



# **Move NAS data LIFs owned by node2 from node3 to node4 and verify SAN LIFs on node4**

## **AFF and FAS Controller Upgrade**

NetApp  
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# Move NAS data LIFs owned by node2 from node3 to node4 and verify SAN LIFs on node4

After you verify the node4 installation and before you relocate node2 aggregates from node3 to node4, you need to move the NAS data LIFs owned by node2 currently on node3 from node3 to node4. You also need to verify the SAN LIFs on node4.

## About this task

Remote LIFs handle traffic to SAN LUNs during the upgrade procedure. Moving SAN LIFs is not necessary for cluster or service health during the upgrade. SAN LIFs are not moved unless they need to be mapped to new ports. You verify that the LIFs are healthy and located on appropriate ports after you bring node4 online.

## Steps

1. List all the NAS data LIFs that are not owned by node3 by entering the following command on either node and capturing the output:

```
network interface show -role data -curr-node node3 -is-home false
```

2. Take one of the following actions:

If node2...	Description
Had interface groups or VLANs configured	Go to <a href="#">Step 3</a> .
Did not have interface groups or VLANs configured	Skip Step 3 and go to <a href="#">Step 4</a> .

3. Take the following steps to migrate any NAS data LIFs hosted on interface groups and VLANs that originally were on node2 from node3 to node4.
  - a. Migrate any LIFs hosted on node3 that previously belonging to node2 on an interface group to a port on node4 that is capable of hosting LIFs on the same network by entering the following command, once for each LIF:

```
network interface migrate -vserver <vserver_name> -lif <lif_name>  
-destination-node node4 -destination-port <netport|ifgrp>
```

- b. Modify the home port and home node of the LIFs in [Substep a](#) to the port and node currently hosting the LIFs by entering the following command, once for each LIF:

```
network interface modify -vserver <vserver_name> -lif <datalif_name> -home  
-node node4 home-port <netport|ifgrp>
```

- c. Migrate any LIFs hosted on node3 that previously belonged to node2 on a VLAN port to a port on node4 that is capable of hosting LIFs on the same network by entering the following command, once for each LIF:

```
network interface migrate -vserver <vserver_name> -lif <datalif_name>  
-destination-node node4 -destination-port <netport|ifgrp>
```

- d. Modify the home port and home node of the LIFs in [Substep c](#) to the port and node currently hosting

the LIFs by entering the following command, once for each LIF:

```
network interface modify -vserver <vserver_name> -lif <datalif_name> -home
-node <node4> home-port <netport|ifgrp>
```

4. Take one of the following actions:

If the cluster is configured for...	Then...
NAS	Complete <a href="#">Step 5</a> through <a href="#">Step 8</a> , skip <a href="#">Step 9</a> , and complete <a href="#">Step 10</a> through <a href="#">Step 13</a> .
SAN	Skip <a href="#">Step 5</a> through <a href="#">Step 8</a> , and complete <a href="#">Step 9</a> through <a href="#">Step 13</a> .
Both NAS and SAN	Complete <a href="#">Step 5</a> through <a href="#">Step 13</a> .

5. If you have data ports that are not the same on your platforms, enter the following command to add the ports to the broadcast domain:

```
network port broadcast-domain add-ports -ipspace <IPspace_name> -broadcast
-domain mgmt ports <node:port>
```

The following example adds port "e0a" on node "6280-1" and port "e0i" on node "8060-1" to broadcast domain mgmt in the IPspace Default:

```
cluster::> network port broadcast-domain add-ports -ipspace Default
-broadcast-domain mgmt -ports 6280-1:e0a, 8060-1:e0i
```

6. Migrate each NAS data LIF to node4 by entering the following command, once for each LIF:

```
network interface migrate -vserver <vserver-name> -lif <datalif-name>
-destination-node <node4> -destination-port <netport|ifgrp> -home-node <node4>
```

7. Make sure that the data migration is persistent:

```
network interface modify -vserver <vserver_name> -lif <datalif_name> -home
-port <netport|ifgrp>
```

8. Verify the status of all links as up by entering the following command to list all the network ports and examining its output:

```
network port show
```

The following example shows the output of the `network port show` command with some LIFs up and others down:

```

cluster::> network port show

```

(Mbps)							Speed
Node	Port	IPspace	Broadcast Domain	Link	MTU	Admin/Oper	
node3							
	a0a	Default	-	up	1500	auto/1000	
	e0M	Default	172.17.178.19/24	up	1500	auto/100	
	e0a	Default	-	up	1500	auto/1000	
	e0a-1	Default	172.17.178.19/24	up	1500	auto/1000	
	e0b	Default	-	up	1500	auto/1000	
	e1a	Cluster	Cluster	up	9000	auto/10000	
	e1b	Cluster	Cluster	up	9000	auto/10000	
node4							
	e0M	Default	172.17.178.19/24	up	1500	auto/100	
	e0a	Default	172.17.178.19/24	up	1500	auto/1000	
	e0b	Default	-	up	1500	auto/1000	
	e1a	Cluster	Cluster	up	9000	auto/10000	
	e1b	Cluster	Cluster	up	9000	auto/10000	

12 entries were displayed.

9. If the output of the `network port show` command displays network ports that are not available in the new node and are present in the old nodes, delete the old network ports by completing the following substeps:

- a. Enter the advanced privilege level by entering the following command:

```
set -privilege advanced
```

- b. Enter the following command, once for each old network port:

```
network port delete -node <node_name> -port <port_name>
```

- c. Return to the admin level by entering the following command:

```
set -privilege admin
```

10. Ensure that the SAN LIFs are on the correct ports on node4 by completing the following substeps:

- a. Enter the following command:

```
network interface show -data-protocol iscsi|fc -home-node node4
```

The system returns output similar to the following example:

```

cluster::> network interface show -data-protocol iscsi|fcp -home-node
node4

```

Current Is	Logical	Status	Network	Current
Vserver	Interface	Admin/Oper	Address/Mask	Node
Port	Home			
vs0	a0a	up/down	10.63.0.53/24	node3
a0a	true			
	data1	up/up	10.63.0.50/18	node3
e0c	true			
	rads1	up/up	10.63.0.51/18	node3
e1a	true			
	rads2	up/down	10.63.0.52/24	node3
e1b	true			
vs1				
	lif1	up/up	172.17.176.120/24	node3
e0c	true			
	lif2	up/up	172.17.176.121/24	node3

b. If node4 has any SAN LIFs or groups of SAN LIFs that are on a port that did not exist on node2, move them to an appropriate port on node4 by entering one of the following commands:

i. Set the LIF status to down:

```

network interface modify -vserver <vserver_name> -lif <lif_name> -status
-admin down

```

ii. Remove the LIF from the port set:

```

portset remove -vserver <vserver_name> -portset <portset_name> -port-name
<port_name>

```

iii. Enter one of the following commands:

- Move a single LIF:

```

network interface modify -lif <lif_name> -home-port <new_home_port>

```

- Move all the LIFs on a single nonexistent or incorrect port to a new port:

```

network interface modify {-home-port <port_on_node2> -home-node
<node2> -role data} -home-port <new_home_port_on_node4>

```

- Add the LIFs back to the port set:

```

portset add -vserver <vserver_name> -portset <portset_name> -port-name
<port_name>

```



You need to ensure that you move SAN LIFs to a port that has the same link speed as the original port.

11. Modify the status of all LIFs to `up` so the LIFs can accept and send traffic on the node by entering the following command:

```
network interface modify -vserver <vserver_name> -home-port <port_name> -home  
-node <node4> lif <lif_name> -status-admin up
```

12. Verify that any SAN LIFs have been moved to the correct ports and that the LIFs have the status of `up` by entering the following command on either node and examining the output:

```
network interface show -home-node <node4> -role data
```

13. If any LIFs are down, set the administrative status of the LIFs to `up` by entering the following command, once for each LIF:

```
network interface modify -vserver <vserver_name> -lif <lif_name> -status-admin  
up
```

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