



# Release Notes for Catalyst 6500 Series Switch and Cisco 7600 Series Internet Router FlexWAN and OSM ROMMON Software

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**Current Release: 12.1(5r)E—May 19, 2003**

This publication describes how to upgrade the ROMMON on your Catalyst 6500 series switch or Cisco 7600 series Internet Router FlexWAN (WS-X6182-2PA) or Optical Services Module (OSM).



**Tip**

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You should consider the 12.1(5r)E ROMMON software upgrade if you need the bug fix documented in the [“Caveats” section on page 2](#).

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With this procedure, you can upgrade the ROMMON image similar to the way that you upgrade the Cisco IOS.

ROMMON software release 12.1(5r)E is supported in Catalyst 6500 series switches and Cisco 7600 series Internet Router systems that are running Cisco IOS software on the Supervisor Engine 2 and on the MSFC2.



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## Software Images

[Table 1](#) lists the software releases for the FlexWAN and OSM ROMMON software.

**Table 1 Upgradable ROMMON Images**

ROMMON Software Release	Filename
12.1(5r)E upgradable module ROMMON image	CWAN RM.121-5r.E

## New and Changed Information

FlexWAN and OSM ROMMON software Release 12.1(5r)E contains bug fixes; no new feature support is added.

## Caveats

The following section contains resolved caveat information.

### Resolved Caveats in FlexWAN and OSM ROMMON Software Release 12.1(5r)E

- The FlexWAN fails to come online. This problem is resolved in FlexWAN and OSM ROMMON software release 12.1(5r)E. (CSCdy50995)

## Upgrading the ROMMON



**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 FlexWAN or OSM, perform these steps (in this example, the module with the FlexWAN is in slot 4):

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

```
Router# show rom-monitor slot 4
Cisco Internetwork Operating System Software
IOS (tm) MSFC2 Software (C6MSFC2-JSV-M), Version 12.1(12c)E2, EARLY DEPLOYMENT RELEASE
SOFTWARE (fc1)
Copyright (c) 1986-2002 by cisco Systems, Inc.
Compiled Thu 22-Aug-02 17:01 by eaarmas
Image text-base: 0x40008980, data-base: 0x4198E000

ROM: System Bootstrap, Version 12.1(1r)E, RELEASE SOFTWARE (fc1)
Router#
```

**Step 2** Program the new ROMMON to the Flash device on the FlexWAN in slot 4:

```
Router# upgrade rom-monitor slot 4 file bootflash:CWAN_RM.121-5r.E
Copying bootflash:CWAN_RM.121-5r.E onto bootflash of slot#4 CCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Router#
```

**Step 3** Check the new active ROMMON information:

```
CWTLC-Slot4# test cwlc upgrade rommon bootflash:CWAN_RM.121-5r.E

ROMMON image upgrade in progress
Erasing flash
Programming flash
Verifying new image
ROMMON image upgrade complete, linecard must reset
CWTLC-Slot4#
```

**Step 4** Reload the FlexWAN for the change to take effect:

```
Router(config)# no power enable module 4
Router(config)# power enable module 4
Router(config)# end
Router#
<output truncated>
```

**Step 5** After the system boots, check the ROMMON information again:

```
Router# show rom-monitor slot 4
Cisco Internetwork Operating System Software
IOS (tm) MSFC2 Software (C6MSFC2-JSV-M), Version 12.1(12c)E2, EARLY DEPLOYMENT RELEASE
SOFTWARE (fc1)
Copyright (c) 1986-2002 by cisco Systems, Inc.
Compiled Thu 22-Aug-02 17:01 by eaarmas
Image text-base: 0x40008980, data-base: 0x4198E000

ROM: System Bootstrap, Version 12.1(5r)E, RELEASE SOFTWARE (fc1)
Router#
```

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## Additional Documentation

The following documents are available for the Catalyst 6500 series switches and Cisco 7600 series Internet Routers:

- *Catalyst 6500 Series and Cisco 7600 Series Internet Router FlexWAN Module Installation and Configuration Note*
- *Optical Services Modules Installation and Verification Note*
- *Release Notes for Cisco IOS Release 12.1E on the Catalyst 6500 and Cisco 7600 MSFC*
- *Release Notes for Cisco IOS Release 12.1E on the Catalyst 6500 and Cisco 7600 Supervisor Engine and MSFC*

These publications are available for the Catalyst 6500 series switches running Cisco IOS on the supervisor engine and MSFC:

[http://www.cisco.com/univercd/cc/td/doc/product/lan/cat6000/12\\_1e/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/lan/cat6000/12_1e/index.htm)

These publications are available for the Cisco 7600 series Internet Router running Cisco IOS software on the supervisor engine and MSFC:

<http://www.cisco.com/univercd/cc/td/doc/product/core/cis7600/index.htm>

These publications are available for the Catalyst 6500 series switches running Catalyst 7.x software on the supervisor engine and Cisco IOS software on the MSFC:

[http://www.cisco.com/univercd/cc/td/doc/product/lan/cat6000/sw\\_7\\_6/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/lan/cat6000/sw_7_6/index.htm)

## Obtaining Documentation

Cisco provides several ways to obtain documentation, technical assistance, and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

### Cisco.com

You can access the most current Cisco documentation on the World Wide Web at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

International Cisco websites can be accessed from this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

### Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which may have shipped with your product. The Documentation CD-ROM is updated regularly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual or quarterly subscription.

Registered Cisco.com users can order a single Documentation CD-ROM (product number DOC-CONDOCCD=) through the Cisco Ordering tool:

[http://www.cisco.com/en/US/partner/ordering/ordering\\_place\\_order\\_ordering\\_tool\\_launch.html](http://www.cisco.com/en/US/partner/ordering/ordering_place_order_ordering_tool_launch.html)

All users can order monthly or quarterly subscriptions through the online Subscription Store:

<http://www.cisco.com/go/subscription>

## Ordering Documentation

You can find instructions for ordering documentation at this URL:

[http://www.cisco.com/univercd/cc/td/doc/es\\_inpck/pdi.htm](http://www.cisco.com/univercd/cc/td/doc/es_inpck/pdi.htm)

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Networking Products MarketPlace:

<http://www.cisco.com/en/US/partner/ordering/index.shtml>

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, U.S.A.) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

## Documentation Feedback

You can submit comments electronically on Cisco.com. On the Cisco Documentation home page, click **Feedback** at the top of the page.

You can e-mail your comments to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems  
Attn: Customer Document Ordering  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

## Obtaining Technical Assistance

Cisco provides Cisco.com, which includes the Cisco Technical Assistance Center (TAC) website, as a starting point for all technical assistance. Customers and partners can obtain online documentation, troubleshooting tips, and sample configurations from the Cisco TAC website. Cisco.com registered users have complete access to the technical support resources on the Cisco TAC website, including TAC tools and utilities.

## Cisco.com

Cisco.com offers a suite of interactive, networked services that let you access Cisco information, networking solutions, services, programs, and resources at any time, from anywhere in the world.

Cisco.com provides a broad range of features and services to help you with these tasks:

- Streamline business processes and improve productivity
- Resolve technical issues with online support
- Download and test software packages
- Order Cisco learning materials and merchandise
- Register for online skill assessment, training, and certification programs

To obtain customized information and service, you can self-register on Cisco.com at this URL:

<http://tools.cisco.com/RPF/register/register.do>

## Technical Assistance Center

The Cisco TAC is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two types of support are available: the Cisco TAC website and the Cisco TAC Escalation Center. The type of support that you choose depends on the priority of the problem and the conditions stated in service contracts, when applicable.

We categorize Cisco TAC inquiries according to urgency:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration. There is little or no impact to your business operations.
- Priority level 3 (P3)—Operational performance of the network is impaired, but most business operations remain functional. You and Cisco are willing to commit resources during normal business hours to restore service to satisfactory levels.
- Priority level 2 (P2)—Operation of an existing network is severely degraded, or significant aspects of your business operations are negatively impacted by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.
- Priority level 1 (P1)—An existing network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

## Cisco TAC Website

The Cisco TAC website provides online documents and tools to help troubleshoot and resolve technical issues with Cisco products and technologies. To access the Cisco TAC website, go to this URL:

<http://www.cisco.com/tac>

All customers, partners, and resellers who have a valid Cisco service contract have complete access to the technical support resources on the Cisco TAC website. Some services on the Cisco TAC website require a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to this URL to register:

<http://tools.cisco.com/RPF/register/register.do>

If you are a Cisco.com registered user, and you cannot resolve your technical issues by using the Cisco TAC website, you can open a case online at this URL:

<http://www.cisco.com/tac/caseopen>

If you have Internet access, we recommend that you open P3 and P4 cases online so that you can fully describe the situation and attach any necessary files.

## Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses priority level 1 or priority level 2 issues. These classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer automatically opens a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to this URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

Before calling, please check with your network operations center to determine the Cisco support services to which your company is entitled: for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). When you call the center, please have available your service agreement number and your product serial number.

## Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- The *Cisco Product Catalog* describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the *Cisco Product Catalog* at this URL:

[http://www.cisco.com/en/US/products/products\\_catalog\\_links\\_launch.html](http://www.cisco.com/en/US/products/products_catalog_links_launch.html)

- Cisco Press publishes a wide range of networking publications. Cisco suggests these titles for new and experienced users: *Internetworking Terms and Acronyms Dictionary*, *Internetworking Technology Handbook*, *Internetworking Troubleshooting Guide*, and the *Internetworking Design Guide*. For current Cisco Press titles and other information, go to Cisco Press online at this URL:

<http://www.ciscopress.com>

- *Packet* magazine is the Cisco quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access *Packet* magazine at this URL:

<http://www.cisco.com/go/packet>

- iQ Magazine is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:

<http://www.cisco.com/go/iqmagazine>

- Internet Protocol Journal is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

[http://www.cisco.com/en/US/about/ac123/ac147/about\\_cisco\\_the\\_internet\\_protocol\\_journal.html](http://www.cisco.com/en/US/about/ac123/ac147/about_cisco_the_internet_protocol_journal.html)

- Training—Cisco offers world-class networking training. Current offerings in network training are listed at this URL:

[http://www.cisco.com/en/US/learning/le31/learning\\_recommended\\_training\\_list.html](http://www.cisco.com/en/US/learning/le31/learning_recommended_training_list.html)

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