R Commands

This chapter describes the Cisco NX-OS Enhanced Interior Gateway Routing Protocol (EIGRP) commands that begin with R.

redistribute (EIGRP)

To inject routes from one routing domain into the Enhanced Interior Gateway Routing Protocol (EIGRP), use the **redistribute** command. To remove the **redistribute** command from the configuration file and restore the system to its default condition in which the software does not redistribute routes, use the **no** form of this command.

redistribute {**bgp** *as-number* | **direct** | **eigrp** *id* | **ospf** *instance-tag* | **rip** *instance-tag* | **static**} [**route-map** *map-name*]

no redistribute {**bgp** *as-number* | **direct** | **eigrp** *as-number* | **ospf** *instance-tag* | **rip** *instance-tag* | **static**}

Syntax Description

bgp *as-number*	Distributes routes from Border Gateway Protocol (BGP). The *as-number* is a 2-byte or 4-byte autonomous system number. The range for 2-byte numbers is from 1 to 65535. The range for 4-byte numbers is from 1.0 to 65535.65535.
direct	Distributes routes that are directly connected on an interface.
eigrp *id*	Specifies the name of an EIGRP instance. The *id* can be any case-sensitive, alphanumeric string up to 20 characters.
ospf *instance-tag*	Distributes routes from the OSPF protocol. This protocol is supported in the IPv4 address family. The *instance-tag* can be a maximum of 20 alphanumeric characters.
rip *instance-tag*	Distributes routes from the RIP protocol. The *instance-tag* can be a maximum of 20 alphanumeric characters.
static	Redistributes IP static routes.
route-map *map-name*	(Optional) Specifies the identifier of a configured route map. Use a route map to filter which routes are redistributed into EIGRP.

Command Default

Disabled

Command Modes

Address family configuration mode
Router configuration mode
Router VRF configuration mode

Command History

Release	Modification
5.2(1)N1(1)	This command was introduced.

Usage Guidelines

Use the **redistribute** command to import routes from other routing protocols into EIGRP. You should always use a route map to filter these routes to ensure that EIGRP redistributes only the routes that you intend to redistribute.

You must configure a default metric to redistribute routes from another protocol into EIGRP. You can configure the default metric with the **default-metric** command or with the route map configured with the **redistribute** command.

This command requires the LAN Base Services license.

Examples

This example shows how to redistribute cause BGP routes into an EIGRP autonomous system:

```
switch(config)# router eigrp 209
switch(config-router) address-family ipv4 unicast
switch(config-router-af)# redistribute bgp 64496
switch(config-router-af)
```

Related Commands

Command	Description
default-metric (EIGRP)	Sets the default metrics for routes redistributed into EIGRP.
show ip eigrp	Displays EIGRP information.

redistribute maximum-prefix (EIGRP)

To limit the number of routes redistributed into Enhanced Interior Gateway Routing Protocol (EIGRP), use the **redistribute maximum-prefix** command. To return to the default setting, use the **no** form of this command.

redistribute maximum-prefix *max* [*threshold*] [**warning-only** | **withdraw** [*num-retries timeout*]]

no redistribute maximum-prefix *max* [*threshold*] [**warning-only** | **withdraw** [*num-retries timeout*]

Syntax Description

max	Maximum number of prefixes that EIGRP will distribute. The range is from 0 to 65536.
threshold	(Optional) Percentage of maximum prefixes that triggers a warning message. The range is from 1 to 100. The default is 75 percent.
warning-only	(Optional) Logs a warning message when the maximum number of prefixes is exceeded.
widthdraw	(Optional) Withdraws all redistributed routes.
num-retries	(Optional) Number of times EIGRP tries to retrieve the redistributed routes. The range is from 1 to 12. The default is 1.
timeout	(Optional) Time between retry attempts. The range is from 60 to 600 seconds. The default is 300.

Command Default

No limit

Command Modes

Router configuration mode
VRF configuration mode

Command History

Release	Modification
5.2(1)N1(1)	This command was introduced.

Usage Guidelines

Use the **redistribute maximim-prefix** command to limit the number of routes redistributed into EIGRP. Use the **clear ip eigrp redistribute** command if all routes are withdrawn.

Examples

This example shows how to limit the number of redistributed routes into EIGRP:

```
switch# configure terminal
switch(config)# router eigrp 201
switch(config-router)# address-family ipv4 unicast
switch(config-router-af)# redistribute bgp route-map FilterExternalBGP
switch(config-router-af)# redistribute maximum-prefix 1000 75
switch(config-router-af)#
```

Related Commands

Command	Description
copy running-config startup-config	Saves the configuration changes to the startup configuration file.
feature eigrp	Enables the EIGRP feature.
redistribute (**EIGRP**)	Configures route redistribution for EIGRP.
show running-config eigrp	Displays the EIGRP running configuration.

restart eigrp (EIGRP)

To restart an Enhanced Interior Gateway Routing Protocol (EIGRP) instance and remove all associated neighbors, use the **restart** command.

restart eigrp *instance-tag*

Syntax Description

instance-tag	Name for an EIGRP routing instance. The name can be a maximum of 20 alphanumeric characters.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.2(1)N1(1)	This command was introduced.

Usage Guidelines

This command requires the LAN Base Services license.

Examples

This example shows how to restart the OSPFv2 instance and remove all neighbors:

```
switch# configure terminal
switch(config)# restart eigrp Test1
switch(config)#
```

Related Commands

Command	Description
copy running-config startup-config	Saves the configuration in the startup configuration file.
show ip eigrp interfaces	Displays information about EIGRP interfaces.

router eigrp

To configure a routing process and enter router configuration mode for Enhanced Interior Gateway Routing Protocol (EIGRP), use the **router eigrp** command. To turn off the EIGRP routing process, use the **no** form of this command.

router eigrp *instance-tag*

no router eigrp *instance-tag*

Syntax Description

instance-tag	Name of an EIGRP instance. The *instance-tag* can be any case-sensitive, alphanumeric string up to 20 characters.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.2(1)N1(1)	This command was introduced.

Usage Guidelines

This command requires the LAN Base Services license.

Examples

This example shows how to configure a routing process for EIGRP:

```
switch(config)# router eigrp 1
switch(config-router)#
```

Related Commands

Command	Description
default-information	Controls the distribution of a default route.
default-metric	Configures the default metric for routes redistributed into EIGRP.
distance	Configures the administrative distance.
maximum-paths	Configures the maximum number of equal-cost paths.
redistribute	Configures route redistribution for EIGRP.
router-id	Configures the router ID.
timers	Configures the EIGRP timers.

router-id (EIGRP)

To configure a router ID for an Enhanced Interior Gateway Routing Protocol (EIGRP) process, use the **router-id** command. To cause the software to use the default method of determining the router ID, use the **no** form of this command.

router-id *router-id*

no router-id

Syntax Description

router-id	32-bit router ID value specified in four-part, dotted-decimal notation.

Command Default

If this command is not configured, EIGRP chooses an IPv4 address as the router ID from one of its interfaces.

Command Modes

Address family configuration mode
Router configuration mode
Router VRF configuration mode

Command History

Release	Modification
5.2(1)N1(1)	This command was introduced.

Usage Guidelines

Use the **router-id** command to manually specify a unique 32-bit numeric value for the router ID. This action ensures that EIGRP can function regardless of the interface address configuration.

This command requires the LAN Base Services license.

Examples

This example shows how to assign the IP address of 192.0.2.1 to the EIGRP process 1:

```
switch(config)# router eigrp 1
switch(config-router) address-family ipv4
switch(config-router-af)# router-id 192.0.2.1
```

Related Commands

Command	Description
show ip eigrp	Displays a summary of the EIGRP processes.