

Example: Configuring IGMP Snooping on EX-series Switches

IGMP snooping regulates multicast traffic in a switched network. With IGMP snooping enabled, a LAN switch monitors the IGMP transmissions between a host (a network device) and a multicast router, keeping track of the multicast groups and associated member ports. The switch uses that information to make intelligent multicast-forwarding decisions and forward traffic to the intended destination interfaces.

Configure IGMP snooping on one or more VLANs to allow the switch to examine IGMP packets and make forwarding decisions based on packet content. By default, IGMP snooping is enabled on EX-series switches.

This example describes how to configure IGMP snooping:

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Requirements

This example uses the following software and hardware components:

- One EX-series 3200-24T switch
- JUNOS Release 9.1 or later for EX-series switches

Before you configure IGMP snooping, be sure you have:

- Configured the `employee-vlan` VLAN on the switch
- Assigned interfaces `ge-0/0/1`, `ge-0/0/2`, and `ge-0/0/3` to `employee-vlan`

See Example: Setting Up Bridging with Multiple VLANs for EX Series Switches.

Overview and Topology

IGMP snooping controls multicast traffic in a switched network. With IGMP snooping enabled, an EX-series switch monitors the IGMP transmissions between a host and a multicast router to keep track of the multicast groups and associated member ports. The switch uses this information to make intelligent decisions and forward multicast traffic to the intended destination interfaces.

You can configure IGMP snooping on all interfaces in a VLAN or on individual interfaces. This example shows how to configure IGMP snooping on an EX-series switch by using the default IGMP options or configuring the IGMP options individually.

The configuration setup for this example includes the VLAN `employee-vlan` on the switch.

Table 1 shows the components of the topology for this example.

Table 1: Components of the IGMP Snooping Topology

| Properties | Settings |
|--|------------------------------|
| Switch hardware | One EX 3200-24T switch |
| VLAN name | employee-vlan, tag 20 |
| Interfaces in employee-vlan | ge-0/0/1, ge-0/0/2, ge-0/0/3 |
| Multicast IP address for employee-vlan | 225.100.100.100 |

In this example, the switch is initially configured as follows:

- IGMP snooping is disabled on the VLAN.

Configuration

To configure basic IGMP snooping on a switch:

CLI Quick Configuration To quickly configure IGMP snooping, copy the following commands and paste them into the switch terminal window:

```
[edit protocols]
set igmp-snooping vlan employee-vlan
set igmp-snooping vlan employee-vlan immediate-leave
set igmp-snooping vlan employee-vlan interface ge-0/0/3 static group
225.100.100.100
set igmp-snooping vlan employee-vlan interface ge-0/0/2 multicast-router-interface
set igmp-snooping vlan employee-vlan query-interval 60
set igmp-snooping vlan employee-vlan query-last-member-interval 75
set igmp-snooping vlan employee-vlan query-response-interval 3
set igmp-snooping vlan employee-vlan robust-count 4
```

Step-by-Step Procedure Configure IGMP snooping:

1. Enable and configure IGMP snooping on the VLAN employee-vlan:

```
[edit protocols]
user@switch# set igmp-snooping vlan employee-vlan
```

2. Configure the switch to immediately remove a group membership from an interface when it receives a leave message from that interface without waiting for any other IGMP messages to be exchanged (IGMPv2 only):

```
[edit protocols]
user@switch# set igmp-snooping vlan employee-vlan immediate-leave
```

3. Statically configure IGMP group membership on a port:

```
[edit protocols]
user@switch# set igmp-snooping vlan employee-vlan interface ge-0/0/3.0
static group 225.100.100.100
```

4. Statically configure an interface as a switching interface toward a multicast router (the interface to receive multicast traffic):

```
[edit protocols]
user@switch# set igmp-snooping vlan employee-vlan interface ge-0/0/2
multicast-router-interface
```

5. Change the IGMP snooping query interval on the VLAN to 60 seconds:

```
[edit protocols]
user@switch# set igmp-snooping vlan employee-vlan query-interval 60
```

6. Change the IGMP snooping query-last-member interval on the VLAN to 75 seconds:

```
[edit protocols]
user@switch# set igmp-snooping vlan employee-vlan
query-last-member-interval 75
```

7. Change the IGMP snooping query-response interval on the VLAN to 3 seconds:

```
[edit protocols]
user@switch# set igmp-snooping vlan employee-vlan query-response-interval
3
```

8. Change the number of timeout intervals the switch waits before timing out a multicast group to 4:

```
[edit protocols]
user@switch# set igmp-snooping vlan employee-vlan robust-count 4
```

Results Check the results of the configuration:

```
user@switch# show protocols igmp-snooping
vlan employee-vlan {
  query-interval 60;
  query-last-member interval 75;
  query-response interval 3;
  robust-count 4;
  immediate-leave;
  interface ge-0/0/2 {
    multicast-router-interface;
  }
  interface ge-0/0/3 {
    static {
      group 255.100.100.100
    }
  }
}
```

Related Topics ■ [Configuring IGMP Snooping \(CLI Procedure\)](#)

- [edit protocols] Configuration Statement Hierarchy

Published: 2010-02-05