OSPFv3 Graceful Shutdown

Feature History for OSPFv3 Graceful Shutdown

This table provides release and platform support information for the features explained in this module.

These features are available in all the releases subsequent to the one they were introduced in, unless noted otherwise.

Release	Feature Name and Description	Supported Platform
Cisco IOS XE 17.18.1	OSPFv3 Graceful Shutdown: The OSPFv3 Graceful Shutdown is an enhancement feature that allows network administrators to temporarily and smoothly disable OSPFv3 on a device. This process is designed to minimize disruption to network traffic.	Cisco C9610 Series Smart Switches

OSPFv3 Graceful Shutdown

The OSPFv3 Graceful Shutdown is an enhancement feature that allows network administrators to temporarily and smoothly disable OSPFv3 on a device. This process is designed to minimize disruption to network traffic.

How to configure Graceful Shutdown Support for OSPFv3

These sections provide configuration information on how to configure graceful shutdown support for OSPFv3.

Configure Graceful Shutdown of the OSPFv3 process

Perform this task to configure graceful shutdown of the OSPFv3 process.

Procedure

Step 1 **enable**

Example:

```
Device> enable
```

Enables privileged EXEC mode.

Enter your password, if prompted.

Step 2 **configure terminal**

Example:

```
Device# configure terminal
```

Enters global configuration mode.

Step 3 Choose one of the following:

- **ipv6 router ospf** *process-id*
- **router ospfv3** *process-id*

Example:

```
Device(config)# ipv6 router ospf 1
OR
Device(config)# router ospfv3 101
```

Enables OSPFv3 routing and enters router configuration mode.

process-id: The process ID is an internally used, identification parameter that is locally assigned. Each OSPF has a unique process ID.

Process ID can be a positive integer from 1 to 65535.

Step 4 **shutdown**

Example:

```
Device(config-router)# shutdown
```

Shuts down the selected interface

Step 5 **end**

Example:

```
Device(config-router)# end
```

Returns to privileged EXEC mode.

Step 6 Choose one of the following:

- **show ipv6 ospf** [*process-id*]
- **show ospfv3** [**process-id**]

Example:

```
Device# show ipv6 ospf
OR
Device# show ospfv3
```

(Optional) Displays general information about OSPFv3 routing processes.

Configure Graceful Shutdown of the OSPFv3 process with Address Family

Perform this task to configure graceful shutdown of the OSPFv3 process with address family.

Procedure

Step 1   **enable**

Example:

Device> **enable**

Enables privileged EXEC mode.

Enter your password, if prompted.

Step 2   **configure terminal**

Example:

Device# **configure terminal**

Enters global configuration mode.

Step 3   **router ospf** *process-id* [**vrf** *vrf-name*]

Example:

Device(config)# **router ospf 15**

Enables OSPF routing and enters router configuration mode.

- *process-id*: The process ID is an internally used identification parameter that is locally assigned. Each OSPF process has a unique process ID.

  Process ID can be a positive integer from 1 to 65535.

- **vrf**: Indicates that the OSPF process is being configured for a specific VRF.

- *vrf-name*: Specifies the name of the VRF for which this OSPF process is being created.

Step 4   **address-family ipv6 unicast** [**vrf** *vrf-name*]

Example:

Device(config-router)# **address-family ipv6**

Enters IPv6 address family configuration mode for OSPFv3.

Step 5   **shutdown**

Example:

Device(config-router-af)# **shutdown**

Shuts down the selected interface.

Step 6   **end**

Example:

Device(config-router-af)# **end**

Returns to privileged EXEC mode.

Step 7   **show ospfv3** [*process-id*]

(Optional) Displays general information about OSPFv3 routing processes

Configure OSPFv3 Graceful Shutdown of an OSPFv3 interface

Perform this task to configure OSPFv3 graceful shutdown of an OSPFv3 interface.

Procedure

Step 1   **enable**

Example:

Device> **enable**

Enables privileged EXEC mode.

Enter your password, if prompted.

Step 2   **configure terminal**

Example:

Device# **configure terminal**

Enters global configuration mode.

Step 3   **interface** *interface-id*

Example:

Device(config)# **interface gigabitethernet 1/0/1**

Enters interface configuration mode, and specifies the Layer 3 interface to configure.

Step 4   Choose one of the these commands

- **ipv6 ospf shutdown**
- **ospfv3 shutdown**

Example:

```
Device(config-if)#  ipv6 ospf shutdown
OR
Device(config-if)#  ospfv3 shutdown
```

Initiates an OSPFv3 protocol graceful shutdown at the interface level.

When the **ipv6 ospf shutdown** interface command is entered, the interface on which it is configured sends a ospfv3 shutdown link-state update advising its neighbors that is going down, which allows those neighbors to begin routing OSPFv3 traffic around this device.

Step 5   **end**

Example:

```
Device(config-if)# end
```

Returns to privileged EXEC mode.

Step 6   **show ospfv3** *process-id* [*area-id*] [*address-family*] [**vrf** {*vrf-name* | ***}] **interface** [*type-number*] [**brief**]

(Optional) Displays OSPFv3-related interface information.

- *process-id*: The OSPFv3 routing process ID (a number identifying a specific OSPFv3 process).

- *area-id*: (Optional) Specifies information for a particular OSPF area.

- *address-family*: (Optional) Specifies address family (like ipv4 or ipv6).

- *type-number*: (Optional) Specifies the type and number of a specific interface (e.g., GigabitEthernet 0/0).

Configuration examples for Graceful Shutdown Support for OSPFv3

The following example shows how to configure graceful shutdown of the OSPFv3 process in IPv6 router OSPF configuration mode configuration mode:

```
Device> enable
Device# configure terminal
Device(config)# ipv6 router ospf 6
Device(config-router)# router-id 10.10.10.10
Device(config-router)# shutdown
```

The following example shows how to configure graceful shutdown of the OSPFv3 process in router OSPFv3 configuration mode

```
Device> enable
Device# configure terminal
Device(config)# router ospfv3 1
Device(config-router)# shutdown
!
Device(config-router)# address-family ipv6 unicast
Device(config-router)# exit-address-family
```

The following example shows how to configure graceful shutdown of the OSPFv3 process in address-family configuration mode:

```
Device> enable
Device# configure terminal
Device(config)# router ospfv3 1
Device(config-router)# address-family ipv6 unicast
Device(config-router-af)# shutdown
Device(config-router-af)# exit-address-family
```

The following example shows how to configure graceful shutdown of the OSPFv3 interface using the **ipv6 ospf shutdown** command:

```
Device> enable
Device# configure terminal
Device(config)# interface Serial2/1
Device(config-if)# no ip address
Device(config-if)# ipv6 enable
Device(config-if)# ipv6 ospf 6 area 0
Device(config-if)# ipv6 ospf shutdown
Device(config-if)# serial restart-delay 0
Device(config-if)# end
```

The following example shows how to configure graceful shutdown of the OSPFv3 interface using the **ospfv3 shutdown** command:

```
Device> enable
Device# configure terminal
Device(config)# interface Serial2/0
Device(config-if)# ip address 10.10.10.10 255.255.255.0
Device(config-if)# ip ospf 1 area 0
Device(config-if)# ipv6 enable
Device(config-if)# ospfv3 shutdown
Device(config-if)# ospfv3 1 ipv6 area 0
Device(config-if)# serial restart-delay 0
Device(config-if)# end
```