Cisco 827-4V Router ROM Monitor Download Procedures

This document contains procedures for downloading ROM Monitor (ROMMON) software image upgrades. When you attempt to upgrade IOS images to Cisco IOS Release 12.2(2)XK or later on Cisco 827-4V routers, you must first ensure that ROMMON image version 12.2(1r)XE2 or later is installed on the router.

Caution Failure to upgrade the ROMMON image to version 12.2(1r)XE2 or later before upgrading the IOS image will cause the router to operate improperly and enter into an unrecoverable state.

This ROMMON image upgrade is required only if you are upgrading Cisco IOS 827-4V images to Cisco IOS Release 12.2(2)XK or later. If you have received a Cisco 827-4V router with a Cisco IOS Release 12.2(2)XK or later image already installed, you do not need to upgrade the ROMMON image.

This document contains the following sections:

Supported Platforms

While the Cisco 827-4V router is the only router requiring a ROMMON image upgrade as of the publication time of this release note, ROMMON image upgrades are supported on the following routers.

- Cisco 806
- Cisco 826
- Cisco 827
- Cisco 827-4V

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

- SOHO 77
- Cisco 828
- SOHO 78

Note It is only necessary to upgrade the ROMMON image on the Cisco 827-4V router for newer Cisco IOS releases, as of the publication time of this release note. It is not necessary to upgrade the ROMMON image on Cisco 806, Cisco 826, Cisco 827, Cisco 828, SOHO 77, or SOHO 78 routers when upgrading Cisco IOS images to Release 12.2(2)XK or later.

Important Notes

The 827-4V Cisco IOS images available on Cisco IOS Release 12.2(2)XK and later require the use of the ROMMON image version 12.2(1r)XE2. Attempting to run Release 12.2(2)XK or later IOS images without first ensuring a newer ROMMON image is installed will cause the router to operate improperly and enter into an unrecoverable state. In order to prevent this from occurring, and to ensure a smooth transition to Release 12.2(2)XK and later IOS images on the Cisco 827-4V, you must ensure that a 12.2(1r)XE2 or later ROMMON image is downloaded from the CCO website onto a TFTP server, and then loaded onto the router before running the new IOS images. These ROMMON image are backward compatible with all Cisco IOS images released for the Cisco 827-4V router.

Downloading Images

Two procedures are provided for copying ROMMON images to the Cisco 827-4V router: one performed in ROMMON mode using the **tftpdnld** command, and another performed in IOS EXEC mode, using the **copytftp** command. You may use either procedure. The examples below use the 12.2(1r)XE2 ROMMON image. As it is currently only required for Cisco 827-4V routers, it has a name specific to the Cisco 820 series of routers with the version number appended: C820_RM_ALT.srec.122-lr.XE2. Later versions of ROMMON upgrade files will be named following a similar pattern.

Upgrading the ROMMON Image from ROMMON Mode

Complete these steps to upgrade the ROMMON image from ROMMON mode.

Step 1 Download the ROMMON image C820_RM_ALT.srec.122-1r.XE2 from CCO, and place it on your TFTP server.

Step 2 Place the router in ROMMON mode by sending a telnet **break** command during the router reboot sequence. The following prompt will be displayed, indicating entry into ROMMON mode:

```
rommon >
```

Step 3 In ROMMON mode, set the following parameters by typing the names followed by an equals sign as shown, and then typing a value for the parameter.

IP_ADDRESS=

IP_SUBNET_MASK=

DEFAULT_GATEWAY=

TFTP_SERVER=

TFTP_FILE=

Table 1 describes the type of value to provide for each parameter.

Table 1 ROMMON Parameters and Values

Parameter	Value
IP_ADDRESS=	IP address of the router
IP_SUBNET_MASK=	Subnet mask of the router
DEFAULT_GATEWAY=	IP address of the router's default gateway
TFTP_SERVER=	IP address of the TFTP server on which the ROMMON image is located
TFTP_FILE=	The path and filename of the ROMMON image

Step 4 Verify the parameter settings by entering the **set** command. Correct any mistakes by reentering the parameter and value.

```
rommon> set
TFTP_CHECKSUM=0
IP_SUBNET_MASK=255.255.255.0
DEFAULT_GATEWAY=1.6.0.1
TFTP_SERVER=223.255.254.254
IP_ADDRESS=1.6.97.20
TFTP_FILE=C820_RM_ALT.srec.122-1r.XE2
```

Step 5 Upgrade the ROMMON image by entering the **tftpdnld -u** command. Sample output is shown below.

```
rommon >tftpdnld -u
IP_ADDRESS: 1.6.97.20
IP_SUBNET_MASK: 255.255.255.0
DEFAULT_GATEWAY: 1.6.0.1
TFTP_SERVER: 223.255.254.254
TFTP_FILE: C820_RM_ALT.srec.122-1r.XE2
WARNING: alternate copy of rommon exists, filename: C820_RM_ALT.srec all existing data in
the alternate copy of rommon will be lost.
 Do you wish to continue? y/n:  [n]:
```

Step 6 Enter **y** to start the download. A series of exclamation points (!!!!!!) indicates that the image is downloading successfully. The router will reboot when the download is complete.

Note You may need to reset the router while in ROMMON mode by entering the **reset** command before entering the **tftpdnld** command. The router will prompt you to do this if needed. If prompted to reset the router, you must reset the router and then follow Step 2 through Step 6 to update the ROMMON image.

Updating the ROMMON Image in IOS EXEC Mode

Complete these steps to upgrade the ROMMON image from IOS EXEC mode.

Step 1 Download the ROMMON image C820_RM_ALT.srec.122-1r.XE2 from CCO and place it on your TFTP server.

Step 2 In IOS EXEC mode, save the current configuration by entering the command **copy running-config startup-config**.

Step 3 Enter **copy tftp: rommon:**, and answer the prompts as shown in the following example:

```
820-2#copy tftp: rommon:
 Address or name of remote host []? 223.255.254.253
 Source filename []? C820_RM_ALT.srec.122-1r.XE2
 Destination filename [C820_RM_ALT.srec.122-1r.XE2]?
 Loading C820_RM_ALT.srec.122-1r.XE2 from 223.255.254.253 (via Ethernet0): !
 WARNING...
 Do not attempt ROMMON upgrades unless you know what you are doing.
 Writing to ROMMON must note be interrupted.
 Do not reset the router during this operation.
 Do what you can to ensure power to the router is not interrupted.
 The router will reload after ROMMON upgrade is successfully completed.
 Do you want to continue?[confirm]
```

Press **Enter** to continue. The router will begin downloading the ROMMON image. Successful download is indicated by a series of exclamation marks (!!!!!!). The router will automatically reboot.

Obtaining Documentation

The following sections explain how to obtain documentation from Cisco Systems.

World Wide Web

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

http://www.cisco.com

Translated documentation is available at the following URL:

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 is shipped with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual subscription.

Ordering Documentation

Cisco documentation is available in the following ways:

- Registered Cisco Direct Customers can order Cisco product documentation from the Networking Products MarketPlace:

  http://www.cisco.com/cgi-bin/order/order_root.pl

- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:

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

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

Documentation Feedback

If you are reading Cisco product documentation on Cisco.com, you can submit technical comments electronically. Click **Leave Feedback** at the bottom of the Cisco Documentation home page. After you complete the form, print it out and fax it to Cisco at 408 527-0730.

You can e-mail your comments to bug-doc@cisco.com.

To submit your comments by mail, use the response card behind the front cover of your document, or write to the following address:

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

We appreciate your comments.

Obtaining Technical Assistance

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

Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information, networking solutions, services, programs, and resources at any time, from anywhere in the world.

Cisco.com is a highly integrated Internet application and a powerful, easy-to-use tool that provides a broad range of features and services to help you to

- 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

You can self-register on Cisco.com to obtain customized information and service. To access Cisco.com, go to the following URL:

http://www.cisco.com

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 through the Cisco TAC: the Cisco TAC Web Site and the Cisco TAC Escalation Center.

Inquiries to Cisco TAC are categorized according to the urgency of the issue:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration.
- Priority level 3 (P3)—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- Priority level 2 (P2)—Your production network is severely degraded, affecting significant aspects of business operations. No workaround is available.
- Priority level 1 (P1)—Your production network is down, and a critical impact to business operations will occur if service is not restored quickly. No workaround is available.

Which Cisco TAC resource you choose is based on the priority of the problem and the conditions of service contracts, when applicable.

Cisco TAC Web Site

The Cisco TAC Web Site allows you to resolve P3 and P4 issues yourself, saving both cost and time. The site provides around-the-clock access to online tools, knowledge bases, and software. To access the Cisco TAC Web Site, go to the following URL:

http://www.cisco.com/tac

All customers, partners, and resellers who have a valid Cisco services contract have complete access to the technical support resources on the Cisco TAC Web Site. The Cisco TAC Web Site requires 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 the following URL to register:

http://www.cisco.com/register/

If you cannot resolve your technical issues by using the Cisco TAC Web Site, and you are a Cisco.com registered user, you can open a case online by using the TAC Case Open tool at the following URL:

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

If you have Internet access, it is recommended that you open P3 and P4 cases through the Cisco TAC Web Site.

Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses issues that are classified as priority level 1 or priority level 2; 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 will automatically open a case.

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

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

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

We appreciate and value your comments.

This document is to be used in conjunction with the documents listed in the Obtaining Documentation section.