

BGP Configuration Mode Commands

The Border Gateway Protocol (BGP) Configuration Mode is used to configure properties for BGP-4 routing.

Command Modes

Exec > Global Configuration > Context Configuration > BGP Configuration

configure > context *context_name* **> router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

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

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accept-zero-as-rd

Configures to accept VPN prefixes with Router Distinguisher (RD) value having Administrator Subfield, which is an Autonomous System number 0.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > BGP Configuration

configure > context *context_name* **> router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

Syntax Description

`[ no ] accept-zero-as-rd`

no

Removes the configured VPN prefixes with RD value having AS number 0.

Usage Guidelines

Use this command to configure VPN prefixes with RD value having Administrator Subfield, which is an Autonomous System number 0.

By default the existing behavior of ASR 5500 will be preserved.

Example

Following command configures to accept VPN prefixes with RD value having AS number 0:

`accept-zero-as-rd`

address-family ipv4

Enters the IPv4 Address Family configuration mode. Optionally, it also enables the Virtual Routing and Forwarding (VRF) routing configuraiton, if specified.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > BGP Configuration

configure > context *context_name* **> router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

Syntax Description

`[ no ] address-family ipv4 [ vrf` *`vrf_name`* **`]`**

no

Removes the configured IPv4 address family VRF mode.

address-family ipv4

Enters the BGP Address-Family IPv4 mode to allow entry of IPv4 BGP parameters.



Important The route distinguisher ID must be configured for the VRF name via the **route-distinguisher** command in BGP VRF Configuration mode, before using this keyword.

vrf *vrf_name*

Enables the exchange of VRF routing information. When this keyword is specified with this command, the address family mode changes to VRF address family mode. *vrf_name* is the name of an existing VFR expressed as an alphanumeric string of 1 through 63 characters.

Usage Guidelines

Use this command to configure the IPv4 BGP address family configuration parameters and optionally enables the exchange of VRF routing information.

Use of the **address-family ipv4** command switches the command mode to BGP Address Family Configuration Mode; the CLI prompt changes to:

```
[context_name>]host_name(config-bgp-af-v4)#
```

Use of **address-family ipv4 vrf** *vrf_name* command switches the command mode to BGP Address Family Configuration Mode; the CLI prompt changes to:

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

Example

Use the following command to enter the IPv4 BGP Address-Family configuration mode:

```
address-family ipv4
```

Use following command to enter the IPv4 VRF BGP Address-Family configuration mode for exchange of VRF routing information from VRF *route_vrf1*:

```
address-family ipv4 vrf route_vrf1
```

address-family ipv6

Enters the IPv6 Address Family configuration mode. Optionally, it also enables the Virtual Routing and Forwarding (VRF) routing configuration mode, if specified.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > BGP Configuration

configure > **context** *context_name* > **router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

Syntax Description

`[ no ] address-family ipv6 [ vrf vrf_name ]`

no

Removes the configured IPv6 address family VRF mode.

address-family ipv6

Enters the BGP Address-Family IPv6 mode to allow entry of IPv6 BGP parameters.

vrf *vrf_name*

Enables the exchange of VRF routing information. When this keyword is specified with this command, the address family mode changes to VRF address family mode. *vrf_name* is the name of an existing VFR expressed as an alphanumeric string of 1 through 63 characters.

Usage Guidelines

Use this command to configure the IPv6 BGP address family configuration parameters for BGP router.

Use of the **address-family ipv6** command switches the command mode to BGP Address Family Configuration Mode and changes the CLI prompt to:

`[context_name>]host_name(config-bgp-af-v6)#`

Example

Use the following command to enter the IPv6 BGP Address-Family configuration mode:

`address-family ipv6`

address-family vpnv4

Enters the IPv4 VPN Address Family configuraiton mode.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > BGP Configuration

configure > **context** *context_name* > **router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

Syntax Description

`address-family vpnv4`

address-family vpnv4

Enters the BGP Address-Family IPv4 VPN mode to allow entry of VPN BGP parameters.

Usage Guidelines

Use this command to configure the VPNv4 address family configuration parameters for BGP router. This command is also used to switch the command mode to enter the BGP Address Family Configuration Mode.

Use of the **address-family vpnv4** command switches the command mode to BGP Address Family Configuration Mode; the CLI prompt changes to:

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

Example

Use the following command to enter the BGP Address-Family configuration mode for IPv4 VPN address parameters:

```
address-family vpnv4
```

address-family vpnv6

Enters the IPv6 VPN Address Family configuraiton mode.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > BGP Configuration

configure > context *context_name* **> router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

Syntax Description

```
address-family vpnv6
```

address-family vpnv6

Enters the BGP Address-Family IPv6 VPN mode to allow entry of VPN BGP parameters.

Usage Guidelines

Use this command to configure the IPv6 VPN address family configuration parameters for BGP router. This command is also used to switch the command mode to enter the BGP Address Family Configuration Mode.

Use of the **address-family vpnv6** command switches the command mode to BGP Address Family Configuration Mode; the CLI prompt changes to:

```
[context_name>]host_name(config-bgp-af-vpnv6)#
```

Example

Use the following command to enter the BGP Address-Family configuration mode for IPv6 VPN address parameters:

```
address-family vpnv6
```

bgp

Defines the BGP-specific parameters regarding graceful restarts.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > BGP Configuration

configure > context *context_name* **> router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

Syntax Description

bgp graceful-restart { restart-time *rest_time* **| stalepath-time** *stale_time* **| update-delay** *delay* **}**

graceful-restart restart-time *rest_time*

Specifies the maximum time (in seconds) required for neighbor(s) to gracefully restart. *rest_time* must be an integer from 1 through 3600.

graceful-restart stalepath-time *stale_time*

Specifies the maximum time (in seconds) to retain stale paths from restarting neighbor(s). *stale_time* must be an integer from 1 through 3600.

graceful-restart update-delay *rest_time*

Specifies the maximum time (in seconds) to defer initial route-selection. *update-delay* must be an integer from 1 through 3600.

Usage Guidelines

Use this command to set BGP-specific parameters regarding graceful restarts.

Example

Use the following command to retain stale paths from restarting neighbor(s) for *100* seconds:

```
bgp graceful-restart stalepath-time 100
```

description

Allows you to enter descriptive text for this configuration.

Product

All

Privilege

Security Administrator, Administrator

Syntax Description

```
description text
no description
```

no

Clears the description for this configuration.

text

Enter descriptive text as an alphanumeric string of 1 to 100 characters.

If you include spaces between words in the description, you must enclose the text within double quotation marks (" "), for example, "AAA BBBB".

Usage Guidelines

The description should provide useful information about this configuration.

distance

Defines the administrative distance for routes. The administrative distance is the default priority for a specific route or type route.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > BGP Configuration

configure > context *context_name* **> router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

Syntax Description

```
distance { admin distance prefix prefix_addr [ route-access-list list_name ] |
bgp external ebgp_dist internal ibgp_dist local local_dist }
no distance { admin distance prefix prefix_addr [ route-access-list list_name ]
 | bgp [ external ebgp_dist internal ibgp_dist local local_dist ] }
```

no

Removes the specified administrative distance for the specific route.

distance admin *distance* prefix *prefix_addr* [route-access-list *list_name*]

Sets the administrative distance to a specified value for routes with a specific IP prefix. If you also specify a route access list, the IP prefix must match the rules of that access list.

admin *distance*: Specifies the administrative distance that you want to apply to the IP prefix. *distance* must be an integer from 1 through 254.

prefix *prefix_addr*: Specifies the IP prefix of routes that should have the admin distance applied. *prefix_addr* must be an IPv4 address in dotted-decimal notation and the number of subnet bits, representing the subnet mask in CIDR shorthand (for example, 209.165.200.225/24).

route-access-list *list_name*: Defines the name of a route access list that defines for which routes the administrative distance should be set.

distance bgp external ***ebgp_dist*** **internal** ***ibgp_dist*** **local** ***local_dist***

Sets the administrative distance for external (eBGP), internal (iBGP) and local routes.

external *ebgp_dist*: Sets the administrative distance for eBGP routes. *ebgp_dist* must be an integer from 1 through 254.

internal *ibgp_dist*: Sets the administrative distance for iBGP routes. *ibgp_dist* must be an integer from 1 through 254.

local *local_dist*: Sets the administrative distance for local routes. *local_dist* must be an integer from 1 through 254.

Usage Guidelines Use this command to set the administrative distance for specific routes to values that you specify. These values are only applied to the current router.

Example

Use the following command to set the administrative distance to *100* for all routes that have an IP prefix of *192.168.0.0* with a netmask of *16* and are specified in a remote access list named *racl1*:

```
distance admin 100 prefix 192.168.0.0/16 route-access-list rac11
```

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.

enforce-first-as

Enforces the first Autonomous System (AS) for Exterior Border Gateway Protocol (eBGP) routes. An AS is a connected group of one or more Internet Protocol prefixes run by one or more network operators which has a single and clearly defined routing policy (RFC 1930).

Product All

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > Context Configuration > BGP Configuration

configure > **context** *context_name* > **router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

Syntax Description **`[ no ] enforce-first-as`**

no

Disables the enforcement of the first AS for Exterior Border Gateway Protocol (eBGP) routes.

enforce-first-as

Enables the enforcement of the first AS for Exterior Border Gateway Protocol (eBGP) routes.

Usage Guidelines Use this command to enforce the use of the first AS for EBGP routes.

Example

Use the following command to enable this functionality:

`enforce-first-as`

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.

ip vrf

Adds a preconfigured IP VRF context instance to the BGP ASN and configures the BGP attributes and related parameters to the VRF. This command also switches the command mode to BGP VRF Configuration mode.

Product All

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > Context Configuration > BGP Configuration

configure > **context** *context_name* > **router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

Syntax Description

[no] ip vrf *vrf_name*

no

Removes an associated IP VRF from specified BGP AS number and other configured parameters.

vrf_name

Specifies the IP VRF context configured in the Context configuration mode and to be associated with a BGP AS number. *vrf_name* must be an alphanumeric string of 1 through 79 characters identifying an existing instance.

Usage Guidelines

Use this command to associate the specified IP VRF context instance to the BGP AS number and configures the BGP attributes and related parameters to the VRF. This command also switches the command mode to BGP VRF Configuration mode.

This command switches the command mode to BGP IP VRF Configuration Mode; the CLI prompt changes to:

```
[context_name>]host_name(config-bgp-vrf)#
```

Example

The following command associates the pre-defined VRF context instance *router_mpls* to this BGP AS number:

```
ip vrf router_mpls
```

maximum-paths

Enables forwarding packets over multiple paths and specifies the maximum number of external BGP (eBGP) or internal BGP (iBGP) paths between neighbors.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > BGP Configuration

configure > **context** *context_name* > **router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

Syntax Description

maximum-paths { ebgp *max_num* **| ibgp** *max_num* **}**
[no] maximum-paths { ebgp | ibgp }

no

Disables forwarding packets over multiple eBGP or iBGP paths between neighbors.

ebgp ***max_num***

Enables forwarding packets over multiple eBGP paths between neighbors and specifies the maximum number of eBGP paths. *max_num* must be an integer from 1 through 10, or 1 through 32 (VPC-DI only), or 1 through 64 (VPC-DI only, Release 21.4+).

ibgp ***max_num***

Enables forwarding packets over multiple iBGP paths between neighbors and specifies the maximum number of iBGP paths. *max_num* must be an integer from 1 through 10, or 1 through 32 (*VPC-DI only*), or 1 through 64 (*VPC-DI only, Release 21.4+*).

Usage Guidelines

Use this command to enable or disable forwarding packets over multiple paths between neighbors and specify the maximum number of EBGP or IBGP paths.

Example

To enable forwarding packets over multiple paths and set the maximum number of EBGP paths to *10*, enter the following command:

```
maximum-paths ebgp 10
```

To disable forwarding packets over multiple EBGP paths, enter the following command:

```
no maximum-paths ebgp
```

neighbor

Configures BGP routers that interconnect to non-broadcast networks. Note that a remote AS number must be specified for a neighbor before other parameters can be configured.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > BGP Configuration

configure > **context** *context_name* > **router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

Syntax Description

[no] neighbor *ip_address* **{ activate | advertisement-interval** *adv_time* **| capability graceful-restart | default-originate [route-map** *map_name* **] | distribute-list** *dist_list* **{ in | out } | ebgp-multihop [max-hop** *number* **] | encrypted password** *encrypted password* **| fall-over bfd [multihop] [associate] | filter-list** *filt_list* **{ in | out } | max-prefix** *max_num* **[threshold** *thresh_percent* **] [warning-only] | next-hop-self | password** *password* **| remote-as** *AS_num* **| remove-private-AS | restart-time** *rest_time* **| route-map** *map_name* **{ in | out } | send-community { both | extended | standard } | 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 a BGP neighbor. *ip_address* must be in IPv4 dotted-decimal or IPv6 colon-separated-hexadecimal notation.

activate

Enable 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

Note The advertisement-interval must be explicitly configured for an address-family so that it can take effect for that address-family. By default it will be applicable only for the IPv4 address-family. Specify the address family via the **address-family** command. You can then set the neighbor advertisement-interval in the address family configuration mode.

capability graceful-restart

Configures BGP graceful restart attributes.

default-originate [route-map *map_name*]

Enables the origination of 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 }

Filters updates to and from this neighbor based on a route access list. *dist_list*: The name or number of an existing route-access-list. Default: No filtering is performed.

in: Indicates that incoming advertised routes should be filtered.

out: Indicates that outgoing advertised routes should be filtered.

ebgp-multihop [max-hop *number*]

Allows EBGP neighbors that are not on directly connected networks.

[max-hop] *number*: Specifies the maximum number of hops allowed to reach a neighbor. *number* must be an integer from 1 through 255. Default hop count: 255

encrypted password *encrypted password*

Specifies an encrypted password that is used only inside configuration files. This should be an alphanumeric string of 1 through 523 characters.

fall-over bfd [multihop] [associate]

Enables Bidirectional Fowarding Detection (BFD) multihop support for fallover.

This command adds or modifies a session in BFD for the BGP peer. If there is an existing session in BFD (same source-address/destination address), BGP or OSPF protocol will be added to the list of clients for the BFD session. BGP or OSPF will then be notified when there is a change in the BFD session state.

If there is no such BFD session, a new session is added in BFD. For MH-BFD, the session inherits the parameters including min-tx, min-rx, multiplier and authentication from the multihop-peer configuration in BFD by matching the destination address. If the parameters (interval) are not configured in BFD, then the BFD session will be in Admin-down state.

BGP adds a session in BFD only when the BGP peer is Established state. If there is a state transition in bgp where the peer is no longer in established state, then the bfd session is deleted. It will be added again, once the peer comes back to Established state.

When used, the **associate** keyword associates BGP and BFD neighbors. BGP peers come up only when the BFD session is up.

filter-list *filt_list* { in | out }

Establishes BGP filters based on an AS path access list. **filt_list** is 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.

Default: No maximum prefix limit.

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

[threshold *thresh_percent* **]**: Specifies a percentage value of when the BGP table is full. When this value is reached, peer warnings are sent to the neighbor and the neighbor connection is reset. *thresh_percent* must be an integer from 1 through 100.

[warning-only]: Specifies that only a warning message is sent when the limit is exceeded. The neighbor connection is not reset

next-hop-self

Disables the next hop calculation for this neighbor.

password *password*

Specifies a password that is only used inside configuration files. This should be an alphanumeric string of 1 through 24 characters.

remote-as *AS_num*

Specify the AS number of the BGP neighbor.

AS_num: Specifies the neighbor's AS number as an integer from 1 through 65535.

remove-private-AS

Removes the private AS number from outbound updates. Default: Do not remove the private AS number.

restart-time *rest_time*

Specifies the maximum time (in seconds) required for a neighbor to restart. *rest_time* must be an integer between 1 and 3600.

route-map *map_name* { in | out }

Applies a route map to the neighbor. *map_name*i s 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.

send-community { both | extended | standard }

Sends the community attributes to a peer router (neighbor).

both: Sends extended and standard community attributes.

extended: Sends extended community attributes.

standard: Sends standard community attributes.

shutdown

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

srp-activated-soft-clear

Enables BGP updates when Service Redundancy Protocol SRP-enabled resources are modified.

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

Specifies BGP timers for this 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*

Binds 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*

Sets the default weight for routes from this neighbor. *value* 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.

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
```

network

Specifies a network to announce via BGP.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > BGP Configuration

configure > context *context_name* **> router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

Syntax Description **[no] network** *ip_address*/*mask* **[route-map** *map_name* **]**

no

Delete the specified network from the configuration for the BGP router.

ip_address*/*mask

Specifies the IP address and netmask bits for the network to announce via BGP. *ip_address* is a network IPv4 address in dotted-decimal notation and *mask* is the number of subnet bits, representing a subnet mask in CIDR shorthand. These must be entered in the dotted-decimal notation/subnet bits format (for example, 209.165.200.234/24).

[route-map *map_name*]

Filter routes through the specified route map before announcing the network. *map_name* is the name of the route-map to use specified as an alphanumeric string of 1 through 79 characters.

Usage Guidelines Use this command to specify a network to announce via BGP.

Example

The following command announces the network *192.168.0.0* with a netmask of *16* via BGP:

```
network 192.168.0.0/16
```

The following command removes the network from the BGP router configuration:

```
no network 192.168.0.0/16
```

redistribute

Redistributes routes via BGP from another protocol to BGP neighbors.

Product All

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > Context Configuration > BGP Configuration

configure > **context** *context_name* > **router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

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

no

Remove the specified redistribution parameters from the BGP router configuration.

redistribute connected

Specifies that connected routes will be redistributed.

redistribute ospf

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

redistribute rip

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

redistribute 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
```

router-id

Overrides the configured router identifier and causes BGP peers to reset.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > BGP Configuration

configure > context *context_name* **> router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

Syntax Description

router-id *ip_address*
no router-id [*ip_address* **]**

no

Remove the specified router ID from the router's configuration and use the default router ID.

router-id *ip_address*

Specifies the IP address to use as the BGP router ID as an IPv4 address in dotted-decimal notation.

Usage Guidelines Use this command to configure a specific router ID that overrides the default.

Example

The following command sets the router ID to *192.168.100.25*:

```
router-id 192.168.100.25
```

scan-time

Configures the BGP background scanner interval. BGP monitors the next hop of the installed routes to verify next-hop reachability and to select, install, and validate the BGP best path. By default, the BGP scanner polls the Routing Information Base (RIB) for this information every 60 seconds. During the 60-second time period between scan cycles, Interior Gateway Protocol (IGP) instabilities or other network failures can cause temporarily black holes and routing loops.

Product All

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > Context Configuration > BGP Configuration

configure > **context** *context_name* > **router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

Syntax Description **[no] scan-time** *time*

no

Remove the user specified scan time from the router's configuration. The scan time is reset to the default value.

scan-time *time*

Specifies the amount of time (in seconds) to wait between background scans to determine next-hop validity. *time* must be an integer from 5 through 60. Default: 60

Usage Guidelines Use this command to set the background scanner interval for the BGP router.

Example

The following command sets the background scanner interval to *30* seconds:

```
scan-time 30
```

timers

Configures BGP routing timers.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > BGP Configuration

configure > **context** *context_name* > **router bgp** *as_number*

Entering the above command sequence results in the following prompt:

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

Syntax Description

timers bgp keepalive-interval *interval* **holdtime-interval** *time* **[min-peer-holdtime-interval** *time* **]**

no

Remove the user specified timer values from the router's configuration. The timer values are reset to the default values.

timers bgp keepalive-interval *interval* holdtime-interval *time*

keepalive-interval *interval*: Specifies the interval (in seconds) to wait between sending keepalive packets as an integer from 0 through 65535. Default: 30

holdtime-interval *time*: Specifies the interval (in seconds) after which the neighbor is considered dead if keepalive messages are not received as an integer from 0 through 65535.

[min-peer-holdtime-interval *time*]

Specifies the interval (in seconds) that is the minimum acceptable hold time from a neighbor as an integer from 0 through 65535. The default is 0 so that there is no restriction on the hold time received in an OPEN message from the peer.

Usage Guidelines

Use this command to configure the how long to wait between sending keepalive packets and how long to wait for a keepalive before considering a a neighbor dead.

Example

The following command sets the keepalive interval to 2 minutes (120 seconds) and the holdtime interval to 3 minutes (180 seconds):

```
timers bgp keepalive-interval 120 holdtime-interval 180
min-peer-holdtime-interval 0
```