

## Configuring SNMP IfIndex Persistence

This chapter describes how to configure the SNMP ifIndex persistence feature in Cisco IOS Software Release 12.2SX.

**Note**

For complete syntax and usage information for the commands used in this chapter, see the Cisco IOS Software Releases 12.2SX Command References at this URL:

[http://www.cisco.com/en/US/docs/ios/mcl/122sx\\_mcl.html](http://www.cisco.com/en/US/docs/ios/mcl/122sx_mcl.html)

This chapter consists of these sections:

- [Understanding SNMP IfIndex Persistence, page 60-1](#)
- [Configuring SNMP IfIndex Persistence, page 60-2](#)

## Understanding SNMP IfIndex Persistence

The SNMP ifIndex persistence feature provides an interface index (ifIndex) value that is retained and used when the switch reboots. The ifIndex value is a unique identifying number associated with a physical or logical interface.

There is no requirement in the relevant RFCs that the correspondence between particular ifIndex values and their interfaces be maintained when the switch reboots, but many applications (for example, device inventory, billing, and fault detection) require maintenance of this correspondence.

You can poll the switch at regular intervals to correlate the interfaces to the ifIndexes, but it is not practical to poll constantly. The SNMP ifIndex persistence feature provides permanent ifIndex values, which eliminates the need to poll interfaces.

The following definitions are based on RFC 2233, “The Interfaces Group MIB using SMIV2.” The following terms are values in the Interfaces MIB (IF-MIB):

- **ifIndex**—A unique number (greater than zero) that identifies each interface for SNMP identification of that interface.
- **ifName**—The text-based name of the interface, for example, “ethernet 3/1.”
- **ifDescr**—A description of the interface. Recommended information for this description includes the name of the manufacturer, the product name, and the version of the interface hardware and software.

## Configuring SNMP IfIndex Persistence

These sections describe how to configure SNMP ifIndex persistence:

- [Enabling SNMP IfIndex Persistence Globally, page 60-2](#) (Optional)
- [Enabling and Disabling SNMP IfIndex Persistence on Specific Interfaces, page 60-2](#) (Optional)



### Note

To verify that ifIndex commands have been configured, use the **more system:running-config** command.

### Enabling SNMP IfIndex Persistence Globally

SNMP ifIndex persistence is disabled by default. To globally enable SNMP ifIndex persistence, perform this task:

Command	Purpose
Router(config)# <b>snmp-server ifindex persist</b>	Globally enables SNMP ifIndex persistence.

In the following example, SNMP ifIndex persistence is enabled for all interfaces:

```
router(config)# snmp-server ifindex persist
```

### Disabling SNMP IfIndex Persistence Globally

To globally disable SNMP ifIndex persistence after enabling it, perform this task:

Command	Purpose
Router(config)# <b>no snmp-server ifindex persist</b>	Globally disables SNMP ifIndex persistence.

In the following example, SNMP ifIndex persistence is disabled for all interfaces:

```
router(config)# no snmp-server ifindex persist
```

### Enabling and Disabling SNMP IfIndex Persistence on Specific Interfaces

To enable SNMP ifIndex persistence only on a specific interface, perform this task:

Command	Purpose
<b>Step 1</b> Router(config)# <b>interface</b> {vlan vlan_ID}   {type <sup>1</sup> slot/port}   {port-channel port_channel_number}	Selects an interface to configure.

	Command	Purpose
Step 2	Router(config-if)# <b>snmp ifindex persist</b>	Enables SNMP ifIndex persistence on the specified interface.
	Router(config-if)# <b>no snmp ifindex persist</b>	Disables SNMP ifIndex persistence on the specified interface.
Step 3	Router(config-if)# <b>exit</b>	Exits interface configuration mode.

1. *type* = any supported interface type.

**Note**

The **[no] snmp ifindex persist** interface command cannot be used on subinterfaces. A command applied to an interface is automatically applied to all the subinterfaces associated with that interface.

In the following example, SNMP ifIndex persistence is enabled for Ethernet interface 3/1 only:

```
router(config)# interface ethernet 3/1
router(config-if)# snmp ifindex persist
router(config-if)# exit
```

In the following example, SNMP ifIndex persistence is disabled for Ethernet interface 3/1 only:

```
router(config)# interface ethernet 3/1
router(config-if)# no snmp ifindex persist
router(config-if)# exit
```

## Clearing SNMP IfIndex Persistence Configuration from a Specific Interface

To clear the interface-specific SNMP ifIndex persistence setting and configure the interface to use the global configuration setting, perform this task:

	Command	Purpose
Step 1	Router(config)# <b>interface</b> <i>type slot/port</i>	Enters interface configuration mode for the specified interface. Note that the syntax of the interface command will vary depending on the platform you are using.
Step 2	Router(config-if)# <b>snmp ifindex clear</b>	Clears any interface-specific SNMP ifIndex persistence configuration for the specified interface and returns to the global configuration setting.
Step 3	Router(config-if)# <b>exit</b>	Exits interface configuration mode.

In the following example, any previous setting for SNMP ifIndex persistence on Ethernet interface 3/1 is removed from the configuration. If SNMP ifIndex persistence is globally enabled, SNMP ifIndex persistence will be enabled for Ethernet interface 3/1. If SNMP ifIndex persistence is globally disabled, SNMP ifIndex persistence will be disabled for Ethernet interface 3/1.

```
router(config)# interface ethernet 3/1
router(config-if)# snmp ifindex clear
router(config-if)# exit
```

