



Release Notes for Catalyst 6500, Supervisor Engine 2T, Supervisor Engine 6T, Catalyst 6880, Catalyst 6840, and Catalyst 6800 Series Switches ROMMON

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- [Overview, page 2](#)
- [Software Images, page 2](#)
- [New Features in Catalyst 6840 ROMMON Software Release 15.2\(02r\)SYS1, page 2](#)
- [New Features in Catalyst 6880 ROMMON Software Release 15.1\(02r\)SYS3, page 3](#)
- [New Features in Catalyst 6880 ROMMON Software Release 15.1\(02r\)SYS2, page 3](#)
- [New Features in Catalyst 6500 Supervisor Engine 2T ROMMON Software Release 12.2\(50r\)SYS4, page 3](#)
- [New Features in Catalyst 6500 Supervisor Engine 2T ROMMON Software Release 12.2\(50r\)SYS3, page 4](#)
- [Caveats Resolved in Catalyst 6840 ROMMON Software Release 15.2\(02r\)SYS1, page 4](#)
- [Caveats Resolved in Catalyst 6880 ROMMON Software Release 15.1\(02r\)SYS3, page 5](#)
- [Caveats Resolved in Catalyst 6880 ROMMON Software Release 15.1\(02r\)SYS2, page 5](#)
- [Caveats Resolved in Catalyst 6500 Supervisor Engine 2T ROMMON Software Release 12.2\(50r\)SYS4, page 5](#)
- [Caveats Resolved in Catalyst 6500 Supervisor Engine 2T ROMMON Software Release 12.2\(50r\)SYS3, page 6](#)
- [Upgrading the Supervisor Engine 2T ROMMON, page 6](#)
- [Selecting a ROMMON Image, page 11](#)
- [Upgrading the Catalyst 6800 Series Switches ROMMON, page 12](#)
- [Obtain Documentation and Submit a Service Request, page 13](#)



Americas Headquarters:

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

Overview

This publication describes how to upgrade the Supervisor Engine 2T and Catalyst 6800 Series Switches ROMMON image. The alternative is to order the upgrade kit and physically replace the ROMMON (boot ROM).

The supervisor engine ROMMON consists of two modules:

- A permanent ROMMON software image.
- An upgradeable ROMMON software image.

Software Images

Supervisor Engine 2T ROMMON Software Release	Filename
12.2(50r)SYS4 upgradeable module ROMMON image	pyramid_rm2.srec.122-50r.SYS4
12.2(50r)SYS3 upgradeable module ROMMON image	pyramid_rm2.srec.122-50r.SYS3

Catalyst 6880 ROMMON Software Release	Filename
15.1(02r)SYS2 upgradeable module ROMMON image	governator_rm.bin.SPA.151-02r.SYS2
15.1(02r)SYS3 upgradeable module ROMMON image	c6880x_rm.bin.SPA.151-02r.SYS3
15.1(02r)SYS4 upgradeable module ROMMON image	c6880x_rm.bin.SPA.151-02r.SYS4

Catalyst 6840 ROMMON Software Release	Filename
15.2(02r)SYS1 upgradeable module ROMMON image	transformer_rm.bin.SPA.152-02r.SYS1
15.2(02r)SYS2 upgradeable module ROMMON image	c6840x_rm.bin.SPA.152-02r.SYS2

Supervisor Engine 6T ROMMON Software Release	Filename
15.3(05r)SYS upgradeable module ROMMON image	sup6t_rm.bin.SPA.153-05r.SYS

New Features in Catalyst 6840 ROMMON Software Release 15.2(02r)SYS1

- SFP Management port support in rommon-The management port (mgmt0) can be operated in the following modes,
 - RJ45 (Default mode)
 - SFP

The default mode is RJ45.

To enable SFP mode for management port in rommon, SFP_MGMT=1 rommon variable need to be set.

Example:

```
rommon 1 > SFP_MGMT=1
rommon 2 > sync
rommon 3 >
```

To go back to default mode (RJ45), SFP_MGMT rommon variable has to be unset.

Example:

```
rommon 1 > priv
You now have access to the full set of monitor commands.
```



Warning

some commands will allow you to destroy your configuration and/or system images and could render the machine unbootable.

```
rommon 2 > unset SFP_MGMT
rommon 3 > sync
rommon 4 >
```

New Features in Catalyst 6880 ROMMON Software Release 15.1(02r)SYS4

Changes added in Rommon, to support IOS feature - 'no service password-recovery'.

New Features in Catalyst 6880 ROMMON Software Release 15.1(02r)SYS3

None.

New Features in Catalyst 6880 ROMMON Software Release 15.1(02r)SYS2

None.

New Features in Catalyst 6500 Supervisor Engine 2T ROMMON Software Release 12.2(50r)SYS4

None.

New Features in Catalyst 6500 Supervisor Engine 2T ROMMON Software Release 12.2(50r)SYS3

ROMMON support for the No Service Password-Recovery feature ([CSCtq73649](#))



Note

The [No Service Password-Recovery](#) feature requires ROMMON version 12.2(50r)SYS3.

New Features in Catalyst 6840 ROMMON Software Release 15.2(02r)SYS2

Changes added in Rommon, to support IOS feature - 'no service password-recovery'.

Caveats Resolved in Catalyst 6840 ROMMON Software Release 15.2(02r)SYS1

None.

New Features in Catalyst Sup6T ROMMON Software Release 15.3(05r)SYS

Changes added in Rommon, to support IOS feature - 'no service password-recovery'.

Caveats Resolved in Catalyst 6880 ROMMON Software Release 15.1(02r)SYS4

Identifier	Component	Description
CSCUw69688	cat6000-rommon	"Key start magic is not valid" msg seen in bootup

Caveats Resolved in Catalyst 6840 ROMMON Software Release 15.2(02r)SYS2

Identifier	Component	Description
CSCUw69688	cat6000-rommon	"Key start magic is not valid" msg seen in bootup

Caveats Resolved in Catalyst Sup6T ROMMON Software Release 15.3(05r)SYS

Identifier	Component	Description
CSCuw69688	cat6000-rommon	"Key start magic is not valid" msg seen in bootup

Caveats Resolved in Catalyst 6880 ROMMON Software Release 15.1(02r)SYS3

Identifier	Component	Description
CSCux52863	cat6000-rommon	ENH: better tracking root cause of catastrophic error on 6880

Caveats Resolved in Catalyst 6880 ROMMON Software Release 15.1(02r)SYS2

Identifier	Component	Description
CSCux46829	cat6000-rommon	Catastrophic Error lead to stuck-in-rommon
CSCux92693	cat6000-rommon	After rommon upgrade seeing two different versions during rommon bootup

Caveats Resolved in Catalyst 6500 Supervisor Engine 2T ROMMON Software Release 12.2(50r)SYS4

Identifier	Component	Description
CSCus20649	cat6000-rommon	Sup2T 1Gig port transceivers/SFPs not detected causing link up failures

Caveats Resolved in Catalyst 6500 Supervisor Engine 2T ROMMON Software Release 12.2(50r)SYS3

Identifier	Component	Description
CSCto26539	cat6000-rommon	sup2T (SM) board hang when retrieving rommon after reload
CSCtr89539	cat6000-rommon	C4: Unable to to load monlib with size beyond 128K

Upgrading the Supervisor Engine 2T ROMMON



Note Recommended procedure for ROMMON upgrade of Supervisor in VSS Quad-Sup SSO (V4SO): Use the command *upgrade rom-monitor* to upgrade the ROMMON image, preference region/invalidate region on current active Supervisor. Initiate a switchover using the command *redundancy force-switchover*. Upgrade the current active Supervisor. Four switchovers are required to upgrade all Supervisors. For a VSS, specify the switch number before the slot number keyword, in the commands.



- Note**
- Before performing this procedure, download the new ROMMON image from www.cisco.com.
 - In this example, the module is in slot 1.

Step 1 Check the active ROMMON information:

```
Router# show rom-monitor slot 1 sp
Region Gold: version: V12.2(50r)SYS2
Region F1: INVALID, version: NA
Region F2: INVALID, version: NA
Currently running ROMMON from S (Gold) region
Router#
```

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

Step 2 Update the upgradeable ROMMON software version:

```
Router# upgrade rom-monitor slot 1 sp file
tftp://server/tftpboot-users/pyramid_rm2.srec.122-50r.SYS3
Copying tftp://server/tftp-users/pyramid_rm2.srec.122-50r.SYS3 onto SP's bootdisk
bootdisk:upg_sp_rommon.srec...
Loading tftp-users/pyramid_rm2.srec.122-50r.SYS3 from server (via Vlan69): !!!!!!!!!!!!!!!
[OK - 2850876 bytes]

timestamp: ROMMON image upgrade in progress
timestamp: Signature verification successful
timestamp: Erasing flash
timestamp: Programming flash
timestamp: Verifying new image
timestamp: ROMMON image upgrade complete, Supervisor engine must be reloaded.
Router#
```

Step 3 Check the new active ROMMON information:

```
Router# show rom-monitor slot 1 sp
Region Gold: version: V12.2(50r)SYS2
Region F1: APPROVED, version: V12.2(50r)SYS3 , preferred
Region F2: INVALID, version: NA
Currently running ROMMON from S (Gold) region
Router#
```

Step 4 Reload the runtime image on the supervisor engine:

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

**Note**

- Be sure to complete Step 5 before performing either or the following actions:
- An online insertion and removal (OIR) of the supervisor engine.
- Power cycling the supervisor engine. 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 1 sp
Region Gold: version: V12.2(50r)SYS2
Region F1: APPROVED, version: V12.2(50r)SYS3 , preferred
Region F2: INVALID, version: NA
Currently running ROMMON from F1 region
Router#
```

The “Region F1” field should show “APPROVED” and “preferred.” The ROMMON stored in the Region F1 is now the active ROMMON.

Upgrading ROMMON For a Supervisor Engine 2T VSS

This example is based on a QUAD SUP VSS (2 SUPs in each chassis- SW1 and SW2).

Same procedure applies to a DUAL SUP VSS (1 SUP in each chassis- SW1 and SW2)

Step 1 Check the slot of the SUP in both chassis, using *show switch virtual redundancy* command or a *show mod sw 1* or *show mod sw 2* commands .

```
QUADSUP_VSS_TEST#sh sw virtual
Switch mode                : Virtual Switch
Virtual switch domain number : 100
Local switch number        : 1
Local switch operational role: Virtual Switch Active
Peer switch number         : 2
Peer switch operational role : Virtual Switch Standby
```

```
QUADSUP_VSS_TEST#sh sw virtual redundancy
      My Switch Id = 1
      Peer Switch Id = 2
      Last switchover reason = user forced
      Configured Redundancy Mode = sso
      Operating Redundancy Mode = sso
```

```
Switch 1 Slot 1 Processor Information :
```

```

-----
Current Software state = ACTIVE
Uptime in current state = 8 minutes
Image Version = Cisco IOS Software, s2t54 Software
(s2t54-IPSERVICESK9-M), Version 15.2(1)SY2, RELEASE SOFTWARE (fc3)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2016 by Cisco Systems, Inc.
Compiled Fri 01-Apr-16 16:46 by prod_rel_team
BOOT = bootdisk:s2t54-ipservicesk9-mz.SPA.152-1.SY2.bin,12;
CONFIG_FILE =
BOOTLDR =
Configuration register = 0x2102
Fabric State = ACTIVE
Control Plane State = ACTIVE

```

Switch 1 Slot 2 Processor Information :

```

-----
Current Software state = STANDBY HOT (CHASSIS)
Uptime in current state = 13 minutes
Image Version = Cisco IOS Software, s2t54 Software
(s2t54-IPSERVICESK9-M), Version 15.2(1)SY2, RELEASE SOFTWARE (fc3)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2016 by Cisco Systems, Inc.
Compiled Fri 01-Apr-16 16:46 by prod_rel_team
BOOT = bootdisk:s2t54-ipservicesk9-mz.SPA.152-1.SY2.bin,12;
CONFIG_FILE =
BOOTLDR =
Configuration register = 0x2102
Fabric State = ACTIVE
Control Plane State = STANDBY

```

Switch 2 Slot 2 Processor Information :

```

-----
Current Software state = STANDBY HOT (switchover target)
Uptime in current state = 7 minutes
Image Version = Cisco IOS Software, s2t54 Software
(s2t54-IPSERVICESK9-M), Version 15.2(1)SY2, RELEASE SOFTWARE (fc3)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2016 by Cisco Systems, Inc.
Compiled Fri 01-Apr-16 16:46 by prod_rel_team
BOOT = bootdisk:s2t54-ipservicesk9-mz.SPA.152-1.SY2.bin,12;
CONFIG_FILE =
BOOTLDR =
Configuration register = 0x2102
Fabric State = ACTIVE
Control Plane State = STANDBY

```

Switch 2 Slot 1 Processor Information :

```

-----
Current Software state = STANDBY HOT (CHASSIS)
Uptime in current state = 6 minutes
Image Version = Cisco IOS Software, s2t54 Software
(s2t54-IPSERVICESK9-M), Version 15.2(1)SY2, RELEASE SOFTWARE (fc3)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2016 by Cisco Systems, Inc.
Compiled Fri 01-Apr-16 16:46 by prod_rel_team
BOOT = bootdisk:s2t54-ipservicesk9-mz.SPA.152-1.SY2.bin,12;
CONFIG_FILE =
BOOTLDR =

```



```

Configuration register = 0x2102
      Fabric State = ACTIVE
Control Plane State = STANDBY

```

Step 2 Check the active ROMMON information

```

QUADSUP_VSS_TEST#show rom-monitor switch 1 slot 1 sp ?
| Output modifiers
<cr>

```

```

QUADSUP_VSS_TEST#show rom-monitor switch 1 slot 1 sp
Region Gold: version: V12.2(50r)SYS2
Region F1: INVALID, version: NA
Region F2: INVALID, version: NA
Currently running ROMMON from S (Gold) region

```

Step 3 Update the upgradeable ROMMON software version:

```

QUADSUP_VSS_TEST#upgrade rom-monitor switch 1 slot 1 ?
file          the name of the Rommon file
invalidate    set a rommon region to invalid
preference    set rommon region boot preference

```

```

QUADSUP_VSS_TEST#upgrade rom-monitor switch 1 slot 1 file
tftp://server/tftpboot-users/pyramid_rm2.srec.122-50r.SYS3

```

```

Copying tftp://server/tftp-users/pyramid_rm2.srec.122-50r.SYS3 onto SP's bootdisk
bootdisk:upg_sp_rommon.srec...
Loading tftp-users/pyramid_rm2.srec.122-50r.SYS3 from server (via Vlan69): !!!!!!!!!!!!!
[OK - 2850876 bytes]
timestamp: ROMMON image upgrade in progress
timestamp: Signature verification successful
timestamp: Erasing flash
timestamp: Programming flash
timestamp: Verifying new image
timestamp: ROMMON image upgrade complete, Supervisor engine must be reloaded.

```

NOTE : Instead of tftp , we can also use bootdisk

Step 4 Check the new active ROMMON information. It will still point to the old rommonimage

```

QUADSUP_VSS_TEST#show rom-monitor switch 1 slot 1 sp
Region Gold: version: V12.2(50r)SYS2
Region F1: INVALID, version: NA
Region F2: INVALID, version: NA
Currently running ROMMON from S (Gold) region

```

Step 5 Do a switchover now .This will reload the present active

```

QUADSUP_VSS_TEST#redundancy force-switchover

```

```

This will reload the active unit and force switchover to standby[confirm]
Preparing for switchover.
Now SW1 became standby and SW2 became active .

```

```

QUADSUP_VSS_TEST#sh sw virtual
Switch mode          : Virtual Switch
Virtual switch domain number : 100
Local switch number  : 2
Local switch operational role: Virtual Switch Active
Peer switch number   : 1
Peer switch operational role : Virtual Switch Standby

```

Step 6 Repeating step 1 to 4 for SWITCH2 now in steps 5-8 (SW2 is the current ACTIVE).

```
QUADSUP_VSS_TEST#show rom-monitor switch 2 slot 2 sp
Region Gold: version: V12.2(50r)SYS2
Region F1: INVALID, version: NA
Region F2: INVALID, version: NA
Currently running ROMMON from S (Gold) region
```

Step 7 Update the upgradeable ROMMON software version

```
QUADSUP_VSS_TEST#upgrade rom-monitor switch 2 slot 2 file
tftp://server/tftpboot-users/pyramid_rm2.srec.122-50r.SYS3

Copying tftp://server/tftp-users/pyramid_rm2.srec.122-50r.SYS3 onto SP's bootdisk
bootdisk:upg_sp_rommon.srec...
Loading tftp-users/pyramid_rm2.srec.122-50r.SYS3 from server (via Vlan69): !!!!!!!!!!!!!!!
[OK - 2850876 bytes]
timestamp: ROMMON image upgrade in progress
timestamp: Signature verification successful
timestamp: Erasing flash
timestamp: Programming flash
timestamp: Verifying new image
timestamp: ROMMON image upgrade complete, Supervisor engine must be reloaded.
```

Step 8 Check the new active ROMMON information. It will still point to the old rommonimage

```
QUADSUP_VSS_TEST#show rom-monitor switch 2 slot 2 sp
Region Gold: version: V12.2(50r)SYS2
Region F1: INVALID, version: NA
Region F2: INVALID, version: NA
Currently running ROMMON from S (Gold) region
```

Step 9 Do a switchover now .This will reload the present active

```
QUADSUP_VSS_TEST#redundancy force-switchover

This will reload the active unit and force switchover to standby[confirm]
Preparing for switchover.
```

Now, we are back to original scenario:
SW1 became active and SW2 became standby.

```
QUADSUP_VSS_TEST#sh sw virtual
Switch mode           : Virtual Switch
Virtual switch domain number : 100
Local switch number   : 1
Local switch operational role: Virtual Switch Active
Peer switch number    : 2
Peer switch operational role : Virtual Switch Standby
```

After this , check the "show version" output to see the new ROMMON. It should point to 12.2(50r)SYS3 .

Step 10 (Optional) After Step 3, go to Step 5, upgrade the standby rommon and reload the full chassis (VSS) using the *QUADSUP_VSS_TEST#redundancy reload shelf* command.

Selecting a ROMMON Image

There are three regions (including the Gold region) where versions of the ROMMON image can reside.

The ROMMON software upgrade feature supports two ROMMON images (one in region F1, the second in region F2) in addition to the ROMMON version in the gold region. You can change the preference as required. The change takes effect after a reset.

To disqualify a region with a downloaded ROMMON version and use the ROMMON version in the gold region, perform these steps:

Step 1 Check the active ROMMON information:

```
Router# show rom-monitor slot 1 sp
Region Gold: version: V12.2(50r)SYS2
Region F1:APPROVED, version: V12.2(50r)SYS3 , preferred
Region F2:INVALID, version: NA
Currently running ROMMON from F1 region
```

Step 2 Disqualify a specific ROMMON region:

```
Router# upgrade rom-monitor slot 1 invalidate region1
```

```
You are about to mark F1 region of SP ROMMON in slot 1 as an invalid region,
proceed[n]? y
Router#
```

Step 3 Reload the supervisor engine for the change to take effect:

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

```
<output truncated>
```

Step 4 Verify the change:

```
Router# show rom-monitor slot 1 sp
Region Gold: version: V12.2(50r)SYS2
Region F1:INVALID, version: V12.2(50r)SYS3
Region F2:INVALID, version: NA
Currently running ROMMON from S (Gold) region
```

To select a downloaded ROMMON image, perform this task:

Step 1 Check the active ROMMON information:

```
Router# show rom-monitor slot 1 sp
Region Gold: version: V12.2(50r)SYS2
Region F1:APPROVED, version: V12.2(50r)SYS3
Region F2:INVALID, version: NA
Currently running ROMMON from S (Gold) region
```

Step 2 Change the ROMMON preference:

```
Router# upgrade rom-monitor slot 1 sp 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 3 Reload the supervisor engine for the change to take effect:

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

<output truncated>

Step 4 Verify the change:

```
Router# show rom-monitor slot 1 sp
Region Gold: version: V12.2(50r)SYS2
Region F1:APPROVED, version: V12.2(50r)SYS3, preferred
Region F2:INVALID, version: NA
Currently running ROMMON from F1 region
```

Upgrading the Catalyst 6800 Series Switches ROMMON



Note Recommended procedure for ROMMON upgrade of Catalyst 6800 series switches in VSS is by using the command *upgrade rom-monitor*.



Note Before performing this procedure, download the new ROMMON image from www.cisco.com.

In this example, the module is in slot 1.

Step 1 Check the active ROMMON information:

```
Router#sh rom-monitor slot 1 sp
Rommon image is running from UPGRADABLE region
System Bootstrap, Version 15.2(02)SY [Rel 1.1], RELEASE SOFTWARE
Copyright (c) 1994-2015 by cisco Systems, Inc.
```

Router#
The display indicates that the active ROMMON is running in the UPGRADABLE region.

Step 2 Update the upgradeable ROMMON software version:

```
Router#dir bootdisk:transformer_rm.bin.SPA.152-02r.SYS1
Directory of bootdisk:/transformer_rm.bin.SPA.152-02r.SYS1

 16  -rw-      8388608   May 1 2016 23:10:28 +00:00  transformer_rm.bin.SPA.152-02r.SYS1

1928724480 bytes total (198737920 bytes free)

Router#upgrade rom-monitor slot 1 file bootdisk:transformer_rm.bin.SPA.152-02r.SYS1
ROMMON image upgrade in progress.. Please do not power cycle the box.

Erasing flash
#####
#####
```

```

Programming flash
#####
#####

```

```

Verifying magic in flash
ROMMON image upgrade complete, Supervisor engine must be reloaded.

```

```
Router#
```

Step 3 Reload the runtime image on the Supervisor box:

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

Step 4 After the system comes up, Check the new ROMMON information:

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

Rommon image is running from UPGRADABLE region

System Bootstrap, Version 15.2(02r)SYS1, RELEASE SOFTWARE
Copyright (c) 1994-2015 by cisco Systems, Inc.
```

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