# Replace a Cisco Nexus 3232C storage switch

## Cluster and storage switches

NetApp
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You must be aware of certain configuration information, port connections and cabling requirements when you replace Cisco Nexus 3232C storage switches.

You must verify the following conditions exist before installing the NX-OS software and RCFs on a Cisco Nexus storage switch:

- Your system can support Cisco Nexus 3232C storage switches.
- You must have consulted the switch compatibility table on the Cisco Ethernet Switch page for the supported ONTAP, NX-OS, and RCF versions.

> You should be aware there can be dependencies between command syntax in the RCF and NX-OS versions.

- You must have referred to the appropriate software and upgrade guides available on the Cisco web site for complete documentation on the Cisco switch upgrade and downgrade procedures at Cisco Nexus 3000 Series Switches.
- You must have downloaded the applicable RCFs.

# Steps to replace a Cisco Nexus 3232C storage switch

You can nondisruptively replace a defective Cisco Nexus 3232C storage switch by performing a specific sequence of tasks.

**Before you begin**

The existing network configuration must have the following characteristics:

- The Cisco Ethernet Switches page has the latest RCF and NX-OS versions on your switches.
- Management connectivity must exist on both switches.

> Make sure that all troubleshooting steps have been completed to confirm that your switch needs replacing.

The replacement Cisco Nexus 3232C switch must have the following characteristics:

- Management network connectivity must be functional.
- Console access to the replacement switch must be in place.
- The appropriate RCF and NX-OS operating system image must be loaded onto the switch.
- Initial customization of the switch must be complete.

**Procedure summary:**

- **Confirm the switch to be replaced is S2 (Steps 1-5)**
- **Disconnect the cables from switch S2 (Step 6)**
- **Reconnect the cables to switch NS2 (Step 7)**

- **Verify all device configurations on switch NS2 (Steps 8-10)**
- This procedure replaces the second Nexus 3232C storage switch S2 with the new 3232C switch NS2.
- The two nodes are node1 and node2.

**Steps**

1. 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.

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

2. Check on the health status of the storage node ports to make sure that there is connection to storage switch S1: `storage port show -port-type ENET`

```
storage::*> storage port show -port-type ENET
                                     Speed                      VLAN
Node                Port Type  Mode    (Gb/s) State    Status      ID
------------------- ---- ----- ------- ------ -------- --------- ----
node1
                    e3a  ENET  storage    100 enabled  online      30
                    e3b  ENET  storage      0 enabled  offline     30
                    e7a  ENET  storage      0 enabled  offline     30
                    e7b  ENET  storage      0 enabled  offline     30
node2
                    e3a  ENET  storage    100 enabled  online      30
                    e3b  ENET  storage      0 enabled  offline     30
                    e7a  ENET  storage      0 enabled  offline     30
                    e7b  ENET  storage      0 enabled  offline     30
```

3. Verify that storage switch S1 is available: `network device-discovery show`

```
storage::*> network device-discovery show
Node/       Local  Discovered
Protocol    Port   Device (LLDP: ChassisID)  Interface         Platform
----------- ------ ------------------------- ----------------
---------------
node1/cdp
            e3a    S1                        Ethernet1/1       NX3232C
            e4a    node2                     e4a               AFF-A700
            e4e    node2                     e4e               AFF-A700
node1/lldp
            e3a    S1                        Ethernet1/1       -
            e4a    node2                     e4a               -
            e4e    node2                     e4e               -
node2/cdp
            e3a    S1                        Ethernet1/2       NX3232C
            e4a    node1                     e4a               AFF-A700
            e4e    node1                     e4e               AFF-A700
node2/lldp
            e3a    S1                        Ethernet1/2       -
            e4a    node1                     e4a               -
            e4e    node1                     e4e               -
```

4. Run the `show lldp neighbors` command on the working switch to confirm that you can see both nodes and all shelves: `show lldp neighbors`

```
S1# show lldp neighbors
Capability codes:
  (R) Router, (B) Bridge, (T) Telephone, (C) DOCSIS Cable Device
  (W) WLAN Access Point, (P) Repeater, (S) Station, (O) Other
Device ID               Local Intf      Hold-time  Capability  Port ID
node1                   Eth1/1          121        S           e3a
node2                   Eth1/2          121        S           e3a
SHFGD2008000011         Eth1/5          121        S           e0a
SHFGD2008000011         Eth1/6          120        S           e0a
SHFGD2008000022         Eth1/7          120        S           e0a
SHFGD2008000022         Eth1/8          120        S           e0a
```

5. Verify the shelf ports in the storage system: `storage shelf port show -fields remote-device,remote-port`

```
storage::*> storage shelf port show -fields remote-device,remote-port

shelf  id  remote-port  remote-device
-----  --  -----------  -------------
3.20   0   Ethernet1/5  S1
3.20   1   -            -
3.20   2   Ethernet1/6  S1
3.20   3   -            -
3.30   0   Ethernet1/7  S1
3.20   1   -            -
3.30   2   Ethernet1/8  S1
3.20   3   -            -
```

6. Remove all cables attached to storage switch S2.
7. Reconnect all cables to the replacement switch NS2.
8. Recheck the health status of the storage node ports: `storage port show -port-type ENET`

```
storage::*> storage port show -port-type ENET
                                    Speed                       VLAN
Node                Port Type  Mode    (Gb/s) State    Status      ID
------------------- ---- ----- ------- ------ -------- ---------- ---
node1
                    e3a  ENET  storage    100 enabled  online      30
                    e3b  ENET  storage      0 enabled  offline     30
                    e7a  ENET  storage      0 enabled  offline     30
                    e7b  ENET  storage    100 enabled  online      30
node2
                    e3a  ENET  storage    100 enabled  online      30
                    e3b  ENET  storage      0 enabled  offline     30
                    e7a  ENET  storage      0 enabled  offline     30
                    e7b  ENET  storage    100 enabled  online      30
```

9. Verify that both switches are available: `network device-discovery show`

```
storage::*> network device-discovery show
Node/       Local  Discovered
Protocol    Port   Device (LLDP: ChassisID)  Interface         Platform
----------- ------ ------------------------- ----------------  --------
node1/cdp
            e3a    S1                        Ethernet1/1       NX3232C
            e4a    node2                     e4a               AFF-A700
            e4e    node2                     e4e               AFF-A700
            e7b    NS2                       Ethernet1/1       NX3232C
node1/lldp
            e3a    S1                        Ethernet1/1       -
            e4a    node2                     e4a               -
            e4e    node2                     e4e               -
            e7b    NS2                       Ethernet1/1       -
node2/cdp
            e3a    S1                        Ethernet1/2       NX3232C
            e4a    node1                     e4a               AFF-A700
            e4e    node1                     e4e               AFF-A700
            e7b    NS2                       Ethernet1/2       NX3232C
node2/lldp
            e3a    S1                        Ethernet1/2       -
            e4a    node1                     e4a               -
            e4e    node1                     e4e               -
            e7b    NS2                       Ethernet1/2       -
```

10. Verify the shelf ports in the storage system: `storage shelf port show -fields remote-device,remote-port`

```
storage::*> storage shelf port show -fields remote-device,remote-port
shelf id remote-port remote-device
----- -- ----------- -------------
3.20  0  Ethernet1/5 S1
3.20  1  Ethernet1/5 NS2
3.20  2  Ethernet1/6 S1
3.20  3  Ethernet1/6 NS2
3.30  0  Ethernet1/7 S1
3.20  1  Ethernet1/7 NS2
3.30  2  Ethernet1/8 S1
3.20  3  Ethernet1/8 NS2
```

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