

GMRP Configuration



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Chapter 1 Configuring GMRP

1.1 Introduction

GARP Multicast Registration Protocol (GMRP) is based on the Generic Attribute Registration Protocol (GARP). It adopts GARP's mechanism to maintain the multicast MAC table of the switch, which saves network resources because the mechanism prevents multicast message from broadcasting. All GMRP-supported switches can receive multicast MAC address registry information from other switches and dynamically update the local multicast MAC address registry information, including multicast MAC address registry information currently saved in the ports. At the same time, GMRP-supported switches can send their local multicast MAC address registry information to other switches.

1.2 Configuration Task List

GMRPConfiguration task list includes the following tasks:

- Enabling/Disabling GMRP in global configuration mode
- Enabling/Disabling GMRP on the port
- Monitoring and maintaining GMRP

1.3 GMRP Configuration Task

1.3.1 Enabling/Disabling GMRP in Global Configuration Mode

Perform the following configuration in global configuration mode.

Command	Description
gmrp	Enables/Disables GMRP in global configuration mode.
no gmrp	Resumes GMRP to the default state.

GMRP is disabled by default.

1.3.2 Enabling/Disabling GMRP on the Port

Perform the following configuration in port configuration mode.

Command	Description
gmrp	Enables/Disables GMRP on the port.
no gmrp	Resume GMRP on the port to the default state.

Before enabling GMRP on the port, enable GMRP in global configuration mode. Otherwise, GMRP on the port cannot work. What's more, GMRP has to be configured at the trunk port.

GMRP on the port is enabled by default.

1.3.3 Monitoring and Maintaining GMRP

Perform the following configuration in management mode:

Command	Description
show gmrp statistics [interface <i>port_list</i>]	Displays GMRP statistics information.
show gmrp status	Displays GMRP information in global mode.
[no] debug gmrp { packet event }	Enables/Disables the debug on-off of GMRP packets and events.

1. Displaying GMRP statistics information

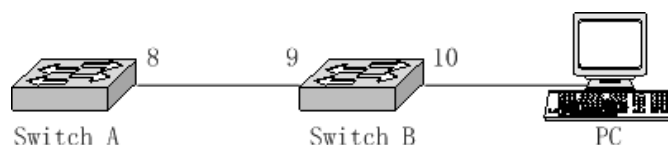
```
switch#show gmrp statistics interface FastEthernet0/6
GMRP statistics on port FastEthernet0/6
GMRP Status: Enabled
GMRP Frames Received: 54
GMRP Frames Transmitted: 27
GMRP Frames Discarded: 0
GMRP Last Pdu Origin: 1234.5678.9abc
```

2. Displaying GMRP information in global mode

```
switch#show gmrp status
GMRP is disabled
```

1.4 Configuration Example

The following figure shows the network connection.



To make VLAN configuration information on Switch A the same as that of Switch B, enable GMRP on Switch A and Switch B. The configuration is shown as follows:

- (1) Run the following command to enable GMRP of Switch A in global configuration mode:

```
Switch_config#gmrp
```

- (2) Run the following command to enable GMRP on port 8 at Switch A:

```
Switch_config_f0/8#gmrp
```

- (3) Run the following command to enable GMRP of Switch B in global configuration mode:

```
Switch_config#gmrp
```

- (4) Run the following command to enable GMRP on port 9 at Switch B:

```
Switch_config_f0/9#gmrp
```

- (5) Run the following command to enable GMRP on port 10 at Switch B:

```
Switch_config_f0/9#gmrp
```

- (6) Send the message **gmrp join** from the computer connecting port 10 of Switch B to Switch B. The multicast MAC address registered in the message is 01.00.00.00.00.99.

- (7) Check the multicast MAC address table at Switch A to find the record about the MAC address 01.00.00.00.00.99.

Note:

- 1) Both the VLAN cluster that port 8 of Switch A belongs to and the VLAN cluster that port 9 of Switch B belongs to contain vlan of the **join** message. Different VLANs cannot communicate with each other directly.
- 2) Check the multicast MAC address table at Switch A before the leaveall timer times out. For easy observation, run **garp timer leaveall** to simultaneously increase the timeout value of leaveall timers of two switches (10 seconds by default).