Restore VMs from backups

SnapCenter Plug-in for VMware vSphere

Ronya Robinson, Madhulika Kola
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Restore VMs from backups

When you restore a VM, you can overwrite the existing content with the backup copy that you select or you can make a copy of the VM.

In SnapCenter Plug-in for VMware vSphere 4.4 and earlier, you can restore VMs only to the original host and datastore.

Beginning in SnapCenter Plug-in for VMware vSphere 4.5, you can restore VMs to the following locations:

- Restore to original location
  - To the original datastore mounted on the original ESXi host (this overwrites the original VM)
- Restore to alternate location
  - To a different datastore mounted on the original ESXi host
  - To the original datastore mounted on a different ESXi host that is managed by the same vCenter
  - To a different datastore mounted on a different ESXi host that is managed by the same vCenter
  - To a different datastore mounted on a different ESXi host that is managed by a different vCenter in linked mode

When restoring to a different location, SnapCenter Plug-in for VMware vSphere must be running in the linked vCenter that is the destination for the restore operation. The destination datastore must have sufficient space.

The following restore workflow is not supported: Add a storage VM, then perform a backup of that VM, then delete the storage VM and add a cluster that includes that same storage VM, and then attempt to restore the original backup.

For improved performance of restore operations in NFS environments, enable the VMware application vStorage API for Array Integration (VAAI).

Before you begin

- A backup must exist.

  You must have created a backup of the VM using the SnapCenter VMware plug-in before you can restore the VM.

  Restore operations cannot finish successfully if there are Snapshot copies of the VM that were performed by software other than the SnapCenter Plug-in for VMware vSphere.

- The VM must not be in transit.

  The VM that you want to restore must not be in a state of vMotion or Storage vMotion.

- HA configuration errors

  Ensure there are no HA configuration errors displayed on the vCenter ESXi Host Summary screen before restoring backups to a different location.

- Restoring to a different locations

  When restoring to a different location, SnapCenter Plug-in for VMware vSphere must be running in the vCenter that is the destination for the restore operation. The destination datastore must have sufficient space.

About this task

- VM is unregistered and registered again

  The restore operation for VMs unregisters the original VM, restores the VM from a backup Snapshot copy, and registers the restored VM with the same name and configuration on the same ESXi server. You must manually add the VMs to resource groups after the restore.

- Restoring datastores

  You cannot restore a datastore, but you can restore any VM in the datastore.

- VMware consistency snapshot failures for a VM

  Even if a VMware consistency snapshot for a VM fails, the VM is nevertheless backed up. You can view the entities contained in the backup copy in the Restore wizard and use it for restore operations.

- A restore operation might fail if the storage tier of the FabricPool where the VM is located is unavailable.

Steps

1. In the VMware vSphere web client GUI, click **Menu** in the toolbar, and then select **VMs and Templates** from the drop-down list.

   If you are restoring a deleted VM, the storage VM credentials that were added to the SnapCenter VMware plug-in must be `vsadmin` or a user account that has all the same privileges as `vsadmin`. The host must be on a storage system that is running ONTAP 8.2.2 or later.

2. In the left Navigator pane, right-click a VM, then select **NetApp SnapCenter** in the drop-down list, and then select **Restore** in the secondary drop-down list to start the wizard.
3. In the **Restore** wizard, on the **Select Backup** page, select the backup Snapshot copy that you want to restore.

   You can search for a specific backup name or a partial backup name, or you can filter the backup list by clicking the filter icon and selecting a date and time range, selecting whether you want backups that contain VMware Snapshots, whether you want mounted backups, and the location. Click **OK** to return to the wizard.

4. On the **Select Scope** page, select **Entire virtual machine** in the **Restore scope** field, then select the restore location, and then enter the destination information where the backup should be mounted.

   In the **VM name** field, if the same VM name exists, then the new VM name format is `<vm_name>_<timestamp>`.

   When restoring partial backups, the restore operation skips the **Select Scope** page.

5. On the **Select Location** page, select the location for the restored datastore.

In SnapCenter Plug-in for VMware vSphere 4.5 and later, you can select secondary storage for FlexGroup volumes.

6. Review the Summary page and then click **Finish**.
7. Optional: Monitor the operation progress by clicking **Recent Tasks** at the bottom of the screen.

   Refresh the screen to display updated information.

After you finish

- Change IP address

  If you restored to a different location, then you must change the IP address of the newly created VM to avoid an IP address conflict when static IP addresses are configured.

- Add restored VMs to resource groups

  Although the VMs are restored, they are not automatically added to their former resource groups. Therefore, you must manually add the restored VMs to the appropriate resource groups.