



Release Notes for Catalyst 6500 Series and Cisco 7600 Series Router MSFC2 ROMMON Software

Current Release: 12.2(17r)S5 — October 28, 2005
Past Releases: 12.2(17r)S1, 12.1(11r)E1, 12.1(4r)E

This publication describes how to upgrade the ROMMON on your Catalyst 6500 Series or Cisco 7600 Series Router Multilayer Switch Feature Card 2 (MSFC2). The ROMMON upgrade is supported on WS-X6K-S2U-MSFC2 and WS-F6K-MSFC2 modules.



Note

All the bug fixes in the 12.2(17r)S5 ROMMON software upgrade apply to systems with Supervisor Engine 2 and DFC. The ROMMON software upgrade is not required on systems with Supervisor Engine 1A.



Tip

You should consider the 12.2(17r)S5 ROMMON software upgrade if you need the bug fixes documented in the [“Caveats” section on page 3](#).

With this procedure, you can upgrade the ROMMON image similar to the way that you upgrade the operating system software (Catalyst software or Cisco IOS software).

ROMMON software release 12.2(17r)S5 is supported in Catalyst 6500 series and Cisco 7600 series systems that are running either of the following:

- Catalyst software on the Supervisor Engine 2 and Cisco IOS software on the MSFC2
- or
- Cisco IOS software on the Supervisor Engine 2 and on the MSFC2



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Contents

This publication consists of these sections:

- [System Software Requirements, page 2](#)
- [Software Images, page 2](#)
- [ROMMON Image Overview, page 3](#)
- [Caveats, page 3](#)
- [Limitations and Restrictions, page 4](#)
- [Upgrading the MSFC2 ROMMON, page 4](#)
- [Storing More Than One ROMMON Image, page 7](#)
- [Additional Documentation, page 8](#)

System Software Requirements

The MSFC2 ROMMON software upgrade requires the following system software:

- MSFC2 ROMMON software releases 12.1(3r)E1 or later.
- For Catalyst 6500 series and Cisco 7600 series systems running Cisco IOS software on the Supervisor Engine 2 and on the MSFC2, Cisco IOS Release 12.1(8a)EX is the first software release that supports a software upgrade of the ROMMON version.
- For Catalyst 6500 series and Cisco 7600 series systems running Catalyst software on the Supervisor Engine 2 and Cisco IOS software on the MSFC2, Cisco IOS Release 12.1(3a)E1 is the first software release that supports a software upgrade of the ROMMON version.

Software Images

[Table 1](#) lists the software releases for the MSFC2 ROMMON software.

Table 1 Upgradable Modules

MSFC2 ROMMON Software Release	Filename
12.2(17r)S5 upgradable module ROMMON image	c6msfc2-RM2.srec.122-17r.S5
12.2(17r)S1 upgradable module ROMMON image	c6msfc2-RM2.srec.122-17r.S1
12.1(11r)E1 upgradable module ROMMON image	c6msfc2-RM2.srec.121-11r.E1
12.1(4r)E upgradable module ROMMON image	c6msfc2-RM2.srec.121-4r.E

ROMMON Image Overview

The MSFC2 ROMMON consists of two modules:

- A resident module that is not changed during the upgrade procedure.
- An upgradable module that is updated during the upgrade procedure. This is the only module that you will download from Cisco.com.

Caveats

The following section contains resolved caveat information:

- [Resolved Caveats in MSFC2 ROMMON Software Release 12.2\(17r\)S5, page 3](#)
- [Resolved Caveats in MSFC2 ROMMON Software Release 12.2\(17r\)S1, page 3](#)
- [Resolved Caveats in MSFC2 ROMMON Software Release 12.1\(11r\)E1, page 4](#)

Resolved Caveats in MSFC2 ROMMON Software Release 12.2(17r)S5

- The **unset** command appears twice in the ROMMON CLI help text in privileged mode and listing of commands are not in alphabetic order (CSCeg24455)
- TFTP boot is terminated and the MSFC2 ROMMON goes to autoboot from bootflash when the CNTL-C command is given during TFTP boot of MSFC2 in a system running Catalyst operating software on the supervisor engine. (CSCin83211)

Resolved Caveats in MSFC2 ROMMON Software Release 12.2(17r)S1

- The wrong cp0_compare register is programmed at bootup. This problem is resolved in MSFC2 ROMMON software release 12.2(17r)S1. (CSCed10938)
- Delayed bootup may occur in the following situations:
 - In a system with a redundant MSFC2, the second MSFC may not boot until the first MSFC completes the booting process from slot 0 of the supervisor engine.
 - When the MSFC2 is configured to boot from sup-slot0, it will not boot up if the start-up configuration does not have at least one VLAN interface. This problem is resolved in MSFC2 ROMMON software release 12.2(17r)S1. (CSCdy55543)
- MSFC2 Autoboot fails when a boot variable statement is present. This problem is resolved in MSFC2 ROMMON software release 12.2(17r)S. (CSCdx73097)
- An MSFC2 may report incorrect bootflash information and generate errors when you enter the **dir bootflash** command. This problem is resolved in MSFC2 ROMMON software release 12.2(17r)S. (CSCdx75887)

Resolved Caveats in MSFC2 ROMMON Software Release 12.1(11r)E1

- This problem could cause a DFC-configured module to not come up on a fully loaded chassis due to a failure to download the image when the EOBC is under stress traffic conditions. The problem *should* never happen to the MSFC2 because the image download to the MSFC2 occurs before any of the modules come up. However, because the image download code is shared between the MSFC2 and the DFC ROMMON image, this bug fix is also incorporated into MSFC2 ROMMON software release 12.1(11r)E1. (CSCdu19133)
- Under some circumstances, after upgrading Catalyst software release 6.1(3) to 6.3(3) on Supervisor Engine 2, the MSFC2 might report a Bus Error and fail to boot. This problem might also occur when you power cycle the switch. This problem is resolved in MSFC2 ROMMON software release 12.1(11r)E1. (CSCdw24401)
- The system might fail to recognize the newly installed memory after upgrading the MSFC2 memory to 256 MB using the upgrade kit (MEM-MSFC2-256MB=). You should upgrade the ROMMON on the MSFC2 to ROMMON software release 12.1(11r)E1. If you are running Cisco IOS Release 12.1(8a)E or later, you can upgrade the ROMMON of the MSFC2 through the software upgrade procedure documented in this publication.

To identify the ROMMON version running on the MSFC2, enter the **show version** command and find the following line in the display output:

```
System Bootstrap, Version 12.1(4r)E, RELEASE SOFTWARE (fc1)
```

In this example, the ROMMON version is 12.1(4r)E.
(CSCdw69150)

Limitations and Restrictions

The following limitations and restrictions apply:

- Due to Cisco IOS bug CSCec69349, accessing the ROMMON software by entering the **send break** command from the MSFC2 IOS console prompt is not supported. Should you enter this command by accident, the MSFC2 will hang in ROMMON and not accept any commands. The workaround for this problem is to reset the MSFC2 from the Supervisor Engine or upgrade the Cisco IOS software to a version where CSCec69349 is resolved.

Upgrading the MSFC2 ROMMON



Note

With Cisco IOS Releases 12.1(11)E and later, the command syntax for upgrading the MSFC2 ROMMON is the same in systems with Cisco IOS software running on both the supervisor engine and the MSFC2 and with systems running Catalyst software on the supervisor engine and Cisco IOS software on the MSFC2.

Prior to software release 12.1(11E), there is a slight difference. In systems with Cisco IOS running on both the supervisor engine and the MSFC2, the command syntax is as follows: **upgrade rom-monitor slot slot_num rp file filename**. In systems with Catalyst software on the supervisor

engine and Cisco IOS software on the MSFC2, the command syntax is as follows: **upgrade rom-monitor rp file *filename***. The above command syntax differences also apply to the **show rom-monitor** command.

**Note**

Before performing this procedure, you must download the new ROMMON image from Cisco.com. The download procedure is the same as downloading Catalyst software images.

To upgrade the ROMMON version on your MSFC2, perform these steps:

Step 1 Check the active ROMMON information:

```
Router# show rom-monitor slot 1 rp

Region F1:APPROVED, preferred
Region F2:INVALID
Currently running ROMMON from F1 region
Router#
```

The display indicates that the active ROMMON is running in region1.

Step 2 Program the new ROMMON image to the Flash device on the MSFC2:

```
Router# upgrade rom-monitor slot 1 rp file
tftp://dirt/tftpboot-users/c6msfc2-RM2.srec.121-11r.E1

ROMMON image upgrade in progress
Erasing flash
Programming flash
Verifying new image
ROMMON image upgrade complete
The card must be reset for this to take effect
Router#
```

Step 3 Check the new active ROMMON information:

```
Router# show rom-monitor slot 1 rp

Region F1:APPROVED
Region F2:FIRST_RUN, preferred
Currently running ROMMON from F1 region
Router#
```

Step 4 Reset the MSFC2:

```
Router# reload
Proceed with reload? [confirm]
```

Step 5 After the system comes up, check the ROMMON information again:

```
Router# show rom-monitor slot 1 rp

Region F1:APPROVED
Region F2:APPROVED, preferred
Currently running ROMMON from F2 region
Router#
```

The “Region2” field should show “APPROVED, preferred.” The ROMMON stored in the Region2 is now the active ROMMON.

Storing More Than One ROMMON Image

The procedure in this section is optional and should be used only if you have multiple versions of the upgraded ROMMON image stored on the MSFC2. These procedures describe how to select a particular ROMMON image for booting and how to disqualify a particular ROMMON region.

Selecting a Stored ROMMON Image on the MSFC2

There are three regions (including the Gold region) where versions of the ROMMON image can be stored. You can use the **upgrade rom-monitor slot preference** command to switch between regions.

The ROMMON software upgrade feature allows you to have two upgraded ROMMON images (one in region F1, the second in region F2) in addition to the “Gold” ROMMON stored on the one-time programmable (OTP) EPROM section of the ROMMON. Use the **upgrade rom-monitor slot preference** command to select which ROMMON will be the preferred ROMMON the next time the system is booted. You can change the preference as often as you like. The changes do not take effect until you reset the system.

To select a particular ROMMON image stored on the MSFC2, perform these steps:

Step 1 Change the ROMMON preference:

```
Router# show rom-monitor slot 1 rp
Region F1:FIRST_RUN
Region F2:FIRST_RUN, preferred
Currently running ROMMON from F2 region
Router# upgrade rom-monitor slot 1 rp preference region1
```

```
You are about to mark F1 region of RP ROMMON in slot 1 as the boot preference region,
proceed[n]? y
Router#
```

Step 2 Reload the MSFC2 for the change to take effect:

```
Router# reload
Proceed with reload? [confirm]
```

<output truncated>

Step 3 Verify the change:

```
Router# show rom-monitor slot 1 rp
Region F1:APPROVED, preferred
Region F2:APPROVED
Currently running ROMMON from F1 region
```

You can also disqualify a specific region of ROMMON and use the other region or go back to using the “Gold” ROMMON stored in the OTP EPROM section by using the **upgrade rom-monitor slot invalidate** command.

To disqualify a specific ROMMON region, perform these steps:

Step 1 Disqualify a specific ROMMON region:

```
Router# show rom-monitor slot 1 rp
Region F1:FIRST_RUN
Region F2:FIRST_RUN, preferred
Currently running ROMMON from F2 region
```

```
Router# upgrade rom-monitor slot 1 rp invalidate region2
```

```
You are about to mark F2 region of RP ROMMON in slot 1 as an invalid region,
proceed[n]? y
Router#
```

Step 2 Reload the MSFC2 for the change to take effect:

```
Router# reload
Proceed with reload? [confirm]
```

<output truncated>

Step 3 Verify the change:

```
Router# show rom-monitor slot 1 rp
Region F1:FIRST_RUN
Region F2:INVALID
Currently running ROMMON from S (Gold) region
```

Additional Documentation

The following Cisco IOS software documents are available for the Catalyst 6500 series switches:

- *Catalyst 6500 Series Switch Cisco IOS Software Configuration Guide*
- *Catalyst 6500 Series Switch Cisco IOS Command Reference*
- *Catalyst 6500 Series Switch Cisco IOS System Message Guide*

The following Cisco IOS software documents are available for the Cisco 7600 series routers:

- *Cisco 7600 Series Switch Cisco IOS Software Configuration Guide*
- *Cisco 7600 Series Switch Cisco IOS Command Reference*
- *Cisco 7600 Series Switch Cisco IOS System Message Guide*

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

This document is to be used in conjunction with the *Catalyst 6500 Series Cisco IOS Software Configuration Guide*, the *Catalyst 6500 Series Cisco IOS Command Reference*, the *Cisco 7600 Series Router Cisco IOS Software Configuration Guide* and the *Cisco 7600 Series Router Cisco IOS Command Reference* publications.

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