

Management Ethernet Interface Commands

This module provides command line interface (CLI) commands for configuring Management Ethernet interfaces on the Cisco 8000 Series Router.

To use commands of this module, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using any command, contact your AAA administrator for assistance.

- duplex (Management Ethernet), on page 2
- interface MgmtEth, on page 3
- ipv6 address autoconfig, on page 4
- mac-address (Management Ethernet), on page 6
- speed (Management Ethernet), on page 8

duplex (Management Ethernet)

To configure duplex mode operation on a Management Ethernet interface, use the **duplex** command in interface configuration mode. To return the interface to autonegotiated duplex mode, use the **no** form of the **duplex** command.

duplex {**full**}

Syntax Description

full Configures the Management Ethernet interface to operate in full duplex mode.

Note
The system does not support half duplex on Management Ethernet interface.

Command Default

Autonegotiates duplex operation

Command Modes

Interface configuration

Command History

Release	Modification
Release 7.0.12	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operations
interface	read, write

Examples

The following example shows how to configure the Management Ethernet interface to operate in full duplex mode:

```
RP/0/RP0/CPU0:router(config)# interface MgmtEth 0//CPU0/0
RP/0/RP0/CPU0:router(config-if)# duplex full
```

The following example shows how to configure the Management Ethernet interface to operate in half duplex mode:

```
RP/0/RP0/CPU0:router(config)# interface MgmtEth 0//CPU0/0
RP/0/RP0/CPU0:router(config-if)# duplex half
```

The following example shows how to return a Management Ethernet interface to autonegotiated duplex mode:

```
RP/0/RP0/CPU0:router(config)# interface MgmtEth 0//CPU0/0
RP/0/RP0/CPU0:router(config-if)# no duplex
```

interface MgmtEth

To enter interface configuration mode for the Management Ethernet interface, use the **interface MgmtEth** command in XR Config mode. To delete a Management Ethernet interface configuration, use the **no** form of this command.

interface MgmtEth *interface-path-id*

Syntax Description

interface-path-id	Physical interface or virtual interface. **Note** Use the **show interfaces** command to see a list of all interfaces currently configured on the router. For more information about the syntax for the router, use the question mark (**?**) online help function.

Command Default

No default behavior or values

Command Modes

XR Config mode

Command History

Release	Modification
Release 7.0.12	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operations
interface	read, write

Examples

This example shows how to enter interface configuration mode for a Management Ethernet interface:

```
RP/0/RP0/CPU0:router(config)# interface MgmtEth 0//CPU0/0
RP/0/RP0/CPU0:router(config-if)#
```

Related Commands

Command	Description
duplex (Management Ethernet), on page 2	Configures duplex mode operation on a Management Ethernet interface.
mac-address (Management Ethernet), on page 6	Sets the MAC layer address of a Management Ethernet interface.
speed (Management Ethernet), on page 8	Configures the speed for a Management Ethernet interface.

ipv6 address autoconfig

The **ipv6 address** command is used to configure IPv6 addresses or prefix on the interface. This command enables IPv6 processing on the interface. To remove all manually configured IPv6 addresses from an interface, use the **no ipv6 address** command without arguments.

ipv6 address { *[ipv6addr]* | *[ipv6-prefix/prefix length]* | **[autoconfig] }**

Syntax Description

ipv6addr	(Optional) Specify the IPv6 address.
ipv6-prefix/prefix length	(Optional) Specify the IPv6 prefix and the prefix length preceded by a slash [/].
autoconfig	(Optional) Enable IPv6 Stateless Address Auto Configuration (SLAAC) on Management interface. **Note** The **autoconfig** option is only available for Management Interfaces.

Command Default

No default behavior or values

Command Modes

Management Interface Configuration

Command History

Release	Modification
Release 7.0.12	This command was introduced.

Usage Guidelines

In the **ipv6 address** interface configuration command, you can enter the *ipv6addr* or *ipv6-prefix/prefix length* variables with the address specified in hexadecimal using 16-bit values between colons. The *prefix length* variable (preceded by a slash [/]) is a decimal value that shows how many of the high-order contiguous bits of the address comprise the prefix (the network portion of the address).

The IPv6 Stateless Address Auto Configuration (SLAAC) is used to automatically assign IPv6 addresses to the host interfaces. This functionality can be used when the exact addresses used by the host need not be specific, as long as they are unique and can be properly routed. SLAAC helps in automating provisioning of the router. IPv6 auto configuration is disabled by default. To enable IPv6 SLAAC on Management interface, use the **ipv6 address autoconfig** command on the Management interface configuration mode.

Task ID

Task ID	Operations
interface	read, write

Examples

The following example shows how to configure the IPv6 address based on the IPv6 prefix 2001:0DB8:c18:1::/64:

```
RP/0/RP0/CPU0:router# configure
```

```
RP/0/RP0/CPU0:router(config)# interface hundredgigabitEthernet 0/2/0/0
RP/0/RP0/CPU0:router(config-if)# ipv6 address 2001:0DB8:c18:1::/64
```

The following example shows how to enable IPv6 auto configuration on router:

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# interface mgmtEth 0/RSP0/CPU0/0
RP/0/RP0/CPU0:router(config-if)# ipv6 address autoconfig
```

mac-address (Management Ethernet)

To set the MAC layer address of a Management Ethernet interface, use the **mac-address** command in interface configuration mode. To return the interface to its default MAC address, use the **no** form of the **mac-address** command.

mac-address *value1.value2.value3*

Syntax Description

value1	High 2 bytes of the MAC address in hexadecimal. Range is from 0 to ffff.
value2	Middle 2 bytes of the MAC address in hexadecimal. Range is from 0 to ffff.
value3	Low 2 bytes of the MAC address in hexadecimal. Range is from 0 to ffff.

Command Default

The default MAC address is read from the hardware burned-in address (BIA).

Command Modes

Interface configuration

Command History

Release	Modification
Release 7.5.3	Unified data model `Cisco-IOS-XR-um-if-mac-address-cfg.yang` to configure MAC address on an interface was introduced.
Release 7.0.12	This command was introduced.

Usage Guidelines

The MAC address must be in the form of three 4-digit values (12 digits in dotted decimal notation).

Task ID

Task ID	Operations
interface	read, write

Examples

This example shows how to set the MAC address of the Management Ethernet interface located at 0/ /CPU0/0:

```
RP/0/RP0/CPU0:router(config)# interface MgmtEth 0//CPU0/0
RP/0/RP0/CPU0:router(config-if)# mac-address 0001.2468.ABCD
```

Configure MAC Address Using YANG Data Model

This example shows how to set the MAC address of the Management Ethernet interface using `Cisco-IOS-XR-um-if-mac-address-cfg.yang` unified data model.

```
<rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
 <edit-config>
     <target>
```

```
        <candidate />
      </target>
      <config type="subtree" xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0">
         <interfaces xmlns="http://cisco.com/ns/yang/Cisco-IOS-XR-um-interface-cfg">
            <interface>
                <interface-name>GigabitEthernet0/0/0/1</interface-name>
                <mac-address
xmlns="http://cisco.com/ns/yang/Cisco-IOS-XR-um-if-mac-address-cfg">00:aa:00:bb:00:cc</mac-address>

            </interface>
         </interfaces>
       </config>
 </edit-config>
</rpc>
```

speed (Management Ethernet)

To configure the speed for a Management Ethernet interface, enter the **speed** command in interface configuration mode. To return the system to autonegotiate speed, use the **no** form of the **speed** command.

speed {**10** | **100** | **1000**}

Syntax Description

10	Configures the interface to transmit at 10 Mbps.
100	Configures the interface to transmit at 100 Mbps.
1000	Configures the interface to transmit at 1000 Mbps (1 Gbps).

Command Default

Interface speed is autonegotiated.

Command Modes

Interface configuration

Command History

Release	Modification
Release 7.0.12	This command was introduced.

Usage Guidelines

Note Keep in mind that both ends of a link must have the same interface speed. A manually configured interface speed overrides any autonegotiated speed, which can prevent a link from coming up if the configured interface speed at one end of a link is different from the interface speed on the other end.

The following table describes the performance of the system for different combinations of the duplex and speed modes. The specified **duplex** command configured with the specified **speed** command produces the resulting system action.

Table 1: Relationship Between duplex and speed Commands

duplex Command	speed Command	Resulting System Action
no duplex	no speed	Autonegotiates both speed and duplex modes.
no duplex	speed 1000	Forces 1000 Mbps (1 Gbps) and full duplex.
no duplex	speed 100	Autonegotiates for duplex mode and forces 100 Mbps.
no duplex	speed 10	Autonegotiates for duplex mode and forces 10 Mbps.
duplex full	no speed	Forces full duplex and autonegotiates for speed.
duplex full	speed 1000	Forces 1000 Mbps (1 Gbps) and full duplex.

duplex Command	speed Command	Resulting System Action
duplex full	speed 100	Forces 100 Mbps and full duplex.
duplex full	speed 10	Forces 10 Mbps and full duplex.
duplex half	no speed	Forces half duplex and autonegotiates for speed (10 or 100 Mbps.)
duplex half	speed 100	Forces 100 Mbps and half duplex.
duplex half	speed 10	Forces 10 Mbps and half duplex.

Task ID

Task ID	Operations
interface	read, write

Examples

This example shows how to configure the Management Ethernet interface to transmit at one gigabit:

```
RP/0/RP0/CPU0:router(config)# interface MgmtEth 0//CPU0/0
RP/0/RP0/CPU0:router(config-if)# speed 1000
```