



AIX host remediation

ONTAP 7-Mode Transition

NetApp
May 31, 2021

This PDF was generated from https://docs.netapp.com/us-en/ontap-7mode-transition/san-host/task_preparing_to_transition_san_boot_luns_on_aix_hosts_with_fc_fcoe_configurations.html on May 31, 2021. Always check docs.netapp.com for the latest.

Table of Contents

- AIX host remediation 1
 - Transition of SAN boot LUNs on AIX hosts with FC/FCoE configurations 1
 - Transitioning AIX host data LUNs with file systems 4

AIX 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 in a SAN environment, you must perform a series of steps on your AIX host before and after transition to avoid transition complications.

Transition of SAN boot LUNs on AIX hosts with FC/FCoE configurations

If you transition a SAN boot LUN on an AIX host with an FC or FCoE configuration from Data ONTAP operating in 7-Mode to clustered Data ONTAP using the 7-Mode Transition Tool (7MTT), you must perform specific steps before and after transition to remediate transition issues on the host.

Preparing to transition SAN boot LUNs on AIX hosts with FC/FCoE configurations

Before you transition a SAN boot LUN on an AIX host with an FC/FCoE configuration, you must record the name of the 7-Mode LUN on which AIX is installed and the SCSI device name for that LUN.

1. From the console of your Data ONTAP operating in 7-Mode controller, identify the 7-Mode LUN name on which AIX 7.1 and AIX 6.1 operating system is installed:

```
lun show
```

2. Obtain the SCSI device name for the LUN on the host:

```
sanlun lun show
```

In the following example, the transition LUN is `lun_sanboot_fas3170_aix04` and the SCSI device for this LUN is `hdisk0`.

```
[04:02 AM root@822-aix03p1/]: sanlun lun show
controller[7mode]/
vserver[Cmode] lun-pathname
-----
fas3170-aix04  /vol/vol_fas3170_aix04_sanboot/lun_sanboot_fas3170_aix04
kit           /vol/kit/kit_0
kit           /vol/kit/kit_0
filename      adapter protocol      size      mode
-----
hdisk0        fcs0         FCP         100g     7
hdisk1        fcs0         FCP         5g       C
hdisk2        fcs0         FCP         5g       C
```

Testing transitioned SAN boot LUNs on AIX hosts before the cutover phase of copy-based transitions

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 7-Mode Windows host LUNs, you can test your transitioned clustered Data ONTAP LUNs before the cutover phase to verify that they are functioning as desired.

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. On the test host, log in to the Hardware Management Console, and then boot your host in the **SMS** menu.
4. After the host boots, change the IP address and host name.
5. Verify that your clustered Data ONTAP LUNs are present:

```
sanlun lun show
```

6. Perform your testing as needed.
7. Shut down the test host:

```
shutdown -h
```

8. In the 7MTT UI, click **Finish Testing**.

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 the cutover phase when transitioning AIX hosts with FC/FCoE configurations.

Before entering the cutover phase for AIX hosts with FC or FCoE configurations, you must perform specific steps.

Fabric connectivity and zoning to the clustered Data ONTAP nodes must be established.

For copy-based transitions, perform these steps after completing the Storage Cutover operation in the 7-Mode Transition Tool. Copy-free transitions are not supported on AIX hosts.

Steps

1. Shut down your host:

`shutdown -h`

Booting from SAN boot LUN on AIX hosts with FC/FCoE configurations after transition

After transitioning a SAN boot LUN on an AIX host with an FC or FCoE configuration, you must perform certain steps to boot your host from the SAN boot LUN.

For copy-based transitions, you must perform these steps after completing the Storage Cutover operation in the 7-Mode Transition Tool. Copy-free transitions are not supported on AIX hosts.

1. Log in to the Hardware Management Console (HMC), and then boot your host in the SMS menu.
2. Select the host.
3. Select **Operations > Activate > Profile**.
4. Click the Advanced tab.
5. Select **SMS**, and then click **OK**.
6. In the SMS Main Menu, enter **5** to select **5. Select Boot Options**.
7. Enter **1** to select **1. Select Install/Boot Device**.
8. Enter **5** to select **5. List all Devices**.
9. Enter the device number of the ONTAP SAN boot LUN that you want to boot with.

In the following example, the desired LUN is option 5:

```

Select Device
Device      Current      Device
Number      Position      Name
1.    -    PCIe2 4-port 1GbE Adapter
        ( loc=U78CB.001.WZS062Y-P1-C12-T1 )
2.    -    PCIe2 4-port 1GbE Adapter
        ( loc=U78CB.001.WZS062Y-P1-C12-T2 )
3.    -    PCIe2 4-port 1GbE Adapter
        ( loc=U78CB.001.WZS062Y-P1-C12-T3 )
4.    -    PCIe2 4-port 1GbE Adapter
        ( loc=U78CB.001.WZS062Y-P1-C12-T4 )
5.    -    107 GB      FC Harddisk, part=2 (AIX 7.1.0)
        ( loc=U78CB.001.WZS062Y-P1-C7-T1-W232200a09830ca3a-
L00000000000000000 )
6.    -    107 GB      FC Harddisk, part=2 (AIX 7.1.0)
        ( loc=U78CB.001.WZS062Y-P1-C7-T2-W232200a09830ca3a-
L00000000000000000 )
-----
Navigation keys:
M = return to Main Menu  N = Next page of list
ESC key = return to previous screen  X = eXit System Management
Services
-----
Type menu item number and press Enter or select Navigation keys: 5

```

10. Enter **2** to select **2. Normal Mode Boot**.
11. Enter **1** to exit the SMS menu.
12. Wait for your operating system to boot.
13. Display the LUN path name:

```
sanlun lun show
```

The output in the mode column should have changed from **7** to **C**.

Transitioning AIX host data LUNs with file systems

If you transition an AIX host data LUN with a file system from Data ONTAP operating in 7-Mode to clustered Data ONTAP using the 7-Mode Transition Tool (7MTT), you must perform specific steps before and after transition to remediate transition issues on the host.

Preparing to transition AIX host data LUNs with file systems

Before you transition AIX host data LUNs with file systems from Data ONTAP operating in

7-Mode to clustered Data ONTAP, you must gather information you need for the transition process.

1. On the 7-Mode controller, identify the name of the LUN to be transitioned:

```
lun show
```

2. On the host, locate the SCSI device name for the LUN:

```
sanlun lun show
```

The SCSI device name is located in the device filename column.

3. List and record the physical volumes used by the volume group configured in the data LUNs to be transitioned:

```
lsvg -p vg_name
```

4. List and record the logical volumes used by the volume group:

```
lsvg -l vg_name
```

Testing transitioned LUNs on AIX hosts before the cutover phase of copy-based transitions

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 AIX host LUNs, you can test your transitioned clustered Data ONTAP LUNs to verify that you can mount your MPIO device before the cutover phase. Your source host can continue to run I/O to your source 7-Mode LUNs during testing.

Your LUNs must be prepared 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. On the test host, rescan your new clustered Data ONTAP LUNs:

```
cfgmgr
```

4. Verify that your new clustered Data ONTAP LUNs are present:

```
sanlun lun show
```

5. Verify the volume group status:

```
lsvg vg_name
```

6. Mount each of the logical volumes:

```
mount -o log/dev/loglv00 file_system_mount_point
```

7. Verify the mount points:

```
df
```

8. Perform your testing as needed.
9. Shut down the test host:

```
shutdown -h
```

10. In the 7MTT UI, click **Finish Testing**.

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 AIX host data LUNs with file systems

If you are transitioning an AIX host data LUN with a file system from Data ONTAP operating in 7-Mode to clustered Data ONTAP, you must perform certain steps before entering the cutover phase.

Fabric connectivity and zoning to the clustered Data ONTAP nodes must be established.

For copy-based transitions, perform these steps after completing the Storage Cutover operation in the 7-Mode Transition Tool. Copy-free transitions are not supported on AIX hosts.

Steps

1. Stop I/O on all of the mount points.
2. Shut down each application accessing the LUNs according to the recommendations of the application vendor.
3. Unmount all of the mount points:

```
umount mount_point
```

4. Disable the volume group:

```
varyoffvg vg_name
```

5. Export the volume group:

```
exportvg vg_name
```

6. Verify the volume group status:

```
lsvg
```


The exported volume group should not be listed in the output.

7. If there are any stale entries, remove them:

```
rmdev -Rdl hdisk#
```

Mounting AIX host data LUNs with file systems after transition

After transitioning AIX host data LUNs with file systems from Data ONTAP operating in 7-Mode to clustered Data ONTAP, you must mount the LUNs.

After LUN transition, the Logical Volume Manager (LVM) attributes, such as the logical volume name and volume group name, do not change. You continue to use the pretransition logical volume name and volume group name for post-transition configuration.

For copy-based transitions, perform these steps after completing the Storage Cutover operation in the 7-Mode Transition Tool. Copy-free transitions are not supported on AIX hosts.

Steps

1. Discover your new clustered Data ONTAP LUNs:

```
cfgmgr
```

2. Verify that your clustered Data ONTAP LUNs have been discovered:

```
sanlun lun show
```

Your clustered Data ONTAP LUNs should be listed and the output in the mode column should be changed from 7 to C.

3. Import your volume group:

```
importvg -y vg_name pv_name
```

You can use any physical volume name in your volume group.

4. Verify that your volume group was imported:

```
lsvg vg_name
```

5. Mount each device:

```
mount -o log=/dev/loglv00 file_system mount_point
```

6. Verify the mount points:

```
df
```

Copyright Information

Copyright © 2021 NetApp, Inc. All rights reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means-graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system- without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

Trademark Information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.