



## E Commands

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# ebgp multihop

To configure the exterior Border Gateway Protocol (eBGP) time-to-live (TTL) value to support eBGP multihop, use the **ebgp multihop** command. To reset to default, use the **no** form of this command.

**ebgp multihop** *ttl-value*  
**no ebgp multihop** *ttl-value*

## Syntax Description

<i>ttl-value</i>	TTL value for eBGP multihop. The range is from 2 to 255. You must manually reset the BGP sessions after using this command.
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## Command Default

None

## Command Modes

BGP neighbor configuration

## Command History

Release	Modification
4.0(1)	This command was introduced.

## Usage Guidelines

Use the **ebgp multihop** command to configure the eBGP time-to-live (TTL) value to support eBGP multihop. In some situations, an eBGP peer is not directly connected to another eBGP peer and requires multiple hops to reach the remote eBGP peer. You can configure the eBGP TTL value for a neighbor session to allow these multihop sessions.

This command requires the Enterprise Services license.

## Examples

This example shows how to configure the eBGP multihop value:

```
switch# configure terminal
switch(config)# router bgp 1.1
switch(config-router)# neighbor 192.0.2.1 remote-as 1.2
switch(config-route-neighbor) ebgp multihop 2
```

## Related Commands

Command	Description
<b>feature bgp</b>	Enables the BGP feature.

# eigrp graceful-restart

To enable graceful restart for the Enhanced Interior Gateway Routing Protocol (EIGRP), use the **eigrp graceful-restart** command. To reset to default, use the **no** form of this command.

**eigrp graceful-restart**  
**no eigrp graceful restart**

## Syntax Description

This command has no arguments or keywords.

## Command Default

Enabled

## Command Modes

Address-family configurationRouter configurationRouter VRF configuration

## Command History

Release	Modification
4.0(1)	This command was introduced.
4.0(3)	Replaced by <b>graceful-restart</b> command.

## Usage Guidelines

Use the **eigrp graceful-restart** command to allow EIGRP to remain in the data forwarding path through a process restart. This command is the same as the **nsf** command.

This command requires the Enterprise Services license.

## Examples

This example shows how to enable graceful restart:

```
switch# configure terminal
switch(config)# router eigrp 1
switch(config-router)# eigrp graceful-restart
```

## Related Commands

Command	Description
<b>graceful-restart</b>	Enables graceful restart.
<b>timers nsf</b>	Configures timers for nonstop forwarding and graceful restart.

# eigrp log-neighbor-changes

To enable the logging of changes in Enhanced Interior Gateway Routing Protocol (EIGRP) neighbor adjacencies, use the **eigrp log-neighbor-changes** command. To disable the logging of changes in EIGRP neighbor adjacencies, use the **no** form of this command.

**eigrp log-neighbor-changes**  
**no eigrp log-neighbor-changes**

**Syntax Description** This command has no arguments or keywords.

**Command Default** Adjacency changes are logged.

**Command Modes**

- Address-family configuration
- Router configuration
- Router VRF configuration

Command History	Release	Modification
	4.0(1)	This command was introduced.
	4.0(3)	Replaced by <b>log-neighbor-changes</b> command.

**Usage Guidelines** Use the **eigrp log-neighbor-changes** command to log neighbor adjacency changes to monitor the stability of the routing system and to detect problems. Logging is enabled by default. To disable the logging of neighbor adjacency changes, use the **no** form of this command.

This command requires the Enterprise Services license.

**Examples** This example shows how to enable logging of neighbor changes for EIGRP process 209:

```
switch# configure terminal
switch(config)# router eigrp 209
switch(config-router)# eigrp log-neighbor-changes
```

Related Commands	Command	Description
	<b>log-neighbor-changes</b>	Enables logging of EIGRP neighbor changes.
	<b>log-neighbor-warnings</b>	Enables logging of EIGRP neighbor warnings.
	<b>log-adjacency-changes</b>	Enables logging of EIGRP adjacency state changes.

# eigrp log-neighbor-warnings

To enable the logging of Enhanced Interior Gateway Routing Protocol (EIGRP) neighbor warning messages, use the **eigrp log-neighbor-warnings** command. To disable the logging of EIGRP neighbor warning messages, use the **no** form of this command.

**eigrp log-neighbor-warnings** [*seconds*]  
**no eigrp log-neighbor-warnings**

## Syntax Description

<i>seconds</i>	(Optional) Time interval (in seconds) between repeated neighbor warning messages. The range of seconds is from 1 to 65535.
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## Command Default

Neighbor warning messages are logged.

## Command Modes

Address-family configuration  
Router configuration  
Router VRF configuration

## Command History

Release	Modification
4.0(1)	This command was introduced.
4.0(3)	Replaced by <b>log-neighbor-warnings</b> command.

## Usage Guidelines

Use the **eigrp log-neighbor-warnings** command to enable neighbor warning messages and to configure the interval between repeated neighbor warning messages.

This command requires the Enterprise Services license.

## Examples

This example shows how to log neighbor warning messages for EIGRP process 209 and to repeat the warning messages in 5-minute (300 seconds) intervals:

```
switch# configure terminal
switch(config)# router eigrp 209
switch(config-router)# eigrp log-neighbor-warnings 30
```

## Related Commands

Command	Description
<b>log-neighbor-changes</b>	Enables logging of EIGRP neighbor changes.
<b>log-neighbor-warnings</b>	Enables logging of EIGRP neighbor warnings.
<b>log-adjacency-changes</b>	Enables logging of EIGRP adjacency state changes.

# eigrp router-id

To set the router ID used by the Enhanced Interior Gateway Routing Protocol (EIGRP) when communicating with its neighbors, use the **eigrp router-id** command. To remove the configured router ID, use the **no** form of this command.

**eigrp router-id** *ip-address*  
**no eigrp router-id** *ip-address*

## Syntax Description

<i>ip-address</i>	Router ID in dotted decimal notation.
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## Command Default

EIGRP automatically selects an IP address to use as the router ID when an EIGRP process is started. The highest local IP address is selected and loopback interfaces are preferred. The router ID is not changed unless the EIGRP process is removed with the **no router eigrp** command or if the router ID is manually configured with the **eigrp router-id** command.

## Command Modes

Address-family configuration  
 Router configuration  
 Router VRF configuration

## Command History

Release	Modification
4.0(1)	This command was introduced.
4.0(3)	Replaced by <b>router-id</b> command.

## Usage Guidelines

Use the **eigrp router-id** command to manually configure the router ID for EIGRP. The router ID is used to identify the originating router for external routes. If an external route is received with the local router ID, the route is discarded. The router ID can be configured with any IP address with two exceptions; 0.0.0.0 and 255.255.255.255 are not legal values and cannot be entered. You should configure unique value for each router.

This command requires the Enterprise Services license.

## Examples

This example shows how to configure 172.16.1.3 as a fixed router ID:

```
switch# configure terminal
switch(config)# router eigrp 209
switch(config-router)# eigrp router-id 172.16.1.3
```

# eigrp stub

To configure a router as a stub using the Enhanced Interior Gateway Routing Protocol (EIGRP), use the **eigrp stub** command. To disable the EIGRP stub routing feature, use the **no** form of this command.

**eigrp stub** [{**direct** | **leak-map** *map-name* | **receive-only** | **redistributed**}]  
**no eigrp stub** [{**direct** | **leak-map** *map-name* | **receive-only** | **redistributed**}]

## Syntax Description

<b>direct</b>	(Optional) Advertises directly connected routes.
<b>leak-map</b> <i>map-name</i>	(Optional) Allows dynamic prefixes based on the leak map.
<b>receive-only</b>	(Optional) Sets the router as a receive-only neighbor.
<b>redistributed</b>	(Optional) Advertises redistributed routes from other protocols and autonomous systems.

## Command Default

Disabled

## Command Modes

Address-family configuration  
 Router configuration  
 Router VRF configuration

## Command History

Release	Modification
4.0(1)	This command was introduced.
4.0(3)	Replaced by <b>stub</b> command.

## Usage Guidelines

Use the **eigrp stub** command to configure a router as a stub where the router directs all IP traffic to a distribution router.

The **direct** keyword permits EIGRP stub routing to advertise connected routes. This option is enabled by default.

The **receive-only** keyword restricts the router from sharing any of its routes with any other router in that EIGRP autonomous system, and the **receive-only** keyword does not permit any other option to be specified because it prevents any type of route from being sent.

The **redistributed** keyword permits the EIGRP Stub Routing feature to send other routing protocols and autonomous systems. Without the configuration of this option, EIGRP will not advertise redistributed routes.

If you use any of these four keywords (**direct**, **leak-map**, **receive-only**, **redistributed**) with the **eigrp stub** command, only the route types specified by the particular keyword(s) are advertised.

This command requires the Enterprise Services license.

## Usage Guidelines

This example shows how to configure the router as a receive-only neighbor:

```
switch# configure terminal
switch(config)# router eigrp 1
switch(config-router)# eigrp stub receive-only
```

# event fib resource tcam usage

To configure an event statement for the policy, use the **event fib resource tcam usage** command.

**event fib resource tcam usage**

**Syntax Description** This command has no arguments or keywords.

**Command Default** None

**Command Modes** config-applet mode

Command History	Release	Modification
	6.2(2)	This command was introduced.

**Usage Guidelines** By using the **event fib resource tcam usage** command, you can configure a policy in the Embedded Event Manager (EEM) to monitor TCAM utilization on Cisco Nexus 7000 M1 Series modules.

The **event fib resource tcam usage** command triggers an event each time the TCAM utilization percentage becomes a multiple of 5, in either direction.

This command requires the Enterprise Services license.

## Examples

This example shows how to configure an event statement for the policy:

```
switch# configure terminal
switch(config)# event manager applet Test1
switch(config-applet)# description "checks TCAM usage threshold on M1 card"
switch(config-applet)# event fib resource tcam usage
switch(config-applet)#
```

Related Commands	Command	Description
	<b>show event manager policy-state</b>	Displays information about the status of the specified event policy.



## event fib route

To configure an event statement for the policy, use the event fib route command. To remove an event statement from an Embedded Event Manager (EEM) policy, use the no form of this command.

```
event fib route {inconsistent | missing | failure}
no event fib route {inconsistent | missing | failure}
```

### Syntax Description

<b>inconsistent</b>	Triggers an event if the route or adjacency programming is changed in the hardware configuration.
<b>missing</b>	Triggers an event if the route is deleted in the unicast Forward Information Base (FIB).
<b>failure</b>	Triggers an event if a route fails to be inserted in the unicast FIB.

### Command Default

None

### Command Modes

config-applet mode

### Command History

Release	Modification
6.2(2)	This command was introduced.

### Usage Guidelines

This command requires the Enterprise Services license.

### Examples

This example shows how to configure an event statement for the policy:

```
switch# configure terminal
switch(config)# event manager applet Route1
switch(config-applet)# description "checks for missing routes in FIB"
switch(config-applet)# event fib route missing
switch(config-applet)#
```

### Related Commands

Command	Description
<b>show event manager policy-state</b>	Displays information about the status of the specified event policy.

# export vrf

To export IP prefixes to the default VRF (global routing table) from any other VRF, use the **export vrf** command.

**export vrf default** [*prefix-limit*] **map** *route-map*

## Syntax Description

<i>prefix-limit</i>	Number of routes that can be exported in order to avoid the global table being over-loaded. The default value is 1000.
<b>map</b>	Specifies the route map.
<i>route-map</i>	Name of the route map. It is case-sensitive, alphanumeric character string with a maximum length of 63 characters.

## Command Modes

Address Family Configuration (config-vrf-af)

## Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

## Examples

The following example shows how to export the route-map, BgpMap, to default VRF, and verify the configuration:

```
switch# configure terminal
switch(config)# feature bgp
switch(config)# vrf context vpn1
switch(config-vrf)# address-family ipv4 unicast
switch(config-vrf-af)# export vrf default 3 map BgpMap
switch(config-vrf-af)# exit
switch(config)# show gp process vrf vpn1
```

## Related Commands

Command	Description
<b>import vrf</b>	Import IP prefixes from default VRF.