



Release Notes for Cisco 5940 ESR Alternate ROMMON 15.2(1r)GC5

Current Release:
15.2(1r)GC5—June 2014
Previous Release:
15.2(1r)GC—August 2011

The following release notes support Cisco 5940 ESR Alternate ROMMON 15.2(1r)GC5.

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Image Information and Supported Platforms


Note

You must have a Cisco.com account to download the software.

Cisco 5940 ESR Alternate ROMMON 15.2(1r)GC5 image:

- C5940_RM_ALT.src.SPA.152-1r.GC5

Resolved 5940 Rommon Caveats for 15.2(1r)GC5

- **CSCun10518**

With Waas and the HTTP accelerator enabled, the router would crash and hang when sending an http request from the server to the client. A power cycle was required to recover.

- **CSCui83479**

A condition existed where the ROMMON cookie values were cleared to zeros leading to the IOS image not being able to boot. This typically occurred during a power-cycle at a particular time during IOS or ROMMON reboot.

Symptom: Upon power-up, the router will attempt to load IOS several times before failing to the ROMMON prompt:

```
System Bootstrap, Version 15.2(1r)GC, RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 2011 by cisco Systems, Inc.
ROMMON Integrity test
```

```
RSA verification Passed with v1.5 padding
```

```
Primary ROM: RSA Signature Verification Passed
```

```
c5940 platform with 1048576 Kbytes of main memory
No bootable image file: flash:/
Unable to open boot file[flash:/c5940-adventerprisek9-mz.SPA.151-2.GC2.bin]
rebooting...
```

```
System Bootstrap, Version 15.2(1r)GC, RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 2011 by cisco Systems, Inc.
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RSA verification Passed with v1.5 padding
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Primary ROM: RSA Signature Verification Passed
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c5940 platform with 1048576 Kbytes of main memory
No bootable image file: flash:/
Unable to open boot file[flash:/c5940-adventerprisek9-mz.SPA.151-2.GC2.bin]
rebooting...
```

```
System Bootstrap, Version 15.2(1r)GC, RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 2011 by cisco Systems, Inc.
ROMMON Integrity test
```

```
RSA verification Passed with v1.5 padding
```

```
Primary ROM: RSA Signature Verification Passed
```

```
c5940 platform with 1048576 Kbytes of main memory
rommon 1 >
```

To confirm this as the problem, issue the "cookie" command from the ROMMON prompt and look for all 0's.

```
rommon 1 > cookie
cookie:
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
rommon 2 >
```

Upgrading ROMMON

This section contains procedures for downloading ROM Monitor (ROMMON) software image upgrades.

Downloading/Upgrading ROMMON Images for IOS version 15.2(4)GC2 or later

This is the recommended upgrade procedure if your router is using IOS version 15.2(4)GC2 or later. The **upgrade rom-monitor** command only exists in IOS version 15.2(4)GC2 or later.

Two procedures are provided for upgrading ROMMON images from IOS:

- Using the upgrade command with the tftp server path in the file url argument.
- Using the upgrade command with a locally stored file in the file url argument.

You may use either procedure.

Updating the ROMMON Image in IOS EXEC Mode Directly from TFTP server



Note

In the event of a power outage, the ROM monitor download will not be successful.

Step 1

Make sure your router can reach the TFTP server. As a simple example with the router directly connected to the TFTP server, the IOS configuration might look like the following:

```
!
interface GigabitEthernet0/0
ip address 192.168.0.2 255.255.255.0
duplex auto
speed auto
!
```

Step 2

Download the ROMMON file from Cisco.com and place it on your TFTP server.

Step 3

Upgrade the current configuration by entering the command **upgrade rom-monitor** as shown in the following example:

```
Router# upgrade rom-monitor file tftp://192.168.0.1/C5940_RM_ALT.srec.SPA.152-1r.GC5
Loading C5940_RM_ALT.srec.SPA.152-1r.GC5 from 192.168.0.1 (via GigabitEthernet0/0): !!!!
```

```

OK - 862837 bytes]
image size: 459112
Rommon signature verification PASSED for Upgrade Rommon
This command will result in a 'power-on reset' of the router!
Continue? [yes/no]: yes
Erasing boot flash
Programming boot flash
Now Reloading
System Bootstrap, Version 15.2(1r)GC5, RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 2014 by cisco Systems, Inc.
ROMMON Integrity test

```

- Step 4** Verify that the new Alternate ROMMON image is loaded.
[Verifying New Alternate ROMMON, page 6](#)
-

Updating the ROMMON Image in IOS EXEC Mode from File on Flash File System

An optional method of downloading the ROMMON image is by copying the ROMMON file from the TFTP server to the internal flash memory.

- Step 1** To do this, first copy the image from your TFTP server to flash: (ie. copy tftp: flash:).

- Step 2** Next, enter the command **upgrade rom-monitor** as shown in the following example:
- ```

RTR-5940# upgrade rom-monitor file flash:C5940_RM_ALT.srec.SPA.152-1r.GC5
image size: 459112
Rommon signature verification PASSED for Upgrade Rommon
This command will result in a 'power-on reset' of the router!
Continue? [yes/no]: yes
Erasing boot flash
Programming boot flash
Now Reloading?
System Bootstrap, Version 15.2(1r)GC5, RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 2014 by cisco Systems, Inc.
ROMMON Integrity test

```

- Step 3** Verify that the new Alternate ROMMON image is loaded.  
[Verifying New Alternate ROMMON, page 6](#)
- 

### Downloading/Upgrading ROMMON Images from ROMMON

This is the recommended upgrade procedure if your router has an IOS version earlier than 15.2(4)GC2, however, this method will work regardless of the IOS version installed on the router.

- Step 1** At ROMMON prompt, configure networking and TFTP variables similar to the following (may be changed per your exact set-up):

```

System Bootstrap, Version 15.2(1r)GC, RELEASE SOFTWARE (fc1)

```

Technical Support: <http://www.cisco.com/techsupport>  
 Copyright (c) 2011 by cisco Systems, Inc.  
 Alternate ROMMON

```

uut 1 >IP_ADDRESS=192.168.0.2
uut 1 >IP_SUBNET_MASK=255.255.255.0
uut 1 >DEFAULT_GATEWAY=192.168.0.1
uut 1 >TFTP_SERVER=192.168.0.1
uut 1 >TFTP_FILE=C5940_RM_ALT.srec.SPA.152-1r.GC5

```

**Step 2** Execute `tftpdnld` command to start the upgrade process

```

uut 1 >tftpdnld -u
IP_ADDRESS: 192.168.0.2
IP_SUBNET_MASK: 255.255.255.0
DEFAULT_GATEWAY: 192.168.0.1
TFTP_SERVER: 192.168.0.1
TFTP_FILE: C5940_RM_ALT.srec.SPA.152-1r.GC5
WARNING: alternate copy of rommon exists, filename: C5940_RM_ALT.srec.SPA.152-1r.GC
all existing data in the alternate copy of rommon will be lost.
Do you wish to continue? y/n: [n]: y

```

```

Waiting for auto-negotiation to finish...
ether speed 1000M
ether full duplex

```

```

Receiving C5940_RM_ALT.srec.SPA.152-1r.GC5 from 192.168.0.1
!!
File reception completed.
Copying file C5940_RM_ALT.srec.SPA.152-1r.GC5 to flash.
image: 0x3ff80000 bigbuf: 0x101fb480 bigbuf_sz: 803228544 Sec_rom_sz: 524288
Platform Field Upgradeable ROMMON LOAD test

```

---

ROMMON Integrity test

---

```

RSA verification Passed with v1.5 padding
ROM: Digitally Signed Release Software
Invalidating existing:C5940_RM_ALT.srec.SPA.152-1r.GC rommon header

```

```

now write the code in ram
.00000100
Erasing flash ..
Programming flash .00000101

```

Rebooting.

```

System Bootstrap, Version 15.2(1r)GC5, RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 2014 by cisco Systems, Inc.
ROMMON Integrity test

```

- Step 3** Verify that the new Alternate ROMMON image is loaded.  
[Verifying New Alternate ROMMON, page 6](#)
- 

## Verifying New Alternate ROMMON

There are two methods to verify that the new Alternate ROMMON image is in place.

1. Verifying new Alternate ROMMON from ROMMON Prompt:

```
uut 1 >showver

System Bootstrap, Version 15.2(1r)GC5, RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 2014 by cisco Systems, Inc.
Alternate ROMMON
```

2. Verifying new Alternate ROMMON from IOS Prompt:

```
Router#show ver
Cisco IOS Software, C5940 Software (C5940-ADVENTERPRISEK9-M), Version 15.2(4)GC2, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2014 by Cisco Systems, Inc.
Compiled Fri 13-Jun-14 13:28 by prod_rel_team

ROM: System Bootstrap, Version 15.2(1r)GC5, RELEASE SOFTWARE (fc1)
```

## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see What's New in Cisco Product Documentation at:  
<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>.

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