C H A P T E R 4

Cisco Carrier Routing System MIB Specifications

This chapter describes the Management Information Base (MIB) on the Cisco Carrier Routing System. Each MIB description lists any constraints on how the MIB or its object identifiers (OIDs) are implemented on the Cisco Carrier Routing System.

Unless noted otherwise, the Cisco Carrier Routing System implementation of a MIB follows the standard MIB that has been defined. Any MIB table or object not listed in the table is implemented as defined in the standard MIB definition.

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Cisco Carrier Routing System MIBs

Each MIB description lists relevant constraints about the implementation of the MIB on the Cisco Carrier Routing System. Any objects not listed in a table are implemented as defined in the MIB. For detailed MIB descriptions, see the standard MIB.

Note Not all MIBs included in a Cisco IOS XR Software release are fully supported by the router. Some MIBs are not supported at all. Other MIBs might work, but they have not been tested on the router. In addition, some MIBs are deprecated but cannot be removed from the software. When a MIB is included in the image, this does not necessarily mean it is supported by the Cisco Carrier Routing System platform.

To determine which MIBs are included in other releases, see the "Downloading and Compiling MIBs" section on page 2-7.

Cisco Carrier Routing System MIB Categories

The MIBs in the Cisco Carrier Routing System are categorized into three types:

- see the "Supported and Verified MIBs" section on page 4-154
- see the "Supported and Unverified MIBs" section on page 4-154
- see the "Unverified or Unsupported MIBs" section on page 4-154

Supported and Verified MIBs

The MIB exists in the image, the code is implemented, and Cisco has verified that all the supported objects work properly. These MIBs are tested for the Cisco Carrier Routing System.

Supported and Unverified MIBs

The MIB exists in the image, the code is implemented, but we have not verified if it is working properly. In other words, the user may get something if they query the MIB. However, the information may be correct or incorrect the MIB has not been tested. These MIBs are not tested for the Cisco Carrier Routing System support.

Unverified or Unsupported MIBs

The MIB exists in the image but is either not tested or not supported. These MIBs are neither tested nor supported for the Cisco Carrier Routing System.

MIB Version String Description

The MIB version string indicates the date and time that the module was most recently modified. The format is YYMMDDHHMMZ or YYYYMMDDHHMMZ, where:

- YY is the last two digits of the year (only years between 1900 and 1999).
- YYYY is all four digits of the year (any year).
- MM is the month (01 through 12).
- DD is the day of the month (01 through 31).
- HH is hours (00 through 23).
- MM is minutes (00 through 59).
- Z (the ASCII character Z) denotes Coordinated Universal Time (UTC, formerly Greenwich Mean Time, GMT). This datatype stores the date and time fields YEAR, MONTH, DAY, HOUR, MINUTE, SECOND, TIMEZONE_HOUR, and TIMEZONE_MINUTE.

Note   For example, 9502192015Z and 199502192015Z represent 8:15 GMT on 19 February 1995. Years after 1999 use the four-digit format. Years 1900–1999 may use the two or four digit format.

> **Note**   In the following table the term *Revision not available* refers to the MIB module that does not have a recorded time stamp indicating the latest modification.

MIBs in the Cisco Carrier Routing System

Table 4-1 lists the MIBs in the Cisco Carrier Routing System.

Table 4-1   *MIBs in the Cisco Carrier Routing System*

MIB	midb process	Supported		Unsupported or Unverified	Not in Image
		Verified	Unverified		
CISCO-MAU-EXT-MIB	mibd-interface				
• Release 3.7		200803050000Z	—	—	—
• Release 3.9		200803050000Z			
• Release 4.0		200803050000Z			
• Release 4.2		200803050000Z			
• Release 4.3		200803050000Z			
IANA-MAU-MIB	—				
• Release 3.7		—	—	—	—
• Release 3.9					
• Release 4.0					
• Release 4.2					
• Release 4.3					
MAU-MIB	mibd-interface				
• Release 3.7		200309190000Z	—	—	—
• Release 3.9		200309190000Z			
• Release 4.0		200309190000Z			
• Release 4.2		200309190000Z			
• Release 4.3		200309190000Z			

CISCO-MAU-EXT-MIB

The CISCO-MAU-EXT-MIB extends the MAU-MIB (RFC 3636) to add objects which provide additional management information about MAU or Jack not available in MAU-MIB.

Table 4-2 lists the tables associated with this MIB.

Table 4-2   CISCO-MAU-EXT-MIB Tables and Descriptions

Name	Description
cmExtJackConfigTable	This table contains management information about MAUs attached to interfaces with managed jacks. The objects in this table are in addition to the objects in the ifJackTable.
cmExtIfAutoMdixConfigTable	This table contains Auto-MDIX configuration information for MAUs attached to interfaces in the device. An entry appears in this table for each active Auto-MDIX capable MAU connected to interfaces in the device.
cmExtIfMauTrafficTable	(conceptual) Table that identifies the type of traffic carried by the interfaces associated with the MAUs in the device. This table is sparse dependant on ifMauTable.

MIB Constraints

Table 4-3 lists the constraints that the Cisco Carrier Routing System places on objects in the MAU-MIB. For detailed definitions of MIB objects, see the MIB.

Table 4-3   CISCO-MAU-EXT-MIB Constraints

MIB Object	Notes
cmExtJackConfigTable	Not supported
cmExtIfAutoMdixConfigTable	Not supported

IANA-MAU-MIB

The IANA-MAU-MIB does not define any management objects. Instead, it defines a set of textual conventions which are used by the MAU-MIB and may be used by other MIB modules to define management objects. Meaningful security considerations can only be written for MIB modules that define management objects. This MIB is required by the MAU-MIB to export the IANAifMauTypeListBits, IANAifMauMediaAvailable, IANAifMauAutoNegCapBits, and IANAifJackType definitions.

Note   None of the objects defined in this MIB are supported.

MAU-MIB

The MAU-MIB describes Management Information for 802.3 MAUs.

Table 4-4 lists the tables associated with this MIB.

Table 4-4   MAU-MIB Tables and Descriptions

Name	Description
rpMauTable	Table of descriptive and status information about the MAU attached to the ports of a repeater.
rpJackTable	Information about the external jacks attached to MAUs attached to the ports of a repeater.
ifMauTable	Table of descriptive and status information about MAU(s) attached to an interface.
ifJackTable	Information about the external jacks attached to MAUs attached to an interface.
ifMauAutoNegTable	Configuration and status objects for the auto-negotiation function of MAUs attached to interfaces.
broadMauBasicTable	Table of descriptive and status information about the broadband MAUs connected to interfaces. This entire table has been deprecated. There have been no reported implementations of this table, and it is unlikely that there ever will be. IEEE recommends that broadband MAU types should not be used for new installations.

MIB Constraints

Table 4-5 lists the constraints that the Cisco Carrier Routing System places on objects in the MAU-MIB. For detailed definitions of MIB objects, see the MIB. In addition to the constraints listed in the table, MAU-MIB only supports managing Control-Ethernet (CE) interfaces. There is no support for data plane Ethernet-like interfaces.

Note   Set Operation on MAU-MIB objects is not supported.

Table 4-5   MAU-MIB Constraints

MIB Object	Notes
rpMauTable	Not supported
rpJackTable	Not supported
Traps (ifMauJabberTrap)	Not supported. Not applicable to CE interfaces.

■ **MAU-MIB**