



# Upgrading OmniSwitch 9000 Series Switches to 6.1.5.R01

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## Overview

This instruction sheet documents how to upgrade OmniSwitch 9000 Series switches to 6.1.5.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 10](#).

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**Note.** To downgrade a switch (e.g., 6.1.5 to 6.1.3), see [Upgrade/Downgrade Software Matrix on page 16](#).

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## 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.

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**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.

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# Upgrading with WebView

Upgrading the OS9000 series switches to 6.1.5.R01 consists of the following steps.

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

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

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## Upgrading the Image Files

Follow the steps below to upgrade the image files to 6.1.5.R01.

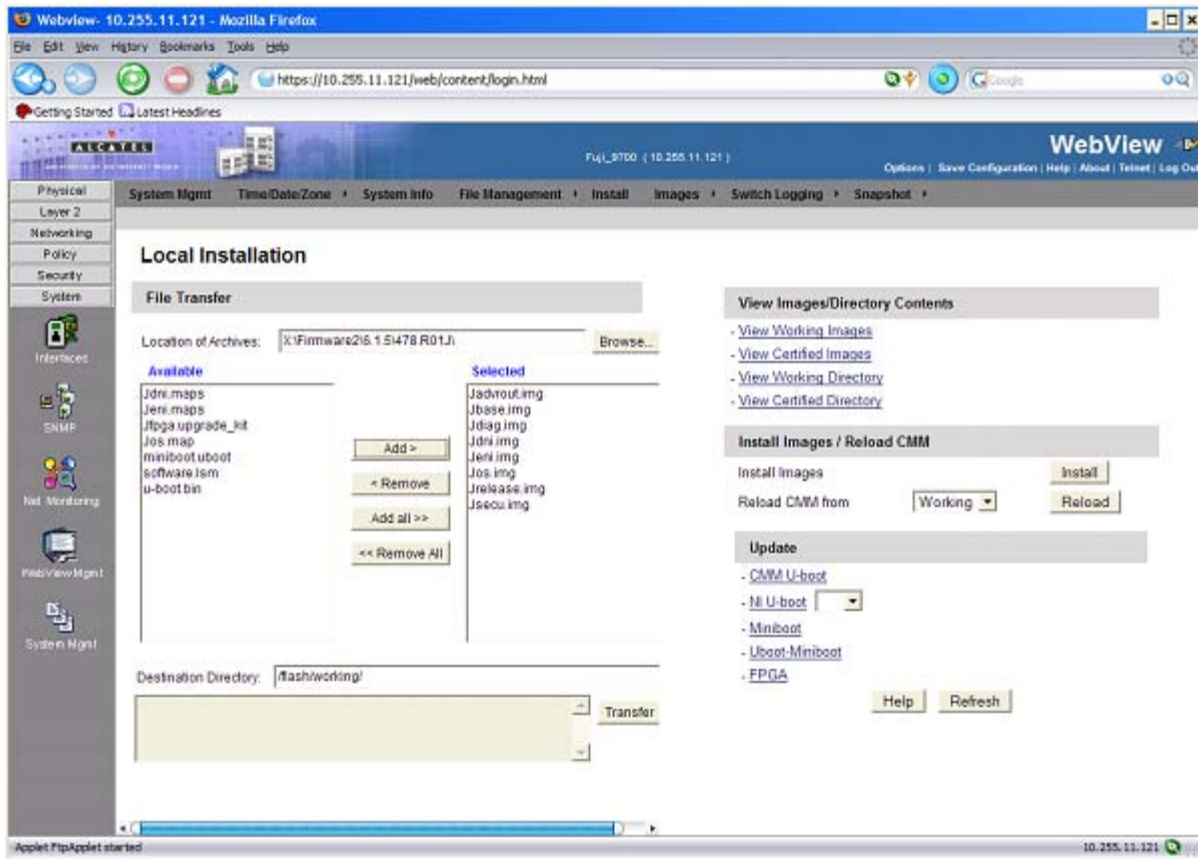
- 1 Download the 6.1.5.R01 image files from the Alcatel Service and Support web site to your PC.
- 2 Log into the switch through WebView. (In dual redundant configurations you must log into the primary switch).

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**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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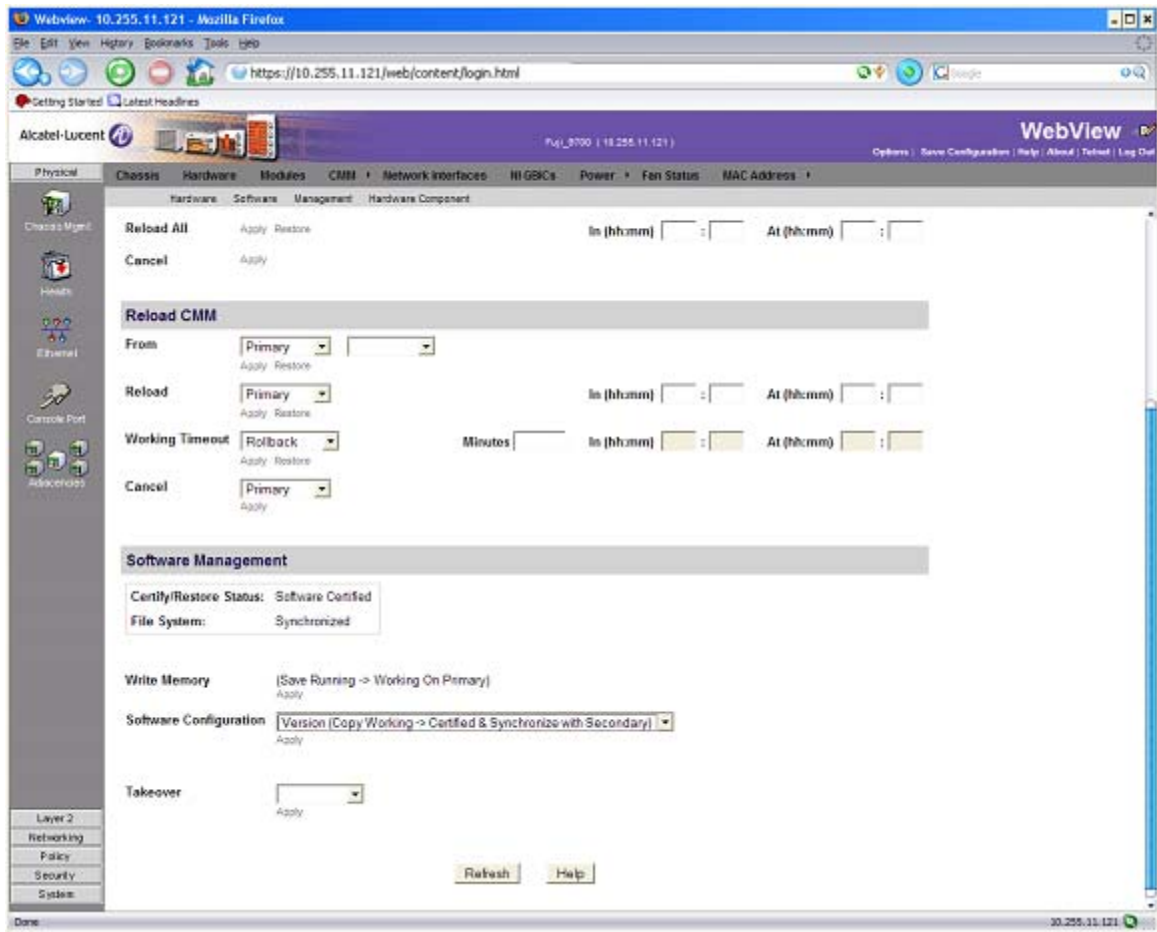
- 3 Select **System > System Mgmt > Install** to locate and FTP the 6.1.5.R01 image files that you downloaded in Step 1. Click on the **Browse** button to locate the files. All of the files will appear in the "Selected" area.
- 4 Click on the **Remove All** button to move all of the files to the "Available" area; then select the following image files and click the **Add** button to move them to the "Selected" area as shown below:  
**Jadvrout.img, Jbase.img, Jdiag.img, Jdni.img, Jeni.img, Jos.img, Jrelease.img, Jsecu.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 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 Configuration** field, select **Copy Working -> Certified on Primary** for switches with a single CMM, or **Copy Working -> Certified & Synchronize with Secondary** for switches with a secondary CMM, then click **Apply**.

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 your PC.

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**Note.** The following U-Boot and Miniboot version is supported for the 6.1.5. upgrade - **6.1.5.354.R01**.

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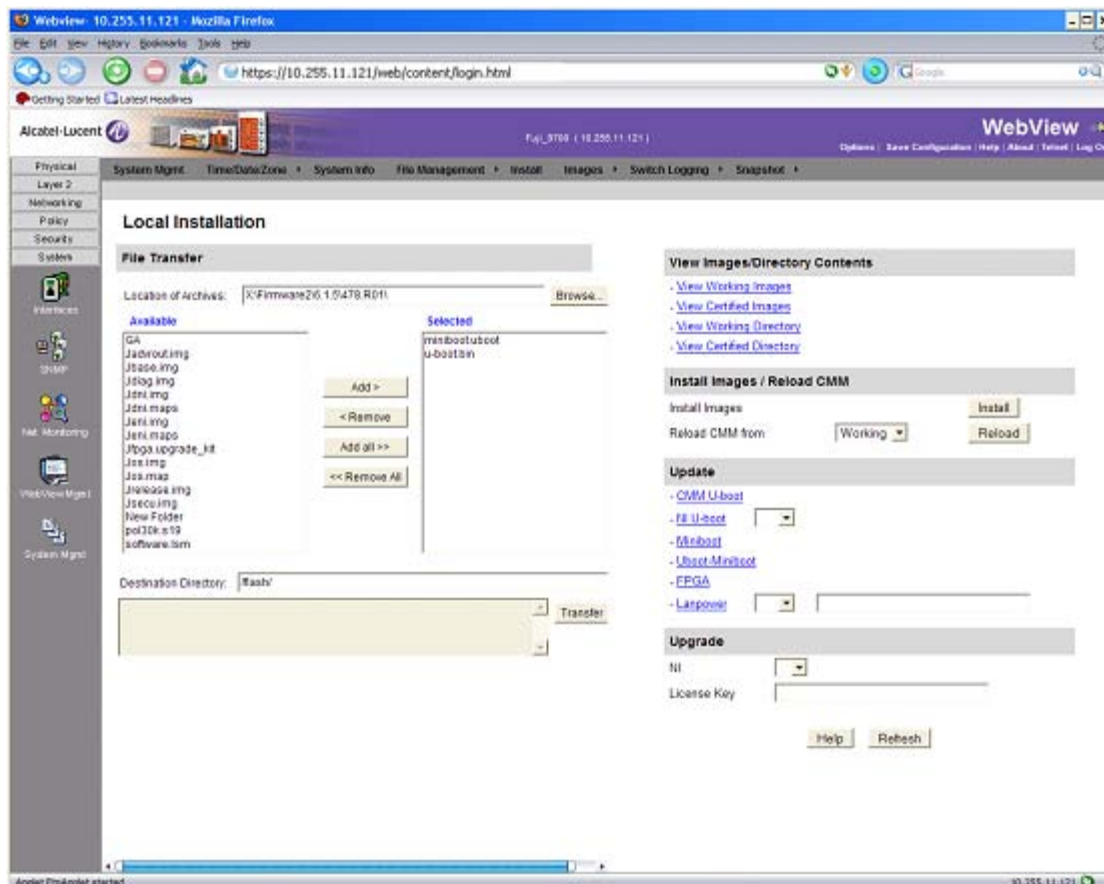
- 2 Log into the switch through WebView. (In dual redundant configurations you must log into the primary switch).

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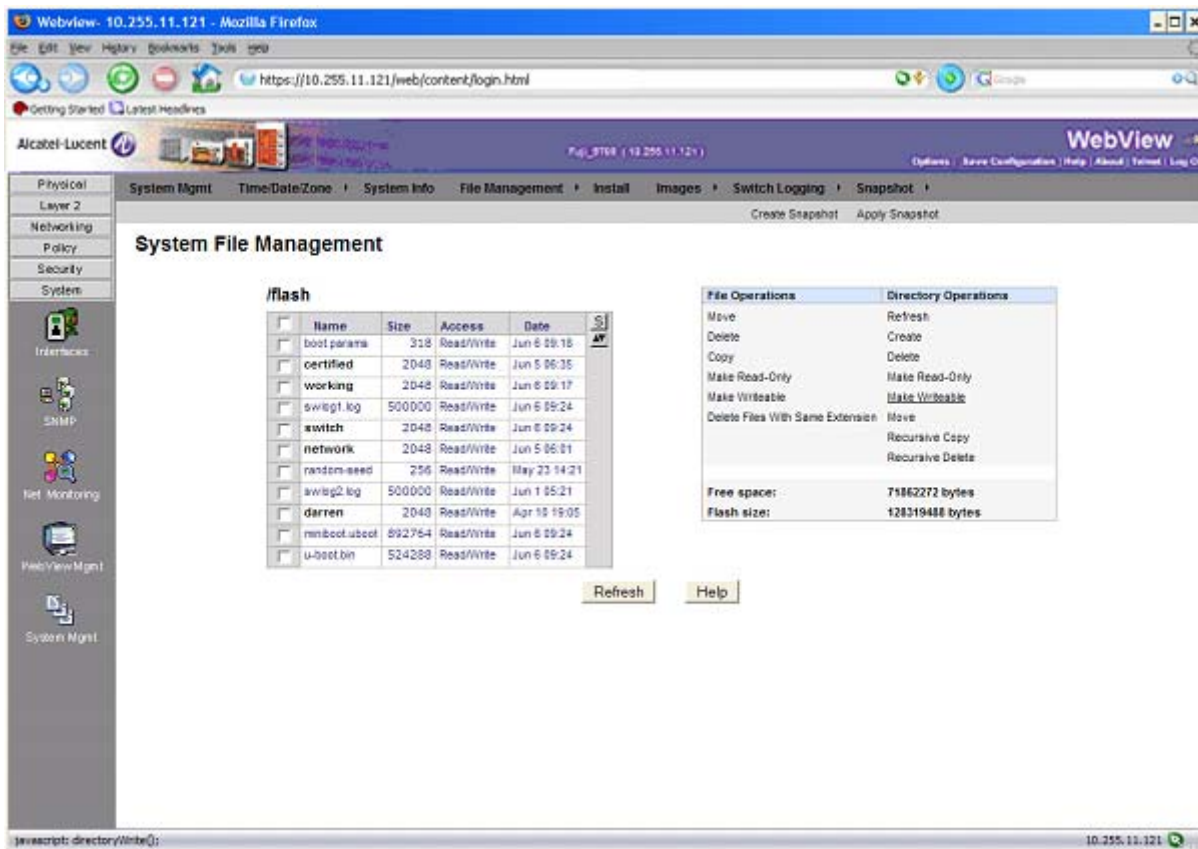
**Note.** If you have not already done so, make sure that the switch's Web Management Inactivity Timer is set to at least 10 minutes (default setting is 4 minutes). To view and change the setting, go to the **Session Type Parameters** page by selecting **Security > ASA > Sessions > Configuration**.

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- 3 Select **System > System Mgmt > Install** to locate and FTP the Miniboot and U-Boot 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 both the **miniboot.uboot** and **u-boot.bin** 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” area, click on **Uboot-Miniboot**, then click **OK** at the confirmation prompt. This will upgrade the Uboot and Miniboot files on all of the CMMs and the NIs. 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 7](#)), delete the **miniboot.uboot** and **u-boot.bin** files from the Flash Directory by selecting **System > System Mgmt > File Management > Local**, as shown below.

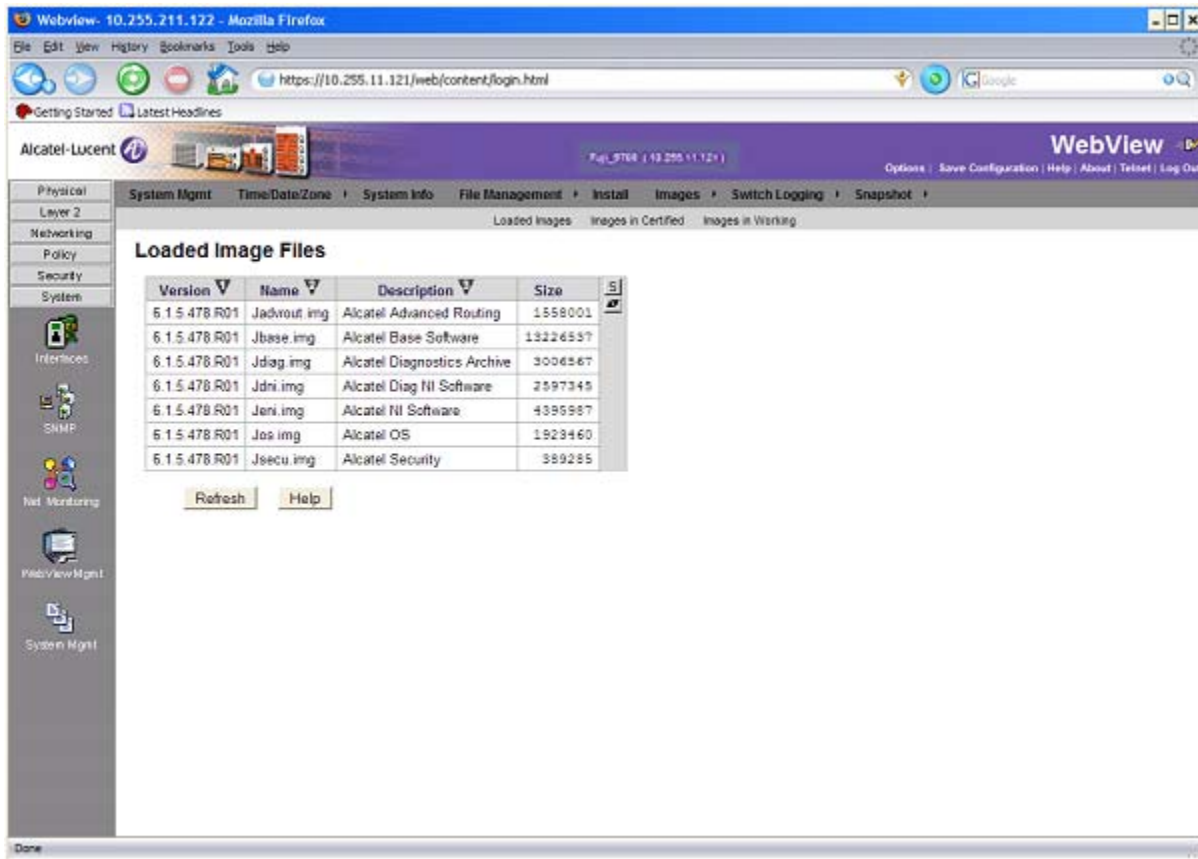


- 9 Check the box next to the **miniboot.uboot** file, select **Delete** in the **File Operations** box, then click **OK** at the confirmation prompt. Repeat to delete the **u-boot.bin** file.

# 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.



The screenshot shows the WebView interface for an Alcatel-Lucent switch. The browser address bar shows the URL `https://10.255.11.121/web/content/login.html`. The page title is "Loaded Image Files". The table below lists the loaded image files:

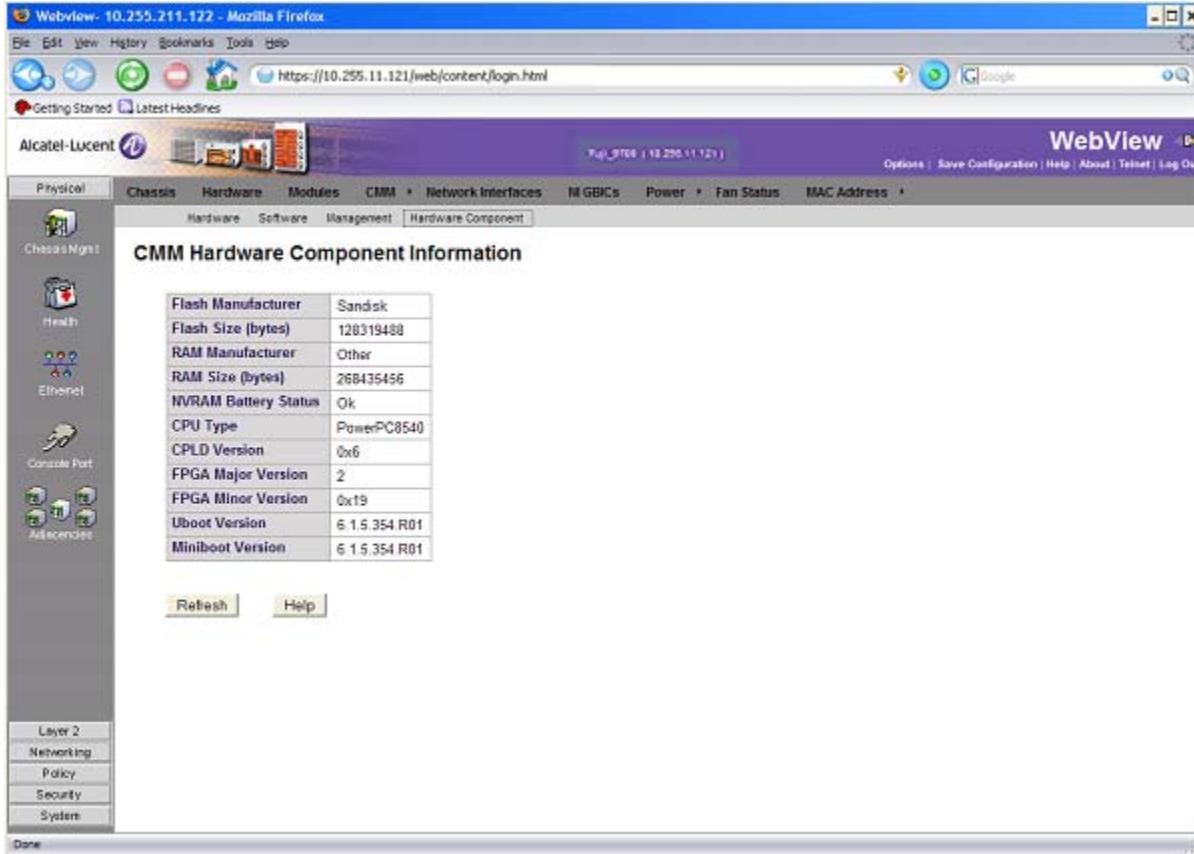
Version	Name	Description	Size
6.1.5.478.R01	Jadvout.img	Alcatel Advanced Routing	1558001
6.1.5.478.R01	Jbase.img	Alcatel Base Software	13226557
6.1.5.478.R01	Jdiag.img	Alcatel Diagnostics Archive	3006567
6.1.5.478.R01	Jdmi.img	Alcatel Diag NI Software	2597345
6.1.5.478.R01	Jeni.img	Alcatel NI Software	4395987
6.1.5.478.R01	Jos.img	Alcatel OS	1923460
6.1.5.478.R01	Jsecu.img	Alcatel Security	389285

Below the table, there are two buttons: "Refresh" and "Help".

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 the 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.



The screenshot shows the WebView interface for an Alcatel-Lucent switch. The main content area displays the 'CMM Hardware Component Information' page. The page features a table with the following data:

Flash Manufacturer	Sandisk
Flash Size (bytes)	128319488
RAM Manufacturer	Other
RAM Size (bytes)	268435456
NVRAM Battery Status	Ok
CPU Type	PowerPC8540
CPLD Version	0x6
FPGA Major Version	2
FPGA Minor Version	0x19
Uboot Version	6.1.5.354.R01
Miniboot Version	6.1.5.354.R01

Below the table, there are two buttons: 'Refresh' and 'Help'.



To verify that the U-Boot file was successfully upgraded on the switch's NIs, go to the **Network Interfaces** page by selecting **Physical > Chassis Mgmt > Network Interfaces**, as shown below.

The screenshot shows the WebView interface for an Alcatel-Lucent switch. The navigation menu includes Physical, Chassis, Hardware, Modules, CMM, Network Interfaces, NIGBICs, Power, Fan Status, and MAC Address. The Network Interfaces page is active, displaying a table of network interfaces.

Slot Number	Model Type	Model Name	Part Number	Admin Status	Oper Status	Reload on Takeover	LED Status	Power	Description	Uboot Version	Firmware Version	Hardware Revision	Board Serial
1	Module	OS9-GNI-C20L	902434-90	Power On	Up	Disabled		49	RJ45(LITE), SFP	6.1.5.354.R01		A07	H0400117
2	Module	OS9-GNI-C48T	907507-90	Power On	Up	Disabled		79	10-1000 MRJ21	6.1.5.354.R01		A02	H043086P
3	Module	OS9700-U2	902397-40	Power On	Up	Disabled		96	U2 10000	6.1.5.354.R01		B10	G1313816
4	Module	OS9-GNI-C24	902367-10	Power On	Up	Disabled		91	10-1000 RJ45	6.1.5.354.R01		A10	F3130261

Below the table are buttons for Power On, Power Off, Refresh, and Help.

# Upgrading with the CLI

Upgrading the OS9000 series switches to 6.1.5.R01 consists of the following steps.

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

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

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## Upgrading the Image Files

Follow the steps below to upgrade the image files to 6.1.5.R01.

- 1 FTP the 6.1.5.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.

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**Note.** The following U-Boot and Miniboot version is supported for the 6.1.5. upgrade - **6.1.5.354.R01**.

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- 2 Execute the following CLI commands to update the U-Boot and Miniboot files on the switch.

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

### Sample output for "update uboot-miniboot" ->

```
WED JUN 6 17:29:09 : SYSTEM (75) info message:
+++ ---->SSACTION_UPDATE_UBOOT_MINIBOOT
WED JUN 6 17:29:09 : CSM-CHASSIS (103) info message:
+++ == CSM == Update bootrom on all slots
+++ == CSM == sysUpdate begin
WED JUN 6 17:29:10 : FTP (82) info message:
+++ Session 0 New Connection, Client Address 127.2.66.1
+++ Get /flash/u-boot.bin!
+++ Session 0 Ending
WED JUN 6 17:29:13 : SYSTEM (75) info message:
+++ NI 1 software update started
WED JUN 6 17:29:20 : SYSTEM (75) info message:
+++ NI 1 software update completed -- file /flash/u-boot.bin copied
+++ NI 2 software update started
WED JUN 6 17:29:26 : SYSTEM (75) info message:
+++ NI 2 software update completed -- file /flash/u-boot.bin copied
+++ NI 3 software update started
WED JUN 6 17:29:32 : SYSTEM (75) info message:
+++ NI 3 software update completed -- file /flash/u-boot.bin copied
+++ NI 4 software update started
WED JUN 6 17:29:37 : SYSTEM (75) info message:
+++ NI 4 software update completed -- file /flash/u-boot.bin copied
+++ NI 5 software update started
```

```
WED JUN 6 17:29:42 : SYSTEM (75) info message:
+++ NI 5 software update completed -- file /flash/u-boot.bin copied
+++ NI 6 software update started
WED JUN 6 17:29:48 : SYSTEM (75) info message:
+++ NI 6 software update completed -- file /flash/u-boot.bin copied
+++ NI 7 software update started
WED JUN 6 17:29:53 : SYSTEM (75) info message:
+++ NI 7 software update completed -- file /flash/u-boot.bin copied
+++ NI 8 software update started
WED JUN 6 17:29:58 : SYSTEM (75) info message:
+++ NI 8 software update completed -- file /flash/u-boot.bin copied
+++ NI 65 software update started
Erasing flash....
Writing flash....
Done
WED JUN 6 17:30:04 : SYSTEM (75) info message:
+++ NI 65 software update completed -- file /flash/u-boot.bin copied
+++ NI 66 software update started
WED JUN 6 17:30:10 : SYSTEM (75) info message:
+++ NI 66 software update completed -- file /flash/u-boot.bin copied
+++ NI 65 software update started
Erasing flash.....
Writing flash.....
Done
WED JUN 6 17:30:23 : SYSTEM (75) info message:
+++ NI 65 software update completed -- file /flash/miniboot.u-boot copied
+++ NI 66 software update started
WED JUN 6 17:30:36 : SYSTEM (75) info message:
+++ NI 66 software update completed -- file /flash/miniboot.u-boot copied
WED JUN 6 17:30:44 : CSM-CHASSIS (103) info message:
+++ == CSM == sysUpdate end
+++ == CSM == timer_r:duplex---- session end ----
+++ == CSM == UPDATE COMPLETED
```

- 3 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](#) below 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 6.1.5.R01, use the **show microcode** command as shown below.

```
-> show microcode
```

Package	Release	Size	Description
Jbase.img	6.1.5.478.R01	12791788	Alcatel Base Software
Jeni.img	6.1.5.478.R01	4265379	Alcatel NI Software
Jdni.img	6.1.5.478.R01	2547675	Alcatel Diag NI Software
Jdiag.img	6.1.5.478.R01	2914537	Alcatel Diagnostics Archive
Jsecu.img	6.1.5.478.R01	386933	Alcatel Security
Jos.img	6.1.5.478.R01	1902999	Alcatel OS
Jadvrout.img	6.1.5.478.R01	1428434	Alcatel Advanced Routing

## 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 8540,
Flash Manufacturer : SanDisk SDCFJ-128,
Flash size         : 128319488 bytes (122 MB),
RAM Manufacturer   : Other,
RAM size           : 268435456 bytes (256 MB),
NVRAM Battery OK ? : YES,
CPLD rev           : 0x6,
FPGA major rev     : 0x2,
FPGA minor rev     : 0x19,
uboot Version      : 6.1.5.354.R01,
uboot-miniboot Version : 6.1.5.354.R01,
```

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:           OS9700-U24,
Description:          U24 1000,
Part Number:          902370-10,
Hardware Revision:    A10,
Serial Number:        F313047A,
Manufacture Date:     OCT 05 2005,
Firmware Version:     ,
Admin Status:         POWER ON,
Operational Status:   UP,
Power Consumption:    60,
Power Control Checksum: 0x0,
MAC Address:          00:d0:95:d0:bb:d8,
ASIC - Physical 1:    BCM56504_A1
CPLD - Physical 1:    0005/B7
UBOOT Version :      6.1.5.354.R01
```

```
UBOOT-miniboot Version :      No Miniboot
POE SW Version :              n/a
NI GBIC 1
  Model Name:                  Tyco Electronics,
  Description:                  Tyco Electronics,
  Part Number:                  1382408-1      ,
  Hardware Revision:            000,
  Serial Number:                b3515047      ,
  Manufacture Date:             031219      ,
  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 9000 Series Switch to/from Build 6.1.5.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. Build not supported on the model.

Upgrade/Downgrade Matrix 6.1.5.R01 GA I = 6.1.5.R01 GA F = 6.1.5.354.R01		
Build and Supported Software Versions for Each Upgrade		
	6.1.1 GA I = 6.1.1.R01 GA F = 6.1.1.632.R01	6.1.3 GA I = 6.1.3.R01 GA F = 6.1.1.167.R02
Model		
9600	No	Yes
9700	Yes	Yes
9800	No	Yes

**Note.** Hardware is only backward compatible down to the software that originally supported it. For example, you cannot run a 9800 Series Switch with 6.1.1.R01 software; however, you could run it with 6.1.3.R01 software. Also, when downgrading, make sure to load the applicable U-Boot/Miniboot files. For more information, contact Customer Support.



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