

IGMP-PROXY Configuration

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Chapter 1 IGMP-Proxy Configuration

1.1 IGMP-proxy Configuration Tasks

The IGMP Proxy allows the VLAN where the multicast user is located to receive the multicast source from other VLANs. The IGMP Proxy runs on layer 2 independently without other multicast routing protocols. IGMP proxy will be transmitted by the IGMP packets of the proxied VLAN to the proxying VLAN and maintain the hardware forward table of the multicast user of the agent VLAN according to these IGMP packets. IGMP proxy divides different VLANs into two kinds: proxied VLANs and proxying VLANs. The downstream multicast VLANs can be set to the proxied VLANs, while the upstream multicast VLANs can be set to the proxying VLANs.

Although IGMP proxy is based on IGMP snooping, two are independent in application; IGMP Snooping will not be affected when IGMP proxy is enabled or disabled, while IGMP proxy can run only when IGMP Snooping is enabled.

IGMP proxy cannot be used unless the following conditions are met:

1. L3 switch
2. Avoiding to enable IP multicast routing at the same time
3. Preventing a vlan to act as downstream vlan and also upstream vlan
 - Enabling/Disabling IGMP-Proxy
 - Adding/deleting VLAN agent relationship
 - Adding/deleting static multicast source entries
 - Monitoring and Maintaining IGMP-Proxy
 - Setting the Example of IGMP Proxy

1.1.1 Enabling/Disabling IGMP-Proxy

Run the following commands in global configuration mode.

Command	Purpose
ip igmp-proxy enable	Enables IGMP proxy.
no ip igmp-proxy enable	Resumes the default settings.

Note: IGMP-proxy cannot be enabled after IP multicast-routing is enabled. The previously enabled IGMP proxy is automatically shut down if IP multicast routing is enabled. The shutdown of ip multicast-routing will not lead to the automatic enablement of IGMP proxy.

1.1.2 Adding/Deleting VLAN Agent Relationship

Run the following commands in global configuration mode.

Command	Purpose
ip igmp-proxy agent-vlan <i>avlan_map</i> client-vlan map <i>cvlan_map</i>	Adds the agent VLAN (<i>avlan_map</i>) to manage the represented vlan (<i>cvlan_map</i>).
no ip igmp-proxy agent-vlan <i>avlan_map</i> client-vlan map <i>cvlan_map</i>	Deletes the agent relationship.

Note:

1. The represented VLAN cannot be configured before vlan is designated by *avlan_map*; also, the agent VLAN cannot be configured before *cvlan_map*.
2. The represented and agent VLANs must accept the control of IGMP-Snooping.

1.1.3 Adding/Deleting Static Multicast Source Entries

Run the following commands in global configuration mode.

Command	Purpose
ip igmp-proxy source <i>multi_ip</i> <i>src_ip</i> svlan <i>vlan_id</i> sport <i>intf_name</i>	Adds entries of the static source multicast.
no ip igmp-proxy source <i>multi_ip</i> <i>src_ip</i> svlan <i>vlan_id</i> sport <i>intf_name</i>	Deletes entries of the static source multicast.

Note: The SVLAN mentioned here is the multicast source VLAN and the vlan ID of SVLAN cannot be that of represented VLAN.

1.1.4 Monitoring and Maintaining IGMP-Proxy

Run the following commands in EXEC mode:

Command	Operation
show ip igmp-proxy	Displays the information about IGMP proxy.
show ip igmp-proxy mcache [<i>delete</i> <i>nonsync</i> <i>sync</i>] <i>static</i>	Displays the forwarding cache of IGMP proxy. delete: display those entries of which hardware caches are deleted but software caches do not time out. nonsync: display those entries that have been processed but not yet synchronized to the

	<p>hardware cache..</p> <p>Sync: display those entries already in the hardware cache.</p> <p>All entries are to be displayed if no filtration conditions are specified.</p> <p>static: only display the entries of static multicast cache.</p>
<code>[no] debug ip igmp-proxy [error event packet]</code>	Enables or disables the IGMP-proxy debug switch.

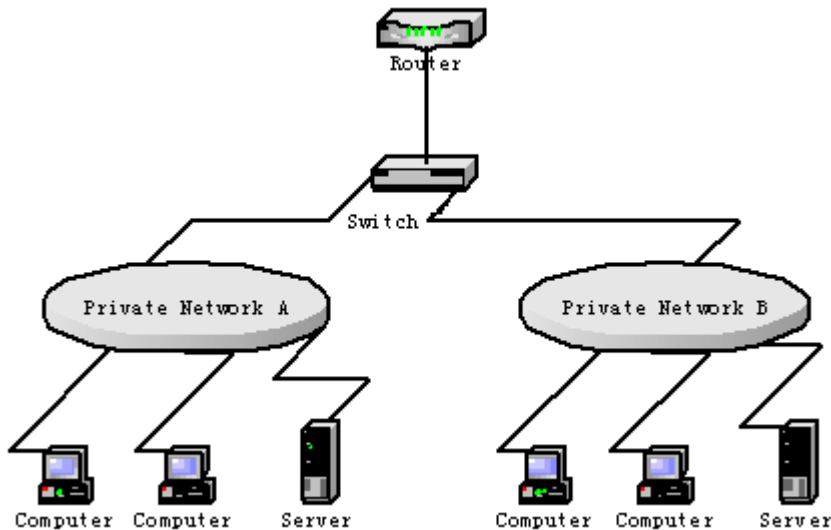
The following example shows how to display the forwarding caches of IGMP proxy:

```
Switch# show ip igmp-proxy mcache
Codes: '+' synchronization, '-' deleted, 'S' static
      '^' unsynchronization

Item 1: Group 225.1.1.2
      +(192.168.213.163, 2, G3/24)
      VLAN 3,4
```

1.1.5 IGMP-Proxy Configuration Example

The network topology is shown in figure 1.



Switch configuration:

- (1) Enable IGMP snooping and IGMP proxy.
`Switch_config#ip igmp-snooping`
`Switch_config#ip igmp-proxy enable`

- (2) Add VLAN 2 as the agent VLAN of the represented VLAN 3.
Switch_config#ip igmp-proxy agent-vlan 2 client-vlan map 3