Cable Modem Termination System

System Release 2.6.1
Release Notes

Part No. 10038851
Service Release 2.6.1

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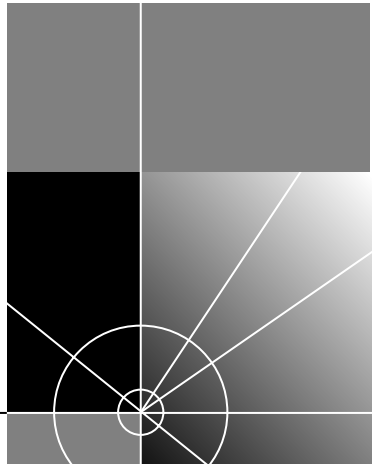

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Part No. 10038851

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CABLE MODEM TERMINATION SYSTEM 2.6.1 RELEASE NOTES

CABLE MODEM TERMINATION SYSTEM 2.6.1 RELEASE NOTES

About These Release Notes

These Release Notes contain information important to the installation and configuration of the 3Com Cable Modem Termination System (CMTS) System Release (SR) 2.6.1. They also include new features and information that changed after the main documentation set was released.

Use these Release Notes in conjunction with the *Cable Access Router User Guide* PN 1.024.1740-01 and the *Cable Access Router Command Line Interface Reference Guide*, PN 1.024.2174-00.

CRITICAL STEPS AFTER COMPLETING THE UPGRADE TO SR 2.6.1: *After upgrading to SR 2.6.1, refer to the "Steps to Complete After Upgrading Successfully to SR 2.6.1" section in these Release Notes. You* ***must*** *complete the four procedures described in order for SR 2.6.1 to run smoothly in your network.*

Hardware and Software Compatibility

CMTS SR 2.6.1 supports the 3Com hardware and software versions listed in the following tables.

Table 1 CMTS 2.5.1 Hardware Compatibility

Product	Hardware Version
CAR Network Application Card (NAC)	all versions
CAR NIC	REV C Type 5
Upstream Receiver Card (URC) NAC	all single slot versions
QAM Modulator Network Interface Card (NIC)	all versions
Cable Management System	N/A
Cable Headend Manager	N/A
Cable Modem Manager	N/A
Cable Modem Configuration File Editor	N/A

Table 2 CMTS 2.5.1 Software Compatibility

Product	Software Version
CAR Network Application Card (NAC)	3.63.60 or higher
CAR NIC	N/A
Upstream Receiver Card (URC) NAC	Operational Code 4.6.4
QAM Modulator Network Interface Card (NIC)	N/A
Cable Management System	1.2.2 or greater
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*

*This product provides only limited functionality when used in conjunction with System Release 2.6.1 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 Functionality in Release 2.6.1

CMTS SR 2.6.1 is a 3Com General Availability (GA) release geared towards customers who currently run releases 2.5.1, 2.5.5 or 2.6.0 on their 3Com CMTS. Improved functionality includes the following.

- **SNMPv2 Support**—The software supports both SNMPv1 and SNMPv2 modes of operation, simultaneously when necessary.
- **Euro-DOCSIS Hardware Support**—The software works seamlessly with any European-based hardware installed in your cable data network, running international frequencies.
- **PPP Over Ethernet Bridging (PPPoE)**—Carries PPPoE packets across the eth:1 and qam1 interfaces.
- **Multicast Bridging**—This feature forwards IP multicast packets from the interface it is received on, to all interfaces within the network.
- **Open Access Routing**—This feature allows the cable provider to accommodate numerous network providers on a single cable network.
- **1024 Bit Key Support for BPI**—Supports Cable Modems that request both 1024 bit length keys and 786 bit length keys. *1024 Bit Key Support works transparently. No user action is required to use this feature.*

- **SNMPv1 Community String Enhancement**—Ensures that a user with read-only access cannot view the entire community string list. *This enhancement works transparently. No user action is required to use this feature.*

Card-Specific Improvements

Please note that SR 2.6.1 includes the following enhancements to the Upstream Receiver Card (URC).

- URC Crash Dumps Saved in Non-Volatile Memory
- QAM Modulator NIC installs and functions properly behind the URC NAC

Commands Removed from Previous Release

The Three-Way Feature Key function, supported in previous releases, is no longer valid in SR 2.6.1. This feature allowed only those customers who purchased three-way technology for their CMTS, to access it via a special key provided by 3Com Technical Support.

The following command no longer applies to CMTS SR 2.6.1:

set cable featkey

New Feature Commands and Descriptions

The following sections explain how to use the new feature commands for SR 2.6.1.

SNMPv1 Community String Enhancement

The following command is included in SR 2.6.1 to serve two purposes. First, the command improves security, allowing you to assign an access level so that only specific users can read the list of CMTS community strings.

Secondly, the command lets you associate a single community string with multiple IP addresses, allowing for multiple subnets or host addresses.

Before upgrading or restoring a previous version of CMTS software, record your community strings. After completing the procedure, you must re-enter the community strings using the ***add snmp community string*** *command.*

set snmp community string

syntax:

```
set snmp community string <ip address>
mask <ip mask>
access <ro|rw|adm>
```

Table 0-3 Set SNMP Community String Parameters

Parameter	Description	Settings	Default
ip address	Enter the IP address of the workstation granted SNMP access to the CAR.	IP address in the nnn.nnn.nnn.nnn format	none
ip mask	The IP network mask specifier.	Mask address in the IP address format	none
access	Specifies the type of access to CAR MIBs that is allowed to authorized users.	Read Only Access (ro) Assigns view only access to user Read/Write Access (rw) Assigns view/edit access to user. Administrative Access (adm) Assigns management-level access to user.	ro for public (0.0.0.0) networks, rw for private networks

CPE Tables

The `list cable` commands used with the CAR have been expanded to include a set of tables of Customer Premises Equipment (CPE). These include a cable modem index, a list of CPE IP addresses, a list of cable modem MAC addresses, and a table that relates the cable modem index, CPE index, IP address, CPE MAC address, and cable modem MAC address for all CPE used with the CMTS.

CPE Table

Use the following command to display the CPE table.

```
list cable cpe table
```

Sample output:

```
--- CPE table ---
CM     CPE    IP            CPE MAC               CM MAC
INDEX  INDEX  ADDR          ADDR                  ADDR
-------------------------------------------------------------------
  9      1    10.10.11.2    00:60:08:CE:3C:0A 00:50:04:AC:16:50
```

Cable Modem Index

The following command displays a an index or a table that relates the cable modem and CPE MAC addresses to the cable modem index.

```
list cable cpe cmindex <argument>
```

Where argument is either a valid cable modem index or the keyword table (to list all the indexes).

Sample output:

```
HiPerCMTS>> list cable cpe cmindex 9

--- CPE table ---
CM     CPE    IP            CPE MAC               CM MAC
INDEX  INDEX  ADDR          ADDR                  ADDR
-------------------------------------------------------------------
  9      1     10.10.11.2    00:60:08:CE:3C:0A 00:50:04:AC:16:50
```

CPE IP

The following command lists the CPE and cable modem MAC addresses for an IP address.

```
list cable cpe cpeip <argument>
```

Where argument is a valid IP address in the form a.b.c.d.

Sample output:

```
HiPerCMTS>> list cable cpe cpeip 10.10.11.2

--- CPE table ---
CM     CPE    IP            CPE MAC               CM MAC
INDEX  INDEX  ADDR          ADDR                  ADDR
-------------------------------------------------------------------
  9      1   10.10.11.2    00:60:08:CE:3C:0A 00:50:04:AC:16:50
```

Cable Modem MAC Address

The following command lists IP address and associated CPE MAC addresses for a given cable modem MAC address.

```
list cable cpe cmmacaddr <argument>
```

Where argument is the valid MAC address of a cable modem.

Sample output:

```
HiPerCMTS>> list cable cpe cmmacaddr 00:50:04:AC:16:50

--- CPE table ---
CM     CPE    CM MAC             IP          CPE MAC
INDEX  INDEX  ADDR               ADDR        ADDR
-------------------------------------------------------------------------------
9      1    00:50:04:AC:16:50 10.10.11.2      00:60:08:CE:3C:0A 00:60:08:CE:3C:0A
```

Euro-DOCSIS The following commands were modified to support Euro-DOCSIS functionality in the CMTS.

set cable upchannel index Configures the upstream frequency for CMTSs operating with Euro-DOCSIS hardware. The upstream frequency ranges from 5 to 65 MHz.

syntax:

```
set cable upchannel index <index_number>
   frequency <frequency>
```

Parameter	Description	Settings	Default
index_number	Enter a number that identifies this upstream channel setting to the CAR.	1 - 100	none
frequency	Enter a number (in MHz) that defines the center of the frequency band associated with this upstream channel. 3Com strongly recommends that you change this frequency if you do not want to use the default value. The default is card-dependent.	5 -65 MHz	card-dependent (varies)

set cable downchannel index Configures the downstream interleave for CMTSs operating with Euro-DOCSIS hardware.

syntax:

```
set cable downchannel index <index_number>
   interleave <interleave_setting>
```

Table 0-4 Set Cable Downchannel Interleave Parameters

Parameter	Description	Settings	Default
index_number	Enter a number that identifies this upstream channel setting to the CAR.	1 - 100	none

Table 0-4 Set Cable Downchannel Interleave Parameters

Parameter	Description	Settings	Default
interleave_setting	The only possible downstream interleave setting for Euro-DOCSIS modulation. If running a CMTS without Euro-DOCSIS hardware installed, values include: ■ taps128increment1 ■ taps8increment16	taps12increment17	taps12increment17

if the CMTS is not using Euro-DOCSIS hardware, do not use the Euro-DOCSIS downstream interleave setting, taps12increment17. Access will be denied.

PPP Over Ethernet Bridging

Use the following commands to set PPPoE bridging support.

show cable pppoebridging

Use this command to determine if the PPPoE bridging feature is currently enabled or disabled.

syntax:

```
show cable pppoebridging
```

enable cable pppoebridging

Activates PPPoE bridging in the cable data network.

syntax:

```
enable cable pppoebridging
```

disable cable pppoebridging

Terminates PPPoE bridging in the cable data network.

syntax:

```
disable cable pppoebridging
```

Multicast Bridging

Use the following commands to set the multicast bridging feature.

show cable mcast bridging

Use this command to determine if multicast bridging is currently enabled or disabled.

syntax:

```
show cable mcast bridging
```

enable cable mcast bridging

Activates multicast bridging in the cable data network.

syntax:

```
enable cable mcast bridging
```

disable cable mcast bridging

Terminates multicast bridging in the cable data network.

syntax:

```
disable cable mcast bridging
```

enable cable mcast upstream_bridging

Activates multicast upstream bridging in the cable data network.

syntax:

```
enable cable mcast upstream_bridging
```

disable cable mcast upstream_bridging

Terminates multicast upstream Bridging in the cable data network.

syntax:

```
disable cable mcast upstream_bridging
```

set facility multicast bridging loglevel

Use this command to set syslog events for multicast bridging.

syntax:

```
set facility multicast bridging
loglevel <critical, debug, verbose, common>
```

Table 0-5 Set Facility Multicast Bridging Loglevel Parameters

Parameter	Description
critical	Generates an events syslog when a serious system error occurs, which may effect system integrity.
debug	Prints all multicast packets on the console.
verbose	Generates an events syslog every time a multicast packet is received.

Table 0-5 Set Facility Multicast Bridging Loglevel Parameters

Parameter	Description
common	Generates an events syslog every time an IGMP JOIN is received.

Open Access Routing or Network Specific Gateway (NSG)

Use the following commands to set the Open Access Routing, or Network Specific Gateway (NSG), feature.

set cable nsg network

Use this command to define an NSG for each network residing on an interface.

syntax:

```
set cable nsg network <network_name>
gateway <IP_address>
```

Table 0-6 Set Cable NSG Network Parameters

Parameter	Description
network_name	A unique name that identifies this IP network
gateway	The IP address of the gateway.

delete cable nsg network

Use this command to remove a specific NSG from a network.

syntax:

```
delete cable nsg network <network_name>
```

list cable nsg

Use this command to list the NSGs on the network.

syntax:

```
list cable nsg
```

show cable nsg network

Use this command to display the name of the NSG onscreen.

syntax:

```
show cable nsg network
```

enable cable nsg

Use this command to turn on the NSG feature.

syntax:

```
enable cable nsg
```

disable cable nsg

Use this command to turn off the NSG feature.

syntax:

```
disable cable nsg
```

set cable nsg force-to-NSG on

Use this command to force data to travel via the NSG only, preventing packets from using any other router that appears to offer a shorter path. Setting this command benefits the ISP, by ensuring that customers use the appropriate path.

syntax:

```
set cable nsg force-to-NSG on
```

set cable nsg force-to-NSG off

Use this command to turn off the force-to-NSG command described above, allowing packets to travel through any router offering the shortest data path, (not necessarily the NSG associated with the ISP).

syntax:

```
set cable nsg force-to-NSG off
```

show cable nsg

Use this command to display the current status of the NSG feature.

syntax:

```
show cable nsg
```

set cable nsg network

Use this command to define a network that is applying the NSG feature.

syntax:

`set cable nsg network` `<network_name>`

Parameter	Description
network_name	A unique name that identifies this IP network

Upgrading Your Current Software to Release 2.6.1

If you do not have one already, create a telnet account in the CAR. See the *CAR User Guide* chapter *Managing the CMTS* for more information.

Refer to the upgrade instructions in the following guide to upgrade to CMTS Release 2.6.1.

Cable Modem Termination System Software Upgrade Instructions System Release 2.02 or Greater to Latest Release

Part Number: 10030576

Accessing the Upgrade Instructions

Use these steps to access the upgrade guide from 3Com's **totalservice.com** website.

Please note that although the title of these upgrade instructions does not reflect Release 2.6.1, the instructions apply to this release.

1. Go to **http://totalservice.3com.com** via your web browser.
2. Click **Documentation Library**.
3. From the Document Types pull-down menu, select **Upgrade Instructions**.
4. From the Product Family window, select **Data-Over-Cable**.
5. Select the approximate date of this release.
6. Select **Doc Name** from the Sort pull-down menu.
7. Click the **Start Search** button.
8. Click **10030576.pdf** from the File Name area. The *Cable Modem Termination System Software Upgrade Instructions System Release 2.02 or Greater to Latest Release* guide displays.

CRITICAL STEPS AFTER COMPLETING THE UPGRADE TO SR 2.6.1: *After upgrading to SR 2.6.1, refer to the "Steps to Complete After Upgrading Successfully to SR 2.6.1" section in these Release Notes. You **must** complete the four procedures described in order for SR 2.6.1 to run smoothly in your network.*

Substituting Appropriate Upgrade Version Numbers

Please note that when following the upgrade instructions presented in the guide **10030576.pdf**, you will need to substitute the appropriate SR 2.6.1 filenames and version numbers in place of those listed.

Currently, the SR 2.6.1 CAR upgrade file is ne036360.dmf, and the URC upgrade file is umc040604.lv.

*Verify these filenames per the **3Com totalservice.com** website to ensure that you are upgrading to the latest release.*

Critical Steps After Upgrading Successfully to SR 2.6.1

After upgrading to SR 2.6.1, you ***must*** complete the following four procedures to ensure that the new code runs properly.

- Confirm connections between system components.
- Disable the UFC frequency feature.
- Reset the number of header checksum errors allowed.
- Re-enter SNMP Community Strings.
- Update the Baseline Privacy Parameter Table.

Confirm Connections Between System Components

Confirm the correct connections between system components:

1. Connect the Modulator Data 25-pin connector on the CAR NIC to the Modulator Data 25-pin connector on the QAM Modulator NIC with a straight-through cable.
2. Connect the Modulator Control 9-pin connector on the CAR NIC to the RS-232 Console RJ-45 connector on the QAM Modulator NIC with the supplied cable.

Connect to CMTS

Use the telnet account created at the beginning of the upgrade procedure to log into the CLI.

Disable the UFC Frequency Feature

For two-way and three-way cable systems only. As soon as you upgrade to SR 2.6.1, you must disable the UFC frequency hopping feature on every connected channel. Use these steps to set the threshold value to 0.

1. At the CLI type,

   `set cable ufcparam index` `<index_number>` **`errordetectioncontrol 0`**

2. Press **Enter**.

Continue with the next post upgrade procedure, *Reset the Number of Header Checksum Errors*.

Reset the Number of Header Checksum Errors

Use these steps to reset the number of header checksum errors.

1 At the CLI type,

```
set cable ufcparam index <index_number> headerchecksum 1
```

2 Press **Enter**.

If You Do Not Disable the UFC Frequency Feature Immediately After Upgrading to SR 2.6.1

If choose not to disable the UFC feature and reset the number of header checksum errors as recommended here, then no Upstream Frequency channel is defined. The Syslog displays a critical error message similar to the following.

```
At 16:28:16, Facility UMC, Level CRITICAL :: UMC(07:01):
UFC ERROR: CHANNEL 00 NO FREQUENCY AVAILABLE
```

This Syslog error means that there is no frequency available for the exchange of data.

Continue with the next post upgrade procedure, *Re-enter SNMP Community Strings*.

Re-enter SNMP Community Strings

Use these steps to re-enter SNMP Community Strings.

1 Access the CLI via console or Telnet interface.

Please note that you cannot add an SNMP Community String via SNMP-based software. You must enter the Community Strings via the CAR CLI only.

2 Type the following command for each Community String you need to add.

```
add snmp community <community_name><ip address>
   mask [ip_mask]
   access [ro | rw]
```

3 Press **Enter**.

Continue with the next post upgrade procedure, *Update the Baseline Privacy Parameter Table*.

Update the Baseline Privacy Parameter Table

Use these steps to update the Baseline Privacy Parameter Table used by the CMTS and cable modems to ensure secure data transmission.

1. Type the following command to set the value, in seconds, that defines the lifetime the CMTS assigns to a new authorization key. The default as shown here is 604800 (7 days).

   The second part of this command sets a value, in seconds, that defines the Traffic Encryption Key (TEK) lifetime. The default as shown here is 43200 (12 hours).

   `set cable bpibase index` <index number> **`authlifetime 604800 teklifetime 43200`**

2. Press **Enter**.

If you have completed each of these post upgrade procedures, the transition to SR 2.6.1 is complete. If you have not completed these four procedures, errors will occur.

3. Enter this command to save your settings:

   `save all`

4. Press **Enter**

Confirming EuroDOCSIS Operation

To check for correct operation in EuroDOCSIS mode, issue the following command from the CLI:

```
HiPerCMTS>> list cab downchannel table

--- Down Channel table ---
-------------------------
DownChannelIndex: 4
DownChannel ID: 1
Downchannel Frequency: 0
Width: 8000000
Modulation: QAM64
Interleave: TAPS12INCREMENT17
Power: 0
Annex: AnnexA
```

Check the down channel for modulation bandwidth and interleave as shown for EuroDOCSIS operation.

Restoring Previous CAR Software via TFTP

This section describes how to restore the previous CAR software version by instructing the CAR to boot off the headend TFTP server and issuing a TFTP "get" operation to load the software downgrade file. Note that this is different from the TFTP "put" procedure used to upgrade CAR software.

Follow these steps to restore the previous version of CAR software via TFTP.

1. Save the CAR software file that you want to restore to the TFTP server defined in the CAR.
2. Note the IP address of the TFTP server and the directory path that leads to the CAR downgrade file.
3. Access the CAR CLI.
4. Enter this command to verify network connectivity from the CAR to the TFTP server:

`ping <ip_address>` [Enter]

Where <ip_address> is the IP address of the TFTP server defined in the CAR.

If the PING operation is unsuccessful, isolate and repair the network connectivity problem before proceeding with this procedure.

5. Enter this command:

`set boot boot interface eth:1` [Enter]

6. Enter this command:

`set boot config bootmode network` [Enter]

7. Enter this command:

`set boot config ip_config_source static` [Enter]

8. Enter this command to save your settings:

`save all` [Enter]

9. Enter this command to verify your entries:

`show boot settings` [Enter]

10. Verify that your boot settings display correctly. If any of the settings (*eth:1*, *network*, and/or *static*) are incorrect, repeat steps 5 - 10 until they are correct.

11 Enter this command to initiate the CAR software restore procedure:

```
set boot ip interface eth:1
   loadfile <path/car_filename>
   tftpserver <ip_address>
   address <ethernet_ip_network_address> netmask
<subnet_mask>
   gateway <ip_address>
   tftp_boot once [Enter]
```

Table 7 describes the required entries.

Table 7 Set Boot IP Interface Parameter Descriptions

Parameter	Entry
interface	For TFTP restoration of CAR software, this entry must always be **eth:1**.
loadfile	Enter the directory path and filename that locates the CAR downgrade file that you saved to the TFTP server
tftpserver	Enter the IP address of the TFTP server assigned to this CAR.
address / netmask	Enter the IP address and subnet mask of the Ethernet IP Network currently defined in the CAR.
gateway	Enter the IP address of the default gateway currently defined in this CAR.
tftp_boot	Enter the number of times you want the CAR to reboot from the TFTP server. For this restore procedure, always enter the word "once," as indicated.

For example:

set boot ip interface *eth:1* loadfile *c:\car\ne035025.dmf* tftpserver *149.112.155.199* address *149.112.155.50* netmask *255.255.255.255* gateway *149.112.155.19*1 tftp_boot *once* [Enter]

In this example:

- The interface from which the CAR will reboot is **eth:1**.
- The directory path and filename for the CAR downgrade file is **c:\car\ne035025.dmf**.
- The IP address of the TFTP server on which the CAR downgrade file resides is **149.112.155.199**.
- The IP address of the CAR ethernet IP network is **149.112.155.50**.
- The subnet mask of the CAR Ethernet IP Network is **255.255.255.255**.

- The IP address of the default gateway currently defined in this CAR is **149.112.155.191**.
- The CAR has been instructed to reboot **once** from the network.

12 Once you execute the preceding command, issue the **reboot** command.

13 Save the restored file to the FLASH memory, and reboot once more. When the load and reboot sequence is complete, continue with the *Verify CAR File Transfer* instructions, listed next.

The CAR will repeat the sequence described in step 12 indefinitely until it successfully loads the downgrade file. It the CAR encounters a TFTP timeout (30 seconds), it reboots and automatically cycles through the sequence again.

Verify CAR File Transfer

Use these steps to verify that the CAR software upgrade file restored successfully.

1 Telnet to the CAR CLI by entering these commands:

a **`telnet`** `<car_ethernet_ip_network_address>` **[Enter]**

b **`login`** `<username>` **[Enter]**

c **`password`** `<password>` **[Enter]**

2 At CAR CLI prompt, enter this command to verify that the correct CAR software version displays:

`show system` **[Enter]**

3 The *System Version:* field should display the software version number reflected in the filename of the CAR software file you restored. For example, if your CAR software downgrade filename was *ne035025.dmf*, the CAR software version number listed should be *V3.50.25*.

- **If the software version number is correct**: The CAR software restore procedure is complete.
- **If the software version number is incorrect**: Repeat this restore and verification procedure. If the software version number is still incorrect, contact 3Com Technical Support.

4 Continue with *Restore Default Boot Settings* instructions, listed next.

Restore Default CAR Boot Settings

Use these steps to restore the default boot settings in the CAR.

1 Enter this command:

`set boot config bootmode flash [Enter]`

2 Enter this command to save your change:

`save all [Enter]`

3 Enter this command to verify the *bootmode*:

`show boot settings [Enter]`

4 Verify that the bootmode is **flash**. If it is not, repeat steps 1 - 4 until it is correct.

Reload SNMP Community Strings

SNMP Community Hosts are workstations granted access to the CAR. If you want to be able to gain CLI or other SNMP manager configuration access to the CAR other then via the CAR NIC console port, you must set up SNMP community hosts.

To configure an SNMP community host:

1 At the CAR CLI command prompt, enter this command:

`add snmp community` `<community_name>`
`address` `[ip_address]`
`access` `[ro | rw]` **[Enter]**

Table 8-1 describes the required parameters.

Table 0-8 Add SNMP Community Host Parameters

Parameter	Description	Settings	Default
snmp community	Enter the community name required to authorize SNMP access to the CAR.	text string limited to 32 characters	none
address	Enter the IP address of the workstation you want to define as an SNMP host. A value of 0.0.0.0 allows SNMP access to the CAR from any workstation on the network.	IP address in the nnn.nnn.nnn.nnn format	none
access	Enter the type of access you want to allow to CAR SNMP MIBs from this SNMP host. Options are:	ro (read only), rw (read/write)	none

For example:

`add snmp community` ***`private`*** **`address`** ***`149.112.150.50`*** **`access`** ***`rw`*** **[Enter]**

In this example, the workstation with the IP address of *149.112.150.50* has been granted *rw* (read/write) access the to CAR SNMP MIBs by using the SNMP community name *private*.

2 Repeat step 1 for each workstation you want to grant SNMP community access to the CAR.

3 When you have finished configuring SNMP hosts, enter this command to save your settings:

```
save all [Enter]
```

4 To verify your SNMP host configuration, use your SNMP management software (such as CHM or CMS) to access the CAR using the IP address and SNMP community name you defined in step 1.

To view currently defined SNMP hosts, use the list snmp communities command. To modify an existing SNMP host, use the set snmp community command.

The restore procedure is complete.

Board Swapping

When the CMTS chassis is on, the order in which modules are removed or added can be important. Always:

- Remove the CAR NAC before the QAM Modulator NAC
- Install the QAM Modualtor NAC before the CAR NAC

Unresolved Issues

These issues remain unresolved with this release.

Table 9 CMTS Release 2.6.1 Unresolved Issues

Issue	Workaround
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 workaround to this problem. Currently, this is a limitation of the CMTS. Do not use Concatenation and Baseline Privacy simultaneously in any given CMTS.

Issue	Workaround
If while upgrading to Release 2.6.1, you connect a non-standard 3Com console cable to the CAR NIC, the CAR may not transmit any data to the console.	Set DIP SW5 on the CAR NAC to the "ON" position. The switch is set to "ON" when it is positioned away from the faceplate of the CAR NAC. Here is a summary. ■ TFTP new software images ■ Reboot CAR, upgrade the software ■ Unplug the CAR and move DIP SW5 to "ON" position ■ Reseat the CAR

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