Cisco CallManager Express SNMP MIB Support

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Cisco CallManager Express (Cisco CME) is a call-processing application that runs under Cisco IOS software. It enables small business customers and small enterprise branch offices to deploy VoIP telephony and data on a single platform.

The Cisco CME SNMP MIB Support feature provides support for the CISCO-CCME-MIB.

Finding Feature Information in This Module

Your Cisco IOS software release may not support all of the features documented in this module. To reach links to specific feature documentation in this module and to see a list of the releases in which each feature is supported, use the "Feature Information for Cisco CME SNMP MIB Support" section on page 76.

Finding Support Information for Platforms and Cisco IOS Software Images

Use Cisco Feature Navigator to find information about platform support and Cisco IOS software image support. Access Cisco Feature Navigator at http://www.cisco.com/go/fn. You must have an account on Cisco.com. If you do not have an account or have forgotten your username or password, click **Cancel** at the login dialog box and follow the instructions that appear.

Contents

- Restrictions for Cisco CME SNMP MIB Support, page 2
- Prerequisites for Cisco CME SNMP MIB Support, page 2
- Information About Cisco CME SNMP MIB Support, page 3
- How to Configure Cisco CME SNMP MIB Support, page 11
- Configuration Examples for Cisco CME SNMP MIB Support, page 14
- Cisco CME SNMP MIB Support Reference Tables, page 17
- Additional References, page 73
- Glossary, page 74
- Feature Information for Cisco CME SNMP MIB Support, page 76

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Restrictions for Cisco CME SNMP MIB Support

- Cisco CME configuration is not provided through SNMP.
- No password or encrypted objects are provided.
- Objects that are not part of Cisco CME are out of scope for the CISCO-CCME-MIB.
- SIP phone details that cannot be seen by underlying Cisco IOS SRST layers, such as the Ethernet address, are not provided.
- Depending on the platform used, the maximum number of ephone licenses supported ranges from 24 to 240.
- Performance characteristics of the Cisco CME SNMP modules vary significantly depending on how often bulk data is requested by the SNMP managers.
- SNMP bulk data can consume significant CPU and DRAM resources, and even network bandwidth. We recommend that management stations minimize the statistical sampling intervals as much as possible. Even though CISCO-CCME-MIB objects are grouped to reduce the unnecessary bulk data that can be fetched at a burst, the Cisco IOS SNMP agent does not enforce the data volume or the frequency at which SNMP managers make requests to the SNMP agent.
- To reduce performance impact, you can use the traps provided by these MIBs by using asynchronous fault notification and traps to help isolate a fault.
- There are few leaf objects, and they are light weighted and important (specified in active Group of the MIBs). They can be sampled at relatively short intervals to help gather the load on the Cisco CME components.
- Cisco IOS software supports SNMP versions 1, 2c, and 3 (SNMPv1, SNMPv2c, and SNMPv3). The SRST MIB is compliant with SNMPv2c and SNMPv3.
- External SNMP managers are required; they issue SNMP queries and also accept SNMP notifications and traps. SNMP managers include tools, such as basic Scotty command-line tools, HP-OpenView, SunNet managers, IBM Netview, Tivoli, NetIQ, and so on.
- To provide complete monitoring solutions, SNMP managers can interface with existing Cisco IOS MIBs that address individual components and build a schema (or view) that helps monitor objects that suit their configuration or needs. For Cisco CME-related scenarios, CISCO-VOICE-DIAL-CONTROL-MIB, various hardware-interface MIBs, and the CISCO-CCM-MIB are available.

Prerequisites for Cisco CME SNMP MIB Support

- Configure Cisco CallManager Express 3.4 on your system.
- Ensure that you are using the following supported voice gateways:
  - Cisco 1700 series: Cisco 1751V, Cisco 1760, or Cisco 1760V
  - Cisco 2600 series: Cisco 261xXM, Cisco 262xXM, Cisco 265xXM, or Cisco 2691
  - Cisco 3700 series: Cisco 3725 or Cisco 3745
  - Cisco 2800 series: Cisco 2801, Cisco 2811, Cisco 2821, or Cisco 2851
  - Cisco 38oo series: Cisco 3825 or Cisco 3845
  - Cisco IAD 243x

- Ensure that you are using the following IP phone types:
  - Cisco IP Phone 7902, Cisco IP Phone 7905G
  - Cisco IP Phone 7910, Cisco IP Phone 7912G
  - Cisco IP Expansion Module 7914
  - Cisco wireless IP 7920
  - Cisco IP conference station 7935 and Cisco IP conference station 7936
  - Cisco IP Phone 7940G, Cisco IP Phone 7960G, Cisco IP Phone 7970G
  - Cisco ATA 186/188 analog telephone adaptors
  - Cisco VG224 analog phone gateway
- Ensure that an SNMP manager is available on the network.

Note For information on configuring an SNMP server for use with a MIB, see the "Configuring SNMP Support" chapter of the *Cisco IOS Configuration Fundamentals and Network Management Configuration Guide* at http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/122cgcr/ffun_c/fcfprt3/fcf014.htm

- Configure an SNMP agent for the router on which the CISCO-CCME-MIB feature is to be used.

Note For information on this configuration, see the "Enabling the SNMP Agent" section on page 11.

- Configure Cisco IP phones and ephone-dns on the router.

Note For configuration information, see the Cisco CME documents listed at http://www.cisco.com/en/US/partner/products/sw/voicesw/ps4625/products_documentation_roadmap09186a0080189132.html)

- Ensure that the traps are defined in network-management-system software.
- Ensure that alarm events are not put into log-only mod, but rather come up as alarms.
- Obtain the following licenses for Cisco CME operation:
  - A base Cisco CME feature license
  - A phone-seat license for each phone

Information About Cisco CME SNMP MIB Support

This section contains the following information:

- Network Management Overview, page 4
- MIB Overview, page 5
- SNMP Overview, page 7
- CISCO-CCME-MIB Overview, page 8

Network Management Overview

Network management takes place between two major types of systems or devices:

- Those in control (managing systems or managers), most commonly a network-management system (NMS)
- Those observed and controlled (managed devices), most commonly hosts, servers, or network components such as routers and intelligent repeaters

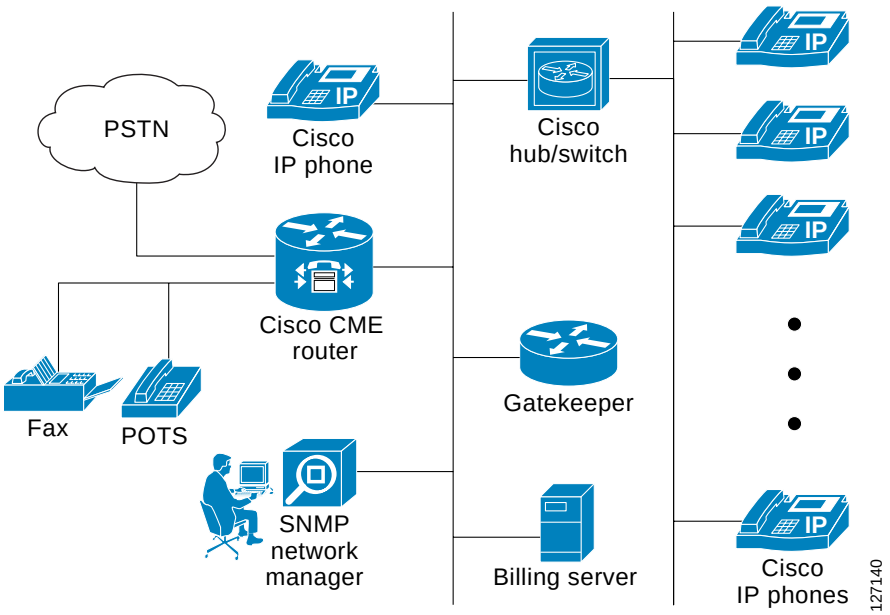
The manager runs a network-management application, called an agent, that sends requests to the managed device. The managed device runs an agent that receives and responds to those requests.

The managed device maintains values for a number of variables and can access and report those by means of its agent, as required, to the NMS. For example, an agent can access and report data such as the number of bytes and packets in and out of the device or the number of broadcast messages sent and received. Information that an agent can access and report back to the NMS is called a managed object.

An NMS can monitor the status of a managed device by requesting the value of a managed object. This is called a “get” operation. It can also control the device by requesting that it change the value of a managed object. This is called a “set” operation.

A typical NMS deployment is shown in Figure 1.

Figure 1 Typical Cisco CME Router Deployment with Network-Management Components



MIB Overview

Managed objects are contained in a management information base (MIB). The MIB defines all information that can be seen or changed by the manager.

MIB Sources

MIBs come from various sources:

- Internet Standard—On the IETF standards track at proposed, draft, or full standard status, and published as requests for comment (RFCs). You must capture the MIB definition and place it within the Cisco Enterprise MIB space (not in the Experimental branch).
- Enterprise—Defined by other organizations, usually individual companies including Cisco Systems. Enterprise MIBs instrument technology not covered by standard MIBs, either completely or as an extension to a standard MIB.
  - Cisco—Cisco enterprise-specific (also called proprietary or private, even though publicly documented).
  - Other company—Non-Cisco enterprise-specific. It is occasionally appropriate to implement a MIB defined by some other company, especially for technology that they originated and instrumented. You must capture the MIB definition, but leave the original wherever in the MIB space that the originating company put it.

A similar concept of the MIB must be shared by both manager and agent.

MIB Objects

A MIB is an abstract database, structured conceptually as a tree (see Figure 2) with branches and leaves. Each leaf, called an *object*, is typically a counter or a protocol status.

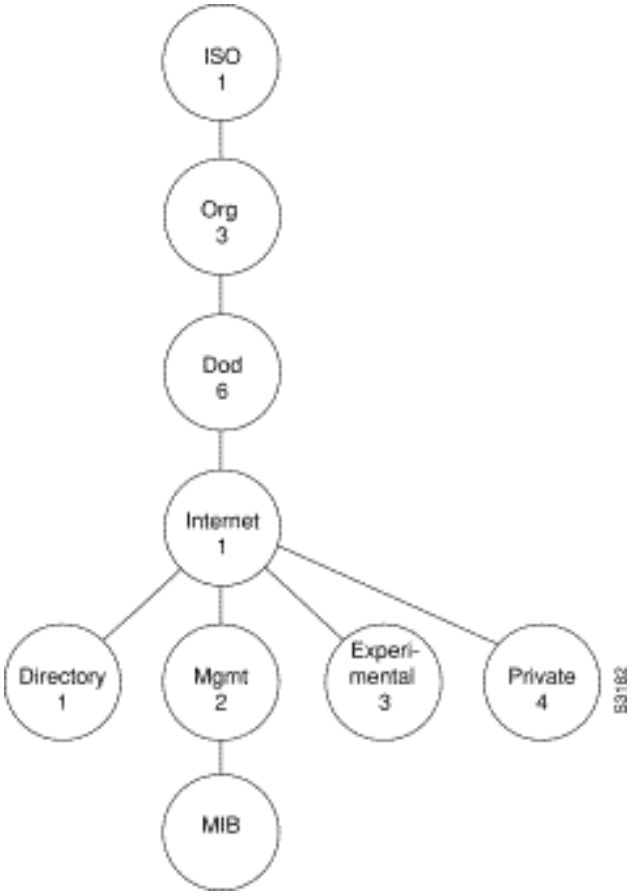
Note Usage of the term *object* within the context of a MIB differs from its usage within the context of the OSI model. An OSI object is a network entity, such as a router or a protocol, that has attributes. OSI attributes and MIB objects are essentially the same concept—that is, individual data values.

An object is denoted by a text string that is encoded into an integer. For example, the object authAddr is denoted by 5.

The location of the object within the MIB structure is denoted by its *object identifier*, which is the sequence of numbers along the path from tree root to object.

For example, the Internet standard MIB is denoted by the object identifier 1.3.6.1.2.1 (or, alternatively, as iso.org.dod.internet.mgmt.mib).

Figure 2 Internet MIB Hierarchy



MIB objects have certain permitted values, as shown in Table 5.

Table 5 MIB Objects and Values

MIB Object (in order of appearance)	Value
Object type	Type of MIB object
Syntax	Data type that models the object
Access	Maximum level of access. Possible values, from highest to lowest, include the following: • Read-create—Instances of the object may be read, written, and created • Read-write—Instance of the object may be read or written, but not created • Read-only—Instances of the object may be read but not written or created • Accessible-for-notify—Instances of the object may appear only in notifications • Not-accessible—Instances of the object may not be directly read, written, or created

Table 5 MIB Objects and Values (continued)

MIB Object (in order of appearance)	Value
Status	Status of a managed object. Possible values include the following: • Mandatory—Definition is required and should be implemented • Current—Definition is current • Deprecated—Definition will soon be made obsolete and need no longer be implemented • Obsolete—Managed nodes should not implement the object
Description	Textual description of the managed object

The following is an example of a MIB object:

```
tpTDMIfCollectTimeInterval OBJECT-TYPE
      SYNTAX Counter32
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
This object shows measurement time interval seconds.
      ::= {tpTDMIfStatTableEntry 1}
```

Note

- Descriptions of supported MIBs and information about how to use them is available on the Cisco MIB website at http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml.
- Cisco MIBs are archived in the Cisco FTP server and are accessible by anonymous FTP at ftp://ftpeng.cisco.com/pub/mibs.

SNMP Overview

To enable communication, manager and managed device must adhere to a common framework and a common language, called a protocol. In the Internet network-management framework, that protocol is Simple Network Management Protocol (SNMP), an application-layer protocol for the exchange of network-management information between a manager and a managed device. SNMP governs the structure and behavior of managers, agents, and MIBs. It permits retrieval of critical information from network elements such as routers, switches, and workstations. The Cisco CME Network Management feature uses SNMP to gather remote-site information.

SNMP and its MIBs are defined in a combination of system-specific language and Abstract Syntax Notation 1 (ASN.1) SNMP uses a subset of ASN.1 that is defined in the SNMP Structure of Management Information (SMI).

SNMP may be carried over a wide choice of transport protocols, most commonly User Datagram Protocol over Internet Protocol (UDP/IP). Other possibilities include AppleTalk, Netware, and Ethernet.

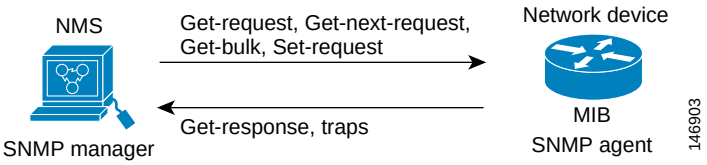
As mentioned previously, an SNMP manager such as an NMS monitors the status of managed devices by means of get (read) and set (modify) operations. These operations are listed in Table 6.

Table 6 SNMP Manager Operations

Operation	Description
get-request	Retrieves the value of a specific variable.
get-next-request	Retrieves the value of the next variable, usually from within a table. **Note** With this operation, an SNMP manager does not need to know the exact variable name. A sequential search is performed to find the needed variable from within the MIB.
get-response	Replies to a get-request, get-next-request, get-bulk-request, or set-request.
get-bulk-request	As for a get-next-request, but fills the get-response with up to max-repetition number of get-next interactions.
set-request	Stores a value in a specific variable.
trap	Unsolicited message sent by an SNMP agent to an SNMP manager indicating that some event has occurred. **Note** The Cisco trap file, mib.traps, documents the format of the Cisco traps. You can find it on the Cisco host ftp.cisco.com.

Figure 3 shows how the SNMP agent gathers data from the MIB, which is the repository for information about device parameters and network data. The agent can also send traps, or notifications of events of interest, to the manager.

Figure 3 SNMP Network



CISCO-CCME-MIB Overview

You can compile the Cisco MIB with your network-management software. If SNMP is configured on a Cisco Catalyst switch, the SNMP agent can respond to MIB-related queries that are sent by the NMS.

This chapter pertains to the CISCO-CCME-MIB, which addresses objects that pertain to Cisco CME, ephone, and ephone-dns. Apart from that MIB, a voice solution can use existing Cisco IOS MIBS, especially the CISCO-VOICE-DIAL-CONTROL-MIB.

The prototypical standard MIB is MIB-II, the second revision of the original SNMP MIB. MIB-II contains branches for the basic areas of instrumentation such as system, network interfaces, IP, and TCP.

MIB-II

Cisco MIBs are private extensions to the Internet standard MIB-II.

Cisco MIBs are often read-only or have some objects or object groups missing because of security concerns or time requirements for implementation. Since Cisco IOS Release 10.2, developers must document such specifics with AGENT-CAPABILITIES from RFC 1904.

Note

- For information about MIB-II, see RFC 1213 (*Management Information Base for Network Management of TCP/IP-based Internets: MIB-II*). This RFC includes information on the benefits of the new feature, supported platforms, related documents, troubleshooting tips, configuration examples, and a detailed command reference.
- To find what MIBs Cisco implements, start at ftp-eng.cisco.com with ftp://ftp-eng.cisco.com/pub/mibs/README.

  This FTP site contains a list of MIBs available for various software versions. It cannot account for MIBs not included in a particular software subset or because a feature is turned off. Whether or not a MIB is included is the function of AGENT-CAPABILITIES descriptions and the snmpORTable (RFC 1907) in later software versions.

Groups and Objects

The CISCO-CCME-MIB enables you to discover, monitor, and send traps to SNMP management applications. It is part of the Cisco management (9) group, which is presented by private.enterprise.cisco.ciscoMgmt. It is uniquely identified within the group by the number 439. Therefore, the ciscoCcmeMIB is 1.3.6.1.4.1.9.9.439.

The CISCO-CCME-MIB is divided into groups as follows:

- ciscoCcmeMIBNotifs
- ciscoCcmeMIBObjects
  - ccmeConfig
  - ccmeActiveStats
  - ccmeHistoryStats
- ciscoCcmeMIBConform

Objects in the CISCO-CCME-MIB can be identified by either of the following methods:

- Object identifier—1.3.6.1.4.1.9.9.439.<CCME MIB-variable>

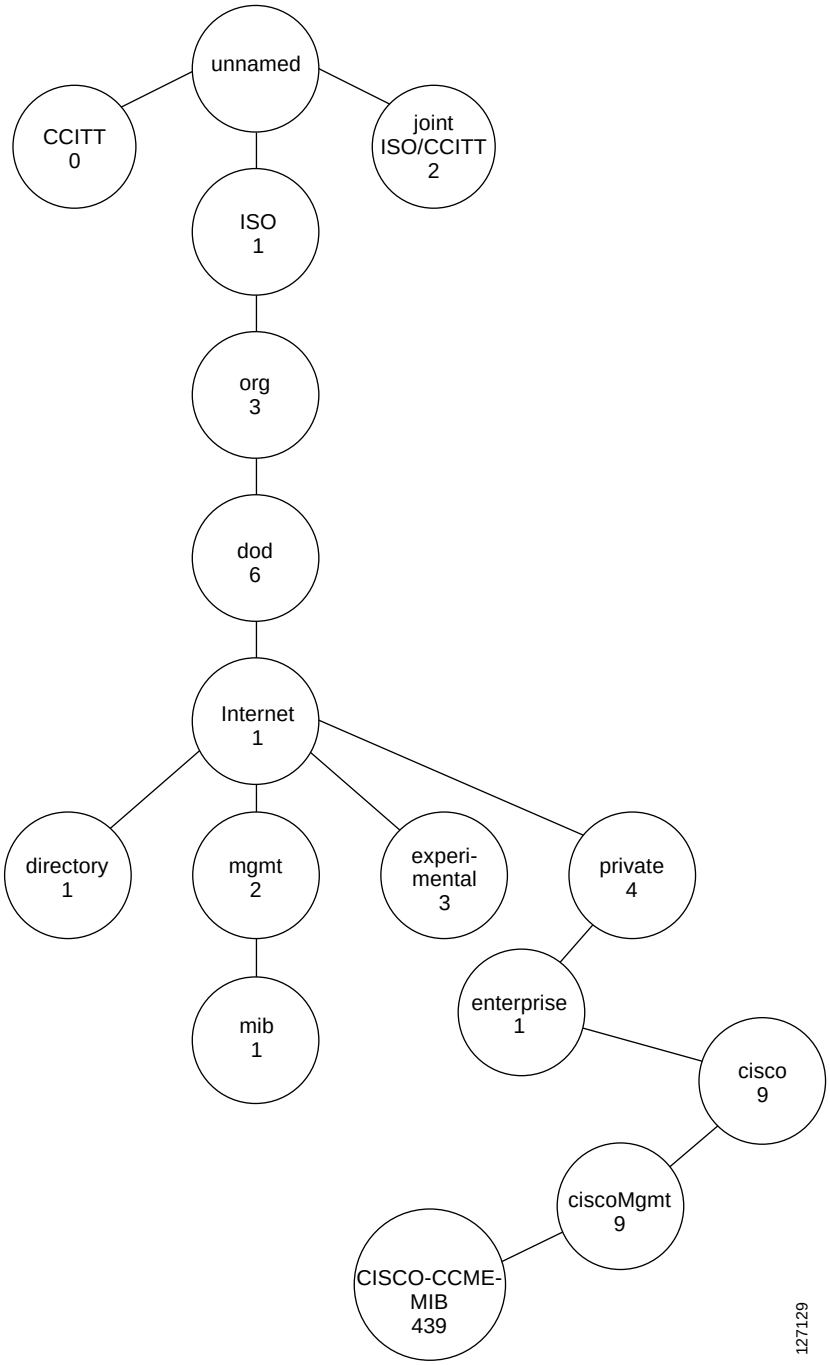
  or

- Object name—iso(1).org(3).dod(6).internet(1).private(4).enterprise(1).cisco(9).ciscoMgmt(9) .ciscoCcmeMIB(439).<MIB-variable>

Position in the Internet Standard MIB Hierarchy

Figure 4 shows the position of the CISCO-CCME-MIB in the Internet Standard MIB hierarchy.

Figure 4 CISCO-CCME-MIB Tree Structure



Supported Cisco CME Features

The CISCO-CCME-MIB supports the following Cisco CME 3.4 features (listed alphabetically):

- Call blocking
- Call-forward, transfer, hold configurations, transfer methods
- Cisco CME configuration display

- Class of restriction (COR)
- Ephone (Ethernet phone)
- Ephone directory number (DN)
- Extension overlays
- Huntstop
- Interactive-voice-response (IVR) application
- Intercom
- Message waiting indicator (MWI)
- Music on hold (MOH)
- Night service
- SIP unsolicited MWI display
- Speed dial, Fast-dial
- System message display
- Telephone Application Programming Interface (TAPI) support
- User locale
- Web browser configuration

How to Configure Cisco CME SNMP MIB Support

- Enabling the SNMP Agent, page 11
- Verifying Enabling of the SNMP Agent, page 13 (optional)
- Enabling Cisco CME Network-Management Notifications and Traps, page 13

Enabling the SNMP Agent

The SNMP agent for the CISCO-CCME-MIB is disabled by default. To enable the agent, perform the following steps.

Note Access your router directly using Telnet or using Terminal server. Telnets to the router are identified by the specified IP address (represented as *xxx.xxx.xxx.xxx*).

SUMMARY STEPS

1. **enable**
2. **config terminal**
3. **snmp-server community** *xxxxxx* **RO**
4. **snmp-server community** *xxxxxx* **RW**
5. **exit**
6. **write memory**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Router> enable`	Enters privileged EXEC mode.
Step 2	**config terminal** **Example:** `Router# config terminal`	Enters global configuration mode.
Step 3	**snmp-server community** *xxxxxx* **RO** **Example:** `Router(config)# snmp-server community xxxxxx RO`	Enables the read-only (RO) community string, where *xxxxxx* represents the read-only community/password string.
Step 4	**snmp-server community** *xxxxxx* **RW** **Example:** `Router(config)# snmp-server community xxxxxx RW`	Enables the read-write (RW) community string, where *xxxxxx* represents the read-write community/password string.
Step 5	**exit** **Example:** `Router(config)# exit`	Exits the current mode.
Step 6	**write memory** **Example:** `Router# write memory`	Writes the modified configuration to nonvolatile memory (NVRAM), permanently saving the settings.

Verifying Enabling of the SNMP Agent

To verify that the SNMP agent has been enabled on a given network device, perform the following steps.

Step 1 Telnet to the target device.

Step 2 Display the running configuration on the device and examine the output for any displayed SNMP information:

```
Router# show running-config

.
.
.
snmp-server community public RO
snmp-server community private RW
```

An "snmp-server" statement such as that above verifies that SNMP is enabled on the specified device.

Enabling Cisco CME Network-Management Notifications and Traps

To enable Cisco CME network management notifications and traps, perform the following steps.

Note Access your router directly using Telnet or using Terminal server. Telnets to the router identified by the specified IP address (represented as *xxx.xxx.xxx.xx*x).

SUMMARY STEPS

1. **enable**
2. **config terminal**
3. **snmp-server enable traps ccme**
4. **exit**
5. **write memory**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Router> enable`	Enters privileged EXEC mode.
Step 2	**config terminal** **Example:** `Router# config terminal`	Enters global configuration mode.

	Command or Action	Purpose
Step 3	**snmp-server enable traps ccme** **Example:** `Router(config)# snmp-server enable traps ccme`	Enables the Cisco CME traps.
Step 4	**exit** **Example:** `Router(config)# exit`	Exits the current mode.
Step 5	**write memory** **Example:** `Router# write memory`	Writes the modified configuration to nonvolatile memory (NVRAM), permanently saving the settings.

Note For information on enabling Cisco CME, see the *Cisco CME System Administration Guide* at the following URLs:

http://www.cisco.com/univercd/cc/td/doc/product/access/ip_ph/ip_ks/cme32/cme32sa/csa32.pdf
http://www.cisco.com/application/pdf/en/us/guest/products/ps5980/c2001/ccmigration_09186a00802d232d.pdf

Configuration Examples for Cisco CME SNMP MIB Support

The following partial configuration example for Cisco CME shows an example of the commands used to configure Cisco CME.

```
.
.
.
service timestamps debug datetime msec
service timestamps log uptime
!
logging buffered 2000000 debugging
!
!
ip dhcp pool ITS
   network 1.4.49.0 255.255.255.0
   option 150 ip 1.4.49.1
   default-router 1.4.49.1
!
!
no ip domain lookup
!
!
ip route 1.4.0.0 255.255.0.0 FastEthernet0/0
!
ip http server
ip http path flash:
!
snmp-server community public RW
snmp-server enable traps ccme
```

```
!
!
tftp-server flash:P00303020214.bin
tftp-server flash:P00305000301.sbn
tftp-server flash:P00403020214.bin
!
!
dial-peer cor custom
 name corlistname1
!
!
dial-peer cor list corlistname1
 member corlistname1
!
dial-peer cor list corname
 member corlistname1
!
!
telephony-service
 fxo hook-flash
 load 7910 P00403020214
 load 7960-7940 P00305000301
 max-ephones 10
 max-dn 50
 ip source-address 1.4.49.1 port 2000
 auto assign 1 to 50
 auto assign 1 to 2
 system message Your current options
 url directories http://mydomain.com/dir2/path/dir_file1.html
 url services http://mydomin.com/dir1/path/file1.html
 date-format dd-mm-yy
 create cnf-files version-stamp 7960 Jun 16 2002 07:06:48
 dialplan-pattern 1 9889 extension-length 4 extension-pattern 9897
 dialplan-pattern 2 8989 extension-length 5 extension-pattern 98978 no-reg
 dialplan-pattern 4 4345 extension-length 4
 voicemail 9999
 mwi sip-server 1.1.1.1 transport tcp
 mwi sip-server 1.2.4.78 unsolicited
 mwi relay
 mwi expires 90000
 max-conferences 4
 call-forward pattern 888..
 call-forward pattern 9998.
 moh flash:a.au
 multicast moh 239.10.16.4 port 2091 route 2.3.4.5 2.4.66.78 2.3.1.67 1.3.4.2
 web admin system name webadminsystemname1 password webadminsysuser1passwd
 web admin customer name webadmincustomername2 password webadminuser2passwd
 time-webedit
 transfer-system full-blind
 transfer-pattern 55501.. blind
 transfer-pattern 55502..
 transfer-pattern 55503..
 transfer-pattern 55504..
 secondary-dialtone 234
 login timeout 60 clear 23:12
 after-hours block pattern 1 7878 7-24
 after-hours block pattern 2 74093 7-24
 after-hours block pattern 3 45654
 after-hours day Sun 02:03 02:04
 after-hours day Wed 12:20 12:30
 after-hours date Feb 29 02:05 02:06
 after-hours date Jan 23 12:20 12:30
 night-service code *5566
 night-service day Mon 11:21 11:22
```

```
 night-service day Tue 21:21 12:22
 night-service date Jan 2 04:12 11:12
 night-service date Jul 3 02:10 11:11
!
!
ephone-dn  1  dual-line
 number 1
 call-forward busy 9999
 call-forward noan 9999 timeout 18
!
!
ephone-dn  2  dual-line
 number 2 secondary 3
 label userlabelB
 name User B
 call-forward busy 9999
 call-forward noan 9999 timeout 18
!
!
ephone-dn  3  dual-line
 number 2003
 cor incoming corlistname1
!
!
ephone-dn  4  dual-line
 number 2004
!
!
ephone-dn  5  dual-line
 number 2005
!
!
ephone-dn  6  dual-line
 number 690
!
!
ephone-dn  7
 number 77
 loopback-dn 14 prefix 3 suffix "#"
!
!
ephone-dn  8
 number 88
 loopback-dn 14 forward 4 prefix 9
!
!
ephone-dn  9
 number 99
 intercom 10 barge-in label "intercom901"
!
!
ephone-dn  10
 number 10
 intercom 99 barge-in label "intercom101"
!
!
ephone-dn  12
 number 12
!
!
ephone  1
 mac-address 000F.23E7.16F0
 fastdial 1 3645 name 1
 fastdial 2 37456 name secondname
```

```
 speed-dial 1 45654 label "humhumhum"
 speed-dial 2 987554 label "humhumhum2"
 type 7960
 button  1:3
!
!
ephone  2
 mac-address 000F.23E7.1BA0
 type 7960
 button  1:2
!
!
line con 0
 exec-timeout 0 0
line aux 0
line vty 0 4
!
ntp clock-period 17184626
ntp server 172.22.121.117
end
```

Cisco CME SNMP MIB Support Reference Tables

This section contains the following information:

- Summary List of Objects, page 17
- Summary List of Notifications and Traps, page 24
- SNMP MIB Tables, page 24
- CISCO-CCME-MIB Objects, page 25
- Cisco CME MIB Object Groups, page 57
- Correlation of Tables, page 65
- Cisco CME Traps and Notifications, page 71

Summary List of Objects

Table 7 lists the objects provided in the Cisco CME MIB. Objects contained within a table are indented. Table 8 on page 24 lists the notifications/traps provided in the Cisco CME MIB.

For a more detailed explanation of the object definitions, see Table 9 on page 26.

Table 7 CISCO-CCME-MIB Summary List of Objects

No.	Object Name	Comment
1	ccmeEnabled	Enabled status
2	ccmeVersion	Cisco CME version
3	ccmeIPAddressType	IP address type
4	ccmeIPAddress	Cisco CME IP address
5	ccmePortNumber	TCP port number
6	ccmeMaxEphones	Maximum number of ephones configured

Table 7 CISCO-CCME-MIB Summary List of Objects (continued)

No.	Object Name	Comment
7	ccmeMaxDirectoryNumber	Maximum number of directory numbers configured
8	ccmeMaxConferences	Maximum number of simultaneous 3-party calls allowed
9	ccmeMaxRedirect	Maximum number of times a call can be redirected
10	ccmeScriptName	Session-level IVR application script name
11	ccmeVoiceMailNumber	Number associated with a voice-mail
12	ccmeMwiRelay	Message-waiting indication notification relay supported
13	ccmeMwiExpires	Message-waiting indication notification expiration time
14	ccmeTransferSystem	Call transfer method for configured ephone extensions
15	ccmeTimeFormat	Time format configured
16	ccmeDateFormat	Date format configured
17	ccmeUrlforServicesBtn	URL for the Services button on the ephone display
18	ccmeUrlforDirectoriesBtn	URL for the Directories button on the ephone display
19	ccmeMohFlashFile	Name of the audio file to use for MOH
20	ccmeMohMulticastFromFlashEnabled	MOH multicast from flash file source status
21	ccmeMohFlashMulticastIPAddrType	Address type of ccmeMohFlashMulticastIPAddr
22	ccmeMohFlashMulticastIPAddr	Destination IP address for audio stream multicast
23	ccmeMohFlashMulticastPortNum	Media port for audio stream multicast
	ccmePhoneFirmwareTable	
24	ccmePhoneFirmwareIndex	Table index
25	ccmePhoneType	Ephone type or model
26	ccmePhoneFirmwareRev	Vendor-specific firmware revision string
	ccmeTransferPatternTable	
27	ccmeTransferPatternIndex	Table index
28	ccmeTransferPattern	Digits for permitted call transfers
29	ccmeTransferPatternType	Pattern for call transfer
30	ccmeWebGUIEditEnabled	Web-based GUI is allowed to add extensions
31	ccmeWebGUITimeEnabled	Web-based GUI is allowed to change device time
	ccmeAfterHrsBlockPatternTable	
32	ccmeAfterHrsBlockPatternTag	Identifier tag configured for the after-hours block pattern
33	ccmeAfterHrsBlockPattern	Outgoing call digits that are matched the after-hours block call
34	ccmeAfterHrsBlockPatternAllTime	After-hours block pattern is applicable all of the time
	ccmeAfterHrsBlockDateTable	
35	ccmeAfterHrsBlockDateIndex	Table index
36	ccmeAfterHrsBlockDateMonth	Month when after-hours block service is activated
37	ccmeAfterHrsBlockDate	Date when after-hours block service is active
38	ccmeAfterHrsBlockDateStartHour	Hour when after-hours block service is activated

Table 7 CISCO-CCME-MIB Summary List of Objects (continued)

No.	Object Name	Comment
39	ccmeAfterHrsBlockDateStartMin	Minute when after-hours block service is activated
40	ccmeAfterHrsBlockDateStopHour	Hour when after-hours block service is deactivated
41	ccmeAfterHrsBlockDateStopMin	Minute when after-hours block service is deactivated
	ccmeAfterHrsBlockDayTable	
42	ccmeAfterHrsBlockDayIndex	Table index
43	ccmeAfterHrsBlockDay	Day when after-hours block service is active
44	ccmeAfterHrsBlockDayStartHour	Hour when after-hours block service is activated
45	ccmeAfterHrsBlockDayStartMin	Minute when after-hours block service is activated
46	ccmeAfterHrsBlockDayStopHour	Hour when after-hours block service is deactivated
47	ccmeAfterHrsBlockDayStopMin	Minute when after-hours block service is deactivated
48	ccmeNightServiceCode	Night service code that disables/enables night service on ephones
	ccmeNightServiceDateTable	
49	ccmeNightServiceDateIndex	Table index
50	ccmeNightServiceDateMonth	Month when night service is activated
51	ccmeNightServiceDate	Day when night service is activated
52	ccmeNightServiceDateStartHour	Hour when night service is activated
53	ccmeNightServiceDateStartMin	Minute within the hour when night service is activated
54	ccmeNightServiceDateStopHour	Hour when night service is deactivated
55	ccmeNightServiceDateStopMin	Minute of the hour when night service is deactivated
	ccmeNightServiceDayTable	
56	ccmeNightServiceDayIndex	Table index
57	ccmeNightServiceDay	Day when night service is activated
58	ccmeNightServiceDayStartHour	Hour when night service is activated
59	ccmeNightServiceDayStartMin	Minute within the hour when night service is activated
60	ccmeNightServiceDayStopHour	Hour when night service is deactivated
61	ccmeNightServiceDayStopMin	Minute within the hour when night service is deactivated
62	ccmeFXOHookFlashEnabled	Flash softkey display is enabled on foreign exchange office lines
63	ccmeSecondaryDialTonePrefix	Secondary dial tone access prefix digit string
64	ccmeWebAdminSystemUser	Login username for a Cisco CME system administrator
65	ccmeWebAdminCustomerUser	Login username for a Cisco CME customer administrator
66	ccmeSystemMessage	Text system message displayed on idle ephone
	ccmeDialplanPatternTable	
67	ccmeDialplanPatternIndex	Table index
68	ccmeDialplanPatternTag	Number that identifies the dial-plan pattern
69	ccmeDialplanExtLength	Length of digit extension for dial-plan-pattern extension
70	ccmeDialplanPattern	String of digits forming a dial-plan pattern

Table 7 CISCO-CCME-MIB Summary List of Objects (continued)

No.	Object Name	Comment
71	ccmeDialplanExtPattern	String of digits forming the extension number leading digit pattern
72	ccmeDialplanAllowRegiEnabled	Whether or not the dial peer E.164 number can register with the gatekeeper
73	ccmeKeepAliveTimeout	Time between successive keepalive messages
74	ccmeInterDigitTimeout	Time interval for interdigit timeout for ephones
75	ccmeBusyTimeout	Wait time before a call is disconnected from a busy signal
76	ccmeAlertTimeout	Time interval for the ephone to alert when a call is unanswered
	ccmeEphoneConfTable	
77	ccmeEphoneTag	Number identifying a configured ephone on the device
78	ccmeEphoneIpAddressType	Address type of ccmeEphoneIpAddress
79	ccmeEphoneIpAddress	Designated IP address of the configured ephone
80	ccmeEphoneMacAddress	MAC address of the ephone
81	ccmeEphoneModel	Type and model of the ephone
82	ccmeEphoneUsername	Username of the local ephone user
83	ccmeEphoneKeepAlive	Time between successive keepalive messages
84	ccmeEphoneAutoLineOut	Line (ephone-dn) selected for outgoing calls
85	ccmeEphonePagingDn	Audio paging DN group configured for this ephone
86	ccmeEphoneAddon	Number of add on modules attached to this ephone
87	ccmeEphoneTemplate	Ephone template tag associated with this ephone
88	ccmeEphonePagingPolicy	Paging mechanism associated with this ephone
89	ccmeEphoneKeyPhone	Whether or not the ephone is marked as key ephone
90	ccmeEphoneAutoLineInEnabled	Automatic line (ephone-dn) selection for incoming call is available
91	ccmeEphoneAftHrsBlkExmptEnabled	Whether or not the ephone is exempt from after-hours blocking
92	ccmeEphoneNightBellSvcEnabled	Whether or not night-bell service is available on this ephone
93	ccmeEphoneKeepConfEnabled	Call disconnect status when the conference initiator hangs-up
	ccmeEphoneSpeedDialConfTable	
94	ccmeEphoneSpeedDialTableIndex	Table index
95	ccmeEphoneSpeedDialTag	Identifier tag configured for a speed-dial entry
96	ccmeEphoneSpeedDialNumber	Speed-dial E.164 ephone extension number associated with a line
97	ccmeEphoneSpeedDialLabel	Speed-dial label
	ccmeEphoneFastDialConfTable	
98	ccmeEphoneFastDialTableIndex	Table index
99	ccmeEphoneFastDialNumber	Fast- dial E.164 ephone extension number associated with the ephone
100	ccmeEphoneFastDialName	Name associated with this fast-dial E.164 ephone extension number
	ccmeEphoneBtnDNAssocConfTable	
101	ccmeEphoneButtonNumber	Button number of an ephone

Table 7 CISCO-CCME-MIB Summary List of Objects (continued)

No.	Object Name	Comment
102	ccmeEphoneOverlayDN	Overlay DNs configured for this button on this ephone
	ccmeEphoneDnConfigTable	
103	ccmeEphoneDnTag	Whether or not an ephone extension is configured on this device
104	ccmeEphoneDnType	Extension type of the line
105	ccmeEphoneDnMode	Line mode
106	ccmeEphoneDnPriNum	Primary E.164 ephone extension number associated with a line
107	ccmeEphoneDnSecNum	Secondary E.164 ephone extension number associated with a line
108	ccmeEphoneDnName	Person's name associated with this extension (ephone-dn)
109	ccmeEphoneDnLabel	Text string displayed on the ephone console, not the extension number
110	ccmeEphoneDnPriPref	Preference for the primary number associated with an extension
111	ccmeEphoneDnSecPref	Preference for the secondary number associated with an extension
112	ccmeEphoneDnCFBusyNum	Call forward busy number
113	ccmeEphoneDnCFAllNum	Number to which incoming calls are forwarded
114	ccmeEphoneDnCFNoAnNum	Number to which incoming calls are forwarded that does not answer
115	ccmeEphoneDnCFNoAnTo	Duration an unanswered call rings before forwarding
116	ccmeEphoneDnMwiCapability	Extension capability to process MWI notification
117	ccmeEphoneDnHuntstop	Call hunting behavior for an unanswered line stops if not answered
118	ccmeEphoneDnHuntstopCh	Call hunting behavior for an unanswered dual line stops if not answered
119	ccmeEphoneDnHoldAltTo	Time out for repeating audible alert notification when a call is on hold
120	ccmeEphoneDnHoldAltType	When hold alert audible notification is repeated
121	ccmeEphoneDnMwiSipSubscrEnabled	Whether or not the extension is subscribed to a SIP-based MWI server
122	ccmeEphoneDnScriptName	IVR application script name for this extension
123	ccmeNotificationEnable	Whether or not the system produces the Cisco CME notifications
124	ccmeSysTrapSeverity	Alarm condition severity of the most recent notification
125	ccmeSysNotificationReason	Failure cause of the alarm condition, for the most recent trap
126	ccmeEphoneUnRegThreshold	Sets the threshold to limit the unregistration trap notification
127	ccmeEphoneTrapReason	Failure cause of the alarm condition, for the most recent ephone trap
128	ccmeUserAutoLogoutTo	Time before Cisco CME ephone users are automatically logged out
129	ccmeUserLoginDeactivateTime	Time of day when user logins for all ephones are deactivated
130	ccmeMwiSipServerIpAddress	IP address to an external SIP-based MWI server
131	ccmeMwiSipServerTransportType	Protocol used to connect to an external SIP-based MWI server
132	ccmeMwiSipServerPortNumber	Port number for the MWI server
133	ccmeMwiSipServerRegE164Enabled	Whether or not the E.164 number is registered with SIP proxy or registrar
134	ccmeMwiSipSvrUnsolicitedEnabled	Whether or not a SIP NOTIFY for MWI is sent without a SUBSCRIBE

Table 7 CISCO-CCME-MIB Summary List of Objects (continued)

No.	Object Name	Comment
	ccmeCorConfTable	
135	ccmeCorTableIndex	Table index
136	ccmeCorTag	Class of restriction (COR) tag number
137	ccmeCorListName	COR list name configured on this device
138	ccmeCorScope	Scope of this COR list for a list of associated dial-peers
139	ccmeCorDirection	Whether the COR is used by incoming or outgoing dial peers
140	ccmeCorStartingNumber	Starting number of a range of directory numbers for a COR list
141	ccmeCorEndingNumber	Ending number of a range of directory numbers for a COR list
142	ccmeCorVoiceRegPoolNumber	Voice registrar pool number under which this COR list is applied
143	ccmeCorListDefaultEnabled	Whether the default COR list is enabled or disabled for this COR entry
	ccmeLoopbackDnConfTable	
144	ccmeLoopbackDnTag	Number identifying the ephone-dn loopback pairs in this device
145	ccmeLoopbackDnforward	Number of digits in the original called number that are forwarded
146	ccmeLoopbackDnStrip	Digits stripped from the original called number that are forwarded
147	ccmeLoopbackDnPrefix	String of digits added to the front of the forwarded called number
148	ccmeLoopbackDnSuffix	String of digits added to the end of the forwarded called number
149	ccmeLoopbackDnRetryTo	Seconds to wait before retrying loopback target when busy or unavailable
150	ccmeLoopbackDnAutoCon	Automatic connection capability for the call during far-end alert
151	ccmeLoopbackDnCodec	Codec type applied to the calls that pass through the loopback-DN
	ccmeIntercomDnConfTable	
152	ccmeIntercomDnTag	Tag number under which the intercom was configured
153	ccmeIntercomDnExtensionNum	Telephone number to which an intercom call is placed
154	ccmeIntercomDnBargeInEnabled	Inbound intercom call behavior when an existing call is active
155	ccmeIntercomDnAutoAnsEnabled	Whether or not the auto-answer feature is applied to this ephone-dn
156	ccmeIntercomDnLabel	Label for the intercom configured on this device
157	ccmeMohMulticastIpAddressType	Address type of ccmeMohMulticastIpAddress
158	ccmeMohMulticastIpAddress	Destination IP address for multicast of the MOH audio stream
159	ccmeMohMulticastPortNumber	Media port for multicast of the Moh audio stream
160	ccmeMohMulticastRoute	Space-separated IP addresses to which Moh multicast packets are transmitted
161	ccmeEphoneCallLegs	Call legs from the ephones and TAPI clients interacting with this device
162	ccmeEphoneTot	Number of ephones seen by this device since reset
163	ccmeEphoneTotRegistered	Number of ephones currently registered to this device
164	ccmeEphoneTotKeyPhConfigured	Number of configured ephones marked as key ephones on this device
165	ccmeEphoneTotKeyPhRegistered	Number of key ephones currently registered to this device

Table 7 CISCO-CCME-MIB Summary List of Objects (continued)

No.	Object Name	Comment
	ccmeEphoneActTable	
166	ccmeEphoneDeviceName	Type and model of ephone as seen in the registration on this device
167	ccmeEphoneRegState	Registration state of the ephone
168	ccmeEphoneActiveDN	Current active DN (line) on the ephone
169	ccmeEphoneActivityStatus	Current status of the ephone as seen on this device
170	ccmeEphoneKeepAliveCnt	Number of keepalive messages received since the ephone registered
171	ccmeEphonePendingReset	Pending reset operation on this ephone as seen by this device
172	ccmeEphoneRegTime	Time this ephone registered to this device
173	ccmeEphoneCurrentFirmwareRev	Vendor-specific firmware version string provided by the ephone
174	ccmeEphonePreviousFirmwareRev	Previous vendor-specific firmware version of ephone
175	ccmeEphoneLastError	Reason for last reset of the ephone as seen by this device
176	ccmeEphoneObservedType	Type and model of ephone device received during registration
177	ccmeEphoneLoginStatus	Phone-user login status on this ephone
178	ccmeEphoneDnDStatus	Phone is set to do-not-disturb (DnD) on one or more extensions
179	ccmeEphoneDebugStatus	Whether or not the ephone is set in debug mode
180	ccmeEphoneMediaActive	Whether or not the ephone is in active conversation
181	ccmeEphoneTAPIClient	Whether or not the ephone is a TAPI client
182	ccmeEphoneMediaCapability	Whether or not the registered ephone is capable of supporting audio or video
183	ccmeEphoneRemote	Phone is suspected not to be on the LAN
184	ccmeMohSource	MOH source
185	ccmeNightServiceEnabled	Current night service state
	ccmeEphoneDnChStatsHistoryTable	
186	ccmeEphoneDnChNum	Ephone-dn (line) channel number for this entry
187	ccmeEphoneDnChIncoming	Total incoming calls received by this ephone-dn (line) channel
188	ccmeEphoneDnChInAnswered	Total incoming calls answered by this ephone-dn (line) channel
189	ccmeEphoneDnChOutbound	Total calls placed by this ephone-dn (line) channel
190	ccmeEphoneDnChOutAnswered	Total calls placed and answered by this ephone-dn (line) channel
191	ccmeEphoneDnChOutBusy	Total calls placed from this channel and not answered
192	ccmeEphoneDnChDiscAtConn	Total calls placed from this channel and disconnected during call setup
193	ccmeEphoneDnChDiscAtAlert	Total calls placed from this channel and disconnected during call alerting
194	ccmeEphoneDnChDiscAtHold	Total calls placed from this channel and disconnected during call on hold
195	ccmeEphoneDnChDiscAtRing	Total calls received on this channel and disconnected during alerting
196	ccmeEphoneDnChDiscCauseNearEnd	Last near-end disconnect cause code seen by this channel
197	ccmeEphoneDnChDiscCauseFarEnd	Last far-end disconnect cause code seen by this channel

Table 7 CISCO-CCME-MIB Summary List of Objects (continued)

No.	Object Name	Comment
198	ccmeStatusChangeNotif	Notification generated if there is a change in ccmeEnabled
199	ccmeEphoneUnRegThresholdExceed	Notification generated when number of ephones registered is exceeded
200	ccmeEPhoneDeceased	Notification generated when registered ephone changes state to deceased
201	ccmeEPhoneRegFailed	Notification generated when an ephone attempts to register but fails
202	ccmeEphoneLoginFailed	Notification generated when an ephone user login is rejected/failed
203	ccmeNightServiceChangeNotif	Notification generated if night service status on this device changes
204	ccmeLivefeedMohFailedNotif	Notification generated when the MOH live feed fails
205	ccmeMaxConferenceNotif	Notification generated if the maximum number of simultaneous three-party conferences supported is exceeded
206	ccmeKeyEphoneRegChangeNotif	Notification generated if the key ephone registration status changes

Summary List of Notifications and Traps

Table 8 CISCO-CCME-MIB Summary List of Notifications and Traps

No.	Object Name	Comment
198	ccmeStatusChangeNotif	Notification generated if there is a change in ccmeEnabled
199	ccmeEphoneUnRegThresholdExceed	Notification generated when number of ephones registered is exceeded
200	ccmeEPhoneDeceased	Notification generated when registered ephone changes state to deceased
201	ccmeEPhoneRegFailed	Notification generated when an ephone attempts to register but fails
202	ccmeEphoneLoginFailed	Notification generated when an ephone user login is rejected/failed
203	ccmeNightServiceChangeNotif	Notification generated if night service status on this device changes
204	ccmeLivefeedMohFailedNotif	Notification generated when the MOH live feed fails
205	ccmeMaxConferenceNotif	Notification generated if the maximum number of simultaneous three-party conferences supported is exceeded
206	ccmeKeyEphoneRegChangeNotif	Notification generated if the key ephone registration status changes

SNMP MIB Tables

Tables are a powerful and often confusing aspect of SNMP MIBs. Architectural purists say that SNMP has conceptual tables, not real tables. This is because every object, whether in a table or not, is a leaf of the tree, identified by an object identifier (OID) that includes an instance. So, in an abstract sense, all objects are alike. But practically speaking, SNMP has tables, and using or implementing them gets somewhat more complex than implementing scalars, which are single object instances.

Tables have a rigid structure, defined in the SMI. Tables can contain only simple objects, not other tables, although multiple indexes can represent the concept of tables in tables. An entry, or row, in a table is uniquely identified by one or more table indexes, also called auxiliary objects. The OID of an object from a table is the OID for that object's position in the MIB tree concatenated with a representation of all the table indexes for an entry in the table.

For example, the Interface MIB (RFC 1573) has a key table called the ifTable. Its index object is ifIndex, an integer. Minus the instance, the OID for a counter from that table is:

```
iso.internet.mgmt.mib-2.interfaces.ifTable.ifEntry.ifInOctets
```

Or, numerically:

```
1.3.6.1.2.1.2.2.1.10
```

For the interface with ifIndex 7, the full OID is:

```
iso.internet.mgmt.mib-2.interfaces.ifTable.ifEntry.ifInOctets.7
1.3.6.1.2.1.2.2.1.10.7
```

Observe that row selection (instance) comes after column selection. This can be particularly confusing when you are applying the principle of lexical order to a table. Using the GetNext protocol operation to walk a table, you can proceed by column—that is, all instances for a column are returned before starting the next column.

Table indexes can be much more complex than tables. Here is an example from the Cisco VINES MIB. The INDEX clause from the ASN.1 definition is:

```
INDEX { cvForwNeighborHost,
            ifIndex,
            cvForwNeighborPhysAddress }
```

The first two indexes are simple integers, with ifIndex being imported from the standard ifTable. The final index is a variable-length octet string. Including the integers is simple and obvious. The variable-length index object gets more complex. RFC 1212 includes rules for encoding variable-length index objects as instances. The general rule is that the value is preceded by a length, and the length and each part of the value are separate subidentifiers.

So, for example, if we have neighbor host number 9, ifIndex 3, and an Ethernet neighbor physical address 0000.0c03.1ef0, the instance portion of an object for that row is 9.3.6.0.0.12.3.30.240.

In RFC 1902, SNMPv2 extends the instance-encoding rules to include an "IMPLIED" keyword that can be used on the final instance object if it is variable in length. When "IMPLIED" is present, the string instance cannot have a zero length in front of it.

Because lexical ordering for variable-length instance objects effectively sorts them by length, your ASCII text index does not come out naturally in alphabetical order.

CISCO-CCME-MIB Objects

This section contains the Cisco CallManager Express MIB object. Table 9 lists the CISCO-CCME-MIB groupings and objects. Table 10 lists the CISCO-CCME-MIB object IDs (OIDs).

Table 9 CISCO-CCME-MIB Groupings and Objects

Group	Object	Max Access	Description
	CISCO-CCME-MIB DEFINITIONS	—	This MIB allows management of Cisco CME features in Cisco IOS Release 12.4(x)T. Cisco CME is an optional software feature that enables Cisco routers to deliver key system or hybrid PBX functionality for enterprise branch offices or small businesses.
	-- CCME MIB Groups	—	The CISCO-CCME-MIB groups are as follows: • ciscoCcmeMIBNotifs • ciscoCcmeMIBObjects • ciscoCcmeMIBConform
	-- CCME MIB object groups	—	The CISCO-CCME-MIB object groups are as follows: • ccmeConfig • ccmeActiveStats • ccmeHistoryStats
ccmeConfigGroup			
	ccmeEnabled	Read-only	Whether Cisco CME is enabled on the device: • True—Enabled. • False—Disabled.
	ccmeVersion	Read-only	Version of Cisco CallManager Express on the device.
	ccmeIPAddressType	Read-only	Address type of ccmeIPAddress. Only IPv4 addresses are currently allowed.
	ccmeIPAddress	Read-only	IP address through which the ephones communicate with Cisco CME. The type of this address is determined by the value of the ccmeSysIPAddressType object. This IP address is usually the IP address bound to the Ethernet port on the gateway to which the ephones are connected.
	ccmePortNumber	Read-only	TCP port number to use for Skinny Client Control Protocol (SCCP). This also indicates through which port ephones communicate with this device. DEFVAL: 2000
	ccmeMaxEphones	Read-only	Maximum number of ephones allowed by the configuration for Cisco CME the device. Maximum permissible range is Cisco IOS release and platform dependent. A value of 0 indicates no ephones are permitted to register to this device.
	ccmeMaxDirectory Number	Read-only	Maximum number of ephone extensions (ephone-dns) or directory numbers supported by this device. Maximum permissible range is Cisco IOS release and platform dependent. A value of 0 indicates no ephone extensions can be created.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeMaxConferences	Read-only	Maximum number of simultaneous three-party conferences supported by the Cisco CME on the device. Range is release and platform dependent. With Cisco CME 3.4, the following are the maximum values for each platform: • Cisco 1750, Cisco 1751, Cisco 2600, Cisco 3640: 8 conferences • Cisco 3660, Cisco 3725, Cisco 3745: 16 conferences Default is half the maximum number of simultaneous three-party conferences for each platform. A value of zero indicates that no three-party conferences are allowed on this device.
	ccmeMaxRedirect	Read-only	Maximum number of times that a call can be redirected by call forwarding or transfer within this device.
	ccmeScriptName	Read-only	Session-level IVR application script in Tool Command Language (Tcl) for all extensions (ephone-dns) in the Cisco CME system. By default no application script is selected for any extensions, and the object length in this case returns a zero length string.
	ccmeVoiceMailNumber	Read-only	E.164 phone number that is associated with a voice-mail (speed-dial) on this device. If a voice-mail number is not configured, this object has a length of zero.
	ccmeMwiRelay	Read-only	Whether or not the device can relay message-waiting indication (MWI) notification to remote ephones.
	ccmeMwiExpires	Read-only	Expiration time, in seconds, for the registration of the MWI client or server. DEFVAL: 86400.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeTransferSystem	Read-only	Call-transfer method for all configured ephone extensions that use the ITU-T H.450.2 standard. Call transfers that use the H.450.2 standard can be blind or consultative. A blind transfer is one in which the transferring extension connects the caller to a destination extension before ringback begins. A consultative transfer is one in which the transferring party either connects the caller to a ringing phone (ringback heard) or speaks with the third party before connecting the caller to the third party. blind—Calls are transferred without consultation using a single phone line and the Cisco proprietary method. localConsult—Calls are transferred with local consultation using the second phone line if available, or the calls fall back to blind for nonlocal consultation or transfer target. This mode is intended for use primarily in voice over Frame Relay networks.|} fullBlind—Calls are transferred without consultation using H.450.2 standard method. fullConsult—Calls are transferred using H.450.2 with consultation using the second phone line if available, or the calls fall back to fullBlind if the second line is unavailable. • blind(1) • localConsult(2) • fullBlind(3) • fullConsult(4)
	ccmeTimeFormat	Read-only	Time-display format on ephones in a Cisco CME system: • twelve(1)—12 hour clock • twentyfour(2)—24 hour clock
	ccmeDateFormat	Read-only	Date-display format on ephones in a Cisco CME system: • 1—mmddyy (default) • 2—ddmmyy • 3—yymmdd • 4—yyddmm
	ccmeUrlforServicesBtn	Read-only	URL information for the Services button on the ephone display. Cisco IP Phone 7940 and Cisco IP Phone 7960 can support four URLs in association with the four programmable feature buttons on those ephones: Directories, Information, Messages, and Services. The fifth button, Settings, is managed entirely by the ephone. Operation of these services is determined by the ephone capabilities and the content of the referenced URL.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeUrlforDirectoriesBtn	Read-only	URL information for the Directories button on the ephone display. Cisco IP Phone 7940 and Cisco IP Phone 7960 can support four URLs in association with the four programmable feature buttons on those ephones: Directories, Information, Messages, and Services. The fifth button, Settings, is managed entirely by the ephone. Operation of these services is determined by the ephone capabilities and the content of the referenced URL.
	ccmeMohFlashFile	Read-only	Name of the audio file to use for the MOH audio stream. Audio files that are used for MOH exist in the flash file system on the device. A MOH file can be in the .au or .wav file format. However, the file format must contain 8-bit, 8-kHz data in a-law or mu-law. Maximum length of filename is 128 characters. This object returns a zero-length string if the MOH from flash is not configured on this router.
	ccmeMohMulticastFromFlashEnabled	Read-only	Whether or not MOH multicast from flash file source is enabled on this router. If ccmeMohFlashFile is zero length, this object has no relevance.
	ccmeMohFlashMulticastIPAddrType	Read-only	Address type of ccmeMohFlashMulticastIPAddr. Only IPv4 and IPv6 addresses are allowed.
	ccmeMohFlashMulticastIPAddr	Read-only	Destination IP address for multicast of the audio stream from flash file, that is designated for MOH. If ccmeMohFlashFile is zero length, this object has no relevance. Cisco ephones do not support multicast at 224.x.x.x addresses.
	ccmeMohFlashMulticastPortNum	Read-only	Media port for multicast of the audio stream from flash file that is designated for MOH. This object has no relevance if the ccmeMohMulticastFromFlash object is zero length.
	ccmePhoneFirmwareTable	Not-accessible	List of firmware loads configured for each ephone on this device.
	ccmePhoneFirmwareEntry	Not-accessible	Information on an ephone type and its configured firmware load. There is an entry in this table for each phone-type firmware that is configured on this device, which includes the following objects: • ccmePhoneFirmwareIndex • ccmePhoneType • ccmePhoneFirmwareRev
	ccmePhoneFirmwareIndex	Not-accessible	Arbitrary and unique index for this CcmePhoneFirmwareEntry.
	ccmePhoneType	Read-only	Type or model of ephone. Cisco ephone types are 7902, 7905, 7910, 7912, 7914, 7920, 7935, 7936, 7940, 7960, ATA-186, and ATA-188.
	ccmePhoneFirmwareRev	Read-only	Vendor-specific firmware revision string configured for the ephone on this device.
	ccmeTransferPatternTable	Not-accessible	List of transfer patterns configured on this device.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeTransferPatternEntry	Not-accessible	Information on a configured transfer pattern. There is an entry in this table for each transfer pattern that is configured on this device, which includes the following objects: • ccmeTransferPatternIndex • ccmeTransferPattern • ccmeTransferPatternType
	ccmeTransferPatternIndex	Not-accessible	An arbitrary and unique index for this CcmeTransferPatternEntry.
	ccmeTransferPattern	Read-only	String of digits for permitted call transfers.
	ccmeTransferPatternType	Read-only	Pattern for call transfer: • blind(1)—Blind transfer pattern • h4502(2)—H.450.2 consultative call transfer
	ccmeWebGUIEditEnabled	Read-only	Cisco CME web-based graphical user interface (GUI) is allowed to add extensions (ephone-dns).
	ccmeWebGUITimeEnabled	Read-only	Cisco CME web-based GUI is allowed to change or set time on this device.
	ccmeAfterHrsBlockPatternTable	Not-accessible	List of after-hours block patterns configured on this device.
	ccmeAfterHrsBlockPatternEntry	Not-accessible	Information about a configured after-hours block pattern. There is an entry in this table for each after-hours block that is configured on this device, which includes the following objects: • ccmeAfterHrsBlockPatternTag • ccmeAfterHrsBlockPattern • ccmeAfterHrsBlockPatternAllTime
	ccmeAfterHrsBlockPatternTag	Not-accessible	Unique identifier tag configured for a pattern.
	ccmeAfterHrsBlockPattern	Read-only	Configured string of outgoing call digits that is to be matched for blocking calls at specified after hours.
	ccmeAfterHrsBlockPatternAllTime	Read-only	Whether or not after-hours block pattern is applicable all of the time: • true—The ccmeAfterHrsBlockPattern pattern is always applied, 7 days a week, 24 hours a day. • false—The ccmeAfterHrsBlockPattern pattern is blocked during the days and dates defined by the ccmeAfterHrsBlockDateTable and ccmeAfterHrsBlockDayTable objects.
	ccmeAfterHrsBlockDateTable	Not-accessible	List of recurring time periods, based on date, during which outgoing calls that match defined block patterns are blocked on ephones.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeAfterHrsBlockDateEntry	Not-accessible	Information on a configured after-hours block pattern date. There is an entry in this table for each entry that is configured on this device. An entry is deleted from this table once an after-hours block configuration is removed from this device, which includes the following objects: • ccmeAfterHrsBlockDateIndex • CcmeAfterHrsBlockDateEntry • ccmeAfterHrsBlockDateMonth • ccmeAfterHrsBlockDate • ccmeAfterHrsBlockDateStartHour • ccmeAfterHrsBlockDateStartMin • ccmeAfterHrsBlockDateStopHour • ccmeAfterHrsBlockDateStopMin
	ccmeAfterHrsBlockDateIndex	Not-accessible	An arbitrary and unique index for this CcmeAfterHrsBlockDateEntry.
	ccmeAfterHrsBlockDateMonth	Read-only	Month of the year during which after-hours block service is activated: • jan(1) • feb(2) • mar(3) • apr(4) • may(5) • jun(6) • jul(7) • aug(8) • sep(9) • oct(10) • nov(11) • dec(12)
	ccmeAfterHrsBlockDate	Read-only	Day of the month during which after-hours block service is activated.
	ccmeAfterHrsBlockDateStartHour	Read-only	Hour of the day during which after-hours block service is activated.
	ccmeAfterHrsBlockDateStartMin	Read-only	Minute in the ccmeAfterHrsBlockDateStartHour from which after-hours block service is activated.
	ccmeAfterHrsBlockDateStopHour	Read-only	Hour of the day during which after-hours block service is deactivated.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeAfterHrsBlockDateStopMin	Read-only	Minute in the ccmeAfterHrsBlockDateStopHour after which after-hours block service is deactivated.
	ccmeAfterHrsBlockDayTable	Not-accessible	List of recurring time periods, based on day of week, during which outgoing calls that match defined block patterns are blocked on ephones.
	ccmeAfterHrsBlockDayEntry	Not-accessible	Information on a configured after-hours block-pattern day. There is an entry in this table for each entry that is configured on this device. An entry is deleted from this table once an after-hours block day configuration is removed from this device, which includes the following objects: • ccmeAfterHrsBlockDayIndex • ccmeAfterHrsBlockDay • ccmeAfterHrsBlockDayStartHour • ccmeAfterHrsBlockDayStartMin • ccmeAfterHrsBlockDayStopHour • ccmeAfterHrsBlockDayStopMin
	ccmeAfterHrsBlockDayIndex	Not-accessible	An arbitrary and unique index for this CcmeAfterHrsBlockDayEntry.
	ccmeAfterHrsBlockDay	Read-only	Day of the week during which after-hours block service is activated: • sun(1) • mon(2) • tue(3) • wed(4) • thu(5) • fri(6) • sat(7)
	ccmeAfterHrsBlockDayStartHour	Read-only	Hour of the day during which after-hours block service is activated.
	ccmeAfterHrsBlockDayStartMin	Read-only	Minute in the ccmeAfterHrsBlockDayStartHour from which after-hours block service is activated.
	ccmeAfterHrsBlockDayStopHour	Read-only	Hour of the day during which after-hours block service is inactive.
	ccmeAfterHrsBlockDayStopMin	Read-only	Minute in the ccmeAfterHrsBlockDayStopHour after which after-hours block service is inactive.
	ccmeNightServiceCode	Read-only	Configured night-service code that a user enters at an ephone to disable or enable night service. The code begins with an asterisk (*).
	ccmeNightServiceDateTable	Not-accessible	List of recurring time periods, based on date of month, during which night service is activated.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeNightServiceDateEntry	Not-accessible	Information on a configured night service date pattern. There is an entry in this table for each entry that is configured on this device. An entry is deleted from this table once a night-service configuration is removed from this device, which includes the following objects: • ccmeNightServiceDateIndex • ccmeNightServiceDateMonth • ccmeNightServiceDate • ccmeNightServiceDateStartHour • ccmeNightServiceDateStartMin • ccmeNightServiceDateStopHour • ccmeNightServiceDateStopMin
	ccmeNightServiceDateIndex	Not-accessible	Arbitrary and unique index for this CcmeNightServiceDateEntry.
	ccmeNightServiceDateMonth	Read-only	Month of the year during which night service is activated: • jan(1) • feb(2) • mar(3) • apr(4) • may(5) • jun(6) • jul(7) • aug(8) • sep(9) • oct(10) • nov(11) • dec(12)
	ccmeNightServiceDate	Read-only	Day of the month during which night service is activated.
	ccmeNightServiceDateStartHour	Read-only	Hour of the day during which night service is activated.
	ccmeNightServiceDateStartMin	Read-only	Minute in the ccmeNightServiceDateStartHour during which night service is activated.
	ccmeNightServiceDateStopHour	Read-only	Hour of the date during which night service is deactivated.
	ccmeNightServiceDateStopMin	Read-only	Minute in the ccmeNightServiceDateStopHour during which night service is deactivated.
	ccmeNightServiceDayTable	Not-accessible	List of recurring time periods associated with a day of the week during which night service is activated.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeNightServiceDayEntry	Not-accessible	Information on a configured night service day pattern. There is an entry in this table for each entry that is configured on this device. An entry is deleted from this table once a night service configuration is removed from this device, which includes the following objects: • ccmeNightServiceDayIndex • ccmeNightServiceDay • ccmeNightServiceDayStartHour • ccmeNightServiceDayStartMin • ccmeNightServiceDayStopHour • ccmeNightServiceDayStopMin
	ccmeNightServiceDayIndex	Not-accessible	An arbitrary and unique index for this CcmeNightServiceDayEntry.
	ccmeNightServiceDay	Read-only	Day of the week during which night service is activated: • sun(1) • mon(2) • tue(3) • wed(4) • thu(5) • fri(6) • sat(7)
	ccmeNightServiceDayStartHour	Read-only	Hour of the day during which night service is activated.
	ccmeNightServiceDayStartMin	Read-only	Minute in the ccmeNightServiceDayStartHour during which night service is activated.
	ccmeNightServiceDayStopHour	Read-only	Hour of the day during which night service is deactivated.
	ccmeNightServiceDayStopMin	Read-only	Minute in the ccmeNightServiceDayStopHour during which night service is deactivated.
	ccmeFXOHookFlashEnabled	Read-only	Whether or not the flash softkey display on the ephone is enabled: • true—Display is enabled. • false—Display is not enabled. **Note** The flash softkey is provided to Cisco IP Phone 7940 and Cisco IP Phone 7960 users on foreign-exchange-office (FXO) lines attached to the Cisco CME system.
	ccmeSecondaryDialTonePrefix	Read-only	Secondary dial tone access prefix digit string. If secondary dial tone is not configured on this device, the object returns a zero length string. For example, 9.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeWebAdminSystemUser	Read-only	Login username for a Cisco CME system administrator.
	ccmeWebAdminCustomerUser	Read-only	Login username for a Cisco CME customer administrator.
	ccmeSystemMessage	Read-only	Configured text system message for display on idle Cisco IP Phone 7940 and Cisco IP Phone 7960 phones in a Cisco CME system. The text message is an alphanumeric string of up to 32 characters that displays when the phone is idle.
	ccmeDialplanPatternTable	Not-accessible	List of dial-plan patterns configured on this device.
	ccmeDialplanPatternEntry	Not-accessible	Information on a configured dial-plan pattern. There is an entry in this table for each pattern that is configured on this device, which includes the following objects: • ccmeDialplanPatternIndex • ccmeDialplanPatternTag • ccmeDialplanExtLength • ccmeDialplanPattern • ccmeDialplanExtPattern • ccmeDialplanAllowRegiEnabled
	ccmeDialplanPatternIndex	Not-accessible	An arbitrary and unique index for this ccmeDialplanPatternTable.
	ccmeDialplanPatternTag	Read-only	Number that identifies the dial-plan pattern.
	ccmeDialplanExtLength	Read-only	Length of digit extension for dial-plan-pattern extension.
	ccmeDialplanPattern	Read-only	String of digits forming a dial-plan pattern, such as the area code, prefix, and first one or two digits of the extension number, plus wild-card markers or dots (.) for the remainder of the extension number digits. Example: `40854.....`
	ccmeDialplanExtPattern	Read-only	String of digits forming the extension number leading digit pattern that is used when the leading digits of the extension number are different from the E.164 telephone number leading digits defined by the ccmeDialplanPattern object.
	ccmeDialplanAllowRegiEnabled	Read-only	Whether or not the E.164 number in the dial peer is allowed to register with the gatekeeper: • true—Registration is allowed. • false—Registration is disabled.
	ccmeKeepAliveTimeout	Read-only	Length of time, in seconds, between successive keep-alive messages from this device to ephones. DEFVAL: 30

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeInterDigitTimeout	Read-only	Length of time, in seconds, for interdigit timeout for ephones. DEFVAL: 10
	ccmeBusyTimeout	Read-only	Length of time, in seconds, after which the call is disconnected from a busy signal. DEFVAL: 10
	ccmeAlertTimeout	Read-only	Length of time, in seconds, that Cisco CME allows the ephone to alert (ring) if a call is not answered. DEFVAL: 180
	ccmeEphoneConfTable	Not-accessible	List of ephones configured on this device.
	ccmeEphoneConfEntry	Not-accessible	Information about a configured ephone. There is an entry in this table for each ephone that is configured on this device. An entry is deleted in this table once an ephone configuration is removed from this device, which includes the following objects: • ccmeEphoneTag • ccmeEphoneIpAddressType • ccmeEphoneIpAddress • ccmeEphoneMacAddress • ccmeEphoneModel • ccmeEphoneUsername • ccmeEphoneKeepAlive • ccmeEphoneAutoLineOut • ccmeEphonePagingDn • ccmeEphoneAddon • ccmeEphoneTemplate • ccmeEphonePagingPolicy • ccmeEphoneKeyPhone • ccmeEphoneAutoLineInEnabled • ccmeEphoneAftHrsBlkExmptEnabled • ccmeEphoneNightBellSvcEnabled • ccmeEphoneKeepConfEnabled
	ccmeEphoneTag	Not-accessible	Number that uniquely identifies an ephone configured on the device. The maximum number of ephone entries varies among Cisco IOS platforms and can be less than 120.
	ccmeEphoneIpAddressType	Read-only	Address type of ccmeEphoneIpAddress. Only IPv4 addresses are currently allowed.
	ccmeEphoneIpAddress	Read-only	Designated IP address of this ephone configured on this device.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeEphoneMacAddress	Read-only	MAC address of the ephone.
	ccmeEphoneModel	Read-only	Type and model of the ephone.
	ccmeEphoneUsername	Read-only	Username of the local ephone user. Default is “Admin”. The specified login account allows an ephone user to access a web-based GUI to view information and change some personal settings for the ephone user's own ephone only. A login account is also required for users of TAPI-aware PC applications, which can register with this device and exercise remote-control operations of ephones.
	ccmeEphoneKeepAlive	Read-only	Time interval, in seconds, between successive keep-alive messages from this device to this particular ephone. If the router fails to receive three successive keepalive messages, it considers the ephone to be out of service until the ephone reregisters. DEFVAL: 30
	ccmeEphoneAutoLineOut	Read-only	Line (ephone-dn) to be selected for outgoing calls when this ephone goes off-hook.
	ccmeEphonePagingDn	Read-only	Audio-paging DN group configured for this ephone.
	ccmeEphoneAddon	Read-only	Number of add-on modules (Cisco IP Phone 7914 types) that are attached to this ephone.
	ccmeEphoneTemplate	Read-only	Ephone template tag associated with this ephone.
	ccmeEphonePagingPolicy	Read-only	Paging mechanism associated with this ephone: • unicast(1)—Phone is not capable of receiving audio paging through multicast and requests that all pages to this ephone be sent through unicast. • multicast(2)—Audio paging is transmitted to the ephone through multicast.
	ccmeEphoneKeyPhone	Read-only	Whether or not the ephone is marked as “key” ephone: • true—Key ephone • false—Not key ephone
	ccmeEphoneAutoLineInEnabled	Read-only	Whether or not automatic line (ephone-dn) selection for incoming call is available: • true—Enabled • false—Disabled
	ccmeEphoneAftHrsBlkExmptEnabled	Read-only	Whether or not this ephone is exempt from after-hours blocking: • true—Exempt from blocking • false—Included in blocking

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeEphoneNightBellSvcEnabled	Read-only	Whether or not night-bell service is enabled on this ephone: • true—Enabled • false—Disabled
	ccmeEphoneKeepConfEnabled	Read-only	Whether or not the call is disconnected when conference initiator hangs up: • true—Not disconnected (connect remaining parties together directly using call transfer) • false—Disconnected.
	ccmeEphoneSpeedDialConfTable	Not-accessible	Information about configured speed dial entries for all ephones.
	ccmeEphoneSpeedDialConfEntry	Not-accessible	Information about all configured speed dial entries for an ephone. There is an entry created for each speed dial configured on this device. An entry is deleted from this table when the speed dial configuration is removed, which includes the following objects: • ccmeEphoneSpeedDialTableIndex • ccmeEphoneSpeedDialTag • ccmeEphoneSpeedDialNumber • ccmeEphoneSpeedDialLabel
	ccmeEphoneSpeedDialTableIndex	Not-accessible	An arbitrary and unique index for CcmeEphoneSpeedDialConfEntry.
	ccmeEphoneSpeedDialTag	Read-only	Unique identifier tag configured for a speed-dial entry.
	ccmeEphoneSpeedDialNumber	Read-only	Configured speed-dial E.164 phone extension number that is associated with a line (ephone-dn) on this ephone.
	ccmeEphoneSpeedDialLabel	Read-only	Text to be displayed next to the speed-dial button on an ephone.
	ccmeEphoneFastDialConfTable	Not-accessible	Information about configured fast-dial entries for all ephones.
	ccmeEphoneFastDialConfEntry	Not-accessible	Information about all configured fast-dial entries for an ephone. An entry created for each fast dial configured on this device. An entry is deleted from this table when fast-dial configuration is removed from this device, which includes the following objects: • ccmeEphoneFastDialTableIndex • ccmeEphoneFastDialNumber • ccmeEphoneFastDialName
	ccmeEphoneFastDialTableIndex	Not-accessible	An arbitrary and unique index for this CcmeEphoneFastDialConfEntry.
	ccmeEphoneFastDialNumber	Read-only	Configured fast-dial E.164 phone extension number that is associated with this ephone. No primary number is associated as a default.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeEphoneFastDialName	Read-only	Configured name associated with the fast-dial E.164 phone extension number that is associated with this ephone. When no name is associated, this object returns a string length of zero.
	ccmeEphoneBtnDNAssocConfTable	Not-accessible	Information about all configured DN and button associations for all ephones.
	ccmeEphoneBtnDNAssocConfEntry	Not-accessible	Information about configured DN and button association entries for an ephone. There is an entry in this table for each DN and button association that is configured on this device. An entry is deleted once the configuration is deleted from this device, which includes the following objects: • ccmeEphoneButtonNumber • ccmeEphoneOverlayDN
	ccmeEphoneButtonNumber	Not-accessible	Button number of an ephone.
	ccmeEphoneOverlayDN	Read-only	Overlay DNs configured for this button on this ephone.
	ccmeEphoneDnConfigTable	Not-accessible	List of configured ephone-dns (directory numbers or extensions) for ephone lines on this device.
	ccmeEphoneDnConfigEntry	Not-accessible	Information about each configured extension or DN. There is an entry in this table for each ephone-dn configured on this device. In Survivable Remote Site Telephone (SRST) mode, an entry is created for each ephone-dn automatically generated. An entry is deleted from this table if the ephone-dn is unconfigured on this device, which includes the following objects: • ccmeEphoneDnTag • ccmeEphoneDnType • ccmeEphoneDnMode • ccmeEphoneDnPriNum • ccmeEphoneDnSecNum • ccmeEphoneDnName • ccmeEphoneDnLabel • ccmeEphoneDnPriPref • ccmeEphoneDnSecPref • ccmeEphoneDnCFBusyNum • ccmeEphoneDnCFAllNum • ccmeEphoneDnCFNoAnNum • ccmeEphoneDnCFNoAnTo

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	CcmeEphoneDnConfigEntry		ccmeEphoneDnHuntstop ccmeEphoneDnMwiCapability ccmeEphoneDnHuntstopCh ccmeEphoneDnHoldAltTo ccmeEphoneDnHoldAltType ccmeEphoneDnMwiSipSubscrEnabled ccmeEphoneDnScriptName
	ccmeEphoneDnTag	Not-accessible	Unique sequence number that indicates an ephone extension (ephone-dn) configured on this device.
	ccmeEphoneDnType	Read-only	Extension type of the line: • extension(1)—Ephone line • intercom(2)—Part of pair of intercom line • paging(3)—Type to receive audio pages • moh(4)—Type to address MOH • mwi(5)—Type to address MWI • parkslot(6)—Type to address call park slot • loopback(7)—Loopback directory number
	ccmeEphoneDnMode	Read-only	Mode of the line: • single(1)—Single-line mode. • dual(2)—Dual-line mode that has one virtual voice port and two channels to handle two independent calls. This allows call waiting, call transfer and conference functions within a single line (ephone-dn).
	ccmeEphoneDnPriNum	Read-only	Primary E.164 phone extension number that is associated with a line (ephone-dn) on this device No primary number is associated as a default.
	ccmeEphoneDnSecNum	Read-only	Second E.164 phone extension number that is associated with a line (ephone-dn) on this device.
	ccmeEphoneDnName	Read-only	Name of the person associated with this extension (ephone-dn). If no specific name of a person is associated with the ephone, then this object contains a zero-length string.
	ccmeEphoneDnLabel	Read-only	Text string that is displayed on the ephone console instead of the extension phone number.
	ccmeEphoneDnPriPref	Read-only	Preference for the primary number associated with an extension. Range: 0 to 10, where 0 is highest and 10 is lowest.
	ccmeEphoneDnSecPref	Read-only	Preference for the secondary number associated with an extension. Range: 0 to 10, where 0 is highest and 10 is lowest.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeEphoneDnCFBusyNum	Read-only	E.164 phone number to which calls are forwarded for any incoming call to a busy extension. If no specific call forwarding phone number is associated with the ephone, then this object contains a zero-length string.
	ccmeEphoneDnCFAllNum	Read-only	E.164 phone number to which calls are forwarded for all incoming call to an extension (ephone-dn). If no specific call forwarding all phone number is associated with the ephone, then this object contains a zero-length string.
	ccmeEphoneDnCFNoAnNum	Read-only	E.164 phone number to which calls are forwarded for all the incoming calls to an extension (ephone-dn) that does not answer. If no specific call forwarding number is associated with the ephone, then this object contains a zero-length string.
	ccmeEphoneDnCFNoAnTo	Read-only	How long a call rings with no answer before the call is forwarded to another extension, line, or DN.
	ccmeEphoneDnMwiCapability	Read-only	Capability of an extension (ephone-dn) to process MWI notification from an external voice-messaging system: • mwiOn(1)—Extension can process MWI ON notifications using either the main or secondary phone number. • mwiOff(2)—Extension can process MWI OFF notifications using either the main or secondary phone number. • mwiOnOff(3)—Extension can process both MWI ON and OFF notifications using either the main or secondary phone number. • mwiDisabled(4)—MWI notifications are disabled on an extension.
	ccmeEphoneDnHuntstop	Read-only	Call-hunting behavior for an extension (ephone-dn). If the value of this object is “true”, an incoming call does not roll over (hunt) to another ephone-dn when the called ephone-dn is busy or does not answer, providing that a hunting strategy has been established, which includes this ephone-dn.
	ccmeEphoneDnHuntstopCh	Read-only	Call-hunting behavior for an extension (ephone-dn) channel. If this object is enabled on dual-line extensions, an incoming call does not roll over (hunt) to another channel when the first channel is busy or does not answer on this ephone-dn.
	ccmeEphoneDnHoldAltTo	Read-only	Timeout, in seconds, for repeating audible alert notification when a call is on hold on an ephone. Range is 15 to 300. By default this hold alert feature is disabled. When it is disabled, this object returns a zero value.
	ccmeEphoneDnHoldAltType	Read-only	When hold alert audible notification is repeated on an ephone: • idle(1)—Alerts only when the ephone is idle. • originator(2)—Alerts when the ephone is idle or busy. • shared(3)—Alerts only when the ephone is idle but alerts all ephones that share the line.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeEphoneDnMwiSipSubscrEnabled	Read-only	Whether or not this extension (DN) in a Cisco CME system is subscribed to a SIP-based MWI server: • true—Extension can receive MWI from a SIP-based MWI server. • false—Extension is not subscribed to receive MWI.
	ccmeEphoneDnScriptName	Read-only	Session level IVR application script in Tool Command Language (TCL) for this extension (ephone-dn) in a Cisco CME system. By default no application script is selected for an extension, and the object length in this case returns a string of zero length.
	-- Notification Configuration	—	
	ccmeNotificationEnable	read-write	Whether or not the system produces the Cisco CME notifications: • true—Generation of notifications is enabled. • false—Generation of notifications is disabled. DEFVAL: true
	ccmeSysTrapSeverity	Read-only	Internally defined severity of the particular alarm condition, associated with the most recent notification. A subsequent event in which the alarm condition changes from its failed state back to a “normal” state has a severity of “clear”. • clear (1) • minor (2) • major (3)
	ccmeSysNotificationReason	Read-only	Internally defined failure cause of the particular alarm condition that is associated with the most recent trap.
	ccmeEphoneUnRegThreshold	read-write	Threshold that limits the unregistration trap notification.
	ccmeEphoneTrapReason	Read-only	Internally defined failure cause of the particular alarm condition, associated with the most recent ephone trap.
	ccmeUserAutoLogoutTo	Read-only	Length of time, in seconds, before the users of ephones in a Cisco CME system are automatically logged out.
	ccmeUserLoginDeactivateTime	Read-only	Specified time of day when user logins for all ephones are deactivated.
	ccmeMwiSipServerIpAddress	Read-only	Designated IP address to an external SIP based MWI server. The type of this address is determined by the value of the ccmeSysIPAddressType object.
	ccmeMwiSipServerTransportType	Read-only	Transport layer protocol used when connecting to external SIP-based MWI servers: • tcp(1)—TCP as transport layer protocol • udp(2)—UDP as transport layer protocol

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeMwiSipServer PortNumber	Read-only	Port number for the MWI server. DEFVAL: 5060
	ccmeMwiSipServer RegE164Enabled	Read-only	Whether or not an E.164 number rather than an extension number is registered with SIP proxy or registrar: • true—E.164 is registered. • false—The extension number is registered.
	ccmeMwiSipSvrUns olicitedEnabled	Read-only	Whether or not SIP NOTIFY for MWI is sent without a SUBSCRIBE from Cisco CME: • true—SIP NOTIFY is sent without SIP SUBSCRIBE. • false—Solicited NOTIFY is sent.
	ccmeCorConfTable	Not-accessible	List of class of restrictions (COR) configured on this device.
	ccmeCorConfEntry	Not-accessible	Information about a COR-configured entry. There is an entry for each COR configured on this device. An entry is deleted if the COR is removed from configuration, which includes the following objects: • ccmeCorTableIndex • ccmeCorTag • ccmeCorListName • ccmeCorDirection • ccmeCorScope • ccmeCorStartingNumber • ccmeCorEndingNumber • ccmeCorVoiceRegPoolNumber • ccmeCorListDefaultEnabled
	ccmeCorTableIndex	Not-accessible	An arbitrary and unique index for this CcmeCorConfEntry.
	ccmeCorTag	Read-only	Tag number. If the ccmeEnabled object is true for Cisco CME mode, then this object indicates the ephone-dn tag under which the COR was configured. If the csrstEnabled object is true for SRST mode, then this object indicates the COR list identifier configured under SRST configuration or voice registrar configuration.
	ccmeCorListName	Read-only	COR list name configured on this device.
	ccmeCorScope	Read-only	Scope of this COR list for a list of associated dial-peers: • ccme(1)—COR is applicable to the dial-peer associated with the ciscoCorTag ephone-dn object. • srstSccp(2)—COR is applicable to all the dynamically created dial-peers under SCCP SRST mode. • srstSip(3)—COR is applicable to all the SIP SRST dial-peers that belong to a specified voice registrar pool indicated by the ciscoCorVoiceRegPoolNumber object.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeCorDirection	Read-only	Whether the COR to be used by incoming or outgoing dial peers.
	ccmeCorStartingNumber	Read-only	Whether or not the starting number of a range of directory numbers for a COR list is configured on this device.
	ccmeCorEndingNumber	Read-only	Ending number of a range of directory numbers for a COR list configured on this device.
	ccmeCorVoiceRegPoolNumber	Read-only	Voice registrar pool number under which this COR list is applied.
	ccmeCorListDefaultEnabled	Read-only	Whether or not the default COR list is enabled for this COR entry: • true—Default COR list is applied (this COR list takes on the behavior of a predefined default COR list) • false—Default COR list is not applied.
	ccmeLoopbackDnConfTable	Not-accessible	List of loopback-dns (lines) configured on this device.
	ccmeLoopbackDnConfEntry	Not-accessible	Information about a loopback-dn configured on this device. There is an entry created for each loopback-dn configured on this device. An entry is deleted if the loopback-dn is removed from this device configuration, which includes the following objects: • ccmeLoopbackDnTag • ccmeLoopbackDnforward • ccmeLoopbackDnStrip • ccmeLoopbackDnPrefix • ccmeLoopbackDnSuffix • ccmeLoopbackDnRetryTo • ccmeLoopbackDnAutoCon • ccmeLoopbackDnCodec
	ccmeLoopbackDnTag	Not-accessible	Unique sequence number that identifies the ephone-dn loopback pairs in this device.
	ccmeLoopbackDnforward	Read-only	Number of digits in the original called number that are forwarded to the other ephone DN in the loopback-dn pair.
	ccmeLoopbackDnStrip	Read-only	Number of leading digits that are stripped from the original called number, which is then forwarded to the other ephone DN in the loopback-dn pair.
	ccmeLoopbackDnPrefix	Read-only	String of digits to be added at the front of the forwarded called number.
	ccmeLoopbackDnSuffix	Read-only	String of digits to be added at the end of the forwarded called number.
	ccmeLoopbackDnRetryTo	Read-only	Number of seconds to wait before retrying the loopback target when it is busy or unavailable. A zero value indicates that retry is disabled and appropriate call-progress tones are passed to the call originator.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeLoopbackDnAutoCon	Read-only	Whether or not automatic connection of the call is enabled during far-end alert: • true—Enabled. The call is immediately connected and in-band alerting is provided while waiting for the far-end destination to answer. • false—Disabled.
	ccmeLoopbackDnCodec	Read-only	Codec type applied to the calls passing through the loopback-dn: • g711alaw(1)—G.711 a-law • g711ulaw(2)—G.711 mu-law Options 1 and 2 override the G.711 codec type that is negotiated for the call and provide mu-law to a-law conversion if needed. • default(3)—Real-Time Transport Protocol (RTP) voice packets are passed through the loopback-dn regardless of the G.711 coding type negotiated for the calls.
	ccmeIntercomDnConfTable	Not-accessible	List of intercom DNs (lines) configured on this device.
	ccmeIntercomDnConfEntry	Not-accessible	Information about an intercom DN configured on this device. An entry is created for each intercom DN configured on the device. An entry is deleted if the intercom DN is removed from this device configuration, which includes the following objects: • ccmeIntercomDnTag • ccmeIntercomDnExtensionNum • ccmeIntercomDnBargeInEnabled • ccmeIntercomDnAutoAnsEnabled • ccmeIntercomDnLabel
	ccmeIntercomDnTag	Not-accessible	Ephone-dn (line) tag number under which this intercom was configured.
	ccmeIntercomDnExtensionNum	Read-only	Telephone number to which intercom calls are placed.
	ccmeIntercomDnBargeInEnabled	Read-only	Inbound-intercom call behavior when an existing call is active: • true—Inbound intercom calls force the existing call into call-hold state and allow the intercom call to be answered immediately. • false—Inbound intercom calls do not barge in the existing calls.
	ccmeIntercomDnAutoAnsEnabled	Read-only	Whether or not auto-answer is enabled for this ephone-dn: • true—Enabled • false—Disabled
	ccmeIntercomDnLabel	Read-only	Label for the intercom configured on this device.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeMohMulticastIpAddressType	Read-only	Address type of ccmeMohMulticastIpAddress. Only IPv4 addresses are currently allowed.
	ccmeMohMulticastIpAddress	Read-only	Destination IP address for multicast of the MOH audio stream. The type of this address is determined by the value of the ccmeSysIPAddressType object.
	ccmeMohMulticastPortNumber	Read-only	Media port for multicast of the MOH audio stream.
	ccmeMohMulticastRoute	Read-only	String of IP addresses, each separated from the other by a space, over which MOH IP multicast packets are transmitted.
ccmeActiveStatsGroup			
	ccmeEphoneCallLegs	Read-only	Active number of call legs contributed from the ephones and TAPI clients interacting with this device at this instant.
	ccmeEphoneTot	Read-only	Total number of ephones seen by this device since the last reset.
	ccmeEphoneTotRegistered	Read-only	Total number of ephones currently registered to this device.
	ccmeEphoneTotKeyPhConfigured	Read-only	Total number of configured ephones marked as key ephones on this device.
	ccmeEphoneTotKeyPhRegistered	Read-only	Total number of key ephones currently registered to this device.
	ccmeEphoneActTable	Not-accessible	List of all ephones currently registered on this device.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeEphoneActEntry	Not-accessible	Information about an ephone seen by this device. An entry is added for each new ephone registration in this table. The entry is removed once the ephone is deceased or reregistered, which includes the following objects: • ccmeEphoneDeviceName • ccmeEphoneRegState • ccmeEphoneActiveDN • ccmeEphoneActivityStatus • ccmeEphoneKeepAliveCnt • ccmeEphonePendingReset • ccmeEphoneRegTime • ccmeEphoneCurrentFirmwareRev • ccmeEphonePreviousFirmwareRev • ccmeEphoneLastError • ccmeEphoneObservedType • ccmeEphoneLoginStatus • ccmeEphoneDnDStatus • ccmeEphoneDebugStatus • ccmeEphoneMediaActive • ccmeEphoneTAPIClient • ccmeEphoneMediaCapability • ccmeEphoneRemote
	ccmeEphoneDeviceName	Read-only	Type and model of ephone as seen in the registration on this device.
	ccmeEphoneRegState	Read-only	Registration state of the ephone: • registered(1)—Phone is active. • unregistered(2)—Connection to the ephone was closed in normal manner. • deceased(3)—Connection to the ephone was closed because of a keepalive timeout.
	ccmeEphoneActiveDN	Read-only	Current active DN (line) on the ephone.
	ccmeEphoneActivityStatus	Read-only	Current status of the ephone as seen on this device: • onhook(1)—Phone is on-hook. • offhook(2)—Phone is off-hook. • ringing(3)—Phone is ringing. • paging(4)—Phone is receiving an audio page.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeEphoneKeepAliveCnt	Read-only	Number of keepalive messages received from the ephone by this device since the ephone registered.
	ccmeEphonePendingReset	Read-only	Pending reset operation on this ephone as seen by this device. With "true" indicating reset is pending.
	ccmeEphoneRegTime	Read-only	Time that this ephone registered to this device.
	ccmeEphoneCurrentFirmwareRev	Read-only	Current vendor-specific firmware version string provided by the ephone during registration on this device.
	ccmeEphonePreviousFirmwareRev	Read-only	Previous vendor-specific firmware version of ephone provided during registration on this device.
	ccmeEphoneLastError	Read-only	Reason for last reset of the ephone as seen by this device. Reason for last reset of ephone could be "TCP-timeout" or "CallManager-closed-TCP" or "Initialized".
	ccmeEphoneObservedType	Read-only	Type and model of ephone received by this device during the registration of ephone.
	ccmeEphoneLoginStatus	Read-only	Login status: • true—A user is currently logged in on this ephone. • false—No user is currently logged in on this ephone.
	ccmeEphoneDnDStatus	Read-only	Do-not-disturb (DnD) status: • true—Ephone is set to DnD on one or more of its extensions. • false—No DnD is set.
	ccmeEphoneDebugStatus	Read-only	Debug status: • true—Enabled • false—Disabled
	ccmeEphoneMediaActive	Read-only	Whether or not a conversation is active on this ephone: • true—Active • false—Inactive
	ccmeEphoneTAPIClient	Read-only	Whether or not ephone is a TAPI client: • true—TAPI client • false—Not a TAPI client
	ccmeEphoneMediaCapability	Read-only	Whether or not the ephone can support video: • audioOnly(1)—Audio only • audioVideo(2)—Audio and video
	ccmeEphoneRemote	Read-only	Whether or not the ephone is on the same LAN as the device: • true—Phone is suspected not to be on the LAN. This response is based on the Address Resolution Protocol (ARP) entry not being seen on this device. • false—Phone is on the same LAN as the device.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeMohSource	Read-only	Cisco CME system can derive MOH from two locations: • flash(1)—The router is currently picking MOH stream from an audio file configured in flash file system. The location of the file is provided by ccmeMohFlashFile object. • liveFeed(2)—The router is currently picking MOH stream from an incoming call audio stream. Typically, a single ephone-dn would be configured to accept liveFeed call. ccmeEphoneDnType with MOH type specifies this DN.
	ccmeNightServiceEnabled	Read-only	Current night-service state: • true—Night service is active. • false—Night service is inactive.
ccmeHistoryStatsGroup			
	ccmeEphoneDnChStatsHistoryTable	Not-accessible	List of statistics for all ephone-dns (lines) on this device.
	ccmeEphoneDnChStatsHistoryEntry	Not-accessible	Statistical information about an ephone-dn. An entry is added for each new ephone-dn configured in this table. An entry is removed once the ephone-dn is removed from this device configuration, which includes the following objects: • ccmeEphoneDnChNum • ccmeEphoneDnChIncoming • ccmeEphoneDnChInAnswered • ccmeEphoneDnChOutbound • ccmeEphoneDnChOutAnswered • ccmeEphoneDnChOutBusy • ccmeEphoneDnChDiscAtConn • ccmeEphoneDnChDiscAtAlert • ccmeEphoneDnChDiscAtHold • ccmeEphoneDnChDiscAtRing • ccmeEphoneDnChDiscCauseNearEnd • ccmeEphoneDnChDiscCauseFarEnd
	ccmeEphoneDnChNum	Not-accessible	Ephone-dn (line) channel number for this entry.
	ccmeEphoneDnChIncoming	Read-only	Total number of incoming calls received by this ephone-dn (line) channel.
	ccmeEphoneDnChInAnswered	Read-only	Total number of incoming calls answered by this ephone-dn (line) channel.
	ccmeEphoneDnChOutbound	Read-only	Total number of calls placed by this ephone-dn (line) channel.

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeEphoneDnChOutAnswered	Read-only	Total number of calls that were placed and answered by this ephone-dn (line) channel.
	ccmeEphoneDnChOutBusy	Read-only	Total number of calls that were placed from this channel and were not answered because of busy line.
	ccmeEphoneDnChDiscAtConn	Read-only	Total number of calls that were placed from this channel and were disconnected during call setup.
	ccmeEphoneDnChDiscAtAlert	Read-only	Total number of calls that were placed from this channel and were disconnected during call alerting stage.
	ccmeEphoneDnChDiscAtHold	Read-only	Total number of calls that were placed from this channel and were disconnected while the call was put on hold.
	ccmeEphoneDnChDiscAtRing	Read-only	Total number of calls that were received on this channel and were disconnected during alerting state.
	ccmeEphoneDnChDiscCauseNearEnd	Read-only	Last near-end disconnect cause code seen by this channel.
	ccmeEphoneDnChDiscCauseFarEnd	Read-only	Last far-end disconnect cause code seen by this channel.
ccmeNotifGroup			
	ccmeStatusChangeNotif		Notification generated if there is a change in ccmeEnabled. This notification is generated only when the value of the ccmeNotificationEnable object is true and includes the following objects: • ccmeSysTrapSeverity • ccmeEnabled • ccmeSysNotificationReason
	ccmeEphoneUnRegThresholdExceed	Notification-Type	Notification generated every time the total number of ephones registered is exceeded and then drops below the threshold specified by the ccmeEphoneUnRegThreshold object. This object is generated only if the ccmeNotificationEnable object is true. • ccmeEphoneUnRegThreshold
	ccmeEPhoneDeceased	Notification-Type	Notification generated every time the registered ephone changes state to Deceased, indicating that the connection to the ephone was closed because of a keepalive timeout. This objects is generated only if the ccmeNotificationEnable object is true. • ccmeEphoneIpAddress • ccmeEphoneRegState
	ccmeEPhoneRegFailed	Notification-Type	Notification generated when an ephone attempts to register but fails. This notification is only for those failures seen by the Cisco CME or SRST gateway. This object is generated only if the ccmeNotificationEnable object is true. • ccmeEphoneIpAddress • ccmeEphoneTrapReason

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
	ccmeEphoneLoginFailed	Notification-Type	Notification generated when an ephone user login is rejected/failed. This object is generated only if the ccmeNotificationEnable object is true. • ccmeEphoneIpAddress • ccmeEphoneTrapReason
	ccmeNightServiceChangeNotif	Notification-Type	Notification generated if there is a change in night service status on this device. This object is generated only if the ccmeNotificationEnable object is true. • ccmeEphoneTrapReason
	ccmeLivefeedMohFailedNotif	Notification-Type	Notification generated when the MOH live feed has failed. This objects is generated only if the ccmeNotificationEnable object is true. • ccmeEphoneTrapReason
	ccmeMaxConferenceNotif	Notification-Type	Notification generated if the maximum number of simultaneous three-party conferences supported by the Cisco CME is exceeded. This object is generated only if the ccmeNotificationEnable object is true. • ccmeEphoneTrapReason
	ccmeKeyEphoneRegChangeNotif	Notification-Type	Notification generated if there is a change in the registration status of the key ephone. This object is generated only if the ccmeNotificationEnable object is true. • ccmeEphoneIpAddress • ccmeEphoneRegState

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
ccmeConfigGroup			Collection of objects that are used to show the configuration of Cisco CallManager Express feature. • ccmeEnabled • ccmeVersion • ccmeIPAddressType • ccmeIPAddress • ccmePortNumber • ccmeMaxEphones • ccmeMaxDirectoryNumber • ccmeMaxConferences • ccmeMaxRedirect • ccmeScriptName • ccmeVoiceMailNumber • ccmeMwiRelay • ccmeMwiExpires • ccmeTransferSystem • ccmeTimeFormat • ccmeDateFormat • ccmeUrlforServicesBtn • ccmeUrlforDirectoriesBtn • ccmeMohFlashFile • ccmeMohMulticastFromFlashEnabled • ccmeMohFlashMulticastIPAddrType • ccmeMohFlashMulticastIPAddr • ccmeMohFlashMulticastPortNum • ccmePhoneType • ccmePhoneFirmwareRev • ccmeTransferPattern • ccmeTransferPatternType • ccmeWebGUIEditEnabled • ccmeWebGUITimeEnabled • ccmeAfterHrsBlockPattern • ccmeAfterHrsBlockPatternAllTime • ccmeAfterHrsBlockDateMonth • ccmeAfterHrsBlockDate

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
			• ccmeAfterHrsBlockDateStartHour • ccmeAfterHrsBlockDateStartMin • ccmeAfterHrsBlockDateStopHour • ccmeAfterHrsBlockDateStopMin • ccmeAfterHrsBlockDay • ccmeAfterHrsBlockDayStartHour • ccmeAfterHrsBlockDayStartMin • ccmeAfterHrsBlockDayStopHour • ccmeAfterHrsBlockDayStopMin • ccmeNightServiceCode • ccmeNightServiceDateMonth • ccmeNightServiceDate • ccmeNightServiceDateStartHour • ccmeNightServiceDateStartMin • ccmeNightServiceDateStopHour • ccmeNightServiceDateStopMin • ccmeNightServiceDay • ccmeNightServiceDayStartHour • ccmeNightServiceDayStartMin • ccmeNightServiceDayStopHour • ccmeNightServiceDayStopMin • ccmeFXOHookFlashEnabled • ccmeSecondaryDialTonePrefix • ccmeWebAdminSystemUser • ccmeWebAdminCustomerUser • ccmeSystemMessage • ccmeDialplanPatternTag • ccmeDialplanPattern • ccmeDialplanExtLength • ccmeDialplanExtPattern • ccmeDialplanAllowRegiEnabled • ccmeKeepAliveTimeout • ccmeInterDigitTimeout • ccmeBusyTimeout • ccmeAlertTimeout

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
			• ccmeEphoneIpAddressType • ccmeEphoneIpAddress • ccmeEphoneMacAddress • ccmeEphoneModel • ccmeEphoneDnType • ccmeEphoneDnMode • ccmeEphoneDnPriNum • ccmeEphoneDnSecNum • ccmeEphoneDnName • ccmeEphoneDnLabel • ccmeEphoneDnPriPref • ccmeEphoneDnSecPref • ccmeEphoneDnCFBusyNum • ccmeEphoneDnCFAllNum • ccmeEphoneDnCFNoAnNum • ccmeEphoneDnCFNoAnTo • ccmeEphoneDnMwiCapability • ccmeEphoneDnHuntstop • ccmeEphoneDnHuntstopCh • ccmeEphoneDnHoldAltTo • ccmeEphoneDnHoldAltType • ccmeEphoneDnMwiSipSubscrEnabled • ccmeEphoneDnScriptName • ccmeEphoneUsername • ccmeNotificationEnable • ccmeSysTrapSeverity • ccmeSysNotificationReason • ccmeEphoneUnRegThreshold • ccmeEphoneKeyPhone • ccmeEphoneKeepAlive • ccmeEphoneAutoLineInEnabled • ccmeEphoneAutoLineOut • ccmeEphonePagingDn • ccmeEphonePagingPolicy • ccmeEphoneTemplate

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
			• ccmeEphoneAftHrsBlkExmptEnabled • ccmeEphoneNightBellSvcEnabled • ccmeEphoneAddon • ccmeEphoneKeepConfEnabled • ccmeEphoneTrapReason • ccmeUserAutoLogoutTo • ccmeUserLoginDeactivateTime • ccmeMwiSipServerIpAddress • ccmeMwiSipServerTransportType • ccmeMwiSipServerPortNumber • ccmeMwiSipServerRegE164Enabled • ccmeMwiSipSvrUnsolicitedEnabled • ccmeCorTag • ccmeCorListName • ccmeCorScope • ccmeCorDirection • ccmeCorStartingNumber • ccmeCorEndingNumber • ccmeCorVoiceRegPoolNumber • ccmeCorListDefaultEnabled • ccmeLoopbackDnforward • ccmeLoopbackDnStrip • ccmeLoopbackDnPrefix • ccmeLoopbackDnSuffix • ccmeLoopbackDnRetryTo • ccmeLoopbackDnAutoCon • ccmeLoopbackDnCodec • ccmeIntercomDnExtensionNum • ccmeIntercomDnBargeInEnabled • ccmeIntercomDnAutoAnsEnabled • ccmeIntercomDnLabel • ccmeEphoneSpeedDialTag • ccmeEphoneSpeedDialNumber • ccmeEphoneSpeedDialLabel • ccmeEphoneFastDialNumber

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
			• ccmeEphoneFastDialName • ccmeEphoneOverlayDN • ccmeMohMulticastIpAddressType • ccmeMohMulticastIpAddress • ccmeMohMulticastPortNumber • ccmeMohMulticastRoute
ccmeActiveStatsGroup		—	• Collection of objects that show the active status of Cisco CallManager Express, ephone and ephone-dn. • ccmeEphoneCallLegs • ccmeEphoneTot • ccmeEphoneTotRegistered • ccmeEphoneTotKeyPhConfigured • ccmeEphoneTotKeyPhRegistered • ccmeEphoneDeviceName • ccmeEphoneRegState • ccmeEphoneActiveDN • ccmeEphoneActivityStatus • ccmeEphoneKeepAliveCnt • ccmeEphonePendingReset • ccmeEphoneRegTime • ccmeEphoneCurrentFirmwareRev • ccmeEphonePreviousFirmwareRev • ccmeEphoneLastError • ccmeEphoneObservedType • ccmeEphoneLoginStatus • ccmeEphoneDnDStatus • ccmeEphoneDebugStatus • ccmeEphoneMediaActive • ccmeEphoneTAPIClient • ccmeEphoneMediaCapability • ccmeEphoneRemote • ccmeMohSource • ccmeNightServiceEnabled

Table 9 CISCO-CCME-MIB Groupings and Objects (continued)

Group	Object	Max Access	Description
ccmeHistoryStatsGroup		—	Group of objects that display the history status of ephone-dn: • ccmeEphoneDnChIncoming • ccmeEphoneDnChInAnswered • ccmeEphoneDnChOutbound • ccmeEphoneDnChOutAnswered • ccmeEphoneDnChOutBusy • ccmeEphoneDnChDiscAtConn • ccmeEphoneDnChDiscAtAlert • ccmeEphoneDnChDiscAtHold • ccmeEphoneDnChDiscAtRing • ccmeEphoneDnChDiscCauseNearEnd • ccmeEphoneDnChDiscCauseFarEnd
ccmeNotifGroup NOTIFICATION-GROUP		—	Collection of notifications for the Cisco CME features: • ccmeStatusChangeNotif • ccmeEphoneUnRegThresholdExceed • ccmeEPhoneDeceased • ccmeEPhoneRegFailed • ccmeEphoneLoginFailed • ccmeNightServiceChangeNotif • ccmeLivefeedMohFailedNotif • ccmeMaxConferenceNotif • ccmeKeyEphoneRegChangeNotif

Cisco CME MIB Object Groups

Table 7 lists the CISCO-CCME-MIB objects, arranged according to their group. The following four CISCO-CCME-MIB groups are listed:

- ccmeConfig
- ccmeActiveStats
- ccmeHistoryStats
- ccmeMIBNotifications

The CISCO-CCME-MIB object IDs are listed in Table 10.

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Table 10 ciscoCcmeMIB Object ID Mapping

Object Name	Object ID
ciscoMgmt	1.3.6.1.4.1.9.9
ciscoCcmeMIB	1.3.6.1.4.1.9.9.439
ccmeStatusChangeNotif	1.3.6.1.4.1.9.9.439.0.0.1
ccmeEphoneUnRegThresholdExceed	1.3.6.1.4.1.9.9.439.0.0.2
ccmeEPhoneDeceased	1.3.6.1.4.1.9.9.439.0.0.3
ccmeEPhoneRegFailed	1.3.6.1.4.1.9.9.439.0.0.4
ccmeEphoneLoginFailed	1.3.6.1.4.1.9.9.439.0.0.5
ccmeNightServiceChangeNotif	1.3.6.1.4.1.9.9.439.0.0.6
ccmeLivefeedMohFailedNotif	1.3.6.1.4.1.9.9.439.0.0.7
ccmeMaxConferenceNotif	1.3.6.1.4.1.9.9.439.0.0.8
ccmeKeyEphoneRegChangeNotif	1.3.6.1.4.1.9.9.439.0.0.9
ciscoCcmeMIBObjects	1.3.6.1.4.1.9.9.439.1
ccmeConfig	1.3.6.1.4.1.9.9.439.1.1
ccmeEnabled	1.3.6.1.4.1.9.9.439.1.1.1
ccmeVersion	1.3.6.1.4.1.9.9.439.1.1.2
ccmeIPAddressType	1.3.6.1.4.1.9.9.439.1.1.3
ccmeIPAddress	1.3.6.1.4.1.9.9.439.1.1.4
ccmePortNumber	1.3.6.1.4.1.9.9.439.1.1.5
ccmeMaxEphones	1.3.6.1.4.1.9.9.439.1.1.6
ccmeMaxDirectoryNumber	1.3.6.1.4.1.9.9.439.1.1.7
ccmeMaxConferences	1.3.6.1.4.1.9.9.439.1.1.8
ccmeMaxRedirect	1.3.6.1.4.1.9.9.439.1.1.9
ccmeScriptName	1.3.6.1.4.1.9.9.439.1.1.10
ccmeVoiceMailNumber	1.3.6.1.4.1.9.9.439.1.1.11
ccmeMwiRelay	1.3.6.1.4.1.9.9.439.1.1.12
ccmeMwiExpires	1.3.6.1.4.1.9.9.439.1.1.13
ccmeTransferSystem	1.3.6.1.4.1.9.9.439.1.1.14
ccmeTimeFormat	1.3.6.1.4.1.9.9.439.1.1.15
ccmeDateFormat	1.3.6.1.4.1.9.9.439.1.1.16
ccmeUrlforServicesBtn	1.3.6.1.4.1.9.9.439.1.1.17
ccmeUrlforDirectoriesBtn	1.3.6.1.4.1.9.9.439.1.1.18
ccmeMohFlashFile	1.3.6.1.4.1.9.9.439.1.1.19
ccmeMohMulticastFromFlashEnabled	1.3.6.1.4.1.9.9.439.1.1.20
ccmeMohFlashMulticastIPAddr	1.3.6.1.4.1.9.9.439.1.1.21
ccmeMohFlashMulticastPortNum	1.3.6.1.4.1.9.9.439.1.1.22
ccmePhoneFirmware**Table**	1.3.6.1.4.1.9.9.439.1.1.23

Table 10 ciscoCcmeMIB Object ID Mapping (continued)

Object Name	Object ID
ccmePhoneFirmware	1.3.6.1.4.1.9.9.439.1.1.23.1
ccmePhoneFirmwareIndex	1.3.6.1.4.1.9.9.439.1.1.23.1.1
ccmePhoneType	1.3.6.1.4.1.9.9.439.1.1.23.1.2
ccmePhoneFirmwareRev	1.3.6.1.4.1.9.9.439.1.1.23.1.3
ccmeTransferPattern**Table**	1.3.6.1.4.1.9.9.439.1.1.24
ccmeTransferPattern	1.3.6.1.4.1.9.9.439.1.1.24.1
ccmeTransferPatternIndex	1.3.6.1.4.1.9.9.439.1.1.24.1.1
ccmeTransferPattern	1.3.6.1.4.1.9.9.439.1.1.24.1.2
ccmeTransferPatternType	1.3.6.1.4.1.9.9.439.1.1.24.1.3
ccmeWebGUIEditEnabled	1.3.6.1.4.1.9.9.439.1.1.25
ccmeWebGUITimeEnabled	1.3.6.1.4.1.9.9.439.1.1.26
ccmeAfterHrsBlockPattern**Table**	1.3.6.1.4.1.9.9.439.1.1.27
ccmeAfterHrsBlockPattern	1.3.6.1.4.1.9.9.439.1.1.27.1
ccmeAfterHrsBlockPatternTag	1.3.6.1.4.1.9.9.439.1.1.27.1.1
ccmeAfterHrsBlockPattern	1.3.6.1.4.1.9.9.439.1.1.27.1.2
ccmeAfterHrsBlockPatternAllTime	1.3.6.1.4.1.9.9.439.1.1.27.1.3
ccmeAfterHrsBlockDate**Table**	1.3.6.1.4.1.9.9.439.1.1.28
ccmeAfterHrsBlockDate	1.3.6.1.4.1.9.9.439.1.1.28.1
ccmeAfterHrsBlockDateIndex	1.3.6.1.4.1.9.9.439.1.1.28.1.1
ccmeAfterHrsBlockDateMonth	1.3.6.1.4.1.9.9.439.1.1.28.1.2
ccmeAfterHrsBlockDate	1.3.6.1.4.1.9.9.439.1.1.28.1.3
ccmeAfterHrsBlockDateStartHour	1.3.6.1.4.1.9.9.439.1.1.28.1.4
ccmeAfterHrsBlockDateStartMin	1.3.6.1.4.1.9.9.439.1.1.28.1.5
ccmeAfterHrsBlockDateStopHour	1.3.6.1.4.1.9.9.439.1.1.28.1.6
ccmeAfterHrsBlockDateStopMin	1.3.6.1.4.1.9.9.439.1.1.28.1.7
ccmeAfterHrsBlockDay**Table**	1.3.6.1.4.1.9.9.439.1.1.29
ccmeAfterHrsBlockDay	1.3.6.1.4.1.9.9.439.1.1.29.1
ccmeAfterHrsBlockDayIndex	1.3.6.1.4.1.9.9.439.1.1.29.1.1
ccmeAfterHrsBlockDay	1.3.6.1.4.1.9.9.439.1.1.29.1.2
ccmeAfterHrsBlockDayStartHour	1.3.6.1.4.1.9.9.439.1.1.29.1.3
ccmeAfterHrsBlockDayStartMin	1.3.6.1.4.1.9.9.439.1.1.29.1.4
ccmeAfterHrsBlockDayStopHour	1.3.6.1.4.1.9.9.439.1.1.29.1.5
ccmeAfterHrsBlockDayStopMin	1.3.6.1.4.1.9.9.439.1.1.29.1.6
ccmeNightServiceCode	1.3.6.1.4.1.9.9.439.1.1.30
ccmeNightServiceDate**Table**	1.3.6.1.4.1.9.9.439.1.1.31
ccmeNightServiceDate	1.3.6.1.4.1.9.9.439.1.1.31.1

Table 10 ciscoCcmeMIB Object ID Mapping (continued)

Object Name	Object ID
ccmeNightServiceDateIndex	1.3.6.1.4.1.9.9.439.1.1.31.1.1
ccmeNightServiceDateMonth	1.3.6.1.4.1.9.9.439.1.1.31.1.2
ccmeNightServiceDate	1.3.6.1.4.1.9.9.439.1.1.31.1.3
ccmeNightServiceDateStartHour	1.3.6.1.4.1.9.9.439.1.1.31.1.4
ccmeNightServiceDateStartMin	1.3.6.1.4.1.9.9.439.1.1.31.1.5
ccmeNightServiceDateStopHour	1.3.6.1.4.1.9.9.439.1.1.31.1.6
ccmeNightServiceDateStopMin	1.3.6.1.4.1.9.9.439.1.1.31.1.7
ccmeNightServiceDay**Table**	1.3.6.1.4.1.9.9.439.1.1.32
ccmeNightServiceDay	1.3.6.1.4.1.9.9.439.1.1.32.1
ccmeNightServiceDayIndex	1.3.6.1.4.1.9.9.439.1.1.32.1.1
ccmeNightServiceDay	1.3.6.1.4.1.9.9.439.1.1.32.1.2
ccmeNightServiceDayStartHour	1.3.6.1.4.1.9.9.439.1.1.32.1.3
ccmeNightServiceDayStartMin	1.3.6.1.4.1.9.9.439.1.1.32.1.4
ccmeNightServiceDayStopHour	1.3.6.1.4.1.9.9.439.1.1.32.1.5
ccmeNightServiceDayStopMin	1.3.6.1.4.1.9.9.439.1.1.32.1.6
ccmeFXOHookFlashEnabled	1.3.6.1.4.1.9.9.439.1.1.33
ccmeSecondaryDialTonePrefix	1.3.6.1.4.1.9.9.439.1.1.34
ccmeWebAdminSystemUser	1.3.6.1.4.1.9.9.439.1.1.35
ccmeWebAdminCustomerUser	1.3.6.1.4.1.9.9.439.1.1.36
ccmeSystemMessage	1.3.6.1.4.1.9.9.439.1.1.37
ccmeDialplanPattern**Table**	1.3.6.1.4.1.9.9.439.1.1.38
ccmeDialplanPattern	1.3.6.1.4.1.9.9.439.1.1.38.1
ccmeDialplanPatternIndex	1.3.6.1.4.1.9.9.439.1.1.38.1.1
ccmeDialplanPatternTag	1.3.6.1.4.1.9.9.439.1.1.38.1.2
ccmeDialplanExtLength	1.3.6.1.4.1.9.9.439.1.1.38.1.3
ccmeDialplanPattern	1.3.6.1.4.1.9.9.439.1.1.38.1.4
ccmeDialplanExtPattern	1.3.6.1.4.1.9.9.439.1.1.38.1.5
ccmeDialplanAllowRegiEnabled	1.3.6.1.4.1.9.9.439.1.1.38.1.6
ccmeKeepAliveTimeout	1.3.6.1.4.1.9.9.439.1.1.39
ccmeInterDigitTimeout	1.3.6.1.4.1.9.9.439.1.1.40
ccmeBusyTimeout	1.3.6.1.4.1.9.9.439.1.1.41
ccmeAlertTimeout	1.3.6.1.4.1.9.9.439.1.1.42
ccmeEphoneConf**Table**	1.3.6.1.4.1.9.9.439.1.1.43
ccmeEphoneConf	1.3.6.1.4.1.9.9.439.1.1.43.1
ccmeEphoneTag	1.3.6.1.4.1.9.9.439.1.1.43.1.1
ccmeEphoneIpAddressType	1.3.6.1.4.1.9.9.439.1.1.43.1.2

Table 10 ciscoCcmeMIB Object ID Mapping (continued)

Object Name	Object ID
ccmeEphoneIpAddress	1.3.6.1.4.1.9.9.439.1.1.43.1.3
ccmeEphoneMacAddress	1.3.6.1.4.1.9.9.439.1.1.43.1.4
ccmeEphoneModel	1.3.6.1.4.1.9.9.439.1.1.43.1.5
ccmeEphoneUsername	1.3.6.1.4.1.9.9.439.1.1.43.1.6
ccmeEphoneKeepAlive	1.3.6.1.4.1.9.9.439.1.1.43.1.7
ccmeEphoneAutoLineOut	1.3.6.1.4.1.9.9.439.1.1.43.1.8
ccmeEphonePagingDn	1.3.6.1.4.1.9.9.439.1.1.43.1.9
ccmeEphoneAddon	1.3.6.1.4.1.9.9.439.1.1.43.1.10
ccmeEphoneTemplate	1.3.6.1.4.1.9.9.439.1.1.43.1.11
ccmeEphonePagingPolicy	1.3.6.1.4.1.9.9.439.1.1.43.1.12
ccmeEphoneKeyPhone	1.3.6.1.4.1.9.9.439.1.1.43.1.13
ccmeEphoneAutoLineInEnabled	1.3.6.1.4.1.9.9.439.1.1.43.1.14
ccmeEphoneAftHrsBlkExmptEnabled	1.3.6.1.4.1.9.9.439.1.1.43.1.15
ccmeEphoneNightBellSvcEnabled	1.3.6.1.4.1.9.9.439.1.1.43.1.16
ccmeEphoneKeepConfEnabled	1.3.6.1.4.1.9.9.439.1.1.43.1.17
ccmeEphoneSpeedDialConf**Table**	1.3.6.1.4.1.9.9.439.1.1.44
ccmeEphoneSpeedDialConf	1.3.6.1.4.1.9.9.439.1.1.44.1
ccmeEphoneSpeedDialTableIndex	1.3.6.1.4.1.9.9.439.1.1.44.1.1
ccmeEphoneSpeedDialTag	1.3.6.1.4.1.9.9.439.1.1.44.1.2
ccmeEphoneSpeedDialNumber	1.3.6.1.4.1.9.9.439.1.1.44.1.3
ccmeEphoneSpeedDialLabel	1.3.6.1.4.1.9.9.439.1.1.44.1.4
ccmeEphoneFastDialConf**Table**	1.3.6.1.4.1.9.9.439.1.1.45
ccmeEphoneFastDialConf	1.3.6.1.4.1.9.9.439.1.1.45.1
ccmeEphoneFastDialTableIndex	1.3.6.1.4.1.9.9.439.1.1.45.1.1
ccmeEphoneFastDialNumber	1.3.6.1.4.1.9.9.439.1.1.45.1.2
ccmeEphoneFastDialName	1.3.6.1.4.1.9.9.439.1.1.45.1.3
ccmeEphoneBtnDNAssocConf**Table**	1.3.6.1.4.1.9.9.439.1.1.46
ccmeEphoneBtnDNAssocConf	1.3.6.1.4.1.9.9.439.1.1.46.1
ccmeEphoneButtonNumber	1.3.6.1.4.1.9.9.439.1.1.46.1.1
ccmeEphoneOverlayDN	1.3.6.1.4.1.9.9.439.1.1.46.1.2
ccmeEphoneDnConfig**Table**	1.3.6.1.4.1.9.9.439.1.1.47
ccmeEphoneDnConfig	1.3.6.1.4.1.9.9.439.1.1.47.1
ccmeEphoneDnTag	1.3.6.1.4.1.9.9.439.1.1.47.1.1
ccmeEphoneDnType	1.3.6.1.4.1.9.9.439.1.1.47.1.2
ccmeEphoneDnMode	1.3.6.1.4.1.9.9.439.1.1.47.1.3
ccmeEphoneDnPriNum	1.3.6.1.4.1.9.9.439.1.1.47.1.4

Table 10 ciscoCcmeMIB Object ID Mapping (continued)

Object Name	Object ID
ccmeEphoneDnSecNum	1.3.6.1.4.1.9.9.439.1.1.47.1.5
ccmeEphoneDnName	1.3.6.1.4.1.9.9.439.1.1.47.1.6
ccmeEphoneDnLabel	1.3.6.1.4.1.9.9.439.1.1.47.1.7
ccmeEphoneDnPriPref	1.3.6.1.4.1.9.9.439.1.1.47.1.8
ccmeEphoneDnSecPref	1.3.6.1.4.1.9.9.439.1.1.47.1.9
ccmeEphoneDnCFBusyNum	1.3.6.1.4.1.9.9.439.1.1.47.1.10
ccmeEphoneDnCFAllNum	1.3.6.1.4.1.9.9.439.1.1.47.1.11
ccmeEphoneDnCFNoAnNum	1.3.6.1.4.1.9.9.439.1.1.47.1.12
ccmeEphoneDnCFNoAnTo	1.3.6.1.4.1.9.9.439.1.1.47.1.13
ccmeEphoneDnMwiCapability	1.3.6.1.4.1.9.9.439.1.1.47.1.14
ccmeEphoneDnHuntstop	1.3.6.1.4.1.9.9.439.1.1.47.1.15
ccmeEphoneDnHuntstopCh	1.3.6.1.4.1.9.9.439.1.1.47.1.16
ccmeEphoneDnHoldAltTo	1.3.6.1.4.1.9.9.439.1.1.47.1.17
ccmeEphoneDnHoldAltType	1.3.6.1.4.1.9.9.439.1.1.47.1.18
ccmeEphoneDnMwiSipSubscrEnabled	1.3.6.1.4.1.9.9.439.1.1.47.1.19
ccmeEphoneDnScriptName	1.3.6.1.4.1.9.9.439.1.1.47.1.20
ccmeNotificationEnable	1.3.6.1.4.1.9.9.439.1.1.48 (read-write)
ccmeSysTrapSeverity	1.3.6.1.4.1.9.9.439.1.1.49
ccmeSysNotificationReason	1.3.6.1.4.1.9.9.439.1.1.50
ccmeEphoneUnRegThreshold	1.3.6.1.4.1.9.9.439.1.1.51 (read-write)
ccmeEphoneTrapReason	1.3.6.1.4.1.9.9.439.1.1.52
ccmeUserAutoLogoutTo	1.3.6.1.4.1.9.9.439.1.1.53
ccmeUserLoginDeactivateTime	1.3.6.1.4.1.9.9.439.1.1.54
ccmeMwiSipServerIpAddress	1.3.6.1.4.1.9.9.439.1.1.55
ccmeMwiSipServerTransportType	1.3.6.1.4.1.9.9.439.1.1.56
ccmeMwiSipServerPortNumber	1.3.6.1.4.1.9.9.439.1.1.57
ccmeMwiSipServerRegE164Enabled	1.3.6.1.4.1.9.9.439.1.1.58
ccmeMwiSipSvrUnsolicitedEnabled	1.3.6.1.4.1.9.9.439.1.1.59
ccmeCorConf**Table**	1.3.6.1.4.1.9.9.439.1.1.60
ccmeCorConf	1.3.6.1.4.1.9.9.439.1.1.60.1
ccmeCorTableIndex	1.3.6.1.4.1.9.9.439.1.1.60.1.1
ccmeCorTag	1.3.6.1.4.1.9.9.439.1.1.60.1.2
ccmeCorListName	1.3.6.1.4.1.9.9.439.1.1.60.1.3
ccmeCorScope	1.3.6.1.4.1.9.9.439.1.1.60.1.4
ccmeCorDirection	1.3.6.1.4.1.9.9.439.1.1.60.1.5
ccmeCorStartingNumber	1.3.6.1.4.1.9.9.439.1.1.60.1.6

Table 10 ciscoCcmeMIB Object ID Mapping (continued)

Object Name	Object ID
ccmeCorEndingNumber	1.3.6.1.4.1.9.9.439.1.1.60.1.7
ccmeCorVoiceRegPoolNumber	1.3.6.1.4.1.9.9.439.1.1.60.1.8
ccmeCorListDefaultEnabled	1.3.6.1.4.1.9.9.439.1.1.60.1.9
ccmeLoopbackDnConf**Table**	1.3.6.1.4.1.9.9.439.1.1.61
ccmeLoopbackDnConf	1.3.6.1.4.1.9.9.439.1.1.61.1
ccmeLoopbackDnTag	1.3.6.1.4.1.9.9.439.1.1.61.1.1
ccmeLoopbackDnforward	1.3.6.1.4.1.9.9.439.1.1.61.1.2
ccmeLoopbackDnStrip	1.3.6.1.4.1.9.9.439.1.1.61.1.3
ccmeLoopbackDnPrefix	1.3.6.1.4.1.9.9.439.1.1.61.1.4
ccmeLoopbackDnSuffix	1.3.6.1.4.1.9.9.439.1.1.61.1.5
ccmeLoopbackDnRetryTo	1.3.6.1.4.1.9.9.439.1.1.61.1.6
ccmeLoopbackDnAutoCon	1.3.6.1.4.1.9.9.439.1.1.61.1.7
ccmeLoopbackDnCodec	1.3.6.1.4.1.9.9.439.1.1.61.1.8
ccmeIntercomDnConf**Table**	1.3.6.1.4.1.9.9.439.1.1.62
ccmeIntercomDnConf	1.3.6.1.4.1.9.9.439.1.1.62.1
ccmeIntercomDnTag	1.3.6.1.4.1.9.9.439.1.1.62.1.1
ccmeIntercomDnExtensionNum	1.3.6.1.4.1.9.9.439.1.1.62.1.2
ccmeIntercomDnBargeInEnabled	1.3.6.1.4.1.9.9.439.1.1.62.1.3
ccmeIntercomDnAutoAnsEnabled	1.3.6.1.4.1.9.9.439.1.1.62.1.4
ccmeIntercomDnLabel	1.3.6.1.4.1.9.9.439.1.1.62.1.5
ccmeMohMulticastIpAddress	1.3.6.1.4.1.9.9.439.1.1.63
ccmeMohMulticastPortNumber	1.3.6.1.4.1.9.9.439.1.1.64
ccmeMohMulticastRoute	1.3.6.1.4.1.9.9.439.1.1.65
ccmeMohFlashMulticastIPAddrType	1.3.6.1.4.1.9.9.439.1.1.66
ccmeMohMulticastIpAddressType	1.3.6.1.4.1.9.9.439.1.1.67
ccmeActiveStats	1.3.6.1.4.1.9.9.439.1.2
ccmeEphoneCallLegs	1.3.6.1.4.1.9.9.439.1.2.1
ccmeEphoneTot	1.3.6.1.4.1.9.9.439.1.2.2
ccmeEphoneTotRegistered	1.3.6.1.4.1.9.9.439.1.2.3
ccmeEphoneTotKeyPhConfigured	1.3.6.1.4.1.9.9.439.1.2.4
ccmeEphoneTotKeyPhRegistered	1.3.6.1.4.1.9.9.439.1.2.5
ccmeEphoneAct**Table**	1.3.6.1.4.1.9.9.439.1.2.6
ccmeEphoneAct	1.3.6.1.4.1.9.9.439.1.2.6.1
ccmeEphoneDeviceName	1.3.6.1.4.1.9.9.439.1.2.6.1.1
ccmeEphoneRegState	1.3.6.1.4.1.9.9.439.1.2.6.1.2
ccmeEphoneActiveDN	1.3.6.1.4.1.9.9.439.1.2.6.1.3

Table 10 ciscoCcmeMIB Object ID Mapping (continued)

Object Name	Object ID
ccmeEphoneActivityStatus	1.3.6.1.4.1.9.9.439.1.2.6.1.4
ccmeEphoneKeepAliveCnt	1.3.6.1.4.1.9.9.439.1.2.6.1.5
ccmeEphonePendingReset	1.3.6.1.4.1.9.9.439.1.2.6.1.6
ccmeEphoneRegTime	1.3.6.1.4.1.9.9.439.1.2.6.1.7
ccmeEphoneCurrentFirmwareRev	1.3.6.1.4.1.9.9.439.1.2.6.1.8
ccmeEphonePreviousFirmwareRev	1.3.6.1.4.1.9.9.439.1.2.6.1.9
ccmeEphoneLastError	1.3.6.1.4.1.9.9.439.1.2.6.1.10
ccmeEphoneObservedType	1.3.6.1.4.1.9.9.439.1.2.6.1.11
ccmeEphoneLoginStatus	1.3.6.1.4.1.9.9.439.1.2.6.1.12
ccmeEphoneDnDStatus	1.3.6.1.4.1.9.9.439.1.2.6.1.13
ccmeEphoneDebugStatus	1.3.6.1.4.1.9.9.439.1.2.6.1.14
ccmeEphoneMediaActive	1.3.6.1.4.1.9.9.439.1.2.6.1.15
ccmeEphoneTAPIClient	1.3.6.1.4.1.9.9.439.1.2.6.1.16
ccmeEphoneMediaCapability	1.3.6.1.4.1.9.9.439.1.2.6.1.17
ccmeEphoneRemote	1.3.6.1.4.1.9.9.439.1.2.6.1.18
ccmeMohSource	1.3.6.1.4.1.9.9.439.1.2.7
ccmeNightServiceEnabled	1.3.6.1.4.1.9.9.439.1.2.8
ccmeHistoryStats	1.3.6.1.4.1.9.9.439.1.3
ccmeEphoneDnChStatsHistory**Table**	1.3.6.1.4.1.9.9.439.1.3.1
ccmeEphoneDnChStatsHistory	1.3.6.1.4.1.9.9.439.1.3.1.1
ccmeEphoneDnChNum	1.3.6.1.4.1.9.9.439.1.3.1.1.1
ccmeEphoneDnChIncoming	1.3.6.1.4.1.9.9.439.1.3.1.1.2
ccmeEphoneDnChInAnswered	1.3.6.1.4.1.9.9.439.1.3.1.1.3
ccmeEphoneDnChOutbound	1.3.6.1.4.1.9.9.439.1.3.1.1.4
ccmeEphoneDnChOutAnswered	1.3.6.1.4.1.9.9.439.1.3.1.1.5
ccmeEphoneDnChOutBusy	1.3.6.1.4.1.9.9.439.1.3.1.1.6
ccmeEphoneDnChDiscAtConn	1.3.6.1.4.1.9.9.439.1.3.1.1.7
ccmeEphoneDnChDiscAtAlert	1.3.6.1.4.1.9.9.439.1.3.1.1.8
ccmeEphoneDnChDiscAtHold	1.3.6.1.4.1.9.9.439.1.3.1.1.9
ccmeEphoneDnChDiscAtRing	1.3.6.1.4.1.9.9.439.1.3.1.1.10
ccmeEphoneDnChDiscCauseNearEnd	1.3.6.1.4.1.9.9.439.1.3.1.1.11
ccmeEphoneDnChDiscCauseFarEnd	1.3.6.1.4.1.9.9.439.1.3.1.1.12

Correlation of Tables

The CISCO-CCME-MIB contains the tables listed in Table 11 through Table 28.

Table 11 ccmePhoneFirmware Table

Object Name	Object ID
ccmePhoneFirmware**Table**	1.3.6.1.4.1.9.9.439.1.1.23
ccmePhoneFirmware	1.3.6.1.4.1.9.9.439.1.1.23.1
ccmePhoneFirmwareIndex	1.3.6.1.4.1.9.9.439.1.1.23.1.1
ccmePhoneType	1.3.6.1.4.1.9.9.439.1.1.23.1.2
ccmePhoneFirmwareRev	1.3.6.1.4.1.9.9.439.1.1.23.1.3

Table 12 ccmeTransferPattern Table

Object Name	Object ID
ccmeTransferPattern**Table**	1.3.6.1.4.1.9.9.439.1.1.24
ccmeTransferPattern	1.3.6.1.4.1.9.9.439.1.1.24.1
ccmeTransferPatternIndex	1.3.6.1.4.1.9.9.439.1.1.24.1.1
ccmeTransferPattern	1.3.6.1.4.1.9.9.439.1.1.24.1.2
ccmeTransferPatternType	1.3.6.1.4.1.9.9.439.1.1.24.1.3

Table 13 ccmeAfterHrsBlockPattern Table

Object Name	Object ID
ccmeAfterHrsBlockPattern**Table**	1.3.6.1.4.1.9.9.439.1.1.27
ccmeAfterHrsBlockPattern	1.3.6.1.4.1.9.9.439.1.1.27.1
ccmeAfterHrsBlockPatternTag	1.3.6.1.4.1.9.9.439.1.1.27.1.1
ccmeAfterHrsBlockPattern	1.3.6.1.4.1.9.9.439.1.1.27.1.2
ccmeAfterHrsBlockPatternAllTime	1.3.6.1.4.1.9.9.439.1.1.27.1.3

Table 14 ccmeAfterHrsBlockDate Table

Object Name	Object ID
ccmeAfterHrsBlockDate**Table**	1.3.6.1.4.1.9.9.439.1.1.28
ccmeAfterHrsBlockDate	1.3.6.1.4.1.9.9.439.1.1.28.1
ccmeAfterHrsBlockDateIndex	1.3.6.1.4.1.9.9.439.1.1.28.1.1
ccmeAfterHrsBlockDateMonth	1.3.6.1.4.1.9.9.439.1.1.28.1.2
ccmeAfterHrsBlockDate	1.3.6.1.4.1.9.9.439.1.1.28.1.3
ccmeAfterHrsBlockDateStartHour	1.3.6.1.4.1.9.9.439.1.1.28.1.4
ccmeAfterHrsBlockDateStartMin	1.3.6.1.4.1.9.9.439.1.1.28.1.5

Table 14 ccmeAfterHrsBlockDate Table (continued)

Object Name	Object ID
ccmeAfterHrsBlockDateStopHour	1.3.6.1.4.1.9.9.439.1.1.28.1.6
ccmeAfterHrsBlockDateStopMin	1.3.6.1.4.1.9.9.439.1.1.28.1.7

Table 15 ccmeAfterHrsBlockDay Table

Object Name	Object ID
ccmeAfterHrsBlockDay**Table**	1.3.6.1.4.1.9.9.439.1.1.29
ccmeAfterHrsBlockDay	1.3.6.1.4.1.9.9.439.1.1.29.1
ccmeAfterHrsBlockDayIndex	1.3.6.1.4.1.9.9.439.1.1.29.1.1
ccmeAfterHrsBlockDay	1.3.6.1.4.1.9.9.439.1.1.29.1.2
ccmeAfterHrsBlockDayStartHour	1.3.6.1.4.1.9.9.439.1.1.29.1.3
ccmeAfterHrsBlockDayStartMin	1.3.6.1.4.1.9.9.439.1.1.29.1.4
ccmeAfterHrsBlockDayStopHour	1.3.6.1.4.1.9.9.439.1.1.29.1.5
ccmeAfterHrsBlockDayStopMin	1.3.6.1.4.1.9.9.439.1.1.29.1.6

Table 16 ccmeNightServiceDate Table

Object Name	Object ID
ccmeNightServiceDate**Table**	1.3.6.1.4.1.9.9.439.1.1.31
ccmeNightServiceDate	1.3.6.1.4.1.9.9.439.1.1.31.1
ccmeNightServiceDateIndex	1.3.6.1.4.1.9.9.439.1.1.31.1.1
ccmeNightServiceDateMonth	1.3.6.1.4.1.9.9.439.1.1.31.1.2
ccmeNightServiceDate	1.3.6.1.4.1.9.9.439.1.1.31.1.3
ccmeNightServiceDateStartHour	1.3.6.1.4.1.9.9.439.1.1.31.1.4
ccmeNightServiceDateStartMin	1.3.6.1.4.1.9.9.439.1.1.31.1.5
ccmeNightServiceDateStopHour	1.3.6.1.4.1.9.9.439.1.1.31.1.6
ccmeNightServiceDateStopMin	1.3.6.1.4.1.9.9.439.1.1.31.1.7

Table 17 ccmeNightServiceDay Table

Object Name	Object ID
ccmeNightServiceDay**Table**	1.3.6.1.4.1.9.9.439.1.1.32
ccmeNightServiceDay	1.3.6.1.4.1.9.9.439.1.1.32.1
ccmeNightServiceDayIndex	1.3.6.1.4.1.9.9.439.1.1.32.1.1
ccmeNightServiceDay	1.3.6.1.4.1.9.9.439.1.1.32.1.2
ccmeNightServiceDayStartHour	1.3.6.1.4.1.9.9.439.1.1.32.1.3
ccmeNightServiceDayStartMin	1.3.6.1.4.1.9.9.439.1.1.32.1.4

Table 17 ccmeNightServiceDay Table (continued)

Object Name	Object ID
ccmeNightServiceDayStopHour	1.3.6.1.4.1.9.9.439.1.1.32.1.5
ccmeNightServiceDayStopMin	1.3.6.1.4.1.9.9.439.1.1.32.1.6

Table 18 ccmeDialplanPattern Table

Object Name	Object ID
ccmeDialplanPattern**Table**	1.3.6.1.4.1.9.9.439.1.1.38
ccmeDialplanPattern	1.3.6.1.4.1.9.9.439.1.1.38.1
ccmeDialplanPatternIndex	1.3.6.1.4.1.9.9.439.1.1.38.1.1
ccmeDialplanPatternTag	1.3.6.1.4.1.9.9.439.1.1.38.1.2
ccmeDialplanExtLength	1.3.6.1.4.1.9.9.439.1.1.38.1.3
ccmeDialplanPattern	1.3.6.1.4.1.9.9.439.1.1.38.1.4
ccmeDialplanExtPattern	1.3.6.1.4.1.9.9.439.1.1.38.1.5
ccmeDialplanAllowRegiEnabled	1.3.6.1.4.1.9.9.439.1.1.38.1.6

Table 19 ccmeEphoneConf Table

Object Name	Object ID
ccmeEphoneConf**Table**	1.3.6.1.4.1.9.9.439.1.1.43
ccmeEphoneConf	1.3.6.1.4.1.9.9.439.1.1.43.1
ccmeEphoneTag	1.3.6.1.4.1.9.9.439.1.1.43.1.1
ccmeEphoneIpAddressType	1.3.6.1.4.1.9.9.439.1.1.43.1.2
ccmeEphoneIpAddress	1.3.6.1.4.1.9.9.439.1.1.43.1.3
ccmeEphoneMacAddress	1.3.6.1.4.1.9.9.439.1.1.43.1.4
ccmeEphoneModel	1.3.6.1.4.1.9.9.439.1.1.43.1.5
ccmeEphoneUsername	1.3.6.1.4.1.9.9.439.1.1.43.1.6
ccmeEphoneKeepAlive	1.3.6.1.4.1.9.9.439.1.1.43.1.7
ccmeEphoneAutoLineOut	1.3.6.1.4.1.9.9.439.1.1.43.1.8
ccmeEphonePagingDn	1.3.6.1.4.1.9.9.439.1.1.43.1.9
ccmeEphoneAddon	1.3.6.1.4.1.9.9.439.1.1.43.1.10
ccmeEphoneTemplate	1.3.6.1.4.1.9.9.439.1.1.43.1.11
ccmeEphonePagingPolicy	1.3.6.1.4.1.9.9.439.1.1.43.1.12
ccmeEphoneKeyPhone	1.3.6.1.4.1.9.9.439.1.1.43.1.13
ccmeEphoneAutoLineInEnabled	1.3.6.1.4.1.9.9.439.1.1.43.1.14
ccmeEphoneAftHrsBlkExmptEnabled	1.3.6.1.4.1.9.9.439.1.1.43.1.15
ccmeEphoneNightBellSvcEnabled	1.3.6.1.4.1.9.9.439.1.1.43.1.16
ccmeEphoneKeepConfEnabled	1.3.6.1.4.1.9.9.439.1.1.43.1.17

Table 20 ccmeEphoneSpeedDialConf Table

Object Name	Object ID
ccmeEphoneSpeedDialConf**Table**	1.3.6.1.4.1.9.9.439.1.1.44
ccmeEphoneSpeedDialConf	1.3.6.1.4.1.9.9.439.1.1.44.1
ccmeEphoneSpeedDialTableIndex	1.3.6.1.4.1.9.9.439.1.1.44.1.1
ccmeEphoneSpeedDialTag	1.3.6.1.4.1.9.9.439.1.1.44.1.2
ccmeEphoneSpeedDialNumber	1.3.6.1.4.1.9.9.439.1.1.44.1.3
ccmeEphoneSpeedDialLabel	1.3.6.1.4.1.9.9.439.1.1.44.1.4

Table 21 ccmeEphoneFastDialConf Table

Object Name	Object ID
ccmeEphoneFastDialConf**Table**	1.3.6.1.4.1.9.9.439.1.1.45
ccmeEphoneFastDialConf	1.3.6.1.4.1.9.9.439.1.1.45.1
ccmeEphoneFastDialTableIndex	1.3.6.1.4.1.9.9.439.1.1.45.1.1
ccmeEphoneFastDialNumber	1.3.6.1.4.1.9.9.439.1.1.45.1.2
ccmeEphoneFastDialName	1.3.6.1.4.1.9.9.439.1.1.45.1.3

Table 22 ccmeEphoneBtnDNAssocConf Table

Object Name	Object ID
ccmeEphoneBtnDNAssocConf**Table**	1.3.6.1.4.1.9.9.439.1.1.46
ccmeEphoneBtnDNAssocConf	1.3.6.1.4.1.9.9.439.1.1.46.1
ccmeEphoneButtonNumber	1.3.6.1.4.1.9.9.439.1.1.46.1.1
ccmeEphoneOverlayDN	1.3.6.1.4.1.9.9.439.1.1.46.1.2

Table 23 ccmeEphoneDNConfig Table

Object Name	Object ID
ccmeEphoneDnConfig**Table**	1.3.6.1.4.1.9.9.439.1.1.47
ccmeEphoneDnConfig	1.3.6.1.4.1.9.9.439.1.1.47.1
ccmeEphoneDnTag	1.3.6.1.4.1.9.9.439.1.1.47.1.1
ccmeEphoneDnType	1.3.6.1.4.1.9.9.439.1.1.47.1.2
ccmeEphoneDnMode	1.3.6.1.4.1.9.9.439.1.1.47.1.3
ccmeEphoneDnPriNum	1.3.6.1.4.1.9.9.439.1.1.47.1.4
ccmeEphoneDnSecNum	1.3.6.1.4.1.9.9.439.1.1.47.1.5
ccmeEphoneDnName	1.3.6.1.4.1.9.9.439.1.1.47.1.6
ccmeEphoneDnLabel	1.3.6.1.4.1.9.9.439.1.1.47.1.7
ccmeEphoneDnPriPref	1.3.6.1.4.1.9.9.439.1.1.47.1.8

Table 23 ccmeEphoneDNConfig Table (continued)

Object Name	Object ID
ccmeEphoneDnSecPref	1.3.6.1.4.1.9.9.439.1.1.47.1.9
ccmeEphoneDnCFBusyNum	1.3.6.1.4.1.9.9.439.1.1.47.1.10
ccmeEphoneDnCFAllNum	1.3.6.1.4.1.9.9.439.1.1.47.1.11
ccmeEphoneDnCFNoAnNum	1.3.6.1.4.1.9.9.439.1.1.47.1.12
ccmeEphoneDnCFNoAnTo	1.3.6.1.4.1.9.9.439.1.1.47.1.13
ccmeEphoneDnMwiCapability	1.3.6.1.4.1.9.9.439.1.1.47.1.14
ccmeEphoneDnHuntstop	1.3.6.1.4.1.9.9.439.1.1.47.1.15
ccmeEphoneDnHuntstopCh	1.3.6.1.4.1.9.9.439.1.1.47.1.16
ccmeEphoneDnHoldAltTo	1.3.6.1.4.1.9.9.439.1.1.47.1.17
ccmeEphoneDnHoldAltType	1.3.6.1.4.1.9.9.439.1.1.47.1.18
ccmeEphoneDnMwiSipSubscrEnabled	1.3.6.1.4.1.9.9.439.1.1.47.1.19
ccmeEphoneDnScriptName	1.3.6.1.4.1.9.9.439.1.1.47.1.20

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Table 24 ccmeCorConf Table

Object Name	Object ID
ccmeCorConf**Table**	1.3.6.1.4.1.9.9.439.1.1.60
ccmeCorConf	1.3.6.1.4.1.9.9.439.1.1.60.1
ccmeCorTableIndex	1.3.6.1.4.1.9.9.439.1.1.60.1.1
ccmeCorTag	1.3.6.1.4.1.9.9.439.1.1.60.1.2
ccmeCorListName	1.3.6.1.4.1.9.9.439.1.1.60.1.3
ccmeCorScope	1.3.6.1.4.1.9.9.439.1.1.60.1.4
ccmeCorDirection	1.3.6.1.4.1.9.9.439.1.1.60.1.5
ccmeCorStartingNumber	1.3.6.1.4.1.9.9.439.1.1.60.1.6
ccmeCorEndingNumber	1.3.6.1.4.1.9.9.439.1.1.60.1.7
ccmeCorVoiceRegPoolNumber	1.3.6.1.4.1.9.9.439.1.1.60.1.8
ccmeCorListDefaultEnabled	1.3.6.1.4.1.9.9.439.1.1.60.1.9

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Table 25 ccmeLoopbackDnConf Table

Object Name	Object ID
ccmeLoopbackDnConf**Table**	1.3.6.1.4.1.9.9.439.1.1.61
ccmeLoopbackDnConf	1.3.6.1.4.1.9.9.439.1.1.61.1
ccmeLoopbackDnTag	1.3.6.1.4.1.9.9.439.1.1.61.1.1
ccmeLoopbackDnforward	1.3.6.1.4.1.9.9.439.1.1.61.1.2
ccmeLoopbackDnStrip	1.3.6.1.4.1.9.9.439.1.1.61.1.3
ccmeLoopbackDnPrefix	1.3.6.1.4.1.9.9.439.1.1.61.1.4

Table 25 ccmeLoopbackDnConf Table (continued)

Object Name	Object ID
ccmeLoopbackDnSuffix	1.3.6.1.4.1.9.9.439.1.1.61.1.5
ccmeLoopbackDnRetryTo	1.3.6.1.4.1.9.9.439.1.1.61.1.6
ccmeLoopbackDnAutoCon	1.3.6.1.4.1.9.9.439.1.1.61.1.7
ccmeLoopbackDnCodec	1.3.6.1.4.1.9.9.439.1.1.61.1.8

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Table 26 ccmeIntercomDnConf Table

Object Name	Object ID
ccmeIntercomDnConf**Table**	1.3.6.1.4.1.9.9.439.1.1.62
ccmeIntercomDnConf	1.3.6.1.4.1.9.9.439.1.1.62.1
ccmeIntercomDnTag	1.3.6.1.4.1.9.9.439.1.1.62.1.1
ccmeIntercomDnExtensionNum	1.3.6.1.4.1.9.9.439.1.1.62.1.2
ccmeIntercomDnBargeInEnabled	1.3.6.1.4.1.9.9.439.1.1.62.1.3
ccmeIntercomDnAutoAnsEnabled	1.3.6.1.4.1.9.9.439.1.1.62.1.4
ccmeIntercomDnLabel	1.3.6.1.4.1.9.9.439.1.1.62.1.5

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Table 27 ccmeEphoneAct Table

Object Name	Object ID
ccmeEphoneAct**Table**	1.3.6.1.4.1.9.9.439.1.2.6
ccmeEphoneAct	1.3.6.1.4.1.9.9.439.1.2.6.1
ccmeEphoneDeviceName	1.3.6.1.4.1.9.9.439.1.2.6.1.1
ccmeEphoneRegState	1.3.6.1.4.1.9.9.439.1.2.6.1.2
ccmeEphoneActiveDN	1.3.6.1.4.1.9.9.439.1.2.6.1.3
ccmeEphoneActivityStatus	1.3.6.1.4.1.9.9.439.1.2.6.1.4
ccmeEphoneKeepAliveCnt	1.3.6.1.4.1.9.9.439.1.2.6.1.5
ccmeEphonePendingReset	1.3.6.1.4.1.9.9.439.1.2.6.1.6
ccmeEphoneRegTime	1.3.6.1.4.1.9.9.439.1.2.6.1.7
ccmeEphoneCurrentFirmwareRev	1.3.6.1.4.1.9.9.439.1.2.6.1.8
ccmeEphonePreviousFirmwareRev	1.3.6.1.4.1.9.9.439.1.2.6.1.9
ccmeEphoneLastError	1.3.6.1.4.1.9.9.439.1.2.6.1.10
ccmeEphoneObservedType	1.3.6.1.4.1.9.9.439.1.2.6.1.11
ccmeEphoneLoginStatus	1.3.6.1.4.1.9.9.439.1.2.6.1.12
ccmeEphoneDnDStatus	1.3.6.1.4.1.9.9.439.1.2.6.1.13
ccmeEphoneDebugStatus	1.3.6.1.4.1.9.9.439.1.2.6.1.14
ccmeEphoneMediaActive	1.3.6.1.4.1.9.9.439.1.2.6.1.15
ccmeEphoneTAPIClient	1.3.6.1.4.1.9.9.439.1.2.6.1.16

Table 27 ccmeEphoneAct Table (continued)

Object Name	Object ID
ccmeEphoneMediaCapability	1.3.6.1.4.1.9.9.439.1.2.6.1.17
ccmeEphoneRemote	1.3.6.1.4.1.9.9.439.1.2.6.1.18

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Table 28 ccmeEphoneDnChStatsHistory Table

Object Name	Object ID
ccmeEphoneDnChStatsHistory**Table**	1.3.6.1.4.1.9.9.439.1.3.1
ccmeEphoneDnChStatsHistory	1.3.6.1.4.1.9.9.439.1.3.1.1
ccmeEphoneDnChNum	1.3.6.1.4.1.9.9.439.1.3.1.1.1
ccmeEphoneDnChIncoming	1.3.6.1.4.1.9.9.439.1.3.1.1.2
ccmeEphoneDnChInAnswered	1.3.6.1.4.1.9.9.439.1.3.1.1.3
ccmeEphoneDnChOutbound	1.3.6.1.4.1.9.9.439.1.3.1.1.4
ccmeEphoneDnChOutAnswered	1.3.6.1.4.1.9.9.439.1.3.1.1.5
ccmeEphoneDnChOutBusy	1.3.6.1.4.1.9.9.439.1.3.1.1.6
ccmeEphoneDnChDiscAtConn	1.3.6.1.4.1.9.9.439.1.3.1.1.7
ccmeEphoneDnChDiscAtAlert	1.3.6.1.4.1.9.9.439.1.3.1.1.8
ccmeEphoneDnChDiscAtHold	1.3.6.1.4.1.9.9.439.1.3.1.1.9
ccmeEphoneDnChDiscAtRing	1.3.6.1.4.1.9.9.439.1.3.1.1.10
ccmeEphoneDnChDiscCauseNearEnd	1.3.6.1.4.1.9.9.439.1.3.1.1.11
ccmeEphoneDnChDiscCauseFarEnd	1.3.6.1.4.1.9.9.439.1.3.1.1.12

Cisco CME Traps and Notifications

Cisco CME SNMP traps are unsolicited notifications of an unusual or a catastrophic system event sent to the system administrator.

Traps are sent for the following scenarios:

- ccmeStatusChangeNotif
- ccmeEphoneUnRegThresholdExceed
- ccmeEPhoneDeceased
- ccmeEPhoneRegFailed
- ccmeEphoneLoginFailed
- ccmeNightServiceChangeNotif
- ccmeLivefeedMohFailedNotif
- ccmeMaxConferenceNotif
- ccmeKeyEphoneRegChangeNotif

Note Traps are sent by modem or by ISDN dial-backup links to a secondary NMS when the primary links are down (this is done through the configuration in Cisco CME router).

Notifications are asynchronously generated by Cisco CME to pass information about certain device status changes. Table 29 through Table 36 list and describe these notifications.

Table 29 ccmeStatusChangeNotif

ccmeSysNotificationReason	ccmeSysTrapSeverity	Corrective Action
CCME shutdown	Major	
Skinny server initialization failed—Socket initialization failed	Major	
Skinny server initialization failed—not enough memory	Major	
CCME started successfully	Clear	

Table 30 ccmeNightServiceChangeNotif

ccmeEphoneTrapReason	Corrective Action
Night service activated for Ephone <ephone-tag>	None

Table 31 ccmeLivefeedMohFailedNotif

ccmeEphoneTrapReason	Corrective Action
Music-on-Hold live feed failed	None
Music-on-Hold live feed terminated on DN <ephone-DN tag>	None

Table 32 ccmeNightServiceChangeNotif

ccmeEphoneTrapReason	Corrective Action
Night service activated for ephone <ephone-tag>	None

Table 33 ccmeMaxConferenceNotif

ccmeEphoneTrapReason	Corrective Action
Maximum number of supported conferences reached	None

Table 34 ccmeEPhoneRegFailed

ccmeEphoneTrapReason	Corrective Action
Ephone associate failed: maximum phone count exceeded on socket	None

Table 35 ccmeEphoneLoginFailed

ccmeEphoneTrapReason	Corrective Action
Ephone user login failed	None

Table 36 Generic Traps

ccmeEphoneTrap Name	Corrective Action
ccmeEphoneUnRegThresholdExceed	None
ccmeEPhoneDeceased	None
ccmeKeyEphoneRegChangeNotif	None

Additional References

The following sections provide references related to Cisco CME SNMP MIB Support.

Related Documents

Related Topic	Document Title
Configuring an SNMP server for use with a MIB	"Configuring SNMP Support" chapter of the *Cisco IOS Configuration Fundamentals and Network Management Configuration Guide* at http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/122cgcr/ffun_c/fcfprt3/fcf014.htm
Configuring Cisco CME	*Cisco CME System Administration Guide* at the following URLs: http://www.cisco.com/univercd/cc/td/doc/product/access/ip_ph/ip_ks/cme32/cme32sa/csa32.pdf http://www.cisco.com/application/pdf/en/us/guest/products/ps5980/c2001/ccmigration_09186a00802d232d.pdf
Configuring Cisco IP phones (ephones) and ephone-dns on the router	Cisco CME documents listed at http://www.cisco.com/en/US/partner/products/sw/voicesw/ps4625/products_documentation_roadmap09186a0080189132.html)
MIBs that Cisco implements	Start at ftp-eng.cisco.com with ftp://ftp-eng.cisco.com/pub/mibs/README

MIBs

MIB	MIBs Link
• CISCO-CCM-MIB • CISCO-CCME-MIB • CISCO-VOICE-DIAL-CONTROL-MIB	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

RFCs

RFC	Title
RFC 826	*Ethernet Address Resolution Protocol: Or converting network protocol addresses to 48.bit Ethernet address for transmission on Ethernet hardware*
RFC 1212	*Concise MIB definitions*
RFC 1213	*Management Information Base for Network Management of TCP/IP-based Internets: MIB-II*
RFC 1573	*Evolution of the Interfaces Group of MIB-II*
RFC 1902	*Structure of Management Information for Version 2 of the Simple Network Management Protocol (SNMPv2)*
RFC 1904	*Conformance Statements for Version 2 of the Simple Network Management Protocol (SNMPv2)*

Technical Assistance

Description	Link
The Cisco Technical Support & Documentation website contains thousands of pages of searchable technical content, including links to products, technologies, solutions, technical tips, and tools. Registered Cisco.com users can log in from this page to access even more content.	http://www.cisco.com/techsupport

Glossary

ARP—Address Resolution Protocol. Internet protocol used to map an IP address to a MAC address. Defined in RFC 826.

ATA—Analog telephone adaptor.

BRI—Basic Rate Interface. ISDN interface composed of two B channels and one D channel for circuit-switched communication of voice, video, and data.

COR—Class of restriction. Functionality that provides the capability to deny certain call attempts based on the incoming and outgoing class of restrictions provisioned on the dial peers. This functionality provides flexibility in network design, allows users to block calls (for example, to 900 numbers), and applies different restrictions to call attempts from different originators. COR specifies which incoming dial peer can use which outgoing dial peer to make a call.

DN—Dialed number. Number that a caller dialed to initiate a call; for example, 800-555-1212.

Ephone—Ethernet phone. Phone that operates in an IP-telephony environment.

FXO—Foreign-exchange office. An FXO interface connects to the PSTN central office and is the interface offered on a standard telephone. Cisco's FXO interface is an RJ-11 connector that allows an analog connection at the PSTN central office or to a station interface on a PBX.

IETF—Internet Engineering Task Force. Task force consisting of over 80 working groups responsible for developing Internet standards. The IETF operates under the auspices of ISOC.

IVR—Interactive voice response. Term used to describe systems that provide information in the form of recorded messages over telephone lines in response to user input in the form of spoken words or, more commonly, DTMF signaling. Examples include banks that allow you to check your balance from any telephone and automated stock quote systems.

LAN—Local area network. High-speed, low-error data network covering a relatively small geographic area (up to a few thousand meters). LANs connect workstations, peripherals, terminals, and other devices in a single building or other geographically limited area. LAN standards specify cabling and signaling at the physical and data link layers of the OSI model. Ethernet, FDDI, and Token Ring are widely used LAN technologies.

MIB—Management information base. Database of network management information that is used and maintained by a network management protocol, such as SNMP or CMIP. The value of a MIB object can be changed or retrieved using SNMP or CMIP commands, usually through a GUI network management system. MIB objects are organized in a tree structure that includes public (standard) and private (proprietary) branches.

MOH—Music on hold. Music that plays while a user is on hold.

MWI—Message-waiting indicator. Usually an audio or visual signal that a voice-mail or other type of message is waiting.

NMS—Network management system. System responsible for managing at least part of a network. An NMS is generally a reasonably powerful and well-equipped computer, such as an engineering workstation. NMSs communicate with agents to help keep track of network statistics and resources.

PLAR—Private line, automatic ringdown. Leased voice circuit that connects two single endpoints together. When either telephone handset is taken off-hook, the remote telephone automatically rings.

PRI—Primary Rate Interface. ISDN interface to primary rate access. Primary rate access consists of a single 64-kbps D channel plus 23 (T1) or 30 (E1) B channels for voice or data.

RFC—Request for comment. Document series used as the primary means for communicating information about the Internet. Some RFCs are designated by the IAB as Internet standards. Most RFCs document protocol specifications, such as Telnet and FTP, but some are humorous or historical. RFCs are available online from numerous sources.

SCCP—Skinny Call Control Protocol. Proprietary protocol used between Cisco CallManager and Cisco VoIP ephones.

SIP—Session Initiation Protocol. Protocol developed by the IETF MMUSIC Working Group as an alternative to H.323. SIP equips platforms to signal the setup of voice and multimedia calls over IP networks.

SNMP—Simple Network Management Protocol. Network-management protocol used almost exclusively in TCP/IP networks. SNMP provides a means to monitor and control network devices and to manage configurations, statistics collection, performance, and security.

SRST—Survivable Remote Site Telephony. Critical component of a centralized call-processing architecture in which a Cisco CallManager cluster and application servers at a central site provide telephony services for all sites of a corporation. With tens of thousands of sites deployed, this architecture now represents the majority of IP telephony deployments because of the many benefits it delivers.

Tcl—Tool Command Language. An interpreted scripting language for enabling systems to collect user input in response to recorded messages over telephone lines.

Note See *Internetworking Terms and Acronyms* for terms not included in this glossary.

Feature Information for Cisco CME SNMP MIB Support

Table 37 lists the release history for this feature.

Not all commands may be available in your Cisco IOS software release. For release information about a specific command, see the command-reference documentation.

Cisco IOS software images are specific to a Cisco IOS software release, a feature set, and a platform. Use Cisco Feature Navigator to find information about platform support and Cisco IOS software image support. Access Cisco Feature Navigator at http://www.cisco.com/go/fn. You must have an account on Cisco.com. If you do not have an account or have forgotten your username or password, click **Cancel** at the login dialog box and follow the instructions that appear.

Note Table 37 lists only the Cisco IOS software release that introduced support for a given feature in a given Cisco IOS software release train. Unless noted otherwise, subsequent releases of that Cisco IOS software release train also support that feature.

Table 37 Feature Information for Cisco SNMP MIB Support

Feature Name	Cisco IOS Release	Cisco CME Version	Feature Information
Cisco CME SNMP MIB Support	12.4(4)T	3.4	This feature provides support for the CISCO-CCME-MIB. With Cisco IOS Release 12.3(4)T and Cisco CME 3.4, this feature was introduced.