

## Storage and recovery

This section contains information for storing and recovering data using Quantum vmPRO.

# Recover from backup using the Quantum vmPRO Recovery Wizard

Using the vmPRO Recover Virtual Machines Wizard, you can automatically recover VMs backed up by SmartMotion or manually recover a VM backed up using a third-party backup application.

For step-by-step instructions on how to recover VMs backed up using SmartMotion and how to manually recover a VM backed up using a third-party backup application, see the Recover Data With Quantum vmPRO Chapter in the [Quantum vmPRO User's Guide](#) [1].

## Single-step recovery through /import

Quantum vmPRO supports single-step recovery of multiple VMs. Follow this procedure.

1. Create a directory under `import` to recover the VMs to. Either CIFS mount `\import` and create the directory there, or use the following command at the vmPRO appliance's command line:  
`import mkdir <dir name>`
  - Each VM to recover must have its own directory.
  - A directory name does not have to match the VM name.
2. Use your backup application to restore the VM's `.cfg` file to the new directory under `import`. (Restore only the `.cfg` file at this time; in later steps you will restore the rest of the VM's files.)
3. Once the recovery is complete, go to the vmPRO appliance's console command line.
4. Use this command to view the contents of the recovered VM directory:  
`import show errors`
5. If an error indicates that the target directory or VM name already exists, provide an alternate restore path or VM name by editing the `<vmname>.cfg` file using this command:  
`import edit <full path to .cfg file>`

For example, here is a typical error:

The target directory `/vmfs/volumes/4c2b929b-30e4f94d-0717-0026b97e5e32/ubuntu-v804` already exists. It will not be overwritten.

The `<vmname>.cfg` file for this VM looks like this:

□ To resolve this error, you would change the `dsname` (datastore uuid) to a different name. The `dsname` in the example above is `4c2b929b-30e4f94d-0717-0026b97e5e32`.

Below is a corrected `<vmname>.cfg` file with a different `dsname` (`6d23e75f-06fabd34`). (Using the datastore uuid is preferred to using the datastore name, as the uuid is globally unique, but the datastore name is not. A datastore uuid can be obtained from the ESX host console at `/vmfs/volumes/`.)

□ Alternatively, you can modify the `<vmname>.cfg` file by changing `on-conflict = "stop"` to `on-conflict = "rename"`. This will recover the VM to the same datastore with a different name.

6. Once you have corrected any errors and saved the `<vmname>.cfg` file, use your backup application to restore the `<vmname>.vmx` and `<vmname>-flat.vmdk` files to your new directory in `import` (there may be more than one flat file). **DO NOT** restore the `<vmname>.cfg` file or the `<vmname>.vmdk` file.
7. If this backup contains `-pancvt.vmdk` files, then restore them now by following the same steps that were just used to restore the `-flat.vmdk` files. Restore of `-pancvt.vmdk` files must always come after the restore of `-flat.vmdk` files.
8. Once all files have been recovered to `import`, the VM will be available on the target datastore. Register the VM using VI client.

## Storage and recovery using Quantum vmPRO SmartMotion

vmPRO SmartMotion is a core technology of Quantum vmPRO that allows you to push data from `/export` to external storage on a scheduled basis.

The Back Up and Store Data With Quantum vmPRO Chapter in the [Quantum vmPRO User's Guide](#) [1] presents detailed instructions regarding the use of SmartMotion to back up your VMs.

The Recover Data With Quantum vmPRO Chapter in the [Quantum vmPRO User's Guide](#) [1] presents detailed instructions regarding the recovery of VMs backed up by either SmartMotion or a third-party backup application.

## Supported Versions of Microsoft Exchange for Mailbox-Level Recovery

Quantum vmPRO supports the following versions of Microsoft Exchange for Mailbox-Level Recovery:

- Windows 2008R2/Exchange 2010
- Windows 2008R2/Exchange 2013
- Windows 2012R2/Exchange 2013

The Windows Management Framework 3.0 must be installed when using Exchange servers running Windows 2008R2 and Exchange 2010.

## Recovery to a server using VMware Converter

**Note:** Beginning with vmPRO 2.2.0, we recommend using the [vmPRO Recovery Wizard](#) [2] rather than the VMware Converter.

This article explains how to use VMware Converter to return files to a VM system after backup software has done a recovery operation of .vmdk and .vmx files to a recovery directory, such as *E:\recover\vm*.

1. Start *VMware vCenter Converter* on a system that has network access to your ESX server and to the VM recovery directory. (VMware Converter is available from the VMware web site.)
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2. In the *vCenter Converter* window, click *Convert Machine* to open the *Specify Source* tab.
3. In the *Specify Source* tab:
  - From the *Select source type* pulldown, select *VMware Workstation* or other VMware virtual machine.
  - In the *Virtual machine file* field, enter or browse to the path where the recovered virtual machine image is located.
  - Click *Next*.
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4. In the *Destination Type* window of the *Specify Destination* tab:
  - From the *Select destination type* pulldown, select *VMware Infrastructure virtual machine*.
  - Fill in the VMware Infrastructure server details.
  - Click *Next*.
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5. In the *Host/Resource* window of the *Specify Destination* tab:
  - In the *Virtual machine name* field, enter a name for the recovered virtual machine.
  - Choose the *Datastore*.
  - Choose the *Virtual machine version*.
  - Click *Next* and a verification will occur.
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6. In the *View/Edit Options* tab:
  - Edit as necessary.
  - Click *Next*.
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7. In the *Ready to Complete* tab, click *Finish*. The VMware Converter process begins.
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8. When the conversion finishes, connect to the ESX server using your vSphere Client.
9. Power up the recovered VM system.
10. You can now log into the recovered VM.

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Source URL: <https://mosaic.quantum.com/docs/StorageAndRecovery>

### Links:

[1] <http://www.quantum.com/serviceandsupport/softwareanddocumentationdownloads/quantumvmprosoftware/index.aspx?whattab=Fifth>

[2] <https://mosaic.quantum.com/docs/StorageAndRecovery/RecoveryWizard>