

GVRP Configuration

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Chapter 1 Configuring GVRP

1.1 Overview

GVRP (GARP VLAN Registration Protocol GARP VLAN) is a concrete application of GARP (GARP VLAN Registration Protocol GARP VLAN). It adopts the working mechanism of GARP protocol to maintain VLAN information of OLT. All OLTs that support GVRP can receive other devices' VLAN information and dynamically update the local VLAN registration information, including current VLAN members and the ports through which these VLAN members can be reached. Also, all the OLT that support GVRP can broadcast the local VLAN registration information to other OLTs, making all GVRP-supported devices in the same switching network have the same VLAN information.

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

Run the following commands in global configuration mode.

Command	Purpose
[no] gvrp	Enabling/Disabling GVRP Globally

GVRP is disabled by default.

1.3.2 Setting Dynamic VLAN to Validate only on a Registered Port

Run the following commands in global configuration mode.

Command	Purpose
[no] gvrp dynamic-vlan-pruning	Enables or disables dynamic 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.

This function is not enabled by default.

1.3.3 Enabling/Disabling GVRP on the Interface

Run the following commands in interface configuration mode.

Command	Purpose
[no] gvrp	Enable/disable interface GVRP.

Before enabling GVRP, please enable global GVRP first, or the interface GVRP cannot work. Moreover, GVRP function can only be configured on the Trunk interface, or the interface GVRP function cannot work.

By default, the interface GVRP function is enabled.

1.3.4 Monitoring and Maintenance of GVRP

The command can be used in other modes except the user mode.

Command	Purpose
show gvrp statistics [interface port_list]	This command is used to display the gvrp statistics information.
show gvrp status	This command is used to display the gvrp global state information.
[no] debug gvrp { packet event }	Enable/disable GVRP data packet or event debug switch.

This command is used to display the gvrp statistics information.

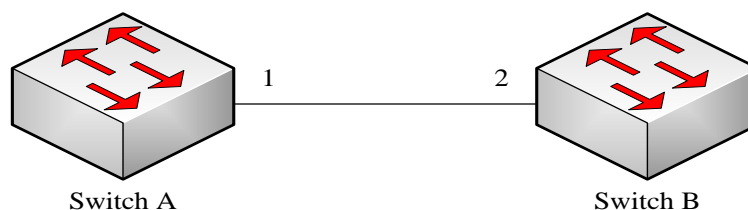
```
switch# show gvrp statistics interface g0/1
GVRP statistics on port g0/1
  GVRP Status:           : Enabled
  GVRP Frames Received   : 0
  GVRP Frames Transmitted : 66
  GVRP Frames Discarded  : 0
  GVRP Last Pdu Origin   : 0000.0000.0000
```

This command is used to display the 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 0/1 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 0/1 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 0/2 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 0/2 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.