# Upgrade Catalyst 9200 switches

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## Introduction

This document describes the methods for upgrading Catalyst 9200 switches.

## Prerequisites

### Requirements

There are no specific requirements for this document.

### Components Used

The information in this document is based on C9200.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

## Background Information

This document covers upgrade procedures for Catalyst 9200 switches that use either BUNDLE or INSTALL modes. ISSU upgrade method is not supported on Catalyst 9200 switches.

## Recommended Releases

For the recommended software versions based on the downloads page, please consult this link:

Recommended Releases for Catalyst 9000 Switches

# Software Download

To download the software, please visit https://software.cisco.com/download/home and select your product.

# Essential Criteria for Upgrade

•A maintenance window of 2-3 hours is sufficient for upgrading to the target version or rolling back to the previous version if any issues arise.

•Ensure you have a 4GB or 8GB USB drive with the .bin files of both the current and target Cisco IOS® versions. The USB drive must be formatted in FAT32 to copy the Cisco IOS® image.

•Verify that TFTP is set up with both the current and target Cisco IOS® versions and is reachable to download these versions to the switch if needed.

•Confirm that console access to the device is available in case any issues occur.

•Ensure there is at least 1GB to 1.5GB of available space in the flash memory for the expansion of the new image. If there is insufficient space, remove old installation files.

# Rommon Upgrade & Bootloader Upgrade

When you upgrade from the existing release on your switch to a later or newer release for the first time, the boot loader can be automatically upgraded, based on the hardware version of the switch. If the bootloader is automatically upgraded, it takes effect on the next reload. If you go back to the older release after this, the boot loader is not downgraded. The updated bootloader supports all previous releases.

To know the bootloader version that applies to every major and maintenance release, see these links.

ROMMON Versions for 17.x.x

ROMMON Versions for 16.x.x

# Upgrade Methods

This document covers upgrade procedures for Catalyst 9200 switch that uses either BUNDLE or INSTALL modes.

## Install Mode

An install mode upgrade on a Cisco Catalyst 9200 switch is a method of upgrading the switch software that involves using individual software packages rather than a single monolithic image file.

When upgradingto any newer version in INSTALL mode, the "install" commands are utilized.

Perform the outlined steps for an upgrade in Install mode.

1. Cleanup
Remove any inactive installations with the command:

```
Switch#install remove inactive
```

2. Copying the New Image

Transfer the new .bin image file to the active switch flash storage using one of these methods:

Via TFTP:

```
Switch#copy tftp://Location/directory/<file_name> flash:
```

Via USB:

```
Switch#copy usbflash0:<file_name> flash:
```

Confirm the available file systems with:

```
Switch#show file systems
```

3. Verification

• After transferring the Cisco IOS® to the active switch, check if the image is correctly copied with:

```
Switch#dir flash:
```

• (Optional) To verify the MD5 checksum, use the command:

```
Switch#verify /md5 flash:<file_name>
```

Make sure this checksum matches the one provided on the Software Download page.

4. Setting the Boot Variable

Set the boot variable to point to the packages.conf file with these commands:

```
Switch#configure terminal
Switch(config)#no boot system
Switch(config)#boot system flash:packages.conf
```

```
Switch(config)#end
```

5. Autoboot Configuration

Configure the switch to autoboot by executing:

```
Switch#configure terminal
Switch(config)#no boot manual
Switch(config)#end
```

6. Saving Configuration

Save your current configuration with:

```
Switch#write memory
```

Confirm the boot settings with the command:

```
Switch#show boot
```

7. Installation of the Image

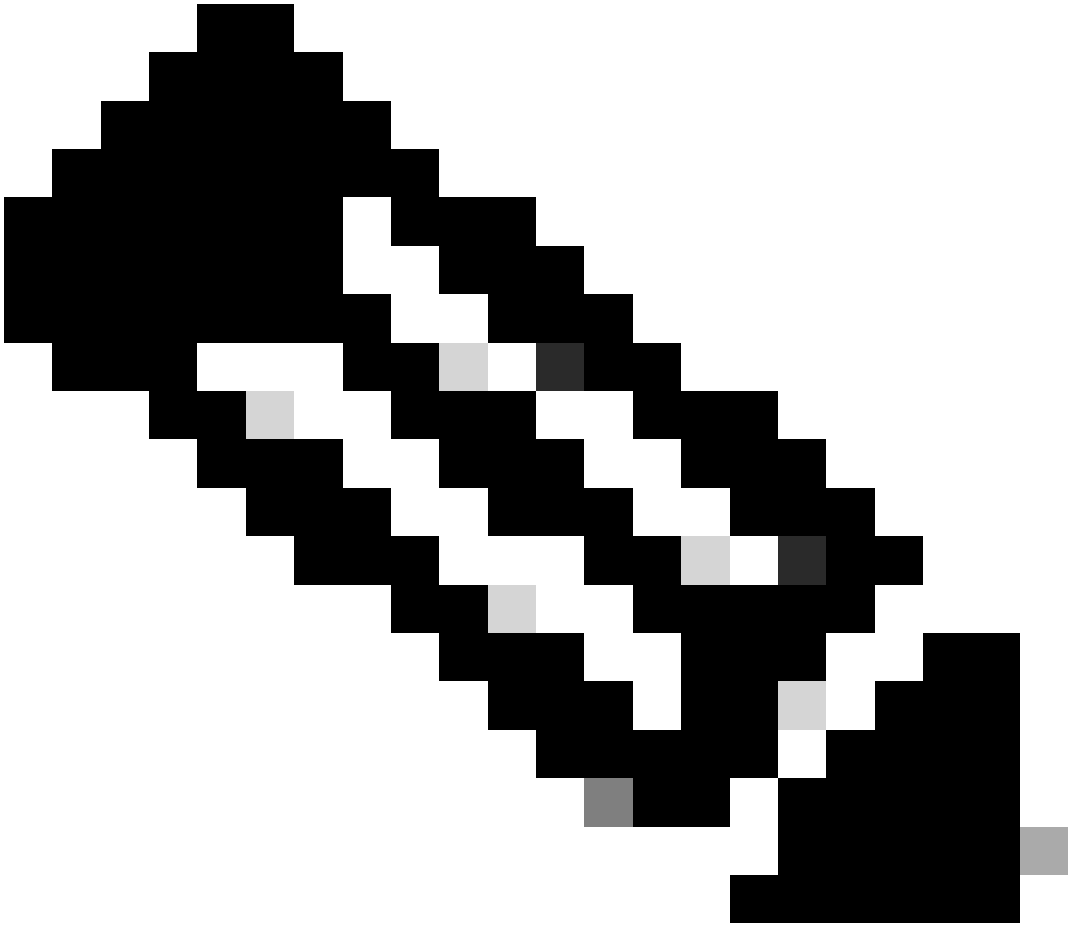
To install the image, use the command:

```
Switch#install add file flash:<file_name> activate commit
```

When prompted with "This operation requires a reload of the system. Do you want to proceed? [y/n]," respond with "y" to proceed.

8. Verification of the successful upgrade

```
Switch#show version
```



**Note**: Replace with the actual name of your Cisco IOS® image file throughout the steps.

## Bundle Mode

A bundle mode upgrade on a Cisco Catalyst 9200 switch refers to a method of upgrading the switch software where the entire software image is bundled into a single file. This file includes all the necessary components such as the operating system, device drivers, and other essential software required for the switch to operate. The upgrade involves a single software image file, typically with a .bin extension. This contrasts with other methods, such as install mode, which can involve multiple files and packages.

For C9200 we can upgrade directly from 16. x.x to 17. x.x train or within 17. x.x train in INSTALL and BUNDLE mode. Please refer to the release notes of the target Cisco IOS® which is found externally for more understanding.

Perform the outlined steps for an upgrade in Bundle mode.

1. Transfer the new image (.bin file) to the flash memory of each stack member in the standalone switch or stack using one of these methods

• Via TFTP:

```
Switch#copy tftp://location/directory/<file_name> flash-x: (Replace 'x' with the respective switch numb
```

• Via USB:

```
Switch#copy usbflash0:<file_name> flash-x: (Replace 'x' with the respective switch number in the stack)
```

2. Confirm the available file systems by using the command

```
Switch#show file systems
```

3. After replicatingthe Cisco IOS® to all member switches, verify that the image has been correctly copied with

```
Switch#dir flash-x: (Replace 'x' with the respective switch number in the stack)
```

4. (Optional) Verify the MD5 checksum with the command

```
Switch#verify /md5 flash-x:<file_name>
```

Ensure that the output matches the MD5 checksum value provided on the Software Download page.

5. Configure the boot variable to point to the new image file with these commands

```
Switch#configure terminal
Switch(config)#no boot system
Switch(config)#boot system flash:<file_name>.bin
Switch(config)#end
```

6 .Save the configuration

```
Switch#write memory
```

7. Verify the boot settings using

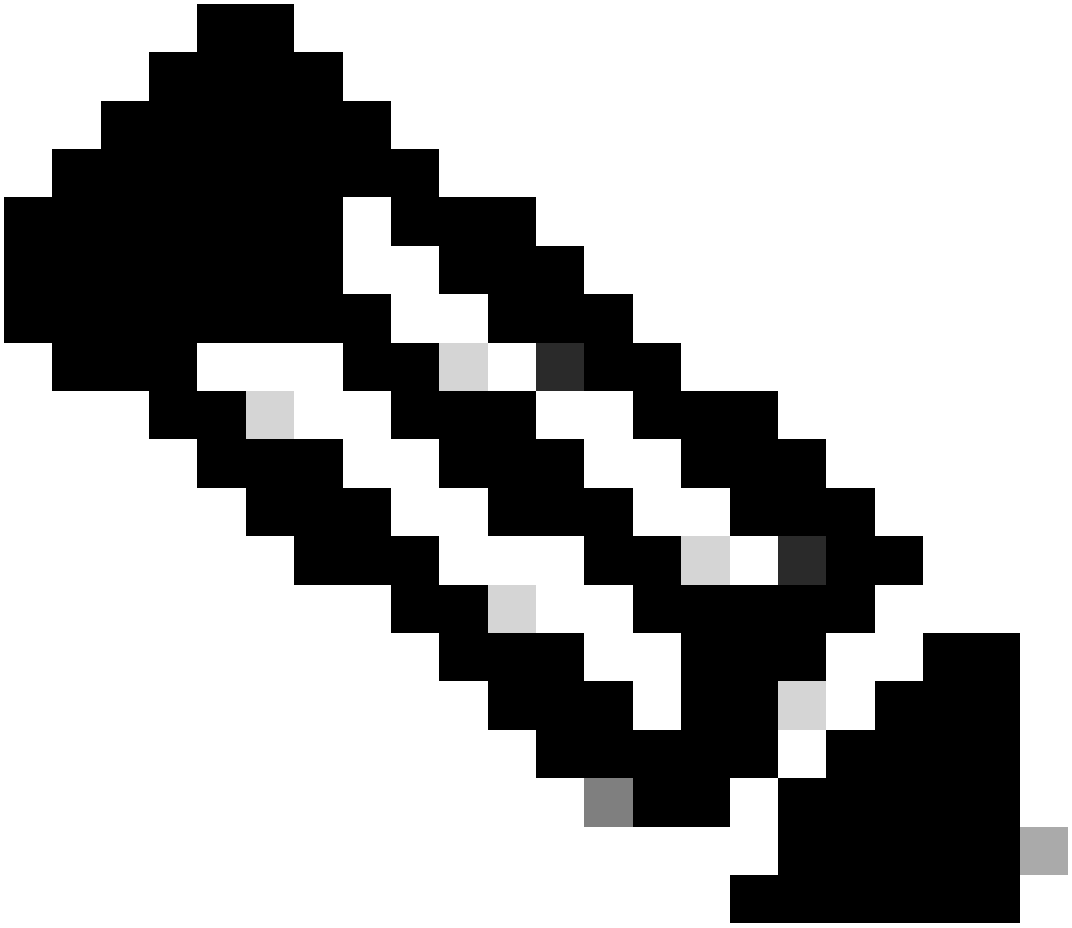
```
Switch#show boot
```

8. Reload the switch to apply the new Cisco IOS®.

```
Switch#reload
```

9. Verification of the successful upgrade

```
Switch#show version
```



**Note**: Replace with the actual name of your Cisco IOS® image file throughout the steps.