



# Upgrading or Downgrading the Software Using the CLI

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You can upgrade the software using the CLI.



## Note

- Ensure that you check and follow these guidelines:
  - [Workflow to Upgrade or Downgrade the Cisco ACI Fabric](#)
  - [Pre-Upgrade/Downgrade Checklists](#)
  - [Guidelines and Limitations for Upgrading or Downgrading](#)
- If you create policies for upgrade through the GUI, you cannot change that same policy through the CLI, and vice versa.

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- [Upgrading or Downgrading the Cisco APIC Software Using the NX-OS Style CLI, on page 1](#)
  - [Upgrading or Downgrading the Switches Using the NX-OS Style CLI, on page 3](#)
  - [Upgrading or Downgrading the Catalog Software Version Using the NX-OS Style CLI, on page 6](#)

## Upgrading or Downgrading the Cisco APIC Software Using the NX-OS Style CLI

### Procedure

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**Step 1** Download the image from the source into the controller.

#### Example:

```
admin@ifcl:~> scp <username>@<Host IP address that has the image>:./<absolute path to the
image including image file name> .
admin@ifcl:~> pwd
/home/admin
admin@ifcl:~> ls
<ver-no>.bin
```

**Step 2** Display the repository information.

**Example:**

```
apic1# show firmware repository
```

**Step 3** Add the firmware image to the repository.

```
apic1# firmware repository add <name of the image file>
```

**Example:**

```
apic1# firmware repository add aci-apic-dk9.2.0.1r.iso
```

**Step 4** Configure the controllers for upgrade or downgrade.

```
apic# configure
apic1(config)# firmware
apic1(config-firmware)# controller-group
apic1(config-firmware-controller)# firmware-version <name of the image file>
```

**Example:**

```
apic# configure
apic1(config)# firmware
apic1(config-firmware)# controller-group
apic1(config-firmware-controller)# firmware-version aci-apic-dk9.2.2.2e.bin
```

**Step 5** Upgrade or downgrade the controller.

**Example:**

```
apic1(config-firmware-controller)# exit
apic1(config-firmware)# exit
apic1(config)# exit
apic1# firmware upgrade controller-group
```

The Cisco APICs are upgraded or downgraded serially so that the controller cluster is available during the upgrade or downgrade. The upgrade or downgrade occurs in the background.

**Step 6** Verify the upgrade or downgrade for the controller.

**Example:**

```
apic1# show firmware upgrade status
```

Pod	Node	Current-Firmware	Target-Firmware	Status
		Upgrade-Progress (%)		
1	1	apic-2.3(0.376a)		success
	100			
1	2	apic-2.3(0.376a)		success
	100			
1	3	apic-2.3(0.376a)		success
	100			
1	101	n9000-12.3(0.102)	n9000-12.3(0.102)	success
	100			
1	102	n9000-12.3(0.102)	n9000-12.3(0.102)	success
	100			
1	103	n9000-12.3(0.100)	n9000-12.3(0.102)	upgrade in progress
	5			
1	104	n9000-12.3(0.102)	n9000-12.3(0.102)	success
	100			
1	201	n9000-12.3(0.102)	n9000-12.3(0.102)	success
	100			
1	202	n9000-12.3(0.100)	n9000-12.3(0.102)	upgrade in progress

```

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apic1#

```

# Upgrading or Downgrading the Switches Using the NX-OS Style CLI

## Procedure

**Step 1** Download the image from the source into the controller.

### Example:

```

admin@ifc1:~> scp <username>@<image_host_IP>:</filename_and_image_absolute_path> .
admin@ifc1:~> pwd
/home/admin
admin@ifc1:~> ls
<ver-no>.bin

```

**Step 2** Display repository information.

### Example:

```

apic1# show firmware repository

```

**Note** When you migrate to 6.0 (2) by using the CLI mode to upgrade the firmware, the maintenance group displays two target firmware versions. It displays both these images because their base version is the same. Both the firmware versions belong to the same release, where one version has the 64 bit extension and the other version does not have the 64 bit extension as shown below:

```

apic1(config-firmware-switch)# show running-config
# Command: show running-config firmware switch-group 64bit
# Time: Thu Jan 19 05:23:15 2023
firmware
  switch-group 64bit
  switch 102
  switch 103
  switch 104
  switch 105
  switch 152
  firmware-version aci-n9000-dk9.16.0.2.bin
  firmware-version aci-n9000-dk9.16.0.2-cs_64.bin
exit
exit

```

The `firmware-version aci-n9000-dk9.16.0.2.bin` and `firmware-version aci-n9000-dk9.16.0.2-cs_64.bin` firmware statements in the above output shows 2 firmware versions are present even though 1 is configured.

**Step 3** Add the firmware image to the repository.

```

apic1# firmware repository add <image_filename>

```

### Example:

```

apic1# firmware repository add aci-apic-dk9.2.0.1r.iso

```

**Step 4** Configure the switch group for upgrade.

```
apicl# configure
apicl(config)# firmware
apicl(config-firmware)# switch-group <switch_group>
apicl(config-firmware-switch)# switch <switches_to_add_to_group>
apicl(config-firmware-switch)# firmware-version <image_filename>
```

**Example:**

```
apicl# configure
apicl(config)# firmware
apicl(config-firmware)# switch-group group1
apicl(config-firmware-switch)# switch 101-104,201,202
apicl(config-firmware-switch)# firmware-version aci-n9000-dk9.12.2.2e.bin
```

**Note** You can also use the **no** argument with the **switch** command above to remove switches from the group:

**Example:**

```
apicl(config-firmware-switch)# no switch 203,204
```

**Step 5** Specify whether to proceed to the next set of nodes if the upgrade fails on the current set of nodes.

```
apicl(config-firmware-switch)# [no] run-mode {pause-never | pause-on-failure}
```

**Example:**

```
apicl(config-firmware-switch)# run-mode pause-on-failure
```

**Step 6** Determine if you want to assign a scheduler for the upgrade or if you want to upgrade immediately.

- If you want to assign a scheduler for the upgrade, a scheduler must exist to specify when the upgrade will be executed.

See [About Upgrading or Downgrading with the Scheduler](#) for more information about the scheduler.

To assign that existing scheduler for the upgrade:

```
apicl(config-firmware-switch)# schedule <scheduler_name>
```

For example:

```
apicl(config-firmware-switch)# schedule myNextSunday
```

- If you want to upgrade immediately, return to EXEC mode and type the command **firmware upgrade switch-group**.

**Note** The **firmware upgrade switch-group** command performs the upgrade immediately in this situation.

This takes priority over any configured scheduled upgrades.

```
apicl(config-firmware-switch)# exit
apicl(config-firmware)# exit
apicl(config)# exit
apicl# firmware upgrade switch-group <switch_group>
```

For example:

```
apicl(config-firmware-switch)# exit
apicl(config-firmware)# exit
apicl(config)# exit
apicl# firmware upgrade switch-group group1
```

**Step 7** Verify the upgrade status for the switch group.

```
apic1# show firmware upgrade status switch-group <switch_group>
```

The output that is produced from this command will vary, depending on the release:

- For releases prior to Release 4.2(5), output similar to the following appears:

Pod	Node	Current-Firmware	Target-Firmware	Status	Upgrade-Progress(%)
1	1	apic-2.3(0.376a)		success	100
1	2	apic-2.3(0.376a)		success	100
1	3	apic-2.3(0.376a)		success	100
1	101	n9000-12.3(0.102)	n9000-12.3(0.102)	success	100
1	102	n9000-12.3(0.102)	n9000-12.3(0.102)	success	100
1	103	n9000-12.3(0.100)	n9000-12.3(0.102)	upgrade in progress	5
1	104	n9000-12.3(0.102)	n9000-12.3(0.102)	success	100
1	201	n9000-12.3(0.102)	n9000-12.3(0.102)	success	100
1	202	n9000-12.3(0.100)	n9000-12.3(0.102)	upgrade in progress	5

```
apic1#
```

- For Release 4.2(5) and later, output similar to the following appears, where the **Download-Status** and **Download-Progress(%)** columns are now available to provide additional information:

Pod	Node	Current-Firmware	Target-Firmware	Status	Upgrade-Progress(%)	Download-Status	Download-Progress(%)
1	101	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	107	n9000-15.0(0.138)	n9000-15.0(0.144)	waiting in queue	0	downloaded	100
1	108	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	112	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	113	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	121	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	122	n9000-15.0(0.138)	n9000-15.0(0.144)	waiting in queue	0	downloaded	100
1	123	n9000-15.0(0.138)	n9000-15.0(0.144)	waiting in queue	0	downloaded	100
1	124	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	126	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	127	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	128	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	130	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
2	171	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
2	172	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
2	173	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
2	174	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
2	175	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
2	196	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
2	197	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	201	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
2	303	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	501	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	502	n9000-15.0(0.138)	n9000-15.0(0.144)	waiting in queue	0	downloaded	100
1	1001	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	1002	n9000-15.0(0.138)	n9000-15.0(0.144)	waiting in queue	0	downloaded	100
1	1901	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	1902	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	1903	n9000-15.0(0.138)	n9000-15.0(0.144)	upgrade in progress	45	downloaded	100
1	3999	n9000-15.0(0.138)	n9000-15.0(0.144)	waiting in queue	0	downloaded	100

```
apic1#
```

# Upgrading or Downgrading the Catalog Software Version Using the NX-OS Style CLI

By default, upgrading or downgrading the controllers automatically upgrades or downgrades the catalog that corresponds to the controller version. That is, adding a controller image to the repository adds a catalog image into the repository as well.

You can also copy a separate catalog image and add that to the repository.

## Procedure

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**Step 1** Add the catalog image to the repository.

**Example:**

```
apicl(config)# firmware
apicl(config-firmware)# catalog-version aci-catalog-dk9.2.2.2e.bin
```

**Step 2** Verify the catalog upgrade status.

**Example:**

```
apicl# show catalog
Catalog-version : 2.2(2e)
apicl#
```

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