



Upgrading Your CSS Software

New software versions are periodically released for the CSS. This appendix provides information on how to upgrade your CSS with a new software release. This appendix contains the following major sections:

- [Before You Begin](#)
- [Upgrading Your CSS Software](#)
- [Updating MIBs](#)



Note

When syntax changes are made to existing CLI commands, the CSS updates your startup-config file automatically with most command syntax changes. For example, the CSS automatically updates the **web-mgmt state enabled** command in the startup-config file to the new **no restrict web-mgmt** command. If the CSS does not update a command syntax change in a startup-config file automatically, a startup error is displayed. Refer to the *Release Note for the Cisco Series Content Services Switch* for information on which command syntax changes display startup-config file errors.

Before You Begin

Before you can upgrade your CSS, you must copy the new CSS software to your FTP server and configure an FTP server record so the CSS recognizes the server. Use the **show installed-software version-limit** command to display the maximum number of installed versions allowed on your hard disk or Flash disk.

Copying the New CSS Software

ArrowPoint Distribution Images (ADIs) of the CSS software versions are located on the Cisco Systems Web site (www.cisco.com). Use your customer login and password to access this page. From this location, access the page listing the versions of GZIP-compressed software, then click an image to download it. Once the image is downloaded, place it on an FTP server that the CSS can access.

**Note**

You do not need to uncompress the GZIP-compressed software. When you copy the software, or if the upgrade script copies the software to the CSS, the CSS automatically uncompresses it.

Configuring an FTP Server Record on the CSS

Before you can copy the ADI from the FTP server to the CSS, you must create an FTP record file on the CSS identifying the ADI. The record contains the IP address, username, and password for the server. To configure an FTP server record:

1. Log in to the CSS.
2. Access global configuration mode:

```
# config  
(config)#
```

3. Use the **ftp-record** command to configure the default FTP server. The syntax is:

```
ftp-record ftp_record ip_or_host username  
    [“password”|encrypted-password encrypted_pwd] {base_directory}
```

The options and variables for this command are:

- *ftp_record* - Name for this FTP record file. Enter an unquoted text string with no spaces and a maximum of 32 characters.
- *ip_or_host* - IP address or host name of the FTP server you want to access. Enter an IP address in dotted-decimal notation (for example, 192.168.11.1) or a mnemonic host name (for example, myhost.mydomain.com).
- *username* - Valid login username on the FTP server. Enter a case-sensitive unquoted text string with no spaces and a maximum of 32 characters.
- *password* - Password for the valid login username on the FTP server. Enter a case-sensitive, quoted text string with no spaces and a maximum of 16 characters. The CSS allows all special characters in a password except for the percent sign (%).
- **encrypted-password** *encrypted_pwd* - Encrypted password for the valid login username on the FTP server. Enter a case-sensitive, unquoted text string with no spaces and a maximum of 16 characters.
- *base_directory* - (Optional) Base directory when using this record.

For example:

```
(config)# ftp-record DEFAULT_FTP 192.168.2.01 eng1  
encrypted-password serve
```

You can now upgrade your CSS.

Upgrading Your CSS Software

This section includes the following topics:

- [Using the Upgrade Script](#)
- [Manually Upgrading the CSS Software](#)

Using the Upgrade Script

The upgrade script allows you to upgrade your CSS without having to enter any CLI commands. There are two ways to run the script:

- [Automatically Running the Upgrade Script](#)
- [Interactively Using the Upgrade Script](#)

If the upgrade script fails while upgrading the CSS to the same version of software that is currently running, the CSS software directory will be incomplete. To reinstall the software, you must upgrade the CSS manually (that is, use FTP to transfer the .adi to the CSS and perform a manual unpack).

Automatically Running the Upgrade Script

You can run the upgrade script to perform the software upgrade without having to enter any information. The script automatically:

- Checks to see how many installed software versions are installed on the CSS. For the Cisco 11000 series CSS, you can install a maximum of four software versions. If the CSS contains the maximum number of installed software versions, the script deletes an older version.

**Note**

The script does not prompt you to delete a version of software that you configured as the primary or secondary boot file. On a Flash disk-based system, you may need to quit and then deselect the primary or secondary boot file before continuing with the upgrade.

- Archives the running configuration to the startup configuration.
- Copies the new ADI to the CSS boot-image directory.
- Unpacks the new ADI.
- Sets the primary boot file to the new ADI.
- Reboots the CSS.

To upgrade your CSS software using the upgrade script:

1. Log in to the CSS.
2. Archive your custom scripts and user-profile files from the CSS scripts directory to the archive directory. The upgrade overwrites files in the script directory but does not overwrite files in the archive directory. After the upgrade, you will restore these files to the scripts directory.

To archive each file to the archive directory, use the **archive script** command. The syntax for this command is:

```
archive script script_filename {archive_filename}
```

The variables are as follows:

- *script_filename* - The filename of the script to archive. To see a list of scripts, enter:

```
# archive script ?
```
- *archive_filename* - (Optional) The name you want to assign to the archive file. Enter an unquoted text string with a maximum of 32 characters.

For example, to archive the admin-profile file from the scripts directory to the archive directory, enter:

```
# archive script admin-profile
```

To copy any changes to your current user profile to the script directory and then archive the profile to the archive directory, use the alias **save_profile** command. For example, enter:

```
# save_profile
```

3. Start the upgrade script and put the name of the ADI and its extension in quotes.
 - If you are using a GZIP-compressed ADI from the FTP server, include the `.gz` file extension. For example:

```
# upgrade "ap0720002.adi.gz"
```

- If you are using an uncompressed version of the ADI from the FTP server, include the `.adi` file extension. For example:

```
# upgrade "ap0720002.adi"
```

If you did not configure a default FTP record before starting the upgrade script, the script prompts you to configure one. You can either:

- Allow the CSS to automatically configure a record to the server containing the ADI
- At the prompts, manually configure the FTP record by entering the FTP server information where you copied the upgrade ADI

When you configure a default FTP record, you see the following information during the upgrade:

```
Current Version:ap0720002 (Build 2)
```

```
*** You must remove an installed version to upgrade. ***
```

```
Attempting to delete ap0720001
```

```
archive running-config startup-config
```

```
Attempting ftp of ap0720002.adi:
```

```
# copy ftp DEFAULT_FTP ${new_version_adi} boot-image
```

```
Copying (-) 57,241,012
```

```
Completed successfully.
```

```
 #(config-boot)#
```

```
unpack ${new_version_adi}
```

```
Unpacking(/) 99%
```

```
(config-boot)#
```

```
setting primary boot-file ap0720002
```

```
rebooting
```

The CSS automatically performs a Flash upgrade, if necessary, and then boots the new image.

4. After you upgrade the software in a CSS 11800 that contains a passive SCM, use the **passive sync** command in boot-config mode (or the **passive sync** macro command) immediately after upgrading your CSS software to synchronize the boot configurations on the redundant SCMs. Refer to [Chapter 4, Specifying the CSS Boot Configuration](#) for details on configuring a boot configuration record for a passive SCM.
5. Use the **restore** command to restore the startup-config file, custom scripts, and user-profile files previously archived in the CSS archive directory. To see a list of files in the archive directory, enter:

```
# restore ?
```

- To restore the startup-config file, use the **restore filename startup-config** command. For example, to restore the startup-config file in the archive directory as the startup-config file on the CSS, enter:

```
# restore startup-config startup-config
```

- To restore each custom script and user profile file to the script directory, use the **restore filename script** command. For example, to restore the admin-profile filename to the CSS script directory, enter:

```
# restore admin-profile script
```

Interactively Using the Upgrade Script

The upgrade script allows you to enter information and make selections by responding to prompts as it runs. Before the script performs the upgrade, it prompts you to:

- Remove ADIs from the CSS if the script detects four installed versions on a hard disk-based system or on a Flash disk-based system
- Enter the version of the new ADI
- Set the primary boot-file to the new ADI
- Reboot the CSS with the ADI you are installing after the upgrade is done
- Archive the running configuration to the startup configuration

To use the interactive version of the script:

1. Log in to the CSS.
2. Archive your custom scripts and user-profile files from the CSS scripts directory to the archive directory. The upgrade overwrites files in the script directory but does not overwrite files in the archive directory. After the upgrade, you will restore these files to the scripts directory.

To archive each file to the archive directory, use the **archive script** command. The syntax for this command is:

```
archive script script_filename {archive_filename}
```

The variables are as follows:

- *script_filename* - The filename of the script to archive. To see a list of scripts, enter:

```
# archive script ?
```
- *archive_filename* - (Optional) The name you want to assign to the archive file. Enter an unquoted text string with a maximum of 32 characters.

For example, to archive the admin-profile file from the scripts directory to the archive directory, enter:

```
# archive script admin-profile
```

To copy any changes to your current user profile to the script directory and then archive the profile to the archive directory, use the alias **save_profile** command. For example, enter:

```
# save_profile
```

3. Start the upgrade script. For example:

```
# upgrade
```

If you did not configure a default FTP record before starting the upgrade script, the script prompts you to configure one. You can either:

- Allow the CSS to automatically configure a record to the server containing the ADI
- At the prompts, manually configure the FTP record by entering the FTP server information where you copied the upgrade ADI

When a default FTP record is configured, the script displays the current version of the ADI.

```
Current Version: ap0720002 (Official)
```

If the script detects the maximum number of ADIs, a message informs you to remove an ADI. Then the script prompts you to remove an older ADI. For example:

```
*** You must remove an installed version to upgrade.***
```

```
remove ap0720001[y n q]?
```



Note The script does not prompt you to delete a version of software that you configured as the primary or secondary boot file. On a Flash disk-based system, you may need to quit and then deselect the primary or secondary boot file before continuing with the upgrade.

4. Remove the ADI, if necessary.

- Enter **y** to remove the displayed ADI version.
- Enter **n** for the script to display another version to remove.
- Enter **q** to exit from the script.

```
remove ap0720001 [y n q]? y
```

```
Attempting to delete ap0720001
```

5. Enter the filename and extension of the GZIP-compressed ADI version to install at the prompt, and verify the information you entered. If you are using an uncompressed version of the ADI from the FTP server, include the **.adi** file extension (for example, ap0720002.adi). For example:

```
Please Enter Version to Install: ap0720002.adi.gz
```

```
Upgrade to Version ap0720002? [y n q] y
```

6. Determine whether to set the ADI as the primary boot file.

- Enter **y** to set the ADI as the primary boot-file and change the CSS configuration.
- Enter **n** to keep the same primary boot-file configuration.

```
Set primary boot-file to Version ap0720002? [y n q] y
```

7. Determine whether to have the CSS reboot with the ADI.
 - Enter **y** to reboot the CSS with this ADI after the upgrade is done.
 - Enter **n** to not reboot the CSS with the ADI after the upgrade is done.

```
Reboot with Version ap0720002? [y n q] n
```

8. Determine whether to have the CSS archive the contents of the running-config file to the startup-config file.
 - Enter **y** to archive the contents of the running-config file to the startup-config file.
 - Enter **n** to keep the same startup configuration.

```
Archive running-config to startup-config? [y n q] y
```

```
archive running-config startup-config
```

The script copies the ADI from the FTP server, unpacks and installs it, and sets the ADI as the primary boot file.

```
Attempting ftp of ap0720002.adi.gz:
```

```
# copy ftp DEFAULT_FTP ${new_version_adi} boot-image
```

```
Copying (-) 57,241,012
```

```
Completed successfully.
```

```
#
```

```
(config-boot)# unpack ${new_version_adi}
```

```
unpacking(/) 99%
```

```
(config-boot)#
```

```
setting primary boot-file ap0720002
```

9. If you decided to reboot the CSS with the installed ADI in Step 7, the CSS reboots automatically. If you made the ADI the primary boot file and archived the contents of the running-config file to the startup-config file, the CSS automatically performs a Flash upgrade, if necessary, and then boots the new image.

To manually reboot the system, enter the following commands:

```
(config)# boot  
(config-boot)# reboot
```

10. After you upgrade the software in a CSS 11800 that contains a passive SCM, use the **passive sync** command in boot-config mode (or the **passive sync** macro command) immediately after upgrading your CSS software to synchronize the boot configurations on the redundant SCMs. Refer to [Chapter 4, Specifying the CSS Boot Configuration](#) for details on configuring a boot configuration record for a passive SCM.
11. Use the **restore** command to restore the startup-config file, custom scripts, and user-profile files previously archived in the CSS archive directory. To see a list of files in the archive directory, enter:

```
# restore ?
```

- To restore the startup-config file, use the **restore filename startup-config** command. For example, to restore the startup-config file in the archive directory as the startup-config file on the CSS, enter:

```
# restore startup-config startup-config
```

- To restore each custom script and user profile file to the script directory, use the **restore filename script** command. For example, to restore the admin-profile filename to the CSS script directory, enter:

```
# restore admin-profile script
```

Manually Upgrading the CSS Software

If desired, you can manually enter CLI commands to upgrade the CSS. Make sure you configure a default FTP server, as described in the [“Before You Begin”](#) section.

To manually upgrade the software version on your CSS:

1. Log in to the CSS.
2. Remove an older version of the ADI from the CSS if there are four installed versions.



Caution

Do not remove the ADI currently running on the CSS. Use the **version** command to see the currently running software version.

To remove an ADI:

- a. List the ADIs on the CSS.

```
(config)# show installed-software
ap0720001
ap0720002
```

- b. Access boot mode:

```
(config)# boot
(config-boot)#
```

- c. Use the **remove** command to remove the ADI.

```
(config-boot)# remove ap0720001
```

3. Archive your running configuration to the startup config file. For example:

```
# config
(config)# archive running-config startup-config
```

You can also use the **save_config** alias to archive your startup-config file. To view all available aliases, use the **show aliases** command.

4. Archive your custom scripts and user-profile files from the CSS scripts directory to the archive directory. The upgrade overwrites files in the script directory but does not overwrite files in the archive directory. After the upgrade, you will restore these files to the scripts directory.

To archive each file to the archive directory, use the **archive script** command. The syntax for this command is:

```
archive script script_filename {archive_filename}
```

The variables are as follows:

- *script_filename* - The filename of the script to archive. To see a list of scripts, enter:

```
# archive script ?
```
- *archive_filename* - (Optional) The name you want to assign to the archive file. Enter an unquoted text string with a maximum of 32 characters.

For example, to archive the admin-profile file from the scripts directory to the archive directory, enter:

```
# archive script admin-profile
```

To copy any changes to your current user profile to the script directory and then archive the profile to the archive directory, use the alias **save_profile** command. For example, enter:

```
# save_profile
```

5. Copy the new ADI to the CSS as the boot-image. If you are copying an uncompressed version of the ADI from the FTP server, include the .adi file extension (for example, ap0720002.adi).

```
(config-boot)# exit
```

```
(config)# copy ftp DEFAULT_FTP ap0720002.adi.gz boot-image
```

DEFAULT_FTP is the FTP record file defined in the “[Configuring an FTP Server Record on the CSS](#)” section.



Note When you copy a GZIP-compressed ADI onto the CSS, the CSS automatically uncompresses it.

6. Unpack the ADI.

```
(config)# boot
```

```
(config-boot)# unpack ap0720002.adi
```

7. Set the new ADI as the primary boot file and install it. For example:

```
(config-boot)# primary boot-file ap0720002
```

8. Reboot the system.

```
(config)# boot
```

```
(config-boot)# reboot
```

The CSS automatically performs a Flash upgrade, if necessary, and then boots the new image.

9. After you upgrade the software in a CSS 11800 that contains a passive SCM, use the **passive sync** command in boot-config mode (or the **passive sync** macro command) immediately after upgrading your CSS software to synchronize the boot configurations on the redundant SCMs. Refer to [Chapter 4, Specifying the CSS Boot Configuration](#) for details on configuring a boot configuration record for a passive SCM.

10. Use the **restore** command to restore the startup-config file, custom scripts, and user-profile files previously archived in the CSS archive directory. To see a list of files in the archive directory, enter:

```
# restore ?
```

- To restore the startup-config file, use the **restore filename startup-config** command. For example, to restore the startup-config file in the archive directory as the startup-config file on the CSS, enter:

```
# restore startup-config startup-config
```

- To restore each custom script and user profile file to the script directory, use the **restore filename script** command. For example, to restore the admin-profile filename to the CSS script directory, enter:

```
# restore admin-profile script
```

Updating MIBs

Typically, MIBs do not change for maintenance or sustaining releases. If there are MIB changes, the changes are clearly stated in the CSS release notes. In those cases, we recommend that you update the CSS Enterprise MIBs.

CSS Enterprise MIBs are included in the CSS GZIP file. During the software upgrade, the MIBs are loaded into the CSS /mibs directory.

To update the CSS MIBs on your management station after you upgrade the CSS:

1. Use FTP to transfer the MIBs from the CSS MIBs (/v1 or /v2) directory to your management station.
2. Load the MIBs into the management application.

Refer to [Chapter 12, Configuring Simple Network Management Protocol \(SNMP\)](#) for information on CSS Enterprise MIBs.