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FiberstoreOS

BGP Command Line Reference

Contents

1 BGP Commands

1.1 address-family

Use this command to enter the IPv4, VPNv4 address-family command mode.

Command Syntax

address-family ipv4 (unicast|vrf NAME |)

address-family vpnv4 (unicast)

vpnv4	Configures sessions for VPN-IPv4 prefixes. This parameter takes an IPv4 style address: A.B.C.D.
unicast	Specifies unicast prefixes.
vrf	VPN routing/forwarding instance
NAME	VPN Routing/Forwarding instance name

Command Mode

Router mode

Default

N/A

Usage

Use the address family command to enter the address family mode allowing configuration of address-family specific parameters.

To leave the address family mode and return to the Configure mode use the exit-address-family command.

Examples

```
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router)address-family ipv4
```

Related Commands

exit, exit-address-family

1.2 aggregate-address

Use this command to configure BGP aggregate entries.

Use the no parameter with this command to disable this function.

Command Syntax

(no) aggregate-address IPADDRESS {summary-only|as-set}

IPADDRESS	A.B.C.D/M Specifies the aggregate prefix
summary-only	Filters more specific routes from updates.
as-set	Generates AS set path information

Command Mode

Router mode

Default

Disabled

Usage

Aggregates are used to minimize the size of routing tables. Aggregation combines the characteristics of several different routes and advertises a single route.The aggregate-address command creates an aggregate entry in the BGP routing table if any more-specific BGP routes are available in the specified range. Using the summary-only parameter advertises the prefix only, suppressing the more-specific routes to all neighbors.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 100
Switch(config-router)# aggregate-address 10.0.0.0/8 as-set summary-only
```

Related Commands

N/A

1.3 bgp always-compare-med

Use this command to compare the Multi Exit Discriminator (MED) for paths from neighbors in different autonomous systems.

Use the no parameter with this command to disallow the comparison.

Command Syntax

(no) bgp always-compare-med

Command Mode

Router mode

Default

Disabled

Usage

Multi Exit Discriminator (MED) is used in best path selection by BGP. MED is compared after BGP attributes weight, local preference, AS-path and origin have been compared and are equal.

MED comparison is done only among paths from the same autonomous system (AS). Use bgp always-comparemed command to allow comparison of MEDs from different ASs. The MED parameter is used to select the best path. A path with lower MED is preferred.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 100
Switch(config-router)# bgp always-compare-med
```

Related Commands

bgp bestpath med, bgp bestpath as-path ignore

1.4 bgp bestpath as-path ignore

Use this command to prevent the router from considering as-path as a factor in the algorithm for choosing a route.

Use the no parameter with this command to allow the router to consider as-path in choosing a route.

Command Syntax

(no) bgp bestpath as-path ignore

Command Mode

Router mode

Default

Disabled

Usage

Use the address family command to enter the address family mode allowing configuration of address-family specific parameters.

To leave the address family mode and return to the Configure mode use the exit-address-family command.

Examples

```
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router) bgp bestpath as-path ignore
```

Related Commands

bgp always-compare-med, bgp bestpath med, bgp bestpath compare-routerid

1.5 bgp bestpath compare-confed-aspath

Use this command to allow comparing of the confederation AS path length.

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Use the no parameter with this command to revert the selection and ignore AS confederation path length in the BGP best path selection.

Command Syntax

(no) bgp bestpath compare-confed-aspath

Command Mode

Router mode

Default

BGP receives routes with identical eBGP paths from eBGP peers and selects the first route received as the best path.

Usage

This command specifies that the AS confederation path length must be used, when available, in the BGP best path decision process. It is effective only when bgp bestpath as-path ignore command has not been specified.

Examples

```
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router) bgp bestpath compare-confed-aspath
```

Related Commands

bgp bestpath as-path ignore

1.6 bgp bestpath compare-routerid

Use this command to compare router-id for identical eBGP paths.
Use the no parameter with this command to disable this function.

Command Syntax

(no) bgp bestpath compare-routerid

Command Mode

Router mode

Default

BGP receives routes with identical eBGP paths from eBGP peers and selects the first route received as the best path.

Usage

When comparing similar routes from peers the BGP router does not consider router ID of the routes. By default, it selects the first received route. Use this command to include router ID in the selection process; similar routes are compared and the route with lowest router ID is selected. The router-id is the highest IP address on the router, with preference given to loopback addresses. Router-id can be manually set by using the bgp router-id command.

Examples

```
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router) bgp bestpath compare-routerid
```

Related Commands

show ip bgp, show ip bgp neighbors

1.7 bgp bestpath med

Use this command to specify Multi Exit Discriminator (MED) attribute comparison.

Use the no parameter with this command to prevent BGP from considering the MED attribute in comparing paths.

Command Syntax

bgp bestpath med confed [missing-as-worst]

bgp bestpath med missing-as-worst [confed]

missing-as-worst	Treats missing MED as the least preferred one
confed	Compares MED among confederation paths

Command Mode

Router mode

Default

MED value is zero.

Usage

Use this command to specify two MED attributes--confed and missing-as-worst. The confed attribute enables MED comparison among paths learned from confederation peers. The MEDs are compared only if there is no external autonomous system (an AS not within the confederation) in the path. If there is an external autonomous system in the path, the MED comparison is not made.

The missing-as-worst attribute to consider a missing MED attribute in a path as having a value of infinity, making the path without a MED value the least desirable path. If missing-as-worst is disabled, the missing MED is assigned the value of 0, making the path with the missing MED attribute the best path.

Examples

```
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router) bgp bestpath med missing-as-worst
```

Related Commands

bgp always-compare-med, bgp bestpath as-path ignore, bgp deterministic-med

1.8 bgp client-to-client reflection

Use this command to restore route reflection from a BGP route reflector to clients.

Use the no parameter with this command to turn off client-to-client reflection.

Command Syntax

(no) bgp client-to-client reflection

reflection	Allows reflection of routes

Command Mode

Router mode

Default

When a router is configured as a route reflector, client-to-client reflection is enabled by default.

Usage

The bgp client-to-client reflection command is used to configure routers as route reflectors. Route reflectors are used when all Interior Border Gateway Protocol (iBGP) speakers are not fully meshed. If the clients are fully meshed the route reflector is not required, use no bgp client-to-client reflection command to disable the client-to-client route reflection.

Examples

```
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router) no bgp client-to-client reflection
```

Related Commands

bgp cluster-id, neighbor route-reflector-client, show ip bgp

1.9 bgp cluster-id

Use this command to configure the cluster ID if the BGP cluster has more than one route reflector.

Use the no parameter with this command to remove the cluster ID.

Command Syntax

(no) bgp cluster-id CLUSTERID

CLUSTERID	A.B.C.D|<1-4294967295> Specifies the cluster ID of this router acting as a route reflector, either as IP address or as a maximum of 4 bytes. A.B.C.D Route Reflector Cluster-id in IP address format

	<1-4294967295> Route Reflector cluster-id as a 32 bit quantity

Command Mode

Router mode

Default

N/A

Usage

A cluster includes route reflectors and its clients. Usually, each cluster is identified by the router ID of its single route reflector but to increase redundancy sometimes a cluster may have more than one route reflector. All router reflectors in such a cluster are then identified by a cluster ID. The bgp cluster-id command is used to configure the 4 byte cluster ID for clusters with more than one route reflectors.

Examples

```
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router) bgp cluster-id 1.1.1.1
```

Related Commands

bgp client-to-client reflection, neighbor route-reflector-client, show ip bgp

1.10 bgp confederation identifier

Use this command to specify a Bgp confederation identifier.

Use the no parameter with this command to remove the Bgp confederation identifier.

Command Syntax

(no) bgp confederation identifier ID

ID	<1-65535> Set routing domain confederation AS number

Command Mode

Router mode

Default

N/A

Usage

N/A

Examples

```
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router) bgp confederation identifier 1
```

Related Commands

bgp confederation peer

1.11 bgp confederation peers

Use this command to configure the Autonomous Systems (AS) that belong to the confederation.

Use the no parameter with this command to remove an autonomous system from the confederation.

Command Syntax

(no) bgp confederation peers .ASN

ASN	<1-65535> AS numbers of eBGP peers that are under same confederation but in a different sub-AS

Command Mode

Router mode

Default

N/A

Usage

A confederation allows an AS to be divided into several ASs. The AS is given a confederation identifier. External routers view only the whole confederation as one AS. Each AS is fully meshed within itself and is visible internally to the confederation. Use the bgp confederation peer command to define the list of confederation peers.

Examples

```
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router) bgp confederation peers 1234 21345
```

Related Commands

bgp confederation identifier

1.12 bgp dampening

Use this command to set bgp dampening parameters.

Use the no parameter with this command to unset the bgp dampening parameters.

Command Syntax

(no) bgp dampening REACHTIME

(no) bgp dampening REACHTIME REUSE

(no) bgp dampening REACHTIME REUSE SUPPRESS MAXSUPPRESS (UNREACHTIME)

(no) bgp dampening ROUTEMAP

REACHTIME	<1-45> Specifies the reachability half-life time in minutes. The time for the penalty to decrease to one-half of its current value. The default is 15 minutes.
REUSE	<1-20000> Specifies the reuse limit value. When the penalty for a suppressed route decays below the reuse value, the routes become unsuppressed. The default reuse limit is 750 SUPPRESS <1-20000> Specifies the suppress limit value. When the penalty for a route exceeds the suppress value, the route is suppressed. The default suppress limit is 2000.
MAXSUPPRESS	<1-255> Specifies the max-suppress-time. Maximum time that a dampened route is suppressed. The default max-suppress value is 4 times the half-life time (60 minutes).
UNREACHTIME	<1-45> Specifies the un-reachability half-life time for penalty, in minutes.
ROUTEMAP	route-map WORD Route-map to specify criteria for dampening. WORD Specify the name of the route-map.

Command Mode

Router mode

Default

N/A

Usage

Route dampening minimizes the instability caused by route flapping. A penalty is added for every flap in a flapping route. As soon as the total penalty reaches the suppress limit the advertisement of the route is suppressed. This penalty is decayed according to the configured half time value. Once the penalty is lower than the reuse limit, the route advertisement is un-suppressed.

The dampening information is purged from the router once the penalty becomes less than half of the reuse limit.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 100
Switch(config-router)# bgp dampening 20 800 2500 80 25
```

Related Commands

N/A

1.13 bgp default ipv4-unicast

Use this command to configure BGP defaults and activate ipv4-unicast for a peer by default. This affects the BGP global configuration.

Use the no parameter with this command to disable this function

Command Syntax

(no) bgp default ipv4-unicast

Command Mode

Router mode

Default

The bgp default ipv4 unicast is the default behavior.

Usage

The no bgp default ipv4-unicast command is used to disable the default behavior of the BGP routing process of exchanging IPv4 addressing information with BGP neighbor routers.

Examples

```
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router) bgp default ipv4-unicast
```

Related Commands

N/A

1.14 bgp default local-preference

Use this command to change the default local preference value.
Use the no parameter with this command to revert to the default setting.

Command Syntax

(no) bgp default local-preference PREF_VALUE

PREF_VALUE	<0-4294967295> Configure default local preference value. The default local preference value is 100.

Command Mode

Router mode

Default

The default local preference value is 100.

Usage

Local preference indicates the preferred path when there are multiple paths to the same destination. The path having a higher preference is preferred. Use bgp default local-preference command to define preference of a particular path. The preference is sent to all routers and access servers in the local autonomous system.

Examples

```
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router) bgp default local-preference 2345555
```

Related Commands

N/A

1.15 bgp deterministic-med

Use this command to compare the Multi Exit Discriminator (MED) variable when choosing among routes advertised by different peers in the same autonomous system.

Use the no parameter with this command to disallow this setting.

Command Syntax

(no) bgp deterministic-med

Command Mode

Router mode

Default

Disabled

Usage

Multi Exit Discriminator (MED) is used in best path selection by BGP. MED is compared after BGP attributes weight, local preference, AS-path and origin have been compared and are equal. Enable bgp deterministic med command on all routers in the local AS, for a correct comparison result. After enabling this command, all paths for the same prefix are grouped together and arranged according to their MED value.

Based on this comparison, the best path is then chosen.

This command compares MED variable when choosing routes advertised by different peers in the same AS, to compare MED, when choosing routes from neighbors in different ASs use the bgp always-compare-med command.

Examples

```
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router) bgp deterministic-med
```

Related Commands

show ip bgp, show ip bgp neighbors

1.16 bgp enforce-first-as

Use this command to enforce the first AS for the eBGP routes.

Use the no parameter with this command to disable this feature.

Command Syntax

(no) bgp enforce-first-as

Command Mode

Router mode

Default

Disabled

Usage

This command specifies that any updates received from an external neighbor that do not have the neighbor's configured Autonomous System (AS) at the beginning of the AS_PATH in the received update must be denied.

Enabling this feature adds to the security of the BGP network by not allowing traffic from unauthorized systems.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 100
Switch(config-router)# bgp enforce-first-as
```

Related Commands

N/A

1.17 bgp fast-external-failover

Use this command to reset a BGP session immediately, if the interface used for BGP connection goes down.

Use the no parameter with this command to disable this feature.

Command Syntax

(no) bgp fast-external-failover

Command Mode

Router mode

Default

Enabled

Usage

N/A

Examples

```
Switch# configure terminal
Switch(config)# router bgp 100
Switch(config-router)# bgp fast-external-failover
```

Related Commands

N/A

1.18 bgp log-neighbor-changes

Use this command to enable logging of status change messages without turning on debug bgp commands.

Use the no parameter with this command to disable this feature.

Command Syntax

(no) bgp log-neighbor-changes

Command Mode

Router mode

Default

Disabled

Usage

Centec implementation provides other kinds of logging services for neighbor status, for example, debug bgp fsm, debug bgp events, etc. However, these commands create a significant hit in the logging performance.

The bgp log-neighbor-changes command, logs the following events:

- BGP Notification Received
- Erroneous BGP Update Received
- User reset request
- Peer time-out
- Peer Closing down the session
- Interface flap
- Router ID changed
- Neighbor deleted
- Member added to peer group
- Administrative shutdown
- Remote AS changed
- RR client configuration modification
- Soft reconfiguration modification

Examples

```
Switch# configure terminal
Switch(config)# router bgp 100
Switch(config-router)# bgp log-neighbor-changes
```

Related Commands

N/A

1.19 bgp router-id

Use this command to configure the router identifier.

Use the no parameter with this command to disable this function

Command Syntax

(no) bgp router-id ROUTERID

ROUTERID	A.B.C.D Manually configured router ID.

Command Mode

Router mode

Default

In case the loopback interface is configured the router-id is set to the IP address of a loopback interface. If not, the highest IP address is the router-id.

Usage

Use bgp router-id command to manually configure a fixed router ID as a BGP router identifier.

Examples

```
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router) bgp router-id 1.1.2.3
```

Related Commands

N/A

1.20 bgp scan-time

Use this command to set the interval for BGP route next-hop scanning.
Use the no parameter with this command to disable this function.

Command Syntax

(no) bgp scan-time TIME

TIME	<0-60> **Scan**ning interval in seconds. The default **scan**ning interval is 60 seconds.

Command Mode

Router mode

Default

N/A

Usage

Use this command to configure scanning intervals of BGP routers. This interval is the period after which router checks the validity of the routes in its database.

To disable BGP scanning, set the scan time interval to 0 seconds.

Examples

```
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router) bgp scan-time 10
```

Related Commands

N/A

1.21 clear ip bgp *

Use this command to reset a BGP connection for all peers.

Command Syntax

clear ip bgp * (in|out|SOFT|)

clear ip bgp * ipv4 PREFIX ROUTES

clear ip bgp * vpnv4 unicast ROUTES

clear ip bgp * vrf NAME ROUTES

*	clears all bgp peers
ipv4	clears all IPv4 address family peers
ROUTES	IN|out|SOFT
IN	in (prefix-filter)
in	Indicates that incoming advertised routes will be cleared
prefix-filter	Pushes out prefix-list ORF and does inbound soft reconfiguration
out	Indicates that outgoing advertised routes will be cleared.
SOFT	soft (in|out) Indicates that both incoming and outgoing routes will be cleared
PREFIX	unicast|multicast
unicast	address family modifier
multicast	address family modifier
vrf	VPN routing/forwarding instance
NAME	VPN Routing/Forwarding instance name

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A.

Examples

```
Switch# clear ip bgp *
Switch# clear ip bgp * ipv4 unicast in prefix-filter
Switch# clear ip bgp * vpnv4 unicast in
```

Related Commands

N/A

1.22 clear ip bgp A.B.C.D

Use this command to reset a IPv4 BGP connection for a specific IP address.

Command Syntax

clear ip bgp A.B.C.D (in|out|SOFT)

clear ip bgp A.B.C.D ipv4 PREFIX ROUTES

clear ip bgp A.B.C.D vpnv4 unicast ROUTES

A.B.C.D	Specifies the IPv4 address of the BGP route to be cleared
ipv4	clears all IPv4 address family peers
vpnv4	clears all VPNv4 address family peers
ROUTES	IN|out|SOFT
IN	in (prefix-filter)
in	Indicates that incoming advertised routes will be cleared
prefix-filter	Pushes out prefix-list ORF and does inbound soft reconfiguration
out	Indicates that outgoing advertised routes will be cleared.
SOFT	soft (in|out) Indicates that both incoming and outgoing routes will be cleared
PREFIX	unicast|multicast
unicast	address family modifier
multicast	address family modifier

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# clear ip bgp 10.10.0.12 soft
Switch# clear ip bgp 10.10.0.10 vpnv4 unicast out
Switch# clear ip bgp 11.11.11.11 ipv4 multicast in prefix-filter
```

Related Commands

N/A

1.23 clear ip bgp dampening

Use this command to reset all dampened BGP routes under the specified address family.

Command Syntax

clear ip bgp dampening (A.B.C.D|A.B.C.D/M)

clear ip bgp ipv4 PREFIX dampening (A.B.C.D|A.B.C.D/M)

A.B.C.D	Specifies the IPv4 address for which Bgp dampening is to be cleared.
A.B.C.D/M	Specifies the IPv4 address with mask for which Bgp dampening is to be cleared.
ipv4	clears all IPv4 address family peers
PREFIX	unicast|multicast
unicast	address family modifier
multicast	address family modifier

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# clear ip bgp dampening 10.10.0.121
Switch# clear ip bgp ipv4 unicast dampening
```

Related Commands

N/A

1.24 clear ip bgp flap-statistics

Use this command to clear the flap count and history duration for all the prefixes under the specified address family.

Command Syntax

clear ip bgp flap-statistics (A.B.C.D|A.B.C.D/M)

clear ip bgp ipv4 PREFIX flap-statistics (A.B.C.D|A.B.C.D/M)

A.B.C.D	Specifies the IPv4 address for which Bgp dampening is to be cleared.
A.B.C.D/M	Specifies the IPv4 address with mask for which Bgp dampening is to be cleared.

ipv4	clears all IPv4 address family peers
PREFIX	unicast|multicast
unicast	address family modifier
multicast	address family modifier

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# clear ip bgp flap-statistics 10.10.0.121
Switch# clear ip bgp ipv4 unicast flap-statistics
```

Related Commands

N/A

1.25 clear ip bgp ASN

Use this command to reset a BGP connection for all peers in a specified Autonomous System.

Command Syntax

clear ip bgp ASN (IN|out|SOFT|)

clear ip bgp ASN ipv4 PREFIX ROUTES

clear ip bgp ASN vpnv4 unicast ROUTES

ASN	<1-65535>Specifies the AS Number for which all routes will be cleared
ipv4	clears all IPv4 address family peers
vpnv4	clears all VPNv4 address family peers
ROUTES	IN|out|SOFT
IN	in (prefix-filter)
in	Indicates that incoming advertised routes will be cleared
prefix-filter	Pushes out prefix-list ORF and does inbound soft reconfiguration
out	Indicates that outgoing advertised routes will be cleared.
SOFT	soft (in|out) Indicates that both incoming and outgoing routes will be cleared
PREFIX	unicast|multicast
unicast	address family modifier

multicast	address family modifier

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# clear ip bgp 100
Switch# clear ip bgp 200 ipv4 unicast in prefix-filter
Switch# clear ip bgp 500 vpnv4 unicast in
```

Related Commands

N/A

1.26 clear ip bgp external

Use this command to reset a BGP connection for all external peers.

Command Syntax

clear ip bgp external (IN|out|SOFT|)

clear ip bgp external ipv4 PREFIX ROUTES

external	Clears all external peers
ipv4	clears all IPv4 address family peers
ROUTES	IN|out|SOFT
IN	in (prefix-filter)
in	Indicates that incoming advertised routes will be cleared
prefix-filter	Pushes out prefix-list ORF and does inbound soft reconfiguration
out	Indicates that outgoing advertised routes will be cleared.
SOFT	soft (in|out) Indicates that both incoming and outgoing routes will be cleared
PREFIX	unicast|multicast
unicast	address family modifier
multicast	address family modifier

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# clear ip bgp external out
Switch# clear ip bgp external ipv4 unicast in prefix-filter
```

Related Commands

N/A

1.27 clear ip bgp peer-group

Use this command to reset a BGP connection for all members of a peer group.

Command Syntax

clear ip bgp peer-group WORD(IN|out|SOFT|)

clear ip bgp peer-group WORD ipv4 PREFIX ROUTES

peer-group	Clears all members of a peer group
WORD	Specifies the name of the peer group for which all members will be cleared.
ipv4	clears all IPv4 address family peers
ROUTES	IN|out|SOFT
IN	in (prefix-filter)
in	Indicates that incoming advertised routes will be cleared
prefix-filter	Pushes out prefix-list ORF and does inbound soft reconfiguration
out	Indicates that outgoing advertised routes will be cleared.
SOFT	soft (in|out) Indicates that both incoming and outgoing routes will be cleared
PREFIX	unicast|multicast
unicast	address family modifier
multicast	address family modifier

Command Mode

Privileged Exec mode

Default

N/A

Usage

Use the address family command to enter the address family mode allowing configuration of address-family specific parameters.

To leave the address family mode and return to the Configure mode use the exit-address-family command.

Examples

```
Switch# clear ip bgp peer-group Peer1 out
Switch# clear ip bgp peer-group mypeer ipv4 unicast in prefix-filter
```

Related Commands

N/A

1.28 clear ip bgp vrf

Use this command to reset the specified VPN Routing /Forwarding Instance for BGP connections.

Command Syntax

clear ip bgp (A.B.C.D)|*) vrf WORD (out|in|SOFT)

WORD	Specifies the name of the VRF
A.B.C.D	Specifies the IPv4 address of the BGP route to be cleared
*	Clears all peers
in	Performs soft reconfiguration in
out	Performs soft reconfiguration out
SOFT	soft in|soft out|soft

Command Mode

Privileged Exec mode

Default

N/A

Usage

If the neighbor address is specified with this command it clears the specified connection. If no address is specified this command clears all the BGP routes.

Examples

```
Switch# clear ip bgp 3.3.3.3 vrf VRF1 soft in
```

Related Commands

N/A

1.29 debug bgp

Use this command to enter the IPv4, VPNv4 **address-family** command mode.

Command Syntax

debug bgp (all|dampening|events|filters|fsm|keepalives|mpls|updates)

no debug bgp
(all|dampening|events|filters|fsm|keepalives|mpls|nsm|updates)

all	Used with the no form exclusively; turns off all debugging for BGP
dampening	Specifies debugging for Bgp dampening.
events	Specifies debugging for BGP events.
filters	Specifies debugging for BGP filters.
fsm	Specifies debugging for BGP Finite State Machine (FSM).
keepalives	Specifies debugging for BGP keepalives.
mpls	Specifies debuggin for BGP Multiprotocol Label Switching.
updates	updates Specifies debugging for BGP updates.

Command Mode

Privileged Exec mode

Default

N/A

Usage

This command without any parameters turns on normal bgp debug information.

Examples

```
Switch# debug bgp
Switch# debug bgp events
```

Related Commands

N/A

1.30 distance

Use this command to define an administrative distance.

Use the no parameter with this command to remove an administrative distance.

Command Syntax

(no) distance ADMINDISTANCE | BGPDISTANCE

ADMINDISTANCE	<1-255> A.B.C.D/M (LISTNAME) Specifies the administrative distance. 1-255 the administrative distance
1-255	the administrative distance
A.B.C.D/M	the IP source prefix
LISTNAME	the name of the access list to be applied to the administrative distance to selected routes.
BGPDISTANCE	bgp EXT INT LOCAL Specifies the IP address and subnet mask.
EXT	<1-255> Specifies the administrative distance for BGP external routes. The default distance for external routes is 20.
INT	<1-255> Specifies the administrative distance for BGP internal routes. The default distance for internal routes in 200.
LOCAL	<1-255> Specifies the administrative distance for BGP local routes. The default distance for local routes is 200.

Command Mode

Router mode

Default

N/A

Usage

Use this command to set the administrative distance for BGP. This distance is a rating of trustworthiness of a router.

The higher the distance the lower the trust rating.

The administrative distance can be set for external, internal and local routes. External paths are routes learned from a neighbor out of the AS. The internal routes are routes learned from another router within the same AS. Local routes are for the router that is being redistributed from another process.

If the administrative distance is changed, it could create inconsistency in the routing table and obstruct routing.

Examples

```
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router) distance 34 10.10.0.0/24 mylist
Switch# configure terminal
Switch(config) router bgp 100
Switch(config-router) distance bgp 34 23 15
```

Related Commands

N/A

1.31 exit-address-family

Use this command to exit the address family mode.

Command Syntax

exit-address-family

Command Mode

Address Family mode

Default

N/A

Usage

N/A

Examples

The following example shows the use of exit-address-family command and the change in the prompt after using this command.

```
Switch# configure terminal
Switch(config)# router bgp 100
Switch(config-router)# address-family ipv4 unicast
Switch(config-router-af)# exit-address-family
Switch(config-router)#
```

Related Commands

address family

1.32 ip as-path access-list

Use this command to define a BGP Autonomous System (AS) path access list.

Use the no parameter with this command to disable use of the access list.

Command Syntax

(no) ip as-path access-list LISTNAME (deny|permit) .LINE

LISTNAME	Specifies the name of the access list.
deny	(Optional) Denies access to matching conditions.
permit	(Optional) Permits access to matching conditions.
.LINE	Specifies a regular expression to match the BGP AS paths. Refer to the appendix "Regular Expressions" for further details.

Command Mode

Configure mode

Default

N/A

Usage

Named community list is a filter based on regular expressions. If the regular expression matches the specified string representing the AS path of the route, then the permit or deny condition applies. Use this command to define the BGP access list globally, use the neighbor router configuration command to apply a specific access list.

Examples

```
Switch# configure terminal
Switch(config)# ip as-path access-list mylist deny ^65535$
```

Related Commands

N/A

1.33 ip community-list

Use this command to add a community list entry.

Use the no parameter with this command to delete the community list entry.

Command Syntax

(no) ip community-list LISTNUM deny|permit .COMMUNITY

LISTNUM	Specifies the community num. <1-99> Community list number (standard) <100-199> Community list number (expanded)
deny	Specifies the community to reject.
permit	Specifies the community to accept.
COMMUNITY	AA:NN|internet|local-AS|no-advertise|no-export
AA:NN	Specifies the valid value for the community number. This format represents the 32 bit communities value, where AS is the high order 16 bits and VAL is the low order 16 bits in digit format.
internet	Specifies routes not to be advertised to the Internet.
local-AS	Specifies routes not to be advertised to external BGP peers.
no-advertise	Specifies routes not to be advertised to other BGP peers.
no-export	Specifies routes not to be advertised outside of Autonomous System boundary.

Command Mode

Configure mode

Default

N/A

Usage

Use the community-lists to specify BGP community attributes. The community attribute is used for implementing policy routing. It is an optional, transitive attribute and facilitates transfer of local policies through different autonomous systems. It includes community values that are 32 bits long.

There are two kinds of community-lists: the expanded and standard. The standard community-list defines the community attributes in a specified format and not with regular expressions. The expanded community-list defines the communities attributes with regular expressions.

Examples

```
Switch# configure terminal
Switch(config)# ip community-list 20 permit 7675:80 7675:90
```

Related Commands

ip community-list standard, ip community-list expanded

1.34 ip community-list expanded

Use this command to add a community list entry.
Use the no parameter with this command to delete the community list entry.

Command Syntax

(no) ip community-list expanded WORD deny|permit .LINE

expanded	Add an expanded community-list entry.
WORD	Expanded community list name
deny	Specifies community to reject.
permit	Specifies community to accept.
LINE	Specifies community attributes with regular expression. Refer to the appendix "Regular Expressions" for further details.

Command Mode

Configure mode

Default

N/A

Usage

Use the community-lists to specify BGP community attributes. The community attribute is used for implementing policy routing. It is an optional, transitive attribute and facilitates transfer of local policies through different autonomous systems. It includes community values that are 32 bits long.

There are two kinds of community-lists--the expanded and standard. The standard community-list defines the community attributes in a specified

format and not with regular expressions. The expanded community-list defines the communities attributes with regular expressions.

Examples

```
Switch# configure terminal
Switch(config)# ip community-list expanded CLIST permit .*
```

Related Commands

ip community-list, ip community-list standard

1.35 ip community-list standard

Use this command to add a standard community-list entry.

Use the no parameter with this command to delete the standard community-list entry.

Command Syntax

(no) ip community-list standard WORD deny|permit .COMMUNITY

standard	Specifies a standard community list.
WORD	Standard community list name
deny	Specifies community to reject.
permit	Specifies community to accept.
COMMUNITY	AA:NN|internet|local-AS|no-advertise|no-export
AA:NN	Specifies the valid value for the community number. This format represents the 32 bit communities value, where AS is the high order 16 bits and VAL is the low order 16 bits in digit format.
internet	Specifies routes not to be advertised to the Internet.
local-AS	Specifies routes not to be advertised to external BGP peers.
no-advertise	Specifies routes not to be advertised to other BGP peers.
no-export	Specifies routes not to be advertised outside of the Autonomous System boundary.

Command Mode

Configure mode

Default

N/A

Usage

Use the community-lists to specify BGP community attributes. The community attribute is used for implementing policy routing. It is an optional, transitive attribute and facilitates transfer of local policies

through different autonomous systems. It includes community values that are 32 bits long.

There are two kinds of community-lists--the expanded and standard. The standard community-list defines the community attributes in a specified format without regular expressions. The expanded community-list defines the communities attributes with regular expressions.

Use the ip community-list standard command to add a standard community-list entry. The standard community-list is compiled into binary format and is directly compared with the BGP communities attribute in the BGP updates. The comparison is faster than the expanded community-list. Any community value that does not match the standard community value is automatically treated as expanded.

Examples

```
Switch# configure terminal
Switch(config)# ip community-list standard CLIST permit 7675:80 7675:90
no-export
```

Related Commands

ip community-list, ip community-list expanded

1.36 neighbor activate

Use this command to enable the exchange of the specified AF routes with a neighboring router.

Use the no parameter with this command to disable exchange of information with a neighbor.

Command Syntax

(no) neighbor NEIGHBORID activate

NEIGHBORID	A.B.C.D|TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.

Command Mode

Address Family mode and Router mode

Default

N/A

Usage

After the TCP connection is opened with the neighbor, this command is used to enable or disable the exchange of the specified AF information with a neighboring router.

To enable the exchange of multicast and VPNv4 address prefix types, neighbors are activated using the neighbor activate command in address family mode.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 1.2.3.4 activate
```

Related Commands

neighbor remote-as

1.37 neighbor advertisement-interval

Use this command to set the minimum interval between sending the BGP routing updates.

Use the no parameter with this command to set the interval time to default.

Command Syntax

(no) neighbor NEIGHBORID advertisement-interval TIME

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.
TIME	<0-600> Advertise -interval value in seconds

Command Mode

Router mode

Default

N/A

Usage

Use this command to set the minimum interval between the sending of BGP routing updates. To reduce the flapping of routes to internet, a minimum advertisement interval is set, so that the BGP routing updates are sent only per interval seconds. bgp dampening can also be used to control the effects of flapping routes.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 10.10.0.3 advertisement-interval 45
```

1.38 neighbor allowas-in

Use this command to configure PE routers to allow re-advertisement of all prefixes containing duplicate Autonomous System Numbers (ASNs).

Use the no parameter with this command to disable the readvertisement of a PE router's ASN.

Command Syntax

neighbor NEIGHBOR allowas-in [NUMBER]

no neighbor NEIGHBOR allowas-in

NEIGHBOR	neighbor IP address. Use A.B.C.D form.
NUMBER	<1-10> Number of occurances of AS number.

Command Mode

Router mode and Address Family mode

Default

Disabled

Usage

In a hub and spoke configuration, a PE router re-advertises all prefixes containing duplicate ASNs. Use the neighbor allowas-in command to configure two VRFs on each PE router to receive and re-advertise prefixes. One of the VRFs receives prefixes with ASNs from all PE routers and then advertises them to neighboring PE routers. The other VRF receives prefixes with ASNs from the CE router and re-advertises them to all PE routers in the hub and spoke configuration.

Control the number of times an ASN is advertised, by specifying a number from 1 to 10.

Examples

```
Switch (config-router)# address-family ipv4 vrf VRF_A
Switch (config-router-af)# neighbor 10.10.0.1 allowas-in 3
```

Related Commands

N/A

1.39 neighbor attribute-unchanged

Use this command to advertise unchanged BGP attributes to the specified neighbor.

Use the no parameter with this command to disable this function.

Command Syntax

(no) neighbor NEIGHBORID attribute-unchanged {as-path|next-hop|med}

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.
as-path	AS path attribute
next-hop	Next hop attribute
med	Multi Exit Discriminator

Command Mode

Router mode and Address Family mode

Default

N/A

Usage

N/A

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 10.10.0.75 attribute-unchanged as-path
med
```

Related Commands

N/A

1.40 neighbor capability dynamic

Use this command to enable the dynamic capability for a specific peer.
Use the no parameter with this command to disable the dynamic capability.

Command Syntax

(no) neighbor NEIGHBORID capability dynamic

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in

	the specified group.

Command Mode

Router mode

Default

Disabled

Usage

This command allows a BGP speaker to advertise or withdraw an address family capability to a peer in a non-disruptive manner.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 10.10.10.1 capability dynamic
```

Related Commands

N/A

1.41 neighbor capability orf prefix-list

Use this command to advertise ORF capability to neighbors.
Use the no parameter with this command to disable this function.

Command Syntax

(no) neighbor NEIGHBORID capability orf prefix-list (both|receive|send)

NEIGHBORID	A.B.C.D|TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.
orf	Advertises ORF capability to its neighbors
both	Indicates that the local router can send ORF entries to its peer as well as receive ORF entries from its peer.
receive	Indicates that the local router is willing to receive ORF entries from its peer
send	Indicates that the local router is willing to send ORF entries to its peer

Command Mode

Router mode and Address Family mode

Default

N/A

Usage

Outbound Route Filters (ORFs) send and receive capabilities to lessen the number of updates exchanged between neighbors. By filtering updates, this option minimizes generating and processing of updates.

The local router advertises the ORF capability in send mode and the remote router receives the ORF capability in receive mode applying the filter as outbound policy. The two routers exchange updates to maintain the ORF for each

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 1.1.1.1 capability orf prefix-list both
```

Related Commands

N/A

1.42 neighbor capability route-refresh

Use this command to advertise route-refresh capability to the specified neighbors.
Use the no parameter with this command to disable this function

Command Syntax

(no) neighbor NEIGHBORID capability route-refresh

NEIGHBORID	A.B.C.D|TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.

Command Mode

Router mode

Default

N/A

Usage

Use this command to advertise to peer about route refresh capability support. If route refresh capability is supported, then router can dynamically request that the peer readvertises its Adj-RIB-Out.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 10.10.10.1 capability route-refresh
```

Related Commands

N/A

1.43 neighbor default-originate

Use this command to allow a BGP local router to send the default route 0.0.0.0 to a neighbor for use as a default route.

Use the no parameter with this command to send no route as a default.

Command Syntax

(no) neighbor NEIGHBORID default-originate (ROUTEMAP)

NEIGHBORID	A.B.C.D|TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.
ROUTEMAP	route-map WORD
route-map	The route-map to specify criteria to originate default routes
WORD	Route-map name

Command Mode

Router mode and Address Family mode

Default

N/A

Usage

The neighbor default-originate command can be used with standard or extended access lists.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 10.10.10.1 default-originate route-map
myroute
```

Related Commands

N/A

1.44 neighbor description

Use this command to associate a description with a neighbor.

Use the no parameter with this command to remove the description.

Command Syntax

(no) neighbor NEIGHBORID description .LINE

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.
LINE	Up to 80 characters of text describing the neighbor.

Command Mode

Router mode and Address Family ipv4 vrf mode (if BGP/VPN is supported)

Default

N/A

Usage

N/A

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 1.2.3.4 description Backup router for
sales.
```

Related Commands

N/A

1.45 neighbor distribute-list

Use this command to filter route update from a particular BGP neighbor.

Use the no parameter with this command to remove an entry.

Command Syntax

(no) neighbor NEIGHBORID distribute-list WORD   in|out

NEIGHBORID	A.B.C.D| TAG

A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.
WORD	The name of IP access-list
in	Indicates that incoming advertised routes will be filtered.
out	Indicates that outgoing advertised routes will be filtered.

Command Mode

Router mode and Address Family mode

Default

N/A

Usage

Use only one distribute-list per BGP neighbor.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 1.2.3.4 distribute-list mylist out
```

Related Commands

N/A

1.46 neighbor ebgp-multihop

Use this command to accept and attempt BGP connections to external peers on indirectly connected networks.

Use the no parameter with this command to return to the default.

Command Syntax

(no) neighbor NEIGHBORID ebgp-multihop (COUNT)

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.
COUNT	<1-255> Maximum hop count. If the maximum

	hop count is not set the hop count is 255.

Command Mode

Router mode

Default

N/A

Usage

Multihop is not established if the only route to the multihop peer is a default route. This avoids loop formation.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 10.10.10.34 remote-as 20
Switch(config-router)# neighbor 10.10.10.34 ebgp-multihop 5
```

Related Commands

N/A

1.47 neighbor filter-list

Use this command to set up a BGP filter.
Use the no parameter with this command to disable this function.

Command Syntax

(no) neighbor NEIGHBORID filter-list LISTNAME in|out

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to theneighbor peer-group and neighbor remote-as commands. When this parameter is usedwith a command, the command applies on all peers in the specified group.
LISTNAME	The name of an autonomous system path access list.
in	Indicates that incoming advertised routes will be filtered.
out	Indicates that outgoing advertised routes will be filtered.

Command Mode

Router mode and Address Family mode

Default

N/A

Usage

This command specifies an access list filter on updates based on the BGP autonomous system paths. Each filter is an access list based on regular expressions.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 10.10.0.34 filter-list listname out
```

Related Commands

N/A

1.48 neighbor maximum-prefix

Use this command to control the number of prefixes that can be received from a neighbor.
Use the no parameter with this command to disable this function.

Command Syntax

(no) neighbor NEIGHBORID maximum-prefix MAXIMUM

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.
MAXIMUM	MAXPREFIX (THRESHOLD) (warning-only)
MAXPREFIX	<1-4294967295> Specifies the maximum number of prefixes permitted.
THRESHOLD	<1-100> Specifies the threshold value, 1 to 100 percent.
warning-only	Only gives a warning message when the limit is exceeded.

Command Mode

Router mode and Address Family mode

Default

N/A

Usage

The neighbor maximum-prefix command allows the configuration of a specified number of prefixes that a BGP router is allowed to receive from a neighbor. When the warning-only option is not used, if any extra prefixes are received, the router ends the peering. A terminated peer, stays down until the clear ip bgp command is used.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 10.10.0.72 maximum-prefix 1244
warning-only
```

Related Commands

N/A

1.49 neighbor next-hop-self

Use this command to configure the router as the next hop for a BGP-speaking neighbor or peer group.

Use the no parameter with this command to disable this feature.

Command Syntax

(no) neighbor NEIGHBORID next-hop-self

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.

Command Mode

Router mode and Address Family mode

Default

N/A

Usage

This command allows a BGP router to change the nexthop information that is sent to the iBGP peer. The nexthop information is set to the IP address of the interface used to communicate with the neighbor.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 10.10.0.72 remote-as 100
Switch(config-router)# neighbor 10.10.0.72 next-hop-self
```

1.50 neighbor override-capability

Use this command to override a capability negotiation result.

Use the no parameter with this command to disable this function

Command Syntax

(no) neighbor NEIGHBORID override-capability

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.

Command Mode

Router mode

Default

N/A

Usage

Use the address family command to enter the address family mode allowing configuration of address-family specific parameters.

To leave the address family mode and return to the Configure mode use the exit-address-family command.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 12
Switch(config-router)# neighbor 10.10.10.10 override-capability
```

Related Commands

N/A

1.51 neighbor passive

Use this command to set a BGP neighbor as passive.

Use the no parameter with this command to disable this function

Command Syntax

(no) neighbor NEIGHBORID passive

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.

Command Mode

Router mode

Default

N/A

Usage

N/A

Examples

```
Switch# configure terminal
Switch(config)# router bgp 12
Switch(config-router)# neighbor 10.10.10.10 passive
```

Related Commands

N/A

1.52 neighbor peer-group (adding a neighbor)

Use this command to add a neighbor to an existing peer-group.

Use the no parameter with this command to disable this function.

Command Syntax

(no) neighbor IPADDRESS peer-group TAG

IPADDRESS	A.B.C.D Specifies the address of the BGP neighbor in IPv4 format. TAG Name of the peer-group

Command Mode

Router mode

Default

N/A

Usage

Use this command to Neighbors with the same update policies are grouped into peer groups. This facilitates the updates of various policies, such as, distribute and filter lists. The peer-group is then configured

easily with any of the neighbor commands. Any changes made to the peer group affect all members.

To create a peer-group use the neighbor peer-group create command and then use this command to add neighbors to the group.

Examples

This example shows a new peer-group group1 and the adding of a neighbor 10.10.0.63 to the group.

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor group1 peer-group
Switch(config-router)# neighbor 10.10.0.63 peer-group group1
```

Related Commands

N/A

1.53 neighbor peer-group (creating a peer-group)

Use this command to create a peer-group.

Use the no parameter with this command to disable this function

Command Syntax

(no) neighbor TAG peer-group

TAG	Name of the peer-group

Command Mode

Router mode

Default

N/A

Usage

Neighbors with the same update policies are grouped into peer groups. This facilitates the updates of various policies, such as, distribute and filter lists. The peer-group is then configured easily with any of the neighbor commands. Any changes made to the peer group affect all members. Use this command to create a peer-group.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor group1 peer-group
```

Related Commands

N/A

1.54 neighbor prefix-list

Use this command to distribute BGP neighbor information as specified in a prefix list.

Use the no parameter with this command to remove an entry.

Command Syntax

(no) neighbor NEIGHBORID prefix-list LISTNAME in|out

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.
LISTNAME	The number of an AS-path access list.
in	Specifies that the access list applies to incoming advertisements.
out	Specifies that the access list applies to outgoing advertisements.

Command Mode

Router mode and Address Family mode

Default

N/A

Usage

Use this command to specify a prefix list for filtering BGP advertisements. Filtering by prefix list matches the prefixes of routes with those listed in the prefix list. If there is a match, the route is used. An empty prefix list permits all prefixes. If a given prefix does not match any entries of a prefix list, the route is denied access. When multiple entries of a prefix list match a prefix, the entry with the smallest sequence number is considered to be a real match.

The router begins the search at the top of the prefix list, with the sequence number 1. Once a match or deny occurs, the router does not need to go through the rest of the prefix list. For efficiency the most common matches or denies are listed at the top.

The neighbor distribute-list command is an alternative to the neighbor prefix-list command and only

one of them can be used for filtering to the same neighbor in any direction.

Examples

```
Switch# configure terminal
Switch(config)# ip prefix-list list1 deny 30.0.0.0/24
```

```
Switch(config)# router bgp 12
Switch(config-router)# neighbor 10.10.10.10 prefix-list list1 in
```

Related Commands

ip prefix-list

1.55 neighbor remote-as

Use this command to configure an internal or external BGP (iBGP or eBGP) TCP session with another router.

Command Syntax

neighbor NEIGHBORID remote-as ASNUM

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.
ASNUM	<1-4294967295 > Neighbor's autonomous system number

Command Mode

Router mode

Default

N/A

Usage

This command is used to configure iBGP and eBGP sessions with other neighbors. A peer-group support of this command is configured only after creating a specific peer-group.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 11
Switch(config-router)# neighbor 10.10.0.73 remote-as 345
```

Related Commands

N/A

1.56 neighbor remove-private-AS

Use this command to remove the private Autonomous System (AS) number from outbound updates.

Use the no parameter with this command too revert to default.

Command Syntax

(no)neighbor NEIGHBORID remove-private-AS

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.

Command Mode

Router mode and Address Family (ipv4 unicast | ipv4 multicast | vpnv4 unicast) mode

Default

Disabled

Usage

The private AS numbers range from <64512-65535>. Private AS numbers are not advertised to the Internet. This command is used with external BGP peers only. The router removes the AS numbers only if the update includes private AS numbers. If the update includes both private and public AS numbers, the system treats it as an error.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 10.10.0.63 remove-private-AS
```

Related Commands

N/A

1.57 neighbor route-reflector-client

Use this command to configure the router as a BGP route reflector and configure the specified neighbor as its client.

Use the no parameter with this command to indicate that the neighbor is not a client.

Command Syntax

(no) neighbor NEIGHBORID route-reflector-client

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group.

	For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.

Command Mode

Router mode and Address Family mode

Default

N/A

Usage

Route reflectors are a solution for the explosion of iBGP peering within an autonomous system. By route reflection the number of iBGP peers within an AS is reduced. Use the neighbor route-reflector-client command to configure the local router as the route reflector and specify neighbors as its client.

An AS can have more than one route reflector. One route reflector treats the other route reflector as another iBGP speaker.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 10.10.0.72 route-reflector-client
```

Related Commands

N/A

1.58 neighbor send-community

Use this command to specify that a community attribute should be sent to a BGP neighbor.

Use the no parameter with this command to remove the entry. Use the extended and no parameters to remove extended communities. Specifying no other parameter with no removes standard communities only.

Command Syntax

(no) neighbor NEIGHBORID send-community (both|extended|standard)

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.
both	Sends Standard and Extended Community attributes

extended	Sends Extended Community attributes
standard	Sends Standard Community attributes

Command Mode

Router mode and Address Family mode

Default

Both standard and extended community attributes are sent to a neighbor.

Usage

This command is used to specify a community attribute to be sent to a neighbor. The community attribute groups destinations in a certain community and applies routing decisions according to those communities. On receiving community attributes the router reannounces them to the neighbor. Only when the no parameter is used with this command the community attributes are not reannounced to the neighbor.

By default, both standard and extended community attributes are sent to a neighbor. To explicitly send only the standard or extended community attribute, run the bgp config-type command with the standard parameter, before running this command.

Examples

```
Switch# configure terminal
Switch(config)# bgp config-type standard
Switch(config)# router bgp 10
Switch(config-router)# neighbor 10.10.0.72 send-community extended
```

Related Commands

N/A

1.59 neighbor shutdown

Use this command to disable a neighbor.
Use the no parameter with this command to re-enable the neighbor.

Command Syntax

(no) neighbor NEIGHBORID shutdown

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.

Command Mode

Router mode

Default

N/A

Usage

This command shuts down any active session for the specified neighbor and clears all related routing data.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 10.10.0.72 shutdown
```

Related Commands

N/A

1.60 neighbor soft-reconfiguration inbound

Use this command to configure to start storing updates.

Use the no parameter with this command to disable this function.

Command Syntax

(no) neighbor NEIGHBORID soft-reconfiguration inbound

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.

Command Mode

Router mode and Address Family mode

Default

N/A

Usage

Use this command to store updates for inbound soft reconfiguration. Soft-reconfiguration may be used in lieu of BGP route refresh capability. Using this command enables local storage of all the received routes and their attributes. This requires additional memory. When a soft reset (inbound) is done on this neighbor, the locally stored routes are reprocessed according to the inbound policy. The BGP neighbor connection is not affected.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 12
Switch(config-router)# neighbor 10.10.10.10 soft-reconfiguration
inbound
```

Related Commands

N/A

1.61 neighbor strict-capability-match

Use this command to close the BGP connection if capability value does not completely match to remote peer.

Use the no parameter with this command to disable this function

Command Syntax

(no) neighbor NEIGHBORID strict-capability-match

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.

Command Mode

Router mode

Default

N/A

Usage

N/A

Examples

```
Switch# configure terminal
Switch(config)# router bgp 12
Switch(config-router)# neighbor 10.10.10.10 strict-capability-match
```

Related Commands

N/A

1.62 neighbor timers

Use this command to set the timers for a specific BGP neighbor.

Use the no parameter with this command to clear the timers for a specific BGP neighbor

Command Syntax

(no) neighbor NEIGHBORID timers KEEPALIVE

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.
KEEPALIVE	<1-65535> holdtime Frequency (in seconds) at which a router sends keepalive messages to its neighbor. The default is 60 seconds.
holdtime	<3-65535> Interval (in seconds) after which, on not receiving a keepalive message, the router declares a neighbor dead. The default is 180 seconds.

Command Mode

Router mode

Default

N/A

Usage

Keepalive messages are sent by a router to inform another router that the BGP connection between the two is still active. The keepalive interval is the period of time between each keepalive message sent by the router. The holdtime interval is the time the router waits to receive a keepalive message and if it does not receive a message for this period it declares the neighbor dead.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 12
Switch(config-router)# neighbor 10.10.10.10 timers 60 120
```

Related Commands

N/A

1.63 neighbor unsuppress-map

Use this command to selectively leak more-specific routes to a particular neighbor.

Command Syntax

(no)neighbor NEIGHBORID unsuppress-map WORD

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.

Command Mode

Router mode and Address Family (ipv4 unicast | ipv4 multicast) mode

Default

N/A

Usage

When the aggregate-address command is used with the summary-only option, the more-specific routes of the aggregate are suppressed to all neighbors. Use the unsuppress-map command to selectively leak more-specific routes to a particular neighbor.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router) neighbor 10.10.0.73 unsuppress-map mymap
Switch#configure terminal
Switch(config)#router bgp 10
Switch(config-router)address-family ipv4 unicast
Switch(config-router-af)neighbor 10.10.0.70 unsuppress-map mymap
```

Related Commands

N/A

1.64 neighbor update-source

Use this command to allow internal BGP sessions to use any operational interface for TCP connections.

Use the no parameter with this command to restore the interface assignment to the closest interface.

Command Syntax

(no) neighbor NEIGHBORID update-source IFNAME

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups,

	refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.
IFNAME	Specifies the loopback interface.

Command Mode

Router mode

Default

N/A

Usage

Use this command in conjunction with any specified interface on the router. The loopback interface is the interface that is most commonly used with this command. The use of loopback interface eliminates a dependency and BGP does not have to rely on the availability of a particular interface for making TCP connections.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# neighbor 10.10.0.72 update-source eth-0-1
```

Related Commands

N/A

1.65 neighbor weight

Use this command to set default weights for routes from this neighbor.
Use the no parameter with this command to remove a weight assignment.

Command Syntax

(no) neighbor NEIGHBORID weight WEIGHT

NEIGHBORID	A.B.C.D| TAG
A.B.C.D	Specifies the address of the BGP neighbor in IPv4 format.
TAG	Name of an existing peer-group. For information on how to create peer groups, refer to the neighbor peer-group and neighbor remote-as commands. When this parameter is used with a command, the command applies on all peers in the specified group.
WEIGHT	<0-65535> Specifies the weight this command assigns to the route.

Command Mode

Router mode

Default

N/A

Usage

Use this command to specify a weight value to all routes learned from a neighbor. The route with the highest weight gets preference when there are other routes on the network.

Unlike the local-preference attribute, the weight attribute is relevant only to the local router.

The weights assigned using the set weight command overrides the weights assigned using this command.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 12
Switch(config-router)# neighbor 10.10.10.10 weight 60
```

Related Commands

N/A

1.66 network

Use this command to specify the networks to be advertised by the BGP routing process. A unicast network address without a mask is accepted if it falls into the natural boundary of its class. A class-boundary mask is derived if the address matches its natural class-boundary.

Use the no form of this command to remove a network route entry.

Command Syntax

(no) network A.B.C.D

(no) network A.B.C.D route-map WORD

A.B.C.D	IP prefix <network>, e.g., 35.0.0.0
WORD	Name of the route map

Command Mode

Router mode and IPv4-Unicast Address-family mode

Default

N/A

Usage

N/A

Examples

The following example illustrates a Class-A address configured as a network route. The natural Class-A network prefix mask length of 8 will be internally derived, that is, 2.0.0.0/8.

```
Switch(config)#router bgp 1
```

```
Switch(config-router)#network 2.0.0.0
Switch#show run
!
router bgp 1
no synchronization
network 2.0.0.0
```

The following example illustrates a network address which does not fall into its natural class boundary, and hence, is perceived as a host route, that is, 1.2.3.0/32.

```
Switch(config)#router bgp 1
Switch(config-router)#network 1.2.3.0
Switch#show run
!
router bgp 1
no synchronization
network 1.2.3.0 mask 255.255.255.255
```

Related Commands

N/A

1.67 network synchronization

Use this command to ensure the exact same static network prefix, specified through any of the network <prefix> commands, is local or has IGP reachability (in the NSM RIB) before being introduced into the BGP RIB.

Use the no parameter with this command to disable this function.

Command Syntax

(no) network synchronization

Command Mode

Router mode

Address Family mode

ipv4 unicast

ipv4 multicast

Default

Network synchronization is disabled by default.

Usage

N/A

Examples

The following example enables IGP synchronization of BGP static network routes in the router configuration mode.

```
Switch# configure terminal
Switch(config)# router bgp 11
Switch(config-router)# network synchronization
The following example enables IGP synchronization of BGP static network
routes in the IPv4-Unicast address family.
Switch# configure terminal
```

```
Switch(config)# router bgp 11
Switch(config)# address-family ipv4 unicast
Switch(config-af)# network synchronization
```

Related Commands

N/A

1.68 synchronization

Use this command to enable IGP synchronization of Internal BGP (iBGP) learned routes with the Internal Gateway Protocol (IGP) system in the router configuration mode or in the address-family configuration mode.

Use the no parameter with this command to disable this function.

Command Syntax

(no) synchronization

vpnv4	Configures sessions for VPN-IPv4 prefixes. This parameter takes an IPv4 style address: A.B.C.D.
unicast	Specifies unicast prefixes.
vrf	VPN routing/forwarding instance
NAME	VPN Routing/Forwarding instance name

Command Mode

Router mode

Address Family mode

ipv4 unicast

ipv4 multicast

Default

IGP synchronization is disabled.

Usage

Synchronization is used when a BGP router should not advertise routes learned from iBGP neighbors, unless those routes are also present in an IGP (for example, OSPF). Synchronization may be enabled when all the routers in an autonomous system do not speak BGP, and the autonomous system is a transit for other autonomous systems. The no synchronization command is used when BGP router can advertise routes learned from its iBGP neighbors without waiting for the IGP reachability to be present.

Examples

The following example enables IGP synchronization of iBGP routes in Router mode.

```
Switch# configure terminal
Switch(config)# router bgp 11
Switch(config-router)# synchronization
```

The following example enables IGP synchronization of iBGP routes in the IPv4-Unicast address family.

```
Switch# configure terminal
Switch(config)# router bgp 11
Switch(config)# address-family ipv4 unicast
Switch(config-af)# synchronization
```

Related Commands

N/A

1.69 router bgp

Use this command to configure a BGP routing process.

Use the no parameter with this command to disable a routing process.

Command Syntax

(no) router bgp ASN

ASN	Specifies the Autonomous System (AS) number <1-4294967295>.

Command Mode

Configure mode

Default

N/A

Usage

The router bgp command enables a BGP routing process.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 12
Switch(config-router)#
```

Related Commands

N/A

1.70 show debugging bgp

Use this command to display the BGP debugging option set.

Command Syntax

show debugging bgp

Command Mode

Privileged Exec mode

Default

N/A

Usage

Use the address family command to enter the address family mode allowing configuration of address-family specific parameters.

To leave the address family mode and return to the Configure mode use the exit-address-family command.

Examples

```
Switch# show debugging bgp
BGP debugging status:
```

Related Commands

N/A

1.71 show ip bgp

Use this command to display BGP network information.

Command Syntax

show ip bgp(IPADDRESS)

show ip bgp ipv4 PREFIX (IPADDRESS)

IPADDRESS	A.B.C.D|A.B.C.D/M Specifies the address and length.
ipv4	Specifies the address family. The type of address family determines the routing table that is displayed.
PREFIX	multicast|unicast
unicast	Specifies a IPv4 unicast address family. This is the default option.
multicast	Specifies a IPv4 multicast address family.

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# show ip bgp 10.10.1.34/24
```

Related Commands

N/A

1.72 show ip bgp attribute-info

Use this command to show internal attribute hash information.

Command Syntax

show ip bgp attribute-info

vpnv4	Configures sessions for VPN-IPv4 prefixes. This parameter takes an IPv4 style address: A.B.C.D.
unicast	Specifies unicast prefixes.
vrf	VPN routing/forwarding instance
NAME	VPN Routing/Forwarding instance name

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

This is a sample output from the show ip bgp attribute-info command displaying internal attribute information.

```
Switch# show ip bgp attribute-info
```

Related Commands

N/A

1.73 show ip bgp cidr-only

Use this command to display routes with non-natural network masks.

Command Syntax

show ip bgp cidr-only

show ip bgp ipv4 PREFIX cidr-only

ipv4	Specifies the address family. The type of address family determines the routing table that is displayed.
PREFIX	multicast|unicast
unicast	Specifies a IPv4 unicast address family. This is the default option.
multicast	Specifies a IPv4 multicast address family.

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

This is a sample output from the show ip bgp cidr-only command.

```
Switch# show ip bgp cidr-only
```

Related Commands

N/A

1.74 show ip bgp community

Use this command to display routes matching the communities.

Command Syntax

show ip bgp community TYPE (exact-match)

show ip bgp ipv4 PREFIX community TYPE (exact-match)

TYPE	AA:NN|local-AS|no-advertise|no-export
AA:NN	Specifies a valid value for a community number.
local-AS	Do not send outside local AS (well-known community).
no-advertise	Do not advertise to any peer (well-known community).
no-export	Do not export to next AS (well-known community).
exact-match	Specifies that display the exact match of the communities.

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# show ip bgp community 10:23 exact-match
Switch# show ip bgp ipv4 multicast community 10:23 exact-match
```

Related Commands

N/A

1.75 show ip bgp community-info

Use this command to list all BGP community information.

Command Syntax

show ip bgp community-info

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# show ip bgp community-info
```

Related Commands

N/A

1.76 show ip bgp community-list

Use this command to display routes that match the community-list.

Command Syntax

show ip bgp community-list LISTNAME (exact-match)

show ip bgp ipv4 PREFIX community-list LISTNAME (exact-match)

LISTNAME	Specifies the community list name.
exact-match	Displays only routes that have exactly the same specified communities.
ipv4	Specifies the address family. The type of address family determines the routing table that is displayed.
PREFIX	multicast|unicast
unicast	Specifies a IPv4 unicast address family. This is the default option.
multicast	Specifies a IPv4 multicast address family.

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# show ip bgp community-list mylist exact-match
Switch# show ip bgp ipv4 unicast community-list mylist
```

Related Commands

N/A

1.77 show ip bgp dampening

Use this command to display detailed information about dampening.

Command Syntax

show ip bgp dampening dampened-paths|flap-statistics|parameters

show ip bgp ipv4 PREFIX dampening
dampened-paths|flap-statistics|parameters

dampened-paths	Display paths suppressed due to dampening.
flap-statistics	Display flap statistics of routes.
parameters	Display details of configured dampening parameters.
ipv4	Specifies the address family. The type of address family determines the routing table that is displayed.
PREFIX	multicast|unicast

Command Mode

Exec mode and Privileged Exec mode

Default

N/A

Usage

N/A

Examples

Enable bgp dampening to maintain dampened-path information in memory.

The following is a sample output displaying all the dampening parameters:

```
Switch# show ip bgp dampening parameters
```

The following sample output is showing that the internal route (i), has flapped 3 times and is now categorized as history (h).

```
Switch# show ip bgp dampening flap-statistics
```

The following sample output is showing a dampened route in the 1.1.1.0/24 network.

```
Switch# show ip bgp dampening dampened-paths
```

Related Commands

N/A

1.78 show ip bgp filter-list

Use this command to display routes conforming to the filter-list.

Command Syntax

show ip bgp filter-list LISTNAME

show ip bgp ipv4 PREFIX filter-list LISTNAME

LISTNAME	Specifies the regular-expression access list name.
ipv4	Specifies the address family. The type of address family determines the routing table that is displayed.
PREFIX	multicast|unicast
unicast	Specifies a IPv4 unicast address family. This is the default option.
multicast	Specifies a IPv4 multicast address family.

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# show ip bgp filter-list mylist
Switch# show ip bgp ipv4 unicast filter-list Switch
```

Related Commands

N/A

1.79 show ip bgp inconsistent-as

Use this command to display routes with inconsistent AS Paths.

Command Syntax

show ip bgp inconsistent-as

show ip bgp ipv4 PREFIX inconsistent-as

ipv4	Specifies the address family. The type of address family determines the routing table that is displayed.
PREFIX	multicast|unicast
unicast	Specifies a IPv4 unicast address family. This is the default option.
multicast	Specifies a IPv4 multicast address family.

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# show ip bgp inconsistent-as
Switch# show ip bgp ipv4 unicast inconsistent-as
```

Related Commands

N/A

1.80 show ip bgp neighbors

Use this command to display detailed information on TCP and BGP neighbor connections.

Command Syntax

show ip bgp neighbors (IPADDRESS (advertised-routes|RECEIVED|received-routes|routes))

show ip bgp ipv4 PREFIX neighbors (IPADDRESS (advertised-routes|RECEIVED|received-routes|routes))

IPADDRESS	A.B.C.D Specifies the IP address.
A.B.C.D	Specifies an IPv4 address.
advertised-routes	Displays the routes advertised to a BGP neighbor.
RECEIVED	received prefix-filter Displays all received routes, both accepted and rejected.
prefix-filter	Displays the prefix-list filter.
received-routes	Displays the received routes from neighbor. To display all the received routes from the neighbor,

	configure the BGP soft reconfigure first. routes Displays all accepted routes learned from neighbors.
ipv4	Specifies the address family. The type of address family determines the routing table that is displayed.
PREFIX	multicast|unicast
unicast	Specifies a IPv4 unicast address family. This is the default option.
multicast	Specifies a IPv4 multicast address family.

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

This is a sample output from the show ip bgp neighbors command displaying information about the specified neighbor.

```
Switch# show ip bgp neighbors
```

Related Commands

N/A

1.81 show ip bgp paths

Use this command to display BGP path information.

Command Syntax

show ip bgp paths

show ip bgp ipv4 PREFIX paths

ipv4	Specifies the address family. The type of address family determines the routing table that is displayed.
PREFIX	multicast|unicast
unicast	Specifies a IPv4 unicast address family. This is the default option.
multicast	Specifies a IPv4 multicast address family.

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# show ip bgp paths
```

Related Commands

N/A

1.82 show ip bgp prefix-list

Use this command to display routes matching the prefix-list.

Command Syntax

show ip bgp prefix-list LIST

show ip bgp ipv4 PREFIX prefix-list LIST

LIST	Specifies the name of the IP prefix list.
ipv4	Specifies the address family. The type of address family determines the routing table that is displayed.
PREFIX	multicast|unicast
unicast	Specifies a IPv4 unicast address family. This is the default option.
multicast	Specifies a IPv4 multicast address family.

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# show ip bgp prefix-list mylist
```

Related Commands

N/A

1.83 show ip bgp quote-regexp

Use this command to display routes matching the AS path regular expression in quotes.

Command Syntax

show ip bgp quote-regexp WORD

show ip bgp ipv4 PREFIX regexp WORD

WORD	Specifies a regular-expression to match the BGP AS paths
ipv4	Specifies the address family. The type of address family determines the routing table that is displayed.
PREFIX	multicast|unicast
unicast	Specifies a IPv4 unicast address family. This is the default option.
multicast	Specifies a IPv4 multicast address family.

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# show ip bgp quote-regexp "Switch"
```

Related Commands

N/A

1.84 show ip bgp regexp

Use this command to display routes matching the AS path regular expression.

Command Syntax

show ip bgp regexp .LINE

show ip bgp ipv4 PREFIX regexp .LINE

regexp	Displays routes matching the AS path regular expression.
LINE	Specifies a regular-expression to match the BGP AS paths. Refer to the appendix "Regular Expressions" for further details.
ipv4	Specifies the address family. The type of address family determines the routing table that is displayed.
PREFIX	multicast|unicast
unicast	Specifies a IPv4 unicast address family. This is the

	default option.
multicast	Specifies a IPv4 multicast address family.

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# show ip bgp regexp myexpression
```

Related Commands

N/A

1.85 show ip bgp scan

Use this command to display BGP scan status.

Command Syntax

show ip bgp scan

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

```
Switch# show ip bgp scan
```

Related Commands

N/A

1.86 show ip bgp summary

Use this command to display a summary of BGP neighbor status.

Command Syntax

show ip bgp summary

show ip bgp ipv4 PREFIX summary

ipv4	Specifies the address family. The type of address family determines the routing table that is

	displayed.
PREFIX	multicast|unicast
unicast	Specifies a IPv4 unicast address family. This is the default option.
multicast	Specifies a IPv4 multicast address family.

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

This is a sample output from the show ip bgp summary command displaying a summary of BGP neighbor status.

```
Switch# show ip bgp summary
```

Related Commands

N/A

1.87 show ip bgp vpnv4 all

Use this command to display VPNv4 NLRI specific information.

Command Syntax

show ip bgp vpnv4 all TYPE

all	Displays information about all VPNv4 NLRIs
TYPE	A.B.C.D|neighbors|summary
A.B.C.D	Network for which information will be displayed in the BGP routing table.
neighbors	Displays information about all VPNv4 NLRIs.
summary	Displays summary of the BGP neighbor status.

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

This is a sample output from the show ip bgp vpnv4 all command displaying VPNv4 specific information

```
Switch# show ip bgp vpnv4 all
```

Related Commands

N/A

1.88 show ip bgp vpnv4 rd

Use this command to display VPNv4 NLRI specific information.

Command Syntax

show ip bgp vpnv4 rd WORD TYPE

rd	Display information for a route distinguisher
WORD	VPN Route Distinguisher
TYPE	A.B.C.D|neighbors|summary
A.B.C.D	Network for which information will be displayed in the BGP routing table.
neighbors	Displays information about all VPNv4 NLRIs.
summary	Displays summary of the BGP neighbor status.

Command Mode

Privileged Exec mode

Default

N/A

Usage

N/A

Examples

This is a sample output from the show ip bgp vpnv4 rd command displaying VPNv4 specific information

```
Switch# show ip bgp vpnv4 rd 123
```

Related Commands

N/A

1.89 show ip bgp vpnv4 vrf

Use this command to display VPNv4 NLRI specific information.

Command Syntax

show ip bgp vpnv4 vrf WORD TYPE

vrf	VPN Routing/Forwarding instance
WORD	VPN Routing/Forwarding instance name
TYPE	A.B.C.D|neighbors|summary
A.B.C.D	Network for which information will be displayed in the BGP routing table.
neighbors	Displays information about all VPNv4 NLRIs.
summary	Displays summary of the BGP neighbor status.

Command Mode

Router mode

Default

N/A

Usage

N/A

Examples

This is a sample output from the show ip bgp vpnv4 rd command displaying VPNv4 specific information

```
Switch# show ip bgp vpnv4 vrf 123
```

Related Commands

N/A

1.90 timers

Use this command sets the BGP keepalive timer and holdtime timer values.

Use the no parameter with this command to reset timers to default value.

Command Syntax

timers bgp KEEPALIVE HOLDTIME

no timers bgp

KEEPALIVE	<0-65535> The frequency with which the keepalive messages are sent to the neighbors. The default value is 60 seconds.
HOLDTIME	<3-65535> The interval after which the neighbor is considered dead if keepalive messages are not received. The default holdtime value is 180 seconds.

Command Mode

Router mode

Default

N/A

Usage

This command is used globally to set or unset the keepalive and holdtime values for all the neighbors.

Examples

```
Switch# configure terminal
Switch(config)# router bgp 10
Switch(config-router)# timers bgp 40 120
```

Related Commands

N/A