Stage 4. Record information and retire node2

AFF and FAS Controller Upgrade

NetApp
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During Stage 4, you record node2 information and then retire node2.

Steps

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Record node2 information

Before you can shut down and retire node2, you need to record information about its cluster network, management, and FC ports as well as its NVRAM System ID. You need that information later in the procedure when you map node2 to node4 and reassign disks.

Steps

1. Find the cluster network, node-management, intercluster, and cluster-management ports on node2:

   ```
   network interface show -curr-node <node_name> -role
   cluster,intercluster,nodemgmt,cluster-mgmt
   ```

   The system displays the LIFs for that node and other nodes in the cluster, as shown in the following example:

   ```
   cluster::> network interface show -curr-node node2 -role
   cluster,intercluster,node-mgmt,cluster-mgmt
            Logical     Status     Network            Current     Current
   Is
   Vserver  Interface   Admin/Oper Address/Mask       Node        Port
   Home
   -------- ----------  ---------- ------------------ ----------  -------
   ----
   node2
            intercluster up/up     192.168.1.202/24   node2       e0e
   true
            clus1        up/up     169.254.xx.xx/24   node2       e0a
   true
            clus2        up/up     169.254.xx.xx/24   node2       e0b
   true
            mgmt1        up/up     192.168.0.xxx/24   node2       e0c
   true
   4 entries were displayed.
   ```

Your system might not have intercluster LIFs. You will have a cluster management LIF only on one node of a node pair. A cluster management LIF was displayed in the example output of Step 1 in *Record node1 port information*.

2. Capture the information in the output to use in the section Map ports from node2 to node4.

   The output information is required to map the new controller ports to the old controller ports.

3. Determine physical ports on node2:

   `network port show -node <node_name> -type physical +`

   `node_name` is the node which is being migrated.

   The system displays the physical ports on node2, as shown in the following example:

```
cluster::> network port show -node node2 -type physical

                                                               Speed
(Mbps)
Node   Port      IPspace      Broadcast Domain Link   MTU    Admin/Oper
------ --------- ------------ ---------------- ----- ------- -----------
node2
       e0M       Default      IP_address       up       1500  auto/100
       e0a       Default      -                up       1500  auto/1000
       e0b       Default      -                up       1500  auto/1000
       e1a       Cluster      Cluster          up       9000  auto/10000
       e1b       Cluster      Cluster          up       9000  auto/10000
5 entries were displayed.
```

4. Record the ports and their broadcast domains.

   The broadcast domains will need to be mapped to the ports on the new controller later in the procedure.

5. Determine the FC ports on node2:

   `network fcp adapter show`

   The system displays the FC ports on the node2, as shown in the following example:

```
cluster::> network fcp adapter show -node node2
                     Connection  Host
Node         Adapter Established Port Address
------------ ------- ----------- ------------
node2
             0a      ptp         11400
node2
             0c      ptp         11700
node2
             6a      loop        0
node2
             6b      loop        0
4 entries were displayed.
```

6. Record the ports.

   The output information is required to map the new FC ports on the new controller later in the procedure.

7. If you have not done so earlier, check whether there are interface groups or VLANs configured on node2:

   `ifgrp show`

   `vlan show`

   You will use the information in the section Map ports from node2 to node4.

8. Take one of the following actions:

If you…	Then…
Recorded NVRAM System ID number in Prepare the nodes for upgrade	Go to Retire node2.
Did not record the NVRAM System ID number in Prepare the nodes for upgrade	Complete Step 9 and Step 10 and then go to the next section, Retire node2.

9. Display the attributes of node 2:

   `system node show -instance -node node2`

```
cluster::> system node show -instance -node node2
                              ...
                NVRAM System ID: system_ID
                              ...
```

10. Record the NVRAM System ID to use in the section Install and boot node4.

Retire node2

To retire node2, you need to shut node2 down properly and remove it from the rack or chassis. If the cluster is in a SAN environment, you also need to delete the SAN LIFs.

Steps

1. Take one of the following actions:

If the cluster is…	Then…
A two-node cluster	Go to Step 2.
A cluster with more than two nodes	Go to Step 9.

2. Access the advanced privilege level by entering the following command on either node:

   ```
   set -privilege advanced
   ```

3. Verify that the cluster HA has been disabled by entering the following command and examining its output:

   ```
   cluster ha show
   ```

   The system displays the following message:

   ```
   High Availability Configured: false
   ```

4. Check if node2 currently holds epsilon by entering the following command and examining its output:

   ```
   cluster show
   ```

   The following example shows that node2 holds epsilon:

   ```
   cluster*::> cluster show
   Node                 Health  Eligibility   Epsilon
   -------------------- ------- ------------  -----------
   node1                true    true          false
   node2                true    true          true

   Warning: Cluster HA has not been configured. Cluster HA must be
   configured on a two-node cluster to ensure data access availability in
   the event of storage failover. Use the "cluster ha modify -configured
   true" command to configure cluster HA.

   2 entries were displayed.
   ```

5. If node2 holds epsilon, mark epsilon as `false` on the node so that it can be transferred to node3:

   ```
   cluster modify -node <node2> -epsilon false
   ```

6. Transfer epsilon to node3 by marking epsilon `true` on node3:

   `cluster modify -node <node3> -epsilon true`

7. Verify if the setup is a two-node switchless cluster:

   `network options switchless-cluster show`

   ```
   cluster::*> network options switchless-cluster show
   Enable Switchless Cluster: false/true
   ```

   The value of this command must match the physical state of the system.

8. Verify if the setup is a two-node switchless cluster:

   `network options switchless-cluster show`

   ```
   cluster::*> network options switchless-cluster show
   Enable Switchless Cluster: false/true
   ```

   The value of this command must match the physical state of the system.

9. Return to the admin level:

   `set -privilege admin`

10. Halt node2 by entering the following command on either controller:
    `system node halt -node <node2>`
11. After node2 shuts down completely, remove it from the chassis or the rack. You can decommission node2 after the upgrade is completed. See Decommission the old system.