H Commands

This chapter describes the Cisco NX-OS multicast routing commands that begin with H.

hardware fabric flow-control multicast

To enable the Cisco Nexus 7000 Series switch to handle multicast traffic more efficiently in microbursting environments, use the **hardware fabric flow-control multicast** command. To disable this feature, use the **no** form of this command.

hardware fabric flow-control multicast [**all-modules** | **forced** | **module** *module-number*]

no sampler hardware fabric flow-control multicast [**all-modules** | **forced** | **module** *module-number*]

Syntax Description	**all-modules**	(Optional) Specifies the fabric flow-control on all modules.
	forced	(Optional) Specifies the fabric flow-control mandatorily.
	module	(Optional) Specifies the fabric flow-control to individual module(s).
	module-number	Specifies module number. The range is from 1 to 18.

Defaults   None.

Command Modes   Global configuration

SupportedUserRoles   network-admin
vdc-admin

Command History	Release	Modification
	5.2(1)	This command was introduced.

Usage Guidelines   None.

This command does not require a license.

Examples   This example shows how to configure fabric flow control on all modules:

```
switch(config)# hardware fabric flow-control multicast all-modules forced
switch(config)#
```

Related Commands	Command	Description
	show system internal xbar fabric-flow-control-info	Displays the hardware information.

hardware forwarding shim

To enable the hardware forwarding shim header knob, use the **hardware forwarding shim** command. To disable this feature, use the **no** form of this command.

> **hardware forwarding shim**

> **no hardware forwarding shim**

Syntax Description   This command has no arguments or keywords.

Defaults   None.

Command Modes   Global configuration mode

SupportedUserRoles   network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines   None.

This command does not require a license.

Examples   This example shows how to enable the hardware forwarding shim:

```
switch# config t
switch(config)# hardware forwarding shim
Disabling shim knob on vdc 1
switch(config)#
```

Related Commands

Command	Description
show system internal xbar fabric-flow-control-info	Displays the hardware information.

hardware proxy layer-3 replication rebalance-mode

To configure the hardware proxy Layer 3 multicast balance mode for replication, use the **hardware proxy layer-3 replication rebalance-mode** command. To disable this feature, use the **no** form of this command.

hardware proxy layer-3 replication rebalance-mode {**auto** | **manual**}

no hardware proxy layer-3 replication rebalance-mode {**auto** | **manual**}

Syntax Description		
	auto	Specifies to automatically rebalance VLAN interfaces on available replicators.
	manual	Specifies to manually rebalance VLAN interfaces on available replicators using the command-line interface (CLI).

Defaults

Manual

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command applies only to the Cisco Nexus 7000 Series chassis that contains an F1 Series module or an M1 Series module. This command applies when you are using either a FabricPath or Ethernet interface.

Note The system automatically balances all Layer 3 routing traffic among the available proxy routing interfaces on the M Series modules in the chassis.

This command does not require a license.

Examples

This example shows how to automatically rebalance VLAN interfaces on available replicators:

```
switch(config)# hardware proxy layer-3 replication rebalance-mode auto
switch(config)#
```

This example shows how to manually rebalance VLAN interfaces on available replicators using the CLI:

```
switch(config)# hardware proxy layer-3 replication rebalance-mode manual
switch(config)#
```

Related Commands	Command	Description
	show hardware proxy layer-3 detail	Displays detailed information on the proxy Layer 3 functionality.

hardware proxy layer-3 replication

To configure specific modules and physical interfaces on the N7K-M Series module to provide the proxy routing for egress replication of Layer 3 multicast packets on the N7K-F Series module, use the **hardware proxy layer-3 replication** command. To delete the user configuration and to use all M-series modules in the virtual device context (VDC) for egress replication, use the **no** form of this command.

> **hardware proxy layer-3 replication** {**exclude | use**} {**interface ethernet** *slot/port* | **module** *slot-number*} [**module-type f1**]

> **no hardware proxy layer-3 replication**

Syntax Description		
	exclude	Specifies all available members.
	use	Specifies members.
	interface	Specifies interfaces.
	ethernet	Specifies the ethernet interface.
	slot/port	Slot or port number. The range is from 1 to 253.
	module	Specifies modules.
	slot-number	Slot number. The range is from 1 to 18.
	module-type f1	(Optional) Specifies the type of modules to perform proxy Layer 3 replication.

Defaults   None

Command Modes   Global configuration mode

SupportedUserRoles   network-admin
vdc-admin

Command History	Release	Modification
	5.1(1)	This command was introduced.

Usage Guidelines   This command applies only to the Cisco Nexus 7000 Series chassis that contains an F1 Series module or an M1 Series module. This command applies when you are using either a FabricPath or Ethernet interface.

This command does not require a license.

Examples   The example shows how to configure a service group timeout in seconds:

```
switch(config)# hardware proxy layer-3 replication exclude interface ethernet 2/1-16,
ethernet 3/1, ethernet 4/1-2
switch(config)#
```

Related Commands

Command	Description
show hardware proxy layer-3 detail	Displays detailed information on the proxy Layer 3 functionality.

hardware proxy layer-3 replication trigger rebalance

To trigger one-time load balancing among all the proxy routing multicast replication interfaces, use the **hardware proxy layer-3 replication trigger rebalance** command.

hardware proxy layer-3 replication trigger rebalance

Syntax Description This command has no arguments or keywords.

Defaults Manual

Command Modes EXEC mode

SupportedUserRoles network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines This command applies only to the Cisco Nexus 7000 Series chassis that contains an F1 Series module or an M1 Series module. This command applies when you are using either a FabricPath or Ethernet interface.

This command does not require a license.

Examples This example shows how to configure load balancing among the proxy routing replication interfaces:

```
switch# hardware proxy layer-3 replication trigger rebalance
switch#
```

Related Commands

Command	Description
show hardware proxy layer-3 detail	Displays detailed information on the proxy Layer 3 functionality.