Release Notes for the Cisco MWR 1941-DC-A Mobile Wireless Edge Router for Cisco IOS Release 12.4(16)MR2

September 24, 2008

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Cisco IOS Release 12.4(16)MR2

These release notes are for the Cisco Mobile Wireless Router (MWR) 1941-DC-A Mobile Wireless Edge Router for Cisco IOS Release 12.4(16)MR2. Cisco IOS Release 12.4(16)MR2 is required to deploy the Cisco MWR 1941-DC-A router in a Radio Access Network-Optimization (RAN-O) 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 8.

To review Cisco MWR 1900 Mobile Wireless Routers release notes, including *Release Notes for the Cisco MWR 1941-DC-A Mobile Wireless Edge Router for Cisco IOS Release 12.4(16)MR2,* go to the following URL:

http://www.cisco.com/en/US/products/hw/routers/ps4062/prod_release_notes_list.html

To review release notes for the Cisco IOS Software Releases 12.4 Mainline, including *Release Notes for the Cisco MWR 1941-DC-A Mobile Wireless Edge Router 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

Contents

This document contains the following sections:

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Introduction

With Cisco IOS Release 12.4(2)MR and later, the Cisco MWR 1941-DC-A router can be used in a Cisco RAN-O solution. 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 Requirements

When being implemented in an RAN-O solution, the Cisco MWR 1941-DC-A router requires the minimum following system configuration:

- Cisco IOS Release 12.4(2)MR software or later.
- Redundancy—Standalone Mode

  The Cisco MWR 1941-DC-A router must be configured to operate in standalone mode. The standalone option must be configured from redundancy mode.

  To manually set the relays to open or closed, perform the following steps beginning in global configuration mode:

Step 1 Enter redundancy mode.

```
Router(config)# redundancy
```

Step 2 Enter the y-cable mode.

```
Router(config-r)# mode y-cable
```

Step 3 Specify that the router is to be used as a stand-alone device. This command closes the relays.

```
Router(config-r-y)# standalone
```

Step 4 Exit y-mode configuration mode.

```
Router(config-r-y)# exit
```

To verify the status of the relays on a Cisco MWR 1941-DC-A router, use the **show controllers** command.

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 MWR 1941-DC-A Mobile Wireless Edge Router	RAN Optimization	mwr1941-iprank9-mz	128 MB	256 MB	RAM
Cisco MWR 1941-DC-A Mobile Wireless Edge Router	Adv IP Series	mwr1941-adviprank9-mz	128 MB	256 MB	RAM

Determining the Software Version

To determine the image and version of Cisco IOS software running on your Cisco MWR 1941-DC-A router, log in to the Cisco MWR 1941-DC-A and enter the **show version** EXEC command:

```
router> show version
     Cisco Internetwork Operating System Software
   IOS (tm) 1900 Software (MWR1941-IPRANK9-MZ), Version 12.4(16)MR2, EARLY DEPLOYMENT
   RELEASE SOFTWARE (fc1)
```

Upgrading to a New Software Release

For general information about upgrading to a new software release, refer to Software Installation and Upgrade Procedures located at the following URL:

http://www.cisco.com/web/psa/products/index.html

New and Changed Information

The following sections list the new hardware and software features supported by the Cisco MWR 1941-DC-A router:

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

In Cisco IOS Release 12.4(16)MR2, the Cisco MWR 1941-DC-A 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 MWR 1941-DC-A router supports the following:

- Up to 10 ATM ports in an IMA group with the AIM-ATM-8

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

In Cisco IOS Release 12.4(16)MR, the Cisco MWR 1941-DC-A router supports three additional Cisco network interface cards:

- NM-16ESW
- NM-1A-T3
- NM-1A-OC-3SMI

Also, with Cisco IOS Release 12.4(16)MR software, the Cisco MWR 1941-DC-A router supports RFC 4448—Encapsulation Methods for Transport of Ethernet over MPLS Networks.

New Features in Cisco IOS Release 12.4(12)MR2 Software

In Cisco IOS Release 12.4(12)MR2, the Cisco MWR 1941-DC-A router 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)

New Features in Cisco IOS Release 12.4(12)MR1 Software

No new features are supported by the Cisco MWR 1941-DC-A router for Cisco IOS Release 12.4(12)MR1.

New Features in Cisco IOS Release 12.4(12)MR Software

In Cisco IOS Release 12.4(12)MR, the Cisco MWR 1941-DC-A router supports the following:

- New **show umts traffic** and **show gsm traffic** commands
- Only application bytes (below UDP header) calculate **show umts traffic** and **show gsm traffic** commands
- Built-in (fixed) high performance advanced integration module for ATM (AIM-ATM-8) daughter card that provides support for up to eight independent ATM links or four Inverse Multiplexing for ATM (IMA) groups

New Features in Cisco IOS Release 12.4(11)MR Software

In Cisco IOS Release 12.4(11)MR, the Cisco MWR 1941-DC-A router supports the following:

- K9 image
- Secure Shell (SSH)

New Features in Cisco IOS Release 12.4(9)MR Software

In Cisco IOS Release 12.4(9)MR, the Cisco MWR 1941-DC-A router supports three Cisco network interface cards:

- VWIC-2MFT-T1-DIR
- VWIC-2MFT-E1-DIR
- WIC-2A/S

Also, in Cisco IOS Release 12.4(9)MR software, L2TPv3 is supported.

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

No new features are supported by the Cisco MWR 1941-DC-A router for Cisco IOS Release 12.4(6)MR1.

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

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

- See *Release Notes for Cisco 3845 Series Integrated Services Router in a RAN-O for Cisco IOS Release 12.4(6)MR*

New Features in Cisco IOS Release 12.4(4)MR1 Software

The following new features are implemented in Cisco IOS 12.4(4)MR1 and later releases:

- UMTS Congestion Management Control—Implemented in Cisco IOS Release 12.4(4)MR1. Allows you to configure the UMTS congestion based on priority. Two new commands (**umts-iub congestion priority** and **umts-iub congestion-control**) are added using the PVC Configuration mode and the Interface Configuration mode, respectively (for detailed command information, see the *Cisco MWR 1941-DC-A Mobile Wireless Router Software Configuration Guide,* Appendix A).

New Features in Cisco IOS Release 12.4(4)MR Software

The following new features are implemented in Cisco IOS 12.4(4)MR and later releases:

- Inverse Multiplexing for ATM (IMA)—As a shorthaul, you can now configure existing UMTS commands on IMA interfaces. No new commands are added for this new feature. Only previously existing Cisco IOS commands have been added for this feature (for detailed command information, see the *Cisco MWR 1941-DC-A Mobile Wireless Router Software Configuration Guide,* Appendix A).
- Permanent Virtual Circuit (PVC) Routing—allows you to offload PVC traffic from a physical ATM shorthaul to an alternate backhaul. For each alternate backhaul, you must create a logical shorthaul by creating an ATM subinterface. Traffic from the PVCs configured under this logical shorthaul go through the corresponding alternate backhaul. Three new commands are added using Subinterface Configuration mode for this new feature: **atm umts**, **umts local**, and **umts remote** (for detailed command information, see the *Cisco MWR 1941-DC-A Mobile Wireless Router Software Configuration Guide,* Appendix A).
- UMTS QoS—Three new commands are added using the Interface Configuration mode for this new feature: **umts-iub set dscp**, **umts-iub set peering dscp**, and **gsm-abis set dscp** and one new ATM-VC Interface Configuration command: **umts-iub set dscp** (for detailed command information, see the *Cisco MWR 1941-DC-A Mobile Wireless Router Software Configuration Guide,* Appendix A). These new commands allow you to perform the following:
  - UMTS Shorthaul Interface:

    – Set the default description value to tag the backhaul packet including peering and data generated from the shorthaul in a UMTS Iub configuration.

    – Set the description value in the UMTS Iub configuration such that it overwrites the default value defined previously. It is also used to tag the peering backhaul packet.
  - PVC of a UMTS Shorthaul Interface—Set the description value in the UMTS Iub configuration to overwrite the default value defined previously. It is also used to tag the backhaul packet generated from traffic from the PVC.
  - GSM Shorthaul Interface—Set the description value to tag all the backhaul packets generated from the shorthaul in the GSM Abis interface.

New Features in Cisco IOS Release 12.4(2)MR1 Software

In Cisco IOS Release 12.4(2)MR1, the Cisco MWR 1941-DC-A router supports the following MIB:

- CISCO-IP-RAN-BACKHAUL-MIB—This MIB is compatible with Cisco Mobile Wireless Transport Manager (MWTM) 5.0 or later.

New Features in Cisco IOS Release 12.4(2)MR Software

In Cisco IOS Release 12.4(2)MR, the Cisco MWR 1941-DC-A router supports the following Cisco network modules and interface cards:

- Cisco 2-Port T1/E1-RAN Interface Card (VWIC)—Cisco 2-port T1/E1-RAN interface card: VWIC-2T1/E1-RAN
- Cisco Network Modules—Network Module with two WIC slots and no LAN (Ethernet/Fast Ethernet) ports: NM-2W

Limitations and Restrictions

Caution The Cisco MWR 1941-DC-A router does not support online insertion and removal (OIR) of WAN interface cards. Any attempt to perform OIR on a card in a powered-on router might cause damage to the card.

Caution The Cisco MWR 1941-DC-A router does not support online insertion and removal (OIR) of network modules. Any attempt to perform OIR on a card in a powered up router might cause damage to the card.

Unsupported Hardware—Cisco MWR 1941-DC-A Router

Use of additional interface cards: The only supported interface cards are the following:

- VWIC-2T1/2E-RAN
- VWIC-2MFT-T1-DIR
- VWIC-2MFT-E1-DIR
- WIC-2A/S

Caveats

This section documents the open and resolved caveats for the Cisco MWR 1941-DC-A 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 opened and resolved caveats in the following releases:

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

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

CSCsk61916

Description: There is no recovery after a slower link in the MLP bundle resets.

One of the two links in an MLP bundle is 8 ms slower. If the slower link arrives first (expected sequence number is slower link), the MLP bundle functions as expected. But when the slower link resets so that the fast link becomes primary (expected sequence number is faster link), fragments are dropped as lost even though they eventually arrive. This condition is known as lost received increments, which requires manual intervention to recover. For example, resetting the fast link.

Workaround: To void this problem, configure **ppp link reorders** on the member links. This command has the effect of disabling the normal lost fragment detection logic, so it may also be advisable to configure a lower lost fragment timeout value using the command **ppp timeout multilink lost fragment** to detect lost fragments more quickly.

Caveats in Cisco IOS Release 12.4(12)MR2

The following caveats are opened and resolved in Cisco IOS Release 12.4(12)MR2.

Open Caveats

There are no known open caveats in Cisco IOS Release 12.4(12)MR2.

Resolved Caveats

There are no known resolved caveats in Cisco IOS Release 12.4(12)MR2.

Caveats in Cisco IOS Release 12.4(12)MR1

The following caveats are opened and resolved in Cisco IOS Release 12.4(12)MR1.

Open Caveats

There are no know open caveats in Cisco IOS Release 12.4(12)MR1.

Resolved Caveats

This section lists the caveats that are resolved in Cisco IOS Release 12.4(12)MR1.

CSCsi13687

Description: If all GSM-Abis shorthaul interfaces are down, the router may stop responding in interrupt processing. Console/Telnet access to the router may be limited (or not possible). The router may return to normal after 1 to 2 minutes.

Workaround: There is no workaround for the Release 12.4(12)MR image. The Cisco MWR 1941-DC-A router must be power-cycled and booted with the Release 12.4(12)MR 1 image to recover.

Caution To increase network availability, we recommend that you upgrade affected images with the suggested replacement software images. We will discontinue manufacturing shipment of affected images. Any pending order is substituted by the replacement software images.

Be aware that failure to upgrade the affected images may result in network downtime.

The terms and conditions that governed your rights and obligations and those of Cisco, with respect to the deferred images will apply to the replacement images.

Software Replacement Recommendations for Cisco IOS Release 12.4(12)MR

Table 2 lists the software replacement recommendations for Cisco IOS Release 12.4(12)MR.

Table 2 Affected Software and Replacement Solution for Cisco IOS Release 12.4(12)MR

Software Affected			Software Solution		
OS Type	Version	Software	Version	Software	Availability (mm/dd/yyyy)
Cisco IOS	12.4(12)MR	mwr1941-iprank9-mz	12.4(12)MR1	mwr1941-iprank9-mz	03/23/07

Caveats in Cisco IOS Release 12.4(12)MR

The following caveats are opened and resolved in Cisco IOS Release 12.4(12)MR.

Open Caveats

This section lists the caveats that are open in Cisco IOS Release 12.4(12)MR.

CSCsi13687

Description: If all GSM-Abis shorthaul interfaces are down, the router may stop responding in interrupt processing. Console/Telnet access to the router may be limited (or not possible). The router may return to normal after 1 to 2 minutes.

Workaround: There is no workaround for this problem if the last active GSM-Abis interface goes down without operator intervention (peer router reloads, local controller goes down). If the operator is removing the last active GSM-Abis interface via configuration, the problem can be avoided by manual shutdown of the E1 controller.

```
controller e1 0/3
shut
no channel-group <channel-group-number>
```

Resolved Caveats

This section lists the caveats that are resolved in Cisco IOS Release 12.4(12)MR.

CSCsh54166

Description: If the clear umts-iub command is issued with an ATM interface specified, the command line interface access to all the UMTS commands becomes blocked.

Workaround: Do not use **clear umts atm** ***atm interface number*** command to clear UMTS statistics for just one peer. To clear UMTS statistics, use the **clear umts-iub** to clear statistics for all peers.

Caveats in Cisco IOS Release 12.4(11)MR

The following caveats are opened and resolved in Cisco IOS Release 12.4(11)MR.

Open Caveats

This section lists the caveats that are open in Cisco IOS Release 12.4(11)MR.

CSCsh54166

Description: Error to acquire umts parser read lock. If clear umts-iub command is issued with a specific interface, CLI access to all umts commands gets blocked.

Workaround: Do not use **clear umts atm x/y** to clear umts stats for just one peer. To clear umts stats, enter the **clear umts** command to clear stats for all peers.

Resolved Caveats

There are no known resolved caveats in Cisco IOS Release 12.4(11)MR.

Caveats in Cisco IOS Release 12.4(9)MR

The following caveats are opened and resolved in Cisco IOS Release 12.4(9)MR.

Open Caveats

There are no known open caveats in Cisco IOS Release 12.4(9)MR.

Resolved Caveats

This section lists the caveats that are resolved in Cisco IOS Release 12.4(9)MR.

CSCsc04185

Description: The cirbhCongestionDuration counter in the cirbhCongestionTable resets when clear umts on device is issued.

Workaround: There is no workaround for the Cisco IOS Release 12.4(6)MR image.

CSCsc04788

Description: The dscp value changed over MLP configured with IP Header Compression (IPHC), Quality of Service (QoS), and LFi. With MLP IPHC configured in IPHC format, the receiver side IPHC drops packets. With MLP IPHC configured as either the IPHC or Internet Engineering Task Force (IETF) forma, the number of dscp 8 packets at the receiver side does not match the number of dscp 8 packet at the sender side. The same problem applies for dscp 16 packets.

Workaround: There is no workaround for the Cisco IOS Release 12.4(6)MR image.

CSCsf15013

Description: The cirbhCongestionDuration counter resets when clear umts on device. While testing the UMTS congestion control, an adjacent MWR cell site router got hung up in the congestion control mode. It constantly throttled cells (at a slow rate), and the congestion timer display for show umts cong was incrementing. Turning off all GSM & UMTS traffic streams did not change this strange condition.

Workaround: There is no workaround for the Cisco IOS Release 12.4(6)MR image.

CSCsg56935

Description: When mixed GSM and UMTS traffic is run on an Multi-Link Point-to-Point Protocol (MLPPP) backhaul and the UMTS traffic utilization is over 60 percent of the total MLPPP backhaul, then GSM errors are seen and GSM packets may not arrive in a timely manner. This happens for the default value of the GSM jitter (4 milliseconds) and a UMTS backhaul aximum transmission unit (MTU) of 450 bytes.

Workaround: Recommended configuration changes for such deployments are as follows:

- Increase the GSM jitter buffer to a higher value, such as from the default value of 2 to 8.
- Reduce the MTU of the UMTS backhaul to produce a side effect of a slightly greater CPU utilization.

Either or both of the workaround configuration changes will fix the problem. A user can choose the option that best fits the particular deployment and traffic requirements.

Commands: The following commands are available for the above workaround:

- Router(config-if)#**gsm-abis jitter ?**

<4-2000> transmit jitter (in milliseconds)

– Router(config-if)#**umts-iub backhaul-mtu ?**

<250-4440> mtu in byte

Caveats in Cisco IOS Release 12.4(6)MR1

The following caveats are opened and resolved in Cisco IOS Release 12.4(6)MR1.

Open Caveats

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

Resolved Caveats

This section lists the caveats that are resolved in Cisco IOS Release 12.4(6)MR.1

CSCek37177

Description: In certain versions of Cisco IOS software, the Cisco IOS Transmission Control Protocol (TCP) listener is vulnerable to a remotely-exploitable memory leak that may lead to a denial of service condition.

This vulnerability only applies to traffic traveling to the Cisco IOS device. Traffic transiting the Cisco IOS device does not trigger this vulnerability.

Workaround: Free software is available to address this vulnerability for affected customers.

This issue is documented as Cisco ID CSCek37177.

Workarounds are available to mitigate the effects of the vulnerability.

This advisory is posted at
http://www.cisco.com/warp/public/707/cisco-sa-20070124-crafted-tcp.shtml

CSCse51159

Description: The Cisco MWR 1941-DC-A router stalls during bootup after reporting the following message: %PA-2-UNDEFIO: Unsupported I/O Controller (type 1297) in I/O Bay. The I/O Controller network interfaces are unavailable.

This situation only occurs on the latest Cisco MWR 1941-DC-A hardware with the Cisco IOS Release 12.4(6)MR image.

Workaround: There is no workaround for the Cisco IOS Release 12.4(6)MR image. The Cisco MWR 1941-DC-A router must be power-cycled and booted with older image to recover.

Caveats in Cisco IOS Release 12.4(6)MR

The following caveats are opened and resolved in Cisco IOS Release 12.4(6)MR.

Open Caveats

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

Resolved Caveats

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

Caveats in Cisco IOS Release 12.4(4)MR1

The following caveats are opened and resolved in Cisco IOS Release 12.4(4)MR1.

Open Caveats

There are no known open caveats in Cisco IOS Release 12.4(4)MR1.

Resolved Caveats

This section lists the caveats that are resolved in Cisco IOS Release 12.4(4)MR1.

CSCsc00700

Description: When the mwr1941-ipran-mz.THROTTLE_V124_4_MR1_01 connects to the mwr1941-ipran-mz. 124-4.MR, error messages appear and peering is not established.

Workaround: Upgrade software at both ends of a link at the same time or do not configure timeslot 31 in the channel group.

Caveats in Cisco IOS Release 12.4(4)MR

The following caveats are opened and resolved in Cisco IOS Release 12.4(4)MR.

Open Caveats

This section lists the caveats that are open in Cisco IOS Release 12.4(4)MR.

CSCsc22721

Description: Corrupted memory occurs when you configure all UMTS traffic traveling to a best-effort queue.

Workaround: Always configure UMTS traffic in the high priority queue.

Resolved Caveats

This section lists the caveats that are resolved in Cisco IOS Release 12.4(4)MR.

CSCsb09661

Description: When booting the Cisco MWR 1941-DC-A router, sometimes the controller on the Cisco 2-port T1/E1-RAN card does not come up. The controller stays down even after a reboot.

Workaround: Disconnect the interface cables to the Cisco 2-port T1/E1-RAN card and then re-connect them.

CSCsb62772

Description: The IMA UMTS interface does not pass any traffic when one of the links is down. This occurs while the IMA interface is down when there are no E1 controller alarms indicated.

Workaround: Remove link from IMA group.

Caveats in Cisco IOS Release 12.4(2)MR1

The following caveats are opened and resolved in Cisco IOS Release 12.4(2)MR1.

Open Caveats

There are no known open caveats in Cisco IOS Release 12.4(2)MR1.

Resolved Caveats

This section lists the caveats that are resolved in Cisco IOS Release 12.4(2)MR1.

CSCei61732

Cisco IOS software may permit arbitrary code execution after exploitation of a heap-based buffer overflow vulnerability. Additional integrity checks exist in the software that reduce the likelihood of arbitrary code execution.

Free software is available that includes the additional integrity checks for affected customers.

This advisory is posted at http://www.cisco.com/warp/public/707/cisco-sa-20051102-timers.shtml

Caveats in Cisco IOS Release 12.4(2)MR

The following caveats are opened and resolved in Cisco IOS Release 12.4(2)MR.

Open Caveats

There are no known open caveats in Cisco IOS Release 12.4(2)MR.

Resolved Caveats

There are no known resolved caveats in Cisco IOS Release 12.4(2)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.

Related Documentation

Related documents for implementing the Cisco MWR 1941-DC-A Mobile Wireless Edge 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/hw/routers/ps4062/tsd_products_support_series_home.html

Documents related to the Cisco MWR 1941-DC-A Mobile Wireless Edge Router include the following guides:

- Cisco MWR 1941-DC-A Mobile Wireless Edge Router Documents
  - *Cisco MWR 1941-DC-A Mobile Wireless Edge Router Hardware Installation Guide*
  - *Cisco MWR 1941-DC-A Mobile Wireless Edge Router Software Configuration Guide*
  - *Cisco Regulatory Compliance and Safety Information for the Cisco MWR 1941-DC-A Mobile Wireless Edge Router*
  - *Cisco MWR 1941-DC-A Mobile Wireless Edge Router Rack Mounting Instructions*
- Cisco Network Modules Installation Guides
  - *Network Modules Quick Start Guide*
  - *Cisco Network Modules Hardware Installation Guide*
- Cisco Interface Cards Installation Guides
  - *Quick Start Guide: Interface Cards*
  - *Cisco Interface Cards Installation Guide*
  - *Cisco 2-Port T1/E1-RAN Installation Instructions*
- Release Notes
  - Release Notes for *Cisco MWR 1941-DC-A Mobile Wireless Edge Router for Cisco IOS 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

Release Notes for the Cisco MWR 1941-DC-A Mobile Wireless Edge Router for Cisco IOS Release 12.4(16)MR2