



# Release Notes for Cisco Broadband Troubleshooter Release 3.2

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Multiple Service Operators (MSOs) provide a variety of services such as TV, video on demand, data, and voice telephony to subscribers. Cable companies provide a variety of services such as TV, video on demand, data, and voice telephony to subscribers. Network Administrators and radio frequency (RF) technicians need specialized tools to resolve RF problems in the cable plant. Cisco Broadband Troubleshooter 3.2 (CBT 3.2) is a simple, easy-to-use tool designed to accurately recognize and resolve such issues.

This document describes the new features included with CBT 3.2 as well as known issues for CBT 3.2 and instructions for working around them.

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# New and Changed Information

Cisco Broadband Troubleshooter 3.1 was the release prior to CBT 3.2. This section describes the following CBT 3.2 enhancements and topics, with ongoing support for CBT 3.1 features:

- [New Features in Cisco CBT 3.2, page 2](#)
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- [How to Upgrade to CBT 3.2, page 5](#)

## New Features in Cisco CBT 3.2

Cisco IOS Release 12.3(9a)BC introduces support for the Cisco Broadband Troubleshooter (CBT) Version 3.2 on the Cisco uBR10012, Cisco uBR7246VXR and Cisco uBR7100 series universal broadband routers, with newly supported interoperability for the following additional software features:

- Remote spectrum analysis support with CBT 3.2 on the Cisco MC5x20S/U BPE
- [Using Subscriber Traffic Management with CBT 3.2, page 9](#)

CBT 3.2 enables you to select up to three different cable modems (CMs) under the same CMTS or three different upstreams under the same CMTS. In addition, CBT 3.2 introduces the ability to display upstreams and cable modems combined (mixed) on the same trace window for monitoring and for playback.



### Note

Cisco CBT 3.2 resolves the former CBT 3.1 caveat CSCee03388. With CBT 3.1, trace windows did not support the *mixing* of upstreams or cable modems. Such mixing is supported in CBT 3.2.

For additional information about CBT 3.2, spectrum management and STM 1.1, refer to the following documents on Cisco.com:

- *Spectrum Management for the Cisco CMTS*  
[http://www.cisco.com/univercd/cc/td/doc/product/cable/cab\\_rout/cmtsfg/ufg\\_spec.htm](http://www.cisco.com/univercd/cc/td/doc/product/cable/cab_rout/cmtsfg/ufg_spec.htm)
- *Subscriber Traffic Management for the Cisco CMTS*  
[http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/122newft/122limit/122bc/122bc\\_15/ubsubmon.htm](http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/122newft/122limit/122bc/122bc_15/ubsubmon.htm)

The following features are available in CBT 3.1 with ongoing support in CBT 3.2:

- Support for uBRMC28U, MC28X, MC16U, and MC16X line cards with remote spectrum analysis.
- Support for EURO and J-DOCSIS frequency ranges.
- Support secure shell (SSH) communication from the CBT server to the cable modem termination system (CMTS).
  - In order for SSH communication to work, you must configure the CMTS to support SSH. Refer to the configuration guide, *Configuring Secure Shell* at:  
[http://www.cisco.com/en/US/products/sw/iosswrel/ps1835/products\\_configuration\\_guide\\_chapter09186a00800ca7d5.html](http://www.cisco.com/en/US/products/sw/iosswrel/ps1835/products_configuration_guide_chapter09186a00800ca7d5.html)
- Secure Hypertext Transfer Protocol/Secure Socket Layer (HTTPS/SSL) support between the web clients and CBT server. Support for HTTPs defaults to port 9443 (<https://<server-ip>:9443>).
- Scheduling based spectrum data polling.
- Threshold based spectrum data polling.

- Display up to three traces in the same trace window for monitoring and for playback.
  - The user can select up to three different cable modems (CMs) under the same CMTS or three different upstreams under the same CMTS.
- Save and load markers for trace windows playback.
- Purge collected spectrum data.
- Real-time continuous modem Carrier to Noise Ratio (CNR) and Upstream CNR.
- Subscriber Traffic Management (STM), which allows service providers to identify and control subscribers who exceed the maximum bandwidth allowed under their registered quality-of-service (QoS) profiles. This feature supplements current techniques such as Network-Based Application Recognition (NBAR) and access control lists (ACLs) to ensure that users do not consume more than their allowable bandwidth, without impacting network performance or other users that are abiding by their service agreements.
  - Scheduling based STM 1.0 data polling.
  - Real-time display of STM 1.0 violators.
  - Historical display of STM 1.0 violators along with the enforce-rules violated.
  - Search for violators based on MAC address.
  - STM data purge.



**Note** With releases prior to Cisco IOS 12.3(9a)BC Software, STM is not supported on the MC16U, MC16X, MC28U, and MC28X line cards. CBT 3.2 cannot collect STM data from these cards until a future Cisco IOS release supports STM on these line cards.

- Display enforce-rules currently enabled or disabled among the CMTSs (up to the Cisco IOS maximum of 20 rules on each CMTS).
- Generic query tool that allows the user to get MIB variable data from the CMTS. This feature allows the user to get variable information beyond the default polling instances. The tool supports single instance queries or continuous polling of MIB variables.

## Changes in Cisco CBT 3.2

### CBT 3.2 Download File Sizes

[Table 1](#) summarizes approximate download file sizes for Cisco CBT 3.2

*Table 1 Cisco CBT 3.2 File Sizes*

Platform	Filename	File Size <sup>1</sup>
Solaris	CBT32-Solaris1.tar.Z	135 MB
	CBT32-Solaris2.tar.Z	131 MB
Linux	CSCOcbt1.tar.Z	137 MB
	CSCOcbt2.tar.Z	129 MB
Windows	CBT32-Win.exe	143 MB

1. Approximate compressed download file size.

## Additional Changes for CBT 3.2

The following are changes introduced or supported with CBT 3.2:

- When a trace is saved as a file, it is now saved in Portable Network Graphics (PNG) format instead of JPEG. Files are saved on the server in these directories:
  - For Solaris and Linux: <CBT\_installation\_directory>/httpServer/webapps/ROOT/data/trace
  - For Windows: <CBT\_installation\_directory>\httpServer\webapps\ROOT\data\trace
- [Table 2](#) is a summary of supported browsers and Java Virtual Machines (JREs):

**Table 2 Cisco IOS Support for Java™ Runtime Environment (JRE) and Web Browsers**

Platform	NS 7.0 w/ JRE 1.4.1	IE 6.0 w/ JRE 1.4.1
Solaris 2.8	Supported	Not Supported
Windows 2K	Supported	Supported
Windows XP	Supported	Supported
Linux 7.3	Supported	Not Supported

- Java Runtime Environment (JRE) 1.4.1—Cisco recommends that you install and run the Java Runtime Environment (JRE) 1.4.1 or later in Solaris environments for optimal CBT 3.2 performance. Cisco includes the JRE 1.4.1 libraries with the Cisco CBT 3.2 CBT package. However, if you are using a Web browser without JRE 1.4.1, refer to the following resources from Sun Microsystems for additional information and download:
  - *Java Technology Products Download Archive and Release Notes*  
[http://java.sun.com/products/archive/j2se/1.4.1\\_07/](http://java.sun.com/products/archive/j2se/1.4.1_07/)
  - *Java Runtime Environment (JRE) for Solaris Platforms*  
<http://www.sun.com/software/solaris/jre/index.html>
- To use the spectrum management features that Cisco Broadband Troubleshooter 3.2 provides, you must have:
  - Cisco IOS Release 12.3(9a)BC
- The following are the memory requirements for CBT 3.2:
  - 512 MB of memory are required for CBT 3.2 on the client.
- The following are the minimum server requirements for CBT 3.2 on Windows:
  - Windows 2000, or XP workstation
  - Pentium 4, 2 gigahertz (GHz) processor or higher
  - 1 GB DRAM for Windows 2000 Server or Windows XP Server
  - 700 MB disk space
  - Network access to download the application, and license file
  - SNMP or Telnet connectivity between the server and managed routers
- The following are the minimum server requirements for CBT 3.2 on Linux:
  - Linux RedHat 7.3 workstation
  - Pentium 4, 2 gigahertz (GHz) processor or higher
  - 512 MB DRAM to 768 MB DRAM

- 700 MB of disk space
- Network access to download the application, and license file
- SNMP or Telnet connectivity between the server and managed routers
- The following are the minimum server requirements for CBT 3.2 on Solaris:
  - Solaris 2.8 OS
  - Ultra 10 Solaris Workstation for low end systems (typically in a range from one to 10 CMTS headends)
  - Ultra 60 Solaris Workstation for higher utilization systems (typically in a range from one to 50 CMTS licenses)
  - 768 MB to 1 GB DRAM
  - 700 MB disk space
  - Network access to download the application, and license file
  - SNMP or Telnet connectivity between the server and managed routers
- CBT 3.1 and CBT 3.2 no longer ship on a CD-ROM, and are only available by downloading the application from Cisco.com (see “How to Upgrade to CBT 3.2” section on page 5).

## How to Upgrade to CBT 3.2

### Downloading and Upgrading Cisco CBT 3.2

Use the following steps to download and to install Cisco CBT 3.2 on a system with Linux, Solaris, or Windows operating systems.



#### Note

Cisco implements a default TCP port of 8105 on the licensing server for CBT 3.2 in XML script. This prevents port conflict with other applications. If you require a different TCP port other than the default of 8105, then set the TCP port after installation of CBT 3.2, but prior to licensing. Refer to Step 5 below. Cisco recommends ports other than 8005, 8080, 9080, 9443, or 9082.

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- Step 1** Download CBT 3.2 software for the desired platform from Cisco.com to your local directory <CBT3.2\_DOWNLOAD\_DIR>.
- Cisco.com locations:
    - <http://www.cisco.com/cgi-bin/tablebuild.pl/cbt>
  - Platform files:
    - There are two files for the Solaris platform: CBT32-Solaris1.tar.Z and CBT32-Solaris2.tar.Z
    - There are two files for the Linux platform: CBT32-Linux1.tar.Z and CBT32-Linux2.tar.Z
    - Platform files for the Windows platform: CBT32-Win.exe
    - *CBT 3.2 Release Notes*: ReleaseNote.doc or cbt32rn.html
- Step 2** Extract the software. For Solaris and Linux, use the commands below. For Windows 2000 and Windows XP, skip to Step 3.

- Solaris:
  1. cd <CBT3.2\_DOWNLOAD\_DIR>
  2. uncompress CBT32-Solaris1.tar.Z
  3. tar xvf CBT32-Solaris1.tar
  4. uncompress CBT32-Solaris2.tar.Z
  5. tar xvf CBT32-Solaris2.tar
- Linux:
  1. cd <CBT3.2\_DOWNLOAD\_DIR>
  2. gunzip CBT32-Linux1.tar.Z
  3. tar xvf CBT32-Linux1.tar
  4. gunzip CBT32-Linux2.tar.Z
  5. tar xvf CBT32-Linux2.tar

**Step 3** If there is a previous CBT installation (CBT 2.x or CBT 3.0), uninstall it using the following procedures; otherwise, skip to Step 4.

- Solaris: cd <CBT3.2\_DOWNLOAD\_DIR> ./uninstall
- Linux: cd <CBT3.2\_DOWNLOAD\_DIR> ./uninstall
- Windows:
  1. From Windows Explorer, double-click **CBT32-Win.exe** in <CBT3.2\_DOWNLOAD\_DIR>
  2. Remove the existing CBT installation.

**Step 4** Install CBT 3.2

- Solaris: cd <CBT3.2\_DOWNLOAD\_DIR> ./install
- Linux: cd <CBT3.2\_DOWNLOAD\_DIR> ./install
- Windows:
  - From Windows Explorer, double-click CBT32-Win.exe in <CBT3.2\_DOWNLOAD\_DIR>
  - Select the default answers to the installation questions.




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**Note** A demo version of CBT 3.2 is now running (a license is not included in the Cisco.com download). To make the software fully functional, obtain a license for CBT 3.2 from Cisco Systems. See [Step 5](#).

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**Step 5** Purchased copies of CBT will no longer include a software CD, but will include a license certificate with a PAK key. This PAK key is used to generate the necessary license file from the following websites, and the software is downloaded from CCO.

- Use this site if you are a registered user of Cisco Connection Online:  
[www.cisco.com/go/license](http://www.cisco.com/go/license)
- Use this site if you are not a registered user of Cisco Connection Online:  
[www.cisco.com/go/license/public](http://www.cisco.com/go/license/public)




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**Note** Save the license file with the name “License” from the Cisco Server location (to be announced) and follow the instructions in Step 6 to copy it to the appropriate directory for use by CBT 3.2.

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- Demonstration copies are available either via the web, or as an ordered accessory for a uBR product. The copies supplied with a uBR product include a demo license certificate with a PAK key, the copy available from the web uses a registration page where the PAK key is emailed to the user.

**Step 6** Use the following commands to copy the license to the license directory and restart CBT 3.2.

- Solaris:
  1. `cp License /opt/CSCOcbt/httpServer/webapps/ROOT/WEB-INF/classes/lic`
  2. `/opt/CSCOcbt/bin/stop_app`
  3. `/opt/CSCOcbt/bin/start_app`
- Linux:
  1. `cp License /opt/CSCOcbt/httpServer/webapps/ROOT/WEB-INF/classes/lic`
  2. `/opt/CSCOcbt/bin/stop_app`
  3. `/opt/CSCOcbt/bin/start_app`
- Windows:
  1. `copy License <CBT3.2_INSTALLATION_DIR>\httpServer\webapps\ROOT\WEB-INF\classes\lic`
  2. Start > Programs > Cisco Broadband Troubleshooter > Stop Troubleshooter
  3. Start > Programs > Cisco Broadband Troubleshooter > Start Troubleshooter



**Note**

Once the CBT 3.2 license is installed and active, additional changes to the license are not supported. License changes disable an otherwise valid license.

## How to Use Cisco CBT 3.2

This section provides guidelines for using Cisco CBT 3.2 with the following features or functions:

- [Using SNMP MIBs in Cisco CBT 3.2, page 7](#)
- [Using Subscriber Traffic Management with CBT 3.2, page 9](#)
- [Viewing Trace Windows, page 9](#)

## Using SNMP MIBs in Cisco CBT 3.2

Cisco Broadband Troubleshooter (CBT) 3.2 uses the following SNMP MIBs with Cisco IOS Release 12.3(9a)BC and later BC Releases:

- RFC1213-MIB
- IANAifType-MIB
- IF-MIB
- SNMPv2-MIB
- SNMPv2-TC
- CISCO-SMI

- OLD-CISCO-CHASSIS-MIB
- CISCO-PRODUCTS-MIB
  - DOCS-IF-MIB
  - DOCS-IF-EXT-MIB
  - CISCO-CABLE-SPECTRUM-MIB
  - CISCO-DOCS-EXT-MIB
- CISCO-PING-MIB
- INET-ADDRESS-MIB
- SNMP-FRAMEWORK-MIB
  - DOCS-CABLE-DEVICE-MIB
  - CISCO-PROCESS-MIB
  - DOCS-QOS-MIB
  - ENTITY-MIB
  - CISCO-CABLE-QOS-MONITOR-MIB
  - CISCO-DOCS-REMOTE-QUERY-MIB

When extracting the downloaded CBT 3.2 file, these MIBs are placed by default in the following path:

- <CBT Install Directory>/httpServer/webapps/ROOT/WEB-INF/mibs



**Note**

Not all the tables contained in these MIBs are used with CBT 3.2.

Generally, all read and create objects in the `ccsSpectrumRequestTable` and `ccsSNRRequestTable` can be set with spectrum management tools in CBT 3.2. These objects require a WRITE community string:

- `ccsSpectrumRequestTable`
  - `ccsSpectrumRequestIfIndex`
  - `ccsSpectrumRequestMacAddr`
  - `ccsSpectrumRequestLowFreq`
  - `ccsSpectrumRequestUpperFreq`
  - `ccsSpectrumRequestResolution`
  - `ccsSpectrumRequestOperation`
  - `ccsSpectrumRequestStatus`
- `ccsSNRRequestTable`
  - `ccsSNRRequestMacAddr`
  - `ccsSNRRequestOperation`
  - `ccsSNRRequestStatus`

For additional MIBs information for the Cisco CMTS, refer to the following resources on Cisco.com:

- *Cisco CMTS Universal Broadband Router MIB Specifications Guide*  
<http://www.cisco.com/univercd/cc/td/doc/product/cable/cmtsmib/>
- *SNMP Object Navigator*  
<http://www.cisco.com/cgi-bin/Support/Mibbrowser/unity.pl>



## Using Subscriber Traffic Management with CBT 3.2

To use the Subscriber Traffic Management (STM) feature of CBT 3.2, the cable **qos enforce-rule** command on the CMTS must be used with a QoS profile that is not created by the cable modem. Any in-use QoS profile, such as one created by a cable modem, can be turned into management profile.



**Note** STM is newly supported on the MC16U, MC16X, MC28U, and MC28X line cards with CBT 3.2. STM data is now enabled with CBT 3.2.

To create a management profile, follow these steps:

	Command	Purpose
Step 1	Router# <b>show cable modem registered</b>	Finds the registered profiles on the CMTS using the <b>show cable modem registered</b> command. Find a current registered profile that has the features you need.
Step 2	Router# <b>configure terminal</b>	Enters global configuration mode.
Step 3	Router (config)# <b>cable qos profile number</b>	Enters the QoS profile number of the registered profile that has the features you need.
Step 4	Router (config)# <b>exit</b>	Exits global configuration mode.

## Viewing Trace Windows

Some browsers give the user the ability to stop new windows (pop-ups) from being launched by the browser. CBT 3.2 normally launches a new window to display the trace and spectrum data charts. If the data chart window does not appear and the browser is configured to stop new windows from launching, you can configure CBT 3.2 to display data charts within the browser window.

To configure CBT 3.2 to display data charts within the browser window, follow these steps:

- 
- Step 1 Select **Configuration > System** in the CBT 3.2 menu.
  - Step 2 In the System Configuration screen, clear the Use Popup checkbox.
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# Troubleshooting Tips for CBT 3.2

This section contains the following procedures for verifying and troubleshooting Cisco CBT 3.2:

- [Changing Server Ports in XML Script, page 10](#)
- [Saving System Message Logs for Troubleshooting, page 10](#)
- [Verifying Installation Status on the Cisco CBT 3.2 Server, page 11](#)
- [Verifying the Cisco CBT 3.2 License, page 11](#)

## Changing Server Ports in XML Script

Cisco IOS Release 12.3(9a)BC changes the Tomcat server port in server XML script. The script is set to port 8105. This prevents possible port conflict when multiple Tomcat Web servers are running on the same workstation.

If required, perform the following steps to change the Tomcat server port in XML script to port 8105 and to check for additional port conflicts.

- 
- Step 1** Edit the server.xml script in the following location:
- /opt/CSCCOcbt/httpServer/conf
- Step 2** Check for all ports numbers that have conflicts with CBT and change all port numbers that have such conflicts:
- port 8105—JVM server port
  - port 9080—non-SSL HTTP port
  - port 9443—SSL HTTP port
  - port 9082—AJP 1.3 Connector
- 

## Saving System Message Logs for Troubleshooting

When troubleshooting Cisco CBT 3.2, Cisco recommends that message logs be saved and filtered using the following utilities.

- 
- Step 1** To view saved message logs, click **Utilities** then **Message log** in the user interface.
- This is a fixed-size log file that continuously removes the oldest entry as it is updated. This log file is not viewable using an editor (such as vi).
- Step 2** Filter the message log entries by severity, by user, by module, or by date.
- Step 3** To set the logging level, click **Configuration** then **Message Log** in the user interface. Setting the logging level helps to prevent unnecessary messages occupying the fixed-size log file.
- For Solaris and Linux, the log file is located at /opt/CSCCOcbt/httpServer/logs/catalina.out. This file is viewable with viewing utilities such as vi, Cat, Tail, or others.



**Note** This file grows in size. For Windows, these messages go to the console and a file is not created.

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## Verifying Installation Status on the Cisco CBT 3.2 Server

Once Cisco CBT 3.2 is installed, the status of Cisco CBT 3.2 server can be verified with the following steps.

Troubleshooting Tip #2:

What to check whether the installation is ok on the CBT server?

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**Step 1** There should be no exceptions in the catalina.out file located as follows:

- Solaris and Linux—/opt/CSCOcbt/httpServer/logs/ [Solaris and Linux]
- Windows—the CBT 3.2 console

**Step 2** The dbeng8 process should be running:

- Solaris and Linux:

```
ps -ef|grep dbe
root 26449 1 0 Aug 18 ? 0:24 dbeng8 -x tcpip{ServerPort=2640} -q -ud -s local0 -m -c
16M -n cbtdbengine /opt
```

- Windows

There is a Sybase icon shown as a running process.

**Step 3** The following Java processes should be running:

- Solaris and Linux

```
ps -ef|grep java
root 26478 1 0 Aug 18 ? 0:39 /opt/CSCOcbt/jre/bin/java -DCBTpoller -cp
/opt/CSCOcbt/httpServer/webapps/ROOT/

root 26489 1 0 Aug 18 ? 148:55 /opt/CSCOcbt/jre/bin/java
-Djava.endorsed.dirs=/var/CSCOcbt/httpServer/common/e
```




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**Note** Linux displays threads, therefore, there are many Java entries.

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- Windows

Use the command console for tomcat and the command console for the CBT poller to view log messages.

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## Verifying the Cisco CBT 3.2 License

Perform the following steps to verify the Cisco CBT 3.2 installation license.

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**Step 1** For Solaris and Linux, perform these steps:

1. Verify that the license is present and the file is correct in the following location:

/opt/CSCOcbt/httpServer/webapps/ROOT/WEB-INF/classes/lic/License is present and has the right license file.

2. Log in and allow for error prompts to identify any issues.
3. Scan the catalina.out file for error messages, in the following location:

/opt/CSCOcbt/httpServer/logs/ for error messages

**Step 2** For Windows, perform these steps:

1. Verify that the license is present and the file is correct in the following location:  
INSTALLATION\_DIR\httpServer\webapps\ROOT\WEB-INF\classes\lic\License
  2. Log in and allow for error prompts to identify any issues.
  3. Scan the command console for tomcat and see if there are error messages in the console.
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## Caveats for Cisco CBT 3.2

This section contains an explanation of any known issues in Cisco Broadband Troubleshooter 3.2 and directions for working around them.

If the issue is in Cisco's Distributed Defect Tracking System (DDTS), the DDTS number is provided. This is a unique identifier assigned to the issue. For all issues, the following information is provided:

- Symptom—Description of what you experience when you encounter the issue
- Problem description—Details of what causes the issue
- Workaround—Directions for working so that the issue does not impact you or your work

## Running Cisco Cable Diagnostic Manager and CBT 3.2 on the Same Server

If the CBT 3.2 server uses a Windows operating system, and you want to run Cisco Cable Diagnostic Manager (CDM) on the same server, you must install CDM first and CBT 3.2 second.

## Restarting a Spectrogram or Trace Window if Stopped

### Symptom

When using the Spectrogram or the Continuous Sweep feature in the Trace window, the window may stop updating after a period of time.

### Description

When using the Spectrogram or the Continuous Sweep feature in the Trace window, you might notice that the window stops updating after a period of time. A dialog that contains one of the following errors appears:

- pending—The test is in the pending queue.
- running—The test is in process.
- notOnLine—The MAC address is not online.
- fftBusy—The Fast Fourier Transform (FFT) in the Digital Signal Processing (DSP) chip is busy.
- others—Other errors.

These errors are generated by the cable modem termination system (CMTS) and are reported in the CBT 3.2 error dialog.

## Workaround

You can correct an error as follows:

- **pending**—Ensure that the CMTS uses Cisco IOS Release 12.3(9) or a later release. For more information, see DDTS CSCea37178, “10k/16s: Pending entries in ccsSpectrumRequestTable,” which was resolved in Cisco IOS Release 12.2(15)BC1.

Alternatively, the problem could be that too many spectrum data requests have been launched in the CMTS. Eliminate some spectrum data requests by closing Spectrograms or Trace windows.

- **running**—Ensure that the CMTS uses Cisco IOS Release 12.2(15)BC1 or a later release. For more information, see DDTS CSCea48330, “MC16S hangs when used with NPE-G1, under certain CLI commands,” which was resolved in Cisco IOS Release 12.2(15)BC1.

Alternatively, the problem could be that too many spectrum data requests have been launched in the CMTS. Eliminate some spectrum data requests by closing Spectrograms or Trace windows.

- **notOnLine**—The cable modem might not be online. Ensure that the cable modem is online before launching a Spectrogram or Continuous Sweep in the Trace window.
- **fftBusy**—In some circumstances, as with the Cisco uBR-MC16 cable interface line card, cable spectrum groups may be required in order to use CBT 3.2. In such cases, ensure that the CMTS is configured to use a cable spectrum group and that the spectrum group has a band specification. Refer to the **cable spectrum-group** command in the *Cisco Broadband Cable Command Reference Guide* for additional information:

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

- **others**—Ensure that the CMTS uses Cisco IOS Release 12.3(9a)BC or a later release. For more information, see DDTS CSCeb04587, “10k/16S: SNMP agent returns others state so often,” which was resolved in Cisco IOS Release 12.2(15)BC1.

To restart the window, click **OK** in the error dialog. Next, click **Resume** in the Spectrogram or click **Continuous Sweep Start** in the Trace window.

## DDTS Number CSCed91888 Saving a Trace May Take a Long Time

### Symptom

Saving a trace takes at least 5 minutes (sometimes may take almost 30 minutes) to save the file successfully.

### Description

Saving a trace with a Solaris 2.8 client takes at least 5 minutes (sometimes may take almost 30 minutes) to save the file successfully. This does not happen on other client platforms.

### Workaround

No work around.

## DDTS Number CSCec11163

### Trace Window Needs to Refresh the Upstream Interface.

#### Symptom

When a cable modem goes offline and comes up in a different upstream interface, the Trace window does not reflect the change.

#### Description

A modem can change its upstream, failover, load balancing, or channel override. In all these cases the US ifIndex may be changed. CBT 3.2 does not know why a spectrum request failed due to an ifIndex change or modem going offline. In some of the above cases, such as load balancing, CBT 3.2 may be enhanced to find a new ifIndex of the CM.

Currently, the Trace window will provide a proper error message so the user can take proper action; whether to fix a network problem or start a new trace window at a new ifIndex.

Load balancing can take around 10 or more seconds during which time the modem affected is going through offline/init/online mode. Depending on which state the modem is in and which mode the Trace window is in, a different error message may be provided.

Here are the error messages observed in a Trace window while load balancing occurs:

- If load balancing starts in the middle of continuous mode, an error dialog pops up:

```
ccsSpectrumRequestOperation: SnmpResponseCommitFailed Offending variable:
ccsSpectrumRequestOperation.1
start time was: Mon Mar 29 11:14:12 PST 2004
current time is: Mon Mar 29 11:14:12 PST 2004
:172.22.85.83^44^00301d767347^60^6000^5000
```

This error message suggests load balancing may be in progress.

The user needs to check the CM state, and restart a new trace window from proper upstream (US).

- If the Trace window single sweep or continuous mode starts when a modem is in init or offline mode during load balancing, an error will display:

```
Error collecting spectrum data: MAJORERROR^172.22.85.83: ccsSpectrumRequestOperState not
online
Current time is: Mon Mar 29 11:14:40 PST 2004
1:172.22.85.83^44^00301d767347^60^6000^5000
```



#### Note

In this scenario, the error message is the same whether the CM offline or in the init state due to various other causes. Currently CBT 3.2 is not able to isolate the exact cause. The user needs to investigate why the CM is offline or in the init state before starting a new trace window.

#### Workaround

Restart a new trace window for the cable modem.

## DDTS Number CSCed75385

### A Trace Window May Stop Updating

#### Symptom

A Trace window running continuously with MC16S line card in an uBR7246VXR router may stop updating.

#### Description

A Trace window running continuously with a MC16S line card in a uBR7246VXR router using a poll interval of 0 seconds may stop updating after running for some time. A dialog may appear containing a 'fft busy' message.

#### Workaround

Clicking the 'OK' button and then the 'Continuous Sweep Start' button will re-start the trace.

## Related Documentation

For additional information, see the following documentation:

- *User Guide for Cisco Broadband Troubleshooter Release 3.0*  
[http://www.cisco.com/en/US/products/sw/netmgts/ps530/products\\_user\\_guide09186a00801b0801.html](http://www.cisco.com/en/US/products/sw/netmgts/ps530/products_user_guide09186a00801b0801.html)
- *Cisco CBT 3.2 Online Help*
- *Release Notes for Cisco uBR10012 Universal Broadband Router for Cisco IOS Release 12.3 BC*  
<http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123relnt/ubr10000/123bcu10.htm>
- *Release Notes for Cisco uBR7200 Series for Cisco IOS Release 12.3 BC*  
<http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123relnt/ubr7200/123bcu72.htm>
- *Release Notes for Cisco uBR7100 Series for Cisco IOS Release 12.3 BC*  
<http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123relnt/ubr7100/123bcu71.htm>

## 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)

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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)

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

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

We appreciate your comments.

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

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:

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

- 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://cisco.com/univercd/cc/td/doc/pcat/>

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

<http://www.ciscopress.com>



- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:  
<http://www.cisco.com/packet>
- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. 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/ipj>
- World-class networking training is available from Cisco. You can view current offerings at this URL:  
<http://www.cisco.com/en/US/learning/index.html>

## 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>

### 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 automatically provides recommended solutions. If your issue is not resolved using the recommended resources, your service request will be 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, use the following online resource:

<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.

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