



# **Reattaching RDM LUNs to VMs**

## ONTAP 7-Mode Transition

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# Reattaching RDM LUNs to VMs

For VMs attached to Raw Device Mapped (RDM) LUNs to function after transition, you must remove the RDM disks hosting the LUN from the VM. Then you must reattach the RDM disks to the VM based on the LUN serial number provided by the 7-Mode Transition Tool (7MTT).

- For copy-based transitions, perform these steps before initiating the Storage Cutover operation in the 7MTT.
- For copy-free transitions, perform these steps before initiating the Export & Halt 7-Mode Systems operation in the 7MTT.

## Steps

1. In the *Inventory Assessment Workbook*, navigate to the **Host VM Disk Details** tab.
2. Identify the ESXi host VM with PTRDM or NPTRDM in the **Type** column.
3. Note the VM name, the disk path details in the **Disk** column, and the naa ID from the **Device Mapped** column.
4. Verify that the naa ID is listed in the 7MTT mapping file that was generated after transition.
5. Verify that the naa ID has a corresponding new naa ID in the **LUN WWID** column of the mapping file.

This is the new clustered Data ONTAP LUN naa ID.

6. Use the clustered Data ONTAP LUN naa ID from the **LUN WWID** column and the disk path details to reattach the clustered Data ONTAP LUN to the VM.

## Related information

[Removing stale RDMs using vSphere Client](#)

[Reattaching RDM to VMs using vSphere Client](#)

[Reattaching RDM using ESXi the CLI/console](#)

## Removing stale RDMs using vSphere Client

All RDM LUNs become stale during the transition from ONTAP operating in 7-Mode to clustered Data ONTAP. After transition, the RDMs must be removed and reattached before the LUNs can begin servicing data.

You must have the VM name and disk path of the RDM from the *Inventory Assessment Workbook*.

## Steps

1. Open the ESXi host or vCenter Server managing the ESXi host.
2. Right-click the VM, and then select **Edit Settings**.

The VM Properties window is displayed.

3. Select the hard disk from the list of devices using the disk path from the *Inventory Assessment Workbook*.

4. Make note of the **Virtual Device Node** and **Compatibility Mode** from the VM Properties window.

Virtual Device Node: SCSI 0:2

Compatibility Mode: Physical

5. Click **Remove**.
6. Select **Remove from virtual machine and delete files from disk**.
7. Click **OK**.

An error message similar to the following appears. You can ignore this message.



8. Click **Close**.

## Reattaching RDM to VMs using vSphere Client

After transition of an ESXi host using the 7-Mode Transition Tool (7MTT), you must reattach your RDMs to virtual machines (VMs).

Your stale Raw Device Mappings (RDMs) must have been removed.

### Steps

1. Open the ESXi host or vCenter server managing the ESXi host.
2. Right-click the VM, and then select **Edit Settings**.

The VM Properties window opens.

3. Click **Add**.

The Add Hardware window opens.

4. Click **Hard Disk**.
5. Click **Next** to select the disk.
6. Select **Raw Device Mappings**.
7. Click **Next** to select the target LUN.
8. Select the LUN with the new clustered Data ONTAP NAA ID that you noted from the 7MTT mapping file.
9. Click **Next**.

10. Choose **Select Datastore**.

11. Select the datastore that matches the disk path that you noted in the 7MTT mapping file.

12. Click **Next**.

13. Choose either **Physical** or **Virtual** for the **Compatibility Mode**.

Choose the compatibility mode noted when your stale RDM was removed.

14. Click **Next**.

15. Choose **Advance Options**.

16. Select the **Virtual Device Node**.

Select the virtual device mode that you noted when you removed the stale RDM.

17. Click **Next**.

18. Click **Finish** to submit your changes.

19. Repeat the steps for all VMs with RDM attached.

#### Related information

[Removing stale RDMs using vSphere Client](#)

## Reattaching RDM using ESXi the CLI/console

After transition from Data ONTAP operating in 7-Mode to clustered Data ONTAP you must reattach your raw device mapping (RDM).

- You must retrieve the RDM disk file listed in the Disk column of the *Inventory Assessment Workbook*.
- You must retrieve the new clustered Data ONTAP LUN naa ID from the 7MTT mapping file.

#### Steps

1. Log in to the ESXi console using SSH.
2. Use the mv command to make a backup of the RDM disk file and the associated device file.

The RDM disk file is listed in the Disk column of the *Inventory Assessment Workbook*.

If the RDM disk file is /vmfs/volumes/53a3ac3d-df5aca03-3a94-001ec9d631cb/VM2-win-bus-A/VM2-winbus-A.vmdk, you would issue the following command:

```
mv /vmfs/volumes/53a3ac3d-df5aca03-3a94-001ec9d631cb/VM2-win-bus-A/VM2-winbus-A.vmdk /vmfs/volumes/53a3ac3d-df5aca03-3a94-001ec9d631cb/VM2-win-bus-A/VM2-win-bus-A.vmdk_bak
```

- For physical compatibility RDM (PTRDM):

```
mv RDM_disk_file_name-rdmp.vmdk RDM_disk_file_name-rdmp.vmdk_bak
```

For example:

```
mv/vmfs/volumes/53a3ac3d-df5aca03-3a94-001ec9d631cb/VM2-win-bus-A/VM2-winbus-A-rdmp.vmdk/vmfs/volumes/53a3ac3d-df5aca03-3a94-001ec9d631cb/VM2-
```

```
winbus-A/VM2-win-bus-A-rdmp.vmdk _bak
```

- For virtual compatibility RDM (NPTRDM):

```
mv RDM_disk_file_name-rdmp.vmdk RDM_disk_file_name-rdmp.vmdk_bak
```

For example:

```
mv/vmfs/volumes/53a3ac3d-df5aca03-3a94-001ec9d631cb/VM2-win-bus-A/VM2-  
winbus-A-rdmp.vmdk/vmfs/volumes/53a3ac3d-df5aca03-3a94-001ec9d631cb/VM2-  
winbus-A/VM2-win-bus-A-rdmp.vmdk _bak
```

3. Use the new clustered Data ONTAP LUN naa ID and the RDM disk file to re-create the RDM configuration and device files.

- For PTRDM:

```
# vmkfstools -z /vmfs/devices/disks/new_clustered_Data_ONTAP_naa_ID.vmdk
```

For example:

```
vmkfstools -z /vmfs/devices/disks/naa.600a098054314c6c442b446f79712313  
/vmfs/volumes/53a3ac3d-df5aca03-3a94-001ec9d631cb/VM2-win-bus-A/VM2-win-bus-  
A.vmdk
```

- For NPTRDM:

```
# vmkfstools -r /vmfs/devices/disks/new_clustered_Data_ONTAP_naa_ID.vmdk
```

For example:

```
vmkfstools -r /vmfs/devices/disks/naa.600a098054314c6c442b446f79712313  
/vmfs/volumes/53a3ac3d-df5aca03-3a94-001ec9d631cb/VM2-win-bus-A/VM2-win-bus-  
A.vmdk
```

4. Confirm that the configuration and pointer files are created:

```
# ls /vmfs/volumes/datastore/VM_directory
```

```
#ls /vmfs/volumes/53a3ac3d-df5aca03-3a94-001ec9d631cb/VM2-win-bus-A
```

The new configuration and pointer files are displayed under the VM directory path.

5. Repeat the steps for all VMs with RDM attached.

6. Restart the hostd and vpxa agents in the ESXi host:

```
/etc/init.d/hostd/restart
```

```
/etc/init.d/vpxa/restart
```

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