



Windows host remediation

ONTAP 7-Mode Transition

NetApp

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Windows host remediation

If you are using the 7-Mode Transition Tool (7MTT) to move from Data ONTAP operating in 7-Mode to clustered Data ONTAP, you must perform specific steps to prepare your Windows host for transition. You must also perform specific steps to prepare for the cutover phase, and after transition, you must bring your Windows host online.

Related information

[Preparing Windows hosts for transition](#)

[Preparing for cutover phase when transitioning Windows hosts](#)

[Bringing Windows hosts online after transition](#)

Preparing Windows hosts for transition

There are steps you must perform before you transition Windows hosts from Data ONTAP operating in 7-Mode to clustered Data ONTAP.

This procedure applies to copy-based transitions and copy-free transitions.



If you are using Windows 2003, you must upgrade to Windows 2008. The Host Remediation Tool (HRT) is not supported on Windows 2003 and needs Windows 2008 or later to run properly.

Steps

1. Identify the LUN serial numbers, LUN IDs, and corresponding Windows physical disk numbers of the LUNs being transitioned.
 - If your system is running Data ONTAP DSM, use the Data ONTAP DSM Management Extension Snap-In (accessible through Server Manager or the `get-sandisk` Windows PowerShell cmdlet).
 - If your system is running MSDSM, use the Inventory Collect Tool (ICT).
2. Prepare to make the LUNs visible to the host after transition is complete.
 - If the LUNs being transitioned are FC or FCoE LUNs, create or modify fabric zoning.
 - If the LUNs being transitioned are iSCSI LUNs, create iSCSI sessions that connect to the clustered Data ONTAP controller.
3. Use the ICT to generate the Inventory Assessment workbook.

Related information

[SAN configuration](#)

What the Inventory Collect Tool is

The Inventory Collect Tool (ICT) is a stand-alone utility for collecting configuration and inventory information about 7-Mode storage controllers, hosts attached to controllers, and applications running on these hosts for assessing the transition readiness of these systems. You can use the ICT to generate information about your LUNs and the

configuration that you need for transition.

The ICT generates an *Inventory Assessment Workbook* and an Inventory Report XML file that contains configuration details of the storage and host systems.

The ICT is available for ESXi, 5.x, ESXi 6.x, and Windows hosts.

Testing transitioned LUNs on Windows hosts before the cutover phase

If you are using the 7-Mode Transition Tool (7MTT) 2.2 or later and Data ONTAP 8.3.2 or later to transition your Windows host LUNs, you can test your transitioned clustered Data ONTAP LUNs to verify that you can bring your disk online and that your application operations work as expected before the cutover phase. Your source host can continue to run I/O to your source 7-Mode LUNs during testing.

Your 7-Mode LUNs must be ready for transition.

You should maintain hardware parity between the test host and the source host, and you should perform the following steps on the test host.

Your clustered Data ONTAP LUNs are in read/write mode during testing. They convert to read-only mode when testing is complete and you are preparing for the cutover phase.

Steps

1. After the baseline data copy is complete, select **Test Mode** in the 7MTT user interface (UI).
2. In the 7MTT UI, click **Apply configuration**.
3. Generate the 7-Mode to clustered Data ONTAP LUN mapping file:
 - For copy-based transitions, run the following command from the host where the 7MTT is installed:
transition cbt export lunmap -p *project-name* -o *file_path*

For example:

```
transition cbt export lunmap -p SanWorkLoad -o c:/Libraires/Documents/7-to-C-LUN-MAPPING.csv
```

- For copy-free transitions, run the following command from the system where the 7MTT is installed:
transition cft export lunmap -p *project-name* -s *svm-name* -o *output-file



You must run this command for each of your storage virtual machines (SVMs).

For example:

```
transition cft export lunmap -p SANWorkLoad -s svml -o c:/Libraries/Documents/7-to-C-LUN-MAPPING-svml.csv
```

4. Bring the transitioned disks and applications online:
 - If the transitioned disks are not part of Cluster Failover, use the Windows Disk Manager to bring the disks online.

- If the transitioned disks are part of Cluster Failover, use the Cluster Failover Manager to bring the disks online.
- 5. Perform your testing as needed.
- 6. After your testing is complete, take your applications and disks offline:
 - If the transitioned disks are not part of Cluster Failover, use the Windows Disk Manager to take the disks offline.
 - If the transitioned disks are part of Cluster Failover, use the Cluster Failover Manager to take the disks offline.

If your clustered Data ONTAP LUNs are to be remapped to your source host, you must prepare your source host for the cutover phase. If your clustered Data ONTAP LUNs are to remain mapped to your test host, no further steps are required on the test host.

Preparing for cutover phase when transitioning Windows hosts

If you are transitioning a Windows host from Data ONTAP operating in 7-Mode to clustered Data ONTAP, there are steps you must perform after the transition begins, but before the cutover phase begins.

If you are running Data ONTAP DSM, the version of Data ONTAP DSM installed on the server must be supported for the version of Data ONTAP that is running on the target clustered Data ONTAP node.

If you are running MSDSM, the version of Windows Host Utilities installed on the server must be supported for the version of Data ONTAP that is running on the target clustered Data ONTAP node.

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

Steps

1. Use Disk Manager to take offline the disks to be transitioned.
2. If the host is booted from SAN and the boot LUN is being transitioned, shut down the boot host.
3. If the host is clustered, use Failover Cluster Manager to take offline the clustered disks, including the quorum disk.
4. If the host is running Windows Server 2003 and you need to migrate the quorum device, stop the cluster services on all cluster nodes.
5. If you are transitioning LUNs on a server that has Hyper-V enabled, perform the appropriate host side transition steps for your guest operating system.
6. If you are transitioning LUNs on a server that has Hyper-V enabled and the boot device of the guest OS resides on a Data ONTAP LUN that is being transitioned, do the following:
 - a. Shut down the guest OS.
 - b. Take offline the corresponding disk on the parent system.

Bringing Windows hosts online after transition

After you transition your LUNs using the 7-Mode Transition Tool (7MTT) for Windows hosts, you must complete several steps to bring your host online and begin servicing data again.

If you are doing a copy-free transition (CFT), procedures for `vol rehost` must be complete. See the [7-Mode Transition Tool Copy-Free Transition Guide](#) for details.

- For copy-based transitions (CBTs), perform these steps after completing the Storage Cutover operation in the 7-Mode Transition Tool (7MTT).
- For CFTs, perform these steps after completing the Import & Data Configuration operation in the 7MTT.

1. Generate the 7-Mode to ONTAP LUN mapping file:

- For copy-based transitions, run the following command from the host where the 7MTT is installed:
`transition cbt export lunmap -p project-name -o file_path`

For example:

```
transition cbt export lunmap -p SanWorkLoad -o c:/Libraires/Documents/7-to-C-LUN-MAPPING.csv
```

- For copy-free transitions, run the following command from the system where the 7MTT is installed:
`transition cft export lunmap -p project-name -s svm-name -o output-file`



You must run this command for each of your storage virtual machines (SVMs).

For example:

```
transition cft export lunmap -p SANWorkLoad -s svml -o c:/Libraries/Documents/7-to-C-LUN-MAPPING-svml.csv
```

2. If the Windows host is SAN-booted and the boot LUN was transitioned, power on the host.
3. Update the FC BIOS to enable the system to boot from the LUN on the clustered Data ONTAP controller.

See the HBA documentation for more information.

4. On the Windows host, rescan the disks from the Disk Manager.
5. Obtain the LUN serial numbers, LUN IDs, and corresponding Windows physical disk numbers of the LUNs mapped to the host.
 - For systems running Data ONTAP ONTAPDSM: Use the Data ONTAPDSM Management Extension Snap-In or the `get-sandisk` Windows PowerShell cmdlet.
 - For systems running MSDSM: Use the Inventory Collect Tool (ICT).

The LUN ID, LUN serial number, and corresponding serial number is captured under the SAN Host LUNs tab.

6. Use the LUN serial numbers, LUN IDs, and corresponding Windows physical disk numbers of the LUNs along with the LUN map output and the data collected in the pretransition state, to determine

whether the LUNs have transitioned successfully.

7. Note whether the physical disk numbers of the transitioned LUNs have changed.
8. Bring your disks online.
 - Use Windows Disk Manager to bring online disks that are not part of Cluster Failover.
 - Use Failover Cluster Manager to bring online disks that are part of Cluster Failover.
9. If the host you are transitioning is running Windows Server 2003 and you have migrated the quorum device, start the cluster services on all of the cluster nodes.
10. If Hyper-V is enabled on the host and pass-through devices are configured to the VMs, modify the settings from Hyper-V Manager.

The physical disk number of the LUN corresponding to the pass-through device might have changed as a result of the transition.

Related information

[What the Inventory Collect Tool is](#)

Exceptions and known issues when transitioning SAN hosts to ONTAP

You should be aware of certain exceptions and known issues when transitioning SAN hosts from Data ONTAP operating in 7-Mode to later versions of ONTAP.

- For transitioning Hyper-Virtual Machine (VMs) with only VHD or VHDX file types, you can use storage live migration instead of the 7-Mode Transition Tool (7MTT).

For details about Hyper-V storage live migration, see the Microsoft documentation.

- If you used the same igroup name on both nodes of the 7-Mode controller, the transition tool might fail to resolve the igroup conflict.

Bug ID [769715](#).

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