Upgrading OmniSwitch 7700/7800/8800 to 5.1.6.R02

Overview

This instruction sheet documents how to upgrade OmniSwitch 7700 CMM (OS7700-CMM), OmniSwitch 7800 CMM (OS7800-CMM), and OmniSwitch 8800 CMM (OS8800-CMM) modules to 5.1.6.R02 software and firmware. These upgrade (all types) can be done locally or remotely, without physically needing access to the chassis.

WARNING. Failure to follow the steps correctly can permanently damage CMM hardware.

This instruction sheet only applies to users upgrading to 5.1.6.R02. Do not use this instruction sheet for upgrades on later builds.

CAUTION. If you want to downgrade from 5.1.6.R02 on a switch with dual CMMs, the downgrade *must* be done individually on the CMMs. There is no problem on a single CMM chassis.

Upgrade Steps

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

Perform the following steps:

- 1 Use WebView (see Verifying the Upgrade with WebView on page 26) or use the show hardware info and the show microcode commands (see Verifying the Upgrade with the CLI on page 37) to verify that the MiniBoot/BootROM version is 5.1.5.340.R01, the FPGA version is 44, and the software version is 5.1.6.R02. If so, do *not* perform these instructions. If not, continue to the next step.
- 2 If the software version is not 5.1.6.R02 perform the steps described in Upgrading the Image Files with WebView on page 4 or Upgrading the Image Files with the CLI on page 28.
- If the MiniBoot/BootROM version is not 5.1.5.340.R01 perform the steps the steps described in Updating the MiniBoot/BootROM with WebView on page 8 or Updating the MiniBoot/
 BootROM with the CLI on page 30.
- 4 If the FPGA version is not 44 perform the steps described in Upgrading OmniSwitch 7700/7800 FPGA with WebView on page 13, or Upgrading OmniSwitch 8800 FPGA with WebView on page 18, Upgrading OmniSwitch 7700/7800 FPGA with the CLI on page 32, or Upgrading OmniSwitch 8800 FPGA with the CLI on page 34

CAUTION. By default, a shunt connecting pins 1 and 2 on jumper block J31 (OS7700-CMM), jumper J345 (OS7800-CMM), or jumper J21 (OS8800-CMM) is installed on all CMMs. (This jumper connection allows firmware upgrades on CMMs.) If this shunt has been removed and you need to upgrade your CMM's firmware, perform the steps in **Program Enable Jumpers Not Installed** on page 38 in the **Troubleshooting** section before proceeding.

Prerequisites

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

- All CLI commands must be executed via a Console Port connection, not through a Telnet session. If you are performing a remote upgrade, then the console port must be connected through a terminal server (via Telnet, PuTTY, etc.) in the same location as the switch you are upgrading.
- Alcatel recommends that you have at least 4.2 MB of free space in /flash memory on OmniSwitch 7700/7800 and 8800 switches before beginning.
- If all of the update files (miniboot.default, miniboot.backup, bootrom.bin, and either Ffpga.upgrade_kit or Efpga.upgrade_kit) are to be downloaded to flash at the same time, then there should be 6 megabytes of flash free prior to the load and subsequent update.
- The person performing the upgrade must:
 - be the responsible party for maintaining the switches' 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.

WARNING. Do not proceed until all the above prerequisites have been met.

List of Topics

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Upgrading the Image Files with WebView

Follow the steps below to upgrade the image files on OmniSwitch 7700/7800/8800 switches to Release 5.1.6.R02 with WebView. You should review all steps in this procedure before beginning.

Caution. Do not FTP the **miniboot.default**, **miniboot.backup**, **bootrom.bin**, and FPGA files at this time. See the related sections for those instructions.

Recommendation. release 5.1.6.R02 configuration files are *not* backwards compatible to Release 5.1.5 and earlier. Therefore, Alcatel recommends that you back up your configuration files before beginning.

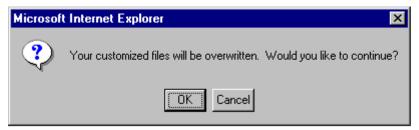
1 FTP the 5.1.6.R02 image files to the /flash/working directory.

Note. If you have dual CMMs make sure you FTP the files to the primary CMM.

- **2** Log into WebView.
- **3** Select System > System Mgmt > Install as shown below:

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2 k	Available	Selected		- View Working Directory		
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4 Click the Install button. The following pop-up window will be displayed:



- 5 Click OK.
- 6 Select Physical > Chassis Mgmt > CMM > Management as shown below:

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Layer 2 Reload From Certified Apply Patient	
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7 In the **Reload From** box Select **Working** and Click **Apply**. The following pop-up window will be displayed:

Microsoft	Internet Explorer
?	The Primary CMM will be reloaded from the Working directory. Are you sure?
	OK Cancel

- 8 Click OK. The switch will now reboot to the new working version. (Wait for the command to finish executing.)
- **9** After the CMM finishes rebooting log into WebView.
- **10** Select Physical > Chassis Mgmt > CMM > Management.

11 If you have a single CMM select Copy Working -> Certified on Primary in the Software Management box as shown below:

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	Restore (Copy Certified -> Workin	g On Primary)			Apply
Layer 2 Networking	Synchronize File System				Apply
Policy Security System	Temperature Threshold	69 (° C)			Apply
phys_chs_cmm_					Local intranet

If you have dual CMMs select **Copy Working -> Certified & Synchronized with Secondary** in the **Software Management** box as shown below:

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	Software Management Need to Certify)	Copy Working -> Certified & Synchronize with Secondary 💌	Apply
	Restore (Copy Certified -> Workin	g On Primary)	Apply
Networking	Synchronize File System		Apply
Policy Security System	Temperature Threshold	89 (° C)	Apply
phys_chs_cmm_cfg.h	ıtml		Local intranet

12 Click **Apply**. The following window will be displayed:



13 Click **OK**. The image file upgrade is complete. See **Verifying the Software with WebView** on page 27 to confirm the upgrade.

Note. In dual CMM configurations the secondary CMM will reboot.

- 14 If the MiniBoot and BootROM are 5.1.5.340.R01 and the FPGA is 44 the upgrade to 5.1.6.R02 is now complete. (See Verifying the Firmware with WebView on page 26 for more information.) If not, continue to Step 15 below.
- 15 If the MiniBoot and BootROM are not 5.1.5.340.R01 continue to Updating the MiniBoot/BootROM with WebView on page 8. (See Verifying the Firmware with WebView on page 26 for more information.)
- 16 If the FPGA is not 44 continue to Upgrading OmniSwitch 7700/7800 FPGA with WebView on page 13 or Upgrading OmniSwitch 8800 FPGA with WebView on page 18. (See Verifying the Firmware with WebView on page 26 for more information.)

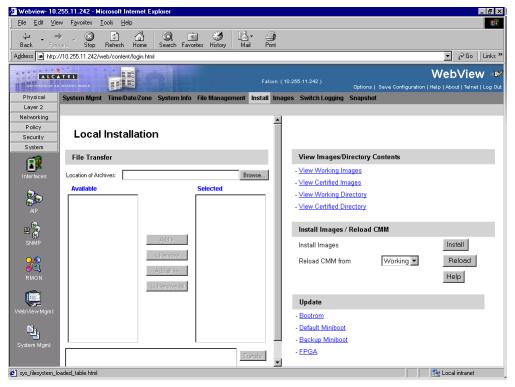
If the image files are 5.1.6.R02, the MiniBoot and BootROM are 5.1.5.340.R01, and the FPGA is 44 the upgrade to 5.1.6.R02 is now complete. (See Verifying the Upgrade with WebView on page 26 for more information.)

Updating the MiniBoot/BootROM with WebView

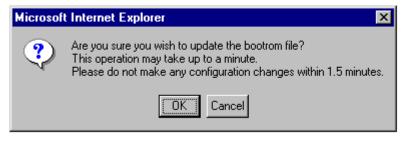
Follow the steps below to upgrade the MiniBoot and BootROM to 5.1.5.340.R01 with WebView. Please note that Release 5.1.6.R02 image files must be installed to use the steps in this procedure. See **Upgrad-ing the Image Files with WebView** on page 4 for more information.

WARNING. All CMMs must be certified and in redundant configurations both CMMs must be synchronized before beginning. In addition, the switch must be running in the Working directory. Use the **show running-directory** command to confirm these conditions.

- 1 Download the **bootrom.bin**, **miniboot.backup**, and **miniboot.default** files from the Alcatel's Service and Support code directory to the /**flash** directory.
- 2 Log into WebView.
- **3** Select System > System Mgmt > Install as shown below:



4 Select **Bootrom** in the **Update** box. The following confirmation window will be displayed:



5 Click **OK**. Wait at least 1.5 minutes before proceeding to the next step.

6 Select Default Miniboot in the Update box. The following confirmation window will be displayed:

Microsof	t Internet Explorer 🛛 🔀
?	Are you sure you wish to update the default miniboot file? This operation may take up to a minute. Please do not make any configuration changes within 1.5 minutes.
	Cancel

- 7 Click OK. Wait at least 1.5 minutes before proceeding to the next step.
- 8 Select Backup Miniboot in the Update box. The following confirmation window will be displayed:

Microsoft	Internet Explorer 🗙
?	Are you sure you wish to update the backup miniboot file? This operation may take up to a minute. Please do not make any configuration changes within 1.5 minutes.
	Cancel

9 Click OK. Wait at least 1.5 minutes before proceeding to the next step.

Note. The MiniBoot and BootROM upgrades on the primary CMM are now complete. See **Verifying the Firmware with WebView** on page 26 to confirm your upgrade.

10 Select System > System Mgmt > File Management > Local as shown below:

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SINMP SINMP RMON		working swlog1.log swlog2.log network random-seed cs_system.pmd command.log boot.cfg.51.err	2048 64000 2048 256 184280 66402 867 2048	Read/Write Read/Write Read/Write Read/Write Read/Write Read/Write Read/Write		Make Writeable Delete Files With Same Extension	Make Wirtleable Move Recursive Copy Recursive Delete	

- **11** Check the box next to **bootrom.bin**.
- 12 Select Delete in the File Operations box. The following confirmation window will be displayed:



- 13 Click OK.
- 14 Check the box next to miniboot.backup.
- 15 Select Delete in the File Operations box. The following confirmation window will be displayed:

Microsoft	Internet Explorer 🗙
?	Are you sure you wish to delete 'miniboot.backup'?
	Cancel

- 16 Click OK.
- **17** Check the box next to **miniboot.default**.
- 18 Select Delete in the File Operations box. The following confirmation window will be displayed:



19 If you have dual CMMs proceed to Step 20. Otherwise, proceed to Step 27.

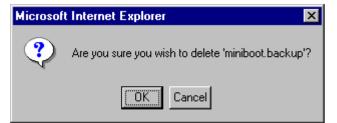
20 Select System > System Mgmt > File Management > Remote as shown below:

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21 Enter **bootrom.bin** in the **Delete** box and click the **Delete File** to the right of this box. The following confirmation window will be displayed:

Microsoft	Internet Explorer 🛛 🗙
?	Are you sure you wish to delete 'bootrom.bin'?
	Cancel

- **22** Click **OK**.
- **23** Enter **miniboot.backup** in the **Delete** box and click the **Delete File** to the right of this box. The following confirmation window will be displayed:



24 Click OK.

25 Enter **miniboot.default** in the **Delete** box and click the **Delete File** to the right of this box. The following confirmation window will be displayed:



26 Click OK.

27 If the FPGA is 44 the upgrade to 5.1.6.R02 is now complete. (See Verifying the Upgrade with WebView on page 26 for more information.) If not, continue to Upgrading OmniSwitch 7700/7800 FPGA with WebView on page 13 or Upgrading OmniSwitch 8800 FPGA with WebView on page 18.

Upgrading OmniSwitch 7700/7800 FPGA with WebView

Follow the steps below to upgrade the FPGA to FPGA 44 on OmniSwitch 7700/7800 switches. Please note that there must be 4.2 megabytes of free flash on each CMM.

CAUTION. By default, a shunt connecting pins 1 and 2 on jumper block J31 (OS7700-CMM) or jumper J345 (OS7800-CMM) is installed on all CMMs. (This jumper connection allows firmware upgrades on CMMs.) If this shunt has been removed and you need to upgrade your CMM's firmware, perform the steps in **Program Enable Jumpers Not Installed** on page 38 in the **Troubleshooting** section before proceeding.

All CMMs must be running with 5.1.6.R02 image files before upgrading the FPGA.If you have not installed 5.1.6.R02 image files perform the steps described in **Upgrading the Image Files with WebView** on page 4 before proceeding.

In addition, all CMMs must be running with BootROM/MiniBoot version 5.1.5.340.R01. If you have not upgraded the BootROM/MiniBoot version to 5.1.5.340.R01 perform the steps described in **Updating the MiniBoot/BootROM with WebView** on page 8 before proceeding.

WARNING. Dual CMMs *must* have the same FPGA version number. Do not attempt to run switches with CMMs with different FPGA versions. See **Verifying the Firmware with WebView** on page 26 for more information on viewing the current FPGA version.

1 Download the FPGA upgrade kit (**Ffpga.upgrade_kit** on OmniSwitch 7700/7800) from the Alcatel's Service and Support code directory to a source machine (e.g., a laptop).

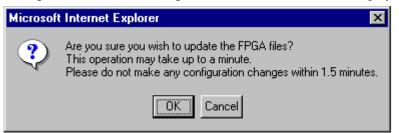
WARNING. All CMMs must be certified and in redundant configurations both CMMs must be synchronized before beginning. In addition, the switch must be running in the Working directory. Use the **show running-directory** command to confirm these conditions.

- 2 FTP the FPGA upgrade kit file (Ffpga.upgrade_kit or Efpga.upgrade_kit) to the /flash directory on the primary CMM. Make sure you change the path of the destination directory from /flash/working (the default) to the root /flash directory before transferring the upgrade kit.
- **3** Log into WebView.

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System Mgmt		- Backup Miniboot
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4 Select System > System Mgmt > Install as shown below:

5 Select FPGA in the Update box. The following confirmation window will be displayed:



6 Click OK. Wait at least 1.5 minutes before proceeding to the next step.

7 Select Physical > Chassis Mgmt > CMM > Management as shown below:

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	Schedule CMM Reload		At : : : :	Apply
		yyyy mm dd	hh mm ss	
Layer 2				
Networking Policy	Cancel CMM Reload	Primary -		Apply
Security				
System				
phys_chs_cmm_	cfg.html			🐅 Local intranet

8 Select Reboot Entire Switch and Click Apply. The following pop-up window will be displayed:



9 Click OK.

Note. If the image files are 5.1.6.R02, the MiniBoot and BootROM are 5.1.5.340.R01, and the FPGA is 44 the upgrade to 5.1.6.R02 is now complete. (See **Verifying the Upgrade with WebView** on page 26 for more information.)

After the FPGA upgrade has been successfully completed you should delete the FPGA upgrade kit file from the primary and secondary (if present) CMMs. Follow the steps below to delete these files:

1 Select System > System Mgmt > File Management > Local as shown below:

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	F	swlog2.log				Extension	Recursive Copy	
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RMON RMON View Mgmt		swlog2.log network random-seed cs_system.pmd command.log boot.cfg.51.err	2048 256 184280 66402 867	Read/Write Read/Write Read/Write Read/Write			Recursive Delete	
RMON		swiog2.log network random-seed cs_system.pmd command.log boot.cfg.51.err switch	2048 256 184280 66402 867 2048	Read/Write Read/Write Read/Write Read/Write Read/Write			Recursive Delete	

- 2 Check the box next to Ffpga.upgrade_kit.
- **3** Select **Delete** in the **File Operations** box. A confirmation window will be displayed.
- 4 Click OK.

Note. After the file is deleted the page will automatically refresh and show that the file has been deleted.

5 If you have a single CMM then you are done. If you have dual CMMs proceed to Step 6.

6 Select System > System Mgmt > File Management > Remote as shown below:

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sys_remote_files	vstem table.html					👼 Local intranet

- 7 Enter Ffpga.upgrade_kit in the Delete box and click the Delete File to the right of this box.A confirmation window will be displayed.
- 8 Click OK.

Note. After the file is deleted the page will automatically refresh and show that the file has been deleted.

Upgrading OmniSwitch 8800 FPGA with WebView

Follow the steps below to upgrade the FPGA to FPGA 44 on OmniSwitch 8800 switches. Please note that there must be 4.2 megabytes of free flash on each CMM.

CAUTION. By default, a shunt connecting pins 1 and 2 on jumper block J21 (OS8800-CMM) is installed on all CMMs. (This jumper connection allows firmware upgrades on CMMs.) If this shunt has been removed and you need to upgrade your CMM's firmware, perform the steps in **Program Enable** Jumpers Not Installed on page 38 in the **Troubleshooting** section before proceeding.

All CMMs must be running with 5.1.6.R02 image files before upgrading the FPGA.If you have not installed 5.1.6.R02 image files perform the steps described in **Upgrading the Image Files with WebView** on page 4 before proceeding.

In addition, all CMMs must be running with BootROM/MiniBoot version 5.1.5.340.R01. If you have not upgraded the BootROM/MiniBoot version to 5.1.5.340.R01 perform the steps described in **Updating the MiniBoot/BootROM with WebView** on page 8 before proceeding.

WARNING. Dual CMMs *must* have the same FPGA version number. Do not attempt to run switches with CMMs with different FPGA versions. See **Verifying the Firmware with WebView** on page 26 for more information on viewing the current FPGA version.

1 Download the FPGA upgrade kit (**Efpga.upgrade_kit**) from the Alcatel's Service and Support code directory to a source machine (e.g., a laptop).

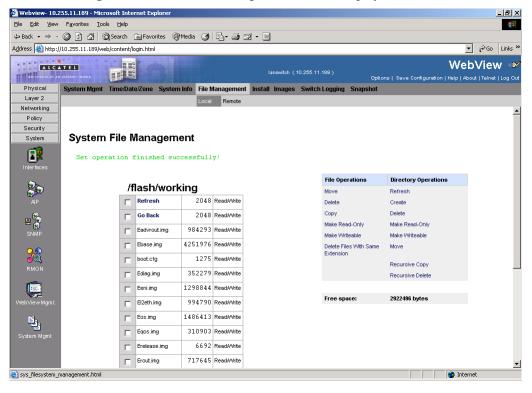
WARNING. All CMMs must be certified and in redundant configurations both CMMs must be synchronized before beginning. In addition, the switch must be running in the Working directory. Use the **show running-directory** command to confirm these conditions.

- 2 FTP the FPGA upgrade kit file (Efpga.upgrade_kit) to the /flash directory on the primary CMM. Make sure you change the path of the destination directory from /flash/working (the default) to the root /flash directory before transferring the upgrade kit.
- **3** Log into WebView.

4 Select System > System Mgmt > File Management > Local as shown below:

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			swlog2.log	64000 2048 256	Read/Write Read/Write			Recursive Copy	
			swlog2.log network random-seed	64000 2048 256 184280	Read/Write Read/Write Read/Write		Extension	Recursive Copy Recursive Delete	
RMON			swlog2.log network random-seed cs_system.pmd	64000 2048 256 184280 66402	Read/Write Read/Write Read/Write Read/Write		Extension	Recursive Copy Recursive Delete	
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RMON			swlog2.log network random-seed cs_system.pmd command.log boot.cfg.51.err	64000 2048 256 184280 66402 867 2048	Read///vite Read///vite Read///vite Read///vite Read///vite		Extension	Recursive Copy Recursive Delete	

- 5 Navigate to the root /flash directory.
- 6 Click on working in the table. The following screen will be displayed:



- 7 Check a box next to any file with a .img extension.
- 8 Click Delete Files With The Same Extension. A confirmation window will be displayed.
- 9 Click OK. Wait about one minute for the operation to complete.
- 10 If you have a single CMM proceed to Step 14. Otherwise, select System > System Mgmt > File Management > Remote as shown below:

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System Mgmt							
i 🙋 sys_remote_filesy	ystem_table.html						🛛 🔡 Local intranet

- **11** Enter /flash/*.img in the Delete box.
- 12 Click the Delete button next to the Delete box. A confirmation will be displayed.
- **13** Click **OK**. Wait about one minute for the operation to complete successfully.

- 🖉 Webview- 10.255.11.242 Microsoft Internet Explo _ 🗗 × <u>File Edit View Favorites Tools Help</u> Stop 🔔 Refresh G Home - ⇒ Search Favorites History Ba∙ Mail - Dint Back Address Addres 💌 🤗 Go 🛛 Links 🎽 WebView ⊮ ALCATEL E. II II XX HE ment Install Images Switch Logging Snapshot Physical System Mgmt Time/Date/Zone Sy stem Info File Mana Layer 2 Networking Policy Local Installation Security System File Transfer View Images/Directory Contents - View Working Images Location of Archives: Browse ... - View Certified Images Available Selected AP - View Working Directory - View Certified Directory Install Images / Reload CMM Install Install Images RMON Reload CMM from Working 💌 Reload Help Update 6.2 Bootrom - Default Miniboot Ľ., - Backup Miniboot - FPGA Transfer sys_filesystem_loaded_table.html 🧾 🧱 Local intranet
- **14** Select System > System Mgmt > Install as shown below:

15 Select FPGA in the Update box. The following confirmation window will be displayed:



16 Click OK. Wait at least 1.5 minutes before proceeding to the next step.

17 Select System > System Mgmt > File Management > Local as shown below:

File Edit View	Favorites Tools Help)						- 8
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SNMP	-		64000			Make Writeable	Make Writeable Move	
SNMP		swlog1.log	64000	ReadAWrite		Make Writeable Delete Files With Same	Make Writeable Move Recursive Copy	
SNMP		swiog1.log swiog2.log network	64000 64000 2048	Read/Write Read/Write Read/Write		Make Writeable Delete Files With Same	Make Writeable Move	
SNMP		swlog1.log swlog2.log network random-seed	64000 64000 2048 256	Read/Write Read/Write Read/Write Read/Write		Make Writeable Delete Files With Same Extension	Make Writeable Move Recursive Copy Recursive Delete	
SNMP		swiog1.log swiog2.log network	64000 64000 2048 256	Read/Write Read/Write Read/Write		Make Writeable Delete Files With Same	Make Writeable Move Recursive Copy	
SNMP		swlog1.log swlog2.log network random-seed	64000 64000 2048 256 184280	Read/Write Read/Write Read/Write Read/Write		Make Writeable Delete Files With Same Extension	Make Writeable Move Recursive Copy Recursive Delete	
SNMP RMON		swlog1.log swlog2.log network random-seed cs_system.pmd	64000 64000 2048 256 184280 66402	Read///rite Read///rite Read///rite Read///rite Read///rite		Make Writeable Delete Files With Same Extension	Make Writeable Move Recursive Copy Recursive Delete	
SNMP SNMP RMON WebVrewMgmt		swlog1.log swlog2.log network random-seed cs_system.pmd command.log	64000 64000 2048 256 184280 66402 867	Read///rite Read///rite Read///rite Read///rite Read///rite		Make Writeable Delete Files With Same Extension	Make Writeable Move Recursive Copy Recursive Delete	
SNMP RMON		swlog1 log swlog2 log network random-seed cs_system.pmd command.log boot.cfg.51.err	64000 64000 2048 256 184280 66402 867 2048	Read/Write Read/Write Read/Write Read/Write Read/Write Read/Write		Make Writeable Delete Files With Same Extension	Make Writeable Move Recursive Copy Recursive Delete	

- **18** Check the box next to **Efpga.upgrade_kit**.
- **19** Select **Delete** in the **File Operations** box. A confirmation window will be displayed.
- **20** Click **OK**.

Note. After the file is deleted the page will automatically refresh and show that the file has been deleted.

21 If you have a single CMM proceed to Step 25. Otherwise, proceed to Step 22.

- view- 10.255.11.249 Microsoft Internet Explo 🖉 Web _ 🗗 × <u>File Edit View Favorites Tools Help</u> Stop 🔔 Refresh 습 Home Q 主 Search Favorites -History Ba∙ Mail - Drint Back Address 🕢 http://10.255.11.249/web/content/login.html 💌 🤗 Go 🛛 Links 🎽 WebView ⊮ ALCATEL E. 11 11 X.6. HE Physical stem Mgmt Time/Date/Zone stem Info File Management Install Images Switch Logging Snapshot Layer 2 Networking Policy **Remote System File Management** Security System Processing Status: Ready Performance Status: Successful Delete File AIP Path(Directory+Filename) Delete Source Path(Directory+Filename) Copy From • Copy File To Destination Filename List Files List From Directory RMON Directory File Name Type Size Attr Date Time [No Entries] e Delete File Copy File List Files Refresh Help 1<u>1</u> ess_remote_filesystem_table.html 📃 🧱 Local intranet
- 22 Select System > System Mgmt > File Management > Remote as shown below:

23 Enter **Efpga.upgrade_kit** in the **Delete** box and click the **Delete File** to the right of this box.

A confirmation window will be displayed.

24 Click OK.

Note. After the file is deleted the page will automatically refresh and show that the file has been deleted.

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Health	Cancel CMM Reload	Secondary 💌	Apply
Ethemet	Reload Working Version	Rollback-Timeout	Apply
Console Port	Write Memory (Save Running ->	Working On Primary)	Apply
Adjacencies	Software Management (Need to Certify)	Copy Working -> Certified On Primary	• Apply
	Restore (Copy Certified -> Workin	g On Primary)	Apply
Layer 2 Networking Policy	Synchronize File System		Apply
Security System	Temperature Threshold	69 (° C)	Apply
physichs cmm c	ofg.html		🐙 Local intranet

25 Select **Physical** > **Chassis Mgmt** > **CMM** > **Management** as shown below:

- **26** Click **Apply** next to the **Copy Certified > Working On Primary** box.
- **27** If you have a single CMM proceed to Step 29. Otherwise, proceed to Step 28.
- **28** Click **Apply** next to the **Synchronize File System** box.

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phys_chs_cmm_	_ctg.html		🜆 Local intranet

29 Select **Physical** > **Chassis Mgmt** > **CMM** > **Management** as shown below:

30 Select Reboot Entire Switch and Click Apply. The following pop-up window will be displayed:



31 Click OK.

Note. If the image files are 5.1.6.R02, the MiniBoot and BootROM are 5.1.5.340.R01, and the FPGA is 44 the upgrade to 5.1.6.R02 is now complete. (See **Verifying the Upgrade with WebView** on page 26 for more information.)

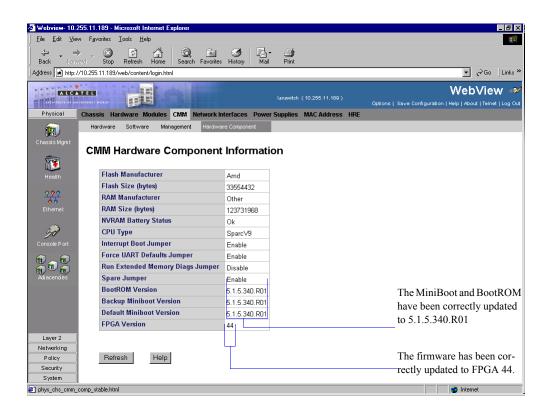
After the FPGA upgrade has been successfully completed you should delete the FPGA upgrade kit file from the primary and secondary (if present) CMMs. Follow the steps below to delete these files:

Verifying the Upgrade with WebView

You can use WebView to verify that your upgrade is successful.

Verifying the Firmware with WebView

To verify that the CMM's firmware was correctly upgraded to FPGA 44 and to verify that the MiniBoot/ BootROM has been successfully upgraded to 5.1.5.340.R01 on OmniSwitch 7700, 7800, and 8800 switches, select **Physical > Chassis Mgmt > CMM > Hardware Component** as shown below:



Verifying the Software with WebView

To verify that the software was correctly upgraded to 5.1.6.R02, select **System Mgmt > Images** > **Loaded Images** as shown below:

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			switch_23 (10.255.13.23)		Options	Save Configuration Help About Telnet Log Ou
Physical	System Mgmt Time/Da	te/Zone System Info	File Management Install Images Switch Logo	ging Snaps	not	
Layer 2			Loaded Images Images in Certified	Images in W	orking	
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Security	Loaded Imag	je Files				
System						
6 7	Version V	Name 💙	Description 💙	Size	S	
	5.1.6.74.R02	Fdiag.img	Alcatel Diagnostics Archive	331338	AV	
Interfaces	5.1.6.74.R02	Fwebadvrout.img	Alcatel Webview - Advanced Routing	249619		
<u>@</u>	5.1.6.74.R02	Fwebl2eth.img	Alcatel Webview - Layer 2 and Ethernet drivers	311057		
AIP	5.1.6.74.R02	Fwebqos.img	Alcatel Webview - Quality of Service	261472		
	5.1.6.74.R02	Fwebrout.img	Alcatel Webview - Routing	345730		
۳ 🐉	5.1.6.74.R02	Fwebsecu.img	Alcatel Webview - Security	210602		
SNMP	5.1.6.74.R02	Fadvrout.img	Alcatel Advanced Routing	983904		
~~	5.1.6.74.R02	Feni.img	Alcatel NI Software	1305860		
8	5.1.6.74.R02	FI2eth.img	Alcatel Layer 2, Ethernet	985955		
RMON	Version	Name	Description	Size		
1	5.1.6.74.R02	Fos.img	Alcatel Operating System	1495164		The image files have been
	5.1.6.74.R02	Fqos.img	Alcatel Quality of Service	313006		correctly updated to
	5.1.6.74.R02	Frout.img	Alcatel Routing	718511		5.1.6.R02.
B _i	5.1.6.74.R02	Fsecu.img	Alcatel Security	130240		
	5.1.6.74.R02	Fweb.img	Alcatel Webview - Main	1433253		
rstern Mgmt	5.1.6.75.R02	Fbase.img	Alcatel Base Software	4299687		
		_	1	1		-

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 have been correctly upgraded to Release 5.1.6.R02.

Note. Refer to the online help and to the *OmniSwitch* 7700/7800/8800 *Switch Management Guide* for more documentation on WebView.

Upgrading the Image Files with the CLI

Follow the steps below to upgrade the image files on OmniSwitch 7700/7800/8800 switches to Release 5.1.6.R02 through the CLI. You should review all steps in this procedure before beginning.

Caution. Do not FTP the **miniboot.default**, **miniboot.backup**, **bootrom.bin**, and FPGA files at this time. See the related sections for those instructions.

Recommendation. release 5.1.6.R02 configuration files are *not* backwards compatible to Release 5.1.5 and earlier. Therefore, Alcatel recommends that you back up your configuration files before beginning.

1 FTP the 5.1.6.R02 image files to the /flash/working directory.

Note. If you have dual CMMs make sure you FTP the files to the primary CMM.

2 Log into the CMM.

Note. In dual CMM configurations you must log into the primary CMM.

3 At the CLI prompt enter:

-> install *.img

4 When prompted to install the WebView security image file (**Fwebsecu.img** on OmniSwitch 7700/ 7800 and **Ewebsecu.img** on OmniSwitch 8800) answer y.

5 Enter:

-> reload working no rollback-timeout

The switch will now reboot to the new working version.

6 Log into the CMM.

Note. In dual CMM configurations you must log into the primary CMM.

- 7 If you have a single CMM enter:
 - -> copy working certified

If you have dual CMMs enter:

-> copy working certified flash-synchro

Wait for the command to finish executing.

Note. In dual CMM configurations the secondary CMM will reboot.

- 8 If the MiniBoot and BootROM are 5.1.5.340.R01 and the FPGA is 44 the upgrade to 5.1.6.R02 is now complete. (See Verifying the Upgrade with the CLI on page 37 for more information.) If not, continue to Step 9 on Page 29.
- 9 If the MiniBoot and BootROM are not 5.1.5.340.R01 continue to Updating the MiniBoot/BootROM with the CLI on page 30. (See Verifying the Upgrade with the CLI on page 37 for more information.)
- 10 If the FPGA is not 44 continue to Upgrading OmniSwitch 7700/7800 FPGA with the CLI on page 32 or Upgrading OmniSwitch 8800 FPGA with the CLI on page 34. (See Verifying the Upgrade with the CLI on page 37 for more information.)

If the image files are 5.1.6.R02, the MiniBoot and BootROM are 5.1.5.340.R01, and the FPGA is 44 the upgrade to 5.1.6.R02 is now complete. (See Verifying the Upgrade with the CLI on page 37 for more information.)

Updating the MiniBoot/BootROM with the CLI

Follow the steps below to upgrade the MiniBoot and BootROM to 5.1.5.340.R01. Please note that Release 5.1.6.R02 image files must be installed to use the steps in this procedure. See **Upgrading the Image Files** with the **CLI** on page 28 for more information.

WARNING. All CMMs must be certified and in redundant configurations both CMMs must be synchronized before beginning. In addition, the switch must be running in the Working directory. Use the **show running-directory** command to confirm these conditions.

- 1 Download the **bootrom.bin**, **miniboot.backup**, and **miniboot.default** files from the Alcatel's Service and Support code directory to the /**flash** directory on the primary CMM.
- **2** Log into the CMM.

Note. In dual CMM configurations you must log into the primary CMM.

3 Enter

```
-> update bootrom bootrom.bin
```

Wait for the following message to be displayed:

"-- SESSION END --"

4 Enter

-> update default miniboot miniboot.default

Wait for the following message to be displayed:

"-- SESSION END --"

5 Enter

-> update backup miniboot miniboot.backup

Wait for the following message to be displayed:

"-- SESSION END --"

```
6 Enter:
```

-> rm bootrom.bin

7 Enter:

-> rm miniboot.default

8 Enter:

-> rm miniboot.backup

Note. Use the ls command to confirm that the files have been deleted on the primary CMM.

9 If you have dual CMMs go to Step 10 below. Otherwise, go to Step 13.

Note. Steps 10 through 12 must be performed on the primary CMM.

10 Enter:

-> rrm /flash/bootrom.bin

11 Enter:

-> rrm /flash/miniboot.default

12 Enter:

-> rrm /flash/miniboot.backup

13 If the FPGA is 44 the upgrade to 5.1.6.R02 is now complete. (See Verifying the Upgrade with the CLI on page 37 for more information.) If not, continue to Upgrading OmniSwitch 7700/7800 FPGA with the CLI on page 32 or Upgrading OmniSwitch 8800 FPGA with the CLI on page 34.

Note. Use the rls command by entering

-> rls /flash

to confirm that the files have been deleted on the secondary CMM.

If the image files are 5.1.6.R02, the MiniBoot and BootROM are 5.1.5.340.R01, and the FPGA is 44 the upgrade to 5.1.6.R02 is now complete. (See Verifying the Upgrade with the CLI on page 37 for more information.)

Upgrading OmniSwitch 7700/7800 FPGA with the CLI

Follow the steps below to upgrade the FPGA to FPGA 44 on OmniSwitch 7700/7800/ switches. Please note that there must be 4.2 megabytes of free flash on each CMM.

CAUTION. By default, a shunt connecting pins 1 and 2 on jumper block J31 (OS7700-CMM) or jumper J345 (OS7800-CMM) is installed on all CMMs. (This jumper connection allows firmware upgrades on CMMs.) If this shunt has been removed and you need to upgrade your CMM's firmware, perform the steps in **Program Enable Jumpers Not Installed** on page 38 in the **Troubleshooting** section before proceeding.

All CMMs must be running with 5.1.6.R02 image files before upgrading the FPGA. If you have not installed 5.1.6.R02 image files perform the steps described in **Upgrading the Image Files with the CLI** on page 28 before proceeding.

In addition, all CMMs must be running with BootROM/MiniBoot version 5.1.5.340.R01. If you have not upgraded the BootROM/MiniBoot version to 5.1.5.340.R01 perform the steps described in **Updating the MiniBoot/BootROM with the CLI** on page 30 before proceeding.

WARNING. Dual CMMs *must* have the same FPGA version number. Do not attempt to run switches with CMMs with different FPGA versions. See **Verifying the Upgrade with the CLI** on page 37 for more information on viewing the current FPGA version.

1 Download the FPGA upgrade kit (**Ffpga.upgrade_kit**) from the Alcatel's Service and Support code directory to a source machine (e.g., a laptop).

WARNING. All CMMs must be certified and in redundant configurations both CMMs must be synchronized before beginning. In addition, the switch must be running in the Working directory. Use the **show running-directory** command to confirm these conditions.

- 2 FTP the FPGA upgrade kit file (Ffpga.upgrade_kit) to the /flash directory on the primary CMM. Make sure you change the path of the destination directory from /flash/working (the default) to the root /flash directory before transferring the upgrade kit.
- **3** Log into the CMM.

Note. In dual CMM configurations you must log into the primary CMM.

4 Enter:

-> update fpga cmm

Wait for the following message to be displayed:

"-- SESSION END --"

Note. This command may take as much as a minute before it completes, particularly in single CMM configurations.

5 Power cycle the switch or use the **reload all** command.

Note. If the image files are 5.1.6.R02, the MiniBoot and BootROM are 5.1.5.340.R01, and the FPGA is 44 the upgrade to 5.1.6.R02 is now complete. (See **Verifying the Upgrade with the CLI** on page 37 for more information.)

After the FPGA upgrade has been successfully completed you should delete the FPGA upgrade kit file from the primary and secondary (if present) CMMs. Follow the steps below to delete these files:

- 1 Enter the following to delete the **Ffpga.upgrade_kit** file on the primary CMM:
 - -> rm Ffpga.upgrade_kit

Note. Use the ls command to confirm that the upgrade kit file has been deleted on the primary CMM.

2 Enter the following on the primary CMM to delete the Ffpga.upgrade_kit file on the secondary CMM:

-> rrm /flash/Ffpga.upgrade_kit

Note. Use the rls command by entering:

-> rls /flash

to confirm that the upgrade kit file has been deleted on the secondary CMM.

Upgrading OmniSwitch 8800 FPGA with the CLI

Follow the steps below to upgrade the FPGA to FPGA 44 on OmniSwitch 7700/7800/8800 switches. Please note that there must be 4.2 megabytes of free flash on each CMM.

CAUTION. By default, a shunt connecting pins 1 and 2 on jumper block J21 (OS8800-CMM) is installed on all CMMs. (This jumper connection allows firmware upgrades on CMMs.) If this shunt has been removed and you need to upgrade your CMM's firmware, perform the steps in **Program Enable Jumpers Not Installed** on page 38 in the **Troubleshooting** section before proceeding.

All CMMs must be running with 5.1.6.R02 image files before upgrading the FPGA. If you have not installed 5.1.6.R02 image files perform the steps described in **Upgrading the Image Files with the CLI** on page 28 before proceeding.

In addition, all CMMs must be running with BootROM/MiniBoot version 5.1.5.340.R01. If you have not upgraded the BootROM/MiniBoot version to 5.1.5.340.R01 perform the steps described in **Updating the MiniBoot/BootROM with the CLI** on page 30 before proceeding.

WARNING. Dual CMMs *must* have the same FPGA version number. Do not attempt to run switches with CMMs with different FPGA versions. See **Verifying the Upgrade with the CLI** on page 37 for more information on viewing the current FPGA version.

1 Download the FPGA upgrade kit (**Efpga.upgrade_kit**) from the Alcatel's Service and Support code directory to a source machine (e.g., a laptop).

WARNING. All CMMs must be certified and in redundant configurations both CMMs must be synchronized before beginning. In addition, the switch must be running in the Working directory. Use the **show running-directory** command to confirm these conditions.

- 2 FTP the FPGA upgrade kit file (Efpga.upgrade_kit) to the /flash directory on the primary CMM. Make sure you change the path of the destination directory from /flash/working (the default) to the root /flash directory before transferring the upgrade kit.
- **3** Log into the CMM.

Note. In dual CMM configurations you must log into the primary CMM.

4 Change to the **Working** directory by entering:

-> cd working

5 Remove the image files from primary CMM by entering:

-> rm *.img

- 6 If you have a secondary CMM enter the following commands. If you have a single CMM proceed to Step 7.
 - -> rrm /flash/working/Ewebsecu.img -> rrm /flash/working/Ewebrout.img -> rrm /flash/working/Ewebgos.img -> rrm /flash/working/Ewebl2eth.img -> rrm /flash/working/Ewebadvrout.img -> rrm /flash/working/Eweb.img -> rrm /flash/working/Esecu.img -> rrm /flash/working/Erelease.img -> rrm /flash/working/Erout.img -> rrm /flash/working/Eqos.img -> rrm /flash/working/Eos.img -> rrm /flash/working/El2eth.img -> rrm /flash/working/Eeni.img -> rrm /flash/working/Ediag.img -> rrm /flash/working/Ebase.img -> rrm /flash/working Eadvrout.img

7 Enter:

-> update fpga cmm

Wait for the following message to be displayed:

"-- SESSION END --"

Note. This command may take as much as a minute before it completes, particularly in single CMM configurations.

8 Delete the Efpga.upgrade_kit file on the primary CMM by entering:

```
-> rm Efpga.upgrade_kit
```

Note. Use the ls command to confirm that the upgrade kit file has been deleted on the primary CMM.

9 If you have a a secondary CMM enter the following on the primary CMM to delete the **Ffpga.upgrade_kit** file on the secondary CMM. Otherwise, proceed to Step 10.

-> rrm /flash/Efpga.upgrade_kit

Note. Use the rls command by entering

-> rls /flash

to confirm that the upgrade kit file has been deleted on the secondary CMM.

10 Enter the following to restore the **Working** directory:

```
-> copy certified working
```

- **11** If you have a a secondary CMM enter the following on the primary CMM to synchronize the images on the primary with those on the secondary CMM. Otherwise, proceed to Step 12.
 - -> copy flash-synchro
- **12** Power cycle the switch or use the **reload all** command.

Note. If the image files are 5.1.6.R02, the MiniBoot and BootROM are 5.1.5.340.R01, and the FPGA is 44 the upgrade to 5.1.6.R02 is now complete. (See **Verifying the Upgrade with the CLI** on page 37 for more information.)

Verifying the Upgrade with the CLI

You can use Command Line Interface (CLI) commands to verify that your upgrade is successful. To verify that the CMM's firmware was correctly upgraded to FPGA 44 and to verify that the MiniBoot/BootROM has been successfully upgraded to 5.1.5.340.R01 on OmniSwitch 7700, 7800, and 8800 switches, use the **show hardware info** command as shown below:

-> show hardware info		
СРИ Туре	: UltraSPARC IIe (SPARC-V9),	
Flash Manufacturer	: AMD,	
Flash size	: 33554432 bytes (32 MB),	
RAM Manufacturer	: Micron,	
RAM size	: 134217728 bytes (128 MB),	
NVRAM Battery OK	: YES,	
Interrupt Boot Jumper	: ON,	
Force UART Defaults Jumper	: ON,	
Run Extended Memory Diags Jumper	: OFF,	
Spare Jumper	: OFF,	
BootROM Version	: 5.1.5.340.R01,	
Backup Miniboot Version	: 5.1.5.340.R01,	The MiniBoot and BootROM
Default Miniboot Version	: 5.1.5.340.R01,	have been correctly updated
FPGA (1) Version	: 44,	- to 5.1.5.340.R01.
FPGA (2) Version	: 44	
		The firmware has been cor- rectly updated to FPGA 44.

To verify that the software was correctly upgraded to 5.1.6.R02, use the **show microcode** command as shown below:

-	Release		Description
Fadvrout.img			Alcatel Advanced Routing
Fbase.img	5.1.6.74.R02	4299687	Alcatel Base Software
Fdiag.img	5.1.6.74.R02	331338	Alcatel Diagnostics Archive
Feni.img	5.1.6.74.R02	1305860	Alcatel NI Software
Fl2eth.img	5.1.6.74.R02	985955	Alcatel Layer 2, Ethernet
Fos.img	5.1.6.74.R02	1495164	Alcatel Operating System
Fqos.img	5.1.6.74.R02	313006	Alcatel Quality of Service
Frout.img	5.1.6.74.R02	718511	Alcatel Routing
Fsecu.img	5.1.6.74.R02	130240	Alcatel Security
Fweb.img	5.1.6.74.R02	1433253	Alcatel Webview - Main
Fwebadvrout.img	5.1.6.74.R02	249619	Alcatel Webview - Advanced Routing
Fwebl2eth.img	5.1.6.74.R02	311057	Alcatel Webview - Layer 2 and Ethern
Fwebqos.img	5.1.6.74.R02	261472	Alcatel Webview - Quality of Service
Fwebrout.img	5.1.6.74.R02	345730	Alcatel Webview - Routing
Fwebsecu.img	5.1.6.74.R02	210602	Alcatel Webview - Security
			The image files have been correctly updated to 5.1.6.R02.

Note. Refer to the OmniSwitch CLI Reference Guide for complete documentation on CLI commands.

Troubleshooting

Program Enable Jumpers Not Installed

Recommendation. Review all steps in this procedure before beginning.

By default, a shunt connecting pins 1 and 2 on jumper block J31 (OS7700-CMM), jumper J345 (OS7800-CMM), or jumper J21 (OmniSwitch 8800) that allows the firmware upgrade to be performed is installed on all CMMs. (These jumpers are illustrated in "CMM Jumper Locations" on page 39.) Only perform these steps if this shunt has been removed.

- 1 When it will not have an adverse effect on the network, power off the switch.
- 2 Loosen the CMM's two captive screws that secure the module to the chassis. If necessary, use a flatblade screwdriver to loosen the screws. Be sure that both captive screws are completely disengaged from the threaded holes in the chassis before continuing
- **3** Simultaneously pull the two module extractor levers—one on top of the CMM and one on the bottom—until the CMM disengages from the chassis.
- **4** Holding the module in both hands, carefully slide it out of the chassis along the card guide. The module should slide out easily. Do not force the module from the slot.
- **5** Place the CMM on a clean, flat, static-free surface.
- **6** If you have an OmniSwitch 7700 CMM (OS7700-CMM), connect pins 1 and 2 on jumper block J31, which is near the lithium battery. If you have an OmniSwitch 7800 CMM (OS7800-CMM), connect pins 1 and 2 on jumper block J345, which is also near the lithium battery. If you have an OmniSwitch 8800 CMM (OS8800-CMM), connect pins 1 and 2 on jumper block J21, which is near the lithium battery.

Note. See "CMM Jumper Locations" on page 39 for more information.

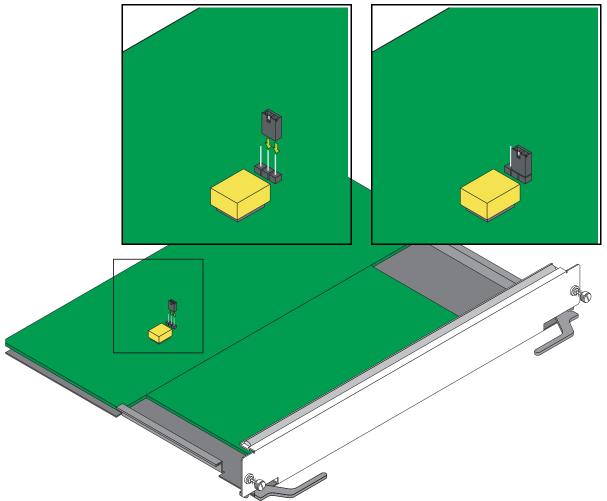
- 7 Holding the CMM in both hands, carefully slide it into the chassis card guide. The CMM should slide in easily. Do not force the CMM into the slot. If any resistance is encountered, ensure the CMM is aligned properly in the card guide.
- 8 When the CMM is nearly seated in the slot, be sure that the two extractor levers—one on top of the CMM and one on the bottom—are slightly opened (approximately 30 degrees). This allows the notch on each extractor lever to grasp the rail on the chassis. Once the notches have grasped the rail, press both extractor levers inward simultaneously until the CMM is firmly seated.
- **9** Once the CMM is firmly seated, secure the CMM to the chassis by tightening the two captive screws. *Be sure not to overtighten the captive screws. If you use a screwdriver, the torque used to tighten the screws must not exceed 2.3 inch pounds.*

Note. Refer to the appropriate *OmniSwitch Hardware Users Guide* for additional documentation on adding and removing modules.

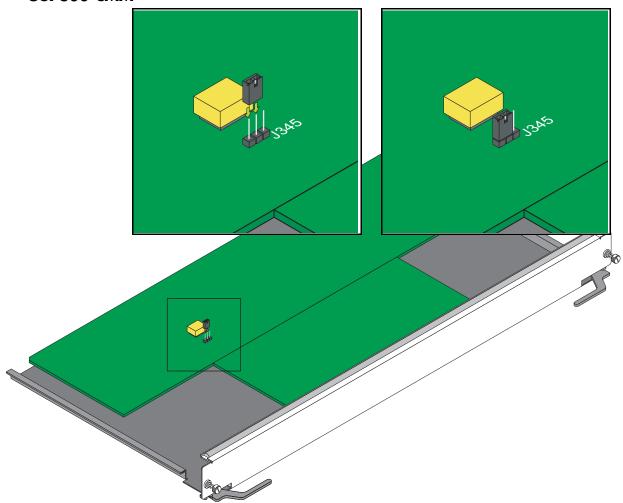
CMM Jumper Locations

This section provides diagrams FPGA enable jumper block locations of the OmniSwitch 7700 CMM (see "OS7700-CMM" on page 39), OmniSwitch 7800 CMM (see "OS7800-CMM" on page 40), and the OmniSwitch 8800 CMM (see "OS8800-CMM" on page 41).

OS7700-CMM



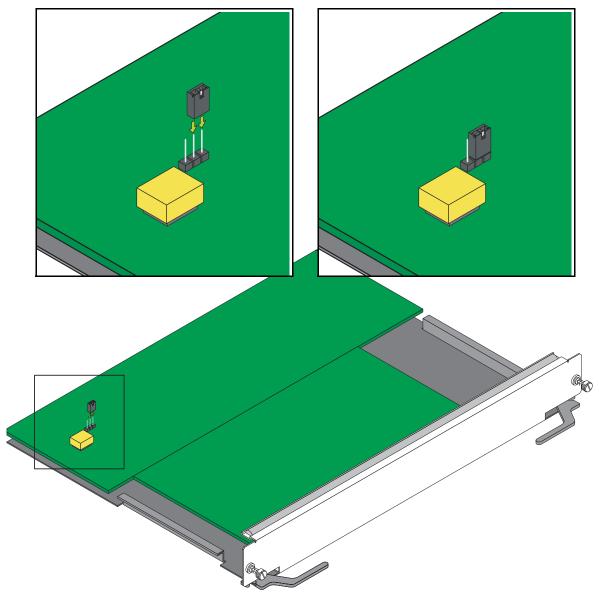
As shown in the figure above pins 1 and 2 must be connected on jumper block J31, which is located near the lithium battery, to ensure a successful FPGA upgrade. (Please note that pin 1 is located the closest to the front panel, pin 2 is in the middle, and pin 3 is located closest to the backplane connector.) If pins 1 and 2 are not connected as shown in the figure above then perform the steps described in "Program Enable Jumpers Not Installed" on page 38 to perform an FPGA upgrade.



OS7800-CMM

As shown in the figure above pins 1 and 2 must be connected on jumper block J345, which is located near the lithium battery, to ensure a successful FPGA upgrade. (Please note that pin 1 is located the closest to the top edge of the CMM, pin 2 is in the middle, and pin 3 is located facing the bottom edge of the CMM.) If pins 1 and 2 are not connected as shown in the figure above then perform the steps described in "Program Enable Jumpers Not Installed" on page 38 to perform an FPGA upgrade.

OS8800-CMM



As shown in the figure above pins 1 and 2 must be connected on jumper block J21, which is located near the lithium battery, to ensure a successful FPGA upgrade. (Please note that pin 1 is located facing the bottom edge of the CMM, pin 2 is in the middle, and pin 3 is located the closest to the top edge of the CMM.) If pins 1 and 2 are not connected as shown in the figure above then perform the steps described in "Program Enable Jumpers Not Installed" on page 38 to perform an FPGA upgrade.

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