Upgrading OmniSwitch 6400 Series Switches to 6.3.4.R01

Overview

This instruction sheet documents how to upgrade OmniSwitch 6400 Series switches to 6.3.4.R01 firmware and software. 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 13.

Note. To downgrade a switch (e.g., 6.3.4 to 6.3.3), 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 6400 series switch from 6.3.3.R01 to 6.3.4.R01 consists of the upgrading the Image files only. You do **not** have to upgrade the U-Boot and Miniboot U-Boot Files for this upgrade.

Note. Switches shipped new with Release 6.3.4.R01 are shipped with U-Boot/Miniboot version 6.3.4.265.R01. If you want to upgrade from the recommended minimum version of 6.3.3.277.R01, you must complete the image file upgrade **first**.
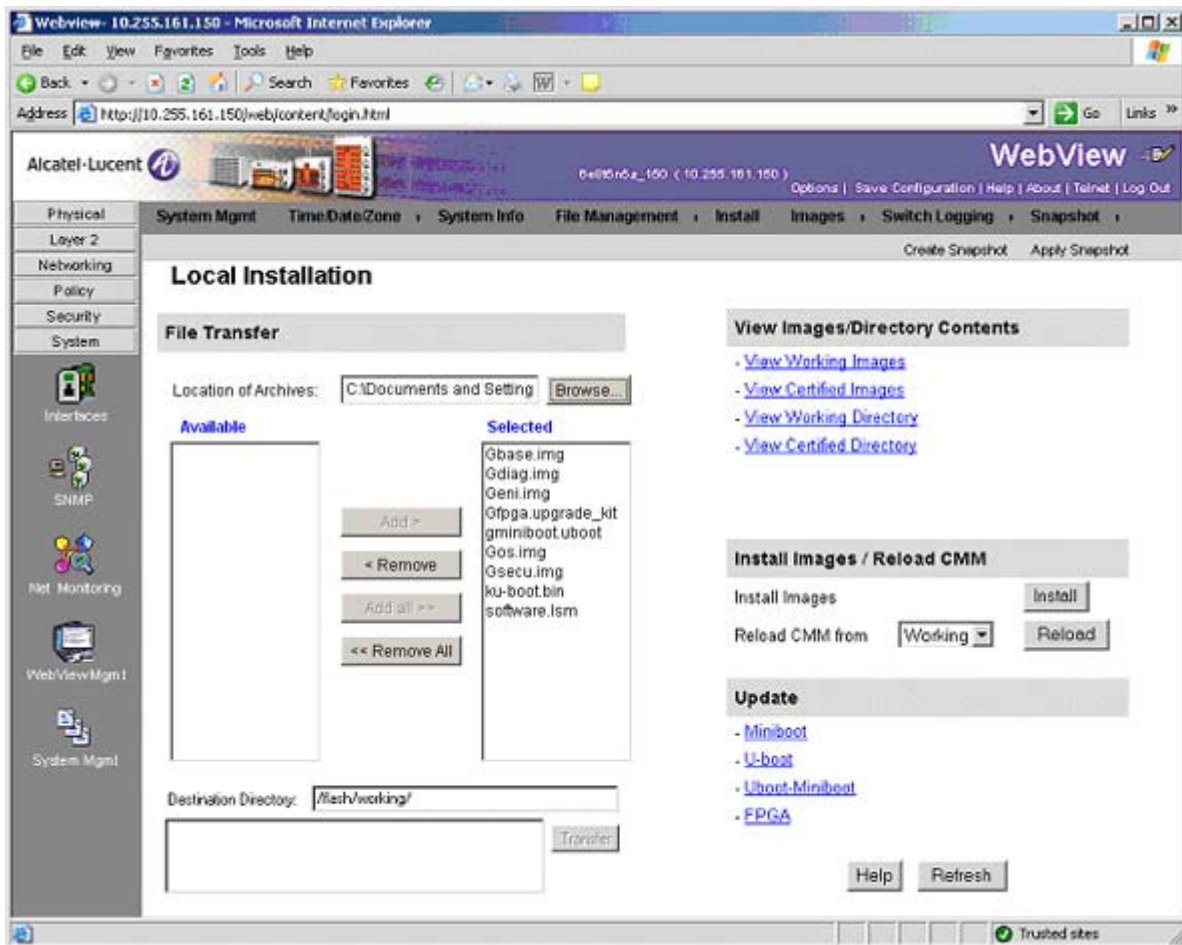

Upgrading the Image Files

Follow the steps below to upgrade the image files to 6.3.4.R01.

1 Download the 6.3.4.R01 upgrade files from the Alcatel Service and Support web site to your PC.

2 Log into the switch through WebView.

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 6.3.4.R01 image files that you downloaded in Step 1. Click on the **Browse** button to locate the files.

4 Select one of the files and click **Open**. All of the files will appear in the "Selected" area, as shown below.

5   Click on the **Remove All** button to move all of the files to the "Available" area; then select the follow-
ing image files and click the **Add** button to move them to the "Selected" area as shown below:
Gbase.img, **Gdiag.img**, **Geni.img**, **Gos.img**, **Gsecu.img**.
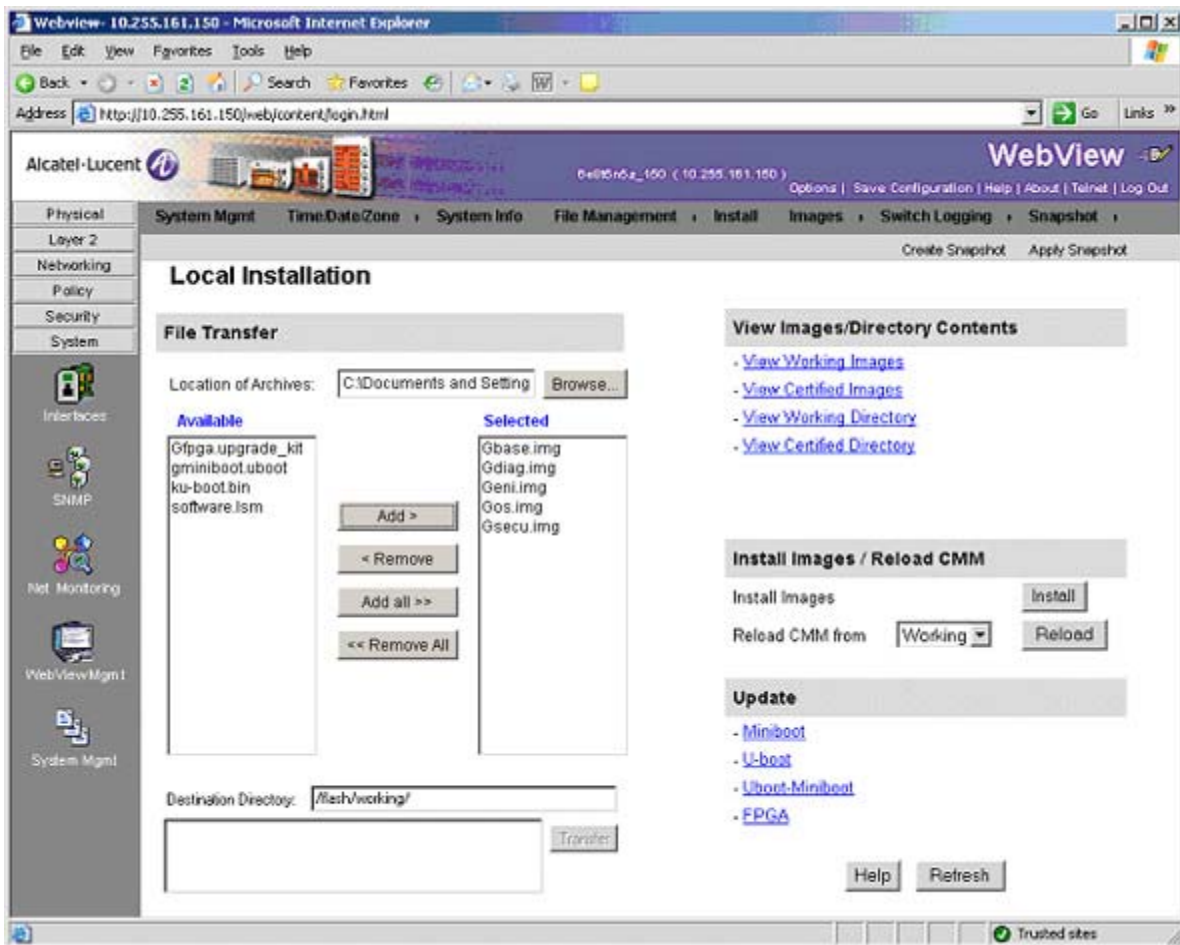
6 Transfer the files to the **flash/working** directory. Make sure the **Destination Directory** is **flash/working**, then click the **Transfer** button. Wait until the process is complete (indicated in the area next to the **Transfer** button - "All files have been transferred successfully").

7 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.

8 After the CMM finishes rebooting, log into WebView.

9 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.

10 Select **Physical** > **Chassis Mgmt** > **CMM** > **Management** as shown below.
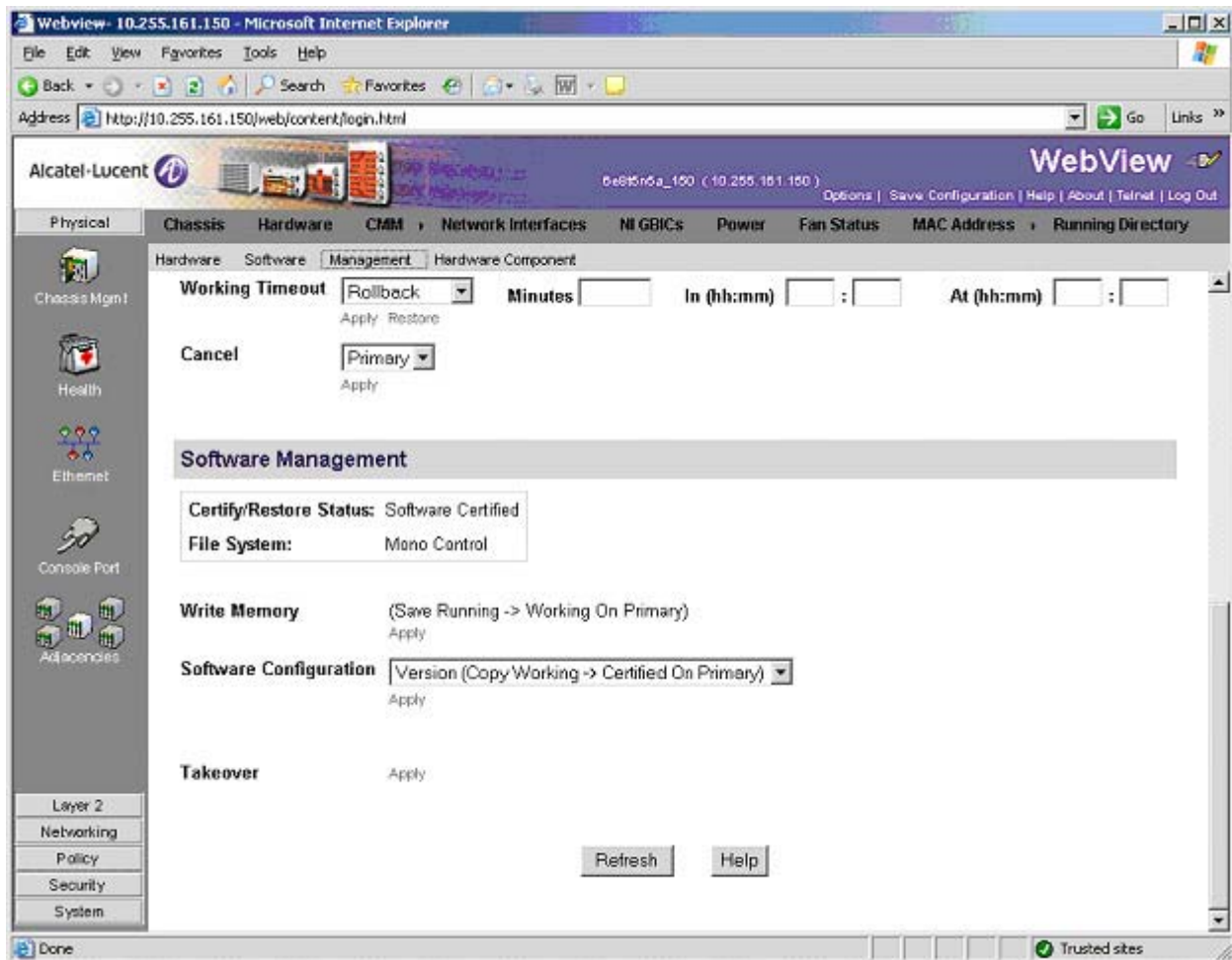
11 In the **Software Management** field, select **Copy Working -> Certified on Primary** for standalone switches. For a stack, select **Copy Working -> Certified & Synchronize with Secondary** and click **Apply**.

The switch will synchronize files from the working directory with all other stacks (if applicable). This command should not be interrupted. Wait for the synchronization process to complete on all switches before proceeding to the next step.

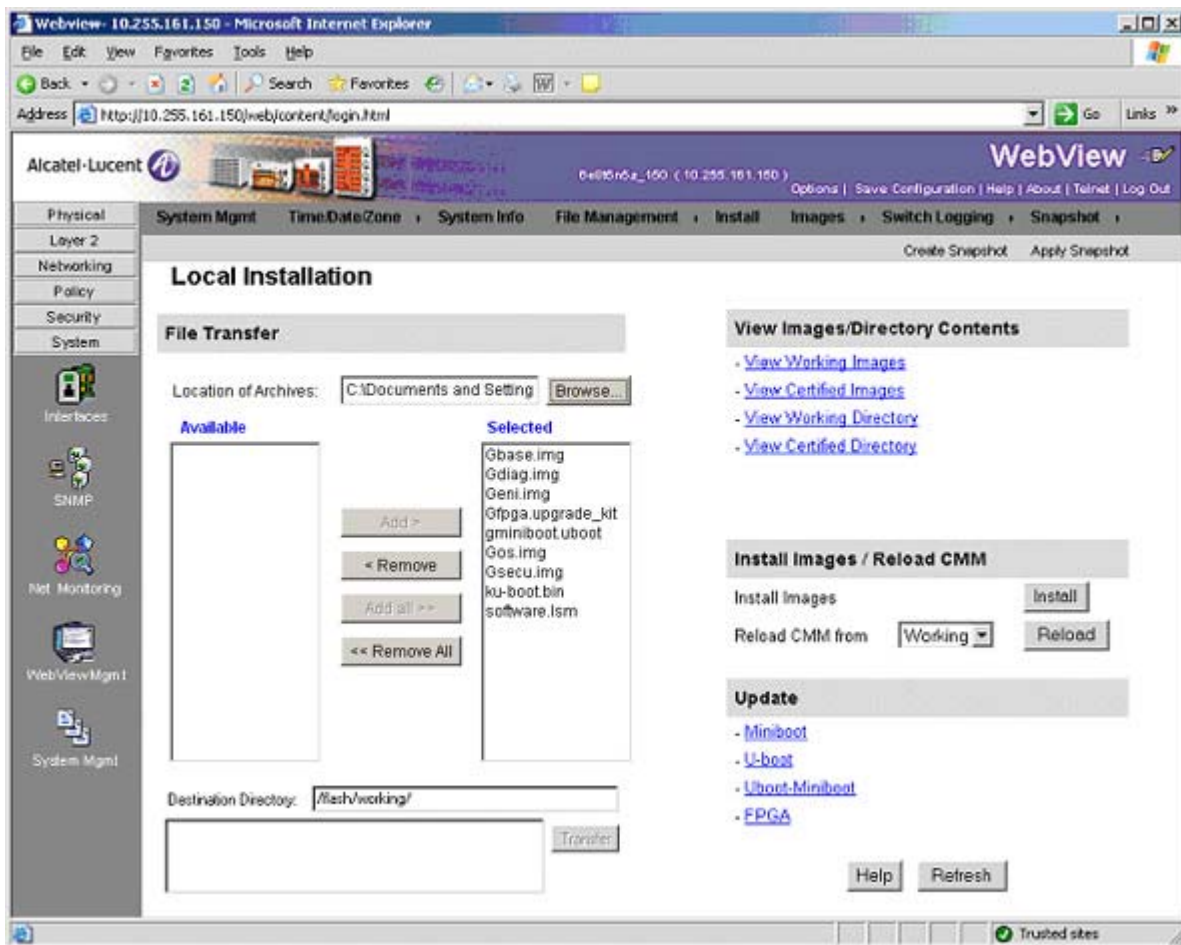# Upgrading the U-Boot and Miniboot Files

Upgrading the 6400 series switch from 6.3.3.R01 to 6.3.4.R01 consists of the upgrading the Image files only. You do **not** have to upgrade the U-Boot and Miniboot U-Boot Files. However, if you want to upgrade from the recommended minimum version of 6.3.3.277.R01, follow the steps below to upgrade the U-Boot and Miniboot files.

Note. Switches shipped new with Release 6.3.4.R01 are shipped with U-Boot/Miniboot version 6.3.4.265.R01.

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1   Download the applicable upgrade files from the Alcatel Service and Support web site to your PC.

2   Log into the switch through WebView.

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 6.3.4.R01 image files that you downloaded in Step 1. Click on the **Browse** button to locate the files.

4   Select one of the files and click **Open**. All of the files will appear in the "Selected" area, as shown below.

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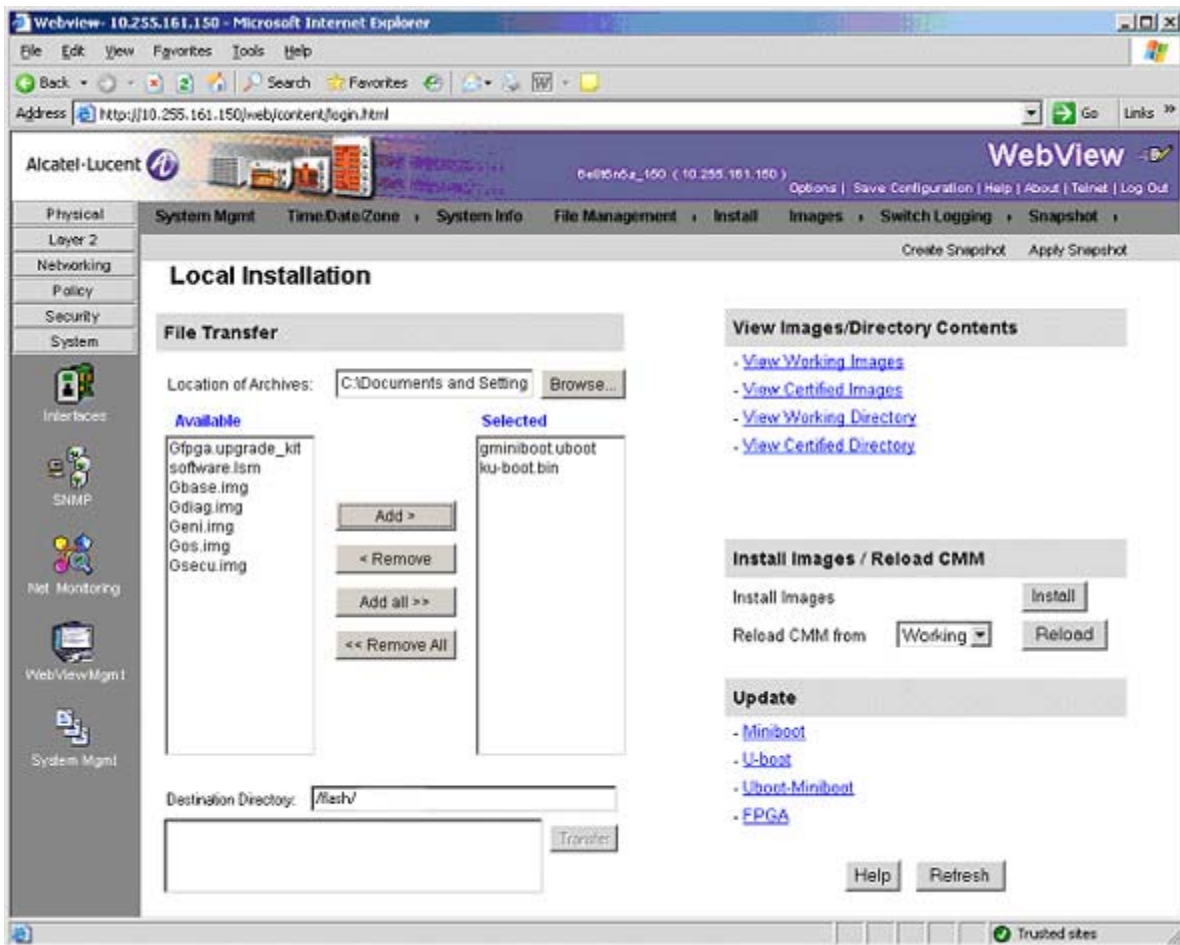
6 Make sure the **Destination Directory** is /**flash**, then click the **Transfer** button. Wait until the process is complete (indicated in the area next to the **Transfer** button - "All files have been transferred successfully").

7 In the "Update" area, click on **Uboot-Miniboot**, then click **OK** at the confirmation prompt. This will upgrade the Uboot and Miniboot files on all of the switches in the stack. The upgrade progress is indicated in the upper right corner of the screen. When the upgrade is complete, the following message appears "set operation finished successfully."

8 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. Wait until the process is complete.

9 After verifying that the upgrade was successful (see **Verifying the Upgrade with WebView** on page 10), delete the **miniboot.uboot** and **ku-boot.bin** files from the Flash Directory by selecting **System** > **System Mgmt** > **File Management** > **Local**, as shown below.
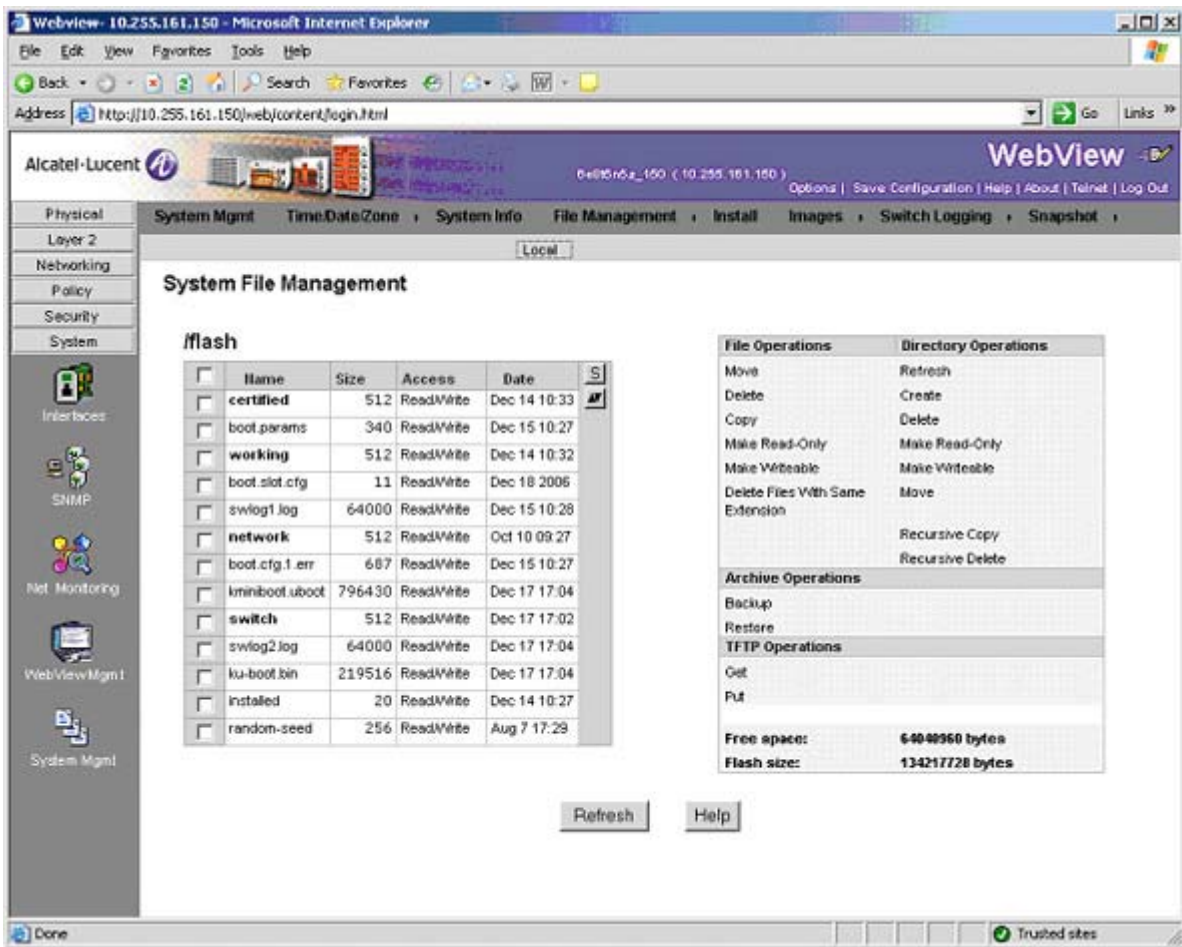
10 Check the box next to the ku-boot.bin file, select **Delete** in the **File Operations** box, then click **OK** at the confirmation prompt. Repeat to delete the kminiboot.uboot file.

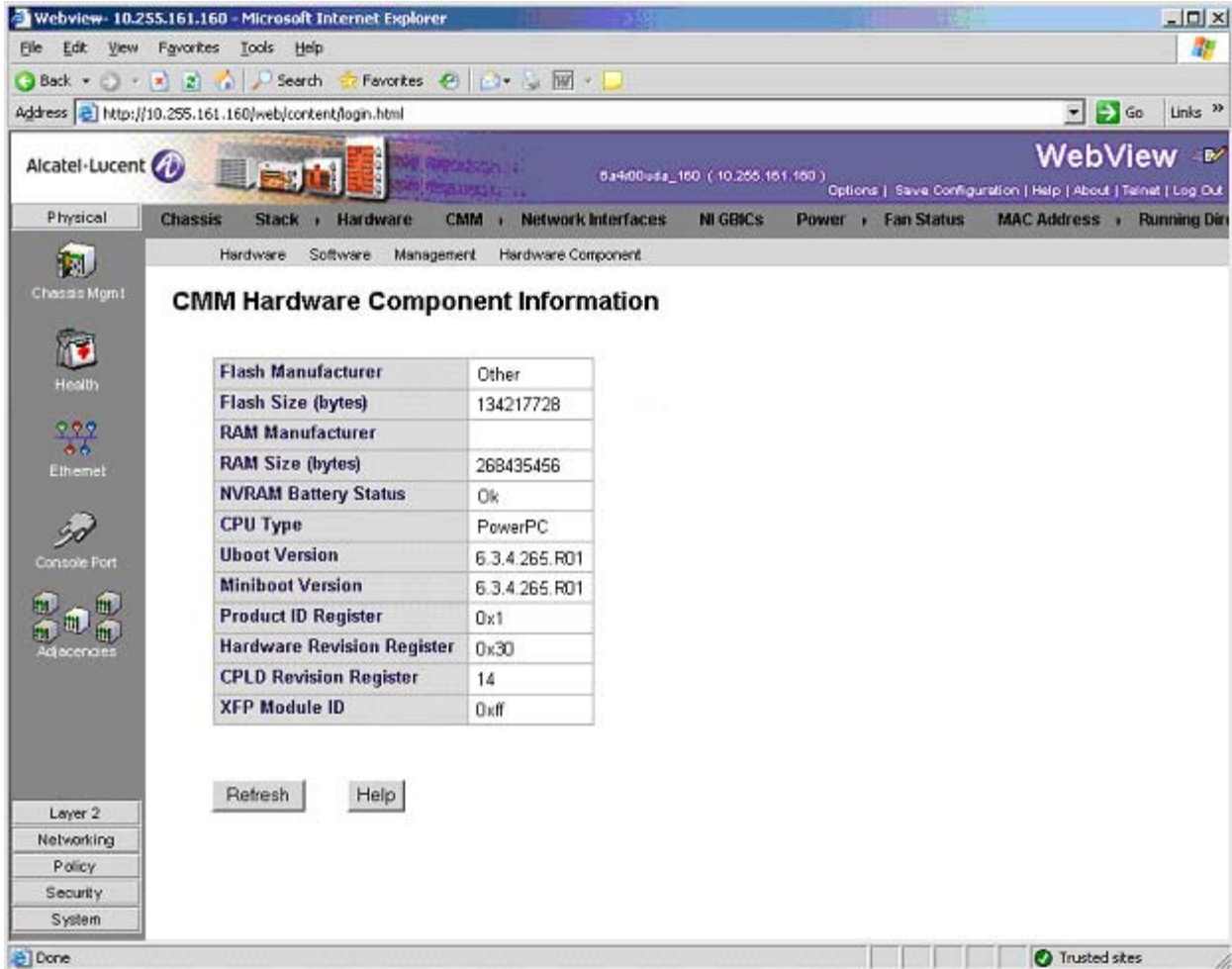# Verifying the Upgrade with WebView

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.
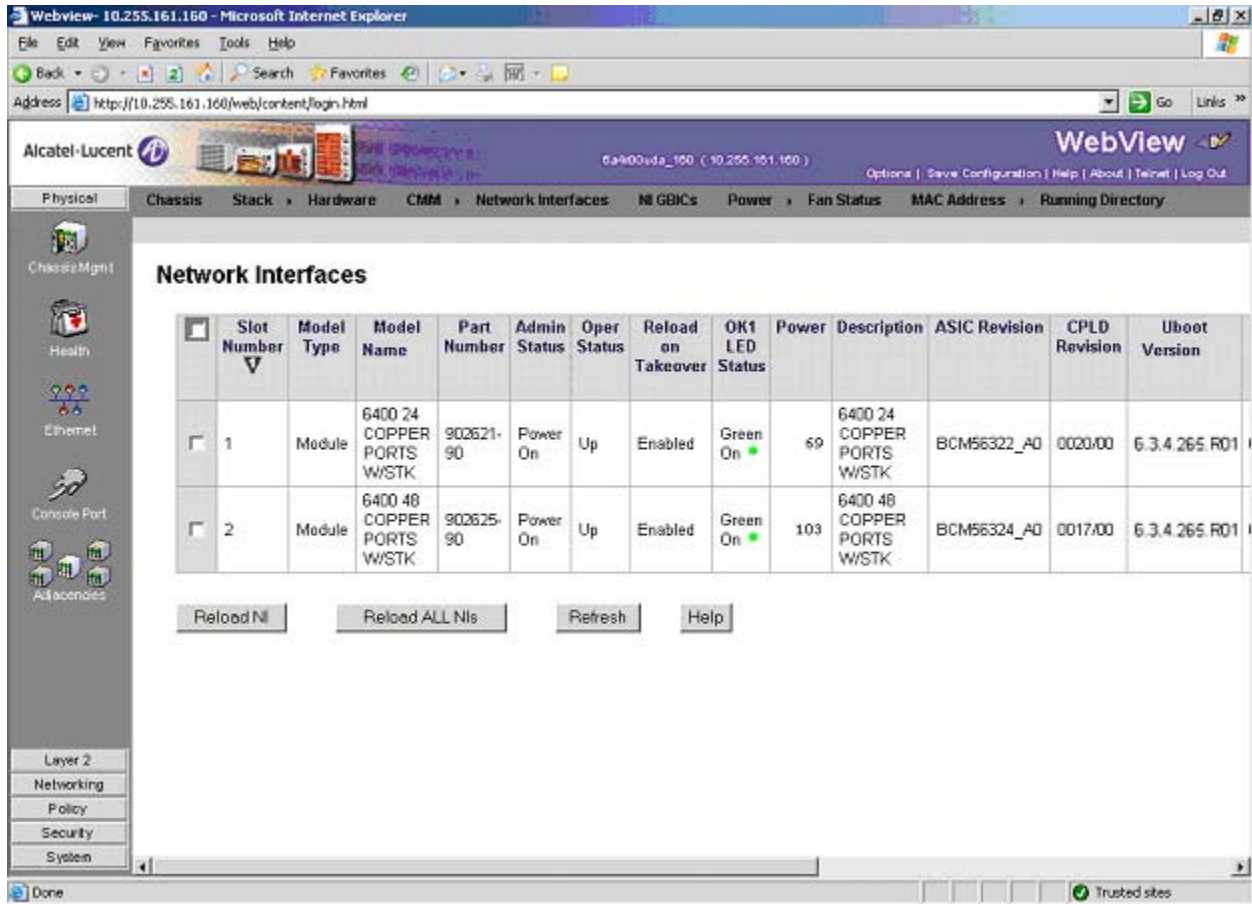
Verifying the U-Boot and Miniboot Upgrade

To verify that U-Boot and Miniboot files were successfully upgraded on the CMM, go to the **CMM Hardware Component Information** page by selecting **Physical** > **Chassis Mgmt** > **CMM** > **Hardware Component**, as shown below.

To verify that the U-Boot and Miniboot files were successfully upgraded on the switch's NIs, go to the **Network Interfaces** page by selecting **Physical** > **Chassis Mgmt** > **Network Interfaces**, as shown below. Scroll right to the **Uboot Version** and **Miniboot Version** columns.

Upgrading with the CLI

Upgrading the 6400 series switch from 6.3.3.R01 to 6.3.4.R01 consists of the upgrading the Image files only. You do **not** have to upgrade the U-Boot and Miniboot U-Boot Files for this upgrade.

Note. Switches shipped new with Release 6.3.4.R01 are shipped with U-Boot/Miniboot version 6.3.4.265.R01. If you want to upgrade from the recommended minimum version of 6.3.3.277.R01, you must complete the image file upgrade **first**.

Upgrading the Image Files

Follow the steps below to upgrade the image files to 6.3.4.R01.

1   Download the 6.3.4.R01 upgrade files from the Alcatel Service and Support web site to your PC.

2   FTP the following 6.3.4.R01 image files to the **/flash/working** directory: **Gbase.img**, **Gdiag.img**, **Geni.img**, **Gos.img**, **Gsecu.img**.

3   Log into the switch and reload the switch from the working directory.

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

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

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

```
-> copy working certified
```

The switch will copy the files from the Working to the Certified Directory. This command should not be interrupted.

Upgrading the U-Boot and Miniboot Files

Upgrading the 6400 series switch from 6.3.3.R01 to 6.3.4.R01 consists of the upgrading the Image files only. You do **not** have to upgrade the U-Boot and Miniboot U-Boot Files. However, if you want to upgrade from the recommended minimum version of 6.3.3.277.R01, follow the steps below to upgrade the U-Boot and Miniboot files.

Note. Switches shipped new with Release 6.3.4.R01 are shipped with U-Boot/Miniboot version 6.3.4.265.R01.

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1 Download the applicable upgrade files from the Alcatel Service and Support web site to your PC.

2 FTP the **gminiboot.uboot** and **ku-boot.bin** files to the **/flash** directory.

3 Execute the following CLI commands to update the Miniboot and U-Boot files on the switch(es) (can be a standalone or stack).

```
-> update uboot-miniboot
```

Sample output for "update uboot-miniboot" for a stack of 2

```
THU MAR 05 15:31:25 : SYSTEM (75) info message:
+++ ---->SSACTION_UPDATE_UBOOT_MINIBOOT

THU MAR 05 15:31:25 : CSM-CHASSIS (103) info message:
+++ == CSM == Application & Watchdog Monitoring Stopped
+++ == CSM == Update bootrom on all slots
+++ == CSM == sysUpdate begin

THU MAR 05 15:31:26 : SYSTEM (75) info message:
+++ NI 1 software update started
Erasing flash
Writing 131072 bytes at 0xfff00000
Erasing flash
Writing 131072 bytes at 0xfff20000
Verifying sectors of flash from (0xfff00000) to (0xfff40000)
Done

THU MAR 05 15:31:31 : SYSTEM (75) info message:
+++ NI 1 software update completed -- file /flash/ku-boot.bin copied
+++ NI 1 software update started
Erasing flash
Writing 131072 bytes at 0xff900000
Erasing flash
Writing 131072 bytes at 0xff920000
Erasing flash
Writing 131072 bytes at 0xff940000
Erasing flash
Writing 131072 bytes at 0xff960000
Erasing flash
Writing 131072 bytes at 0xff980000
Erasing flash
Writing 131072 bytes at 0xff9a0000
Erasing flash
Writing 131072 bytes at 0xff9c0000
Verifying sectors of flash from (0xff900000) to (0xff9e0000)
```

```
Done

THU MAR 05 15:31:47 : SYSTEM (75) info message:
+++ NI 1 software update completed -- file /flash/gminiboot.uboot copied
+++ NI 2 software update started

THU MAR 05 15:31:51 : SYSTEM (75) info message:
+++ NI 2 software update completed -- file /flash/ku-boot.bin copied
+++ NI 2 software update started

THU MAR 05 15:32:08 : SYSTEM (75) info message:
+++ NI 2 software update completed -- file /flash/gminiboot.uboot copied
sysStartWatchdog() Starting watchdog timer to INTERRUPT after 60 secs.

THU MAR 05 15:32:16 : CSM-CHASSIS (103) info message:
+++ == CSM == timer_r:simplex---- session end ----

+++ == CSM == UPDATE COMPLETED
+++ == CSM == Application & Watchdog Monitoring Started
```

4 When the "UPDATE COMPLETED" message appears, delete the miniboot and u-boot files from the / **flash** directory, then reload the switch:

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

The upgrade is now complete. See **Verifying the Upgrade with the CLI** on page 16 for information on verifying the upgrade.

Verifying the Upgrade with the CLI

Verifying the Software Upgrade

To verify that the software was successfully upgraded to 6.3.4.R01, use the **show microcode** command as shown below. The display below shows a successful image file upgrade.

```
-> show microcode

   Package           Release        Size       Description
-----------------+---------------+--------+---------------------------------
Gbase.img          6.3.4.375.R01   13863123 Alcatel-Lucent Base Software

Gos.img            6.3.4.375.R01    1784036 Alcatel-Lucent OS

Geni.img           6.3.4.375.R01    5542946 Alcatel-Lucent NI software

Gsecu.img          6.3.4.375.R01     557392 Alcatel-Lucent Security Management

Gdiag.img          6.3.4.375.R01    1826253 Alcatel-Lucent Diagnostic Software
```

Verifying the U-Boot and Miniboot Upgrade

To verify that the U-Boot and Miniboot files were successfully upgraded on the CMM, use the **show hardware info** command as shown below.

```
-> show hardware info

CPU Type                      : PowerPC 8248,

Flash Manufacturer            : Spansion, Inc.,

Flash size                    : 134217728 bytes (128 MB),

RAM Manufacturer              : Samsung,

RAM size                      : 268435456 bytes (256 MB),

Uboot Version                 : 6.3.4.265.R01,

Miniboot Version              : 6.3.4.265.R01,

Product ID Register           : 01

Hardware Revision Register    : 30

FPGA Revision Register        : 14
```

To verify that the NI modules were successfully upgraded, use the **show ni** command as shown below.
Information for each NI in a stack (if applicable) is displayed.

```
-> show ni

Module in slot 1

  Model Name:                6400 24 COPPER PORTS W/STK,

  Description:               6400 24 COPPER PORTS W/STK,

  Part Number:              902621-90,

  Hardware Revision:        001,

  Serial Number:            J0381455,

  Manufacture Date:         JAN 24 2008,

  Firmware Version:         ,

  Admin Status:             POWER ON,

  Operational Status:       UP,

  Power Consumption:        69,

  Power Control Checksum:   0x6509,

  CPU Model Type   :        Freescale MPC8248,

  MAC Address:              00:e0:b1:8b:6f:b6,

  ASIC - Physical 1:        BCM56322_A0,

  FPGA - Physical 1:        0014/00,

  UBOOT Version :           6.3.4.265.R01,

  UBOOT-miniboot Version :  6.3.4.265.R01,

  POE SW Version :          n/a

Module in slot 2

  Model Name:                6400 48 COPPER PORTS W/STK,

  Description:               6400 48 COPPER PORTS W/STK,

  Part Number:              902625-90,

  Hardware Revision:        0,

  Serial Number:            J0880117,

  Manufacture Date:         FEB 22 2008,

  Firmware Version:         ,

  Admin Status:             POWER ON,

  Operational Status:       UP,

  Power Consumption:        103,
```

```
Power Control Checksum:        0xbc9,

CPU Model Type    :            Freescale MPC8248,

MAC Address:                   00:e0:b1:91:52:ca,

ASIC - Physical 1:             BCM56324_A0,

ASIC - Physical 2:             BCM56322_A0,

FPGA - Physical 1:             0011/00,

UBOOT Version :                6.3.4.265.R01,

UBOOT-miniboot Version :       6.3.4.265.R01,

POE SW Version :               n/a
```

Upgrade/Downgrade Software Matrix

Refer to the matrix below for software compatibility when upgrading/downgrading a 6400 Series Switch to/from Build 6.3.4.R01. For more information, contact Customer Support.

I = Image Files
F = U-Boot/Miniboot
Yes = You can upgrade/downgrade to the next build.
No = You cannot upgrade/downgrade to the next build.
N/A = Not applicable.

Upgrade/Downgrade Matrix 6.3.4.R01 GA I = 6.3.4.R01 GA F = 6.3.4.265.R01	
Build and Supported Software Versions for Each Upgrade	
	6.3.3 GA I = 6.3.3.R01
Model	F = 6.3.3.288.R01
6400	Yes

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