



Migrating to a two-node switched cluster with NetApp CN1610 cluster switches

If you have a two-node switchless cluster, you can migrate, non-disruptively, to a two-node switched cluster that includes NetApp CN1610 cluster-network switches. The procedure you use depends on whether you have two dedicated cluster-network ports on each controller or a single cluster port on each controller.

About this task

Most systems require two dedicated cluster-network ports on each controller.

FAS22xx nodes allow a single cluster port on each controller.

There are two migration options available:

- [Migrating from a switchless cluster to a switched NetApp CN1610 cluster environment](#) on page 1
- [Migrating from a switchless cluster \(FAS22xx systems with a single cluster-network connection\)](#) on page 12

Migrating from a switchless cluster environment to a switched NetApp CN1610 cluster environment

If you have an existing two-node switchless cluster environment, you can migrate to a two-node switched cluster environment using CN1610 cluster network switches that enables you to scale beyond two nodes.

Before you begin

Two-node switchless configuration:

- The two-node switchless configuration must be properly set up and functioning.
- The nodes must be running ONTAP 8.2 or later.
- All cluster ports must be in the **up** state.
- All cluster logical interfaces (LIFs) must be in the **up** state and on their home ports.

CN1610 cluster switch configuration:

- The CN1610 cluster switch infrastructure must be and fully functional on both switches.
- Both switches must have management network connectivity.
- There must be console access to the cluster switches.
- CN1610 node-to-node switch and switch-to-switch connections must use twinax or fiber cables. The *NetApp Hardware Universe* contains more information about cabling. [Hardware Universe - Switches](#)
- Inter-Switch Link (ISL) cables must be connected to ports 13 through 16 on both CN1610 switches.
- Initial customization of both the CN1610 switches must be completed.

Any previous site customization, such as SMTP, SNMP, and SSH should be copied to the new switches.

About this task

The examples in this procedure use the following cluster switch and node nomenclature:

- The names of the CN1610 switches are cs1 and cs2.
- The names of the LIFs are clus1 and clus2.
- The names of the SVMs are node1 and node2.
- The `cluster::*>` prompt indicates the name of the cluster.
- The cluster ports used in this procedure are e1a and e2a.

The *Hardware Universe* contains the latest information about the actual cluster ports for your platforms.

Steps

1. Change the privilege level to advanced, entering `y` when prompted to continue: **set -privilege advanced**
The advanced prompt (`*>`) appears.
2. If AutoSupport is enabled on this cluster, suppress automatic case creation by invoking an AutoSupport message: **system node autosupport invoke -node * -type all -message MAINT=xh**
`x` is the duration of the maintenance window in hours.

Note: The AutoSupport message notifies technical support of this maintenance task so that automatic case creation is suppressed during the maintenance window.

Example

The following command suppresses automatic case creation for two hours:

```
cluster::*> system node autosupport invoke -node * -type all -message MAINT=2h
```

3. Disable all of the node-facing ports (not ISL ports) on both the new cluster switches cs1 and cs2.
You must not disable the ISL ports.

Example

The following example shows that node-facing ports 1 through 12 are disabled on switch cs1:

```
(cs1)# configure  
(cs1)(Config)# interface 0/1-0/12  
(cs1)(Interface 0/1-0/12)# shutdown  
(cs1)(Interface 0/1-0/12)# exit  
(cs1)(Config)# exit
```

The following example shows that node-facing ports 1 through 12 are disabled on switch cs2:

```
(cs2)# configure  
(cs2)(Config)# interface 0/1-0/12  
(cs2)(Interface 0/1-0/12)# shutdown  
(cs2)(Interface 0/1-0/12)# exit  
(cs2)(Config)# exit
```

- Verify that the ISL and the physical ports on the ISL between the two CN1610 cluster switches cs1 and cs2 are up: **show port-channel**

Example

The following example shows that the ISL ports are up on switch cs1:

```
(cs1)# show port-channel 3/1
Local Interface..... 3/1
Channel Name..... ISL-LAG
Link State..... Up
Admin Mode..... Enabled
Type..... Static
Load Balance Option..... 7
(Enhanced hashing mode)

Mbr   Device/      Port      Port
Ports Timeout      Speed     Active
-----
0/13  actor/long    10G Full  True
      partner/long
0/14  actor/long    10G Full  True
      partner/long
0/15  actor/long    10G Full  True
      partner/long
0/16  actor/long    10G Full  True
      partner/long
```

The following example shows that the ISL ports are up on switch cs2:

```
(cs2)# show port-channel 3/1
Local Interface..... 3/1
Channel Name..... ISL-LAG
Link State..... Up
Admin Mode..... Enabled
Type..... Static
Load Balance Option..... 7
(Enhanced hashing mode)

Mbr   Device/      Port      Port
Ports Timeout      Speed     Active
-----
0/13  actor/long    10G Full  True
      partner/long
0/14  actor/long    10G Full  True
      partner/long
0/15  actor/long    10G Full  True
      partner/long
0/16  actor/long    10G Full  True
      partner/long
```

- Display the list of neighboring devices: **show isdp neighbors**

This command provides information about the devices that are connected to the system.

Example

The following example lists the neighboring devices on switch cs1:

```
(cs1)# show isdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge,
                  S - Switch, H - Host, I - IGMP, r - Repeater
```

Device ID	Intf	Holdtime	Capability	Platform	Port ID
cs2	0/13	11	S	CN1610	0/13
cs2	0/14	11	S	CN1610	0/14
cs2	0/15	11	S	CN1610	0/15
cs2	0/16	11	S	CN1610	0/16

The following example lists the neighboring devices on switch cs2:

```
(cs2)# show isdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge,
                  S - Switch, H - Host, I - IGMP, r - Repeater
Device ID          Intf          Holdtime  Capability  Platform  Port ID
-----
cs1                0/13         11        S           CN1610    0/13
cs1                0/14         11        S           CN1610    0/14
cs1                0/15         11        S           CN1610    0/15
cs1                0/16         11        S           CN1610    0/16
```

- Verify that each cluster port is connected to the corresponding port on its partner cluster node: `run * cdpd show-neighbors`

Example

The following example shows that cluster ports e1a and e2a are connected to the same port on their cluster partner node:

```
cluster::*> run * cdpd show-neighbors
2 entries were acted on.

Node: node1
Local Remote      Remote      Remote      Hold Remote
Port  Device      Interface   Platform    Time  Capability
-----
e1a   node2       e1a        FAS3270     137   H
e2a   node2       e2a        FAS3270     137   H

Node: node2
Local Remote      Remote      Remote      Hold Remote
Port  Device      Interface   Platform    Time  Capability
-----
e1a   node1       e1a        FAS3270     161   H
e2a   node1       e2a        FAS3270     161   H
```

- Verify that all of the cluster LIFs are up and operational: `network interface show -role cluster`
Each cluster LIF should display true in the “Is Home” column.

Example

```
cluster::*> network interface show -role cluster
Logical Status Network      Current      Current Is
Vserver Interface Admin/Oper Address/Mask Node          Port        Home
-----
node1
      clus1   up/up    10.10.10.1/16 node1         e1a         true
      clus2   up/up    10.10.10.2/16 node1         e2a         true
```

```
node2
      clus1    up/up    10.10.11.1/16 node2    e1a    true
      clus2    up/up    10.10.11.2/16 node2    e2a    true

4 entries were displayed.
```

Attention: The following modification and migration commands in steps 9 on page 5 through 11 on page 5 must be done from the local node.

- Verify that all cluster ports are up: `network port show -role cluster`

Example

```
cluster::*> network port show -role cluster

Node  Port  Role      Link  MTU  Auto-Negot  Duplex  Speed (Mbps)
-----  ---  -----  ----  ---  -
node1  e1a  clus1    up    9000 true/true   full/full  auto/10000
      e2a  clus2    up    9000 true/true   full/full  auto/10000
node2  e1a  clus1    up    9000 true/true   full/full  auto/10000
      e2a  clus2    up    9000 true/true   full/full  auto/10000

4 entries were displayed.
```

- Set the `-auto-revert` parameter to `false` on cluster LIFs `clus1` and `clus2` on both nodes: `network interface modify`

Example

```
cluster::*> network interface modify -vserver node1 -lif clus1 -auto-revert false
cluster::*> network interface modify -vserver node1 -lif clus2 -auto-revert false
cluster::*> network interface modify -vserver node2 -lif clus1 -auto-revert false
cluster::*> network interface modify -vserver node2 -lif clus2 -auto-revert false
```

- Migrate `clus1` to port `e2a` on the console of each node: `network interface migrate`

Example

The following example shows the process for migrating `clus1` to port `e2a` on `node1` and `node2`:

```
cluster::*> network interface migrate -vserver node1 -lif clus1 -source-node node1 -dest-
node node1 -dest-port e2a
cluster::*> network interface migrate -vserver node2 -lif clus1 -source-node node2 -dest-
node node2 -dest-port e2a
```

- Verify that the migration took place: `network interface show`

Example

The following example verifies that `clus1` is migrated to port `e2a` on `node1` and `node2`:

```
cluster::*> network interface show -role cluster

Vserver  Logical  Status  Network  Current  Current  Is
Interface Admin/Oper Address/Mask Node      Port     Home
-----  -
node1    clus1    up/up    10.10.10.1/16  node1    e2a     false
```

```

node2      clus2      up/up      10.10.10.2/16  node1      e2a      true
           clus1      up/up      10.10.11.1/16  node2      e2a      false
           clus2      up/up      10.10.11.2/16  node2      e2a      true
4 entries were displayed.

```

- Shut down cluster port e1a on both nodes: **network port modify**

Example

The following example shows how to shut down the port e1a on node1 and node2:

```

cluster::*> network port modify -node node1 -port e1a -up-admin false
cluster::*> network port modify -node node2 -port e1a -up-admin false

```

- Verify the port status: **network port show**

Example

The following example shows that port e1a is **down** on node1 and node2:

```

cluster::*> network port show -role cluster
Node  Port  Role      Link  MTU  Auto-Negot  Duplex  Speed (Mbps)
-----  ----  -----  ----  ---  -
node1  e1a   clus1     down  9000  true/true   full/full  auto/10000
       e2a   clus2     up    9000  true/true   full/full  auto/10000
node2  e1a   clus1     down  9000  true/true   full/full  auto/10000
       e2a   clus2     up    9000  true/true   full/full  auto/10000
4 entries were displayed.

```

- Disconnect the cable from cluster port e1a on node1, and then connect e1a to port 1 on cluster switch cs1, using the appropriate cabling supported by the CN1610 switches.

The *NetApp Hardware Universe* contains more information about cabling.

[Hardware Universe - Switches](#)

- Disconnect the cable from cluster port e1a on node2, and then connect e1a to port 2 on cluster switch cs1, using the appropriate cabling supported by the CN1610 switches.

- Enable all of the node-facing ports on cluster switch cs1.

Example

The following example shows that ports 1 through 12 are enabled on switch cs1:

```

(cs1)# configure
(cs1)(Config)# interface 0/1-0/12
(cs1)(Interface 0/1-0/12)# no shutdown
(cs1)(Interface 0/1-0/12)# exit
(cs1)(Config)# exit

```

- Enable the first cluster port e1a on each node: **network port modify**

Example

The following example shows how to enable the port e1a on node1 and node2:

```
cluster::*> network port modify -node node1 -port e1a -up-admin true
cluster::*> network port modify -node node2 -port e1a -up-admin true
```

18. Verify that all of the cluster ports are up: **network port show**

Example

The following example shows that all of the cluster ports are up on node1 and node2:

```
cluster::*> network port show -role cluster
```

Node	Port	Role	Link	MTU	Auto-Negot Admin/Oper	Duplex Admin/Oper	Speed (Mbps) Admin/Oper
node1	e1a	clus1	up	9000	true/true	full/full	auto/10000
	e2a	clus2	up	9000	true/true	full/full	auto/10000
node2	e1a	clus1	up	9000	true/true	full/full	auto/10000
	e2a	clus2	up	9000	true/true	full/full	auto/10000

4 entries were displayed.

19. Revert clus1 (which was previously migrated) to e1a on both nodes: **network interface revert**

Example

The following example shows how to revert clus1 to the port e1a on node1 and node2:

```
cluster::*> network interface revert -vserver node1 -lif clus1
cluster::*> network interface revert -vserver node2 -lif clus1
```

20. Verify that all of the cluster LIFs are up, operational, and display as true in the “Is Home” column: **network interface show**

Example

The following example shows that all of the LIFs are up on node1 and node2 and that the “Is Home” column results are true:

```
cluster::*> network interface show -role cluster
```

Vserver	Logical Interface	Status Admin/Oper	Network Address/Mask	Current Node	Current Port	Is Home
node1	clus1	up/up	10.10.10.1/16	node1	e1a	true
	clus2	up/up	10.10.10.2/16	node1	e2a	true
node2	clus1	up/up	10.10.11.1/16	node2	e1a	true
	clus2	up/up	10.10.11.2/16	node2	e2a	true

4 entries were displayed.

21. Display information about the status of the nodes in the cluster: **cluster show**

Example

The following example displays information about the health and eligibility of the nodes in the cluster:

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

22. Migrate clus2 to port e1a on the console of each node: **network interface migrate**

Example

The following example shows the process for migrating clus2 to port e1a on node1 and node2:

```
cluster::*> network interface migrate -vserver node1 -lif clus2 -source-node node1 -dest-
node node1 -dest-port e1a
cluster::*> network interface migrate -vserver node2 -lif clus2 -source-node node2 -dest-
node node2 -dest-port e1a
```

23. Verify that the migration took place: **network interface show**

Example

The following example verifies that clus2 is migrated to port e1a on node1 and node2:

```
cluster::*> network interface show -role cluster
Logical      Status      Network      Current      Current  Is
Vserver      Interface  Admin/Oper  Address/Mask Node          Port      Home
-----
node1
  clus1      up/up      10.10.10.1/16  node1        e1a       true
  clus2      up/up      10.10.10.2/16  node1        e1a       false
node2
  clus1      up/up      10.10.11.1/16  node2        e1a       true
  clus2      up/up      10.10.11.2/16  node2        e1a       false

4 entries were displayed.
```

24. Shut down cluster port e2a on both nodes: **network port modify**

Example

The following example shows how to shut down the port e2a on node1 and node2:

```
cluster::*> network port modify -node node1 -port e2a -up-admin false
cluster::*> network port modify -node node2 -port e2a -up-admin false
```

25. Verify the port status: **network port show**

Example

The following example shows that port e2a is **down** on node1 and node2:


```

cluster::*> network port show -role cluster
Node  Port  Role      Link  MTU  Auto-Negot  Duplex  Speed (Mbps)
-----  ---  -----  ---  ---  ---  ---  ---
node1  e1a  clus1    up    9000 true/true   full/full  auto/10000
      e2a  clus2    down  9000 true/true   full/full  auto/10000
node2  e1a  clus1    up    9000 true/true   full/full  auto/10000
      e2a  clus2    down  9000 true/true   full/full  auto/10000

4 entries were displayed.

```

26. Disconnect the cable from cluster port e2a on node1, and then connect e2a to port 1 on cluster switch cs2, using the appropriate cabling supported by the CN1610 switches.
27. Disconnect the cable from cluster port e2a on node2, and then connect e2a to port 2 on cluster switch cs2, using the appropriate cabling supported by the CN1610 switches.
28. Enable all of the node-facing ports on cluster switch cs2.

Example

The following example shows that ports 1 through 12 are enabled on switch cs2:

```

(cs2)# configure
(cs2)(Config)# interface 0/1-0/12
(cs2)(Interface 0/1-0/12)# no shutdown
(cs2)(Interface 0/1-0/12)# exit
(cs2)(Config)# exit

```

29. Enable the second cluster port e2a on each node:

Example

The following example shows how to enable the port e2a on node1 and node2:

```

cluster::*> network port modify -node node1 -port e2a -up-admin true
cluster::*> network port modify -node node2 -port e2a -up-admin true

```

30. Verify that all of the cluster ports are up: `network port show -role cluster`

Example

The following example shows that all of the cluster ports are up on node1 and node2:

```

cluster::*> network port show -role cluster
Node  Port  Role      Link  MTU  Auto-Negot  Duplex  Speed (Mbps)
-----  ---  -----  ---  ---  ---  ---  ---
node1  e1a  clus1    up    9000 true/true   full/full  auto/10000
      e2a  clus2    up    9000 true/true   full/full  auto/10000
node2  e1a  clus1    up    9000 true/true   full/full  auto/10000
      e2a  clus2    up    9000 true/true   full/full  auto/10000

4 entries were displayed.

```

31. Revert clus2 (which was previously migrated) to e2a on both nodes: **network interface revert**

Example

The following example shows how to revert clus2 to the port e2a on node1 and node2:

```
cluster::*> network interface revert -vserver node1 -lif clus2
cluster::*> network interface revert -vserver node2 -lif clus2
```

32. Verify that all of the interfaces display **true** in the “Is Home” column: **network interface show**.

Example

The following example shows that all of the LIFs are **up** on node1 and node2 and that the “Is Home” column results are **true**:

```
cluster::*> network interface show -role cluster
```

Vserver	Logical Interface	Status Admin/Oper	Network Address/Mask	Current Node	Current Port	Is Home
node1	clus1	up/up	10.10.10.1/16	node1	e1a	true
	clus2	up/up	10.10.10.2/16	node1	e2a	true
node2	clus1	up/up	10.10.11.1/16	node2	e1a	true
	clus2	up/up	10.10.11.2/16	node2	e2a	true

33. Verify that both nodes have two connections to each switch: **show isdp neighbors**

Example

The following example shows the appropriate results for both switches:

```
(cs1)# show isdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge,
                  S - Switch, H - Host, I - IGMP, r - Repeater
```

Device ID	Intf	Holdtime	Capability	Platform	Port ID
node1	0/1	132	H	FAS3270	e1a
node2	0/2	163	H	FAS3270	e1a
cs2	0/13	11	S	CN1610	0/13
cs2	0/14	11	S	CN1610	0/14
cs2	0/15	11	S	CN1610	0/15
cs2	0/16	11	S	CN1610	0/16

```
(cs2)# show isdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge,
                  S - Switch, H - Host, I - IGMP, r - Repeater
```

Device ID	Intf	Holdtime	Capability	Platform	Port ID
node1	0/1	132	H	FAS3270	e2a
node2	0/2	163	H	FAS3270	e2a
cs1	0/13	11	S	CN1610	0/13
cs1	0/14	11	S	CN1610	0/14
cs1	0/15	11	S	CN1610	0/15
cs1	0/16	11	S	CN1610	0/16

34. Display information about the devices in your configuration: **network device discovery show**

35. Disable the two-node switchless configuration settings on both nodes: **network options switchless-cluster modify**

Example

The following example shows how to disable the switchless configuration settings:

```
cluster::*> network options switchless-cluster modify -enabled false
```

36. Verify that the settings are disabled: **network options switchless-cluster show**

Example

The `false` output in the following example shows that the configuration settings are disabled:

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

37. Configure clusters `clus1` and `clus2` to auto revert on each node and confirm:

Example

```
cluster::*> network interface modify -vserver node1 -lif clus1 -auto-revert true
cluster::*> network interface modify -vserver node1 -lif clus2 -auto-revert true
cluster::*> network interface modify -vserver node2 -lif clus1 -auto-revert true
cluster::*> network interface modify -vserver node2 -lif clus2 -auto-revert true
```

38. Verify the status of the node members in the cluster: **cluster show**

Example

The following example shows information about the health and eligibility of the nodes in the cluster:

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

39. If you suppressed automatic case creation, reenable it by invoking an AutoSupport message: **system node autosupport invoke -node * -type all -message MAINT=END**

Example

```
cluster::*> system node autosupport invoke -node * -type all -message MAINT=END
```

40. Change the privilege level back to admin: **set -privilege admin**

Related information

[Hardware Universe](#)

[NetApp CN1601 and CN1610 description page](#)

[CN1601 and CN1610 Switch Setup and Configuration Guide](#)

Migrating to a two-node switched cluster in FAS22xx systems with a single cluster-network connection

If you have FAS22xx systems in an existing two-node switchless cluster in which each controller module has a single, back-to-back 10 GbE connection for cluster connectivity, you can use the switchless cluster networking option and replace the direct back-to-back connectivity with switch connections.

Before you begin

- Two cluster connections are required to migrate from a switchless configuration to a switched configuration.
- The cluster must be healthy and consist of two nodes connected with back-to-back connectivity.
- The nodes must be running ONTAP 8.2 or later.
- The switchless cluster feature cannot be used with more than two nodes.
- All cluster ports must be in the `up` state.

About this task

This procedure is a nondisruptive procedure that removes the direct cluster connectivity in a switchless environment and replaces each connection to the switch with a connection to the partner node.

Steps

1. Change the privilege level to advanced, entering `y` when prompted to continue: `set -privilege advanced`
The advanced prompt (`*>`) appears.
2. Check the cluster status of the nodes at the system console of either node: `cluster show`

Example

The following example displays information about the health and eligibility of the nodes in the cluster:

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

2 entries were displayed.
```

3. Check the status of the HA pair at the system console of either node: `storage failover show`

Example

The following example shows the status of node1 and node2:

Node	Partner	Possible State	Description
node1	node2	true	Connected to node2
node2	node1	true	Connected to node1

2 entries were displayed.

- If AutoSupport is enabled on this cluster, suppress automatic case creation by invoking an AutoSupport message: **system node autosupport invoke -node * -type all -message MAINT=xh**

x is the duration of the maintenance window in hours.

Note: The message notifies technical support of this maintenance task so that automatic case creation is suppressed during the maintenance window.

Example

The following command suppresses automatic case creation for two hours:

```
cluster::*> system node autosupport invoke -node * -type all -message MAINT=2h
```

- Verify that the current state of the switchless cluster is **true**, and then disable the switchless cluster mode: **network options switchless-cluster modify -enabled false**

- Take over the target node: **storage failover takeover -ofnode target_node_name**

It does not matter which node is the target node. When it is taken over, the target node automatically reboots and displays the `Waiting for giveback...` message.

The active node is now serving data for the partner (target) node that was taken over.

- Wait for two minutes after takeover of the impaired node to confirm that the takeover was completed successfully.
- With the target node showing the `Waiting for giveback...` message, shut it down.

The method you use to shut down the node depends on whether you use remote management through the node Service Processor (SP).

If SP	Then...
Is configured	Log in to the impaired node SP, and then power off the system: system power off
Is not configured	At the impaired node prompt, press Ctrl-C , and then respond y to halt the node.

- On each controller module, disconnect the cable that connects the 10 GbE cluster port to the switchless cluster.
- Connect the 10 GbE cluster port to the switch on both controller modules.
- Verify that the 10 GbE cluster ports connected on the switch are configured to be part of the same VLAN.
If you plan to connect the cluster ports on each controller module to different switches, then you must verify that the ports on which the cluster ports are connected on each switch are configured for the same VLAN and that trunking is properly configured on both switches.
- Give back storage to the target node: **storage failover giveback -ofnode node2**
- Monitor the progress of the giveback operation: **storage failover show-giveback**
- After the giveback operation is complete, confirm that the HA pair is healthy and takeover is possible: **storage failover show**

Example

The output should be similar to the following:

```
Node           Partner           Possible State Description
-----
node1          node2             true      Connected to node2
node2          node1             true      Connected to node1

2 entries were displayed.
```

15. Verify that the cluster port LIFs are operating correctly: **network interface show -role cluster**

Example

The following example shows that the LIFs are **up** on node1 and node2 and that the “Is Home” column results are **true**:

```
cluster::*> network interface show -role cluster
Logical      Status      Network      Current      Current      Is
Vserver      Interface  Admin/Oper  Address/Mask  Node         Port        Home
-----
node1        clus1      up/up       192.168.177.121/24  node1        e1a         true
node2        clus1      up/up       192.168.177.123/24  node2        e1a         true

2 entries were displayed.
```

16. Check the cluster status of the nodes at the system console of either node: **cluster show**

Example

The following example displays information about the health and eligibility of the nodes in the cluster:

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

2 entries were displayed.
```

17. Ping the cluster ports to verify the cluster connectivity: **cluster ping-cluster local**

The command output should show connectivity between all of the cluster ports.

18. If you suppressed automatic case creation, reenable it by invoking an AutoSupport message: **system node autosupport invoke -node * -type all -message MAINT=END**

Example

```
cluster::*> system node autosupport invoke -node * -type all -message MAINT=END
```

19. Change the privilege level back to admin: **set -privilege admin**

Related information

[NetApp KB Article 1010449: How to suppress automatic case creation during scheduled maintenance windows](#)

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