



CHAPTER 1

Overview of System Messages

The Cisco CMTS generates system, error, and other informational messages to inform the operator of significant events. These messages can be grouped into the following two categories:

- [System Event Messages, page 1-2](#)—Describes the system and error messages that are generated for events related to the Cisco CMTS platform, and its hardware and software components.
- [DOCSIS 1.1 Event Messages, page 1-3](#)—Describes the error messages for events as required by the DOCSIS 1.1 specifications.

This guide describes only those system error messages that are specific to the Cisco CMTS platforms. For other system error messages that can be generated, see the *Cisco IOS System Message* guide at the following URL:

http://www.cisco.com/en/US/docs/ios/system/messages/guide/consol_smg.html

The Error Message Decoder tool available at the following URL will help you research and resolve non-cable-specific Cisco IOS software messages:

<http://www.cisco.com/cgi-bin/Support/Errordecoder/index.cgi>

Use this document together with the tools and utilities that are available on Cisco.com at the following locations:

- Cisco Technical Assistance Center (TAC): <http://www.cisco.com/tac>
- Bug Toolkit: <http://www.cisco.com/cgi-bin/Support/Bugtool/home.pl>
- Open a Case with TAC Assistance: <http://tools.cisco.com/ServiceRequestTool/create/launch.do>



Tip

When contacting TAC, please have available the nonzipped, plain-text (.txt) output of the **show logging** and **show tech-support** commands, as well as any pertinent troubleshooting logs.

System Event Messages

The Cisco CMTS generates system event messages to inform the operator of platform-specific events related to the Cisco IOS software or hardware components, such as CPU or line cards. System error messages begin with a percent sign (%) and are structured as follows:

```
%FACILITY-SUBFACILITY-SEVERITY-MNEMONIC: Message-text
```

System error messages contain the following components:

- **FACILITY** is a code indicating the platform or other component that is generating the message. For example, the most common FACILITY values for the Cisco CMTS error messages are the following:
 - UBR7100—A Cisco uBR7100 series router generated the error message.
 - UBR7200—A Cisco uBR7200 series router generated the error message.
 - UBR10000—A Cisco uBR10012 router generated the error message.
- **SEVERITY** is a number that reflects the significance of the error message. All error messages have a Cisco severity number that ranges from 0 to 7. DOCSIS-related events also contain a DOCSIS severity level that ranges from 129 to 136. The lower the number, the more serious the situation. [Table 1-1](#) describes the possible severity levels and their meanings.

Table 1-1 Error Message Severity Levels

Cisco Level	DOCSIS	Class	Description
0	129	Emergency	The system has become unusable and requires immediate attention. This problem might also be affecting other parts of the network.
1	130	Alert	Some type of system or connection failure has occurred and requires immediate attention.
2	131	Critical	An error occurred that requires immediate attention to avoid system or connection failure.
3	132	Error	An error condition occurred that requires attention to resolve. Failure to address this problem will result in some type of system or connection failure in the near future.
4	133	Warning	A condition occurred that indicates attention is needed in near future to avoid potential problems. Failure to address this problem could result in some type of system or connection failure later on.
5	134	Notice	A situation occurred that is normal but is significant enough that system administrators might want to notice.
6	135	Informational	An information message that might or might not be significant to the system administrators.
7	136	Debug	Messages that appear only while debugging is turned on.

- **MNEMONIC** is a string that uniquely identifies the error message. Error messages are usually organized and referred to by their mnemonic value.

- The Message-text is a string that provides details about the particular error. This string can include specifics about cable interface, IP or MAC addresses, and other information. In this document, the specific information is presented by variable fields that are indicated by square brackets ([]). A decimal number, for example, is represented as [dec].

For example, the following message is generated when the CMTS refuses to allow a CPE device to come online because the cable modem is already supporting the maximum number of IP addresses allowed in its configuration:

```
%UBR7200-5-MAXHOST: Interface [chars], New host with IP address [IP_address] and MAC [enet] on SID [dec] (CM [enet]) is ignored.
```

When the message is actually generated, it contains the cable interface reporting the event, the IP and MAC addresses of the new CPE device, the SID it is attempting to use, and the cable modem associated with that SID:

```
%UBR7200-5-MAXHOST: Interface Cable3/0, New host with IP address 192.168.100.20 and MAC 00C0.18B3.0204 on SID 1 (CM 00C0.0e01.abcd) is ignored.
```

DOCSIS 1.1 Event Messages

The DOCSIS 1.1 specifications require the CMTS to generate a set of messages for DOCSIS-specific events. These event messages must conform to the requirements of Section 4.4.2.2.2, SYSLOG Message Format, in the *DOCSIS 1.1 Operations Support System Interface (OSSI) Specification* (SP-OSSIV1.1-I06-020830). This format is as follows:

```
%System_Error_Message: <Level>CMTS[DOCSIS]:<Event ID> Message Text
```

This format contains the following components:

- System Error Message—The Facility, Subfacility, Severity, and Mnemonic components of the message, in the same format that is used for System Error messages, as described in the “System Event Messages” section on page 1-2.
- Level—DOCSIS level number, ranging from 129 to 136, as given in Table 1-1. (The DOCSIS level parallels the Cisco severity levels of 0 to 7—add 129 to the Cisco severity level to get the DOCSIS level.)
- Event ID—Unique 8-digit decimal number that identifies the event. This Event ID is derived using the formula given in Section 4.4.2.2.2 of the OSSI specification.
- Event Message Text—String that describes the error message. It typically includes any relevant parameters, such as the MAC address of a cable modem or the cable interface on which the event occurred.

For example, the CMTS generates the following message when a Dynamic Channel Change Acknowledge (DCC-ACK) message is rejected because it is not in the proper format. This error message is of severity 4, DOCSIS level 133, with the Event ID of 67040500.

```
%UBR7200-4-DCC_ACK_REJ_MSG_SYNTAX_ERROR: <133>CMTS[DOCSIS]:<67040500> DCC-ACK rejected message syntax error
```



Tip

For a complete list of DOCSIS-specific event messages, see Appendix H in the DOCSIS OSSI 1.1 specification, which is listed above. Most DOCSIS-specific event messages also correspond to a specific DOCSIS confirmation code. For a complete list of DOCSIS 1.1 confirmation codes, see section C.4, Confirmation Code, in the DOCSIS 1.1 RF specification.

**Note**

The DOCSIS 1.1 event messages appear only in Cisco IOS images that support DOCSIS 1.1 operations, such as the Cisco IOS Release 12.2 BC train. Use the **cable event syslog-server** command to enable generation of these messages and their transmission to a SYSLOG server.
