

Cisco Broadband Troubleshooter Release 3.3

Q. What are the new features introduced with the new Cisco® Broadband Troubleshooter Release 3.3?

- A.** Cisco Broadband Troubleshooter Release 3.3 enables customers to deploy this product with the most up-to-date software and hardware specifications (see Table 1). In addition, new features introduced in this release include:
- With the addition of the 500 Cisco CMTS license for Cisco Broadband Troubleshooter 3.3, each Cisco Broadband Troubleshooter installation can now support up to 500 Cisco CMTS headends, with 40,000 cable modems per Cisco CMTS.
 - Supports 50 simultaneous client browser sessions or users.
 - Supports troubleshooting of the new Cisco MC5X20H broadband processing engine on the Cisco uBR10012 router.
 - Supports troubleshooting of DOCSIS® 3.0 Wideband Channel Bonding-capable hardware on the Cisco uBR10012 router.
 - Supports instantaneous CPU usage monitoring on the Cisco CMTS during spectrum operations.
 - Improves security by appropriately masking user information from the Cisco Broadband Troubleshooter GUI.

Q. What are the system requirements?

- A.** Cisco Broadband Troubleshooter Release 3.3 runs on Solaris workstations and PCs. Table 1 lists the minimum system requirements.

Table 1. System Requirements for Cisco Broadband Troubleshooter Release 3.3

Server	Client
<p>Recommended Linux server requirements: For 10, 50, 100 Cisco CMTS Headend Systems</p> <ul style="list-style-type: none"> • 3.2 GHz Pentium Processor 4-based workstation • Linux Red Hat Enterprise Edition installed • 20 GB of available disk space • 2 GB of memory • CD-ROM drive • SNMP connectivity between the server and the managed CMTSs • Connectivity between the server and the location of subscriber and provisioning information 	<p>Recommended Linux client requirements:</p> <ul style="list-style-type: none"> • 3.2 GHz Pentium Processor 4-based machine • Red Hat 10 or 9 installed • 1 GB of memory • Netscape 7.0 with JRE5 • IP connection to the Cisco Broadband Troubleshooter server

Server	Client
<p>Recommended Solaris server requirements:</p> <p>For 10 Cisco CMTS Headend Systems</p> <ul style="list-style-type: none"> • UNIX Server Sun Fire Systems with Solaris 10 or Sun Fire V100 Server small • UltraSPARC Ili Processor – one at 550 MHz • 256 MB of memory – one at 256 MB DIMM • 7200 RPM IDE disk drive – one at 80 GB • SNMP connectivity between the server and the managed CMTSs • Connectivity between the server and the location of subscriber and provisioning information <p>For 50–100 Cisco CMTS Headend Systems</p> <ul style="list-style-type: none"> • Sun Fire V210 Server medium • UltraSPARC Ili Cu Processor – two at 1.34 GHz • Layer 2 cache per processor – 1MB • 2 GB of memory – four at 512 MB DIMMS • 10000 RPM Ultra 3 SCSI LVD disk drive – two at 73 GB • SNMP connectivity between the server and the managed CMTSs • Connectivity between the server and the location of subscriber and provisioning information <p>For 500 Cisco CMTS Headend Systems</p> <ul style="list-style-type: none"> • Sun Fire V440 Server small • UltraSPARC Ili Processor – two at 1.593 GHz • Internal cache per processor – 1 MB • 4 GB of memory – eight at 12-MB DIMMS • 10,000 RPM Ultra320 SCSI disk drive – four at 73 GB • SNMP connectivity between the server and the managed CMTSs • Connectivity between the server and the location of subscriber and provisioning information 	<p>Recommended Solaris client requirements:</p> <ul style="list-style-type: none"> • Sun Fire V100 Server small • UltraSPARC Ili Processor – one at 550 MHz • 256 MB of memory – one at 256 MB DIMM • Netscape 7.0 with JRE5 • IP connection to the Cisco Broadband Troubleshooter server
<p>Recommended Windows server requirements:</p> <p>For 10, 50, 100 Cisco CMTS Headend Systems</p> <ul style="list-style-type: none"> • 3.2 GHz Pentium Processor 4-based workstation • Windows 2000 or XP installed • 20 GB of available disk space • 2 GB of memory • CD-ROM drive • SNMP connectivity between the server and the managed CMTSs • Connectivity between the server and the location of subscriber and provisioning information 	<p>Recommended Windows client requirements:</p> <ul style="list-style-type: none"> • Pentium 4 CPU 3.20 GHz • Windows 2000 or XP installed • 1 GB of memory • Netscape 7.0 with JRE5 or Internet Explorer 6.0 with JRE5 • IP connection to the Cisco Broadband Troubleshooter server

Q. What is the Cisco Broadband Troubleshooter?

A. Cisco Broadband Troubleshooter is a Web-based, easy-to-use, and efficient tool to diagnose the hybrid fiber-coaxial (HFC) network and automate analysis of the Cisco cable modem termination system (CMTS) flap list, a patent-pending component of Cisco CMTS products.

Cisco Broadband Troubleshooter enables RF technicians to quickly isolate plant and provisioning problems and characterize upstream and downstream trouble patterns. The product is built on a client-server architecture and runs on both PCs and Solaris workstations.

Cisco Broadband Troubleshooter offers:

- Dashboard views of the cable network health, CMTS, and cable modem statistics and snapshots
- Display of online and "flapping" cable modems
- Analysis and sorting of flapping cable modems into four problem areas:

- Provisioning problems
- Reverse path noise problems
- Reverse path attenuation problems
- Packet corruption problems caused by cyclic redundancy check (CRC) errors
- Scheduled capture and on-demand query of subscriber information for status of cable modems and the cable plant
- Ability to interrogate CMTS and cable modems for fault isolation
- 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
- Ability for concurrent multiuser and remote access through Web browsers
- Point-and-click interface and HTML-based online help
- Two account levels, admin and rftech
- Subscriber information stored in Structured Query Language (SQL) database

Q. What is the flap list?

A. The flap list is a patent-pending component of Cisco CMTS products. The flap list tracks cable modems that are having problems maintaining a connection to the Cisco CMTS: Cisco uBR7200 Series, uBR7100 Series, or uBR10012 Universal Broadband Router. The flap list contains historical downstream and upstream statistics that help cable operators monitor problems and isolate faults.

The flap list is available on both:

- Cisco IOS[®] Software command-line interface (CLI)—using the show cable flap-list command starting in Cisco IOS Software Release 11.3NA and later
- Simple Network Management Protocol (SNMP) MIB—using the ccsFlapTable SNMP table in the CISCO-CABLE-SPECTRUM-MIB starting in Cisco IOS Software Release 12.1EC and later

Q. Does Cisco Broadband Troubleshooter work with set-top boxes?

A. Yes. The Cisco Broadband Troubleshooter supports DOCSIS digital set-top boxes.

Q. Does Cisco Broadband Troubleshooter use SNMP or Telnet?

A. It uses both. Telnet is used to query the flap list and other cable modem statistics from the CMTS. SNMP is used to query the router's Domain Name System (DNS) name, router type, and Cisco IOS Software release.

Q. Will Cisco Broadband Troubleshooter work if the Cisco CMTS is configured with TACACS or authentication, authorization, and accounting (AAA)?

A. Yes. When filling in the Cisco uBR router list window, enter the TACACS account name in the User Name column and the TACACS account password in the User Password column.

Q. Can I schedule the flap list analysis done by Cisco Broadband Troubleshooter?

A. Yes. You can have scheduled captures for analysis.

Q. Do I need a Lightweight Directory Access Protocol (LDAP) server?

- A.** No. Cisco Broadband Troubleshooter Release 3.3 does not have a mechanism tied to any LDAP server. Cisco Broadband Troubleshooter Release 3.3 allows users to import their data storage (database/LDAP server) using delimited ASCII file. For the format of ASCII file, please refer to the "Getting Started Guide."

Once subscriber information is imported to the embedded database, Cisco Broadband Troubleshooter will automatically link the analysis output to subscriber information using the Media Access Control (MAC) address.



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