G Commands

glbp

To enter GLBP configuration mode and create a Gateway Load Balancing Protocol (GLBP) group, use the **glbp** command. To delete a GLBP group, use the **no** form of this command.

glbp *group*
no glbp *group*

Syntax Description

group	GLBP group number. The range is from 0 to 1023.

Command Default

None

Command Modes

Interface configuration

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

Use the **glbp** command to enter GLBP configuration mode and create a GLBP group if the group does not exist.

Note You must configure all GLBP options before you use the **ip** command to assign a virtual IP address and activate the GLBP group.

This command does not require a license.

Examples

This example shows how to create GLBP group 10 on Ethernet interface 1/1:

```
switch# configure terminal
switch(config)# interface ethernet 1/1
switch(config-if)# glbp 10
```

Related Commands

Command	Description
ip (GLBP)	Configures a virtual IP address and activates the GLBP group.
show glbp	Displays GLBP information.

glbp timers extended-hold

To enabled extended hold timers for the Gateway Load Balancing Protocol (GLBP), use the **glbp timers extended-hold** command. To revert to default, use the **no** form of this command.

glbp timers extended-hold [*timer*]
no glbp timers extended-hold

Syntax Description

timer	(Optional) Extended hold time, in seconds. The range is from 10 to 255.

Command Default

10 seconds

Command Modes

Global configuration

Command History

Release	Modification
5.0(2)	This command was introduced.

Usage Guidelines

Use the **glbp timers extended-hold** command to configure extended Non-stop Forwarding (NSF) support for GLBP.

Note You must configure extended hold timers on all GLBP gateways if you configure non-default extended hold timers. You can configure different extended holdtimer values on each GLBP gateway, based on the expected system switchover delays.

This command does not require a license.

Examples

This example shows how to configure the extended hold time for GLBP:

```
switch# configure terminal
switch(config)# glbp timers extended-hold 30
```

Related Commands

Command	Description
ip (GLBP)	Configures a virtual IP address and activates the GLBP group.
show glbp	Displays GLBP information.

graceful-restart (BGP)

To enable the graceful restart and the graceful restart helper capability, use the **graceful-restart** or the graceful-restart-helper router BGP configuration mode command. To disable graceful restart and the graceful restart helper capability, use the **no** form of this command.

graceful-restart [{**restart-time** *restart-time*|**stalepath-time** *stalepath-time*}] **graceful-restart-helper**
{**no graceful-restart** {**restart-time** *restart-time*|**stalepath-time** *stalepath-time*}|**graceful-restart-helper**}

Syntax Description

restart-time *restart-time*	(Optional) Sets the maximum time period that the local router will wait for a graceful-restart-capable neighbor to return to normal operation after a restart event occurs. Range: 1 to 3600. Default: 120.
stalepath-time *stalepath-time*	(Optional) Sets the maximum time period that the local router will hold stale paths for a restarting peer. All stale paths are deleted after this timer expires. The range is from1 to 3600.
graceful-restart-helper	Enables the graceful restart helper capability.

Command Default

Graceful restart and graceful restart helper are enabled by default. The following default values are used when the **graceful-restart** command is entered without any keywords or arguments:

- *restart-time*: 120 seconds
- *stalepath-time*: 300 seconds

Note Changing the restart and stalepath timer values is not required to enable the BGP graceful restart capability. The default values are optimal for most network deployments, and these values should be adjusted only by an experienced network operator.

Command Modes

Neighbor address-family configurationRouter bgp configuration VRF configuration

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

The **graceful-restart** command is used to configure or disable the graceful restart capability on a router in a BGP network.If the graceful restart capability is enabled after a BGP session has been established, you will need to restart the session with a soft or hard reset.

The default timer values for this feature are optimal for most network deployments. We recommend that they are adjusted only by experienced network operators. When adjusting the timer values, the restart timer should not be set to a value greater than the hold time that is carried in the OPEN message. If consecutive restart operations occur, routes (from a restarting router) that were previously marked as stale will be deleted.

The **graceful-restart-helper** command is used to configure the local BGP router to support the graceful restart of a remote BGP peer.

Examples

This example shows how to enable the BGP graceful restart capability:

```
switch(config-router)# graceful-restart
switch(config-router)#
```

This example shows how to set the restart timer is set to 240 seconds:

```
switch(config-router)# graceful-restart restart-timer 240
switch(config-router)#
```

graceful-restart (EIGRP)

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

graceful-restart
no graceful restart

Syntax Description

This command has no arguments or keywords.

Command Default

Enabled

Command Modes

Address-family configurationRouter configurationRouter VRF configuration

Command History

Release	Modification
4.0(3)	This command was introduced.

Usage Guidelines

Use the **graceful-restart** command to allow EIGRP to remain in the data forwarding path through a process restart.

This command requires the Enterprise Services license.

Examples

This example shows how to enable graceful restart:

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

Related Commands

Command	Description
timers nsf	Configures timers for nonstop forwarding and graceful restart.

graceful-restart (IS-IS)

To enable the graceful restart for an IS-IS process, use the **graceful-restart** configuration mode command. To disable graceful restart, use the **no** form of this command.

graceful-restart
no graceful-restart

Syntax Description

This command has no arguments or keywords.

Command Default

Graceful restart is enabled by default.

Command Modes

Address-family configurationRouter configuration VRF configuration

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

The **graceful-restart** command is used to configure or disable the graceful restart capability on a router in an IS-IS network. If the graceful restart capability is enabled after an IS-IS session has been established, you will need to restart the session with a soft or hard reset.

This command requires the Enterprise Services license.

Examples

This example shows how to enable the graceful restart capability:

```
switch(config-router)# graceful-restart
switch(config-router)#
```

Related Commands

Command	Description
feature isis	Enables IS-IS on the router.
router isis	Creates an IS-IS instance.

graceful-restart (OSPF)

To configure nonstop forwarding for Open Shortest Path First (OSPF), use the **graceful-restart** command. To disable this feature, use the **no** form of this command.

graceful-restart [{**grace-period** *seconds*|**helper-disable**|**planned-only**}]
no graceful-restart [{**grace-period** *seconds*|**helper-disable**|**planned-only**}]

Syntax Description

grace-period *seconds*	(Optional) Configures the maximum interval (in seconds) that another router should wait for this router to gracefully restart. The range is from 5 to 1800.
helper-disable	Optional) Disables helper mode. The router will not participate in the graceful restart of a neighbor router.
planned-only	Optional) Enables graceful restart for controlled restarts only.

Command Default

Enabled by default. Grace period: 60 seconds

Command Modes

Router configuration

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

Use the **graceful-restart** command to allow OSPF to remain in the data forwarding path through a process restart. Set the grace period long enough to allow a typical reboot cycle for Cisco NX-OS. Do not set the grace period too long or your network will be relying on old route information.

This command requires the Enterprise Services license.

Examples

This example shows how to configure a graceful restart to occur only for a planned restart:

```
switch# configure terminal
switch(config)# router ospf 202
switch(config-router)# graceful-restart grace-period 300 planned-only
```

Related Commands

Command	Description
flush-routes	Flushes routes on a nongraceful controlled restart.

graceful-restart (OSPFv3)

To configure nonstop forwarding for Open Shortest Path First version 3 (OSPFv3), use the **graceful-restart** command. To disable this feature, use the **no** form of this command.

graceful-restart [{**grace-period** *seconds*|**helper-disable**|**planned-only**}]
no graceful-restart [{**grace-period** *seconds*|**helper-disable**|**planned-only**}]

Syntax Description

grace-period *seconds*	(Optional) Configures the maximum interval (in seconds) that another router should wait for this router to gracefully restart. The range is from 5 to 1800.
helper-disable	Optional) Disables helper mode. The router will not participate in the graceful restart of a neighbor router.
planned-only	Optional) Enables graceful restart for controlled restarts only.

Command Default

Enabled by default. Grace period: 60 seconds

Command Modes

Router configuration

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

Use the **graceful-restart** command to allow OSPFv3 to remain in the data forwarding path through a process restart. Set the grace period long enough to allow a typical reboot cycle for Cisco NX-OS. Do not set the grace period too long or your network will be relying on old route information.

This command requires the Enterprise Services license.

Examples

This example shows how to configure a graceful restart to occur only for a planned restart:

```
switch# configure terminal
switch(config)# router ospfv3 202
switch(config-router)# graceful-restart grace-period 300 planned-only
```

Related Commands

Command	Description
flush-routes	Flushes routes on a nongraceful controlled restart.

graceful-restart t3 manual

To configure the time that Intermediate-System-to-Intermediate System (IS-IS) announces as the adjacency remaining time in its hello message when IS-IS acknowledges a peer restart, use the **graceful-restart t3 manual** command. To revert to the default setting, use the **no** form of this command.

graceful-restart t3 manual *time*
no graceful-restart t3 manual

Syntax Description

time	Time in seconds. The range is from 30 to 65535.

Command Default

60 seconds

Command Modes

Router configuration
VRF configuration

Command History

Release	Modification
4.1(2)	This command was introduced.

Usage Guidelines

Use the **graceful-restart t3 manual** command to set the T3 timer, as defined in RFC 3847.

This command requires the Enterprise Services license.

Examples

This example shows how to set the T3 timer:

```
switch# configure terminal
switch(config-router)# graceful-restart t3 manual 90
switch(config-router)#
```

Related Commands

Command	Description
feature isis	Enables IS-IS on the router.
router isis	Creates an IS-IS instance.