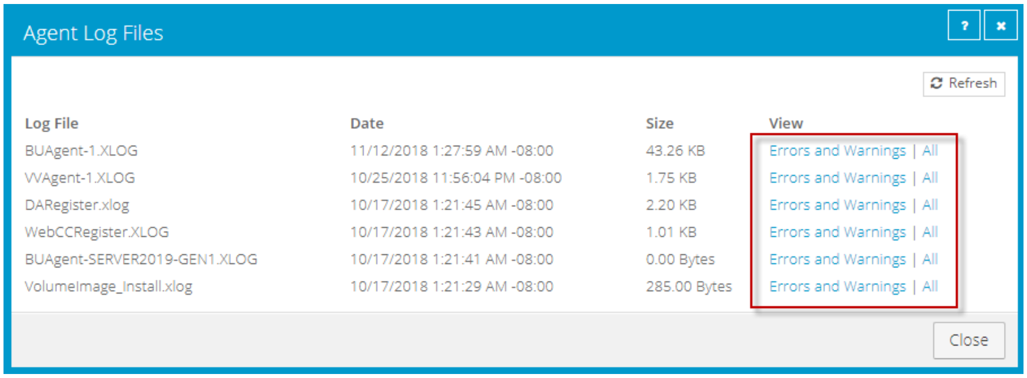
1. On the navigation bar, click **Computers**.

   The Computers page shows registered computers. To only show unconfigured computers, click "Unconfigured" in the **Status** filter.



2. Find an unconfigured computer that is online, and expand its view by clicking the computer row.
3. Click the **logs** link for the unconfigured computer.

   The Agent Log Files window shows a list of logs for the computers. Links to the logs appear at the right side of the window.



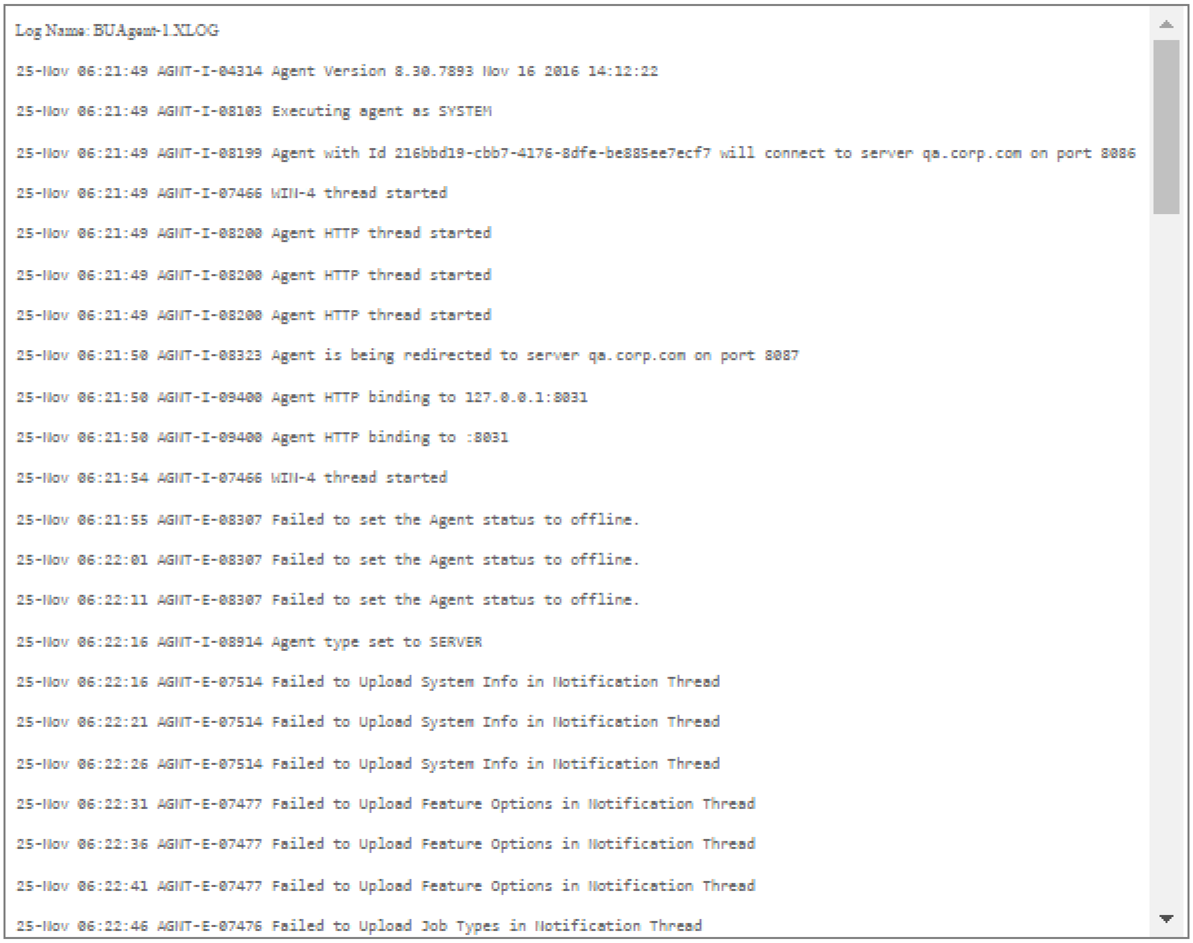
Log File	Date	Size	View
BUAgent-1.XLOG	11/12/2018 1:27:59 AM -08:00	43.26 KB	Errors and Warnings | All
VVAgent-1.XLOG	10/25/2018 11:56:04 PM -08:00	1.75 KB	Errors and Warnings | All
DARegister.xlog	10/17/2018 1:21:45 AM -08:00	2.20 KB	Errors and Warnings | All
WebCCRegister.XLOG	10/17/2018 1:21:43 AM -08:00	1.01 KB	Errors and Warnings | All
BUAgent-SERVER2019-GEN1.XLOG	10/17/2018 1:21:41 AM -08:00	0.00 Bytes	Errors and Warnings | All
VolumeImage_Install.xlog	10/17/2018 1:21:29 AM -08:00	285.00 Bytes	Errors and Warnings | All

4. Do one of the following:

   - To only view errors and warnings in a log, click **Errors and Warnings** for the log.

- To view an entire log, click **All** for the log.

The log appears in a new browser tab.



Log Name: BUAgent-1.XLOG

```
25-Nov 06:21:49 AGNT-I-04314 Agent Version 8.30.7893 Nov 16 2016 14:12:22

25-Nov 06:21:49 AGNT-I-08103 Executing agent as SYSTEM

25-Nov 06:21:49 AGNT-I-08199 Agent with Id 216bbd19-cbb7-4176-8dfe-be885ee7ecf7 will connect to server qa.corp.com on port 8086

25-Nov 06:21:49 AGNT-I-07466 WIN-4 thread started

25-Nov 06:21:49 AGNT-I-08200 Agent HTTP thread started

25-Nov 06:21:49 AGNT-I-08200 Agent HTTP thread started

25-Nov 06:21:49 AGNT-I-08200 Agent HTTP thread started

25-Nov 06:21:50 AGNT-I-08323 Agent is being redirected to server qa.corp.com on port 8087

25-Nov 06:21:50 AGNT-I-09400 Agent HTTP binding to 127.0.0.1:8031

25-Nov 06:21:50 AGNT-I-09400 Agent HTTP binding to :8031

25-Nov 06:21:54 AGNT-I-07466 WIN-4 thread started

25-Nov 06:21:55 AGNT-E-08307 Failed to set the Agent status to offline.

25-Nov 06:22:01 AGNT-E-08307 Failed to set the Agent status to offline.

25-Nov 06:22:11 AGNT-E-08307 Failed to set the Agent status to offline.

25-Nov 06:22:16 AGNT-I-08914 Agent type set to SERVER

25-Nov 06:22:16 AGNT-E-07514 Failed to Upload System Info in Notification Thread

25-Nov 06:22:21 AGNT-E-07514 Failed to Upload System Info in Notification Thread

25-Nov 06:22:26 AGNT-E-07514 Failed to Upload System Info in Notification Thread

25-Nov 06:22:31 AGNT-E-07477 Failed to Upload Feature Options in Notification Thread

25-Nov 06:22:36 AGNT-E-07477 Failed to Upload Feature Options in Notification Thread

25-Nov 06:22:41 AGNT-E-07477 Failed to Upload Feature Options in Notification Thread

25-Nov 06:22:46 AGNT-E-07476 Failed to Upload Job Types in Notification Thread
```

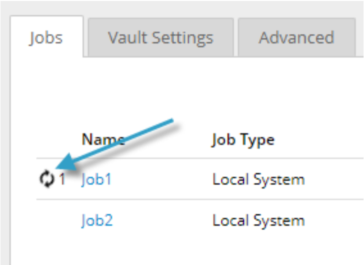
10.3 View current process information for a job

In the Process Details dialog box, you can view information about running, queued and recently-completed processes for a job. Processes include backups, restores, and synchronizations, and is typically deleted within an hour after the process ends.

You can also view information about running and recent Rapid VM Restore and migration processes for a vSphere Recovery Agent (VRA) job. For more information, see Restore a vSphere VM within minutes using Rapid VM Restore.

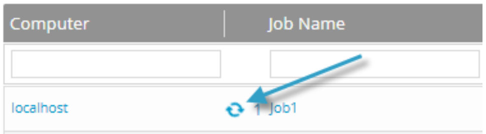
To view current process information for a job:

1. While a backup, restore, Rapid VM Restore, or synchronization is running, do one of the following:
   - On the Computers page, on the Jobs tab, click the Process Details symbol ⟳ or Rapid VM Restore symbol beside the job name.



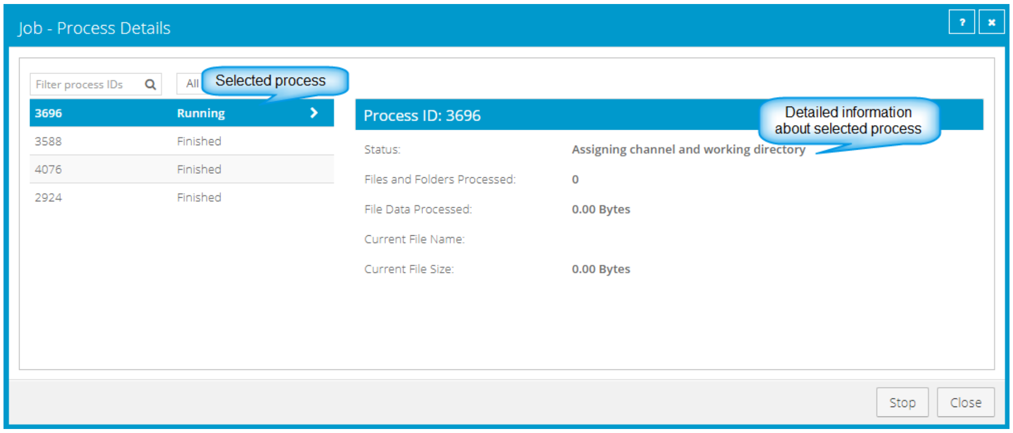
	Name	Job Type
1	Job1	Local System
	Job2	Local System

- On the Monitor page, click the Progress Details symbol or Rapid VM Restore symbol beside the job name.



Computer	Job Name
localhost	1 Job1

If you clicked a Progress Details symbol, the **Process Details** dialog box lists backup, restore and synchronization processes that are running, queued and recently completed for the job. Detailed information is shown for the process that is selected on the left side of the dialog box.



3696	Running
3588	Finished
4076	Finished
2924	Finished

Process ID: 3696

Status: Assigning channel and working directory

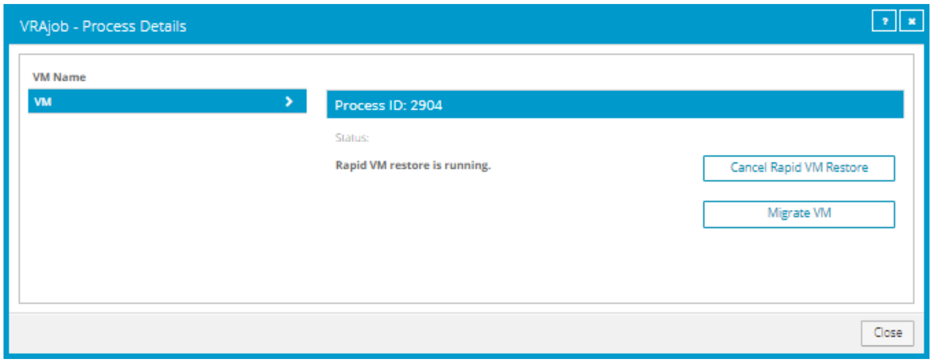
Files and Folders Processed: 0

File Data Processed: 0.00 Bytes

Current File Name:

Current File Size: 0.00 Bytes

If you clicked a Rapid VM Restore symbol, the **Process Details** dialog box lists running and recent Rapid VM Restore and migration processes for the VRA job.



VM Name

VM

Process ID: 2904

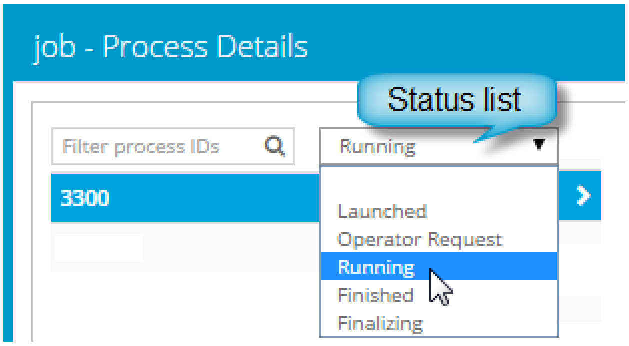
Status:

Rapid VM restore is running.

2. To view information about a different process or Rapid VM Restore, click the process or VM name on the left side of the dialog box.

   Detailed information is shown at the right side of the dialog box.

3. If the Process Details dialog box lists backup, restore and synchronization processes for the job, do one of the following in the status list to show only some processes:
    - To only show queued processes, click **Launched**.
    - To only show processes that are waiting for user action, click **Operator Request**.
    - To only show processes that are in progress, click **Running**.
    - To only show completed processes, click **Finished**.
    - To only show processes that are finishing, click **Finalizing**.



10.4 Monitor backups using email notifications

To make it easier to monitor backups, users can receive emails when backups finish or fail. Admin users and regular users in Portal can set up email notifications for a computer. See Set up email notifications for backups on a computer.

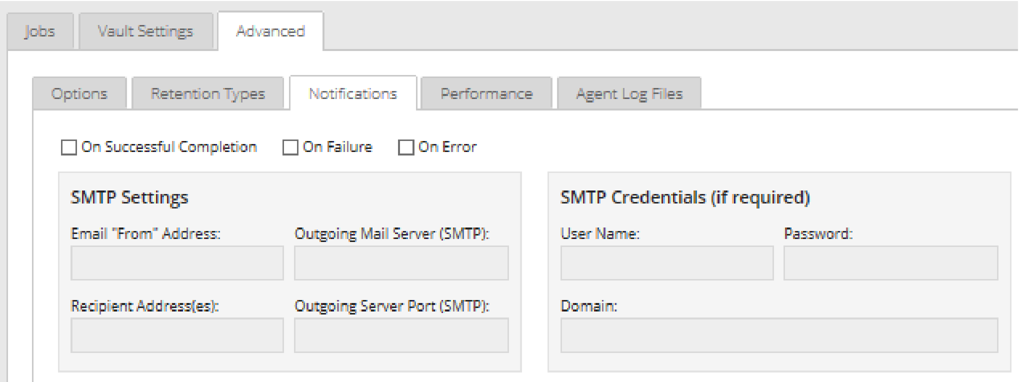
In some Portal instances, email notifications are configured centrally for vSphere Recovery Agent 8.40 or later, instead of separately for each computer. See Set up email notifications for backups on multiple computers.

10.4.1 Set up email notifications for backups on a computer

To set up email notifications for a computer:

1. On the navigation bar, click **Computers**.
2. Find the VRA for which you want to configure email notifications, and click the row to expand its view.
3. On the **Advanced** tab, click the **Notifications** tab.

    If the **Notifications** tab appears, but a policy is assigned to the VRA, you cannot change values on the **Notifications** tab. Instead, notifications can only be modified in the policy.



Select one or more of the following checkboxes:

- **On failure**. If selected, users receive an email notification when a backup or restore fails. If a backup fails, you cannot recover any files from the backup.
- **On error**. If selected, users receive an email notification when a backup or restore completes with errors in the log file. You cannot recover files that are backed up with errors, but you can restore other files from the backup (safeset).
- **On successful completion.** If selected, users receive an email notification when a backup or restore completes successfully. You can recover files from a backup that completes, even if there are warnings in the log file.

Email notifications are sent separately for each backup and restore. For example, if three backup jobs fail on a computer and **On failure** is selected for the computer, three notification emails are sent.

If users will receive email notifications after backups and restores, specify the following email notification information:

Email “From” Address	Email address from which email notifications will be sent.
Outgoing Mail Server (SMTP)	Network address of the SMTP that will send the email.
Recipient Address(es)	Email notification recipient email addresses, separated by commas. These should be real, valid email addresses. If one or more is not valid, the transmission to those addresses will fail, and errors will appear in the log files.
Outgoing Server Port (SMTP)	Port number for sending email notifications.
SMTP Credentials	If required, SMTP username, domain, and password.

4. Click **Save**.

10.4.2 Set up email notifications for backups on multiple computers

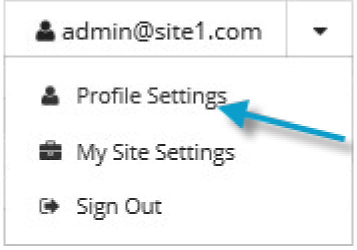
By default in some Portal instances, Admin users receive emails when backups fail, or are cancelled, deferred, missed or completed. Admin users can select backup statuses for which they want to receive email notifications. These email notifications are sent for vSphere Recovery Agent 8.40 or later, instead of separately for each computer.

For other computers, and in Portal instances where Admin users do not automatically receive email notifications, notifications must be configured separately for each computer. See Set up email notifications for backups on a computer.

To set up email notifications for backups on multiple computers:

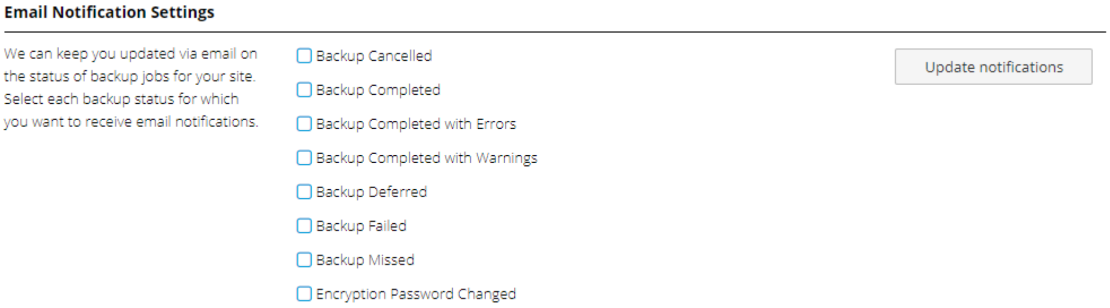
1. When signed in as an Admin user, click your email address at the top right of the Portal page.

   The user menu appears.

2. Click **Profile Settings**.

   Your user profile appears. If your profile includes an Email Notification Settings section with a list of backup events (e.g., Backup Canceled, Backup Completed), you can select events for which you want to receive emails.

   Email Notification Settings

   We can keep you updated via email on the status of backup jobs for your site. Select each backup status for which you want to receive email notifications.

   □ Backup Cancelled
   □ Backup Completed
   □ Backup Completed with Errors
   □ Backup Completed with Warnings
   □ Backup Deferred
   □ Backup Failed
   □ Backup Missed
   □ Encryption Password Changed

   Update notifications

   If Email Notification Settings do not appear, you must set up notifications separately for each computer. See Set up email notifications for backups on a computer.

3. In the Email Notification Settings list, select any of the following events for which you want to receive emails:

   - Backup Cancelled
   - Backup Completed
   - Backup Completed with Errors
   - Backup Completed with Warnings

- Backup Deferred
- Backup Failed
- Backup Missed

4. Click **Update notifications**.

10.5 View a job’s process logs and safeset information

To determine whether a backup or restore completed successfully, or to determine why a process failed, you can view a job’s process logs.

You can also view information about safesets created for the job. A safeset is an instance of backup data on the vault. For most Agents, one safeset is created by each successful backup.

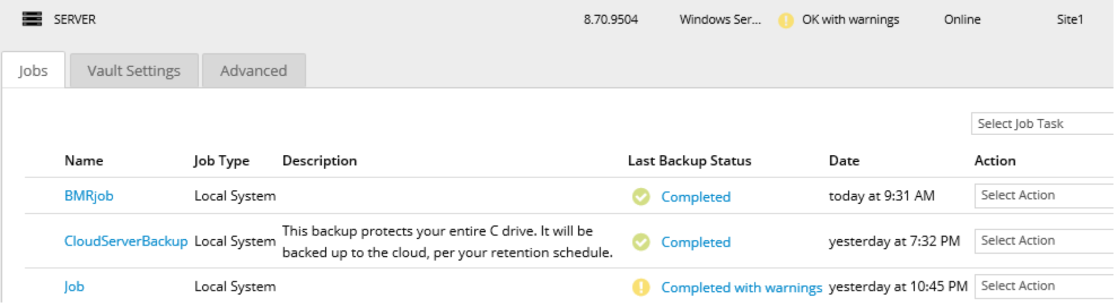
To view a job’s process logs and safeset information:

1. On the navigation bar, click **Computers**.

   The Computers page shows registered VRAs.

2. Find the VRA for which you want to view logs, and click the row to expand its view.

   On the **Jobs** tab, the **Last Backup Status** column shows the status of each backup job.



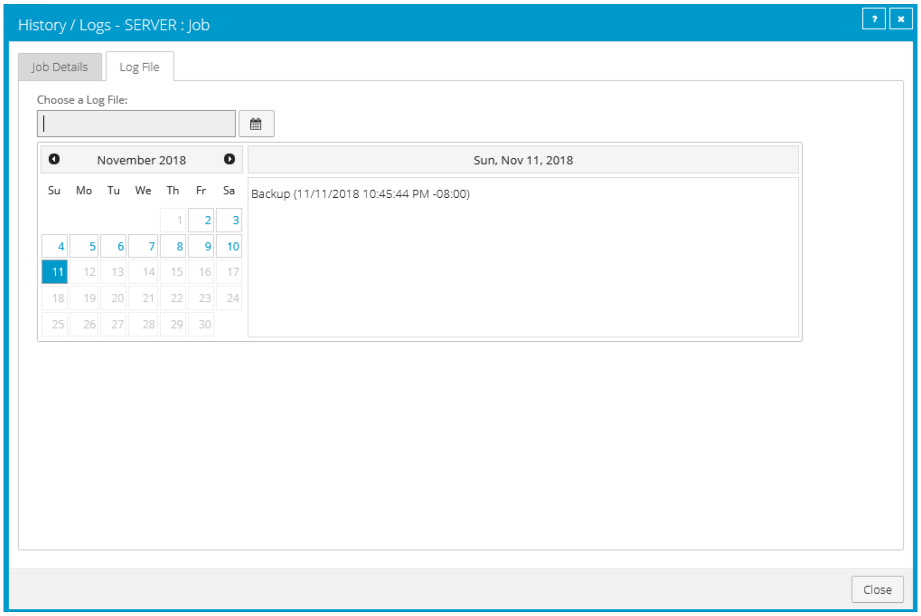
SERVER 8.70.9504 Windows Ser... OK with warnings Online Site1

Name	Job Type	Description	Last Backup Status	Date	Action
BMRjob	Local System		✓ Completed	today at 9:31 AM	Select Action
CloudServerBackup	Local System	This backup protects your entire C drive. It will be backed up to the cloud, per your retention schedule.	✓ Completed	yesterday at 7:32 PM	Select Action
Job	Local System		! Completed with warnings	yesterday at 10:45 PM	Select Action

3. To view log files for a job, do one of the following:

   - In the job’s **Select Action** menu, click **History / Logs**.
   - In the **Last Backup Status** column, click the job status.

   The **History / Logs** window lists the most recent backups, restores and synchronizations on the computer.

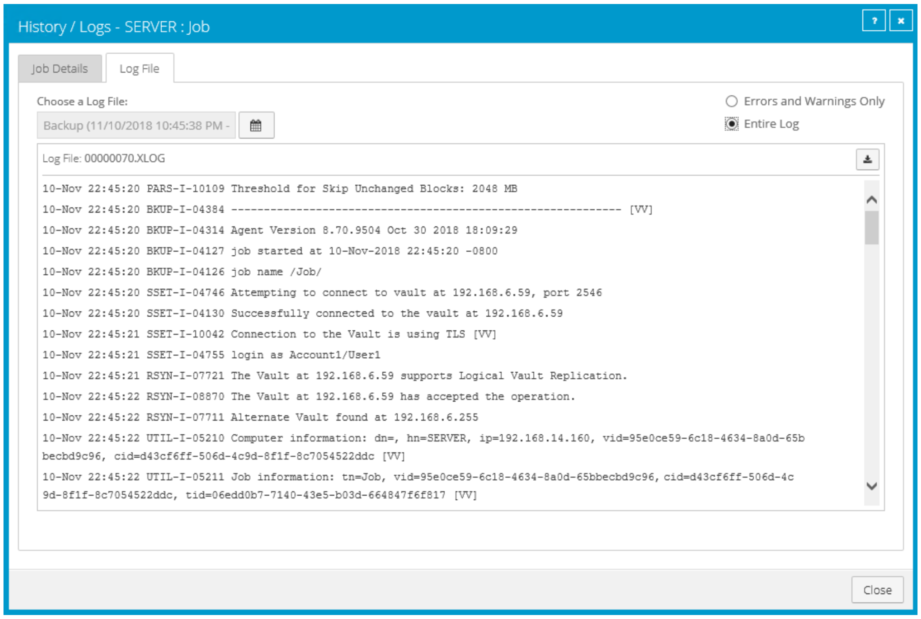


Backup (11/11/2018 10:45:44 PM -08:00)

4. To view processes for a different day, click the calendar button. In the calendar that appears, click the date of the log that you want to view.

5. In the list of processes on the selected date, click the process for which you want to view the log.

   The **History / Logs** window shows the selected log.



Choose a Log File: Backup (11/10/2018 10:45:38 PM -

○ Errors and Warnings Only
● Entire Log

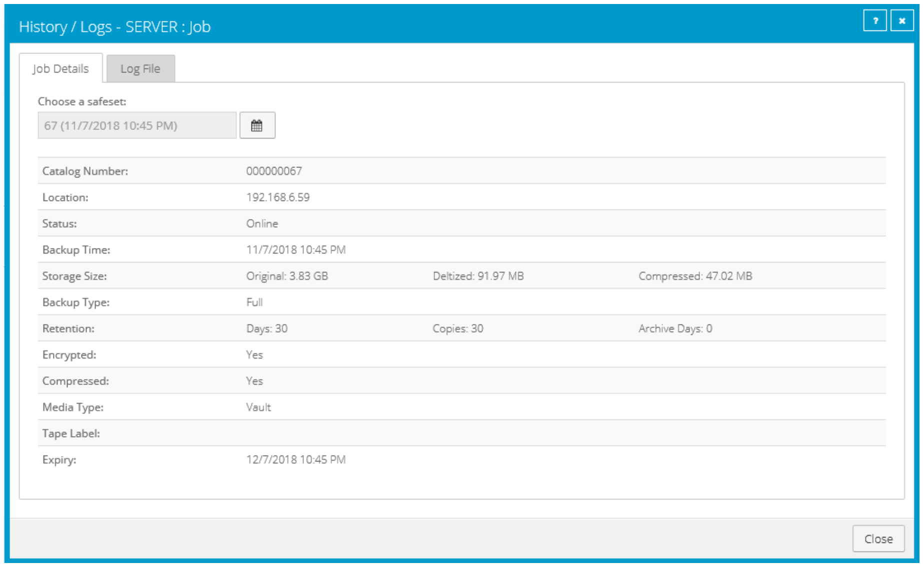
Log File: 00000070.XLOG

```
10-Nov 22:45:20 PARS-I-10109 Threshold for Skip Unchanged Blocks: 2048 MB
10-Nov 22:45:20 BKUP-I-04384 ------------------------------------------------------------ [VV]
10-Nov 22:45:20 BKUP-I-04314 Agent Version 8.70.9504 Oct 30 2018 18:09:29
10-Nov 22:45:20 BKUP-I-04127 job started at 10-Nov-2018 22:45:20 -0800
10-Nov 22:45:20 BKUP-I-04126 job name /Job/
10-Nov 22:45:20 SSET-I-04746 Attempting to connect to vault at 192.168.6.59, port 2546
10-Nov 22:45:20 SSET-I-04130 Successfully connected to the vault at 192.168.6.59
10-Nov 22:45:21 SSET-I-10042 Connection to the Vault is using TLS [VV]
10-Nov 22:45:21 SSET-I-04755 login as Account1/User1
10-Nov 22:45:21 RSYN-I-07721 The Vault at 192.168.6.59 supports Logical Vault Replication.
10-Nov 22:45:22 RSYN-I-08870 The Vault at 192.168.6.59 has accepted the operation.
10-Nov 22:45:22 RSYN-I-07711 Alternate Vault found at 192.168.6.255
10-Nov 22:45:22 UTIL-I-05210 Computer information: dn=, hn=SERVER, ip=192.168.14.160, vid=95e0ce59-6c18-4634-8a0d-65b
becbd9c96, cid=d43cf6ff-506d-4c9d-8f1f-8c7054522ddc [VV]
10-Nov 22:45:22 UTIL-I-05211 Job information: tn=Job, vid=95e0ce59-6c18-4634-8a0d-65bbecbd9c96, cid=d43cf6ff-506d-4c
9d-8f1f-8c7054522ddc, tid=06edd0b7-7140-43e5-b03d-664847f6f817 [VV]
```

6. To only show errors and warnings in the log, click the **Errors and Warnings Only** option at the top right of the window.

7. To view safeset information for a particular backup, click the **Job Details** tab. The tab shows safeset information for the job’s most recent backup.

   To view information for a different safeset, click the calendar button. In the calendar that appears, click the date of the backup for which you want to view information. In the list of backups on the selected date, click the backup for which you want to view information. The tab shows safeset information for the selected backup.



Choose a safeset: 67 (11/7/2018 10:45 PM)

Catalog Number:	000000067		
Location:	192.168.6.59		
Status:	Online		
Backup Time:	11/7/2018 10:45 PM		
Storage Size:	Original: 3.83 GB	Deltized: 91.97 MB	Compressed: 47.02 MB
Backup Type:	Full		
Retention:	Days: 30	Copies: 30	Archive Days: 0
Encrypted:	Yes		
Compressed:	Yes		
Media Type:	Vault		
Tape Label:			
Expiry:	12/7/2018 10:45 PM		

10.6 View and export recent backup statuses

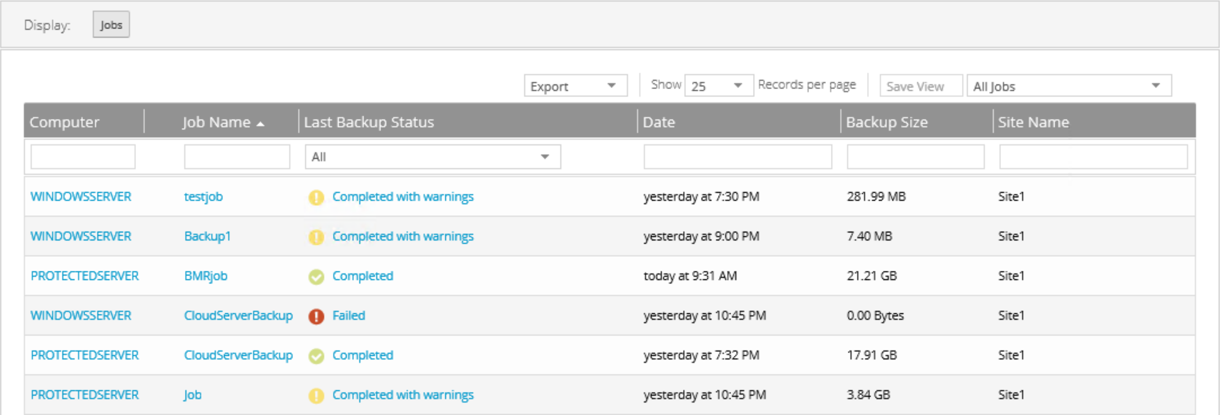
You can view recent backup statuses for computers on the Monitor page in Portal. You can also export the information in comma-separated values (.csv), Microsoft Excel (.xls), or Adobe Acrobat (.pdf) format.

From the Monitor page, you can navigate to related information on the Computers page or in the Logs window.

To view and export recent backup statuses:

1. On the navigation bar, click **Monitor**.

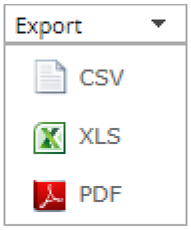
   The Monitor page shows recent backup statuses for jobs in your site.



Computer	Job Name ▲	Last Backup Status	Date	Backup Size	Site Name
		All			
WINDOWSSERVER	testjob	! Completed with warnings	yesterday at 7:30 PM	281.99 MB	Site1
WINDOWSSERVER	Backup1	! Completed with warnings	yesterday at 9:00 PM	7.40 MB	Site1
PROTECTEDSERVER	BMRjob	✓ Completed	today at 9:31 AM	21.21 GB	Site1
WINDOWSSERVER	CloudServerBackup	! Failed	yesterday at 10:45 PM	0.00 Bytes	Site1
PROTECTEDSERVER	CloudServerBackup	✓ Completed	yesterday at 7:32 PM	17.91 GB	Site1
PROTECTEDSERVER	Job	! Completed with warnings	yesterday at 10:45 PM	3.84 GB	Site1

2. To change which backup statuses appear on the page, click the views list at the top of the page, and then click the view that you want to apply.

3. To view information for a job or computer on the Computers page, click the name of an online computer or job.
4. To view the job's logs in the History/Logs window, click the job's last backup status.
5. To export backup status information from the page, click the **Export** box. In the list that appears, click one of the following formats for the exported data file:
   - CSV (comma-separated values)
   - XLS (Microsoft Excel)
   - PDF (Adobe Acrobat)

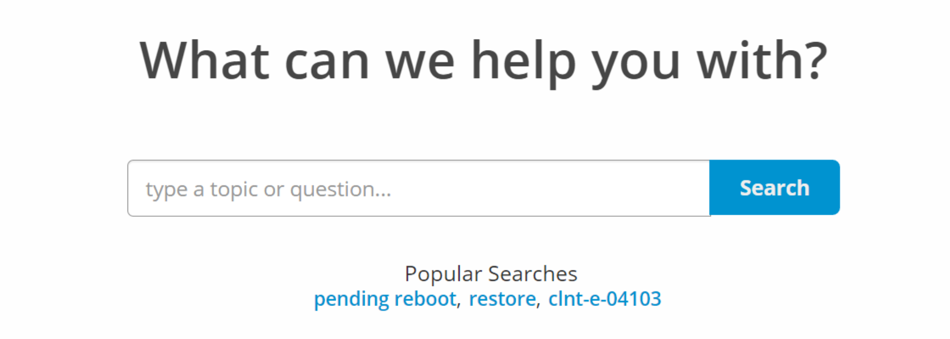
   

   The data file is downloaded to your computer in the specified format.

11 Carbonite Server Backup Support

If you have a question about Carbonite Server Backup that isn’t covered in this guide, our frequently-updated Knowledge Base contains comprehensive information. The Knowledge Base is your first stop when searching for any Carbonite Server Backup solutions you may need. We highly recommend searching here first for the quickest answers to your questions.

Knowledge Base: http://support.carbonite.com/evault

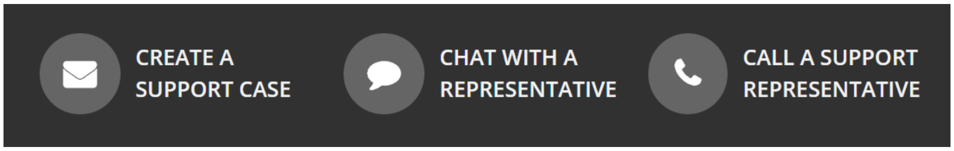


What can we help you with?

type a topic or question...
Search
Popular Searches
pending reboot, restore, clnt-e-04103

11.1 Contacting Carbonite

If you need live assistance from a qualified support agent, Carbonite Support is here for you 24 hours a day, 7 days a week (excluding US holidays). Please feel free to get in touch with us, and we’ll help out any way we can! You can find the contact information for Carbonite Support in the Knowledge Base: http://support.carbonite.com/evault



Tip: When contacting Support with a technical issue, please have both the program's log files and the store you are having difficulty with ready.

To gather log files, click **File** menu and choose *Open log folder*. Compress the contents of the folder in a .zip file and attach it to your support request.

If the log archive and/or mail store exceeds 10MB, you may not be able to send them as an email attachment. In that case, upload instructions will be provided to you upon request.