



# Using the IEEE 802.3ad Link Aggregation MIB

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The IEEE 802.3ad Link Aggregation Control Protocol (LACP) enables the bundling of physical interfaces on a physical device to achieve more bandwidth than is available using a single interface. This feature introduces IEEE 802.3ad Link Aggregation (LAG) MIB support in Cisco IOS software. The LAG MIB both supports the management of interfaces and ports that are part of an LACP port channel and is accessed by a Simple Network Manager Protocol (SNMP) manager application.

## **Finding Feature Information in This Module**

Your Cisco IOS software release may not support all of the features documented in this module. For the latest feature information and caveats, see the release notes for your platform and software release. 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 Using the IEEE 802.3ad Link Aggregation MIB” section on page 7](#).

## **Finding Support Information for Platforms and Cisco IOS and Catalyst OS Software Images**

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

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## Prerequisites for Using the IEEE 802.3ad Link Aggregation MIB

- Link aggregation must be configured using the LACP command-line interface (CLI) commands before the MIB tables can be accessed.
- LACP must be supported in the Cisco IOS image.

## Information About Using the IEEE 802.3ad Link Aggregation MIB

To use the IEEE 802.3ad LAG MIB, you should understand the following concepts:

- [IEEE 802.3ad LAG MIB, page 2](#)
- [Configuration and Management of LACP bundles, page 2](#)
- [LAG MIB Table Object Definitions, page 2](#)

## IEEE 802.3ad LAG MIB

The IEEE 802.3ad LAG MIB supports the management of interfaces and ports that are part of an LACP port channel. No specific commands are used to enable the MIB; access is through an SNMP manager application. For information about using SNMP in Cisco IOS software, see the “[Configuring SNMP Support](#)” chapter of the *Cisco IOS Network Management Configuration Guide*.

## Configuration and Management of LACP bundles

To use the LAG MIB, it is important to know how LACP bundles are configured and managed. For more information about LACP bundles, see the “[Configuring IEEE 802.3ad Link Bundling and Load Balancing](#)” chapter of the *Cisco IOS Carrier Ethernet Configuration Guide*.

## LAG MIB Table Object Definitions

This section lists the MIB objects and tables that are supported as part of this feature.

### dot3adTablesLastChanged Object

The dot3adTablesLastChanged object indicates the time of the most recent change to the dot3adAggTable, dot3adAggPortListTable, or dot3adAggPortTable.

### dot3adAggTable

The dot3adAggTable (Aggregator Configuration table) contains information about every aggregator that is associated with a system. Each LACP channel in a device occupies an entry in the dot3adAggTable. Some objects in the table have restrictions, which are described with the object. The objects are described in [Table 1](#).

**Table 1** *Aggregator Configuration Table Objects*

<b>Object</b>	<b>Maximum Access/Description</b>
dot3adAggActorAdminKey	Cannot be changed via the SET operation.
dot3adAggActorOperKey	Write access not supported.
dot3adAggActorSystemID	Write access not supported.
dot3adAggActorSystemPriority	Write access not supported.
dot3adAggAggregateOrIndividual	Returns a value of TRUE if more than 1 port is configured in the channel; otherwise, returns a value of FALSE.
dot3adAggCollectorMaxDelay	Cannot be changed via the SET operation.
dot3adAggIndex	Write access not supported.
dot3adAggMACAddress	Write access not supported.
dot3adAggPartnerOperKey	Write access not supported.
dot3adAggPartnerSystemID	Write access not supported.
dot3adAggPartnerSystemPriority	Write access i not supported.

## dot3adAggPortListTable

The dot3adAggPortListTable (Aggregation Port List table) contains a list of all the ports associated with each aggregator. Each LACP channel in a device occupies an entry in the table. The objects are described in [Table 2](#).

**Table 2** *Aggregation Port List Table Objects*

<b>Object</b>	<b>Maximum Access/Description</b>
dot3adAggPortListPorts	Write access not supported.

## dot3adAggPortTable

The dot3adAggPortTable (Aggregation Port table) contains LACP configuration information about every aggregation port associated with a device. Each physical port in a device occupies an entry in the dot3adAggPortTable. The objects are described in [Table 3](#).

**Table 3** *Aggregation Port Table Objects*

<b>Object</b>	<b>Maximum Access/Description</b>
dot3adAggPortActorAdminKey	Write access not supported.
dot3adAggPortActorAdminState	Write access not supported.
dot3adAggPortActorOperKey	Read-only access supported.
dot3adAggPortActorOperState	Write access not supported.
dot3adAggPortActorPort	Write access not supported.
dot3adAggPortActorPortPriority	Write access not supported.
dot3adAggPortActorSystemID	Write access not supported.

**Table 3** Aggregation Port Table Objects (continued)

Object	Maximum Access/Description
dot3adAggPortActorSystemPriority	Write access not supported.
dot3adAggPortAggregateOrIndividual	Indicates whether a port is attached to an LACP channel. If the port is attached to an LACP channel and the value of the dot3adAggPortAttachedAggID object in the same row is not zero, the value of this object is TRUE. Otherwise, the value is FALSE.
dot3adAggPortAttachedAggID	Write access not supported.
dot3adAggPortIndex	Write access not supported.
dot3adAggPortPartnerAdminKey	Cannot be changed via the SET operation.
dot3adAggPortPartnerAdminPort	Cannot be changed via the SET operation.
dot3adAggPortPartnerAdminPortPriority	Write access not supported.
dot3adAggPortPartnerAdminState	Cannot be changed via the SET operation.
dot3adAggPortPartnerAdminSystemID	Cannot be changed via the SET operation.
dot3adAggPortPartnerAdminSystemPriority	Cannot be changed via the SET operation.
dot3adAggPortPartnerOperKey	Write access not supported.
dot3adAggPortPartnerOperPort	Cannot be changed via the SET operation.
dot3adAggPortPartnerOperPortPriority	Write access not supported.
dot3adAggPortPartnerOperState	Write access is not supported.
dot3adAggPortPartnerOperSystemID	Write access not supported.
dot3adAggPortPartnerOperSystemPriority	Write access not supported.
dot3adAggPortSelectedAggID	Write access not supported.

## dot3adAggPortStatsTable

The dot3adAggPortStatsTable (LACP Statistics table) contains link aggregation information about every port that is associated with a device. Each physical port occupies a row in the table. The objects are described in [Table 4](#).

**Table 4** LACP Statistics Table Objects

Object	Maximum Access/Description
dot3adAggPortStatsIllegalRx	Write access not supported.
dot3adAggPortStatsLACPDUsRx	Write access not supported.
dot3adAggPortStatsLACPDUsTx	Write access not supported.
dot3adAggPortStatsMarkerPDUsRx	Write access not supported.
dot3adAggPortStatsMarkerPDUsTx	Write access not supported.
dot3adAggPortStatsMarkerResponsePDUsRx	Write access not supported.
dot3adAggPortStatsMarkerResponsePDUsTx	Write access not supported.
dot3adAggPortStatsUnknownRx	Write access not supported.

# Additional References

The following sections provide references related to using the IEEE 802.3ad LAG MIB.

## Related Documents

Related Topic	Document Title
Link aggregation configuration tasks	<a href="#">“Configuring IEEE 802.3ad Link Bundling and Load Balancing”</a> chapter of the <i>Cisco IOS Carrier Ethernet Configuration Guide</i>
Cisco IOS LACP commands	<a href="#">Cisco IOS Carrier Ethernet Command Reference</a>
Configuring SNMP	<a href="#">“Configuring SNMP Support”</a> chapter of the <i>Cisco IOS Network Management Configuration Guide</i>
Cisco IOS SNMP commands	<a href="#">Cisco IOS Network Management Command Reference</a>

## Standards

Standard	Title
IEEE 802.3ad	<i>IEEE 802.3ad-2000 Link Aggregation</i>

## MIBs

MIB	MIBs Link
<ul style="list-style-type: none"> <li>IEEE 802.3ad MIB</li> <li>IF MIB</li> </ul>	<p>To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL:</p> <p><a href="http://www.cisco.com/go/mibs">http://www.cisco.com/go/mibs</a></p>

## RFCs

RFC	Title
No new or modified RFCs are supported by this feature, and support for existing RFCs has not been modified by this feature	—

## Technical Assistance

Description	Link
<p>The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies.</p> <p>To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds.</p> <p>Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.</p>	<p><a href="http://www.cisco.com/techsupport">http://www.cisco.com/techsupport</a></p>

# Feature Information for Using the IEEE 802.3ad Link Aggregation MIB

Table 5 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.

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## Note

Table 5 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 5** Feature Information for Using the IEEE 802.3ad Link Aggregation MIB

Feature Name	Releases	Feature Information
Using IEEE 802.3ad Link Aggregation MIB	12.2(33)SB	This feature introduces LAG MIB support in Cisco IOS software. The LAG MIB supports the management of interfaces and ports that are part of an LACP port channel and is accessed by an SNMP manager application.  This feature uses no commands.

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