



About Cisco UCS MIB Files

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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 Standalone C-Series server or Cisco UCS, 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 Standalone C-Series, Release 1.5 and later, see: <https://cisco.github.io/cisco-mibs/>

Cisco UCS C-Series Faults

In Cisco UCS, a fault is a mutable object that is managed by Cisco UCS. Each fault represents a failure in a Cisco UCS Standalone C-Series server 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 Standalone C-Series servers until the fault is cleared and deleted according to the settings in the fault collection policy, or until the Cisco Integrated Management Controller (CIMC) is restarted.

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 Standalone C-Series server 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, and configuration or environmental 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 Standalone C-Series server WebUI, faults are available in from the **Server** tab under **Faults and Logs**.

The following table describes the attributes exposed by the `cucsFaultTable`.

Table 2: cucsFaultTable Attributes

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, depicted in UTC format.

Attribute	Description
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. Fault severity transitions throughout the lifecycle of the fault, so several different fault severities can be reported during the lifecycle of a fault. These include: <ul style="list-style-type: none"> • Original severity reported when the fault was first detected • Current severity reported for the fault • Previous severity reported for the fault • Highest severity reported for 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.

Cisco UCS Standalone C-Series servers send a `cucsFaultActiveNotif` event notification whenever a fault is raised. The trap variables indicate the nature of the problem, including the fault type. Cisco UCS Standalone C-Series servers send a `cucsFaultClearNotif` event notification whenever a fault has been cleared. A fault is cleared when the underlying issue has been resolved.

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 Standalone C-Series server faults, see [Cisco UCS C-series Servers Integrated Management Controller Faults Reference Guide](#).

Use Cases for Cisco UCS Standalone C-Series Server MIBs

Common use cases for Cisco UCS Standalone C-Series Server 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](#)), 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 , serial numbers, DIMMs, and other intelligence related to system equipment.

See [Purpose of the MIBs](#), 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 Standalone C-Series servers, 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 MIBs](#), 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
Adapter	CSCOUNIFIEDCOMPUTINGADAPTORMIB .1.3.6.1.4.1.9.9.719.1.3 is the parent OID where the key statistics reside.	adaptorUnit —Provides all adapter statistics for every Standalone C-Series server.
Rack level	CSCOUNIFIEDCOMPUTINGCOMPUTEMIB .1.3.6.1.4.1.9.9.719.1.9 is the parentOID where the key statistics reside.	computeMbPowerStats —Provides all motherboard power statistics for every Standalone C-Series server. computeMbTempStats —Provides all motherboard temperature statistics for every Standalone C-Series server. computeBoard — Provides all compute board statistics for every Standalone C-Series server. computeMbPowerStats —Provides all motherboard power statistics for every Standalone C-Series server. computeRackUnit —Provides all rack unit statistics for every Standalone C-Series server. computeRackUnitMbTempStats —Provides all motherboard temperature statistics for every rack-mounted Standalone C-Series server.
Processor	CSCOUNIFIEDCOMPUTINGPROCESSORMIB .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. processorUnit —Provides all CPU statistics for every CPU.
Equipment	CSCOUNIFIEDCOMPUTINGEQUIPMENTMIB .1.3.6.1.4.1.9.9.719.1.15 is the parent OID where the key statistics reside.	equipmentFan —Provides statistics for all fans in every Standalone C-Series server. equipmentPsu —Provides statistics for every PSU attached to a Standalone C-Series server.
Memory	CSCOUNIFIEDCOMPUTINGMEMORYMIB .1.3.6.1.4.1.9.9.719.1.30 is the parent OID where the key statistics reside.	memoryUnit —Provides statistics about all memory unit DIMMs. memoryUnitEnvStats —Provides all memory DIMM temperature statistics for every memory module.

Statistics Type	MIB that Gathers the Statistic	Statistics Table Name in SNMP
Storage	CISCOUNIFIEDCOMPUTINGSTORAGEMIB 1.3.6.1.4.1.9.9.719.1.45 is the parent OID where the key statistics reside.	<p>storageController—Provides statistics about storage controllers attached to all Standalone C-Series servers.</p> <p>storageLocalDisk—Provides statistics about the physical disks in every Standalone C-Series server.</p> <p>storageLocalLun—Provides statistics for virtual drives created on each Standalone C-Series server.</p> <p>storageRaidBattery—Provides statistics for RAID batteries connected to a Standalone C-Series server.</p>