Upgrading OmniSwitch 6800 Series Switches to 6.3.1.R01

Overview

This instruction sheet documents how to upgrade OmniSwitch 6800 Series switches to 6.3.1.R01 software and firmware. The upgrade can be performed using the CLI, WebView, or SNMP. Alcatel recommends using WebView to perform the upgrade. For upgrade instructions using the CLI, see **Upgrading with the CLI** on page 11.

Note. To downgrade a switch (e.g., 6.3.1 to 6.1.2), see **Upgrade/Downgrade Software Matrix** on page 19.

Prerequisites

This instruction sheet requires that the following conditions exist, or are performed, before upgrading:

- The person performing the upgrade must:

  - be the responsible party for maintaining the switch's configuration

  - be aware of any issues that may arise from a network outage caused by improperly loading this code

  - understand that the switch must be rebooted and network users will be affected by this procedure

  - have a working knowledge of the switch to configure it to accept an FTP connection through the EMP or Network Interface (NI) Ethernet port.

- If the CLI is used, all CLI commands must be executed via a Console Port connection, not through a Telnet session. If you are performing a remote upgrade, the console port must be connected through a terminal server (via Telnet, PuTTY, etc.) in the same location as the switch you are upgrading.

Note. Do not proceed until all the above prerequisites have been met. Any deviation from these upgrade procedures will result in the malfunctioning of the switch. All steps in these procedures should be reviewed before beginning.

Upgrading with WebView

Upgrading the 6800 series switch to 6.3.1.R01 consists of the following steps:

1 Upgrading the Image Files

2 Upgrading the Bootrom/Miniboot Files.

Note. The steps must be performed in order. You must complete the image file upgrade **before** upgrading the Bootrom/Miniboot. Also, you must have a Bootrom/Miniboot version of 5.3.1.91.R02 or later, and a recommended build of 5.3.1.255.R02 or later on the switch you are upgrading.


Upgrading the Image Files

Follow the steps below to upgrade the image files to 6.3.1.R01.

1 Download the 6.3.1.R01 image files from the Alcatel Service and Support web site to your PC.

2 Log into the switch through WebView. (In dual redundant configurations you must log into the primary switch).

Note. Before proceeding with the remaining steps, make sure that the switch's Web Management Inactivity Timer is set to at least 10 minutes (default setting is 4 minutes). To view and change the setting, go to the **Session Type Parameters** page by selecting **Security** > **ASA** > **Sessions** > **Configuration**.

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3 Select **System** > **System Mgmt** > **Install** to locate and FTP the 6.3.1.R01 image files that you downloaded in Step 1. Click on the **Browse** button to locate the files. All of the files will appear in the "Selected" area.

4 Click on the **Remove All** button to move all of the files to the "Available" area; then select the following image files and click the **Add** button to move them to the "Selected" area as shown below: **Kbase.img**, **Keni.img**, **Ksecu.img**, **Kos.img**, and **Kadvroute.img** (optional add-on feature).
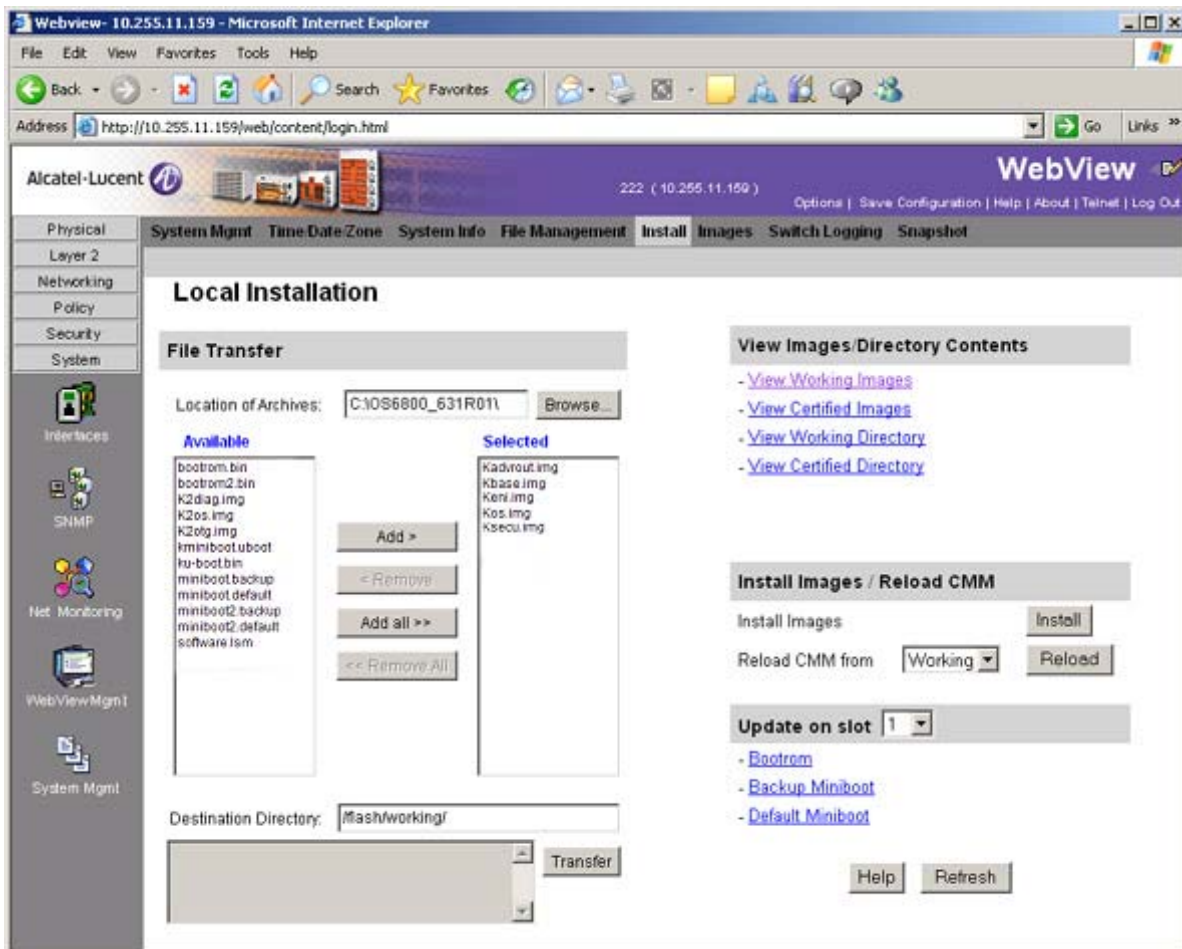
5 Transfer the files to the **flash/working** directory. Make sure the **Destination Directory** is **flash/work-ing**, then click the **Transfer** button. Wait until the process is complete (indicated in the area next to the **Transfer** button - "All files have been transferred successfully").

6 Reload the switch from the Working Directory. In the "Install Images/Reload CMM" area, select **Working** in the **Reload CMM From** field, then click the **Reload** button. Click **OK** at the warning prompt. Wait until the process is complete.

7 After the CMM finishes rebooting, log into WebView.

8 Install the images in the Working Directory. In the "Install Images/Reload CMM" area, click the **Install** button. Click **OK** at the warning prompt.

When the process is complete, the following message appears in the upper right corner of the screen: "set operation finished successfully." Wait until the process is complete before proceeding to the next step.

9 Copy the files to the Certified Directory and sync the Primary and Secondary CMMs (if applicable). Select **Physical** > **Chassis Mgmt** > **CMM** > **Management** as shown below.
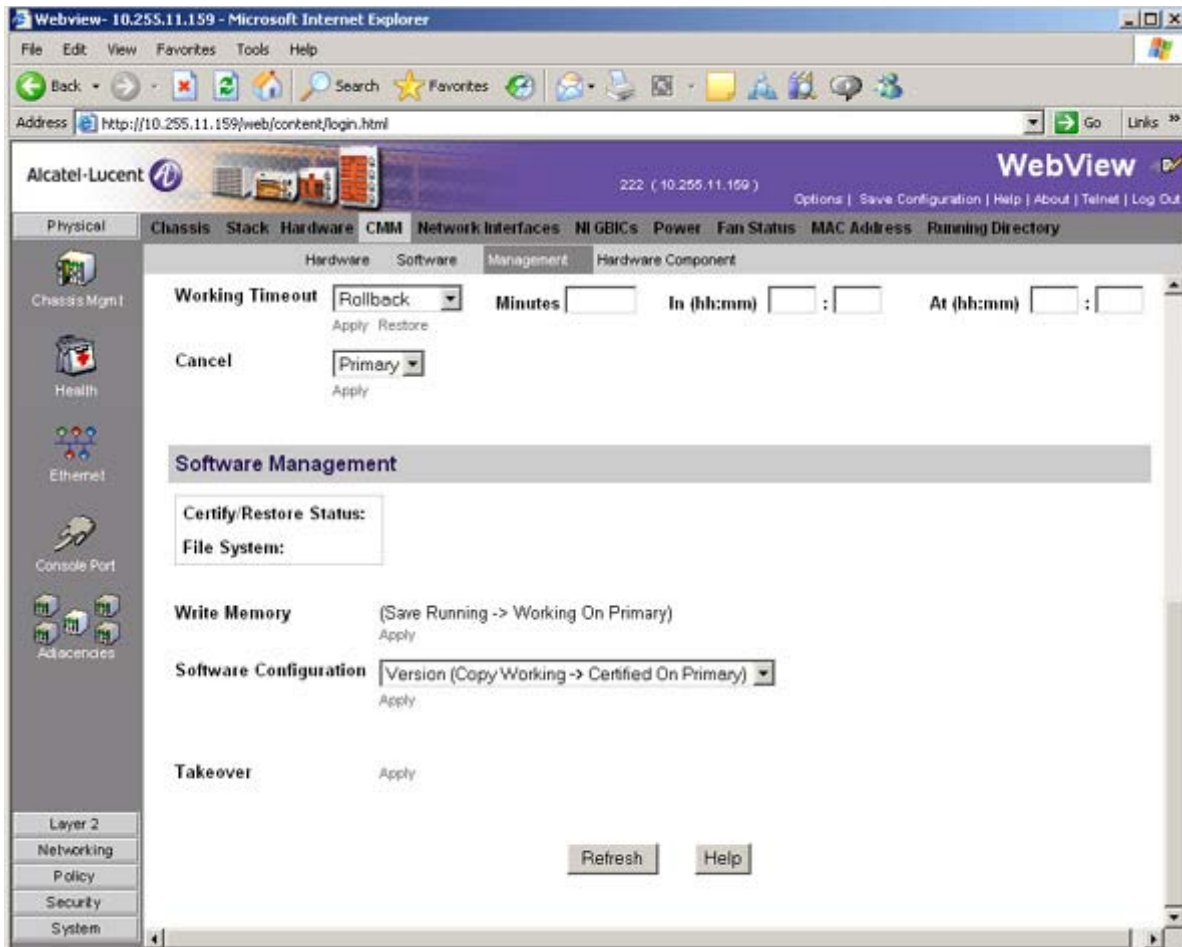
10 In the **Software Management** field, select **Copy Working -> Certified on Primary** for standalone switches. For a stack, select **Copy Working -> Certified & Synchronize with Secondary** and click **Apply**.

The switch will synchronize files from the working directory with all other stacks (if applicable). Note that the process can take 20 minutes or more in a stacked environment. This command should not be interrupted. Wait for the synchronization process to complete on all switches before proceeding to the next step. To confirm that the upgrade was successful, see **Verifying the Upgrade with WebView** on page 8.

Upgrading the Bootrom/Miniboot Files

Follow the steps below to upgrade the BootROM, Default Miniboot, and Backup Miniboot files to 6.3.1.R01. This is to prevent switch failure when upgrading the image files from 5.3.1.R02 to 6.3.1.R01.

1 Download the applicable BootROM, Default Miniboot, and Backup Miniboot files from the Alcatel Service and Support web site to your PC.

Note. The following Bootrom/Miniboot version is supported for the 6.3.1. upgrade - **6.1.2.261.R03**.

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2 Log into the switch through WebView. (In dual redundant configurations you must log into the primary switch).

Note. If you have not already done so, make sure that the switch's Web Management Inactivity Timer is set to at least 10 minutes (default setting is 4 minutes). To view and change the setting, go to the **Session Type Parameters** page by selecting **Security** > **ASA** > **Sessions** > **Configuration**.

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3 Select **System** > **System Mgmt** > **Install** to locate and FTP the BootROM, Default Miniboot, and Backup Miniboot files that you downloaded in Step 1. Click on the **Browse** button to locate the files. All of the files will appear in the "Selected" area.

4 Click on the **Remove All** button to move all of the files to the "Available" area, then select the **bootrom.bin**, **miniboot.backup**, and **miniboot.default** files and click the **Add** button to move them to the "Selected" area as shown below.
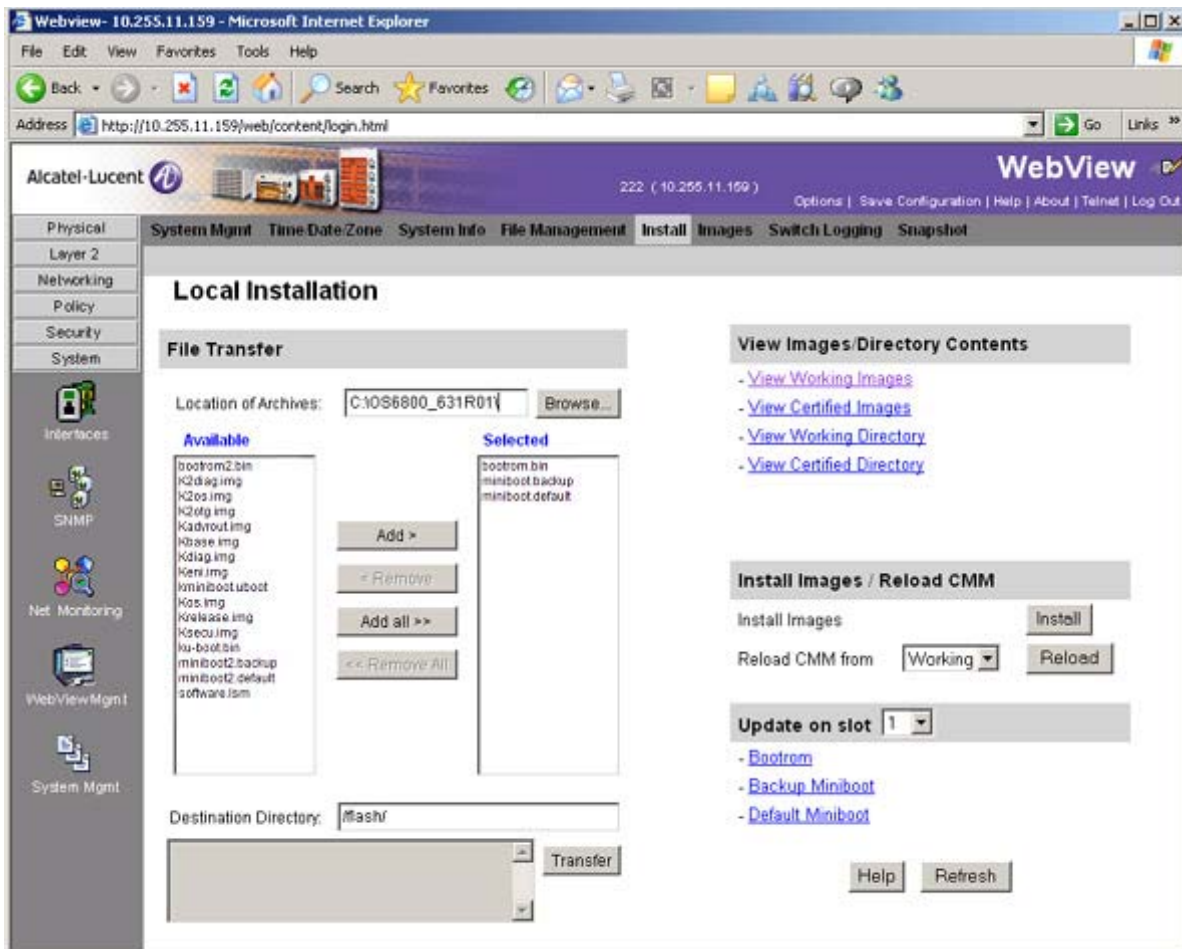
5   Transfer the files to the **/flash** directory. Make sure the **Destination Directory** is /**flash**, then click the **Transfer** button. Wait until the process is complete (indicated in the area next to the **Transfer** button - "All files have been transferred successfully").

6   In the "Update on slot" area, select the slot number of the NI you want to upgrade, or select **All** to upgrade all switches in a stack.

7   Click on **Bootrom**, then click **OK** at the confirmation prompt to upgrade the BootROM file. The upgrade progress is indicated at the top of the screen.

8   When the BootROM upgrade process is complete, upgrade the Default Miniboot file.

9   In the "Update on slot" area, select the slot number of the NI you want to upgrade, or select **All** to upgrade all switches in a stack.

10   Click on **Default Miniboot**, then click **OK** at the confirmation prompt to upgrade the Default Miniboot file. The upgrade progress is indicated in the upper right cornet of the screen.

11   When the Default Miniboot upgrade process is complete, reload the switch from the Working Directory. In the **Install Images/Reload CMM** area, select **Working** from the **Reload CMM From** field, then click the **Reload** button. Click **OK** at the warning prompt.

12 After the CMM finishes rebooting, log into WebView. Go to the **CMM Hardware Component Information** page to confirm that the upgrade was successful (see **Verifying the Upgrade with WebView** on page 8).

13 Once you have verified that the BootROM and Default Miniboot upgrades were successful, upgrade the Backup Miniboot file.

14 In the "Update on slot" area, select the slot number of the NI you want to upgrade, or select **All** to upgrade all switches in a stack.

15 Click on **Backup Miniboot**, then click **OK** at the confirmation prompt to upgrade the Backup Miniboot file. The upgrade progress is indicated in the upper right cornet of the screen.

16 When the Backup Miniboot upgrade is complete, delete the old BootROM, Default Miniboot, and Backup Miniboot files from the Flash Directory by selecting **System** > **System Mgmt** > **File Management** > **Local**, as shown below.

17 Check the box next to the old BootROM file, select **Delete** in the **File Operations** box, then click **OK** at the confirmation prompt. Repeat to delete the old Default Miniboot, and Backup Miniboot files.

Verifying the Upgrade with WebView

Verifying the Software Upgrade

To verify that the software was successfully upgraded, go to the **Loaded Image Files** page by selecting **System** > **System Mgmt** > **Images** > **Loaded Images** as shown below.

In addition, you should also select **System** > **System Mgmt** > **Images** > **Images in Certified** and **System** > **System Mgmt** > **Images** > **Images in Working** to verify that Certified and Working directories were successfully upgraded.

Verifying the Bootrom/Miniboot Upgrade

To verify that the CMM's Bootrom/Miniboot files were successfully upgraded on a single switch, go to the **CMM Hardware Component Information** page by selecting **Physical** > **Chassis Mgmt** > **CMM** > **Hardware Component**, as shown below.

If you have two or more switches in a stack, go to the **Network Interfaces** page by selecting **Physical** > **Chassis Mgmt** > **Network Interfaces**, as shown below.
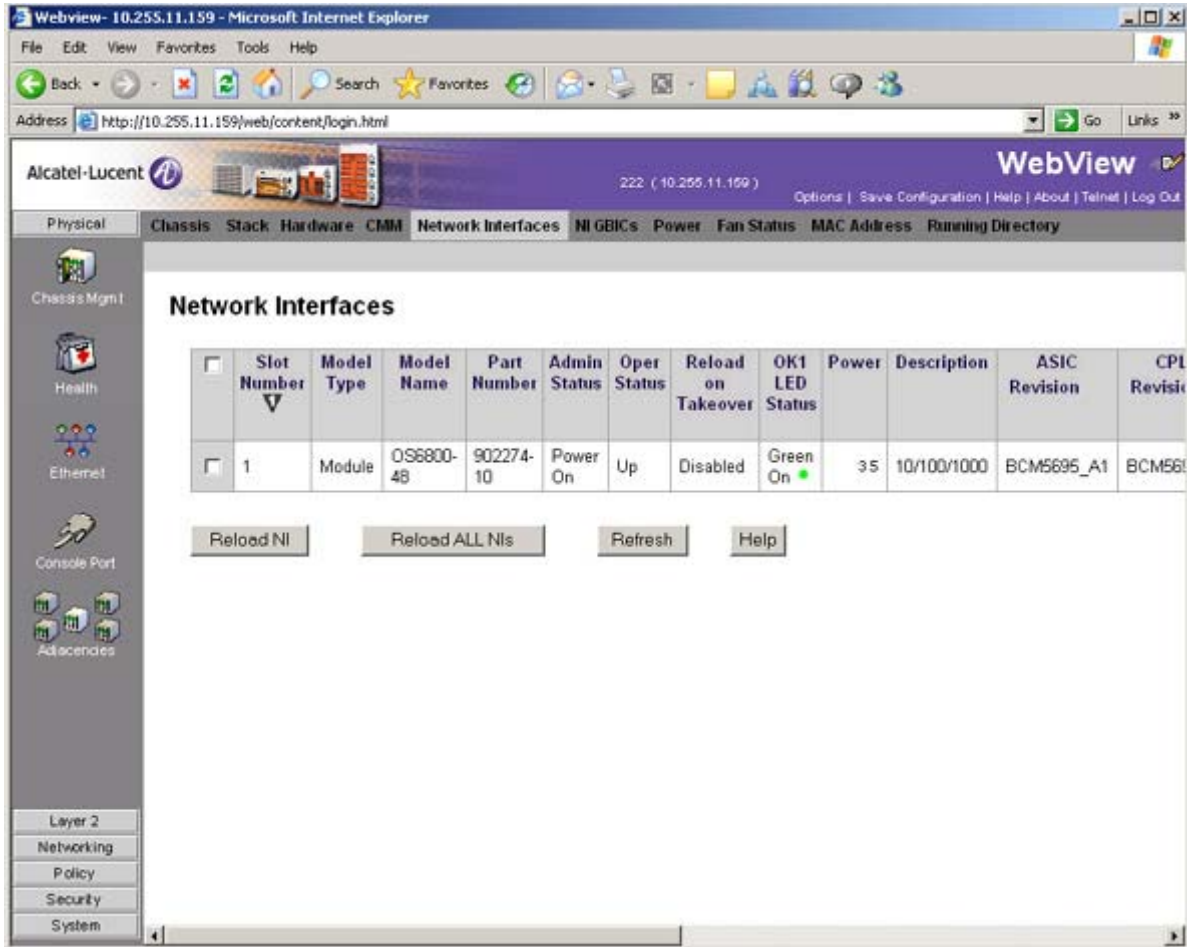
Upgrading with the CLI

Upgrading the 6800 series switch to 6.3.1.R01 consists of the following steps:

1   Upgrading the Image Files

2   Upgrading the Bootrom and Miniboot Files.

Note. The steps must be performed in order. You must complete the image file upgrade **before** upgrading the Bootrom/Miniboot. Also, you must have a Bootrom/Miniboot version of 5.3.1.91.R02 or later, and a recommended build of 5.3.1.255.R02 or later on the switch you are upgrading.

Upgrading the Image Files

Follow the steps below to upgrade the image files to 6.3.1.R01.

1   FTP the 6.3.1.R01 image files from the Alcatel Service and Support code directory to the **/flash/ working** directory of the primary CMM.

2   Log into the switch. In dual redundant configurations you must log into the primary switch.

3   Reload the switch.

```
-> reload working no rollback-timeout
```

4   After the switch finishes rebooting, log into the switch.

5   Install the new image files in the Working Directory.

```
-> install *.img
```

6   Copy the image files from the Working Directory to the Certified Directory.

-   If you have a **single CMM** switch enter:

```
-> copy working certified
```

-   If you have **redundant CMMs** enter:

```
-> copy working certified flash-synchro
```

The switch will copy the files from the Working to the Certified Directory and synchronize the CMMs (if applicable). This command should not be interrupted.

Upgrading the Bootrom/Miniboot Files

Follow the steps below to upgrade the BootROM, Default Miniboot, and Backup Miniboot files to 6.3.1.R01.

1 Download the applicable **bootrom.bin**, **miniboot.default**, and **miniboot.backup** files from the Alcatel Service and Support code directory to the **/flash** directory on the primary CMM.

Note. The following Bootrom/Miniboot version is supported for the 6.3.1. upgrade - **6.1.2.261.R03**.

---

1 Execute the following CLI commands to update the bootrom/miniboot on the switch(es) (can be a standalone or stack).

> **->** update bootrom all

> **->** update default miniboot all

Sample output for "update bootrom all"

```
-> update bootrom all

WED DEC 19 12:04:12 : SYSTEM (75) info message:

+++ ---->SSACTION_UPDATE_BOOTROM

WED DEC 19 12:04:12 : CSM-CHASSIS (103) info message:

+++ == CSM == Update bootrom on all slots

+++ == CSM == sysUpdate begin

Copying bootrom from flash filesystem to RAM filesystem...

Temporarily unmounting flash filesystem...

Writing bootrom to boot sectors of flash...

Deleting bootrom from RAM filesystem...

remounting flash filesystem...

Bootrom updated!!!

WED DEC 19 12:04:29 : CSM-CHASSIS (103) info message:

+++ == CSM == sysUpdate end

+++ == CSM == timer_r:simplex---- session end ----

+++ == CSM == sysUpdate begin

WED DEC 19 12:04:30 : FTP (82) info message:

+++ Session 0 New Connection, Client Address 127.2.66.1

+++ Get /flash/bootrom.bin!

WED DEC 19 12:04:37 : FTP (82) info message:

+++ Session 0 Ending
```

```
asic rev BCM5695_A1 cpld 0006 db_cpld_ptr 00 uboot ver  miniboot ver

WED DEC 19 12:04:49 : CSM-CHASSIS (103) info message:

+++ == CSM == sysUpdate end

+++ == CSM == timer_r:duplex---- session end ----

+++ == CSM == sysUpdate begin

WED DEC 19 12:04:50 : FTP (82) info message:

+++ Session 0 New Connection, Client Address 127.2.67.1

+++ Get /flash/bootrom.bin!

WED DEC 19 12:04:57 : FTP (82) info message:

+++ Session 0 Ending

WED DEC 19 12:05:09 : CSM-CHASSIS (103) info message:

+++ == CSM == sysUpdate end

+++ == CSM == timer_r:duplex---- session end ----

+++ == CSM == UPDATE COMPLETED
```

Sample output for "update default miniboot all"

```
-> update default miniboot all

WED DEC 19 12:05:21 : SYSTEM (75) info message:

+++ ---->SSACTION_UPDATE_DEFAULT_MINIBOOT

WED DEC 19 12:05:21 : CSM-CHASSIS (103) info message:

+++ == CSM == Update default miniboot on all slots

+++ == CSM == sysUpdate begin

Allocating temporary buffer for checksuming miniboot image...

Reading miniboot image into temporary buffer...

Checksuming miniboot image...

Checksum OK. Proceeding with update...

Copying miniboot from flash filesystem to RAM filesystem...

Temporarily unmounting flash filesystem...

Writing miniboot to boot sectors of flash...

Deleting miniboot from the RAM filesystem...

remounting flash filesystem...

Default miniboot updated!!!

asic rev BCM5695_A1 cpld 0006 db_cpld_ptr 00 uboot ver  miniboot ver
```

```
          WED DEC 19 12:05:42 : CSM-CHASSIS (103) info message:

          +++ == CSM == sysUpdate end

          +++ == CSM == timer_r:simplex---- session end ----

          +++ == CSM == sysUpdate begin

          WED DEC 19 12:05:43 : FTP (82) info message:

          +++ Session 0 New Connection, Client Address 127.2.66.1

          WED DEC 19 12:05:44 : FTP (82) info message:

          +++ Get /flash/miniboot.default!

          WED DEC 19 12:05:56 : FTP (82) info message:

          +++ Session 0 Ending

          WED DEC 19 12:06:14 : CSM-CHASSIS (103) info message:

          +++ == CSM == sysUpdate end

          +++ == CSM == timer_r:duplex---- session end ----

          +++ == CSM == sysUpdate begin

          WED DEC 19 12:06:15 : FTP (82) info message:

          +++ Session 0 New Connection, Client Address 127.2.67.1

          +++ Get /flash/miniboot.default!

          WED DEC 19 12:06:28 : FTP (82) info message:

          +++ Session 0 Ending

          WED DEC 19 12:06:44 : CSM-CHASSIS (103) info message:

          +++ == CSM == sysUpdate end

          +++ == CSM == timer_r:duplex---- session end ----

          +++ == CSM == UPDATE COMPLETED
```

2 Reload the switch from the working directory,

```
-> reload working no rollback-timeout
```

The switch will now synchronize files from the working directory with all other stacks (if applicable). Then the switch will now reboot to the new working version. Note that the **reload working no rollback-timeout** command can take up to 20 minutes in a stacked environment. This command should **not** be interrupted.

3 Verify that the upgrade was successful. See **Verifying the Upgrade with the CLI** on page 17.

4 After verifying that the BootROM and Default Miniboot files were successfully upgraded, upgrade the Backup MiniBoot file by executing the following command:

```
-> update backup miniboot all
```

Note. This command should **not** be executed until the switch has been reloaded and the default miniboot has been confirmed to be working correctly.

Sample output for "update backup miniboot all"

```
-> update backup miniboot all

WED DEC 19 12:06:55 : SYSTEM (75) info message:

+++ ---->SSACTION_UPDATE_BACKUP_MINIBOOT

WED DEC 19 12:06:55 : CSM-CHASSIS (103) info message:

+++ == CSM == Update backup miniboot on all slots

+++ == CSM == sysUpdate begin

Allocating temporary buffer for checksuming miniboot image...

Reading miniboot image into temporary buffer...

Checksuming miniboot image...

Checksum OK. Proceeding with update...

Copying miniboot from flash filesystem to RAM filesystem...

Temporarily unmounting flash filesystem...

Writing miniboot to boot sectors of flash...

Deleting miniboot from the RAM filesystem...

remounting flash filesystem...

Backup miniboot updated!!!

asic rev BCM5695_A1 cpld 0006 db_cpld_ptr 00 uboot ver  miniboot ver

WED DEC 19 12:07:16 : CSM-CHASSIS (103) info message:

+++ == CSM == sysUpdate end

+++ == CSM == timer_r:simplex---- session end ----

+++ == CSM == sysUpdate begin

WED DEC 19 12:07:17 : FTP (82) info message:

+++ Session 0 New Connection, Client Address 127.2.66.1

+++ Get /flash/miniboot.backup!

WED DEC 19 12:07:28 : FTP (82) info message:

+++ Session 0 Ending
```

```
WED DEC 19 12:07:47 : CSM-CHASSIS (103) info message:

+++ == CSM == sysUpdate end

+++ == CSM == timer_r:duplex---- session end ----

+++ == CSM == sysUpdate begin

WED DEC 19 12:07:48 : FTP (82) info message:

+++ Session 0 New Connection, Client Address 127.2.67.1

WED DEC 19 12:07:49 : FTP (82) info message:

+++ Get /flash/miniboot.backup!

WED DEC 19 12:08:02 : FTP (82) info message:

+++ Session 0 Ending

WED DEC 19 12:08:17 : CSM-CHASSIS (103) info message:

+++ == CSM == sysUpdate end

+++ == CSM == timer_r:duplex---- session end ----

+++ == CSM == UPDATE COMPLETED
```

5 When the "UPDATE COMPLETED" message appears, delete the old BootROM, Default Miniboot, and Backup Miniboot files from the **/flash** directory.

The firmware upgrade is now complete. See **Verifying the Upgrade with the CLI** on page 17 for information on verifying the upgrade.

Verifying the Upgrade with the CLI

You can use Command Line Interface (CLI) commands to verify that your upgrade was successful.

Verifying the Software Upgrade

To verify that the software has been successfully upgraded to 6.3.1.R01, use the **show microcode** command as shown below.

```
-> show microcode

   Package          Release       Size      Description

-----------------+--------------+--------+--------------------------------

Kbase.img        6.3.1.871.R01   14711041 Alcatel Base Software

Kadvrout.img     6.3.1.871.R01    2684001 Alcatel Advanced Routing

Kos.img          6.3.1.871.R01    1854890 Alcatel OS

Keni.img         6.3.1.871.R01    4895982 Alcatel NI software

Ksecu.img        6.3.1.871.R01     474901 Alcatel Security Management
```

Verifying the Bootrom/Miniboot Upgrade

To verify that the firmware was successfully upgraded, use the **show hardware info** command as shown below.

```
-> show hardware info

CPU Type                        : PowerPC 8245,

Flash Manufacturer              : TOSHIBA,

Flash size                      : 67108864 bytes (64 MB),

RAM Manufacturer                : (null),

RAM size                        : 268435456 bytes (256 MB),

NVRAM Battery OK ?              : YES,

BootROM Version                 : 6.1.2.261.R03 ,

Backup Miniboot Version         : 6.1.2.261.R03,

Default Miniboot Version        : 6.1.2.261.R03,

Product ID Register             : 54

Hardware Revision Register      : 04

CPLD Revision Register          : 07

XFP Module ID                   : 00
```

To verify that the NI modules were successfully upgraded, use the **show ni** command as shown below.

```
-> show ni

Module in slot 1

  Model Name:                 OS6800-48,

  Description:                10/100/1000,

  Part Number:                902274-10,

  Hardware Revision:          004,

  Serial Number:              432L0008,

  Manufacture Date:           SEP 08 2004,

  Firmware Version:           n/a,

  Admin Status:               POWER ON,

  Operational Status:         UP,

  Power Consumption:          35,

  Power Control Checksum:     0xac84,

  CPU Model Type   :          Alcatel CMM MPC8245/396,

  MAC Address:                00:d0:95:ac:a2:fd,

  ASIC - Physical 1:          BCM5695_A1,

  ASIC - Physical 2:          BCM5695_A1,

  ASIC - Physical 3:          BCM5695_A1,

  ASIC - Physical 4:          BCM5695_A1,

  ASIC - Physical 5:          BCM5670_A1,

  CPLD - Physical 1:          0007/00,

  Default Miniboot :          ,

  BackUp Miniboot :           ,

  Bootrom :                   6.1.2.261.R03
```

Upgrade/Downgrade Software Matrix

Refer to the matrix below for software compatibility when upgrading/downgrading a 6800 Series Switch to/from Build 6.3.1.R01. For more information, contact Customer Support.

I = Image Files
F = Bootrom/Miniboot
Yes = You can upgrade/downgrade to the next build.
No = You cannot upgrade/downgrade to the next build.

Upgrading To 6.3.1.R01 GA I = 6.3.1.R01 GA F = 6.1.2.261.R03				
	Build and Supported Software Versions for Each Upgrade			
Model	**5.3.1 GA** I = 5.3.1.255.R02 or later F = 5.3.1.91.R02	**6.1.2 GA** I = 6.1.2.R03 GA F = 6.1.2.261R03	**6.1.3 GA** I = 6.1.3 GA F = 6.1.2.261.R03	**6.1.5 GA** I = 6.1.5 GA F = 6.1.2.261.R03
6800	Yes	Yes	Yes	Yes

Notes. Hardware is only backward compatible down to the software that originally supported it. Also, when downgrading make sure to load the applicable BootROM/Miniboot files.For more information, contact Customer Support.