D Commands

This chapter describes the Cisco NX-OS Open Shortest Path First (OSPF) commands that begin with D.

dead-interval (OSPF virtual link)

To set the interval during which at least one hello packet must be received from a neighbor on an Open Shortest Path First (OSPF) virtual link before the router declares that neighbor as down, use the **dead interval** command. To restore the default, use the **no** form of this command.

dead-interval *seconds*

no dead-interval

Syntax Description

seconds	Interval (in seconds) during which the router must receive at least one hello packet from a neighbor or that neighbor is removed from the peer list and does not participate in routing. The range is from 1 to 65535. The value must be the same for all nodes on the virtual link.

Command Default

40 seconds

Command Modes

Virtual link configuration mode

Command History

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

Usage Guidelines

Use the **dead interval** command in virtual link configuration mode to configure the dead interval advertised in OSPF hello packets. This value must be the same for all networking devices on the virtual link. The default value for *seconds* is four times the interval set by the **hello-interval** command.

You can configure a shorter dead interval (*seconds*) to detect a down neighbor faster and improve convergence. A shorter dead interval may lead to virtual link instability by incorrectly declaring a slow neighbor as down.

Use the **show ip ospf virtual-links** command to verify the dead interval.

This command requires the LAN Base Services license.

Examples

This example shows how to configure the OSPF dead interval to 20 seconds:

```
switch(config)# ospf 201
switch(config-router)# area 99 virtual-link 192.0.2.4
switch(config-router-vlink)# dead-interval 20
```

Related Commands

Command	Description
copy running-config startup-config	Saves the configuration changes to the startup configuration file.
hello-interval (OSPF virtual link)	Specifies the interval between hello packets that Cisco NX-OS sends on the virtual link.
show ip ospf virtual-link	Displays OSPF virtual link information.

default-information originate (OSPF)

To generate a default external route into an Open Shortest Path First (OSPF) routing domain, use the **default-information originate** command. To disable this feature, use the **no** form of this command.

default-information originate [**always**] [**route-map** *map-name*]

no default-information originate [**always**] [**route-map** *map-name*]

Syntax Description

always	(Optional) Specifies to always advertise the default route regardless of whether the route table has a default route.
route-map *map-name*	(Optional) Specifies to advertise the default route if the route map is satisfied. The *map-name* argument can be any alphanumeric string up to 63 characters.

Command Default

Advertises the default route if the route is in the route table.

Command Modes

Router configuration mode

Command History

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

Command History

Usage Guidelines

Use the **default-information originate** command to assign a default route for redistributed routes. Whenever you use the **redistribute** command to redistribute routes into an OSPF routing domain, Cisco NX-OS automatically becomes an Autonomous System Boundary Router (ASBR). However, an ASBR does not, by default, generate a default route into the OSPF routing domain.

Use the **route-map** keyword to filter redistributed routes so that Cisco Nexus 5500 generates a default route only for routes that pass the route map. Use the **always** keyword to generate the default route regardless of whether the default route is in the route table.

Note The **default-information originate** command ignores **match** statements in the optional route map.

This command requires the LAN Base Services license.

Examples

This example shows how to configure the default route redistributed into the OSPF routing domain for the Enhanced Interior Gateway Protocol (EIGRP):

```
switch(config)# router ospf 109
switch(config-router)# redistribute eigrp 108 route-map EigrpPolicy
switch(config-router)# default-information originate always
switch(config-router)#
```

Related Commands

Command	Description
copy running-config startup-config	Saves the configuration changes to the startup configuration file.
redistribute (OSPF)	Redistributes routes from one routing domain into OSPF.
route-map	Defines a filter policy for routes.
show ip ospf	Displays OSPF information.

default-metric (OSPF)

To set default metric values for the Open Shortest Path First (OSPF) routing protocol, use the **default-metric** command. To return to the default state, use the **no** form of this command.

default-metric *metric-value*

no default-metric *metric-value*

Syntax Description

metric-value	Default metric value appropriate for the specified routing protocol. The range is from 1 to 1677214.

Command Default

The metric for redistributed, connected, and static routes is set to 25.

Command Modes

Router configuration mode

Command History

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

Usage Guidelines

Use the **default-metric** command with the **redistribute** command to configure the same metric value for all redistributed routes except static and directly connected routes. A default metric helps to redistribute routes with incompatible metrics. Whenever external route metrics do not convert to an OSPF metric, use a default metric to enable the redistribution to proceed.

Note The **default-metric** command does not apply to the redistribution of directly connected routes into OSPF. Use a route map to change the default metric for directly connected routes.

This command requires the LAN Base Services license.

Examples

This example shows how to configure OSPF to redistribute RIP and BGP and set the default metric to 10:

```
switch(config)# router ospf 201
switch(config-router)# default-metric 10
switch(config-router)# redistribute rip 109 route-map FilterRip
switch(config-router)# redistribute bgp 4 route-map FilterBgp
switch(config-router)#
```

Related Commands

Command	Description
copy running-config startup-config	Saves the configuration changes to the startup configuration file.
redistribute (OSPF)	Redistributes routes from another routing domain into OSPF.
show ip ospf	Displays OSPF information.

distance (OSPF)

To define the Open Shortest Path First (OSPF) route administrative distance, use the **distance** command. To restore the default, use the **no** form of this command.

distance *distance*

no distance

Syntax Description

distance	Administrative distance for all routes local to this OSPF process. The range is from 1 to 255.

Command Default

110

Command Modes

Router configuration mode

Command History

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

Usage Guidelines

Use the **distance** command to set a distance for an entire group of routes. Use the **distance** command when you configure multiple routing protocols, and you want to choose one set of routes over the other.

This command requires the LAN Base Services license.

Examples

This example shows how to set the distance to 200, making the route less reliable:

```
switch(config)# router ospf 1
switch(config-router)# distance 200
switch(config-router)#
```

Related Commands

Command	Description
copy running-config startup-config	Saves this configuration change to the startup configuration file.
show ip ospf	Displays OSPF information.