



## Upgrading BIOS Versions Remotely

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This chapter explains how to perform a remote BIOS upgrade for the Content Engine. This chapter contains the following sections:

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### Introduction

In Intel x86-based computers, such as the Content Engine, the basic input output system (BIOS) is the first software to execute when you power up or restart the system. The BIOS is responsible for initially configuring the processors, memory controller, RAM, and various other hardware devices. Additionally, the BIOS may perform power-on self test (POST) operations. After the BIOS completes the software initialization, the BIOS loads an operating system bootloader from the configured boot device. On ACNS devices, the BIOS typically loads the ACNS bootloader from the Content Engine flash memory (unless you are booting from a CD-ROM, which some models support). BIOS upgrades might be necessary to fix BIOS bugs related to hardware initialization. BIOS upgrades are less frequently required than typical operating system and application upgrades.

### Supported Hardware

The following hardware models currently support remote BIOS upgrades:

- CE-511-K9
- CE-566-144GB-K9
- WAE-511-K9
- WAE-611-K9
- WAE-7326-K9

## Required Items

All BIOS files needed for a particular hardware model BIOS upgrade are available on Cisco.com as a single .bin package file. This file is a special ACNS-installable .bin file that you can install by using the normal software upgrade procedure.

To upgrade the BIOS version on a Content Engine that supports BIOS version upgrades, you need the following items:

- FTP or HTTP server with the software files
- Network connectivity between the device to be upgraded and the server hosting the upgrade files
- Appropriate .bin BIOS upgrade file

## Upgrading the BIOS Using the CLI

**Caution**

Be *extraordinarily* careful when upgrading a flash BIOS. Make *absolutely* sure that the BIOS upgrade patch is the exact one required. If you apply the wrong patch, you can render the system unbootable, making it difficult or impossible to recover even if you reapply the proper patch.

**Caution**

Because a failed flash BIOS upgrade can have critical results, never upgrade a flash BIOS without first connecting the system to an uninterruptable power supply (UPS).

To install the BIOS upgrade file, follow these steps:

**Step 1** Install the BIOS upgrade file by using the **copy ftp install** or **copy http install EXEC** command:

```
ContentEngine# copy ftp install ftp-server remote_file_dir hw_bios.bin
```

```
ContentEngine# copy http install http-server remote_file_dir hw_bios.bin  
[portnumber]
```

**Step 2** After the BIOS upgrade file is copied to your system, reboot by using the **reload EXEC** command.

```
ContentEngine# reload
```

The new BIOS takes effect after the system reboots.

## Sample Output

All output is written to a separate file (/local/local1/.bios\_upgrade.txt) for traceability. The hardware-dependent files that are downloaded from Cisco.com for the BIOS upgrade are automatically deleted from the Content Engine after the BIOS upgrade procedure has been completed.

The following sample output is taken from a WAE-7326 appliance:

```
wae-7326# copy ftp install upgradeserver /bios/update53/derived/ 7326_bios.bin  
Enter username for remote ftp server: myusername  
Enter password for remote ftp server:
```

```
Initiating FTP download...
printing one # per 1MB downloaded
Sending:USER myusername
upgradeserver.cisco.com FTP server (Version wu-2.6.1-18) ready.
Password required for myusername.
Sending:PASS *****
Please read the file README_dotfiles
  it was last modified on Wed Feb 19 16:10:26 1997 - 2877 days ago
Please read the file README_first
  it was last modified on Wed Feb 19 16:05:29 1997 - 2877 days ago
User myusername logged in.
Sending:TYPE I
Type set to I.
Sending:PASV
Entering Passive Mode (128,107,193,240,57,37)
Sending:CWD /bios/update53/derived/
CWD command successful.
Sending PASV
Entering Passive Mode (128,107,193,240,146,117)
Sending:RETR 7326_bios.bin
Opening BINARY mode data connection for 7326_bios.bin (834689 bytes).
Fri Jan 7 15:29:07 UTC 2005
BIOS installer running!
Do not turnoff the system till BIOS installation is complete.
Flash chipset:Macronix 29LV320B
0055000.FLS:280000 [80000]
Erasing block 2f:280000 - 28ffff
Erasing block 30:290000 - 29ffff
Erasing block 31:2a0000 - 2affff
Erasing block 32:2b0000 - 2bffff
Erasing block 33:2c0000 - 2cffff
Erasing block 34:2d0000 - 2dffff
Erasing block 35:2e0000 - 2effff
Erasing block 36:2f0000 - 2fffff
Programming block 2f:280000 - 28ffff
Programming block 30:290000 - 29ffff
Programming block 31:2a0000 - 2affff
Programming block 32:2b0000 - 2bffff
Programming block 33:2c0000 - 2cffff
Programming block 34:2d0000 - 2dffff
Programming block 35:2e0000 - 2effff
Programming block 36:2f0000 - 2fffff
SCSIROM.BIN:260000 [20000]
Erasing block 2d:260000 - 26ffff
Erasing block 2e:270000 - 27ffff
Programming block 2d:260000 - 26ffff
Programming block 2e:270000 - 27ffff
PXEROM.BIN:250000 [10000]
Erasing block 2c:250000 - 25ffff
Programming block 2c:250000 - 25ffff
Primary BIOS flashed successfully
Cleanup BIOS related files that were downloaded....
The new software will run after you reload.
wae-7326#
```

## Upgrading the BIOS Using the Content Distribution Manager GUI

A BIOS upgrade using CDM is not supported.

