Configuring System MTU

Restrictions for System MTU

When configuring the system MTU values, follow these guidelines:

- The device 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 switched and routed ports on the switch.

Information About the MTU

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

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 on the switch. It affects the Fast Ethernet ports. 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.

How to Configure MTU Sizes

Configuring the System MTU

Follow these steps to change the MTU size for switched packets:

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **system mtu** *bytes*
4. **end**
5. **copy running-config startup-config**
6. **show system mtu**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Device> enable`	Enables privileged EXEC mode. • Enter your password if prompted.

	Command or Action	Purpose
Step 2	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 3	**system mtu** *bytes* **Example:** `Device(config)# system mtu 1900`	(Optional) Changes the MTU size for all Gigabit Ethernet and 10-Gigabit Ethernet interfaces.
Step 4	**end** **Example:** `Device(config)# end`	Returns to privileged EXEC mode.
Step 5	**copy running-config startup-config** **Example:** `Device# copy running-config startup-config`	Saves your entries in the configuration file.
Step 6	**show system mtu** **Example:** `Device# show system mtu`	Verifies your settings.

Configuring Protocol-Specific MTU

To override system MTU values on routed interfaces, configure protocol-specific MTU under each routed interface.

Beginning in privileged EXEC mode, follow these steps to change the MTU size for routed ports:

SUMMARY STEPS

1. **configure terminal**
2. **interface** *interface*
3. **ip mtu** *bytes*
4. **ipv6 mtu** *bytes*
5. **end**
6. **copy running-config startup-config**
7. **show system mtu**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.

	Command or Action	Purpose
Step 2	**interface** *interface* **Example:** `Device(config)# interface gigabitethernet0/0`	Enters interface configuration mode.
Step 3	**ip mtu** *bytes* **Example:** `Device(config-if)# ip mtu 68`	Changes the IPv4 MTU size
Step 4	**ipv6 mtu** *bytes* **Example:** `Device(config-if)# ipv6 mtu 1280`	(Optional) Changes the IPv6 MTU size.
Step 5	**end** **Example:** `Device(config-if)#  end`	Returns to privileged EXEC mode.
Step 6	**copy running-config startup-config** **Example:** `Device# copy running-config startup-config`	Saves your entries in the configuration file.
Step 7	**show system mtu** **Example:** `Device# show system mtu`	Verifies your settings.

Configuration Examples for System MTU

Example: Configuring Protocol-Specific MTU

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

Example: Configuring the System MTU

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

Additional References for System MTU

MIBs

MIB	MIBs Link
All the 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.