Configuring System MTU

Restrictions for System MTU

On Cisco Catalyst 9600 Series Supervisor 2 Module (C9600X-SUP-2), the following restrictions are applicable:

- If no protocol-specific MTU configuration is present, Per-Port MTU is used as protocol-specific MTU. In case Per-Port MTU is not configured, System MTU is used as protocol-specific MTU.
- Ingress and egress Layer 2 MTU is derived from Per-Port MTU. If Per-Port MTU is not configured, System MTU is used
- On ingress ports configured with Layer 2 MTU, if packets exceed the configured MTU size, then the packets are dropped.
- Layer 2 MTU configurations are not enforced for egress frames.

Information About the MTU

The default maximum transmission unit (MTU) size for payload received in Ethernet frame and sent on all device interfaces is 1500 bytes. The maximum value of System MTU is 9216.

System MTU Value Application

The upper limit of the IP or IPv6 MTU value is based on the switch 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.

Beginning from Cisco IOS XE Amsterdam 17.3.x, the minimum IPv6 system MTU is fixed at 1280 as per RFC 8200.

How to Configure MTU

Configuring the System MTU

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

Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:** `Device> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
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 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. To change the MTU size for routed ports, perform this procedure

Procedure

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
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 0/1
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

Related Documents

Related Topic	Document Title
For complete syntax and usage information for the commands used in this chapter.	See the *Interface and Hardware Commands* section in the *Command Reference (Catalyst 9600 Series Switches)*

Standards and RFCs

Standard/RFC	Title
RFC 8200	*Internet Protocol, Version 6 (IPv6) Specification*

Feature History for System MTU

This table provides release and related information for features explained in this module.

These features are available on all releases subsequent to the one they were introduced in, unless noted otherwise.

Release	Feature	Feature Information
Cisco IOS XE Gibraltar 16.11.1	System MTU	System MTU defines the maximum transmission unit size for frames transmitted on all interfaces of a switch.

Use Cisco Feature Navigator to find information about platform and software image support. To access Cisco Feature Navigator, go to http://www.cisco.com/go/cfn.