Manage virtual machines

ONTAP tools for VMware vSphere 10

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Manage virtual machines

Virtual machine migration and cloning considerations for ONTAP tools

You should be aware of some of the considerations while migrating existing virtual machines in your data center.

Migrate protected virtual machines

You can migrate the protected virtual machines to:

- Same vVols datastore in a different ESXi host
- Different compatible vVols datastore in same ESXi host
- Different compatible vVols datastore in a different ESXi host

If you migrate the virtual machine to a different FlexVol volume, the system updates the metadata file for that volume with the virtual machine information. If a virtual machine is migrated to a different ESXi host but same storage, then underlying FlexVol volume metadata file will not be modified.

Clone protected virtual machines

You can clone protected virtual machines to the following:

- Same container of same FlexVol volume using replication group

  Same FlexVol volume's metadata file is updated with the cloned virtual machine details.

- Same container of a different FlexVol volume using replication group

  The FlexVol volume where the cloned virtual machine is placed, the metadata file gets updated with the cloned virtual machine details.

- Different container or vVols datastore

  The FlexVol volume where the cloned virtual machine is placed, the metadata file gets updated virtual machine details.

VMware presently doesn't support virtual machines cloned to a VM template.

Clone-of-Clone of a protected virtual machine is supported.

Refer to Creating a Virtual Machine for Cloning for more details.

Virtual Machine Snapshots

Presently only virtual machine Snapshots without memory are supported. If virtual machine has Snapshot with memory, then the virtual machine is not considered for protection.

You also cannot protect unprotected virtual machines that have memory Snapshot. For this release, you're expected to delete memory snapshot before enabling protection for the virtual machine.

For a Windows VM with the ASA r2 storage type, a snapshot of the virtual machine is read-only. When you power on the VM, VASA Provider creates a LUN from the read-only snapshot and enables IOPS. When you power off the VM, VASA Provider deletes the LUN and disables IOPS.

Migrate virtual machines to vVols datastores in ONTAP tools

You can migrate virtual machines from NFS and VMFS datastores to Virtual Volumes (vVols) datastores to take advantage of policy-based VM management and other vVols capabilities. vVols datastores enable you to meet increased workload requirements.

Before you begin

Ensure that VASA Provider is not running on any of the virtual machines that you plan to migrate. If you migrate a virtual machine that is running VASA Provider to a vVols datastore, you cannot perform any management operations, including powering on the virtual machines that are on vVols datastores.

About this task

When you migrate from a NFS and VMFS datastore to a vVols datastore, the vCenter Server uses vStorage APIs for Array Integration (VAAI) offloads when moving data from VMFS datastores, but not from an NFS VMDK file. VAAI offloads normally reduce the load on the host.

Steps

1. Right-click the virtual machine that you want to migrate and select **Migrate**.
2. Select **Change storage only** and then select **Next**.
3. Select a virtual disk format, a VM Storage Policy, and a vVol datastore that matches the features of the datastore that you're migrating.
4. Review the settings and select **Finish**.

Clean up VASA configurations in ONTAP tools

To complete the VASA cleanup process, follow these steps.

It is recommended to remove any vVols datastores before starting the VASA cleanup.

Steps

1. Unregister the plug-in by going into https://OTV_IP:8143/Register.html
2. Verify that the plug-in is no longer available on the vCenter Server.
3. Shut down ONTAP tools for VMware vSphere VM.
4. Delete ONTAP tools for VMware vSphere VM.

Attach or detach a data disk from a VM in ONTAP tools

Follow these steps to attach or detach data disks from virtual machines in vSphere and manage their storage resources.

Attach a data disk to a virtual machine

Attach a data disk to a virtual machine to add more storage.

Steps

1. Log in to the vSphere client.
2. Right-click on a virtual machine in the inventory and select **Edit Settings**.
3. On the **Virtual Hardware** tab, select **Existing hard disk**.
4. Select the virtual machine where the disk exists.
5. Select the disk you want to attach and select the **OK** button.

Result

The hard disk appears in the Virtual Hardware devices list.

Detach a data disk from the virtual machine

Detach a data disk from a virtual machine when you don't need it anymore. The disk is not deleted; it stays on the ONTAP storage system.

Steps

1. Log in to the vSphere client.
2. Right-click on a virtual machine in the inventory and select **Edit Settings**.
3. Move your pointer over the disk and select **Remove**.

The disk is removed from the virtual machine. If other virtual machines share the disk, the disk files aren't deleted.

Related information

Add a New Hard Disk to a Virtual Machine

Add an Existing Hard Disk to a Virtual Machine

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