NetApp

Replace switches

Cluster and storage switches

NetApp
May 08, 2024

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Replace switches

Replacement requirements

Before replacing the switch, make sure the following conditions are met in the current environment and on the replacement switch.

Existing cluster and network infrastructure

Make sure that:

- The existing cluster is verified as completely functional, with at least one fully connected cluster switch.
- All cluster ports are **up**.
- All cluster logical interfaces (LIFs) are administratively and operationally **up** and on their home ports.
- The ONTAP `cluster ping-cluster -node node1` command must indicate that the settings, `basic connectivity` and `larger than PMTU communication`, are successful on all paths.

BES-53248 replacement cluster switch

Make sure that:

- Management network connectivity on the replacement switch is functional.
- Console access to the replacement switch is in place.
- The node connections are ports 0/1 through 0/16 with default licensing.
- All Inter-Switch Link (ISL) ports are disabled on ports 0/55 and 0/56.
- The desired reference configuration file (RCF) and EFOS operating system switch image are loaded onto the switch.
- Initial customization of the switch is complete, as detailed in Configure the BES-53248 cluster switch.

Any previous site customizations, such as STP, SNMP, and SSH, are copied to the new switch.

For more information

- NetApp Support Site
- NetApp Hardware Universe

Replace a Broadcom-supported BES-53248 cluster switch

Follow these steps to replace a defective Broadcom-supported BES-53248 cluster switch in a cluster network. This is a nondisruptive procedure (NDU).

About the examples

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

- The names of the existing BES-53248 switches are `cs1` and `cs2`.

- The name of the new BES-53248 switch is `newcs2`.

- The node names are `node1` and `node2`.

- The cluster ports on each node are named `e0a` and `e0b`.

- The cluster LIF names are `node1_clus1` and `node1_clus2` for node1, and `node2_clus1` and `node2_clus2` for node2.

- The prompt for changes to all cluster nodes is `cluster1::>`

About the topology

This procedure is based on the following cluster network topology:

Show example topology

```
cluster1::> network port show -ipspace Cluster

Node: node1

Ignore
                                                  Speed(Mbps) Health
Health
Port      IPspace      Broadcast Domain Link MTU  Admin/Oper  Status
Status
--------- ------------ ---------------- ---- ---- ----------- --------
------
e0a       Cluster      Cluster          up   9000 auto/10000  healthy
false
e0b       Cluster      Cluster          up   9000 auto/10000  healthy
false


Node: node2

Ignore
                                                  Speed(Mbps) Health
Health
Port      IPspace      Broadcast Domain Link MTU  Admin/Oper  Status
Status
--------- ------------ ---------------- ---- ---- ----------- --------
------
e0a       Cluster      Cluster          up   9000 auto/10000  healthy
false
e0b       Cluster      Cluster          up   9000 auto/10000  healthy
false


cluster1::> network interface show -vserver Cluster
           Logical     Status     Network            Current
Current Is
Vserver    Interface  Admin/Oper Address/Mask       Node          Port
Home
---------- ---------- ---------- ------------------ -------------
------- ----
Cluster
           node1_clus1 up/up      169.254.209.69/16  node1         e0a
true
           node1_clus2 up/up      169.254.49.125/16  node1         e0b
true
```

```
          node2_clus1  up/up    169.254.47.194/16  node2        e0a
true
          node2_clus2  up/up    169.254.19.183/16  node2        e0b
true


cluster1::> network device-discovery show -protocol cdp
Node/        Local  Discovered
Protocol     Port   Device (LLDP: ChassisID)  Interface         Platform
-----------  ------ ------------------------  ----------------
----------------
node2        /cdp
             e0a    cs1                       0/2               BES-
53248
             e0b    cs2                       0/2               BES-
53248
node1        /cdp
             e0a    cs1                       0/1               BES-
53248
             e0b    cs2                       0/1               BES-
53248
```

```
(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       175       H          FAS2750
e0a
node2                     0/2       152       H          FAS2750
e0a
cs2                       0/55      179       R          BES-53248
0/55
cs2                       0/56      179       R          BES-53248
0/56


(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       129       H          FAS2750
e0b
node2                     0/2       165       H          FAS2750
e0b
cs1                       0/55      179       R          BES-53248
0/55
cs1                       0/56      179       R          BES-53248
0/56
```

Steps

1. Review the Replacement requirements.
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
```

where *x* is the duration of the maintenance window in hours.

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

3. Install the appropriate Reference Configuration File (RCF) and image on the switch, newcs2, and make any necessary site preparations.

   If necessary, verify, download, and install the appropriate versions of the RCF and EFOS software for the new switch. If you have verified that the new switch is correctly set up and does not need updates to the RCF and EFOS software, continue to step 2.

   a. You can download the applicable Broadcom EFOS software for your cluster switches from the Broadcom Ethernet Switch Support site. Follow the steps on the Download page to download the EFOS file for the version of ONTAP software you are installing.

   b. The appropriate RCF is available from the Broadcom Cluster Switches page. Follow the steps on the Download page to download the correct RCF for the version of ONTAP software you are installing.

4. On the new switch, log in as `admin` and shut down all of the ports that will be connected to the node cluster interfaces (ports 1 to 16).

> ⓘ If you purchased additional licenses for additional ports, shut down these ports too.

If the switch that you are replacing is not functional and is powered down, the LIFs on the cluster nodes should have already failed over to the other cluster port for each node.

> ⓘ No password is required to enter `enable` mode.

Show example

```
User: admin
Password:
(newcs2)> enable
(newcs2)# config
(newcs2)(config)# interface 0/1-0/16
(newcs2)(interface 0/1-0/16)# shutdown
(newcs2)(interface 0/1-0/16)# exit
(newcs2)(config)# exit
(newcs2)#
```

5. Verify that all cluster LIFs have `auto-revert` enabled:

```
network interface show -vserver Cluster -fields auto-revert
```

Show example topology

```
cluster1::> network interface show -vserver Cluster -fields auto-
revert

Logical
Vserver    Interface    Auto-revert
---------  -----------  ------------
Cluster    node1_clus1  true
Cluster    node1_clus2  true
Cluster    node2_clus1  true
Cluster    node2_clus2  true
```

6. Shut down the ISL ports 0/55 and 0/56 on the BES-53248 switch cs1:

Show example topology

```
(cs1)# config
(cs1)(config)# interface 0/55-0/56
(cs1)(interface 0/55-0/56)# shutdown
```

7. Remove all cables from the BES-53248 cs2 switch, and then connect them to the same ports on the BES-53248 newcs2 switch.

8. Bring up the ISLs ports 0/55 and 0/56 between the cs1 and newcs2 switches, and then verify the port channel operation status.

   The Link State for port-channel 1/1 should be **up** and all member ports should be True under the Port Active heading.

Show example

This example enables ISL ports 0/55 and 0/56 and displays the Link State for port-channel 1/1 on switch cs1:

```
(cs1)# config
(cs1)(config)# interface 0/55-0/56
(cs1)(interface 0/55-0/56)# no shutdown
(cs1)(interface 0/55-0/56)# exit
(cs1)# show port-channel 1/1

Local Interface................................ 1/1
Channel Name................................... Cluster-ISL
Link State..................................... Up
Admin Mode..................................... Enabled
Type........................................... Dynamic
Port-channel Min-links......................... 1
Load Balance Option............................ 7
(Enhanced hashing mode)

Mbr    Device/         Port        Port
Ports  Timeout         Speed       Active
------ -------------   ----------  -------
0/55   actor/long      100G Full   True
       partner/long
0/56   actor/long      100G Full   True
       partner/long
```

9. On the new switch newcs2, re-enable all of the ports that are connected to the node cluster interfaces (ports 1 to 16).

(i)   If you purchased additional licenses for additional ports, shut down these ports too.

Show example

```
User:admin
Password:
(newcs2)> enable
(newcs2)# config
(newcs2)(config)# interface 0/1-0/16
(newcs2)(interface 0/1-0/16)# no shutdown
(newcs2)(interface 0/1-0/16)# exit
(newcs2)(config)# exit
```

10. Verify that port e0b is **up**:

`network port show -ipspace Cluster`

Show example

The output should be similar to the following:

```
cluster1::> network port show -ipspace Cluster

Node: node1

Ignore
                                                 Speed(Mbps)
Health     Health
Port       IPspace       Broadcast Domain Link MTU   Admin/Oper
Status     Status
---------  ------------  ---------------- ---- ----- -----------
--------  -------
e0a        Cluster       Cluster          up   9000  auto/10000
healthy   false
e0b        Cluster       Cluster          up   9000  auto/10000
healthy   false

Node: node2

Ignore
                                                 Speed(Mbps)
Health     Health
Port       IPspace       Broadcast Domain Link MTU   Admin/Oper
Status     Status
---------  ------------  ---------------- ---- ----- -----------
--------  -------
e0a        Cluster       Cluster          up   9000  auto/10000
healthy   false
e0b        Cluster       Cluster          up   9000  auto/auto    -
false
```

11. On the same node as you used in the previous step, wait for the cluster LIF node1_clus2 on node1 to auto-revert.

Show example

In this example, LIF node1_clus2 on node1 is successfully reverted if `Is Home` is `true` and the port is e0b.

The following command displays information about the LIFs on both nodes. Bringing up the first node is successful if `Is Home` is `true` for both cluster interfaces and they show the correct port assignments, in this example `e0a` and `e0b` on node1.

```
cluster::> network interface show -vserver Cluster

          Logical      Status     Network                  Current
Current Is
Vserver     Interface    Admin/Oper Address/Mask            Node
Port     Home
----------- ------------ ---------- ------------------ ----------
------- -----
Cluster
          node1_clus1  up/up      169.254.209.69/16  node1
e0a     true
          node1_clus2  up/up      169.254.49.125/16  node1
e0b     true
          node2_clus1  up/up      169.254.47.194/16  node2
e0a     true
          node2_clus2  up/up      169.254.19.183/16  node2
e0a     false
```

12. Display information about the nodes in a cluster:

```
cluster show
```

Show example

This example shows that the node health for `node1` and `node2` in this cluster is `true`:

```
cluster1::> cluster show
Node    Health   Eligibility   Epsilon
------  -------- ------------  --------
node1   true     true          true
node2   true     true          true
```

13. Confirm the following cluster network configuration:

```
network port show
```

```
cluster1::> network port show -ipspace Cluster
Node: node1

Ignore
                                     Speed(Mbps)          Health
Health
Port      IPspace      Broadcast Domain Link MTU   Admin/Oper  Status
Status
--------- ----------- --------------- ---- ----- -----------
-------- ------
e0a       Cluster      Cluster          up   9000  auto/10000
healthy  false
e0b       Cluster      Cluster          up   9000  auto/10000
healthy  false


Node: node2

Ignore
                                     Speed(Mbps)          Health
Health
Port      IPspace      Broadcast Domain Link MTU  Admin/Oper  Status
Status
--------- ----------- --------------- ---- ---- -----------
-------- ------
e0a       Cluster      Cluster          up   9000 auto/10000
healthy  false
e0b       Cluster      Cluster          up   9000 auto/10000
healthy  false



cluster1::> network interface show -vserver Cluster

           Logical    Status     Network            Current
Current Is
Vserver    Interface  Admin/Oper Address/Mask       Node
Port    Home
---------- ---------- ---------- ----------------- -------------
------- ----
Cluster
           node1_clus1  up/up    169.254.209.69/16  node1
e0a       true
           node1_clus2  up/up    169.254.49.125/16  node1
e0b       true
           node2_clus1  up/up    169.254.47.194/16  node2
```

```
e0a      true
              node2_clus2  up/up     169.254.19.183/16  node2
e0b      true
4 entries were displayed.
```

+

```
cs1# show cdp neighbors

Capability Codes: R - Router, T - Trans-Bridge, B - Source-Route-
Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater,
                  V - VoIP-Phone, D - Remotely-Managed-Device,
                  s - Supports-STP-Dispute

Device-ID           Local Intrfce  Hldtme Capability  Platform
Port ID
node1               Eth1/1         144    H           FAS2980
e0a
node2               Eth1/2         145    H           FAS2980
e0a
newcs2(FDO296348FU)  Eth1/65       176    R S I s     N9K-C92300YC
Eth1/65
newcs2(FDO296348FU)  Eth1/66       176    R S I s     N9K-C92300YC
Eth1/66


cs2# show cdp neighbors

Capability Codes: R - Router, T - Trans-Bridge, B - Source-Route-
Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater,
                  V - VoIP-Phone, D - Remotely-Managed-Device,
                  s - Supports-STP-Dispute

Device-ID           Local Intrfce  Hldtme Capability  Platform
Port ID
node1               Eth1/1         139    H           FAS2980
e0b
node2               Eth1/2         124    H           FAS2980
e0b
cs1(FDO220329KU)    Eth1/65        178    R S I s     N9K-C92300YC
Eth1/65
cs1(FDO220329KU)    Eth1/66        178    R S I s     N9K-C92300YC
Eth1/66
```

14. Verify that the cluster network is healthy:

```
show isdp neighbors
```

Show example

```
(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      175          H             FAS2750     e0a
node2        0/2      152          H             FAS2750     e0a
newcs2       0/55     179          R             BES-53248   0/55
newcs2       0/56     179          R             BES-53248   0/56

(newcs2)# 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      129          H             FAS2750     e0b
node2        0/2      165          H             FAS2750     e0b
cs1          0/55     179          R             BES-53248   0/55
cs1          0/56     179          R             BES-53248   0/56
```

15. If you suppressed automatic case creation, re-enable it by invoking an AutoSupport message:

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

What's next?

See Enable the log collection feature for the steps required to enable cluster health switch log collection used for collecting switch-related log files.

Replace Broadcom BES-53248 cluster switches with switchless connections

You can migrate from a cluster with a switched cluster network to one where two nodes are directly connected for ONTAP 9.3 and later.

Review requirements

Guidelines

Review the following guidelines:

- Migrating to a two-node switchless cluster configuration is a nondisruptive operation. Most systems have two dedicated cluster interconnect ports on each node, but you can also use this procedure for systems with a larger number of dedicated cluster interconnect ports on each node, such as four, six or eight.

- You cannot use the switchless cluster interconnect feature with more than two nodes.

- If you have an existing two-node cluster that uses cluster interconnect switches and is running ONTAP 9.3 or later, you can replace the switches with direct, back-to-back connections between the nodes.
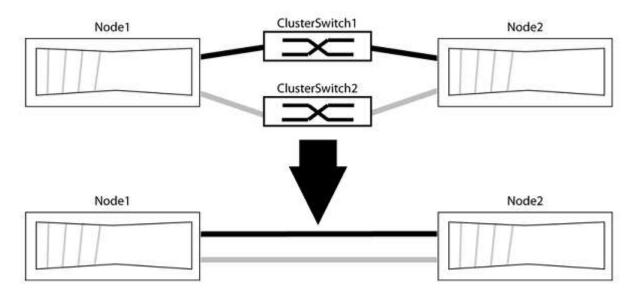
What you'll need

- A healthy cluster that consists of two nodes connected by cluster switches. The nodes must be running the same ONTAP release.

- Each node with the required number of dedicated cluster ports, which provide redundant cluster interconnect connections to support your system configuration. For example, there are two redundant ports for a system with two dedicated cluster interconnect ports on each node.

Migrate the switches

About this task

The following procedure removes the cluster switches in a two-node cluster and replaces each connection to the switch with a direct connection to the partner node.

About the examples

The examples in the following procedure show nodes that are using "e0a" and "e0b" as cluster ports. Your nodes might be using different cluster ports as they vary by system.

Step 1: Prepare for migration

1. Change the privilege level to advanced, entering `y` when prompted to continue:

   `set -privilege advanced`

The advanced prompt `*>` appears.

2. ONTAP 9.3 and later supports automatic detection of switchless clusters, which is enabled by default.

   You can verify that detection of switchless clusters is enabled by running the advanced privilege command:

   `network options detect-switchless-cluster show`

   Show example

   > The following example output shows if the option is enabled.
   >
   > ```
   > cluster::*> network options detect-switchless-cluster show
   >     (network options detect-switchless-cluster show)
   > Enable Switchless Cluster Detection: true
   > ```

   If "Enable Switchless Cluster Detection" is `false`, contact NetApp support.

3. 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=<number_of_hours>h
   ```

   where `h` is the duration of the maintenance window in hours. The message notifies technical support of this maintenance task so that they can suppress automatic case creation during the maintenance window.

   In the following example, the command suppresses automatic case creation for two hours:

   Show example

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

Step 2: Configure ports and cabling

1. Organize the cluster ports on each switch into groups so that the cluster ports in group1 go to cluster switch1 and the cluster ports in group2 go to cluster switch2. These groups are required later in the procedure.

2. Identify the cluster ports and verify link status and health:

   `network port show -ipspace Cluster`

   In the following example for nodes with cluster ports "e0a" and "e0b", one group is identified as "node1:e0a" and "node2:e0a" and the other group as "node1:e0b" and "node2:e0b". Your nodes might be using different cluster ports because they vary by system.

Verify that the ports have a value of `up` for the "Link" column and a value of `healthy` for the "Health Status" column.

Show example

```
cluster::> network port show -ipspace Cluster
Node: node1

Ignore
                                          Speed(Mbps) Health
Health
Port   IPspace    Broadcast Domain Link  MTU   Admin/Oper  Status
Status
-----  ---------  ---------------- ----- ----- ----------- -------
-------
e0a    Cluster    Cluster          up    9000  auto/10000  healthy
false
e0b    Cluster    Cluster          up    9000  auto/10000  healthy
false

Node: node2

Ignore
                                          Speed(Mbps) Health
Health
Port   IPspace    Broadcast Domain Link  MTU   Admin/Oper  Status
Status
-----  ---------  ---------------- ----- ----- ----------- -------
-------
e0a    Cluster    Cluster          up    9000  auto/10000  healthy
false
e0b    Cluster    Cluster          up    9000  auto/10000  healthy
false
4 entries were displayed.
```

3. Confirm that all the cluster LIFs are on their home ports.

Verify that the "is-home" column is `true` for each of the cluster LIFs:

```
network interface show -vserver Cluster -fields is-home
```

Show example

```
cluster::*> net int show -vserver Cluster -fields is-home
(network interface show)
vserver   lif           is-home
--------  ------------  --------
Cluster   node1_clus1   true
Cluster   node1_clus2   true
Cluster   node2_clus1   true
Cluster   node2_clus2   true
4 entries were displayed.
```

If there are cluster LIFs that are not on their home ports, revert those LIFs to their home ports:

```
network interface revert -vserver Cluster -lif *
```

4. Disable auto-revert for the cluster LIFs:

```
network interface modify -vserver Cluster -lif * -auto-revert false
```

5. Verify that all ports listed in the previous step are connected to a network switch:

```
network device-discovery show -port cluster_port
```

The "Discovered Device" column should be the name of the cluster switch that the port is connected to.

Show example

The following example shows that cluster ports "e0a" and "e0b" are correctly connected to cluster switches "cs1" and "cs2".

```
cluster::> network device-discovery show -port e0a|e0b
  (network device-discovery show)
Node/      Local  Discovered
Protocol   Port   Device (LLDP: ChassisID)  Interface  Platform
---------  ------ ------------------------  ---------  ----------
node1/cdp
           e0a    cs1                       0/11       BES-53248
           e0b    cs2                       0/12       BES-53248
node2/cdp
           e0a    cs1                       0/9        BES-53248
           e0b    cs2                       0/9        BES-53248
4 entries were displayed.
```

6. Verify the cluster connectivity:

   `cluster ping-cluster -node local`

7. Verify that the cluster is healthy:

   `cluster ring show`

   All units must be either master or secondary.

8. Set up the switchless configuration for the ports in group 1.

   > (i) To avoid potential networking issues, you must disconnect the ports from group1 and reconnect them back-to-back as quickly as possible, for example, **in less than 20 seconds**.
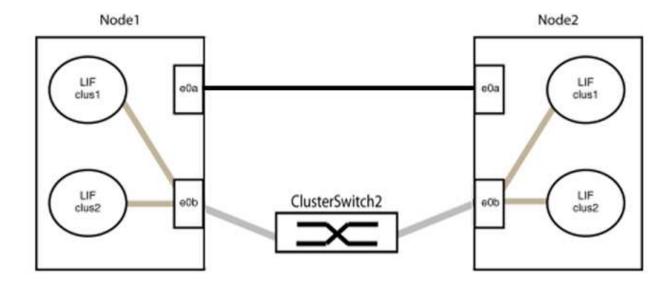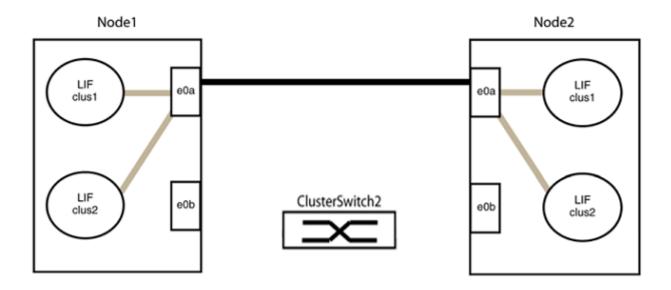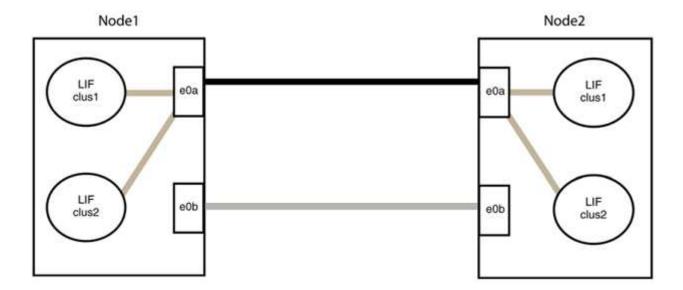
   a. Disconnect all the cables from the ports in group1 at the same time.

      In the following example, the cables are disconnected from port "e0a" on each node, and cluster traffic continues through the switch and port "e0b" on each node:

b. Cable the ports in group1 back-to-back.

In the following example, "e0a" on node1 is connected to "e0a" on node2:

9. The switchless cluster network option transitions from `false` to `true`. This might take up to 45 seconds. Confirm that the switchless option is set to `true`:

`network options switchless-cluster show`

The following example shows that the switchless cluster is enabled:

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

10. Verify that the cluster network is not disrupted:

`cluster ping-cluster -node local`

> **(i)** Before proceeding to the next step, you must wait at least two minutes to confirm a working back-to-back connection on group 1.

11. Set up the switchless configuration for the ports in group 2.

> **(i)** To avoid potential networking issues, you must disconnect the ports from group2 and reconnect them back-to-back as quickly as possible, for example, **in less than 20 seconds**.

a. Disconnect all the cables from the ports in group2 at the same time.

In the following example, the cables are disconnected from port "e0b" on each node, and cluster traffic continues through the direct connection between the "e0a" ports:

b. Cable the ports in group2 back-to-back.

In the following example, "e0a" on node1 is connected to "e0a" on node2 and "e0b" on node1 is connected to "e0b" on node2:

Step 3: Verify the configuration

1. Verify that the ports on both nodes are correctly connected:

   `network device-discovery show -port `*`cluster_port`*

   Show example

   > The following example shows that cluster ports "e0a" and "e0b" are correctly connected to the corresponding port on the cluster partner:
   >
   > ```
   > cluster::> net device-discovery show -port e0a|e0b
   >   (network device-discovery show)
   > Node/      Local  Discovered
   > Protocol   Port   Device (LLDP: ChassisID)  Interface  Platform
   > ---------- ------ ------------------------- ---------- ----------
   > node1/cdp
   >            e0a    node2                     e0a        AFF-A300
   >            e0b    node2                     e0b        AFF-A300
   > node1/lldp
   >            e0a    node2 (00:a0:98:da:16:44) e0a        -
   >            e0b    node2 (00:a0:98:da:16:44) e0b        -
   > node2/cdp
   >            e0a    node1                     e0a        AFF-A300
   >            e0b    node1                     e0b        AFF-A300
   > node2/lldp
   >            e0a    node1 (00:a0:98:da:87:49) e0a        -
   >            e0b    node1 (00:a0:98:da:87:49) e0b        -
   > 8 entries were displayed.
   > ```

2. Re-enable auto-revert for the cluster LIFs:

   `network interface modify -vserver Cluster -lif * -auto-revert true`

3. Verify that all LIFs are home. This might take a few seconds.

   `network interface show -vserver Cluster -lif `*`lif_name`*

Show example

The LIFs have been reverted if the "Is Home" column is `true`, as shown for `node1_clus2` and `node2_clus2` in the following example:

```
cluster::> network interface show -vserver Cluster -fields curr-
port,is-home
vserver  lif            curr-port is-home
-------- -------------- --------- -------
Cluster  node1_clus1    e0a       true
Cluster  node1_clus2    e0b       true
Cluster  node2_clus1    e0a       true
Cluster  node2_clus2    e0b       true
4 entries were displayed.
```

If any cluster LIFS have not returned to their home ports, revert them manually from the local node:

```
network interface revert -vserver Cluster -lif lif_name
```

4. Check the cluster status of the nodes from the system console of either node:

```
cluster show
```

Show example

The following example shows epsilon on both nodes to be `false`:

```
Node   Health  Eligibility Epsilon
-----  ------- ----------- --------
node1 true     true        false
node2 true     true        false
2 entries were displayed.
```

5. Confirm connectivity between the cluster ports:

```
cluster ping-cluster local
```

6. If you suppressed automatic case creation, reenable it by invoking an AutoSupport message:

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

For more information, see NetApp KB Article 1010449: How to suppress automatic case creation during scheduled maintenance windows.

7. Change the privilege level back to admin:

```
set -privilege admin
```