



Preparing for switchback in a mixed configuration (recovery during transition)

ONTAP MetroCluster

Thom Illingworth, Martin Houser, Paula Carrigan, Zachary Wambold
June 24, 2021

Table of Contents

Preparing for switchback in a mixed configuration (recovery during transition) 1

Preparing for switchback in a mixed configuration (recovery during transition)

You must perform certain tasks in order to prepare the mixed MetroCluster IP and FC configuration for the switchback operation. This procedure only applies to configurations that encountered a failure during the MetroCluster FC to IP transition process.

About this task

This procedure should only be used when performing recovery on a system that was in mid-transition when the failure occurred.

In this scenario, the MetroCluster is a mixed configuration:

- One DR group consists of fabric-attached MetroCluster FC nodes.
You must perform the MetroCluster FC recovery steps on these nodes.
- One DR group consists of MetroCluster IP nodes.
You must perform the MetroCluster IP recovery steps on these nodes.

Steps

Perform the steps in the following order.

1. Prepare the FC nodes for switchback by performing the following tasks in order:
 - a. [Verifying port configuration \(MetroCluster FC configurations only\)](#)
 - b. [Configuring the FC-to-SAS bridges \(MetroCluster FC configurations only\)](#)
 - c. [Configuring the FC switches \(MetroCluster FC configurations only\)](#)
 - d. [Verifying the storage configuration](#) (only perform these steps on replaced drives on the MetroCluster FC nodes)
 - e. [Powering on the equipment at the disaster site](#) (only perform these steps on replaced drives on the MetroCluster FC nodes)
 - f. [Assigning ownership for replaced drives](#) (only perform these steps on replaced drives on the MetroCluster FC nodes)
 - g. Perform the steps in [Reassigning disk ownership for root aggregates to replacement controller modules \(MetroCluster FC configurations\)](#), up to and including the step to issue the mailbox destroy command.
 - h. Destroy the local plex (plex 0) of the root aggregate:

```
aggr destroy plex-id
```
 - i. If the root aggr is not online, bring it online.
2. Boot the MetroCluster FC nodes.

You must perform these steps on both of the MetroCluster FC nodes.

- a. Display the boot menu:

```
boot_ontap menu
```

b. From the boot menu, select option 6, **Update flash from backup config**.

c. Respond `y` to the following prompt:

```
This will replace all flash-based configuration with the last backup to
disks. Are you sure you want to continue?: y
```

The system will boot twice, the second time to load the new configuration.



If you did not clear the NVRAM contents of a used replacement controller, then you might see a panic with the following message: `PANIC: NVRAM contents are invalid...` If this occurs, repeat these substeps to boot the system to the ONTAP prompt. You will then need to perform a root recovery. Contact technical support for assistance.

3. Mirror the root aggregate on plex 0:

You must perform these steps on both of the MetroCluster FC nodes.

a. Assign three pool0 disks to the new controller module.

b. Mirror the root aggregate pool1 plex:

```
aggr mirror root-aggr-name
```

c. Assign unowned disks to pool0 on the local node

4. Return to Maintenance mode.

You must perform these steps on both of the MetroCluster FC nodes.

a. Halt the node:

```
halt
```

b. Boot the node to Maintenance:

```
mode:boot_ontap maint
```

5. Delete the contents of the mailbox disks:

```
mailbox destroy local
```

You must perform these steps on both of the MetroCluster FC nodes.

6. Halt the nodes:

```
halt
```

7. After the nodes boot up, verify the status of the node:

```
metrocluster node show
```

```

siteA::*> metrocluster node show
DR
Group Cluster Node Configuration State DR
Mirroring Mode
-----
-----
1      siteA
      wmc66-a1      configured      enabled      waiting for
switchback recovery
      wmc66-a2      configured      enabled      waiting for
switchback recovery
      siteB
      wmc66-b1      configured      enabled      switchover
completed
      wmc66-b2      configured      enabled      switchover
completed
2      siteA
      wmc55-a1      -              -              -
      wmc55-a2      unreachable    -              -
      siteB
      wmc55-b1      configured      enabled      switchover
completed
      wmc55-b2      configured

```

8. Prepare the MetroCluster IP nodes for switchback by performing the tasks in [Preparing for switchback in a MetroCluster IP configuration](#) up to and including [Deleting failed plexes owned by the surviving site \(MetroCluster IP configurations\)](#).
9. On the MetroCluster FC nodes, perform the steps in [Performing aggregate healing and restoring mirrors \(MetroCluster FC configurations\)](#).
10. On the MetroCluster IP nodes, perform the steps in [Performing aggregate healing and restoring mirrors \(MetroCluster IP configurations\)](#).
11. Proceed through the remaining tasks of the recovery process starting with [Reestablishing object stores for FabricPool configurations](#).

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.