# OSPFv3 Configuration Mode Commands

The OSPFv3 Configuration sub-mode is used to configure the OSPFv3 routing protocol. This mode includes commands that configure OSPFv3 routing parameters.

**Command Modes**

Exec > Global Configuration > Context Configuration > OSPFv3 Configuration

**configure > context** *context_name* **> router ospfv3**

Entering the above command sequence results in the following prompt:

`[local]`*host_name*`(config-ospfv3)#`

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


- area, page 2
- default-metric, page 4
- end, page 5
- exit, page 6
- passive-interface, page 7
- redistribute, page 8
- router-id, page 10
- timers spf, page 11

# area

Configures an Open Shortest Path First Version 3 (OSPFv3) area and enables authentication for that area.

## Product

PDSN

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## Privilege

Security Administrator, Administrator

## Command Modes

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**configure > context** *context_name* **> router ospfv3**

Entering the above command sequence results in the following prompt:

`[local]`*host_name*`(config-ospfv3)#`

## Syntax Description

[ **no** ] **area {** *decimal_value* | *ipv4address* **} default-cost** *default_integer_value* | **stub** [ **no-summary** ] | **virtual-link** *virtuallink_neighbour_Ipv4_address* [ **dead-interval** *virtuallink_dead_interval* ] [ **hello-interval** *virtuallink_hello_interval* ] [ **retransmit-interval** *virtuallink_retransmit_interval* ] [ **transmit-delay** *virtuallink_transmit_delay* ]

**no**

Disables authentication for the specified area.

***decimal_value* | *ipv4address***

*decimal_value*: Specifies the identification number of the area where authentication will be enabled as an integer from 0 through 4294967295.

*ipv4address*: Specifies the IP address of the area where authentication will be enabled in IPv4 dotted-decimal notation.

**default-cost *default_integer_value***

Sets the OSPFV3 authentication area's default cost as an integer from 1 through 16777215.

**stub [ no-summary ]**

Sets the OSPFV3 stub area. Only Router-LSAs, Network-LSAs, Inter-area Prefix-LSAs, Intra-area Prefix-LSAs and Link-LSAs are allowed in a Stub area.

**no-summary** Does not inject inter-area routes into stub area.

**virtual-link** ***virtuallink_neighbour_Ipv4_address***

Configures a virtual link to the authentication area.

*virtuallink_neighbour_Ipv4_address* is the IPv4 address for the virtual link of the authenticated area in dotted-decimal notation.

The following interval timers can be set for the virtual link:

- **dead-interval** *virtuallink_dead_interval*: Sets the virtual link dead-interval (in seconds) as an integer from 1 through 65535.
- **hello-interval** *virtuallink_hello_interval*: Sets the virtual link hello interval (in seconds) as an integer from 1 through 65535.
- **retransmit-interval** *virtuallink_retransmit_interval*: Sets the virtual link retransmit interval (in seconds) as an integer from 1 through 3600.
- **transmit-delay** *virtuallink_transmit_delay*: Sets the virtual link transmit delay (in seconds) as n integer from 1 through 3600.

## Usage Guidelines

Use this command to establish OPSFv3 areas and enable authentication.

## Examples

The following command enables authentication for an OSPFv3 area defined by the IP address 192.168.100.10 with default cost of 256
**area 192.168.100.10 default-cost 256**

# default-metric

Configures the default metric value for routes redistributed from another protocol into Open Shortest Path First Version 3 (OSPFv3).

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Security Administrator, Administrator

## Command Modes

Exec > Global Configuration > Context Configuration > OSPFv3 Configuration

**configure > context** *context_name* **> router ospfv3**

Entering the above command sequence results in the following prompt:

`[local]`*host_name*`(config-ospfv3)#`

## Syntax Description

`[` **no** `]` **default-metric** *default_metric_integer_value*

**no**

Disables the default metric.

***default_metric_integer_value***

Specifies the default metric as an integer from 1 through 16777214.

## Usage Guidelines

Use this command to configure OPSFv3 default metric.

## Examples

The following command configures OSPFv3 default metric to 256

**default-metric 256**

# end

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

**Product**

All

**Privilege**

Security Administrator, Administrator

**Syntax Description**

**end**

**Usage Guidelines**

Use this command to return to the Exec mode.

# exit

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

**Product**

All

**Privilege**

Security Administrator, Administrator

**Syntax Description**

**exit**

**Usage Guidelines**

Use this command to return to the parent configuration mode.

# passive-interface

Configures an interface as being OSPFv3 passive. If a network interface is configured as passive, it will not receive or send any OSPFv3 packets.

## Product

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## Privilege

Security Administrator, Administrator

## Command Modes

Exec > Global Configuration > Context Configuration > OSPFv3 Configuration

**configure > context** *context_name* **> router ospfv3**

Entering the above command sequence results in the following prompt:

`[local]`*host_name*`(config-ospfv3)#`

## Syntax Description

**[ no ] passive-interface** *interface_name*

**no**

Disables the passive interface.

***interface_name***

Specifies an OSPFv3 passive interface as an alphanumeric string of 1 through 79 characters.

## Usage Guidelines

Use this command to configure an OPSFv3 passive interface in this context.

## Examples

The following command configures the *OSPF-if1* interface to be OSPFv3 passive.

**passive-interface OSPF-if1**

# redistribute

Redistributes routes from other protocols to OSPFv3 neighbors using the OSPFv3 protocol.

## Product

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## Privilege

Security Administrator, Administrator

## Command Modes

Exec > Global Configuration > Context Configuration > OSPFv3 Configuration

**configure > context** *context_name* **> router ospfv3**

Entering the above command sequence results in the following prompt:

`[local]`*host_name*`(config-ospfv3)#`

## Syntax Description

**[ no ] redistribute { connected | static } redistribute connected** [ **metric** *metric_value* [ **metric-type** *external_metric_type* ] [ **route-map** *route_map_name* ] ] [ **metric-type** *external_metric_type* [ **route-map** *route_map_name* ] ] [ **route-map** *route_map_name* ] **static** [ **metric** *metric_value* [ **metric-type** *external_metric_type* ] [ **route-map** *route_map_name* ] ] [ **metric-type** *external_metric_type* [ **route-map** *route_map_name* ] ] [ **route-map** *route_map_name* ]

**no**

Disables the route redistribution.

**connected**

Redistributes connected routes.

**static**

Redistributes static routes.

**metric** ***metric_value***

Specifies the OSPFv3 default metric value as an integer from 0 through 16777214.

**metric-type** ***external_metric_type***

Specifies the OSPFv3 external metric type as the integer 1 or 2

**route-map** ***route_map_name***

Specifies a route map as an alphanumeric string of 1 through 79 characters.

## Usage Guidelines

Use this command to configure OPSFv3 redistribution of connected or static routes.

## Examples

The following command configures OSPFv3 redistribution of connected routes.

**redistribute connected metric 45 metric-type 1 route-map rt**

# router-id

Sets the OSPFv3 router ID for the Open Shortest Path First Version 3 (OSPFv3) routing process.

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## Privilege

Security Administrator, Administrator

## Command Modes

Exec > Global Configuration > Context Configuration > OSPFv3 Configuration

**configure > context** *context_name* **> router ospfv3**

Entering the above command sequence results in the following prompt:

`[local]`*host_name*`(config-ospfv3)#`

## Syntax Description

`[` **no** `]` **router-id** *router_id_ipaddress*

**no**

Disables the router-id.

***router_id_ipaddress***

Specifies the router-id an IPv4 address in dotted-decimal notation.

## Usage Guidelines

Use this command to configure OPSF v3 router id to the given IPv4 address.

## Examples

The following command configures OSPFv3 router id to the given IPv4 address.

**router-id 11.22.22.21**

# timers spf

Sets OSPFv3 the delay in the time between the detection of a topology change and when the SPF algorithm actually runs.

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## Privilege

Security Administrator, Administrator

## Command Modes

Exec > Global Configuration > Context Configuration > OSPFv3 Configuration

**configure > context** *context_name* **> router ospfv3**

Entering the above command sequence results in the following prompt:

`[local]`*host_name*`(config-ospfv3)#`

## Syntax Description

`[` **no** `]` **timers spf** *spf_delay_timer_value*

**no**

Disables the SPF delay timer.

***spf_delay_timer_value***

Sets the Shortest Path First (SPF) delay timer (in milliseconds) as an integer from 0 through 4294967295.

## Usage Guidelines

Use this command to configure the OPSFv3 SPF delay timer.

## Examples

The following command sets OSPFv3 SPF timer.
**timers spf 256**