Configuring System MTU

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This module describes how to configure the Maximum Transmission Unit for a system on Catalyst 3650 Series Switches and Catalyst 3850 Series Switches.

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 http://www.cisco.com/go/cfn. An account on Cisco.com is not required.

Information about the MTU

The default maximum transmission unit (MTU) size for frames received and sent on all switch interfaces is 1500 bytes.

Restrictions for System MTU

When configuring the system MTU values, follow these guidelines:

- The switch does not support the MTU on a per-interface basis.
- If you enter the **system mtu** *bytes* global configuration command, the command does not take effect on the switch. This command only affects the system MTU size on Fast Ethernet switch ports.

System MTU Value Application

In a switch stack, the MTU values applied to member switches depends upon the stack configuration. The following stack configurations are supported:

This table shows how the MTU values are applied.

Table 1: MTU Values

Configuration	system mtu command	ip mtu command	ipv6 mtu command
Standalone switch or switch stack	You can enter the **system mtu** command on a switch or switch stack, but system MTU value does not take effect. The range is from 1500 to 9198 bytes.	Use the **ip mtu** *bytes* command. The range is from 832 up to 1500 bytes. **Note** The IP MTU value is the applied value, not the configured value.	Use the **ipv6 mtu** *bytes* command. The range is from 1280 to the system jumbo MTU value (in bytes). **Note** The IPv6 MTU value is the applied value, not the configured value.

The upper limit of the IP or IPv6 MTU value is based on the switch or switch stack configuration and refers to the currently applied system MTU value. For more information about setting the MTU sizes, see the **system mtu** global configuration command in the command reference for this release.

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Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:** `Switch> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Switch# configure terminal`	Enters global configuration mode.
Step 3	**system mtu** *bytes* **Example:** `Switch(config)# system mtu 1600`	Applies the Maximum Transmission Unit (MTU) size for all Ethernet interfaces on the switch or the switch stack. • The MTU range is from 1500 to 9198. The default is 1500.
Step 4	**exit** **Example:** `Switch(config)# exit`	Exits global configuration mode and returns to privileged EXEC mode.

	Command or Action	Purpose
Step 5	**show system mtu** **Example:** `Switch# show system mtu`	Displays the configured global MTU size.

Configuring Protocol-Specific MTU

When system MTU changes, the range for the **ip mtu** command for interface also changes.

Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:** `Switch> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Switch# configure terminal`	Enters global configuration mode.
Step 3	**interface** *type number* **Example:** `Switch(config)# interface gigabitethernet 0/0`	Configures an interface and enters interface configuration mode.
Step 4	**ip mtu** *bytes* **Example:** `Switch(config-if)# ip mtu 900`	Sets the maximum transmission unit (MTU) size of IP packets sent on an interface. • The range is from 832 to 1500.
Step 5	**ipv6 mtu** *bytes* **Example:** `Switch(config-if)# ipv6 mtu 1300`	Set the MTU size of IPv6 packets sent on an interface. • The range is from 1280 to 1500.
Step 6	**end** **Example:** `Switch(config-if)# end`	Exits interface configuration mode and returns to privileged EXEC mode.
Step 7	**show system mtu** **Example:** `Switch# show system mtu`	Displays the configured global MTU size.

Configuration Examples for System MTU

Example: Configuring the System MTU

```
Switch# configure terminal
Switch(config)# system mtu 1600
Switch(config)# exit
```

Example: Configuring Protocol-Specific MTU

```
Switch# configure terminal
Switch(config)# interface gigabitethernet 0/0
Switch(config-if)# ip mtu 900
Switch(config-if)# ipv6 mtu 1286
Switch(config-if)# end
```

Additional References for System MTU

Error Message Decoder

Description	Link
To help you research and resolve system error messages in this release, use the Error Message Decoder tool.	https://www.cisco.com/cgi-bin/Support/Errordecoder/index.cgi

MIBs

MIB	MIBs Link
All supported MIBs for this release.	To locate and download MIBs for selected platforms, Cisco IOS 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 website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies. 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. Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.	http://www.cisco.com/support

Feature Information for System MTU

Release	Modification
Cisco IOS XE 3.2SE	This feature was introduced.