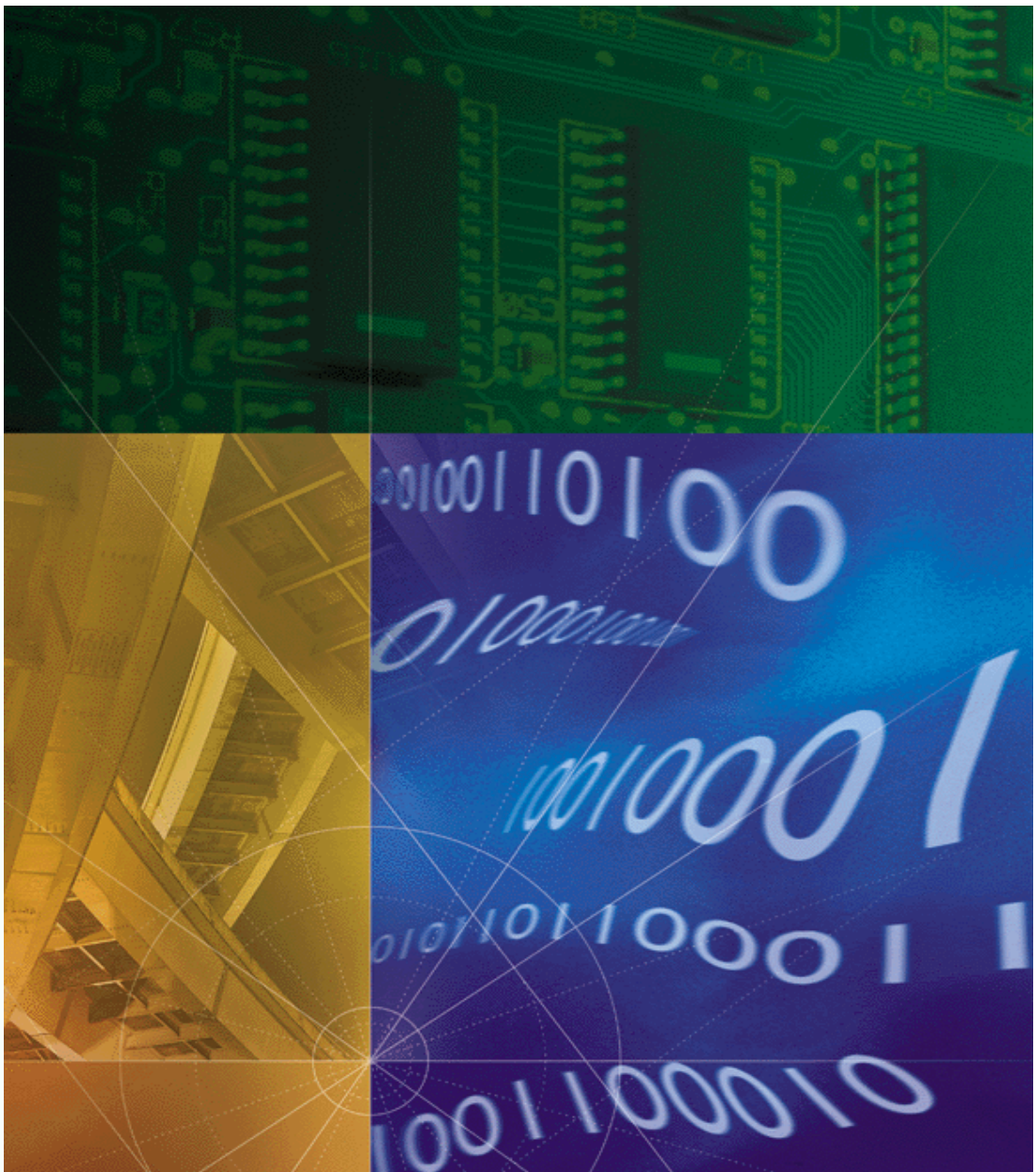
Cable Access Router

Release Notes



Part No. 1.024.1427-04
Version 3.50.25-2

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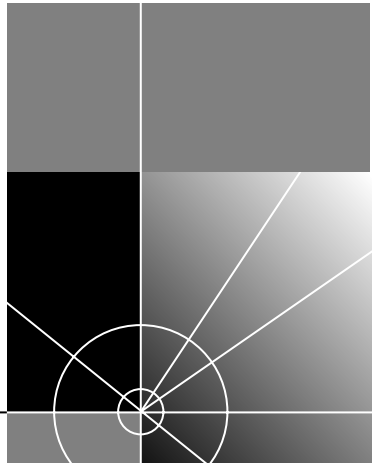

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YEAR 2000 INFORMATION:

For information on Year 2000 compliance and 3Com products, visit the 3Com Year 2000 web page:

http://www.3Com.com/products/yr2000.html

Contents

Cable Access Router Release Notes

About These Release Notes

These Release Notes contain information important to the installation and configuration of Cable Access Router (CAR) software version 3.50.25-2, as well as information that was not available when the *Cable Access Router User Guide* was printed.

- Product Compatibility
- New Features
- Installing/Restoring Cable Access Router Software
- Resolved Issues
- Unresolved Issues

Product Compatibility

CAR software version 3.50.25-2 is compatible with the following 3Com Cable Modem Termination System (CMTS) hardware and software versions:

Table 1 Compatible CMTS Hardware Versions

Product	Hardware Version
CAR Network Application Card (NAC)	all versions
Upstream Receiver Card (URC) NAC	all versions
QAM Modulator NIC	all versions
CAR Network Interface Card (NIC)	all versions

Table 2 Compatible CMTS Software Versions

Product	Software Version
CAR NAC	3.50.25-2
CAR NIC	Not applicable
URC NAC	■ Operational code 4.2.7c or greater ■ Boot code 4.1.8t or greater
QAM Modulator NIC	Not applicable
Cable Headend Manager	2.1.14 or greater
Cable Modem Manager	2.2.1 or greater
Cable Modem Configuration File Editor	3.1.14 or greater
Cable Maintenance System	1.x or greater

New Features

CAR software version 3.50.25-2 provides the following new features:

Refer to the Cable Access Router User Guide for complete details on using these new features.

DOCSIS Support

The CAR supports the Data Over Cable System Interface Specification (DOCSIS) 1.0 software and 1.1 hardware specifications, ensuring interoperability with all cable modems that also support those specifications.

Three-Way CAR The CAR now supports combined one-way and two-way functionality through a single CAR. This provides cable plants added flexibility in deploying data over cable services.

Dual CAR CMTS The CMTS can now support the use of two CARs in a single chassis. This allows you to configure two CMTSs in a single Total Control Enterprise Network Hub chassis.

Upstream Channel Changing The CMTS now allows you to move individual cable modems from their currently assigned upstream channel to a different channel on the same or different URC.

Class of Service (CoS) The CAR now supports up to eight CoS entries, each of which can restrict the maximum upstream and downstream bandwidth available to cable modems.

Baseline Privacy DOCSIS-compliant Baseline Privacy is now supported in the CAR, providing users with secure data transmissions, and protecting cable plants from theft of service.

Telnet Access Telnet access to the CAR Command Line Interface (CLI) is now supported. Access is restricted by IP address and netmask. This makes it more difficult for unauthorized users to break into the CMTS, and provides convenience to cable data network administrators who are not always able to access the CAR locally.

MAC PING The CAR now offers the ability to send MAC-layer PING frames to cable modems. This allows you to verify network connectivity based on physical address rather than IP address. As a result, you can verify cable modem connectivity even if the cable modem has not yet received an IP address, or if it is otherwise unable to register with the CMTS successfully.

Concatenation This feature allows cable modems to concatenate, or "burst" multiple MAC frames in one upstream data transmission. This reduces the amount of network data request and grant traffic between the CMTS and cable modems, and allows cable modems to use the defined maximum upstream burst rate more efficiently.

Mass Registration Event Polling

The CAR now allows you to configure parameters that poll cable modem registration status periodically. This can alert you to significant network problems that are affecting the ability of large numbers of users to register with the CMTS.

Installing/Restoring Cable Access Router Software

For details on installing or restoring CAR software version 3.50.25-2, refer to the *Cable Access Router Software Upgrade Guide* that was shipped with your CAR software.

Resolved Issues

These issues are resolved with CAR software version 3.50.25-2:

Table 3 Resolved Issues in CAR Software V 3.50.25-2

	Problem	Solution
1.	Internet Protocol (IP) broadcasts from a local subnet to the CAR would cause a memory leak in the CAR, leading to an eventual CMTS crash.	IP broadcasts from a local subnet to the CAR no longer cause a memory leak or crash in the CAR.
2.	High amounts of traffic through the CAR destined for downstream transmission would cause the CAR to drop some Upstream Channel Descriptor (UCD) Media Access Control (MAC) management messages. This lead to the inability of some cable modems to register with the CMTS.	High amounts of traffic destined for downstream transmission no longer cause the CAR to drop UCD messages.
3.	The CAR to occasionally stop responding to Simple Network Management Protocol (SNMP) requests.	The CAR no longer stops responding to SNMP requests.
4.	The CAR would reset the Shared Secret (Authorization String) to an empty string when the *save all* command was issued from the Command Line Interface (CLI)	The CAR no longer resets the Shared Secret when the CAR's configuration is saved.
5.	The MAC interface table was not visible via an SNMP manager.	The MAC interface table is now fully visible via an SNMP manager.
6.	The CAR was not compatible with all Dynamic Host Configuration Protocol (DHCP) servers and configurations, and did not conform to the IETF draft suggestions, as required by the DOCSIS 1.0 specification.	The DHCP Relay Agent Information Option has been added to the CMTS as a result of the ECN98033 addition to the DOCSIS 1.0 specification. It is an optional setting to retain compatibility with all DHCP servers and configurations, and to conform to the IETF draft suggestions. By default, it is disabled, so that it will not affect existing customers who may not wish to use it.
7.	The DHCP enable/disable field in the *show dhcp* CAR CLI command did not match the MIB values	The DHCP enable/disable field in the *show dhcp CLI* command now matches the MIB values.
8.	If the CAR's system time was left at the factory default setting, the Network Time Protocol (NTP) would not correctly set the system time.	The NTP now correctly sets the system time in the CAR regardless of how the system date and time were initially set in the CAR.

Table 3 Resolved Issues in CAR Software V 3.50.25-2

	Problem	Solution
9.	The CAR SNMP counter *usrDhcpClientMessages* was not being incremented.	The *usrDhcpClientMessages* SNMP counter now increments properly.
10.	The CAR SNMP counter *usrDhcpClientMessages* was incremented only if the *siaddr* in the DHCP message was set.	The *usrDhcpClientMessages* increments regardless if the siaddr in the DHCP message is set.
14.	The CAR's NTP server configuration was not being saved to the CAR's flash memory when the *save all* command was issued from the CAR CLI.	The CAR's NTP server configuration is now saved properly by the CLI *save all* command.
15.	The MAC interface index (ifIndex) was not set properly in several MIB tables.	The ifindex is now properly set in all MIB tables.
16.	The *DocsDownChannelFrequency* was not displaying correctly when the CAR CLI *list cable downchannel index table* command was issued	The *DocsDownChannelFrequency* displays correctly in the *list cable downchannel index table*.
17.	Large amounts of upstream data traffic would occasionally cause the URC to crash.	Large amounts of upstream data traffic no longer cause the URC to crash.
18.	The URC would crash if too much input power caused the ANALOG FRONT END overload condition to occur.	The URC no longer crashes if the ANALOG FRONT END overload condition occurs.
19.	Some Forward Error Correction (FEC) settings in the CMTS interfered with the ability of cable modems to perform Initial Maintenance.	Cable modems now can perform initial maintenance regardless of the FEC setting in the CMTS.
20.	On occasion, the URC ARP table would become corrupt. This prevented cable modems from registering with the CMTS.	The URC ARP table no longer becomes corrupt.
21.	The URC would drop upstream packets when it detected an UNOWNED upstream descriptor detection. This resulted in stability and performance problems.	The URC no longer drops packets when it detects the UNOWNED upstream descriptor condition.
22.	Accessing the CAR CLI via Telnet over a congested network would lock up the CMTS.	The CMTS is now unaffected by remote users connecting to the CAR CLI via Telnet, regardless of network congestion.
23.	In the CAR CLI, all interface types would display as *invalid* except for the *eth:1* (Ethernet IP Network) interface.	All interface types now correctly display in the CAR CLI.
24.	The CAR would fail a Y2K rollover.	The CAR now properly passes a Y2K rollover.
25.	The *DropOffs* counter in the CLI *list cable statistics table* command was not counting correctly.	The *DropOffs* counter now counts correctly.
26.	Repeated TFTP uploading of files to CAR would lead to corruption of the transferred files.	Repeated TFTP uploading of files to the CAR no longer causes file corruption.

Table 3 Resolved Issues in CAR Software V 3.50.25-2

	Problem	Solution
27.	When issuing the *list cable cmstatus table* command from the CLI, some cable modems would be dropped if the command queried a table containing more than 200 entries and crossed multiple subnets on a single downstream qam:1 (Cable IP Network) interface.	No cable modems are dropped by using the *list cable cmstatus table command*, regardless of the query's parameters.
28.	The CAR was unable to discard Windows NT RAS broadcasts. This led to clutter in the CAR system event log file, making it difficult to read and understand.	The CAR now discards Windows NT RAS broadcasts, which streamlines the system event log file.
29.	The UDP CRC field in DHCP OFFERs being sent to cable modems sometimes becomes corrupt, preventing cable modems from registering.	The UDP CRC field in DHCP OFFERs being sent to cable modems no longer becomes corrupt.

Unresolved Issues

The following issues remain unresolved with CAR software version 3.50.25-2:

Table 4 Unresolved Issues in CAR Software V3.50.25-2

	Problem	Workaround
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.	Do not use Concatenation and Baseline Privacy simultaneously in any given CMTS.
2.	If a chassis contains more than one CAR, and the system clock master CAR is rebooted, the backupmaster and/or slave CARs and their associated URCs also reboot.	None. Currently, this is a limitation of multi-car chassis.
3.	If a cable modem is more than 40 miles away from the CMTS, it will not be able to register.	A patch is available for the CMTS that remedies this problem. Contact your 3Com Customer Service or Sales representative for details on obtaining the patch.
4.	On occasion, the CAR CLI *list cmstatus table* command encounters an error and does not display accurate information.	This is not a service affecting issue. To clear the error, reboot the chassis at your convenience.

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