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Introduction

This document provides configuration examples of static multicast MAC address entries.

Prerequisites

The configuration examples in this document were created and verified in a lab environment, and all the devices were started with the factory default configuration. When you are working on a live network, make sure you understand the potential impact of every command on your network.

This document assumes that you have basic knowledge of multicast MAC addresses.

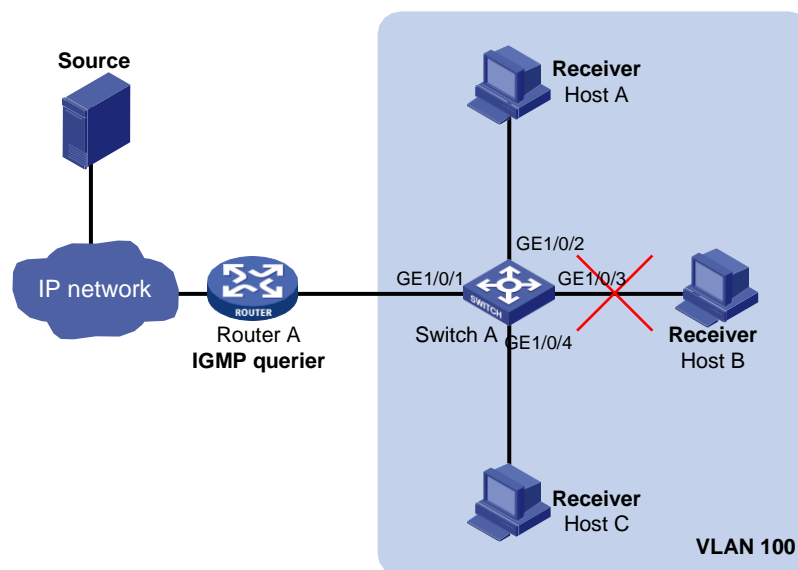
Example: Configuring static multicast MAC address entries

Network configuration

As shown in [Figure 1](#), Router A runs IGMP and acts as the IGMP querier. Switch A does not run a Layer 2 multicast protocol.

Configure a static multicast MAC address entry on Switch A so that only Host A and Host C can receive multicast data for multicast group 224.1.1.1.

Figure 1 Network diagram



Analysis

Multicast MAC address entries guide Layer 2 multicast forwarding. They can be dynamically created through Layer 2 multicast protocols or manually configured by binding multicast MAC addresses and ports.

In this example, Switch A does not run a Layer 2 multicast protocol. To control destination ports of Layer 2 multicast data, configure a static multicast MAC address entry on Switch A.

Applicable hardware and software versions

The following matrix shows the hardware and software versions to which this configuration example is applicable:

Hardware	Software version
SC 3570 switch series	Release 11xx
SC 5525 switch series	Release 63xx, Release 65xx, Release 6615Pxx, Release 6628Pxx
SC 5520 switch series	Release 63xx, Release 65xx, Release 6615Pxx, Release 6628Pxx
SC 3170 switch series	Release 11xx
SC 3130 switch series	Release 63xx

Restrictions and guidelines

When you configure multicast MAC address entries, follow these guidelines:

- You must specify an unused multicast MAC address in a manually configured multicast MAC address entry.
- By default, Ethernet interfaces, VLAN interfaces, and aggregate interfaces are shut down. You must first use the **undo shutdown** command to bring them up. This example assumes that all these interfaces are already up.

Procedures

On Switch A, create VLAN 100.

```
<SwitchA> system-view
[SwitchA] vlan 100
[SwitchA-vlan100] quit
```

Configure GigabitEthernet 1/0/1 through GigabitEthernet 1/0/4 to operate in Layer 2 mode, and assign the ports to VLAN 100.

```
[SwitchA] interface range gigabitethernet 1/0/1 to gigabitethernet 1/0/4
[SwitchA-if-range] port access vlan 100
[SwitchA-if-range] quit
```

Translate the multicast IP address 224.1.1.1 to a multicast MAC address (0100-5e01-0101). (Details not shown.)

Create a static entry for the multicast MAC address 0100-5e01-0101 with GigabitEthernet 1/0/2 and GigabitEthernet 1/0/4 in VLAN 100 as outgoing ports.

```
[SwitchA] mac-address multicast 0100-5e01-0101 interface gigabitethernet 1/0/2
gigabitethernet 1/0/4 vlan 100
```

Verifying the configuration

Display static multicast MAC address entries for VLAN 100 on Switch A.

```
[SwitchA] display mac-address multicast vlan 100
```

MAC Address	VLAN ID	State	Port/NickName	Aging
0100-5e01-0101	100	Multicast	GE1/0/2	N
			GE1/0/4	

The output shows that GigabitEthernet 1/0/2 and GigabitEthernet 1/0/4 have become outgoing ports of the multicast MAC group 0100-5e01-0101.

Configuration files



IMPORTANT:

Support for the **port link-mode bridge** command depends on the device model.

```
#
vlan 100
#
interface GigabitEthernet1/0/1
port link-mode bridge
```

```
port access vlan 100
#
interface GigabitEthernet1/0/2
port link-mode bridge
port access vlan 100
#
interface GigabitEthernet1/0/3
port link-mode bridge
port access vlan 100
#
interface GigabitEthernet1/0/4
port link-mode bridge
port access vlan 100
#
mac-address multicast 0100-5e01-0101 interface GigabitEthernet1/0/2 GigabitEthernet1/0/4
vlan 100
#
```