



# Release Notes for Catalyst 6500 Series Switch Supervisor Engine 32 ROMMON

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**Current Release: 12.2(18r)SX9—May 30, 2008**

**Past Releases: 12.2(18r)SX2, 12.2(18r)SX5**

This release note describes how to determine whether you need to upgrade the ROMMON on your Catalyst 6500 series Supervisor Engine 32. It also provides the procedure to download the new ROMMON image from Cisco.com and then upgrade the ROMMON on your Supervisor Engine 32.

With this procedure, you can upgrade the ROMMON image the same way that you upgrade the operating system software (supervisor engine software or MSFC Cisco IOS software).



**Note**

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The ROMMON software upgrade procedure in this publication applies only to Supervisor Engine 32 with ROMMON software release 12.2(18r)SX2 and later.

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ROMMON software release 12.2(18r)SX2 and later releases are supported in Catalyst 6500 series systems that are running either of the following:

- Catalyst operating system on the Supervisor Engine 32 and Cisco IOS software on the MSFC3
- Cisco IOS software on the Supervisor Engine 32 and on the MSFC3

## Contents

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**Americas Headquarters:**  
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

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## Software Images

Table 1 lists the software releases for the Catalyst 6500 series switch ROMMON Supervisor Engine 32 software.

**Table 1 Upgradable Modules**

Supervisor Engine 32 ROMMON Software Release	Filename
12.2(18r)SX9 upgradable module ROMMON image	c6ksup32-rm2.srec.122-18r.SX9
12.2(18r)SX5 upgradable module ROMMON image	c6ksup32-rm2.srec.122-18r.SX5

## ROMMON Image Overview

The Supervisor Engine 32 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.

## New and Changed Information

The following sections list new features:

- [Supervisor Engine 32 ROMMON Software Release 12.2\(18r\)SX9, page 2](#)
- [Supervisor Engine 32 ROMMON Software Release 12.2\(18r\)SX5, page 2](#)

### Supervisor Engine 32 ROMMON Software Release 12.2(18r)SX9

ROMMON software release 12.2(18r)SX5 supports the following list of enhancements:

- Support for booting from partitions on the memory device (for example, `bootdisk:0:filename`). If no filename is specified, the system will boot from the first file on the device. (CSCs115405)

### Supervisor Engine 32 ROMMON Software Release 12.2(18r)SX5

ROMMON software release 12.2(18r)SX5 supports the following list of enhancements:

- Provides Cisco IOS NMI callback (CSCse36967)
- Support for reset reason (CSCse48697)

## Caveats

The following sections contain caveat information:

- [Resolved Caveats in Supervisor Engine 32 ROMMON Software Release 12.2\(18r\)SX9, page 3](#)
- [Resolved Caveats in Supervisor Engine 32 ROMMON Software Release 12.2\(18r\)SX5, page 3](#)

### Resolved Caveats in Supervisor Engine 32 ROMMON Software Release 12.2(18r)SX9

- Netboot fails if the image is loaded beyond the lower 256 MB of memory (KSEG0). (CSCs115398)
- The **show version** command truncates the name of the running system image file to 64 characters. (CSCso17241)
- After recovery from a software-forced test crash, the reload reason displayed by the **show version** command is incorrect. (CSCsj22085)
- After encountering an invalid entry in the BOOT string, Autoboot ignores a subsequent valid entry and goes to the ROMMON prompt. (CSCsi07304)

### Resolved Caveats in Supervisor Engine 32 ROMMON Software Release 12.2(18r)SX5

- The **show mon** command does not show version, platform, and memory information. (CSCCeg70477)
- There is no Xmodem support. (CSCCec54182)
- Sometimes a **send break** causes the ROMMON to hang on compact flash (CF) access. (CSCei92373)
- If the boot device is not in the boot device table, it will crash. Booting from the wrong device (such as slot0) will cause a crash. (CSCsc26577)
- When Cisco IOS crashes, it should autoboot instead of displaying the ROMMON prompt, if autoboot is configured. (CSCsc84226)
- The command list is not in order; some commands appear twice in the command list in the help menu. (CSCCeg24455)

## Upgrading the Supervisor Engine 32 ROMMON Using Catalyst Operating System Software Commands



#### Note

Before performing this procedure, you need to download the new ROMMON image from Cisco.com. The download procedure is the same procedure that you use for downloading the supervisor engine software images.

To upgrade the ROMMON version on a Supervisor Engine 32 running the Catalyst operating system software, perform these steps:

#### Step 1 Check the active ROMMON information:

```
Console> (enable) rommon show
```

```
Region F1: INVALID
Region F2: INVALID
Currently running ROMMON from S (Gold) region
```

The display indicates that the active ROMMON is running in the Gold region.

- Step 2** Download the new ROMMON image from the TFTP server (where *pathname* is the location of the image file):

```
Console> (enable) copy tftp bootdisk
IP address or name of remote host []? 23.255.254.226
Name of file to copy from []? tftpboot/pathname/c6ksup32-rm2.srec.122-18r.SX5
Flash device [bootdisk]?
Name of file to copy to [c6ksup32-rm2.srec.122-18r.SX5]?

25081216 bytes available on device bootdisk, proceed (y/n) [n]? y
CCCCCCCCCCCC
File has been copied successfully.
```

- Step 3** Program the new ROMMON image to the bootdisk device on the Supervisor Engine 32:

```
Console> (enable) rommon upgrade bootdisk:c6ksup32-rm2.srec.122-18r.SX5
CCCCCCCCCCCC
ROMMON image upgrade in progress, will take a minute
Erasing flash
Programming flash
ROMMON image upgrade complete, Supervisor must be reset.
```



**Note**

The software automatically stores the specified image to a region other than the region that accepted the last upgraded image. For example, if the last upgrade command put the image in Region F1, the current upgrade command will store the image in Region F2 and set it as the “preferred” region when the next system reset occurs. If the last upgrade command stored the image to Region F2, the current upgrade command will store the image to Region F1.

The image that is most recently stored into the Flash memory is always labeled as the “preferred” image. If you decide that you do not want this upgrade image, you can switch to the other region or the Gold region using the **rommon prefer** or **rommon invalidate** commands.

- Step 4** Check the new active ROMMON information:

```
Console> (enable) rommon show

Region F1: FIRST_RUN, preferred
Region F2: INVALID
Currently running ROMMON from S (Gold) region
```

The Region F1 field should show FIRST\_RUN, preferred.

- Step 5** Reset the Supervisor Engine 32:

```
Console> (enable) reset
This command will reset the system.
Do you want to continue (y/n) [n]? y
. . .
Powering OFF all existing linecards

System Bootstrap, Version 12.2(18r)SX5
Copyright (c) 1994-2006 by cisco Systems, Inc.
Cat6k-Sup32/SP processor with 524288 Kbytes of main memory

Autoboot executing command: "boot bootdisk:"
```

```

Self decompressing the image :
#####
#####
.
.
.

Currently running ROMMON from F1 region
ROMMON upgrade successful
Boot image: bootdisk:c6ksup32-rm2.srec.122-18r.SX5
inband gmac link is up

.
.
.
    
```

The Supervisor Engine 32 is booted with the new ROMMON stored in the F1 region.

**Step 6** After the system comes up, check the ROMMON information again:

```

Console> enable

Enter password:
Console> (enable) rommon show

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

The Region F1 field should show APPROVED, preferred. The ROMMON stored in the F1 region is now the active ROMMON.

## Upgrading the Supervisor Engine 32 ROMMON Using Cisco IOS Commands



**Note**

Before performing this procedure you need to download the new ROMMON image from Cisco.com. The download procedure is the same procedure that you use for downloading the supervisor engine software images.

To upgrade the ROMMON version on your Supervisor Engine 32 using Cisco IOS commands, perform these steps:

**Step 1** Check the active ROMMON information:

```

Router# show rom-monitor slot 5 sp

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 Supervisor Engine 32 (where *pathname* is the location of the image file):

```
Router# upgrade rom-monitor slot 5 sp file tftp://pathname/c6ksup32-rm2.srec.122-18r.SX5

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

- Step 4** Reload the runtime image on the Supervisor Engine 32:

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



**Caution**

Be sure to complete Step 5 before performing an online insertion and removal (OIR) of the Supervisor Engine 32 or power cycling the Supervisor Engine 32. The ROMMON upgrade might fail if you perform either of these actions before verifying that the runtime image successfully booted.

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

```
Router# show rom-monitor slot 5 sp
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 procedures in this section are optional and should be used only if you have multiple versions of the upgraded ROMMON image stored on the Supervisor Engine 32. These procedures describe how to select a particular ROMMON image for booting and how to disqualify a particular ROMMON region.

These sections show how to select a stored ROMMON image for booting:

- [Selecting a Stored ROMMON Image on Systems Running Catalyst Operating System Software on the Supervisor Engine 32, page 7](#)
- [Selecting a Stored ROMMON Image on Systems Running Cisco IOS on the Supervisor Engine 32, page 8](#)

## Selecting a Stored ROMMON Image on Systems Running Catalyst Operating System Software on the Supervisor Engine 32

You can store versions of the ROMMON image in three regions (including the Gold region). You can use the **rommon prefer** and **rommon invalidate** commands 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 **rommon preference** command to select which ROMMON will be the preferred ROMMON the next time that 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 Supervisor Engine 32, follow these steps:

### Step 1 Change the ROMMON preference.

```
Console> (enable) rommon prefer F2
```

```
ROMMON in region F2 now has the highest boot preference.
Supervisor must be reset for this to take effect.
```

```
Console> (enable) rommon show
```

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

```
Console> (enable) rommon prefer F1
```

```
ROMMON in region F1 now has the highest boot preference.
Supervisor must be reset for this to take effect.
```

```
Console> (enable) rommon show
```

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

### Step 2 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 **rommon invalidate** command.

To disqualify a specific ROMMON region, enter these commands:

```
Console> (enable) rommon invalidate F1
Do you want to mark F1 region INVALID [n]?y
```

```
done!
Supervisor must be reset for this to take effect.
```

```
Console> (enable) rommon invalidate F2
Do you want to mark F2 region INVALID [n]?y
```

```
done!
Supervisor must be reset for this to take effect.
Console> (enable) rommon show
```

```
Region F1: INVALID
Region F2: INVALID
Currently running ROMMON from F1 region
```

```
Console> (enable) reset
This command will reset the system.
Do you want to continue (y/n) [n]? y
```

```
. . .
```

```

Powering OFF all existing linecards
Console> . . .

System Bootstrap, Version 12.2(18r)SX2
Copyright (c) 1994-2006 by cisco Systems, Inc.
c6k_sup32 processor with 524288 Kbytes of main memory

Autoboot executing command: "boot bootdisk:"

Self decompressing the image :
#####
#####
. . .

Currently running ROMMON from S (Gold) region
Boot image: bootdisk:cat6000-sup32pfc3k8-d.8-5-3-29.bin
inband gmac link is up
.
.
.

```

The display indicates that the active ROMMON is running in the Gold region.

## Selecting a Stored ROMMON Image on Systems Running Cisco IOS on the Supervisor Engine 32

You can store versions of the ROMMON image in three regions (including the Gold region). You can use the **upgrade rom-monitor slot preference** and **upgrade rom-monitor slot preference** commands 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 that 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 Supervisor Engine 32, follow these steps:

### Step 1 Change the ROMMON preference:

```

Router# show rom-monitor slot 5 sp
Region F1:FIRST_RUN
Region F2:FIRST_RUN, preferred
Currently running ROMMON from F2 region
Router# upgrade rom-monitor slot 5sp preference region1

```

```

You are about to mark F1 region of SP ROMMON in slot 5 as the boot preference region,
proceed[n]? y
Router#

```

### Step 2 Reload the Supervisor Engine for the change to take effect:

```

Router# reload
Proceed with reload? [confirm]

```

<output truncated>



**Step 3** Verify the change:

```
Router# show rom-monitor slot 5 sp
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, follow these steps:

---

**Step 1** Disqualify a specific ROMMON region:

```
Router# show rom-monitor slot 5 sp
Region F1:FIRST_RUN
Region F2:FIRST_RUN, preferred
Currently running ROMMON from F2 region
```

```
Router# upgrade rom-monitor slot 5 sp invalidate region2
```

```
You are about to mark F2 region of SP ROMMON in slot 5 as an invalid region,
proceed[n]? y
Router#
```

**Step 2** Reload the supervisor engine for the change to take effect:

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

```
<output truncated>
```

**Step 3** Verify the change:

```
Router# show rom-monitor slot 5 sp
Region F1:FIRST_RUN
Region F2:INVALID
Currently running ROMMON from S (Gold) region
```

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## Related Documentation

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

- *Catalyst 6500 Series Switch Quick Software Configuration*
- *Catalyst 6500 Series Switch Installation Guide*
- *Catalyst 6500 Series Switch Module Installation Guide*
- *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*
- *Catalyst 6500 Series Switch Software Configuration Guide*

- *Catalyst 6500 Series Switch Command Reference*
- *Catalyst 6500 Series Switch System Message Guide*

## Obtaining Documentation and Submitting a Service Request

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