Configuring IP TCP MSS

- Information About IP TCP MSS, on page 1
- Default Settings for IP TCP MSS, on page 1
- Guidelines and Limitations for IP TCP MSS, on page 2
- Configuring IP TCP MSS, on page 2
- Verifying IP TCP MSS, on page 4

Information About IP TCP MSS

The IP TCP Maximum Segment Size (MSS) feature enables a switch to set a maximum segment size for all TCP connections that originate or terminate at a Cisco Nexus 9000 Series switch. The MSS in a TCP header field is the maximum data size or payload that a host can send or receive in a single segment. By default, a Cisco Nexus 9000 Series switch sets the MSS value to 536 bytes for IPv4 TCP connections and 1240 bytes for IPv6 TCP connections. This default value is set by the switch during the initial TCP connection establishment.

The switch from which the TCP connection originates will always set the MSS to the user-configured MSS or the difference between the route interface MTU and the protocol header, whichever is lower. Thus, Host A sends a SYN packet with the proposed MSS of 1460 bytes to Host B. After receiving the SYN packet with the proposed MSS, Host B sends a SYN-ACK packet to Host A, accepting the proposed MSS value for the TCP connection. Host A sends an ACK packet to Host B, setting the MSS value to 1460 for the TCP connection.

Default Settings for IP TCP MSS

Table 1: Default Settings for IP TCP MSS

Parameter	Default Setting
IP TCP MSS	536 bytes for IPv4 TCP connections 1240 bytes for IPv6 TCP connections

Guidelines and Limitations for IP TCP MSS

If the MSS has to be set to a value that is more than 1460 bytes for IPv4 TCP connections, the corresponding MTU value should be set to the required MSS value plus 40 bytes. If the MSS has to be set to a value that is more than 1440 bytes for IPv6 TCP connections, the corresponding MTU value should be set to the required MSS value plus 60 bytes.

Configuring IP TCP MSS

Setting the MSS for TCP Connections, on page 2

Removing a Set IP TCP MSS, on page 3

Setting the MSS for TCP Connections

Before you begin

SUMMARY STEPS

1. switch# **configure terminal**
2. switch(config)# **ip tcp mss** <*bytes*>
3. switch# **show ip tcp mss**

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	switch# **configure terminal**	Enter global configuration mode
Step 2	switch(config)# **ip tcp mss** <*bytes*>	Set a maximum segment size.
Step 3	switch# **show ip tcp mss**	Display the configured IP TCP MSS.

Example: Running Configuration

Example

This example shows a running configuration, followed by a verification command that displays the configured IP TCP MSS:

```
configure terminal
 ip tcp mss 5000
 Setting TCP MSS to 5000 bytes

switch# show ip tcp mss
TCP MSS value 5000 bytes
```

Removing a Set IP TCP MSS

SUMMARY STEPS

1. switch# **configure terminal**
2. switch(config)# **no ip tcp mss**
3. switch# **show ip tcp mss**

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	switch# **configure terminal**	Enter global configuration mode
Step 2	switch(config)# **no ip tcp mss**	Remove the configured IP TCP MSS and set the IP TCP MSS to default values.
Step 3	switch# **show ip tcp mss**	Display the configured IP TCP MSS.

Example: Running Configuration

Example

This example shows a running configuration, followed by a verification command that displays the configured IP TCP MSS:

```
configure terminal
 no ip tcp mss 5000
 Setting default MSS value is 536 bytes

switch# show ip tcp mss
TCP MSS value 536 bytes
```

Example: Setting the MSS for TCP Connections

This example shows a setting the MSS for TCP connections:

```
configure terminal
ip tcp mss 2000
```

Example: Removing a Set IP TCP MSS

This example shows how to remove the MSS:

```
configure terminal
no ip tcp mss
```

Verifying IP TCP MSS

Table 2: Verifying IP TCP MSS

Command	Purpose
show ip tcp mss	Displays the set IP TCP MSS.