Cable Modem Termination System

Release Notes

Part No. 10030554
System Release 2.50

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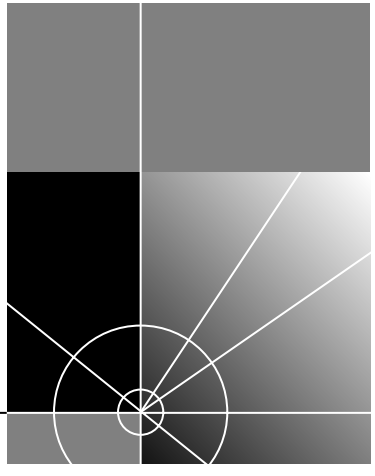

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About These Release Notes

These Release Notes contain information important to the installation, configuration, and use of System Release 2.50 3Com Cable Modem Termination System (CMTS) software.

System Release 2.50 CMTS software is comprised of Cable Access Router (CAR) Network Application Card (NAC) software version 3.60.29 and Upstream Receiver Card (URC) NAC software version 4.04.16.

Product Compatibility

CMTS System Release 2.50 supports the 3Com hardware and software versions listed in Table 1.

Table 1 CMTS Hardware and Software Versions Compatible with CMTS System Release 2.50

Product	Hardware Version	Software Version
CAR Network Application Card (NAC)	all versions	3.60.29
CAR NIC	REV C Type 5	N/A
Upstream Receiver Card (URC) NAC	all single slot versions	■ Operational Code 4.04.16 or greater ■ Boot Code 4.1.8t or greater
QAM Modulator Network Interface Card (NIC)	all versions	N/A
Cable Management System	N/A	1.2.2 or greater
Cable Headend Manager	N/A	2.1.14 or greater *
Cable Modem Manager	N/A	2.2.1 or greater *
Cable Modem Configuration File Editor	N/A	3.1.14 or greater *

* This product provides only limited functionality when used in conjunction with System Release 2.50 CMTS hardware and software. Complete compatibility is available only through Cable Management System (CMS) software. Contact your 3Com Sales representative for details on CMS.

New Features

CMTS System Release 2.50 is a maintenance release that resolves service-affecting issues. It provides no new features. For descriptions of the CMTS features currently supported, refer to the System Release 2.02 *Cable Access Router User Guide* (part number 1.024.1740-01).

Installing CMTS Software

For details on installing or restoring CMTS System Release 2.50 software, refer to the *Cable Modem Termination System Software Upgrade Instructions* document that was shipped with your CMTS software.

Resolved Issues

Table 2 lists the service-affecting issues resolved by CMTS System Release 2.50.

Table 2 Resolved Service-Affecting Issues in CMTS System Release 2.50

CAD #	Problem	Solution
00852	URC frequency adjustments are greater than the +/- 50 packets per million (ppm) tolerance required by Data over Cable System Interface Specifications (DOCSIS).	Resolved. The URC frequency adjustments are now within the tolerances required by DOCSIS.
01018	A memory corruption problem in the CAR would sometimes cause the CAR to reset.	Resolved. The memory corruption problem has been resolved. It no longer causes the CAR to reset.
00972	A Baseline Privacy Timer error occurred in the CAR if the configured *AuthGraceTime* setting was greater than the configured *AuthLifeTime*.	Resolved. The error no longer occurs if the configured *AuthGraceTime* value is greater than the configured *AuthLifeTime* value.
01095	A Baseline Privacy protocol error (*auth_seq_num* mismatch) would occasionally result in cable modem data loss.	Resolved. This Baseline Privacy protocol error no longer occurs. Cable modems no longer experience the resulting data loss.
01219	The URC software allowed a maximum of an 800 microsecond round-trip delay, instead of the DOCSIS required 1500 microseconds. This prevented cable modems from registering with the CMTS if they were 50 or more miles away from the CMTS.	Resolved. The URC software now allows the DOCSIS- required 1500 microsecond delay. Cable modems more than 50 miles away from the CMTS can now successfully register.
00729	The CAR would not allow configuration of the Baseline Privacy *DefaultAuthLifeTime* and *DefaultTEKLifetime* to values less than 180 seconds.	Resolved. The CAR now allows configuration of *DefaultAuthLifeTime* and *DefaultTEKLifeTime* values to below 180 seconds.
01384	Sometimes, the CAR CLI *list cable cmstatistics table* command would display its data improperly.	Resolved. The *list cable cmstatistics* command now displays its data correctly.
01149	On occasion, the CAR CLI *list cable cmstatus table* command encounters an error and does not display some successfully registered cable modems.	Resolved. The *list cable cmstatus table* now correctly displays all successfully registered cable modems.

Table 2 Resolved Service-Affecting Issues in CMTS System Release 2.50

CAD #	Problem	Solution
01347	If a user rebooted the CAR, the CAR would erroneously generate a "CFM Save for CMTS process failed" system event log message.	Resolved. This system event log message is no longer generated erroneously after a CAR reboot.
01858	When the CAR periodically checked on the status of the QAM Modulator NIC the CAR software process designed for this function would sometimes cause the CAR to reset.	Resolved. The CAR software process for checking the status of the QAM Modulator NIC no longer causes the CAR to reset.
01199	If you established a Telnet connection to the CAR CLI, and ran a script that executed the *_debug dump umc* command, the CAR would sometimes fail.	Resolved. Executing a script via Telnet that contains the *_debug dump umc* command no longer causes the CAR to fail.
00983	If a cable modem sent an invalid registration request to the CMTS, the CAR would fail.	Resolved. Invalid registration requests from a cable modem no longer causes the CAR to reset.
01696	On occasion, the CAR would run out of memory and fail if the cable headend DHCP server went down.	Resolved. The CAR no longer runs out of memory and fails if the cable headend DHCP server goes down.
01324	If the upstream symbol rate was changed in the CMTS, it caused some brands of cable modems to reboot.	Resolved. Changing the upstream symbol rate in the CMTS no longer causes cable modems to reboot.
01091	Timing adjustment problems in the CAR sometimes resulted in the CAR sending an abnormal amount of timing requests to cable modems. This prevented cable modems from ranging properly.	Resolved. The timing adjustment problems have been eliminated, preventing this cable modem ranging problem from occurring.
01167 *01026*	On occasion, the CMTS would stop broadcasting initial maintenance messages to cable modems after a CMTS reboot and/or power cycle. This prevented cable modems from registering.	Resolved. The CMTS does no longer stops broadcasting initial maintenance messages after a CMTS reboot or power cycle.
01147	The CMTS would sometimes cause a defined Class of Service (CoS) to allow much less than the configured maximum allowed upstream bandwidth (*maxupbandwidth*).	Resolved. The CMTS now allows the configured maximum upstream bandwidth in any given CoS, provided the bandwidth is available.
00956	The URC would occasionally fail, causing the CMTS to lose communications with all cable modems and eventually drop them from the network.	Resolved. The URC failures which prevented the CMTS from communicating with cable modems on the network no longer occur.
00925	The CMTS would sometimes broadcast overlapping upstream bandwidth allocation maps (MAPs) to cable modems, thereby making inefficient use of the available upstream bandwidth.	Resolved. The CMTS no longer broadcasts overlapping MAPs, thereby allowing efficient utilization of available upstream bandwidth.
01093 *00883*	Sometimes the CAR would randomly cause cable modems to reboot.	Resolved. The CAR no longer causes random cable modem reboots.
00124	Upstream Channel Changing in the CAR would not always work properly.	Resolved. Upstream Channel Changing in the CAR now works properly.

Table 2 Resolved Service-Affecting Issues in CMTS System Release 2.50

CAD #	Problem	Solution
00671	On occasion, the CAR would be unable to communicate with the URC, causing all cable modems to re-register.	Resolved. The CAR no longer loses communications with the URC.

Unresolved Issues

Table 3 lists the service-affecting issues that remain unresolved with CMTS System Release 2.50.

Table 3 Unresolved Service-Affecting Issues in CMTS System Release 2.50

	Problem	Work-around
1.	If both Concatenation and Baseline Privacy are enabled in the CMTS, the system experiences a loss of traffic caused by all packets having CRC errors. This causes cable modems to reboot.	There is no work around to this problem. Currently, this is a limitation of the CMTS. Do not use Concatenation and Baseline Privacy simultaneously in any given CMTS.
2.	If a QAM Modulator NIC is installed in the NIC slot that corresponds to a NAC slot which contains a single slot URC, the CMTS does not function properly.	There is no work around to this problem. Currently, this is a limitation of the CMTS components and the Total Control Enterprise Network Hub chassis. Do not install a QAM Modulator NIC directly behind a single slot URC.
3.	The CMTS does not allow more than 2048 Media Access Control (MAC) addresses. (**Note:** Each cable modem uses 1 MAC address, and each Customer Premises Equipment (CPE) behind a cable modem uses 1 MAC address.	3Com recommends that you allow a maximum of 750 cable modems to connect to any given CMTS. This allows for the use of multiple CPEs behind some cable modems. **Note**: The number of CPEs allowed behind a cable modem can be defined and limited in the cable modem configuration file.
4.	Under some conditions, executing the *list IP ARP* command from the CAR Command Line Interface (CLI) can cause the CMTS to drop cable modems from the network. The cable modems will range abort because they do not receive a station maintenance opportunity from the CMTS.	When you use the *list IP ARP* command from the CAR CLI, pause for 10 seconds each time the CLI displays the "More" prompt before you hit the spacebar.

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