MVR Command Reference

This chapter describes commands used to configure Multicast VLAN Registration (MVR).

mvr

To enable Multicast VLAN Registration (MVR), use the **mvr** command in the bridge domain configuration mode. To disable MVR, use the **no** form of this command.

mvr

no mvr

Syntax Description

This command has no arguments or keywords.

Command Default

MVR is not enabled.

Command Modes

Bridge domain configuration (config-bdomain)

Command History

Release	Modification
9.3.0	This command was introduced.

Usage Guidelines

On a CPT system, MVR can be configured at the bridge domain level.

Following configuration restrictions are applicable while configuring the MVR on the CPT system:

- For a single tagged packet, the tag is removed using the rewrite ingress tag pop 1 symmetric command at the EFP level.
- For a double tagged packet, the tag is removed using the rewrite ingress tag pop 2 symmetric command at the EFP level.
- For an untagged packet, a rewrite operation is not required.

Examples

The following example shows how to enable MVR on bridge domain 22 and configure the group address.

```
Router(config)# bridge-domain 22
Router(config-bdomain)# mvr
Router(config-bdomain)# mvr group 228.1.23.4 5
Router(config-bdomain)# end
```

Related Commands

Command	Description
show mvr	Verifies the MVR configuration.

mvr group

To define a global range of IP multicast groups on which MVR must be enabled, use the **mvr group** command in the bridge domain configuration mode. To remove the IP multicast address groups, use the **no** form of this command.

mvr group *ip-address* [*count*]

no mvr group *ip-address* [*count*]

Syntax Description

ip-address	Group IP address.
count	Group count inside the bridge domain.

Command Default

The IP multicast address on which the MVR feature must be enabled is not defined.

Command Modes

Bridge domain configuration (config-bdomain)

Command History

Release	Modification
9.3.0	This command was introduced.

Usage Guidelines

On a CPT system, MVR can be configured at the bridge domain level.

Following configuration restrictions are applicable while configuring the MVR on the CPT system:

- For a single tagged packet, the tag is removed using the rewrite ingress tag pop 1 symmetric command at the EFP level.
- For a double tagged packet, the tag is removed using the rewrite ingress tag pop 2 symmetric command at the EFP level.
- For an untagged packet, a rewrite operation is not required.

The **mvr group** *ip-address* [*count*] command configures an IP multicast address on the CPT system. The optional count parameter is used to configure a contiguous series of MVR group addresses (the range for count is from 1 to 2000; the default is 1). Any multicast data sent to the IP address mentioned in the command is sent to all source EFPs on the CPT system and all receiver EFPs that have elected to receive data on that multicast address. The **no** form of the deletes the multicast IP address configuration.

Examples

The following example shows how to enable MVR on bridge domain 22 and configure the group address.

```
Router(config)# bridge-domain 22
Router(config-bdomain)# mvr
```

```
Router(config-bdomain)# mvr group 228.1.23.4 5
Router(config-bdomain)# end
```

Related Commands

Command	Description
show mvr	Displays the MVR configuration.
show mvr groups	Displays the group MVR configuration.

mvr type

To configure an EFP as the MVR enabled source or receiver, use the **mvr type** command in the service-instance mode. To remove the source or receiver port configuration, use the **no** form of this command.

mvr type {source | receiver bridge-domain *id* **[vlan** *id***] [immediate]}**

no mvr type {source | receiver bridge-domain *id* **[vlan** *id***] [immediate]}**

Syntax Description

source	Configures an MVR EFP as the source.
receiver bridge-domain *id*	Configures an MVR EFP as the receiver. *id* —Bridge domain ID.
vlan *id*	(Optional) Specifies the VLAN ID to be used when the VLAN range is mentioned. This option is used only on the receiver EFP. *id* —VLAN ID.
immediate	(Optional) Enables the Immediate-Leave feature on the receiver EFP.

Command Default

There is no default setting for this command.

Command Modes

Service instance mode (config-if-srv)

Command History

Release	Modification
9.3.0	This command was introduced.

Usage Guidelines

Users must configure an MVR bridge domain before configuring the MVR source and receiver EFPs.

An MVR enabled EFP (subscriber port) is configured as the receiver to receive only multicast data. It does not receive data unless it becomes a member of the multicast group, either statically or by using IGMP leave and join messages. Receiver EFPs cannot belong to the multicast bridge-domain.

The **mvr type {source | receiver bridge-domain** *id* **[***vlan id***] [immediate]}** command is used to configure the EFPs, where **bridge-domain** *id* **[***vlan id***] [immediate]** is only applicable to the receiver EFPs.

Examples

This example shows how to enable MVR on the bridge domains and configure source MVR EFPs and receiver MVR EFPs.

```
! Enabling MVR on the bridge domain 22 and bridge domain 30.
Router(config)# bridge-domain 22
Router(config-bdomain)# mvr
Router(config-bdomain)# mvr group 225.0.0.1 5
```

```
Router(config-bdomain)# end

Router(config)# bridge-domain 30
Router(config-bdomain)# mvr
Router(config-bdomain)# mvr group 226.0.0.1 5

! Configuring source EFP on the bridge domain 22.
Router(config)# TengigabitEthernet 6/3
Router(config-if)# service instance 100 ethernet
Router(config-if-srv)# encapsulation dot1q 12
Router(config-if-srv)# rewrite ingress tag pop 1 symmetric
Router(config-if-srv)# bridge-domain 22
Router(config-if-srv)# mvr type source

! Configuring receiver EFP on the bridge domain 50.
Router(config)# interface TengigabitEthernet 5/3
Router(config-if)# service instance 100 ethernet
Router(config-if-srv)# encapsulation dot1q 10
Router(config-if-srv)# rewrite ingress tag pop 1 symmetric
Router(config-if-srv)# bridge-domain 50
Router(config-if-srv)# mvr type receiver bridge-domain 22 immediate


! Configuring source EFP on the bridge domain 30.
Router(config)# TengigabitEthernet 4/3
Router(config-if)# service instance 100 ethernet
Router(config-if-srv)# encapsulation dot1q 12
Router(config-if-srv)# rewrite ingress tag pop 1 symmetric
Router(config-if-srv)# bridge-domain 30
Router(config-if-srv)# mvr type source

! Configuring receiver EFP on the bridge domain 60.
Router(config)# interface TengigabitEthernet 2/3
Router(config-if)# service instance 100 ethernet
Router(config-if-srv)# encapsulation dot1q 10
Router(config-if-srv)# rewrite ingress tag pop 1 symmetric
Router(config-if-srv)# bridge-domain 60
Router(config-if-srv)# mvr type receiver bridge-domain 30 immediate

! Configuring receiver EFP on the bridge domain 60 encapsulation range.
Router(config)# interface TengigabitEthernet 2/4
Router(config-if)# service instance 200 ethernet
Router(config-if-srv)# encapsulation dot1q 10-1000
Router(config-if-srv)# bridge-domain 60
Router(config-if-srv)# mvr type receiver bridge-domain 30 immediate vlan 20
```

Related Commands

Command	Description
show mvr [source-ports] [receiver-ports] [groups]	Displays MVR status and values for all the bridge-domains where MVR is enabled. It provides the number of groups configured per bridge domain and displays all receiver and source EFPs.

show mvr

To display the MVR information use the **show mvr** command in the privileged EXEC mode.

show mvr [source-ports] [receiver-ports] [groups]

Syntax Description

source-ports	Displays the details of the MVR enabled source ports.
receiver-ports	Displays the details of the MVR enabled receiver ports.
groups	Displays the details of the MVR enabled groups.

Command Default

This command has no default settings.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
9.3.0	This command was introduced.

Usage Guidelines

This command displays the MVR status and values for all the bridge-domains where MVR is enabled. It provides the number of groups configured per bridge domain and displays all receiver and source EFPs.

Examples

This example shows how to view MVR receiver port configuration.

```
Router# show mvr receiver-ports
```

```
Joins: v1,v2,v3 counter shows total IGMP joins
       v3 counter shows IGMP joins received with both MVR and non-MVR
groups
Port       VLAN   Status            Immediate             Joins
                                    Leave          (v1,v2,v3)    (v3)
---------  ----   -------------     ----------     ---------- ----------
Po10        100   ACTIVE  /UP       DISABLED                0          0
Gi40/2      100   ACTIVE  /UP       DISABLED                0          0
Po10        200   ACTIVE  /UP       DISABLED                0          0
Gi40/2      101   ACTIVE  /UP       DISABLED                0          0
```

This example shows how to view MVR source port configuration.

```
Router# show mvr source-ports
```

```
Joins: v1,v2,v3 counter shows total IGMP joins
       v3 counter shows IGMP joins received with both MVR and non-MVR
groups
Port       VLAN   Status            Immediate             Joins
                                    Leave          (v1,v2,v3)    (v3)
---------  ----   -------------     ----------     ---------- ----------
Gi36/2        1   ACTIVE  /UP       DISABLED                0          0
Gi36/2        2   ACTIVE  /UP       DISABLED                0          0
```

This example shows how to view MVR group details.

```
Router# show mvr groups
```

```
MVR multicast VLAN: 1
MVR max Multicast Groups allowed: 2000
MVR current multicast groups: 60
MVR groups:

        Group start     Group end       Type  Count/Mask
        --------------- --------------- ----- ---------------
        224.1.1.1       224.1.1.20      count 20
        225.1.1.1       225.1.1.20      count 20
        229.1.1.1       229.1.1.10      count 10
        230.1.1.1       230.1.1.10      count 10

MVR multicast VLAN: 2
MVR max Multicast Groups allowed: 2000
MVR current multicast groups: 60
MVR groups:

        Group start     Group end       Type  Count/Mask
        --------------- --------------- ----- ---------------
        224.1.1.1       224.1.1.20      count 20
        225.1.1.1       225.1.1.20      count 20
        229.1.1.1       229.1.1.10      count 10
        230.1.1.1       230.1.1.10      count 10
```

This example shows how to view generic MVR details.

```
Router# show mvr
```

```
MVR Running: TRUE
MVR multicast VLAN: 2
MVR Max Multicast Groups: 2000
MVR Current multicast groups: 100
MVR Global query response time: 5 (tenths of sec)
```

Related Commands

Command	Description
mvr	Enables MVR on the EFP.
mvr group *ip-address count*	Defines a global range of IP multicast groups on which MVR is enabled.

Command	Description
mvr type {source | receiver bridge-domain *id* **[vlan** vlan-id**] [immediate]}**	Configures an EFP as the MVR enabled source or receiver.