



# Release Notes for Cisco 3845 Series Integrated Services Router in a RAN-O for Cisco IOS Release 12.4(6)MR1

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June 29, 2006

Cisco IOS Release 12.4(6)MR1

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These release notes are for the Cisco 3845 Series Integrated Services Router in RAN-O for Cisco IOS Release 12.4(6)MR1. Cisco IOS Release 12.4(6)MR1 is required to deploy the Cisco3845 Series Integrated Router in a RAN Optimization solution.

These release notes are updated as needed to describe new features, memory requirements, hardware support, software platform deferrals, and changes to the microcode and related documents.

For a list of the software caveats that apply to Cisco IOS Release 12.4(6)MR1, see the [“Caveats in Cisco IOS Release 12.4\(6\)MR1” section on page 3](#). To review the release notes for Cisco IOS Release 12.4, go to [www.cisco.com](http://www.cisco.com) and click **Technical Support and Documentation**. Select **Cisco IOS Software**. Then, click **Cisco IOS Software Release 12.4 Mainline** from the Cisco IOS Software list menu. Next, under the **General** menu item, click **Release Notes > Cross-Platform Release Notes for Cisco IOS Release 12.4, Part V:Caveats**.

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## Introduction

With Cisco IOS Release 12.4(6)MR, the Cisco 3845 Series Integrated Services Router can be used in a Cisco Radio Access Network (RAN) Optimization (RAN-O) environment. The Cisco RAN-O feature provides Global System for Mobile Communication (GSM) Abis Optimization over IP and Universal Mobile Telecommunication System (UMTS) Iub Optimization over IP. This feature enables bandwidth efficient transport of GSM and UMTS traffic between the Base Transceiver Station (BTS) and the Base Station Controller (BSC) in GSM RANs and between Node B and Radio Network Controllers (RNC) in UMTS RANs. This results in significant reductions in operating expenditures to the mobile wireless operator and enables new revenue generating services for the future.

## System Configuration Requirements

When being implemented in an RAN-O solution, the Cisco 3845 Series Integrated Router requires the minimum following system configuration:

- Cisco IOS 12.4(6)MR software be installed.

## Memory Recommendations

**Table 1**     *Memory Recommendations for the Cisco IOS Release 12.4(6)MR*

Platform	Feature Set	Software Image	Flash Memory Recommended	DRAM Memory Recommended	Runs From
Cisco 3845 Series Integrated Services Router	RAN Optimization	c3845-ipran-mz	128 MB Flash	256 MB DRAM	RAM

## Determining the Software Version

To determine the image and version of Cisco IOS software running on your Cisco 3845 Series Integrated Services Router, log in to the Cisco 3845 Series Integrated Services Router and enter the **show version** EXEC command:

```
router> show version
```

Cisco Internetwork Operating System Software  
 IOS (tm) 3800 Software (C3845-IPRAN-MZ), Version 12.4(6)MR1, EARLY DEPLOYMENT  
 RELEASE SOFTWARE (fcl)

## Upgrading to a New Software Release

For general information about upgrading to a new software release, refer to Support Download Software at the following URL:

<http://www.cisco.com/public/sw-center/index.shtml>

## New and Changed Information

The following sections list the new hardware and software features supported by the Cisco 3845 Series Integrated Services Router for Cisco IOS Release 12.4(6)MR software.

### New Features in the Cisco IOS Release 12.4(6)MR1 Software

There are no new features supported by the Cisco 3845 Series Integrated Service Router for Cisco IOS Release 12.4(6)MR1.

### New Features in the Cisco IOS Release 12.4(6)MR Software

The following new features are implemented in Cisco IOS 12.4(6)MR and later releases:

- Support of the Cisco 3845 Series Integrated Services Router platform
- Support of the NM-1A-OC3-POM single-width, single-port ATM network module

## Limitations, Restrictions, and Important Notes



#### Note

When the NM-1A-OC3-POM is used in RAN-O applications the line rate is not achievable.

### Hardware not Supported on the Cisco 3845 Series Integrated Services Router

All cards except the NM-1A-OC3-POM.

## Caveats in Cisco IOS Release 12.4(6)MR1

The following sections list and describe the resolved and open caveats for the Cisco 3845 Series Integrated Services Router running Cisco IOS Release 12.4(6)MR1. Only severity 1 through 3 caveats are included.

Caveats describe unexpected behavior in Cisco IOS software releases. Severity 1 caveats are the most serious caveats, severity 2 caveats are less serious, and severity 3 caveats are the least serious of these three severity levels.

Caveats in Cisco IOS Releases 12.4 and 12.4T are also in Cisco IOS Release 12.4(6)MR1. For information on caveats in Cisco IOS Release 12.4, see *Caveats for Cisco IOS Release 12.4*. For information on caveats in Cisco IOS Release 12.4T, see *Caveats for Cisco IOS Release 12.4T*. These two documents list severity 1 and 2 caveats and are located on CCO and the Documentation DVD.

**Note**

If you have an account with Cisco.com, you can use Bug Navigator II to find caveats of any severity for any release. To reach Bug Navigator II, Login to Cisco.com and click **Software Center: Cisco IOS Software: Cisco Bugtool Navigator II**. Another option is to go directly to <http://www.cisco.com/support/bugtools>.

## Open Caveats

There are no known open caveats in Cisco IOS Release 12.4(6)MR1.

## Caveats in Cisco IOS Release 12.4(6)MR

The following sections list and describe the resolved and open caveats for the Cisco 3845 Series Integrated Services Router running Cisco IOS Release 12.4(6)MR. Only severity 1 through 3 caveats are included.

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**Note**

If you have an account with Cisco.com, you can use Bug Navigator II to find caveats of any severity for any release. To reach Bug Navigator II, Login to Cisco.com and click **Software Center: Cisco IOS Software: Cisco Bugtool Navigator II**. Another option is to go directly to <http://www.cisco.com/support/bugtools>.

## Open Caveats

There are no known open caveats in Cisco IOS Release 12.4(6)MR.

## Troubleshooting

### Collecting Data for Router Issues

To collect data for reporting router issues, issue the following command:

- **show tech-support**—Displays general information about the router when it reports a problem.

#### Collecting Data for ROMmon Issues

To collect data for ROMmon issues, issue the following command while in EXEC mode:

- **showmon**— Displays currently selected ROM monitor.

## Documentation Updates

There are no documentation updates at this time.

## Related Documentation

These documents are available for implementing the Cisco 3845 Series Integrated Services Router in a RAN-O and are available on Cisco.com and the Documentation DVD:

### Cisco Mobile Wireless RAN-O on Cisco 3845 Series Integrated Services Router

- Cisco 3800 Series Integrated Services Router Documents
  - *Cisco 3845 Series Integrated Services Router Software Configuration Guide*
- Cisco Network Modules Installation Guides
  - *Cisco NM-1A-OC3-POM Network Module Guide*
  - *Network Modules Quick Start Guide*
  - *Cisco Network Modules Hardware Installation Guide*
- Cisco Interface Cards Installation Guides
  - *Cisco 2-port T1/E1-RAN Installation Instructions*
  - *Quick Start Guide: Interface Cards*
  - *Cisco Interface Cards Installation Guide*
- Release Notes

On Cisco.com at:

**Technical Support & Documentation: Routers: Cisco 3800 Series Integrated Services Routers**

On the Documentation DVD at:

**Technical Support & Documentation: Routers: Cisco 3800 Series Integrated Services Routers**



#### Note

To be sure of obtaining the latest information, access the online documentation.

## Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain 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 at this URL:

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

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

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

## Documentation DVD

Cisco documentation and additional literature are available in a Documentation DVD package, which may have shipped with your product. The Documentation DVD is updated regularly and may be more current than printed documentation. The Documentation DVD package is available as a single unit.

Registered Cisco.com users (Cisco direct customers) can order a Cisco Documentation DVD (product number DOC-DOCDVD=) from the Ordering tool or Cisco Marketplace.

Cisco Ordering tool:

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

Cisco Marketplace:

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

## Ordering Documentation

You can find instructions for ordering documentation at this URL:

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

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Ordering tool:  
<http://www.cisco.com/en/US/partner/ordering/>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 1 800 553-NETS (6387).

## Documentation Feedback

You can send comments about technical documentation 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.

## Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

From this site, you can perform these tasks:

- Report security vulnerabilities in Cisco products.
- Obtain assistance with security incidents that involve Cisco products.
- Register to receive security information from Cisco.

A current list of security advisories and notices for Cisco products is available at this URL:

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

If you prefer to see advisories and notices as they are updated in real time, you can access a Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed from this URL:

[http://www.cisco.com/en/US/products/products\\_psirt\\_rss\\_feed.html](http://www.cisco.com/en/US/products/products_psirt_rss_feed.html)

## Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you might have identified a vulnerability in a Cisco product, contact PSIRT:

- Emergencies—[security-alert@cisco.com](mailto:security-alert@cisco.com)
- Nonemergencies—[psirt@cisco.com](mailto:psirt@cisco.com)



### Tip

We encourage you to use Pretty Good Privacy (PGP) or a compatible product to encrypt any sensitive information that you send to Cisco. PSIRT can work from encrypted information that is compatible with PGP versions 2.x through 8.x.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one that has the most recent creation date in this public key server list:

<http://pgp.mit.edu:11371/pks/lookup?search=psirt%40cisco.com&op=index&exact=on>

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532

# Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, Cisco Technical Support provides 24-hour-a-day, award-winning technical assistance. The Cisco Technical Support Website on Cisco.com features extensive online support resources. In addition, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not hold a valid Cisco service contract, contact your reseller.

## Cisco Technical Support Website

The Cisco Technical Support Website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, 365 days a year, at this URL:

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

Access to all tools on the Cisco Technical Support Website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

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



### Note

Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support Website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

## Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco TAC engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco TAC engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>



## Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—Your 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.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

## Obtaining Additional Publications and Information

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly What's New in Cisco Product Documentation, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the What's New in Cisco Product Documentation as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.

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This document is to be used in conjunction with the documents listed in the “[Related Documentation](#)” section.

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