



Configure Per-Port MTU

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Feature History for Per-port MTU

This table provides release and platform support information for the features explained in this module.

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

Release	Feature name and description	Supported platform
Cisco IOS XE 26.2.1ea	Per-port MTU: This feature support has been introduced.	Cisco C9550 Series Smart Switches
Cisco IOS XE 17.18.1	Per-port MTU: Per-port MTU defines the maximum transmission unit size for frames received and transmitted on a particular port or port channel.	Cisco C9350 Series Smart Switches Cisco C9610 Series Smart Switches

Per-Port MTU

The Per-Port MTU, also known as Interface MTU, is a setting that defines the MTU size for a specific physical or logical interface, such as a GigabitEthernet port, a VLAN interface, or a Port-Channel.

This setting applies only to the individual interface on which it is configured.

Relationship to System MTU:

The Port MTU can override the System MTU for a particular interface. If a Port MTU is explicitly configured on an interface, that interface uses its configured Port MTU, regardless of the System MTU.

However, the Port MTU cannot exceed the System MTU on Cisco platforms. The System MTU often acts as an upper limit for individual Port MTU configurations. If you attempt to configure a Port MTU larger than the System MTU, the switch might reject the configuration or silently cap it at the System MTU value.

Restrictions for configuring per-port MTU

Several restrictions apply to configuring per-port MTU on Cisco Catalyst switches. These restrictions vary depending on the platform, interface type, and other configuration conditions.

General restrictions:

- Per-port MTU cannot be configured on the management port.
- Do not configure the per-port MTU value while traffic is flowing (e.g., during active data transmission).

Port-channel restrictions:

- Members of a port channel cannot be configured with a per-port MTU value; they derive their MTU from the port-channel MTU configuration.
- Per-port MTU can be configured on port-channel interfaces but not on the port-channel members.

Subinterface restrictions:

- Per-port MTU is not supported on subinterfaces or port-channel subinterfaces.

Layer 2 MTU restrictions:

- Ingress and egress Layer 2 MTU is derived from per-port MTU. If per-port MTU is not configured, the System MTU is used.
- On ingress ports configured with Layer 2 MTU, packets that exceed the configured MTU size are dropped.

Platform-specific restrictions:

- On Cisco C9610 Series SUP-3 and SUP-3XL, the following restrictions are applicable:
 - If no protocol-specific MTU configuration is present, per-port MTU is used as protocol-specific MTU.
 - If per-port MTU is not configured, System MTU is used as protocol-specific MTU.

Port MTU specifications for Cisco Smart Switches

You can configure the MTU size for all interfaces on a device at the same time using the **system mtu** command. The default maximum transmission unit (MTU) size for frames received and transmitted on all interfaces is 1500 bytes. The **system mtu** command is a global command and does not allow MTU to be configured at a port level. You can also configure Per-Port MTU. Per-Port MTU supports port level and port channel level MTU configuration. With Per-Port MTU you can set different MTU values for different interfaces as well as different port channel interfaces.

C9350: Per-port MTU can be configured in the range of 1500-9198 bytes.

C9610: Per-port MTU can be configured in the range of 1500-9216 bytes.

C9550: Per-port MTU can be configured in the range of 1500-9216 bytes.

Once the Per-Port MTU value has been configured on a port, the protocol-specific MTU for that port is also changed to the Per-Port MTU value. When Per-Port MTU is configured on a port, you can still configure protocol-specific MTU on the interface.

If the Per-Port MTU is disabled, the MTU for the port will revert to the system MTU value.

You can view the Per-Port MTU configurations on an interface using the **show interface mtu** command.

The following are expected behavior if the Per-Port MTU configuration is changed on any interface:

- The interface flaps if the port-channel is in PAgP or LACP mode.
- The interface does not flap if the port channel is in the **on** mode.
- The interface does not flap if the interface is not a port channel.

You can disable Per-Port MTU by using the **no** form of the **mtu bytes** command in the interface configuration mode.



Note To form routing protocol adjacency, ensure port MTUs match between devices. Configure matching IP MTU or IPv6 MTU values on the interfaces of both devices.

Configure per-port MTU

Change the MTU size for switched packets on specific ports. Adjust MTU size for optimized network performance on selected interfaces.

Before you begin

Ensure privileged EXEC mode access and necessary credentials.

Procedure

	Command or Action	Purpose
Step 1	enable Example: <code>Device> enable</code>	Enables privileged EXEC mode. Enter your password, if prompted.
Step 2	configure terminal Example: <code>Device# configure terminal</code>	Enters global configuration mode.
Step 3	interface type { <i>switch-number</i> <i>slot-number</i> <i>port-number</i> } Example:	Configures the interface and enters interface configuration mode.

	Command or Action	Purpose
	Device# int FortyGigabitEthernet2/5/0/20	
Step 4	mtu bytes Example: Device# mtu 6666	Configures the MTU size for a particular port on the interface.
Step 5	end Example: Device(config)# end	Enters global configuration mode, and returns to privileged EXEC mode.

What to do next

Verify MTU size configuration by checking network performance or consulting device- specific MTU readouts.

Configuration Examples for Per-Port MTU

Configure per-port MTU

Follow these steps to configure per-port MTU on an interface:

```
Device# configure terminal
Device(config)# interface FortyGigabitEthernet2/5/0/20
Device(config-if)# mtu 6666
Device(config-if)# end
```

Verification of per-port MTU

The following example illustrates how to verify the per-port MTU configuration on an interface using the **show interface mtu** command.

```
Device# show interface mtu
Port          Name          MTU
Fo2/5/0/19    Name          1500
Fo2/5/0/20    Name          6666
Fo2/5/0/21    ixia_7_21     1500
```

Disable per-port MTU

Before you begin:

- Ensure that you have administrative access to the device.
- Confirm the interface ID where you want to disable the per-port MTU.

This example shows how to disable per-port MTU on an interface:

```
Device# configure terminal
Device(config)# interface FortyGigabitEthernet2/5/0/20
Device(config-if)# no mtu
Device(config-if)# end
```