

# FSOS

## GSTP Configuration

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## 1. GSTP Configuration

### 1.1 GSTP Overview

The switch is connected with the client. If there is a loop in the client network, which will affect the entire network. GSTP is to solve this problem. After the GSTP is enabled on the switch port, the switch periodically sends a detection message. If the client network has a loop, the switch receives the detection message from the switch. In this case, the switch considers that the client network exists loop, and the port connected to the client port according to the treatment strategy placed discarding or shutdown.

Some people may ask, the spanning tree can also be remote loop detection, why need GSTP? This is because if the client network also has equipment to open spanning tree, the client network topology change easily affects the network of the room. The general networking is to connect the client port which does not open the spanning tree, with GSTP alternative.

### 1.2 GSTP Configuration

#### 1.2.1 Enable Configuration

##### Enable all ports

operation	command	remark
Enter the global configuration mode	configure terminal	required
Enable all ports	[no] spanning-tree remote-loop-detect interface	required
View the configuration information	show spanning-tree remote-loop-detect interface	optional

##### Enable designed port

operation	command	remark
Enter the global configuration mode	configure terminal	required
Enable designed ports	[no] spanning-tree remote-loop-detect interface ethernet <b>port-id</b>	required
Enter the port mode	interface ethernet <b>port-id</b>	required
Enable port	[no]spanning-tree remote-loop-detect	required
View the configuration information	show spanning-tree remote-loop-detect interface [ ethernet <b>port-id</b> ]	optional

 Note:

Enabling a Specified Port has two ways to configure a designated port: 1. Enter the specified port and enable GSTP. 2. Enter the specified port when the port is enabled globally. The same effect, only need to configure one..

### 1.2.2 Configure the Processing Policy

When GSTP detects the existence of loop, there are two ways: one is discarding the port, the other is the port shutdown, and then periodically restores the port; the default use discarding.

Configure the processing policy

operation	command	remark
Enter the global configuration mode	configure terminal	required
Configure the processing policy	spanning-tree remote-loop-detect action { shutdown   discarding }	optional

### 1.2.3 Configure the Recovery Timer

When GSTP detects that a loop exists and the shutdown command is used, the shutdown port periodically recovers the corresponding port. The default recovery period is 20 seconds and can be modified as needed. If it is configured as 60s, it means that it will not be automatically restored. User needs to manually run the shutdown / no shutdown command on the port. The port can re-linkup.

Configure the recovery timer

operation	command	remark
Enter the global configuration mode	configure terminal	required
Configure the shutdown processing policy	spanning-tree remote-loop-detect action shutdown	required
Configure the recovery time of the port	spanning-tree remote-loop-detect recover-time <i>value</i>	optional
View the configuration information	show spanning-tree remote-loop-detect interface	optional

### 1.2.4 Configure the Detection Period

After the GSTP function is enabled, GSTP detection messages are periodically sent from the corresponding port. If the DST receives a GSTP message from itself, it considers that there is a loop and processes it according to the processing policy. The detection time is 5s by default, which allows user to modify the transmission time.

Configure the detection period

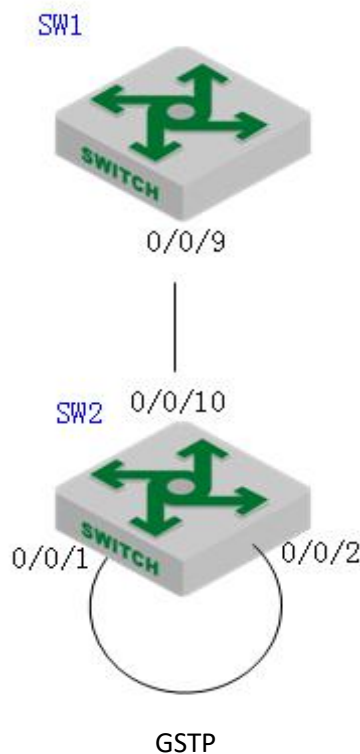
operation	command	remark
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Enter global configuration mode	configure terminal	required
Configure the detection period	spanning-tree remote-loop-detect interval-time <i>value</i>	optional
View configuration information	show spanning-tree remote-loop-detect interface	optional

## 1.2.5 GSTP Configuration Example

### 1. Networking Requirements

As shown in the figure, the port 9 of the SW1 enables GSTP and the SW1 is connected to the switch SW2. When there is a loop on the SW2, the SW1 detects that there is a loop under port 9, port 9 is discarding by default.



### 2. Configuration procedure

#SW1 configuration: Enable the GSTP function of the port 9;

```
SW1(config)# spanning-tree remote-loop-detect interface ethernet 0/0/9
```

```
SW1(config)#interface range ethernet 0/0/9
```

```
SW1(config-if- 0/0/9)#no spanning-tree
```

# SW2 connects port 1 and port 2 to form a single loop, SW1 GSTP is displayed as shown below:

```
SW1(config)#show spanning-tree remote-loop-detect interface ethernet 0/0/9
```

Loopback-detection action is Discarding

The interval time is 5 second(s)

The recovery time is 20 second(s)

Port Information:

port	loopback	status
------	----------	--------

e0/0/9	Enable	Discarding
--------	--------	------------

# After the GSTP processing policy is changed to shutdown, the following is displayed:

SW1(config)#spanning-tree remote-loop-detect action shutdown

SW1(config)#show spanning-tree remote-loop-detect interface ethernet 0/0/9

Loopback-detection action is Shutdown

The interval time is 5 second(s)

The recovery time is 20 second(s)

Port Information:

port	loopback	status
------	----------	--------

e0/0/9	Enable	Shutdown
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