MIB Reference for Cisco UCS Manager

First Published: December 19, 2010

Last Modified: July 10, 2013

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Text Part Number: OL-20152-06

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Preface

This preface includes the following sections:

Conventions

Text Type	Indication
GUI elements	GUI elements such as tab titles, area names, and field labels appear in **this font**. Main titles such as window, dialog box, and wizard titles appear in **this font**.
Document titles	Document titles appear in *this font*.
TUI elements	In a Text-based User Interface, text the system displays appears in `this font`.
System output	Terminal sessions and information that the system displays appear in `this font`.
CLI commands	CLI command keywords appear in **this font**. Variables in a CLI command appear in *this font*.
[ ]	Elements in square brackets are optional.
{x | y | z}	Required alternative keywords are grouped in braces and separated by vertical bars.
[x | y | z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.

Text Type	Indication
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
< >	Nonprinting characters such as passwords are in angle brackets.
[ ]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

Note Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the document.

Tip Means *the following information will help you solve a problem*. The tips information might not be troubleshooting or even an action, but could be useful information, similar to a Timesaver.

Caution Means *reader be careful*. In this situation, you might perform an action that could result in equipment damage or loss of data.

Timesaver Means *the described action saves time*. You can save time by performing the action described in the paragraph.

Warning IMPORTANT SAFETY INSTRUCTIONS

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device.

SAVE THESE INSTRUCTIONS

Related Cisco UCS Documentation

Documentation Roadmaps

For a complete list of all B-Series documentation, see the *Cisco UCS B-Series Servers Documentation Roadmap* available at the following URL: http://www.cisco.com/go/unifiedcomputing/b-series-doc.

For a complete list of all C-Series documentation, see the *Cisco UCS C-Series Servers Documentation Roadmap* available at the following URL: http://www.cisco.com/go/unifiedcomputing/c-series-doc.

Other Documentation Resources

An ISO file containing all B and C-Series documents is available at the following URL: http://www.cisco.com/cisco/software/type.html?mdfid=283853163&flowid=25821. From this page, click **Unified Computing System (UCS) Documentation Roadmap Bundle**.

The ISO file is updated after every major documentation release.

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Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.

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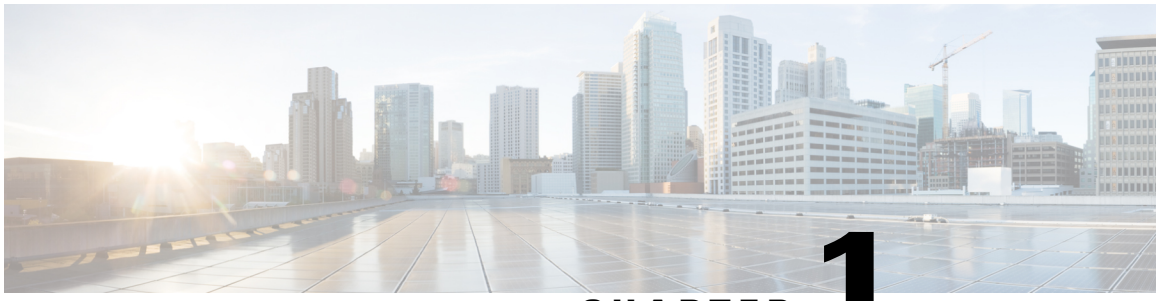


CHAPTER 1

About Cisco UCS MIB Files

This chapter includes the following sections:

Cisco UCS MIB Files

Cisco UCS MIB files are a set of objects that are private extensions to the IETF standard MIB II. MIB II is documented in RFC 1213, *Management Information Base for Network Management of TCP/IP-based Internets: MIB-II*. Portions of MIB-II have been updated since RFC 1213. See the IETF website http://www.ietf.org for the latest updates to this MIB.

If your NMS cannot get requested information from a fabric interconnect or Cisco UCS Manager, then the MIB that allows that specific data collection might be missing. Typically, if an NMS cannot retrieve a particular MIB variable, either the NMS does not recognize that MIB variable, or the agent does not support the MIB variable. If the NMS does not recognize a specific MIB variable, you might need to load the MIB into the NMS, usually with a MIB compiler. For example, you might need to load the Cisco UCS private MIB or the supported RFC MIB into the NMS to execute the required data collection. If the agent does not support a specific MIB variable, you must find out what version of system software you are running. Different software releases support different MIBs.

Note Cisco and IETF MIBs are updated frequently. You should download the latest MIBs from Cisco.com whenever you upgrade the Cisco UCS software versions.

Cisco UCS MIB Support List Locations

See the following support lists:

- For Cisco UCS Manager, Release 1.4 and later, see: ftp://ftp.cisco.com/pub/mibs/supportlists/ucs/ucs-manager-supportlist.html

Cisco UCS Manager

In Cisco UCS, a fault is a mutable object that is managed by Cisco UCS Manager. Each fault represents a failure in the Cisco UCS instance or an alarm threshold that has been raised. During the life cycle of a fault, it can change from one state or severity to another.

Each fault includes information about the operational state of the affected object at the time the fault was raised. If the fault is transitional and the failure is resolved, then the object transitions to a functional state.

A fault remains in Cisco UCS Manager until the fault is cleared and deleted according to the settings in the fault collection policy.

The following table lists the Cisco UCS traps included in the CISCO-UNIFIED-COMPUTING-NOTIF-MIB.

Table 1: CISCO-UNIFIED-COMPUTING-NOTIF-MIB Traps

Trap	Description
cucsFaultActiveNotif The OID for this SNMP trap is .1.3.6.1.4.1.9.9.719.0.1.	This notification is generated by a Cisco UCS instance whenever a fault is raised.
cucsFaultClearNotif The OID for this SNMP trap is .1.3.6.1.4.1.9.9.719.0.2.	This notification is generated by a Cisco UCS instance whenever a fault is cleared.

All Cisco UCS Manager faults are available with SNMP using the cucsFaultTable table and the CISCO-UNIFIED-COMUTING-FAULT-MIB. The table contains one entry for every fault instance. Each entry has variables to indicate the nature of a problem, such as its severity and type. The same object is used to model all Cisco UCS fault types, including equipment problems, FSM failures, configuration or environmental issues, and connectivity issues. The cucsFaultTable table includes all active faults (those that have been raised and need user attention), and all faults that have been cleared but not yet deleted because of the retention interval.

The **cucsFaultTable** table has the same information as the <*faultInst*> objects that can be queried through the XML API. In the Cisco UCS Manager GUI, faults are available in from the **Admin** tab under **All** > **Faults, Events and Audit Logs** > **Faults**.

The following table describes the attributes exposed by the cucsFaultTable.

Table 2: cucsFaultTable Attritubes

Attribute	Description
Fault Instance ID (Table Index)	A unique integer that identifies the fault.
Affected Object DN	The distinguished name of the mutable object that has the fault.
Affected Object OID	The Object identifier (OID) of the mutable object that has the fault.
Creation Time	The time that the fault was created.
Last Modification	The time when any of the attributes were modified.
Code	A code that provides information specific to the nature of the fault.
Type	The fault type.
Cause	The probable cause of the fault.
Severity	The severity of the fault.
Occurrence	The number of times that a fault has occurred since it was created.
Description	A human readable string that contains all information related to the fault.

In Release 1.3 and later, Cisco UCS Manager sends a cucsFaultActiveNotif event notification whenever a fault is raised. There is one exception to this rule: Cisco UCS Manager does not send event notifications for FSM faults. The trap variables indicate the nature of the problem, including the fault type. Cisco UCS Manager sends a cucsFaultClearNotif event notification whenever a fault has been cleared. A fault is cleared when the underlying issue has been resolved.

In Release 1.4 and later, the cucsFaultActiveNotif and cucsFaultClearNotif traps are defined in the CISCO-UNIFIED-COMPUTING-NOTIFS-MIB. All faults can be polled using SNMP GET operations on the cucsFaultTable, which is defined in the CISO-UNIFIED-COMPUTING-FAULT-MIB.

For more details about Cisco UCS Manager faults, see Cisco UCS Faults and Error Messages Reference.

Use Cases for Cisco UCS Manager MIBs

Common use cases for Cisco UCS Manager MIBs are described below.

Receiving Fault Event Notifications

If you want to use SNMP traps for fault event notification in your NMS, you must first load the prerequisite MIBs (see Prerequisite MIBs, on page 11), then load the MIBs listed below.

Important You should load the MIBs in the order listed to eliminate most of the load-order issues.

- CISCO-UNIFIED-COMPUTING-MIB.my
- CISCO-UNIFIED-COMPUTING-TC-MIB.my
- CISCO-UNIFIED-COMPUTING-FAULT-MIB.my
- CISCO-UNIFIED-COMPUTING-NOTIFS-MIB.my

The following table describes the traps included in the CISCO-UNIFIED-COMPUTING-NOTIFS-MIB.

Table 3: CISCO-UNIFIED-COMPUTING-NOTIFS MIB Traps

Trap	Description
cucsFaultActiveNotif The OID that corresponds to this SNMP trap is .1.3.6.1.4.1.9.9.719.0.1.	This notification is generated by a Cisco UCS instance whenever a fault is raised.
cucsFaultClearNotif The OID that corresponds to this SNMP trap is .1.3.6.1.4.1.9.9.719.0.2.	This notification is generated by a Cisco UCS instance whenever a fault is cleared.

Gathering Inventory Information

Cisco UCS MIBs can be used to gather information about the compute equipment in your Cisco UCS inventory. Inventory information includes data such as blades, serial numbers, DIMMs, and other intelligence related to system equipment.

See Purpose of the Cisco UCS MIBs, on page 15, to learn more about which MIBs you need to add to your NMS to collect the inventory data that interests you.

Gathering Statistics

If you want to use SNMP as a way to gather statistics, use the table below as a guide to what MIBs to load and what tables in each MIB to query.

Note The table lists the statistics most commonly monitored in Cisco UCS Manager, but it does not contain an exhaustive list of all statistics that can be monitored. To gather statistics beyond those listed below, refer to Purpose of the Cisco UCS MIBs, on page 15, review the content of the various packages, and download the additional MIB files necessary to meet your specific needs.

Table 4: MIBs to Use for Gathering Statistics

Statistics Type	MIB that Gathers the Statistic	Statistics Table Name in SNMP
Ethernet	CISCO-UNIFIED-COMPUTING-ETHER-MIB .1.3.6.1.4.1.9.9.719.1.16 is the parent OID where the key statistics reside.	**etherPauseStats—**Packet paused **etherLossStats—**Packet loss **etherErrStats—**Packet errors **etherTxStats—**Packets transmitted **etherRxStats—**Packets received
Adapter	CISCO-UNIFIED-COMPUTING-ADAPTOR-MIB .1.3.6.1.4.1.9.9.719.1.3 is the parent OID where the key statistics reside.	**adaptorEthPortBySizeLargeStats** **adaptorEthPortBySizeSmallStats** **adaptorEthPortStats** **adaptorEthPortOutsizedStats** **adaptorEthPortMcastStats**
Fiber channel	CISCO-UNIFIED-COMPUTING-FC-MIB .1.3.6.1.4.1.9.9.719.1.20 is the parent OID where the key statistics reside.	**fcStatsTable** **fcErrStatsTable**
Blade and rack level	CISCO-UNIFIED-COMPUTING-COMPUTE-MIB .1.3.6.1.4.1.9.9.719.1.9 is the parent OID where the key statistics reside.	**computeMbPowerStats—**Provides all motherboard power statistics for every blade. **computeMbTempStats—**Provides all motherboard temperature statistics for every blade.
Rack level	CISCO-UNIFIED-COMPUTING-COMPUTE-MIB .1.3.6.1.4.1.9.9.719.1.9 is the parent OID where the key statistics reside.	**computeMbPowerStats—**Provides all motherboard power statistics for every blade. **computeMbTempStats—**Provides all motherboard temperature statistics for every blade.
Processor	CISCO-UNIFIED-COMPUTING-PROCESSOR-MIB .1.3.6.1.4.1.9.9.719.1.41 is the parent OID where the key statistics reside.	**processorEnvStats—**Provides all CPU power and temperature statistics for every CPU socket.

Statistics Type	MIB that Gathers the Statistic	Statistics Table Name in SNMP
Equipment	CISCO-UNIFIED-COMPUTING-EQUIPMENT-MIB .1.3.6.1.4.1.9.9.719.1.15 is the parent OID where the key statistics reside.	**equipmentFanStats—**Provides all statistics for every physical fan in every chassis in a UCS domain. **equipmentFanModuleStats—**Provides all fan module temperature statistics for every fan module in every chasis in a UCS domain. **equipmentChassisStats—**Provides all chassis level temperature statistics for every chassis in a UCS domain. **equipmentPsuStats—**Provides all chassis level power and temperature statistics for every power supply in a UCS domain. **equipmentIOCardStats—**Provides all chassis level power and temperature statistics for every fabric extender in a UCS domain.
Memory statistics	CISCO-UNIFIED-COMPUTING-MEMORY-MIB .1.3.6.1.4.1.9.9.719.1.30 is the parent OID where the key statistics reside.	**memoryUnitEnvStats—**Provides all memory DIMM temperature statistics for every memory module.
Switching statistics	CISCO-UNIFIED-COMPUTING-SW-MIB .1.3.6.1.4.1.9.9.719.1.46 is the parent OID where the key statistics reside.	**sysEnvStats—**Provides all fabric interconnect level power statistics for every fabric interconnect in a UCS domain.

Types of MIBs

The Cisco UCS Management is based on the XML over HTTP model, which provides a rich data model to configure and monitor the system. This model includes polices, service profiles, configuration and monitoring data, and statistics.

To simplify the integration of Cisco UCS with SNMP based NMS, Cisco UCS Manager exposes the model through SNMP, based on the following Cisco UCS releases:

- In Release 1.0 and later, IETF networking MIBs, such as the IF-MIB and the ENTITY-MIB are implemented.

Note The IETF network MIBs provide information specific only to fabric interconnects.

- In Release 1.4 and later, the entire Cisco UCS Manager data model is exposed through the read-only Cisco UCS MIBs. All objects that can be retrieved through the Cisco UCS Manager XML API can also be retrieved through Cisco UCS Manager MIBs.

Note Each release maintains complete coverage of the XML API model via private MIBs.

Cisco Extensions to the IF-MIB

The IF-MIB supports basic management status and control of interfaces and sublayers within a network switch. Multiple standard and Cisco-specific MIBs use ifIndex from the IF-MIB to extend management for specific interface types. Cisco MIBs also enhance the two interface notifications, linkUp and linkDown, from the IF-MIB to provide a clearer indication of the reason for these notifications. Cisco MIBs add two varbinds to **linkUp** and **linkDown** as shown in the following table.

Table 5: Varbinds Added to IF-MIB Notifications

Notification	Varbinds Added
linkUp	ifDescr
linkDown	ifDescr

See the http://www.cisco.com/en/US/docs/unified_computing/ucs/sw/cli/config/guide/2.1/b_UCSM_CLI_Configuration_Guide_2_1.html for details about enabling link notifications that use these additional varbinds.

Cisco Extensions to the ENTITY-MIB

The ENTITY-MIB provides basic management and identification of physical and logical entities within a network switch. Cisco support for the ENTITY-MIB focuses on the physical entities within a switch. This MIB provides details about each module, power supply, and fan tray within a switch chassis. It provides enough information to correctly map the containment of these entities within the switch.

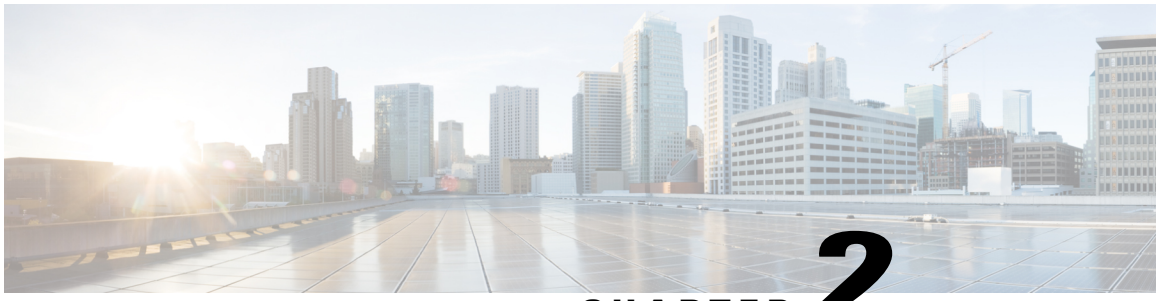
Cisco has developed a number of private extensions to the ENTITY-MIB to provide more details for these physical entities. Each MIB extension shares the common index value, entPhysicalIndex, which allows the management application developer to link information across multiple MIBs.

The following table lists the Cisco MIB extensions that are linked to the ENTITY-MIB by entPhysicalIndex.

Table 6: ENTITY-MIB Extensions

MIB	Description
CISCO-ENTITY-EXT-MIB	Extends the entity physical table for modules with processors. For each of these modules, this MIB provides memory statistics and LED information.

MIB	Description
CISCO-ENTITY-FRU-CONTROL-MIB	Manages field replaceable units, such as power supplies, fans, and modules.
CISCO-ENTITY-SENSOR-MIB	Provides sensor data for environmental monitors such as temperature gauges.
CISCO-IMAGE-UPGRADE-MIB	Provides module image management based on entity physical index.



CHAPTER 2

Accessing Cisco UCS MIB Files

This chapter includes the following sections:

Download Cisco UCS MIB Files

You can download Cisco UCS MIB files in either of the following ways:

- Using the file save feature in your browser from the list on cisco.com.
- Using passive FTP to access the MIB files on ftp://ftp.cisco.com.

Downloading Cisco UCS MIB Files from Cisco.com

Procedure

Step 1 Open a browser and go to the following URL:
http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml

The SNMP support page provides a list of supported MIBs for each UCS release.

Step 2 From the Unified Computing drop-down list, choose **UCS Manager.**
This displays the UCS Networking (NX-OS) MIBs for Cisco UCS Manager for software Release 1.0 and later, and the Cisco UCS Manager MIBs supported by software Release 1.4 and later.

Step 3 Select and save each MIB that you want to download from the list.

Enabling Passive FTP in Internet Explorer

If you are using Internet Explorer, you might need to enable passive FTP.

Procedure

Step 1 Open Internet Explorer.
Step 2 Choose **Tools** > **Internet Options**.
Step 3 Click the **Advanced** tab.
Step 4 Scroll down and check the **Use Passive FTP** (for firewall and DSL modem compatibility) check box.
Step 5 Click **OK** to save changes.

Downloading MIB Files with Passive FTP

Note This procedure assumes that your passive FTP utility has UNIX-like commands.

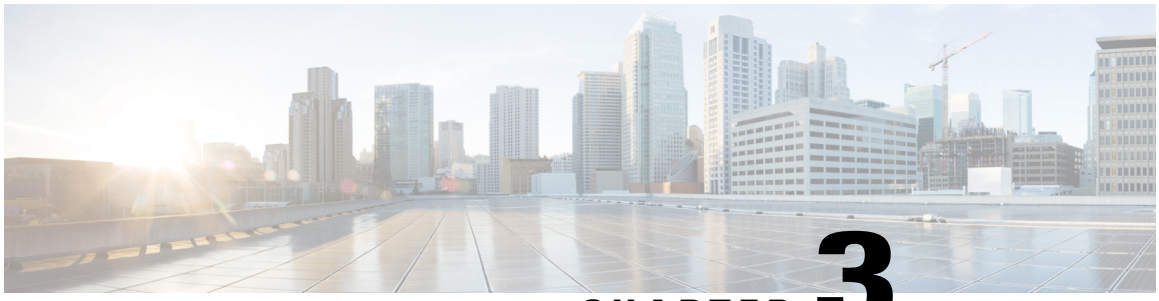
Before You Begin

Before you download the MIB files, ensure the following:

- You know the names of the MIB files you want to download. For the location of the appropriate MIB support list, see Cisco UCS MIB Support List Locations, on page 2.
- Passive FTP is enabled on your browser.

Procedure

Step 1 Access ftp://ftp.cisco.com/pub/mibs/supportlists/ucs/ucs-manager-supportlist.html using passive FTP.
Step 2 Log in with your cisco.com username and password, or as anonymous, with your e-mail address.
Step 3 Enter cd /pub/mibs/ucs-mibs/ to change directories.
Step 4 Use the **get** command to copy the desired files to your local system.
Step 5 Use the **quit** command to exit passive FTP.



CHAPTER 3

Loading Cisco UCS MIBs Into a Network Management System

This chapter includes the following sections:

Load Cisco UCS Manager MIBs

Before loading Cisco UCS Manager MIBs into an NMS, you must first load the prerequisite MIBs into the NMS. This enables you to receive the Cisco UCS Manager Fault Traps in the NMS.

Prerequisite MIBs

The MIBs in this section are required for all use cases and need to be loaded before other Cisco MIBs are loaded.

Important You should load the MIBs in the order listed to eliminate most of the load-order issues.

The following is a list of MIBs from which many other MIBs import definitions:

- SNMPv2-SMI.my
- SNMPv2-TC.my
- SNMP-FRAMEWORK-MIB.my
- RFC1213-MIB.my
- IF-MIB.my
- CISCO-SMI.my

- CISCO-ST-TC.my
- ENTITY-MIB.my
- INET-ADDRESS-MIB
- CISCO.TC.my

Note The CISCO-SMI MIB defines the iso.org.dod.internet.private.enterprise.cisco.ciscoMgmt object (1.3.6.1.4.9.9), which is the parent node of all Cisco UCS Manager MIBs. Several MIBs, including the CISCO-SMI MIB, must be loaded before other Cisco UCS Manager MIBs. Attempting to load other Cisco UCS Manager MIBs before the CISCO-SMI MIB generally results in a MIB compiler error stating that a MIB node has no parent node.

MIB Loading Order

Most of the MIB use definitions are defined in other MIBs. These definitions are listed in the IMPORTS section near the top of the MIB.

For example, if MIB B imports a definition from MIB A, some MIB compilers require you to load MIB A prior to loading MIB B. If you get the MIB loading order wrong, you might get an error message that a MIB is undefined or not listed in IMPORTS. If you receive an error message, look at the loading order of MIBs defined in the IMPORTS section. Ensure that you have the appropriate load order.

Order for Loading MIBs in Cisco UCS

Cisco UCS Manager 1.4 and later supports network MIBs and a series of MIBs to access all of the objects stored in the Cisco UCS Manager Management Information Tree.

All managed objects that can be accessed through the Cisco UCS Manager XML API can also be retrieved through read-only SNMP GET operations.

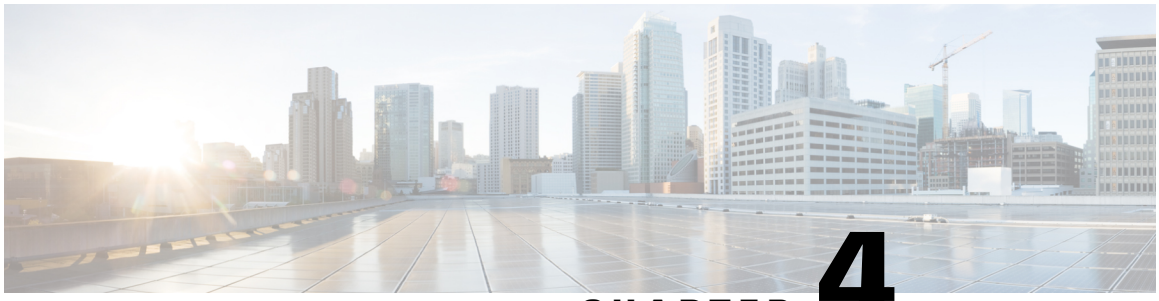
Important You should load the MIBs in the order listed to eliminate most of the load-order issues.

If you want to receive Cisco UCS traps in your NMS, first load the prerequisite MIBs (see Prerequisite MIBs, on page 11), then load the following Cisco MIBs:

- CISCO-UNIFIED-COMPUTING-MIB.my
- CISCO-UNIFIED-COMPUTING-TC-MIB.my
- CISCO-UNIFIED-COMPUTING-FAULT-MIB.my
- CISCO-UNIFIED-COMPUTING-NOTIFS-MIB.my

If you want to retrieve Cisco UCS Manager managed objects using read-only SNMP GET operations, you need to load all additional Cisco UCS Manager MIBs. The additional Cisco UCS Manager MIBs are generally used to retrieve inventory and configuration information using SNMP GET operations. To learn more about all of the Cisco UCS Manager MIBs, see Purpose of the Cisco UCS MIBs, on page 15.

Note In environments running multiple versions of Cisco UCS Manager, load the latest Cisco UCS Manager MIBs in the NMS, because all Cisco UCS Manager MIBs are developed to be backward-compatible with previous versions of Cisco UCS Manager that support SNMP.



CHAPTER 4

Purpose of the Cisco UCS MIBs

This chapter describes the purpose of the Cisco UCS MIBs.

Purpose of the Cisco UCS MIBs

The following table describes the purpose of each Cisco UCS MIB.

Table 7: MIB Purposes

MIB	Purpose
CISCO-UNIFIED-COMPUTING-AAA-MIB	This package contains data about configuring and monitoring the AAA operation within Cisco UCS. It includes the following information: • Identities of external AAA servers such as LDAP, TACACS, and RADIUS. These servers are used as authoritative repositories to authenticate UCS users. • Local Cisco UCS users • User Roles and locales • Mappings between users, roles and locales • Pre-login banner configuration • Audit Logs • AAA policies, such as password policies

MIB	Purpose
CISCO-UNIFIED-COMPUTING-ADAPTOR-MIB	This package contains configuration and statistics information that reflect the state of physical network adapters within Cisco UCS. It includes the following information: • Ethernet and Ethernet port channel Interfaces • FC and FC port channel Interfaces • Network statistics per adapter
CISCO-UNIFIED-COMPUTING-BIOS-MIB	This package contains configuration objects for BIOS settings. It includes the following information: • Boot order parameters for the Cisco UCS Servers • Policy based BIOS parameters that can be applied to service profiles
CISCO-UNIFIED-COMPUTING-BMC-MIB	This package contains configuration objects for capability catalog entries for BMC. Currently, this package contains a single object for the System Event Log (SEL) characteristics.
CISCO-UNIFIED-COMPUTING-CALLHOME-MIB	This package contains configuration objects for the Call Home feature. It includes the following information: • Contact information • Customer ID and contract ID • E-mail address • SMTP servers • Call Home profiles and policies • System Inventory

MIB	Purpose
CISCO-UNIFIED-COMPUTING-CAPABILITY-MIB	This package contains configuration objects for the capability catalog. This catalog contains the characteristics of various physical components in Cisco UCS, including fabric interconnect, network adapters, blade servers, rack-mount servers, chassis, IO Modules, CPUs, memory units, FAN modules, local disks, power supply units, and storage controllers. Cisco UCS is designed to support new hardware by uploading a new capability catalog that includes the following information: • Capability catalog objects • Objects to manage the capability catalog, such as uploading a new catalog to an existing system
CISCO-UNIFIED-COMPUTING-COMM-MIB	This package contains configuration objects that control global configurations, such as DNS, HTTP, and SNMP. It includes the following information: • Date and time management • DNS management • Configuration of XML API over HTTP and HTTPS • NTP management • Shell access configuration • SNMP management • Telnet management
CISCO-UNIFIED-COMPUTING-COMPUTE-MIB	This package contains configuration, inventory, and statistics objects for computing resources, including blade and rack servers. It includes the following information: • Inventory objects for blade servers and components • Inventory objects for rack servers and components • Chassis connectivity policies • Compute discovery and auto-configuration policies • Compute pool objects

MIB	Purpose
CISCO-UNIFIED-COMPUTING-CONFORM-MIB	This package contains SNMP MIB compliance groups. These compliance statements provide a systematic method to describe a group of managed objects that must be implemented for conformance to a standard.
CISCO-UNIFIED-COMPUTING-DCX-MIB	This package contains operational information about virtual interfaces and circuits. It includes the following information: • Virtual interfaces configured for each server network adapter • Virtual circuits configured for each server adapter, chassis, IO module, or FEX
CISCO-UNIFIED-COMPUTING-DHCP-MIB	This package contains DHCP subsystem details. It includes information on DHCP leases obtained by the Cisco UCS subcomponents such as, BMC, blade, and mount servers.
CISCO-UNIFIED-COMPUTING-DIAG-MIB	This package contains diagnostics information about Cisco UCS sub-components. • Diagnostic policies • Network test objects • Diagnostic results
CISCO-UNIFIED-COMPUTING-DPSEC-MIB	This package contains objects that specify the MAC security policy. It includes details about the MAC security policy, which is a part of the network control policy. This policy specifies whether to allow or deny packets with forged MAC addresses.
CISCO-UNIFIED-COMPUTING-EPQOS-MIB	This package contains details about network Quality of Service (QoS). It includes the following information: • Egress QoS policy • Internal object to manage the network QoS

MIB	Purpose
CISCO-UNIFIED-COMPUTING-EQUIPMENT-MIB	This package contains details about the Cisco UCS inventory. Objects in this package are defined to model the physical components. It includes the following information: • Network adapters • Beacon LEDs • Board controllers • Fabric Interconnect fixed and extension modules • Cisco UCS chassis • FAN • FEX • Hard drive • IO card • Memory unit • Power supply unit
CISCO-UNIFIED-COMPUTING-ETHER-MIB	This package contains details about the Ethernet port inventory and statistics about the Ethernet ports. It includes the following information: • Objects that represent inventoried Ethernet ports and port channels • Statistics about Ethernet ports
CISCO-UNIFIED-COMPUTING-EVENT-MIB	This package contains details about the event log. An event is any significant occurrence in the Cisco UCS that may require users to be notified. Events can help users identify and diagnose the source of problems. It includes the following information: • Object to model the event log • Object to model an entry in the event log • Event log policy, which specifies the number of events that need to be maintained in the event log and the event retention policy.

MIB	Purpose
CISCO-UNIFIED-COMPUTING-EXTMGMT-MIB	This package contains details about management interfaces. It includes the following information: • Management interfaces • Gateway ping policy • Interface monitoring policy • ARP targets
CISCO-UNIFIED-COMPUTING-EXTPOL-MIB	This package contains details about external clients that are connected to Cisco UCS Manager
CISCO-UNIFIED-COMPUTING-EXTVMM-MIB	This package contains information about certificate and private key stores.
CISCO-UNIFIED-COMPUTING-FABRIC-MIB	This package contains information about the configuration and policies on the Cisco UCS fabric. The Cisco UCS fabric defines Ethernet, storage, Fibre Channel and FCoE policies, desired port configuration, VLANs, and VSANs. It includes the following information: • VLANs • VSANs • Required Ethernet configuration for uplink ports, port channels, server ports, NAS storage ports, FCoE ports, and SPAN ports • Required Fibre Channel configuration for FC uplink ports, FC port channels, FC direct attach storage ports, and FC span ports • VLAN and VSAN port membership • Ethernet Pin groups • Fibre Channel pin groups • VCON policies

MIB	Purpose
CISCO-UNIFIED-COMPUTING-FAULT-MIB	This package provides information about Cisco UCS faults. A fault is an abnormal condition or defect at the component, equipment, or subsystem level, which may lead to a failure as defined in ISO/CD 10303-226. Each managed object in the management tree may have one or more faults that indicate a particular problem with this object. It includes the following information: • Fault objects • Fault policy, including fault retention, flapping, and clear action
CISCO-UNIFIED-COMPUTING-FC-MIB	This package contains data about the Fibre Channel statistics and FC interface configuration. It includes the following information: • Fibre Channel statistics • Fibre Channel interface configuration
CISCO-UNIFIED-COMPUTING-FCPOOL-MIB	This package contains information about Fibre Channel pools of WWNs. Service profiles VHBAs can be assigned as virtualized WWNs, which help to ensure portability of the service profile. It includes the following information: • Fibre Channel pool of WWNs • Block of WWNs • WWNs, which can be assigned to service profile vHBAs
CISCO-UNIFIED-COMPUTING-FIRMWARE-MIB	This package contains details about the firmware management of the Cisco UCS components. This includes objects to download firmware packages, manage firmware images and firmware packages, firmware packs, and to control firmware upgrades or downgrades. It includes the following information: • Downloader object to download firmware packages • Objects to model firmware and firmware packages • Firmware packs • Control of firmware upgrades and downgrades

MIB	Purpose
CISCO-UNIFIED-COMPUTING-FLOWCTRL-MIB	This package contains the network flow control policy details.
CISCO-UNIFIED-COMPUTING-HOSTIMG-MIB	This package contains the host images policy details. It includes the following information: • Host image policy • Host image targets
CISCO-UNIFIED-COMPUTING-IMGPROV-MIB	This packages contains the image provider policy details.
CISCO-UNIFIED-COMPUTING-IMGSEC-MIB	This package contains details about the image security keys.
CISCO-UNIFIED-COMPUTING-IPPOOL-MIB	This package contains details about pools of IP addresses. Pools of IP addresses are used to assign IP addresses to the BMC interfaces It includes the following information: • Pool of IP addresses • Block of IP addresses • IP addresses which can be assigned to KVMs
CISCO-UNIFIED-COMPUTING-IQNPOOL-MIB	This package contains details about pools of IQN addresses. It includes the following information: • Pools of IQN addresses • Block of IQN addresses • IQN addresses
CISCO-UNIFIED-COMPUTING-ISCSI-MIB	This package contains details about iSCSI objects. It includes the following information: • iSCSI authentication profile • iSCSI protocol profile
CISCO-UNIFIED-COMPUTING-LICENSE-MIB	This package contains the licensing information. It includes the following information: • Port licensing • Licenses • Objects to download and install licenses

MIB	Purpose
CISCO-UNIFIED-COMPUTING-LLDP-MIB	This package contains details about the Link Layer Discovery Protocol object. It includes information on the objects that provide inventory information about peer links through LLDP.
CISCO-UNIFIED-COMPUTING-LS-MIB	This package contains the top-level objects for Cisco UCS service profiles. It includes the following information: • Cisco UCS service profile • Binding between a service profile and a blade or rack mount server • Requirements that a physical server must satisfy in order to be associated with a service profile
CISCO-UNIFIED-COMPUTING-LSBOOT-MIB	This package contains information about the boot objects for Cisco UCS service profiles. It contains the following information: • Service profile boot policy • SAN and LAN boot images • Virtual Media • iSCSI boot policy
CISCO-UNIFIED-COMPUTING-LSMAINT-MIB	This package contains details aboutCisco UCS service profile maintenance policy. It includes information about the Cisco UCS service profile maintenance policy, which specifies what you can do whan a requested change requires a server reboot.
CISCO-UNIFIED-COMPUTING-MACPOOL-MIB	This package contains details about pools of MAC addresses. Pools of MAC addresses are used to assign virtual MAC addresses to service profile vNICs. It includes the following information: • Pools of MAC addresses • Pools of MAC addresses • MAC addresses which can be assigned to service profile vNICs

MIB	Purpose
CISCO-UNIFIED-COMPUTING-MAPPINGS-MIB	This package contains information about the relationships between the Cisco UCS Manager Managed Objects. It includes the following information: • The cucsMappingsMoContainmentTable provides containment information to navigate from a parent managed object to the child managed objects. • The cucsMappingsMoInverseContainmentTable provides information to navigate from a child managed object to the parent managed object. • The cucsMappingsDnToOidTable provides a mapping from the Managed Object Distinguised Name to the SNMP OID.
CISCO-UNIFIED-COMPUTING-MEMORY-MIB	This package contains details about memory units that are installed in blade and rack-mount servers. It includes the following information: • Memory arrays • Memory units • Memory qualification • Statistics
CISCO-UNIFIED-COMPUTING-MGMT-MIB	This package contains Cisco UCS provisioning details. It includes the following information: • Objects to perform backups and imports of Cisco UCS Management configuration • Access policies • Process Monitor entries
CISCO-UNIFIED-COMPUTING-MIB	This package defines the Cisco UCS Manager Managed Object
CISCO-UNIFIED-COMPUTING-NETWORK-MIB	This package provides information about Cisco UCS fabric interconnects. It includes the following information: • Objects to specify the IP addresses of the Cisco UCS fabric interconnects • Network statistics

MIB	Purpose
CISCO-UNIFIED-COMPUTING-NOTIFS-MIB	This MIB contains the definitions of the SNMP notifications that are supported byCisco UCS Manager. The following notifications are defined: • UCS Manager Fault raised • UCS Manager Fault cleared
CISCO-UNIFIED-COMPUTING-NWCTRL-MIB	This package provides information about network control policies.
CISCO-UNIFIED-COMPUTING-ORG-MIB	This package provides information about the organizational hierarchy in the Cisco UCS Manager Management Information Tree.
CISCO-UNIFIED-COMPUTING-OS-MIB	This package contains guest OS agent details. It includes the following information: • Guest OS instance • Guest OS agent
CISCO-UNIFIED-COMPUTING-PCI-MIB	This package contains details about inventory PCI cards. It includes the following information: • Inventory PCI card • Equipment slot
CISCO-UNIFIED-COMPUTING-PKI-MIB	This package contains details about Public Key Infrastructure (PKI) objects. It includes the following information: • Certificate Requests • Key Ring
CISCO-UNIFIED-COMPUTING-PORT-MIB	This package provides information about physical ports on a fabric interconnect and the port groups on the fabric interconnect. It includes the following information: • Port groups • Abstract objects for physical ports on a fabric interconnect • Port Trust mode

MIB	Purpose
CISCO-UNIFIED-COMPUTING-POWER-MIB	This package contains details about chassis power capping policies and statistics. It includes the following information: • Chassis power capping • Chassis power statistics
CISCO-UNIFIED-COMPUTING-PROC-MIB	This package contains details about the internal components of Cisco UCS Manager. It includes the following information: • Statistics about Cisco Cisco UCS Manager transactions • Information about Cisco Cisco UCS Manager processes
CISCO-UNIFIED-COMPUTING-PROCESSOR-MIB	This package provides information about Central Processing Units (CPUs) that can be installed on Cisco UCS servers. It includes the following information: • CPU characteristics • CPU statistics
CISCO-UNIFIED-COMPUTING-QOSCLASS-MIB	This package provides information about QoS classes.
CISCO-UNIFIED-COMPUTING-SOL-MIB	This package provides information about the Serial Over LAN (SOL) policies.
CISCO-UNIFIED-COMPUTING-STATS-MIB	This package contains details about statistics. It includes the following information: • Objects to specify statistics collection • Objects to specify threshold policies
CISCO-UNIFIED-COMPUTING-STORAGE-MIB	This package contains details about storage elements that can be installed or accessed from a Cisco UCS server. It includes following information: • Local disks • Storage controllers • Storage enclosures • LUNs • RAID batteries

MIB	Purpose
CISCO-UNIFIED-COMPUTING-SW-MIB	This package contains details about how the system should be configured. Objects in this package are created implicitly by the system based on user-specified data from the "fabric" package. For example, the "fabric" package may specify high-level fabric policies, and the "sw" package may specify individual VLAN membership for each physical port. It includes the following information: • VLANs • VSANs • VLAN membership • Ethernet and Fibre Channel ports
CISCO-UNIFIED-COMPUTING-SYSDEBUG-MIB	This package provides information to help troubleshoot Cisco UCS. It includes the following information: • Objects for accessing and exporting core files • Backup behavior • Log policies • Tech support file repository
CISCO-UNIFIED-COMPUTING-SYSFILE-MIB	This package provides information to manage the import or export of system files. It includes abstract classes that support the import and export of Cisco UCS Manager files.
CISCO-UNIFIED-COMPUTING-TC-MIB	This MIB contains all the SNMP textual conventions that are used in other Cisco UCS Manager MIBs.
CISCO-UNIFIED-COMPUTING-TOP-MIB	This package contains the definition of the root object in the Cisco UCS management information tree. It includes the definition of the Cisco UCS root objects in the Manager Information Tree.
CISCO-UNIFIED-COMPUTING-TRIG-MIB	This package contains information to manage scheduled and triggered activities. It includes the following objects: • Objects to schedule activities • Objects to monitor activities that have been scheduled • Objects to track activities that require user acknowledgment

MIB	Purpose
CISCO-UNIFIED-COMPUTING-UUIDPOOL-MIB	This package contains details about the pools of UUID identifiers. Pools of UUID identifiers are used to assign virtual UUIDs to service profiles. It includes the following information: • Pools of UUID identifiers • Block of UUID identifiers • UUID identifiers, which can be assigned to service profiles
CISCO-UNIFIED-COMPUTING-VM-MIB	This package contains details specific to the inventory and monitoring of virtual machines. Cisco UCS Manager keeps track of virtual machines if the VM vNIC is provided by UCS. It includes the following information: • Virtual machines • Virtual machines NICs
CISCO-UNIFIED-COMPUTING-VNIC-MIB	This package contains details about Cisco UCS network adapters, including Ethernet vNICs and Fibre Channel vHBAs. It includes the following information: • Objects to model a Service Profile Ethernet vNIC • Objects to model a Service Profile Fibre Ethernet cHBA • Objects to model a Service Profile iSCSI NIC • Policies that control the behavior of vNICs, iSCSI NICs and vHBAs. • Policies for dynamic vNICSs • Boot targets