BGP Address-Family (VRF) Configuration Mode Commands

The Border Gateway Protocol (BGP) Address-Family (VRF) Configuration Mode is used to configure the Virtual Routing and Forwarding address family information.

Command Modes

Exec > Global Configuration > Context Configuration > BGP Configuration > BGP Address-Family Configuration

configure > context *context_name* **> router bgp** *as_number* **> address-family** *address_family_type*

Entering the above command sequence results in the following prompt:

`[context_name]host_name(config-bgp-af-vpnv4)#`

Important The commands or keywords/variables that are available are dependent on platform type, product version, and installed license(s).

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- exit, on page 2
- neighbor, on page 2
- redistribute, on page 5

end

Exits the current configuration mode and returns to the Exec mode.

Product

All

Privilege

Security Administrator, Administrator

Syntax Description

end

Usage Guidelines

Use this command to return to the Exec mode.

exit

Exits the current mode and returns to the parent configuration mode.

Product All

Privilege Security Administrator, Administrator

Syntax Description **exit**

Usage Guidelines Use this command to return to the parent configuration mode.

neighbor

Configures the Virtual Routing and Forwarding (VRF) address family peers for BGP routers that interconnect to non-broadcast networks.

Product All

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > Context Configuration > BGP Configuration > BGP Address-Family Configuration

configure > **context** *context_name* > **router bgp** *as_number* > **address-family** *address_family_type*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-bgp-af-vpnv4)#
```

Syntax Description **[no] neighbor** *ip_address* **{ activate | advertisement-interval** *adv_time* **| default-originate [route-map** *map_name* **] | distribute-list** *dist_list* **{ in | out } | ebgp-multihop [max-hop** *number* **] | filter-list** *filt_list* **{ in | out } | max-prefix** *max_num* **[threshold** *thresh_percent* **] [warning-only] | remote-as** *AS_num* **| remove-private-AS | route-map** *map_name* **{ in | out } | shutdown | srp-activated-soft-clear | timers { [connect-interval** *conn_time* **] | [keepalive-interval** *keep_time* **holdtime-interval** *hold_time* **] } | update-source** *ip_address* **| weight** *value* **}**

no

Delete the specified parameter from the router configuration.

neighbor *ip_address*

Specifies the IP address of the peer router (neighbor) in IPv4 dotted-decimal notation.

activate

Enables the exchange of routes with this neighbor.

advertisement-interval *adv_time*

The minimum interval (in seconds) between sending BGP routing updates.

adv_time must be an integer from 0 through 600.

Default: 30

default-originate [route-map *map_name*]

Originate default routes to this neighbor

route-map *map_name*: Specifies the route-map that contains the criteria to originate default routes. *map_name* must be the name of an existing route-map in the current context.

distribute-list *dist_list* { in | out }

Filter updates to and from this neighbor based on a route access list.

Default: No filtering is performed.

dist_list: The name or number of an existing route-access-list.

in: Indicates that incoming advertised routes should be filtered.

out: Indicates that outgoing advertised routes should be filtered.

ebgp-multihop [max-hop *number*]

Allow external BGP (eBGP) neighbors not on directly connected networks.

max-hop *number*: The maximum number of hops allowed to reach a neighbor. *number* must be an integer from 1 through 255.

Default hop count: 255

filter-list *filt_list* { in | out }

Establish BGP filters based on an AS path access list

filt_list: The name of an existing AS path access list.

in: Indicates that incoming advertised routes will be filtered.

out: Indicates that outgoing advertised routes will be filtered.

max-prefix *max_num* [threshold *thresh_percent*] [warning-only]

The maximum number of prefixes accepted from this peer. When the maximum is exceeded the neighbor connection is reset.

max_num: Specifies the maximum number of prefixes permitted. This must be an integer from 1 through 4294967295.

Default: No maximum prefix limit.

threshold *thresh_percent*: A percentage value which specifies that when the BGP table is the specified percentage full from this peer warnings are sent to the neighbor. *thresh_percent* must be an integer from 1 through 100.

warning-only: This keyword specifies that only a warning message is sent when the limit is exceeded. The neighbor connection is not reset

remote-as *AS_num*

Specify the AS number of the BGP neighbor.

AS_num: The neighbor's autonomous system number. must be an integer from 1 through 65535.

remove-private-AS

Remove the private AS number from outbound updates.

Default: Do not remove the private AS number.

route-map *map_name* { in | out }

Apply a route map to the neighbor.

map_name: Specifies the route-map apply. *map_name* must be the name of an existing route-map in the current context.

in: Indicates that the route map applies to incoming advertisements.

out: Indicates that the route map applies to outgoing advertisements.

shutdown

Administratively shut down this neighbor. This disables exchanging routes or configuring parameters for this neighbor.

srp-activated-soft-clear

Enables BGP updates when SRP-enabled resources are modified.

timers { [connect-interval *conn_time*] | [keepalive-interval *keep_time* holdtime-interval *hold_time*] }

BGP timers for the specified neighbor.

connect-interval *conn_time*: Specifies the connect timer in seconds. *conn_time* must be an integer from 0 through 65535. The default is 60 seconds.

keepalive-interval *keep_time*: The frequency (in seconds) at which the current BGP router sends keepalive messages to its neighbor. *keep_time* must be an integer from 0 through 65535. The default is 30 seconds.

holdtime-interval *hold_time*: The interval (in seconds) the router waits for a keepalive message before declaring a neighbor dead. *hold_time* must be an integer from 0 through 65535. The default is 90 seconds.

update-source *ip_address*

use this keyword to bind the specified IP address to the BGP socket that is used to communicate to the peer. *ip_address* is an IPv4 address in dotted-decimal notation.

In most cases you should set the update-source address to the address of the loopback interface in the current context. By doing this, the TCP connection does not go down until there is no route for the loopback address in the peering router.

weight *value*

This command sets the default weight for routes from this neighbor.

value: This must be an integer from 0 through 65535.

Default: 0

Usage Guidelines Use this command to set parameters for communication with a specified neighbor. The chassis supports a maximum of 64 peers per context.

Important A remote AS number must be specified for a neighbor before other parameters can be configured.

Example

The following command specifies that the neighbor at the IP address *192.168.100.25* has an AS number of *2000*:

```
neighbor 192.168.100.25 remote-as 2000
```

The following command allows BGP neighbors that are a maximum of *27* hops away:

```
neighbor 192.168.100.25 ebgp-multihop max-hop 27
```

The following command sets the minimum interval between sending routing updates to 3 minutes (180 seconds):

```
neighbor 192.168.100.25 advertisement-interval 180
```

The following command sets the default weight for all routes from the specified neighbor to *100*:

```
neighbor 192.168.100.25 weight 100
```

redistribute

Redistributes routes into BGP. This means that any routes from another protocol are redistributed to BGP neighbors using the BGP protocol.

Product All

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > Context Configuration > BGP Configuration > BGP Address-Family Configuration

configure > **context** *context_name* > **router bgp** *as_number* > **address-family** *address_family_type*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-bgp-af-vpnv4)#
```

Syntax Description **[no] redistribute { connected | ospf | rip | static } [route-map** *map_name* **]**

no

Remove the specified redistribution parameters from the BGP router configuration.

connected

Specifies that connected routes will be redistributed.

ospf

Specifies that Open Shortest Path First (OSPF) routes will be redistributed.

rip

Specifies that Routing Information Protocol (RIP) routes will be redistributed. (RIP is not supported at this time.)

static

Specifies that static routes will be redistributed.

route-map *map_name*

Filter routes through the specified route map before redistribution.

map_name specifies the name of the route-map to use and must be specified as an alphanumeric string of 1 through 79 characters.

Usage Guidelines

Use this command to specify what routes this BGP router should redistribute into BGP.

Example

The following command redistributes OSPF routes after filtering them through the route map named *Map1*:

```
redistribute ospf route-map Map1
```

The following command removes the redistribution of OSPF routes from the router's configuration:

```
no redistribute ospf route-map Map1
```