Cisco Enhanced Image MIB

The Cisco Enhanced Image MIB provides information about images running on the system. It has been extended to be useful for modular operating systems.

Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see Bug Search Tool and the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the feature information table at the end of this module.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Information About Cisco Enhanced Image MIB

Cisco Enhanced Image MIB Overview

The CISCO-ENHANCED-IMAGE-MIB is used to obtain information about images running on various entities or nodes on Cisco IOS devices, such as routers and switches. The MIB provides support to query package information on the Cisco IOS XE system for installed images. The MIB supports the following three tables: ceImageInstallableTable, ceImageLocationTable, and ceImageTable.

The three image tables provide information about currently running images on the system. A modular operating system image consists of a base image and all the installables loaded on the base image. The ceImageInstallableTable provides a list of all installables installed on base images, the ceImageLocationTable provides a list of all locations where these images are running and also the status of the images at these locations, and the ceImageTable provides the base images.

Image Table

The Cisco Enhanced Image MIB, ceImageTable, shows details about the currently running image on the active device. In a stack or a High Availability (HA) scenario, this table includes details about all the members in the stack. The table below describes the image table objects and the values populated for each object.

Image Table Object	Description
ceImageDescription	Description of the running OS image.
ceImageFamily	Name of the family of the running OS image.
	The image family indicates the platform for which the image is built. Examples of image families are C3640, C7200, and so on.
ceImageFeature	Feature set supported on the running image.
ceImageMedia	Media on which the image represented by this entry is running.
ceImageName	Name of the running OS image on the device.
ceImageVersion	Version of the running OS image.

Location Table

The Cisco Enhanced Image MIB location table, ceImageLocationTable, consists of a list of all locations where the images are running along with the status of images at these locations. The location table is applicable to modular operating systems. The term *location* in ceImageLocationTable describes the location on the file system where the installed software is placed. The table below describes the location table objects and the values populated for each object.

Location Table Object	Description
ceImageLocation	Location where the operating system is currently loaded on the system.
ceImageLocationRunningStatus	Status of the image currently running on the system.
	This object has a value *True*, if the image from this location is currently running on the system.

Installable Table

The Cisco Enhanced Image MIB installable table, csImageInstallableTable, specifies a list of software installables installed on the system. This table is applicable to operating systems that support installables. A modular operating system can consist of a base image and installables. Every image has a table of installables. Entries are added in this table when an installable is installed on the image. Entries are deleted from this table

when installables are removed or rolled back from the image. The table below describes the installable table objects and the values populated for each object.

Installable Table Object	Description
ceImageInstallableDate	Date on which package was installed
ceImageInstallableMajorVerNumber	Major version number of the software installable. Version is represented as *major.minor.maintenance*. For example, the major number for version 12.3(18.1)S is 12.
ceImageInstallableMinorVerNumber	Minor version number of the software installable. For example, the minor number for the version 12.3(18.1)S is 3.
ceImageInstallableName	Name of the package.
ceImageInstallableRevisionVerNum	Maintenance version string of the software installable. This string represents incremental change in the image over the minor release number. For example, the revision number for the version 12.3(18.1)S is (18.1)S.
ceImageInstallableRowStatus	Status of the conceptual row. The Simple Network Management Protocol (SNMP) Get operation is the only supported option for this table; so this entry always has a default value of 1.
ceImageInstallableStatus	Status of the software installable.
ceImageInstallableType	Type of the software package.

Sample Output from Cisco Enhanced Image MIB Query

The output obtained from the MIB query is as follows:

```
/opt/cisco-net-snmp/bin/snmpwalk -v2c -c public 172.16.0.1 1.3.6.1.4.1.9.9.249

SNMPv2-SMI::enterprises.9.9.249.1.1.1.1.2.1 = STRING: "CAT3K_CAA-UNIVERSALK9-M"
SNMPv2-SMI::enterprises.9.9.249.1.1.1.1.3.1 = STRING: "CAT3K_CAA"
SNMPv2-SMI::enterprises.9.9.249.1.1.1.1.4.1 = STRING:
"IP|SLA|IPv6|IS-IS|FIREWALL|PLUS|QoS|HA|NAT|MPLS|
VPN|LEGACY PROTOCOLS|3DES|SSH|APPN|IPSEC"
SNMPv2-SMI::enterprises.9.9.249.1.1.1.1.5.1 = STRING: "0.DEV-0"
SNMPv2-SMI::enterprises.9.9.249.1.1.1.1.6.1 = INTEGER: 1
SNMPv2-SMI::enterprises.9.9.249.1.1.1.1.7.1 = STRING: "Cisco IOS Software, IOS-XE Software,

Catalyst L3 Switch Software (CAT3K_CAA-UNIVERSALK9-MClosePair(')'), ExperimentalVersion
0.DEV-0
SNMPv2-SMI::enterprises.9.9.249.1.2.1.1.2.1.1 = STRING:
"tftp://172.30.255.0/shapeng/cat3k.bin"
SNMPv2-SMI::enterprises.9.9.249.1.2.1.1.3.1.1 = INTEGER: 1
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.2.1.1.1 = INTEGER: 4
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.2.1.1.2 = INTEGER: 4
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.2.1.1.3 = INTEGER: 4
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.2.1.1.4 = INTEGER: 4
```

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SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.2.1.1.5 = INTEGER: 4
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.2.1.1.6 = INTEGER: 4
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.3.1.1.1 = STRING: "Drivers"
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.3.1.1.2 = STRING: "WCM"
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.3.1.1.3 = STRING: "IOS"
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.3.1.1.4 = STRING: "Platform"
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.3.1.1.5 = STRING: "Infra"
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.3.1.1.6 = STRING: "Base"
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.4.1.1.1 = INTEGER: 1
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.4.1.1.2 = INTEGER: 1
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.4.1.1.3 = INTEGER: 1
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.4.1.1.4 = INTEGER: 1
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.4.1.1.5 = INTEGER: 1
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.4.1.1.6 = INTEGER: 1
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.5.1.1.1 = Gauge32: 0
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.5.1.1.2 = Gauge32: 0
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.5.1.1.3 = Gauge32: 0
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.5.1.1.4 = Gauge32: 0
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.5.1.1.5 = Gauge32: 0
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.5.1.1.6 = Gauge32: 0
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.6.1.1.1 = Gauge32: 0
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.6.1.1.2 = Gauge32: 0
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.6.1.1.3 = Gauge32: 0
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.6.1.1.4 = Gauge32: 0
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.6.1.1.5 = Gauge32: 0
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.6.1.1.6 = Gauge32: 0
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.7.1.1.1 = STRING: "DEV-0"
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.7.1.1.2 = STRING: "DEV-0"
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.7.1.1.3 = STRING: "0"
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.7.1.1.4 = STRING: "DEV-0"
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.7.1.1.5 = STRING: "DEV-0"
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.7.1.1.6 = STRING: "DEV-0"
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.8.1.1.1 = Hex-STRING: B2 07 01 01 00 0008 00
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.8.1.1.2 = Hex-STRING: B2 07 01 01 00 0008 00
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.8.1.1.3 = Hex-STRING: B2 07 01 01 00 0008 00
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.8.1.1.4 = Hex-STRING: B2 07 01 01 00 0008 00
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.8.1.1.5 = Hex-STRING: B2 07 01 01 00 0008 00
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.8.1.1.6 = Hex-STRING: B2 07 01 01 00 0008 00
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.9.1.1.1 = INTEGER: 1
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.9.1.1.2 = INTEGER: 1
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.9.1.1.3 = INTEGER: 1
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.9.1.1.4 = INTEGER: 1
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.9.1.1.5 = INTEGER: 1
SNMPv2-SMI::enterprises.9.9.249.1.2.2.1.9.1.1.6 = INTEGER: 1
```

The output shown above is similar to that obtained from running the **show version** and **show version running** commands from the CLI.

Additional References

Related Documents

Related Topic	Document Title
Cisco IOS commands	Cisco IOS Master Commands List, All Releases
SNMP commands	Cisco IOS SNMP Support Command Reference
SNMP configuration tasks	*Network Management Configuration Guide*

MIBs

MIB	MIBs Link
CISCO-ENHANCED-IMAGE-MIB	To locate and download MIBs for selected platforms, Cisco software releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

Technical Assistance

Description	Link
The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for Cisco Enhanced Image MIB

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Table 1: Feature Information for Cisco Enhanced Image MIB

Feature Name	Releases	Feature Information
Cisco Enhanced Image MIB	15.3(1)S 15.3(1)S Cisco IOS XE Release 3.8S	The CISCO-ENHANCED-IMAGE-MIB provides information about events running on the system and has been extended to be useful for modular operating systems. No commands were introduced or modified for this feature.