Upgrading OmniSwitch 6850 Series Switches to 6.3.1.R01

Overview

This instruction sheet documents how to upgrade OmniSwitch 6850 Series switches to 6.3.1.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 11.

Note. To downgrade a switch (e.g., 6.3.1 to 6.1.3), see **Upgrade/Downgrade Software Matrix** on page 18.

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 6850 series switch to 6.3.1.R01 consists of the following steps.

1   Upgrading the Image Files.

2   Upgrading the U-Boot and Miniboot U-Boot Files.

Note. The steps must be performed in order. You must complete the image file upgrade **before** upgrading the U-Boot and Miniboot files. Note that if you are upgrading from Build 6.1.3.R01, you do **not** have to upgrade the U-Boot/Miniboot files.

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: **K2os.img, Kadvrout.img, Kbase.img, Keni.img, Ksecu.img**.
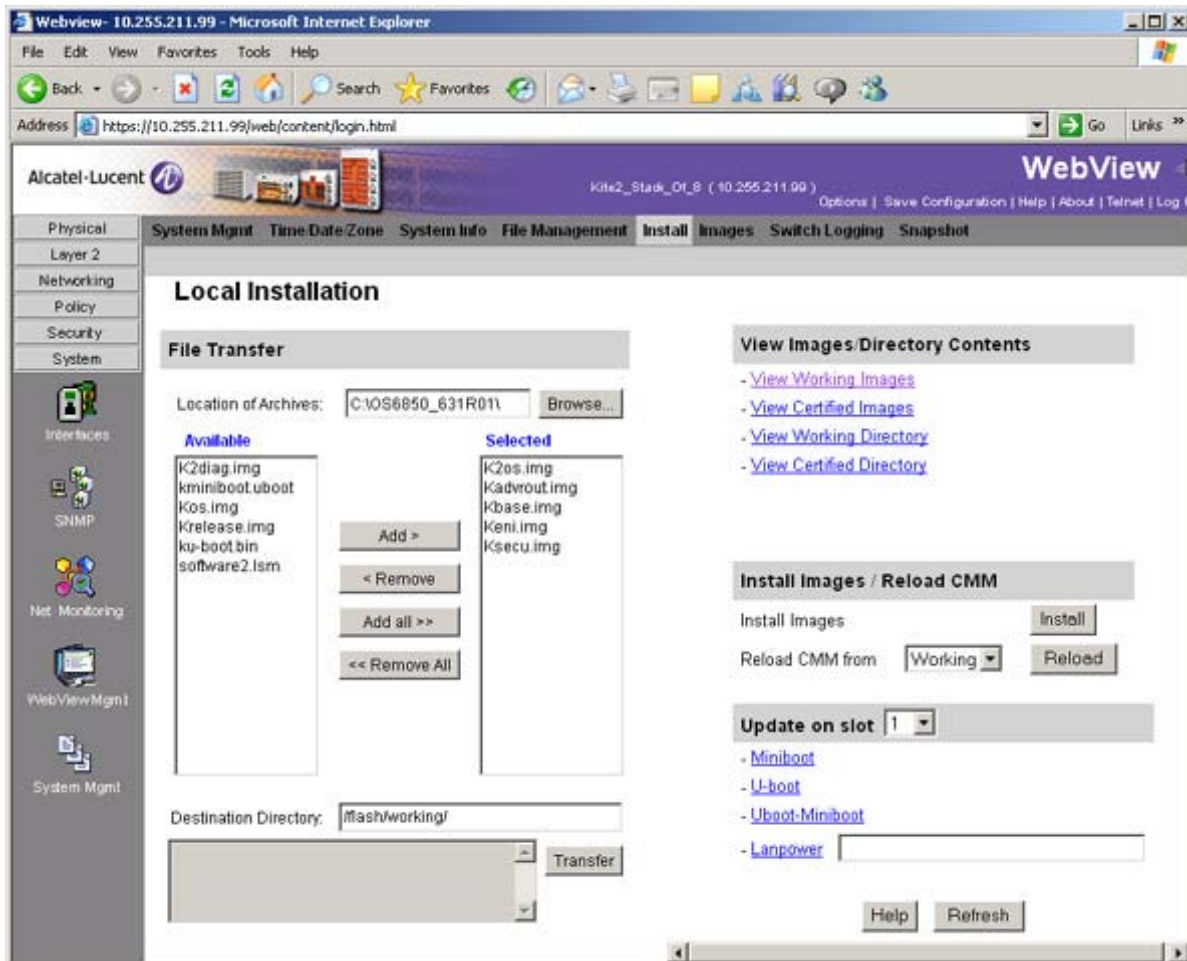
5   Transfer the files to the **flash/working** directory. Make sure the **Destination Directory** is **flash/working**, then click the **Transfer** button. Wait until the process is complete (indicated in the area next to the **Transfer** button - "All files have been transferred successfully").

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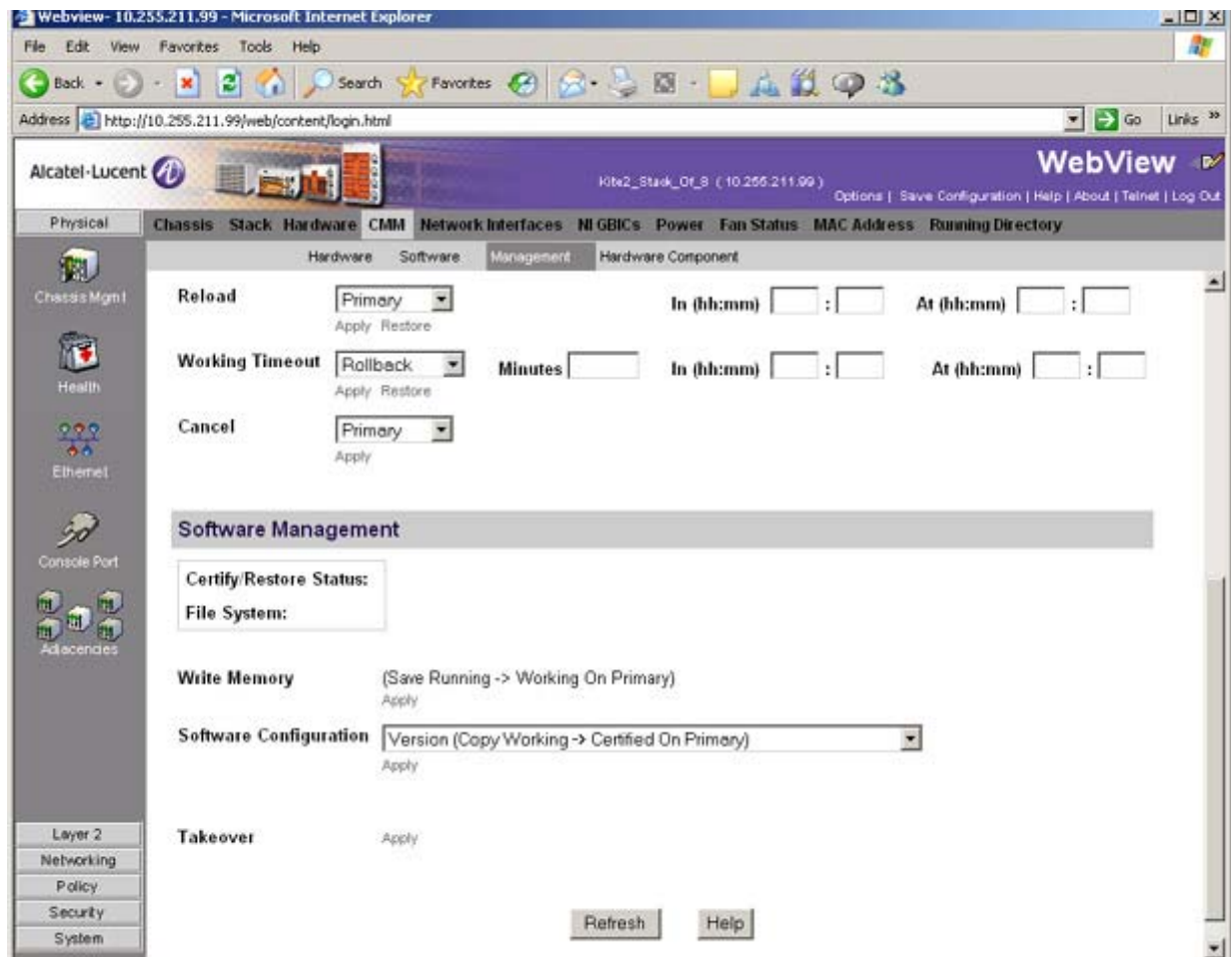
10 In the **Software Management** field, select **Copy Working -> Certified on Primary** for standalone switches. For a stack, select **Copy Working -> Certified & Synchronize with Secondary** and click **Apply**.

The switch will synchronize files from the working directory with all other stacks (if applicable). 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

Follow the steps below to upgrade the U-Boot and Miniboot files.

1 Download the applicable U-Boot/Miniboot files from the Alcatel Service and Support web site to your PC.

Note. The following U-Boot and Miniboot version is supported for the 6.3.1. upgrade - **6.1.3.601.R01**. Remember, if you are upgrading from Build 6.1.3.R01, you do **not** have to upgrade the U-Boot/Miniboot files.

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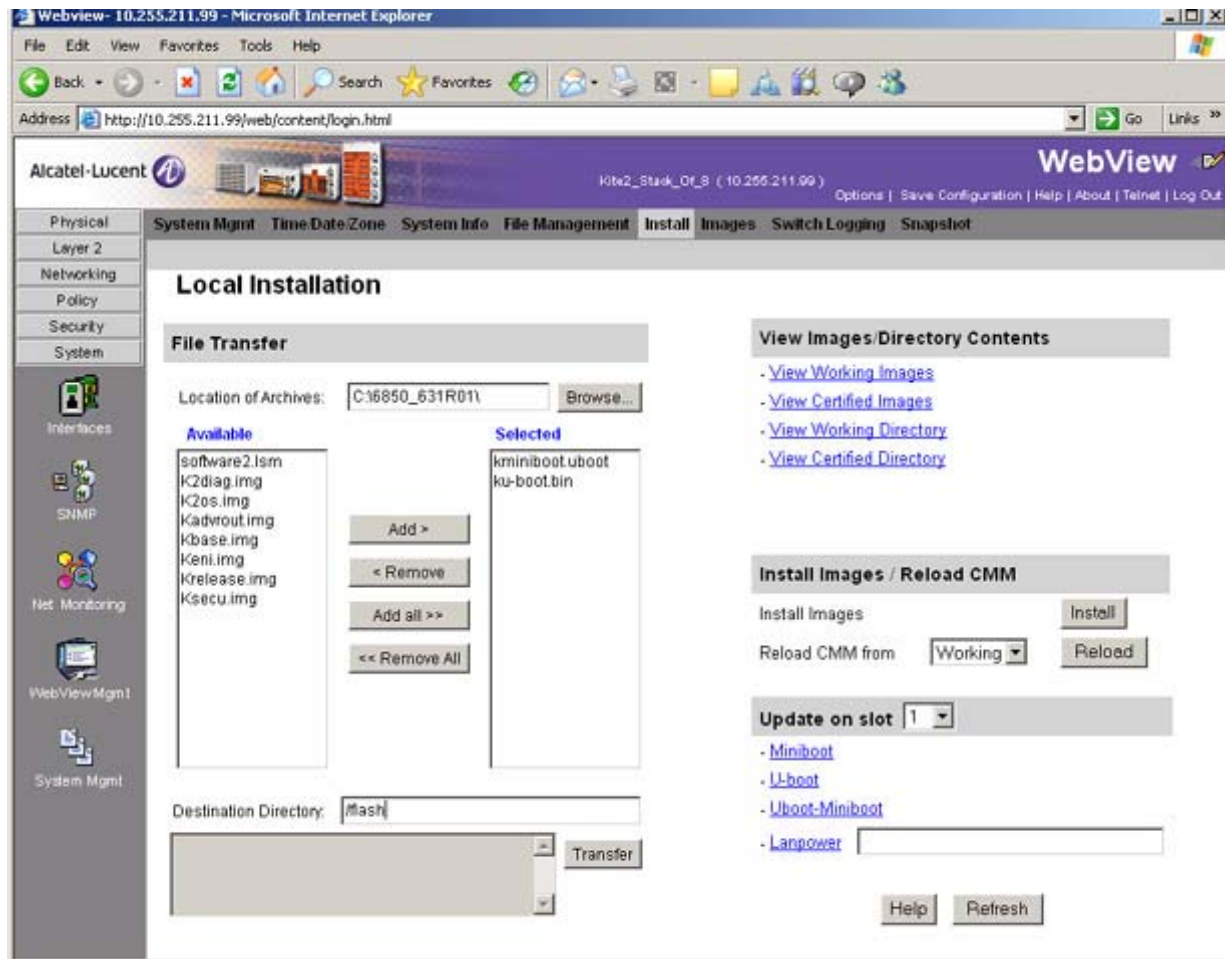
5   Make sure the **Destination Directory** is /**flash**, then click the **Transfer** button. Wait until the process is complete (indicated in the area next to the **Transfer** button - "All files have been transferred successfully").

6   In the "Updated on slot" 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."

7   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.

8   After verifying that the upgrade was successful (see **Verifying the Upgrade with WebView** on page 8), delete the **miniboot.uboot** and **ku-boot.bin** files from the Flash Directory by selecting **System** > **System Mgmt** > **File Management** > **Local**, as shown below.
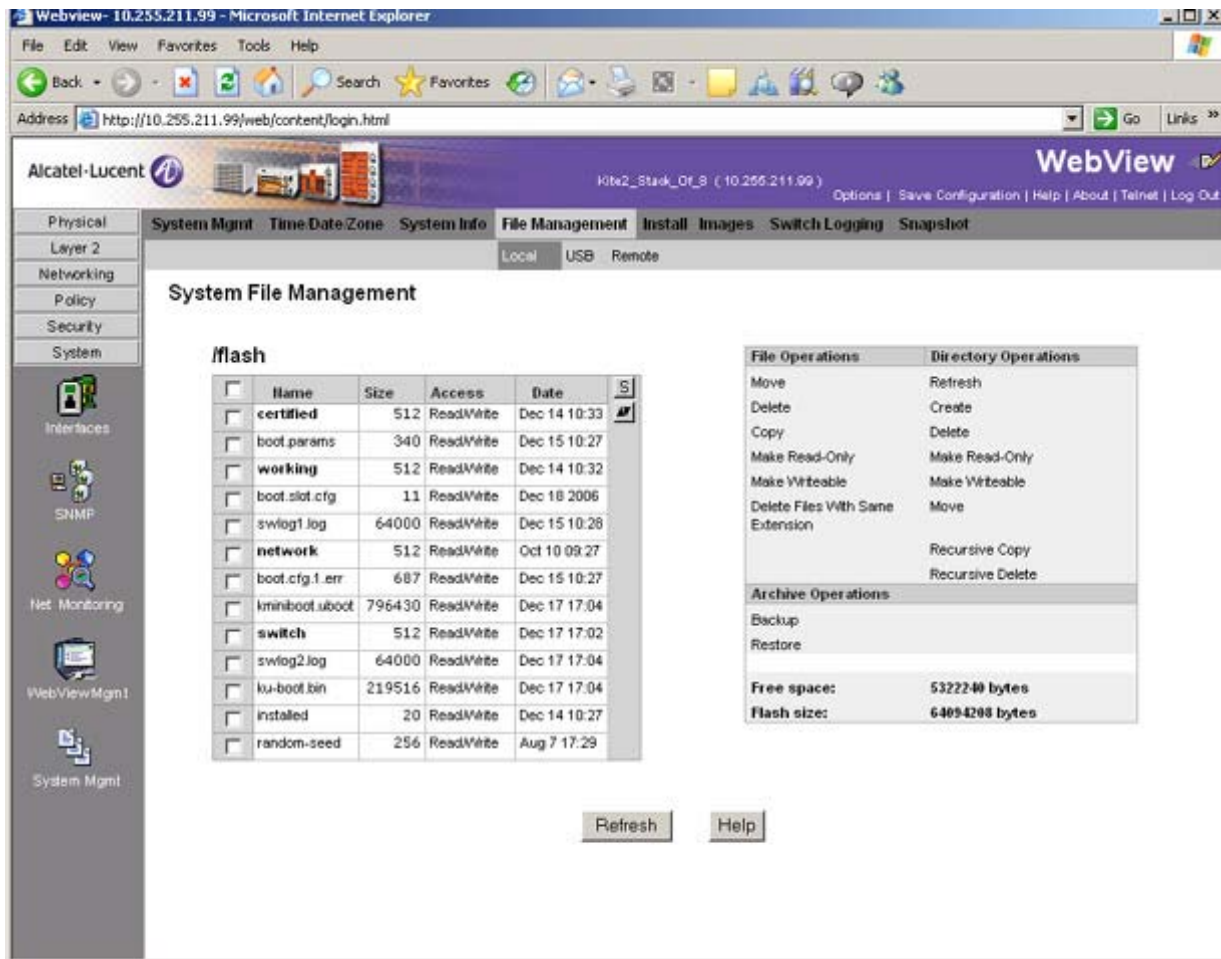
9   Check the box next to the ku-boot.bin file, select **Delete** in the **File Operations** box, then click **OK** at the confirmation prompt. Repeat to delete the kminiboot.uboot file.

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.
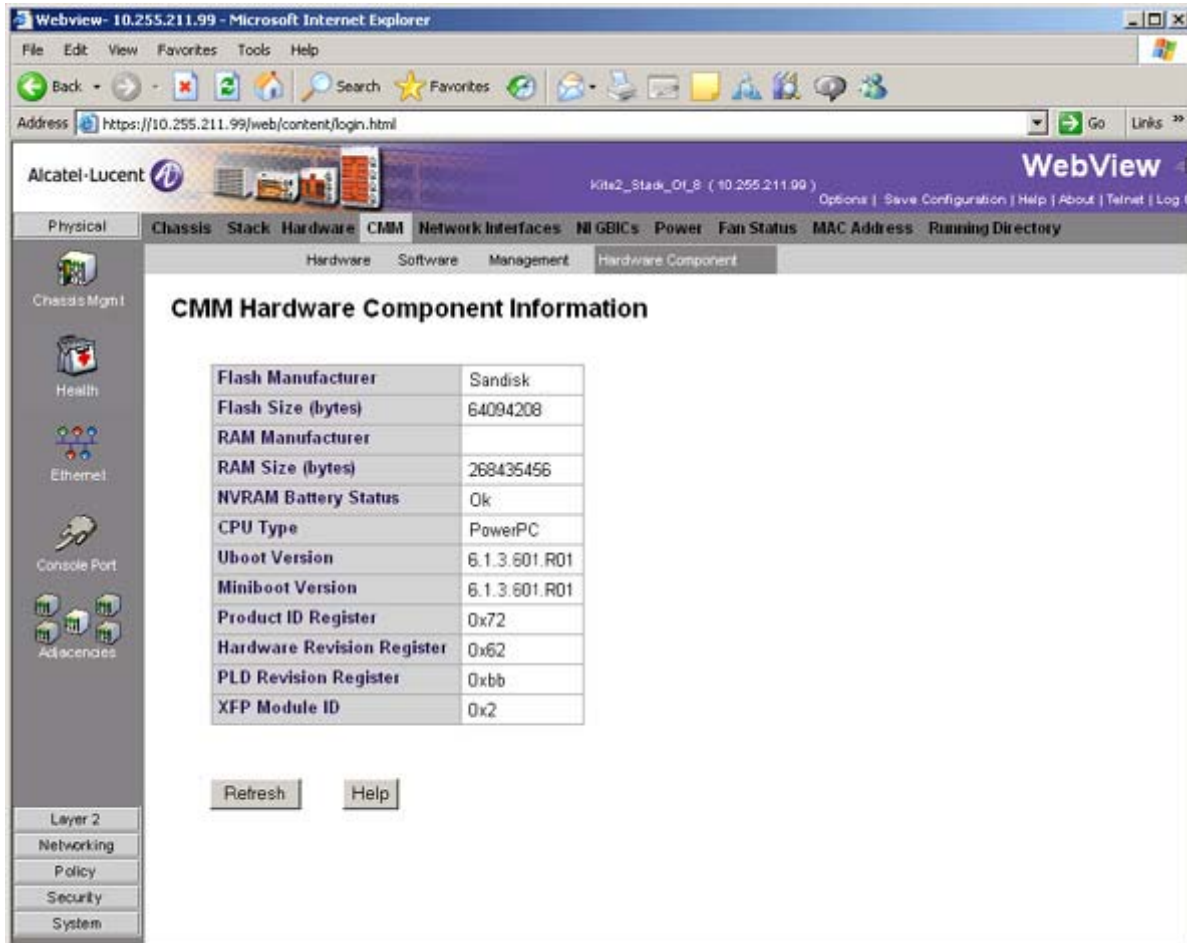

In addition, you should also select **System** > **System Mgmt** > **Images** > **Images in Certified** and **System** > **System Mgmt** > **Images** > **Images in Working** to verify that Certified and Working directories were successfully upgraded.

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 6850 series switch to 6.3.1.R01 consists of the following steps.

1   Upgrading the Image Files.

2   Upgrading the U-Boot and Miniboot Files.

Note. The steps must be performed in order. You must complete the image file upgrade **before** upgrading the U-Boot and Miniboot files.

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 U-Boot and Miniboot Files

Follow the steps below to upgrade the U-Boot and Miniboot files.

1 Download the applicable U-Boot and Miniboot files from the Alcatel Service and Support web site to the **/flash** directory on the primary CMM.

Note. The following U-Boot and Miniboot version is supported for the 6.3.1. upgrade - **6.1.3.601.R01**.

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2 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 8

```
WED DEC 19 10:58:52 : SYSTEM (75) info message:

+++ ---->SSACTION_UPDATE_UBOOT_MINIBOOT

WED DEC 19 10:58:52 : CSM-CHASSIS (103) info message:

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

+++ == CSM == sysUpdate begin

WED DEC 19 10:58:54 : SYSTEM (75) info message:

+++ NI 1 software update started

Erasing flash..

Writing flash..

Done

WED DEC 19 10:58:59 : SYSTEM (75) info message:

+++ NI 1 software update completed -- file /flash/ku-boot.bin copied

+++ NI 1 software update started

Erasing flash......

Writing flash......

Done

WED DEC 19 10:59:14 : SYSTEM (75) info message:

+++ NI 1 software update completed -- file /flash/kminiboot.uboot copied

+++ NI 2 software update started

WED DEC 19 10:59:19 : SYSTEM (75) info message:

+++ NI 2 software update completed -- file /flash/ku-boot.bin copied

+++ NI 2 software update started

WED DEC 19 10:59:36 : SYSTEM (75) info message:
```

```
+++ NI 2 software update completed -- file /flash/kminiboot.uboot copied

+++ NI 3 software update started

WED DEC 19 10:59:41 : SYSTEM (75) info message:

+++ NI 3 software update completed -- file /flash/ku-boot.bin copied

+++ NI 3 software update started

WED DEC 19 10:59:54 : SYSTEM (75) info message:

+++ NI 3 software update completed -- file /flash/kminiboot.uboot copied

+++ NI 4 software update started

WED DEC 19 10:59:58 : SYSTEM (75) info message:

+++ NI 4 software update completed -- file /flash/ku-boot.bin copied

+++ NI 4 software update started

WED DEC 19 11:00:09 : SYSTEM (75) info message:

+++ NI 4 software update completed -- file /flash/kminiboot.uboot copied

+++ NI 5 software update started

WED DEC 19 11:00:12 : SYSTEM (75) info message:

+++ NI 5 software update completed -- file /flash/ku-boot.bin copied

+++ NI 5 software update started

WED DEC 19 11:00:23 : SYSTEM (75) info message:

+++ NI 5 software update completed -- file /flash/kminiboot.uboot copied

+++ NI 6 software update started

WED DEC 19 11:00:27 : SYSTEM (75) info message:

+++ NI 6 software update completed -- file /flash/ku-boot.bin copied

+++ NI 6 software update started

WED DEC 19 11:00:40 : SYSTEM (75) info message:

+++ NI 6 software update completed -- file /flash/kminiboot.uboot copied

+++ NI 7 software update started

WED DEC 19 11:00:44 : SYSTEM (75) info message:

+++ NI 7 software update completed -- file /flash/ku-boot.bin copied

+++ NI 7 software update started

WED DEC 19 11:00:56 : SYSTEM (75) info message:

+++ NI 7 software update completed -- file /flash/kminiboot.uboot copied

+++ NI 8 software update started
```

```
WED DEC 19 11:01:01 : SYSTEM (75) info message:

+++ NI 8 software update completed -- file /flash/ku-boot.bin copied

+++ NI 8 software update started

WED DEC 19 11:01:15 : SYSTEM (75) info message:

+++ NI 8 software update completed -- file /flash/kminiboot.uboot copied

WED DEC 19 11:01:23 : CSM-CHASSIS (103) info message:

+++ == CSM == sysUpdate end

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

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

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

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

The upgrade is now complete. See **Verifying the Upgrade with the CLI** 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 6.3.1.R01, use the **show microcode** command as shown below. The display below shows a successful image file upgrade.

```
-> show microcode

   Package          Release      Size       Description

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

   Kbase.img       6.3.1.871.R01   14716332 Alcatel Base Software

   Kadvrout.img    6.3.1.871.R01    2683730 Alcatel Advanced Routing

   K2os.img        6.3.1.871.R01    1733067 Alcatel OS

   Keni.img        6.3.1.871.R01    4896119 Alcatel NI software

   Ksecu.img       6.3.1.871.R01     474889 Alcatel Security Management
```

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                        : Motorola MPC8248,

Flash Manufacturer              : SanDisk SDCFBI-64                     ,

Flash size                      : 64094208 bytes (61 MB),

RAM Manufacturer                : Samsung,

RAM size                        : 268435456 bytes (256 MB),

NVRAM Battery OK ?              : YES,

Uboot Version                   : 6.1.3.601.R01,

Miniboot Version                : 6.1.3.601.R01,

Product ID Register             : 55

Hardware Revision Register      : 30

CPLD Revision Register          : 16

XFP Module ID                   : 02
```

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:                 OS6850-U24X,

  Description:                24 G SFP + 2 10 G,

  Part Number:                902418-40,

  Hardware Revision:          02,

  Serial Number:              G2552705,

  Manufacture Date:           JUL 14 2006,

  Firmware Version:           n/a,

  Admin Status:               POWER ON,

  Operational Status:         UP,

  Power Consumption:          0,

  Power Control Checksum:     0x9379,

  CPU Model Type   :          Motorola MPC8248,

  MAC Address:                00:d0:95:e9:c9:30,

  ASIC - Physical 1:          BCM56504_B2,

  CPLD - Physical 1:          0016/00,

  UBOOT Version :             6.1.3.601.R01,

  UBOOT-miniboot Version :    6.1.3.601.R01,

  POE SW Version :            n/a

  GBIC  25

        Model Name:                 ,

        Description:                ,

        Part Number:                ,

        Hardware Revision:          ,

        Serial Number:              ,

        Manufacture Date:           ,

        Firmware Version:           ,

        Laser Wave Length:          n/a,

        Admin Status:               POWER ON,

        Operational Status:         UP
```

```
Module in slot 2

  Model Name:                 OS6850-P48 48xGig POE,

  Description:                OS6850-P48 48xGig POE,

  Part Number:                902361-10,

  Hardware Revision:          b01,

  Serial Number:              F2850326,

  Manufacture Date:           SEP 21 2005,

  Firmware Version:           n/a,

  Admin Status:               POWER ON,

  Operational Status:         UP,

  Power Consumption:          44,

  Power Control Checksum:     0xdec0,

  CPU Model Type   :          Motorola MPC8248,

  MAC Address:                00:d0:95:c8:21:42,

  ASIC - Physical 1:          BCM56502_A1,

  ASIC - Physical 2:          BCM56504_A1,

  CPLD - Physical 1:          0189/00,

  UBOOT Version :             6.1.3.601.R01,

  UBOOT-miniboot Version :    6.1.3.601.R01,

  POE SW Version :

  GBIC  4

      Model Name:                 Infineon AG     ,

      Description:                Infineon AG     ,

      Part Number:                V23818-K305-B57 ,

      Hardware Revision:          ,

      Serial Number:              30125740        ,

      Manufacture Date:           02081000,

      Firmware Version:           ,

      Laser Wave Length:          n/a,

      Admin Status:               POWER ON,

      Operational Status:         UP
```

Upgrade/Downgrade Software Matrix

Refer to the matrix below for software compatibility when upgrading/downgrading a 6850 Series Switch to/from Build 6.3.1.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 6.3.1.R01 GA I = 6.3.1.R01 GA F = 6.1.3.601.R01		
Build and Supported Software Versions for Each Upgrade		
6.1.2 GA I = 6.1.2.R03 GA **Model** F = 6.1.2.49.R03	**6.1.3 GA** I = 6.1.3.R01 GA F = 6.1.3.601.R01	**6.1.5 GA** I = 6.1.5.R01 GA F = 6.1.3.601.R01
6850 Yes	Yes	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.

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