



Release Notes for the Cisco 3825 Series Integrated Services Router in an IP RAN Environment for Cisco IOS Release 12.4(16)MR2

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Cisco IOS Release 12.4(16)MR2

These release notes are for the Cisco 3825 Series Integrated Services Router in an IP Radio Access Network (RAN) Environment for Cisco IOS Release 12.4(16)MR2. Cisco IOS Release 12.4(16)MR2 is required to deploy the Cisco 3825 router in an IP RAN Optimization solution. These release notes are updated 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(16)MR2, see the [“Caveats in Cisco IOS Release 12.4\(16\)MR2” section on page 5](#).

To review Cisco 3825 Series Integrated Services Router release notes, including *Release Notes for the Cisco 3825 Series Integrated Services Router in an IP Radio Access Network Environment for Cisco IOS Release 12.4(16)MR2*, go to the following URL:

http://www.cisco.com/en/US/products/ps5855/prod_release_notes_list.html

To review release notes for the Cisco IOS Software Releases 12.4 Mainline, including *Release Notes for the Cisco 3825 Series Integrated Services Router in an IP Radio Access Network Environment for Cisco IOS Release 12.4(16)MR2*, go to the following URL:

http://www.cisco.com/en/US/products/ps6350/prod_release_notes_list.html

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Introduction

With Cisco IOS Release 12.4(16)MR and later, Cisco 3825 series integrated services routers can be used in an Internet Protocol Radio Access Network (IP RAN) environment. The Cisco IP RAN feature provides both:

- Global System for Mobile Communication (GSM) Abis Optimization over IP and
- Universal Mobile Telecommunication System (UMTS) Iub Optimization over IP

The Cisco IP RAN 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 Requirements

When being implemented in an IP RAN solution, the Cisco 3825 series integrated services router requires the following minimum software installation:

- Cisco IOS Release 12.4(16)MR1 software

Memory Requirements

[Table 1](#) lists the required memory for using this software.

Table 1 *Cisco IOS Release 12.4(16)MR2 Memory Requirements*

Platform	Feature Set	Software Image	Flash Memory Recommended	DRAM Memory Recommended	Runs From
Cisco 3825 Series Integrated Services Router	RAN Optimization	c3825-iprank9-mz	128 MB	256 MB	RAM

Hardware Supported

The following cards are supported on the Cisco 3825 router:

- NM-2W
- AIM-ATM-8
- VWIC-2T1/E1-RAN

Determining the Software Version

To determine the image and version of Cisco IOS software running on your Cisco 3825 series integrated services router, log in to the Cisco 3825 series integrated services router and enter the **show version** EXEC command:

```
router> show version
Cisco Internetwork Operating System Software
IOS (tm) 3800 Software (C3825-IPRANK9-MZ), Version 12.4(16)MR2, 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 3825 series integrated services router.

- [New Features in Cisco IOS Release 12.4\(16\)MR2 Software, page 3](#)
- [New Features in Cisco IOS Release 12.4\(16\)MR1 Software, page 3](#)
- [New Features in Cisco IOS Release 12.4\(16\)MR Software, page 4](#)

New Features in Cisco IOS Release 12.4(16)MR2 Software

In Cisco IOS Release 12.4(16)MR2, the Cisco 3825 router supports the following:

- Keyword **ignore-vpi-vci** added to the **xconnect** command for n:1 VCC cell mode PW

New Features in Cisco IOS Release 12.4(16)MR1 Software

In Cisco IOS Release 12.4(16)MR1, the Cisco 3825 router now supports the following:

- RFC 4717: ATM over MPLS
- RFC 4454: ATM over L2TPv3
- RFC 4023: MPLS over GRE
- RFC 4553: Structure-Agnostic TDM over Packet (SAToP)
- draft-ietf-pwe3-cespsn: Structure-aware TDM Circuit Emulation Service over Packet-Switched Network (CESoPSN)
- RFC 4448: Encapsulation Methods for Transport of Ethernet over MPLS Networks
- Up to 12 ATM ports in an IMA group with the AIM-ATM-8 installed in slot 0

New Features in Cisco IOS Release 12.4(16)MR Software

In Cisco IOS Release 12.4(16)MR, the Cisco 3825 router now supports the following:

- GSMmux—Global System for Mobile Communication (GSM) Abis Optimization over IP
- UMTSmux—Universal Mobile Telecommunication System (UMTS) Iub Optimization over IP

Caveats

This section documents the open and resolved caveats for the Cisco 3825 series integrated services router running Cisco IOS Release 12.4(16)MR. 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 Software Releases 12.4 Mainline and Cisco IOS Software Releases 12.4T are also in Cisco IOS Release 12.4(16)MR.

For information on caveats in Cisco IOS Software Releases 12.4 Mainline, go to the following URL on Cisco.com:

http://www.cisco.com/en/US/products/ps6350/prod_release_notes_list.html

For information on caveats in Cisco IOS Software Releases 12.4T, go to the following URL on Cisco.com:

http://www.cisco.com/en/US/products/ps6441/prod_release_notes_list.html

These documents list severity 1 and 2 caveats and can be found on the Documentation DVD as well as Cisco.com.



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, go to Cisco.com. Click the **Support** tab and select **Support** from the drop-down menu. Under Frequently Used Resources, click **Bug Toolkit**. You will then need to log in. Another option is to go directly to

http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl.

The following sections list the open and resolved caveats in the following releases:

- [Caveats in Cisco IOS Release 12.4\(16\)MR2, page 5](#)
- [Caveats in Cisco IOS Release 12.4\(16\)MR1, page 6](#)
- [Caveats in Cisco IOS Release 12.4\(16\)MR, page 6](#)

Caveats in Cisco IOS Release 12.4(16)MR2

The following caveats are opened and resolved in Cisco IOS Release 12.4(16)MR2.

Open Caveats

This section lists the caveats that are open in Cisco IOS Release 12.4(16)MR2.

CSCsk42419 and CSCsk60020

The Secure Shell server (SSH) implementation in Cisco IOS contains multiple vulnerabilities that allow unauthenticated users the ability to generate a spurious memory access error or, in certain cases, reload the device.

The IOS SSH server is an optional service that is disabled by default, but its use is highly recommended as a security best practice for management of Cisco IOS devices. SSH can be configured as part of the AutoSecure feature in the initial configuration of IOS devices, AutoSecure run after initial configuration, or manually. Devices that are not configured to accept SSH connections are not affected by these vulnerabilities.

Common Vulnerabilities and Exposures (CVE) identifier CVE-2008-1159 has been assigned to this bug.

The Security Advisory for this issue is posted at

<http://www.cisco.com/warp/public/707/cisco-sa-20080521-ssh.shtml>

CSCsl27667:

Description: MWR uses only the first 16 bits of the assigned control connection ID AVP.

Workaround: There is no workaround for the 12.4(16)MR1 image.

Resolved Caveats

This section lists the caveats that are resolved in Cisco IOS Release 12.4(16)MR2.

CSCsg91306

Multiple vulnerabilities exist in the Session Initiation Protocol (SIP) implementation in Cisco IOS that can be exploited remotely to trigger a memory leak or to cause a reload of the Cisco IOS device.

Cisco has released free software updates that address these vulnerabilities. Fixed Cisco IOS software listed in the Software Versions and Fixes section contains fixes for all vulnerabilities addressed in this advisory.

There are no workarounds available to mitigate the effects of any of the vulnerabilities apart from disabling the protocol or feature itself, if administrators do not require the Cisco IOS device to provide voice over IP services.

This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20080924-sip.shtml>.

Caveats in Cisco IOS Release 12.4(16)MR1

The following caveats are opened and resolved in Cisco IOS Release 12.4(16)MR1.

Open Caveats

This section lists the caveats that are open in Cisco IOS Release 12.4(16)MR1.

CSCsl27667:

Description: MWR uses only the first 16 bits of the assigned control connection ID AVP.

Workaround: There is no workaround for the 12.4(16)MR1 image.

Resolved Caveats

This section lists the caveats that are resolved in Cisco IOS Release 12.4(16)MR1.

CSCsk53991:

Description: ISR ATM cell switching feature is broken.

Workaround: There is no workaround for the 12.4(16)MR image and prior images.

Caveats in Cisco IOS Release 12.4(16)MR

The following caveats are opened and resolved in Cisco IOS Release 12.4(16)MR.

Open Caveats

There are no known open caveats in Cisco IOS Release 12.4(16)MR.

Resolved Caveats

There are no known resolved caveats in Cisco IOS Release 12.4(16)MR.

Troubleshooting

Collecting Data for Router Issues

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

- **show tech-support**—Displays general information about the router if it reports an issue.

Collecting Data for ROMmon Issues

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

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

Related Documentation

Related documents for implementing the Cisco 3825 series integrated services router in a RAN-O solution are available on Cisco.com and the Documentation DVD.

Use the following URL to access the related documentation on Cisco.com:

http://www.cisco.com/en/US/products/ps5855/tsd_products_support_series_home.html

Documents related to the Cisco 3825 series integrated services router include the following guides:

- Cisco 3800 Series Integrated Services Router Documents
 - *Cisco 3825 Series Integrated Services Router Software Configuration Guide*
- Cisco Network Modules Installation Guides
 - *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
 - *Release Notes for the Cisco 3825 Series Integrated Services Router in an IP Radio Access Network Environment Release 12.4(16)MR2*



Note

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

Service and Support

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, 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>

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