



# Configuring System MTU

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## Configuring System MTU

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 affects all the ports on the switch.

## System MTU Value Application

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	<p>You can enter the <b>system mtu</b> command on a switch or switch stack, but system MTU value does not take effect.</p> <p>The range is from 1500 to 9198 bytes.</p>	<p>Use the <b>ip mtu bytes</b> command.</p> <p>The range is from 68 up to the system MTU value (in bytes).</p> <p><b>Note</b> The IP MTU value is the applied value, not the configured value.</p>	<p>Use the <b>ipv6 mtu bytes</b> command.</p> <p>The range is from 1280 to the system jumbo MTU value (in bytes).</p> <p><b>Note</b> The IPv6 MTU value is the applied value, not the configured value.</p>

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.

## Configuring the System MTU

### Configuring the System MTU

#### SUMMARY STEPS

1. enable
2. configure terminal
3. system mtu bytes
4. exit
5. show system mtu

#### DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<p><b>enable</b></p> <p><b>Example:</b></p> <pre>Switch&gt; enable</pre>	<p>Enables privileged EXEC mode.</p> <ul style="list-style-type: none"> <li>• Enter your password if prompted.</li> </ul>
<b>Step 2</b>	<p><b>configure terminal</b></p> <p><b>Example:</b></p> <pre>Switch# configure terminal</pre>	<p>Enters global configuration mode.</p>

	Command or Action	Purpose
<b>Step 3</b>	<b>system mtu <i>bytes</i></b> <b>Example:</b> Switch(config)# system mtu 1600	Applies the Maximum Transmission Unit (MTU) size for all Ethernet interfaces on the switch or the switch stack. <ul style="list-style-type: none"> <li>The MTU range is from 1500 to 9198. The default is 1500.</li> </ul>
<b>Step 4</b>	<b>exit</b> <b>Example:</b> Switch(config)# exit	Exits global configuration mode and returns to privileged EXEC mode.
<b>Step 5</b>	<b>show system mtu</b> <b>Example:</b> 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.

### SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **interface *type number***
4. **ip mtu *bytes***
5. **ipv6 mtu *bytes***
6. **end**
7. **show system mtu**

### DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<b>enable</b> <b>Example:</b> Switch> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> <li>Enter your password if prompted.</li> </ul>
<b>Step 2</b>	<b>configure terminal</b> <b>Example:</b> Switch# configure terminal	Enters global configuration mode.
<b>Step 3</b>	<b>interface <i>type number</i></b> <b>Example:</b> Switch(config)# interface gigabitethernet 0/0	Configures an interface and enters interface configuration mode.
<b>Step 4</b>	<b>ip mtu <i>bytes</i></b> <b>Example:</b>	Sets the maximum transmission unit (MTU) size of IP packets sent on an interface. <ul style="list-style-type: none"> <li>The range is from 832 to 1500.</li> </ul>

	Command or Action	Purpose
	Switch(config-if)# ip mtu 900	
<b>Step 5</b>	<b>ipv6 mtu bytes</b> <b>Example:</b> Switch(config-if)# ipv6 mtu 1300	Set the MTU size of IPv6 packets sent on an interface. <ul style="list-style-type: none"> <li>The range is from 1280 to 1500.</li> </ul>
<b>Step 6</b>	<b>end</b> <b>Example:</b> Switch(config-if)# end	Exits interface configuration mode and returns to privileged EXEC mode.
<b>Step 7</b>	<b>show system mtu</b> <b>Example:</b> 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.	<a href="https://www.cisco.com/cgi-bin/Support/Errordecoder/index.cgi">https://www.cisco.com/cgi-bin/Support/Errordecoder/index.cgi</a>

**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: <a href="http://www.cisco.com/go/mibs">http://www.cisco.com/go/mibs</a>

**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>	<a href="http://www.cisco.com/support">http://www.cisco.com/support</a>

## Feature Information for System MTU

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

