NetApp

Booting to ONTAP on replacement controller modules in MetroCluster IP configurations

ONTAP MetroCluster

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Booting to ONTAP on replacement controller modules in MetroCluster IP configurations

You must boot the replacement nodes at the disaster site to the ONTAP operating system.

About this task

This task begins with the nodes at the disaster site in Maintenance mode.

Steps

1. On one of the replacement nodes, exit to the LOADER prompt: `halt`

2. Display the boot menu: `boot_ontap menu`

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

   The system boots twice. You should respond `yes` when prompted to continue. After the second boot, you should respond `y` when prompted about the system ID mismatch.

   > (i) If you did not clear the NVRAM contents of a used replacement controller module, then you might see the following panic message: `PANIC: NVRAM contents are invalid…`. If this occurs, boot the system to the ONTAP prompt again (`boot_ontap menu`). You then need to perform a root recovery. Contact technical support for assistance.

   ◦ Confirmation to continue prompt:

   ```
   Selection (1-9)? 6

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

   ◦ System ID mismatch prompt:

   ```
   WARNING: System ID mismatch. This usually occurs when replacing a
   boot device or NVRAM cards!
   Override system ID? {y|n} y
   ```

4. From the surviving site, verify that the correct partner system IDs have been applied to the nodes:

   `metrocluster node show -fields node-systemid,ha-partner-systemid,dr-partner-systemid,dr-auxiliary-systemid`

   In this example, the following new system IDs should appear in the output:

   ◦ Node_A_1: 1574774970

   ◦ Node_A_2: 1574774991

The "ha-partner-systemid" column should show the new system IDs.

```
metrocluster node show -fields node-systemid,ha-partner-systemid,dr-
partner-systemid,dr-auxiliary-systemid

dr-group-id cluster    node      node-systemid ha-partner-systemid dr-
partner-systemid dr-auxiliary-systemid
----------- ---------- --------  ------------- ------ ------------
------ ----------- ------ --------------
1          Cluster_A  Node_A_1  1574774970    1574774991
4068741254           4068741256
1          Cluster_A  Node_A_2  1574774991    1574774970
4068741256           4068741254
1          Cluster_B  Node_B_1  -             -                    -
-
1          Cluster_B  Node_B_2  -             -                    -
-

4 entries were displayed.
```

5. If the partner system IDs were not correctly set, you must manually set the correct value:

   a. Halt and display the LOADER prompt on the node.

   b. Verify the partner-sysID bootarg's current value:

      ```
      printenv
      ```

   c. Set the value to the correct partner system ID:

      ```
      setenv partner-sysid partner-sysID
      ```

   d. Boot the node:

      ```
      boot_ontap
      ```

   e. Repeat these substeps on the other node, if necessary.

6. Confirm that the replacement nodes at the disaster site are ready for switchback:

   ```
   metrocluster node show
   ```

   The replacement nodes should be in waiting for switchback recovery mode. If they are in normal mode instead, you can reboot the replacement nodes. After that boot, the nodes should be in waiting for switchback recovery mode.

   The following example shows that the replacement nodes are ready for switchback:

```
cluster_B::> metrocluster node show
DR                                  Configuration   DR
Group Cluster Node                  State           Mirroring Mode
----- ------- ------------------ -------------- ---------
--------------------
1     cluster_B
            node_B_1             configured      enabled    switchover
completed
            node_B_2             configured      enabled    switchover
completed
      cluster_A
            node_A_1             configured      enabled    waiting for
switchback recovery
            node_A_2             configured      enabled    waiting for
switchback recovery
4 entries were displayed.

cluster_B::>
```

7. Verify the MetroCluster connection configuration settings:

   `metrocluster configuration-settings connection show`

   The configuration state should indicate completed.

```
cluster_B::*> metrocluster configuration-settings connection show
DR                      Source           Destination
Group Cluster Node    Network Address Network Address Partner Type
Config State
----- ------- ------- --------------- --------------- ------------
------------
1     cluster_B
            node_B_2
                Home Port: e5a
                    172.17.26.13    172.17.26.12    HA Partner
completed
                Home Port: e5a
                    172.17.26.13    172.17.26.10    DR Partner
completed
                Home Port: e5a
                    172.17.26.13    172.17.26.11    DR Auxiliary
completed
                Home Port: e5b
                    172.17.27.13    172.17.27.12    HA Partner
completed
```

```
                        Home Port: e5b
                               172.17.27.13    172.17.27.10    DR Partner
completed
                        Home Port: e5b
                               172.17.27.13    172.17.27.11    DR Auxiliary
completed
                 node_B_1
                        Home Port: e5a
                               172.17.26.12    172.17.26.13    HA Partner
completed
                        Home Port: e5a
                               172.17.26.12    172.17.26.11    DR Partner
completed
                        Home Port: e5a
                               172.17.26.12    172.17.26.10    DR Auxiliary
completed
                        Home Port: e5b
                               172.17.27.12    172.17.27.13    HA Partner
completed
                        Home Port: e5b
                               172.17.27.12    172.17.27.11    DR Partner
completed
                        Home Port: e5b
                               172.17.27.12    172.17.27.10    DR Auxiliary
completed
      cluster_A
                 node_A_2
                        Home Port: e5a
                               172.17.26.11    172.17.26.10    HA Partner
completed
                        Home Port: e5a
                               172.17.26.11    172.17.26.12    DR Partner
completed
                        Home Port: e5a
                               172.17.26.11    172.17.26.13    DR Auxiliary
completed
                        Home Port: e5b
                               172.17.27.11    172.17.27.10    HA Partner
completed
                        Home Port: e5b
                               172.17.27.11    172.17.27.12    DR Partner
completed
                        Home Port: e5b
                               172.17.27.11    172.17.27.13    DR Auxiliary
completed
                 node_A_1
```

```
                    Home Port: e5a
                          172.17.26.10    172.17.26.11    HA Partner
completed
                    Home Port: e5a
                          172.17.26.10    172.17.26.13    DR Partner
completed
                    Home Port: e5a
                          172.17.26.10    172.17.26.12    DR Auxiliary
completed
                    Home Port: e5b
                          172.17.27.10    172.17.27.11    HA Partner
completed
                    Home Port: e5b
                          172.17.27.10    172.17.27.13    DR Partner
completed
                    Home Port: e5b
                          172.17.27.10    172.17.27.12    DR Auxiliary
completed
24 entries were displayed.

cluster_B::*>
```

8. Repeat the previous steps on the other node at the disaster site.