Upgrading or downgrading the firmware on a Cisco FC switch

ONTAP MetroCluster

Ivana Devine
April 12, 2021

Table of Contents

Upgrading or downgrading the firmware on a Cisco FC switch

To upgrade or downgrade the firmware on a Cisco FC switch you must use the Cisco-specific commands to disable the switch, perform and verify the upgrade, and reboot and reenable the switch.

- The system must be properly cabled.
- All paths to the storage shelves must be available.
- The disk shelf stacks must be stable.
- The FC switch fabric must be healthy.
- All components in the system must be healthy.
- The system must be operating normally.
- You need the admin password and access to an FTP or SCP server.

The switch fabric is disabled during the firmware upgrade or downgrade and the MetroCluster configuration relies on the second fabric to continue operation.

You must repeat this task on each of the switch fabrics in succession to ensure that all switches are running the same firmware version.

You must have the firmware files.

This procedure is nondisruptive and takes approximately one hour to complete.

Steps

1. Log in to each of the switches in the fabric.

   In the examples, the switches are called FC_switch_A_1 and FC_switch_B_1.

2. Determine whether there is enough space in the bootflash directory on each switch:

   `dir bootflash`

   If not, delete the unwanted firmware files by using the `delete bootflash:file_name` command.

3. Copy the kickstart and system files to the switches:

   `copy` *`source_filetarget_file`*

   In the following example, the kickstart file (`m9200-s2ek9-kickstart-mz.5.2.1.bin`) and the system file (`m9200-s2ek9-mz.5.2.1.bin`) are located on the FTP server 10.10.10.55 in the `/firmware/` path.

   The following example shows the commands issued on FC_switch_A_1:

```
FC_switch_A_1# copy ftp://10.10.10.55/firmware/m9200-s2ek9-kickstart-
mz.5.2.1.bin bootflash:m9200-s2ek9-kickstart-mz.5.2.1.bin
FC_switch_A_1# copy ftp://10.10.10.55/firmware/m9200-s2ek9-mz.5.2.1.bin
bootflash:m9200-s2ek9-mz.5.2.1.bin
```

4. Disable all the VSANs on both the switches in this fabric.
5. Install the desired firmware on the switches:

   install all system bootflash:*systemfile_name* kickstart bootflash:*kickstartfile_name*

   The following example shows the commands issued on FC_switch_A_1:

   ```
   FC_switch_A_1# install all system bootflash:m9200-s2ek9-mz.5.2.1.bin
   kickstart bootflash:m9200-s2ek9-kickstart-mz.5.2.1.bin
   Enter Yes to confirm the installation.
   ```

6. Check the version of the firmware on each switch to make sure the correct version was installed:

   show version

7. Enable all the VSANs on both the switches in this fabric.
8. Verify the operation of the MetroCluster configuration in ONTAP:
   a. Check whether the system is multipathed: + **node run -node *node-name* sysconfig -a**
   b. Check for any health alerts on both clusters: + **system health alert show**
   c. Confirm the MetroCluster configuration and that the operational mode is normal: + **metrocluster show**
   d. Perform a MetroCluster check: + **metrocluster check run**
   e. Display the results of the MetroCluster check: + **metrocluster check show**
   f. Check for any health alerts on the switches (if present): + **storage switch show**
   g. Run Config Advisor.

      NetApp Downloads: Config Advisor

   h. After running Config Advisor, review the tool's output and follow the recommendations in the output to address any issues discovered.
9. Repeat this procedure for the second switch fabric.