



## **Stage 4. Record information and retire node2**

### **AFF and FAS Controller Upgrade**

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# Stage 4. Record information and retire node2

## Stage 4. Record node2 information and retire node2

During Stage 4, you record node2 information 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
```

Is	Logical	Status	Network	Current	Current
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

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
```

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 <a href="#">Prepare the nodes for upgrade</a>	Go to <a href="#">Retire node2</a> .
Did not record the NVRAM System ID number in <a href="#">Prepare the nodes for upgrade</a>	Complete <a href="#">Step 9</a> and <a href="#">Step 10</a> and then go to the next section, <a href="#">Retire node2</a> .

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 <a href="#">Step 2</a> .
A cluster with more than two nodes	Go to <a href="#">Step 9</a> .

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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