



Stage 4. Record information and retire node2

Upgrade controllers

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Stage 4. Record information and retire node2

Stage 4 overview

During Stage 4, you record node2 information for use later in the procedure and then retire node2.

Steps

- 1. [Record node2 information](#)
- 2. [Retire node2](#)

Record node2 information

Before you can shut down and retire node2, you must 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 | | | | | |
| true | 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 is 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
```

| Node | Adapter | Connection | Host 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 node2:

```
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 must shut node2 down correctly and remove it from the rack or chassis. If the cluster is in a SAN environment, you also must 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.



If you are upgrading a HA pair in a cluster with multiple HA pairs, you must move epsilon to the node of a HA pair not undergoing a controller upgrade. For example, if you are upgrading nodeA/nodeB in a cluster with the HA pair configuration nodeA/nodeB and nodeC/nodeD, you must move epsilon to nodeC or nodeD.

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](#).

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