

GVRP Configuration

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Chapter 1 Configuring GVRP

1.1 Overview

GVRP (GARP VLAN Registration Protocol GARP VLAN) is a GARP (GARP VLAN Registration Protocol GARP VLAN) application that provides IEEE 802.1Q-compliant VLAN pruning and dynamic VLAN creation on 802.1Q trunk ports. With GVRP, the switch can exchange the VLAN configuration information with the other GVRP switches, prune the unnecessary broadcast and unknown unicast traffic, and dynamically create and manage the VLANs on the switches that are connected through the 802.1Q trunk ports.

1.2 Configuring Task List

1.2.1 GVRP Configuration Task List

- Enabling/Disabling GVRP Globally
- Enabling/Disabling GVRP on the Interface
- Monitoring and Maintenance of GVRP

1.3 GVRP Configuration Task

1.3.1 Enabling/Disabling GVRP Globally

Perform the following configuration in global configuration mode.

Command	Description
<code>[no] gvrp</code>	Enables/disables GVRP globally.

It is disabled by default.

1.3.2 Dynamic VLAN to Validate only on a Registered Port

Run the following commands in global configuration mode:

Command	Description
<code>[no] gvrp dynamic-vlan-pruning</code>	Enable/disable VLAN to validate only on a registered port.

After this function is enabled, dynamic VLAN takes effect only on the ports on which this dynamic VLAN is registered. After this command is enabled and if a port has not registered a dynamic VLAN, this port will not belong to the dynamic VLAN even though this port is a trunk port and it allows the dynamic VLAN to pass through.

The function is disabled by default.

1.3.3 Enabling/Disabling GVRP on the Interface

Perform the following configuration in interface configuration mode:

Command	Description
[no] gvrp	Enables/disables interface GVRP.

In order for the port to become an active GVRP participant, you must enable GVRP globally first and the port must be an 802.1Q trunk port,

It is enabled by default.

1.3.4 Monitoring and Maintenance of GVRP

Perform the following operations in EXEC mode:

Command	Description
show gvrp statistics [interface port_list]	Displays GVRP statistics.
show gvrp status	Displays GVRP global state information.
[no] debug gvrp [packet event]	Enables/disables GVRP data packet and event debug switches. All debug switches will be enabled/disabled if not specified the concrete switch.

Display GVRP statistics:

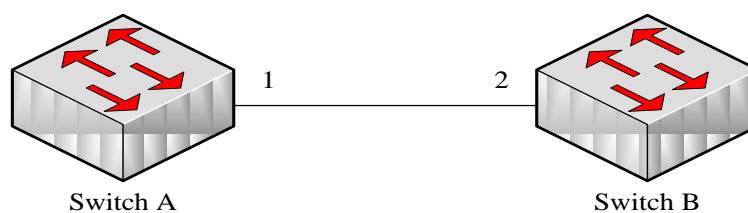
```
switch#show gvrp statistics interface Tthernet0/1
GVRP statistics on port Ethernet0/1
GVRP Status: Enabled
GVRP Failed Registrations: 0
GVRP Last Pdu Origin: 0000.0000.0000
GVRP Registration Type: Normal
```

Display GVRP global state information:

```
Switch#show gvrp status
GVRP is enabled
```

1.4 Configuration Example

The network connection is as follows. In order to make the VLAN configuration information of Switch A and Switch B identical, you can enable GVRP on Switch A and Switch B. The configuration is as follows:



1) Configure the interface 1 that Switch A connects to Switch B to trunk:

```
Switch_config_g0/1# switchport mode trunk
```

2) Enable global GVRP of switch A:

```
Switch_config#gvrp
```

3) Enable GVRP of interface 1 of Switch A:

```
Switch_config_g0/1#gvrp
```

4) Configure VLAN 10, Vlan 20 and Vlan30 on Switch A

```
Switch_config#vlan 10,20,30
```

5) Configure the interface 2 that Switch A connects to Switch B to trunk:

```
Switch_config_g0/2# switchport mode trunk
```

6) Enable global GVRP of switch B:

```
Switch_config#gvrp
```

7) Enable GVRP of interface 2 of Switch B

```
Switch_config_g0/2#gvrp
```

8) Configure VLAN 40, Vlan 50 and Vlan60 on Switch B

```
Switch_config#vlan 40,50,60
```

After completing the configuration, the VLAN configuration information will be displayed respectively on Switch A and Switch B, that is, VLAN10, VLAN20, VLAN30, VLAN40, VLAN50 and VLAN60 on both switches.