



OSPFv3 Autoroute Exclude

OSPFv3 Autoroute Exclude feature allows you to use specific destinations and prefix-list to specify a list of prefixes that are routed using native paths instead of TE tunnels for packet transport. The rest of the prefixes can still be set to use TE tunnels. Prefixes that are excluded do not use a TE tunnel path. IPv6 routes over TE tunnels are supported by OSPFv3 using Autoroute Announce (AA) or Forwarding Adjacencies (FA).

This module describes how to configure the OSPFv3 Autoroute Exclude feature.

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Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see [Bug Search Tool](#) and the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the feature information table.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Prerequisites for OSPFv3 Autoroute Exclude

- Open Shortest Path First (OSPF) must be configured in your network.
- Cisco Express Forwarding (CEF) must be enabled.
- Multiprotocol Label Switching (MPLS) TE tunnels must be configured.
- Auto route announce and forwarding adjacencies must be configured. You can configure either auto route announce or forwarding adjacencies on an interface. You cannot configure them both on the same interface.

Information About OSPFv3 Autoroute Exclude

Overview of OSPFv3 Autoroute Exclude

The auto route feature is an IP routing method that forces OSPF to use MPLS TE tunnels to build paths for IP traffic routes. The auto route feature enables all routes to use TE Tunnels, even if there is an alternate non-TE path available for that route.

The OSPFv3 Autoroute Exclude feature allows specific IPv6 destinations or prefixes to avoid TE tunnels, while other prefixes can still be configured to use TE tunnels. Prefixes that are excluded do not use a TE tunnel path. Only native non-TE paths are downloaded to RIB for such routes. IPv6 routes over TE tunnels are supported by OSPFv3 using auto route announce (AA) or forwarding adjacencies (FA).

The auto route exclude option is configured under the router OSPF configuration mode by using a prefix list. IP addresses and prefixes that are members of this prefix list are excluded from TE tunnels, even when the auto route is enabled on them. If the IP addresses or prefixes are added to the prefix list, they are dynamically routed without passing through the TE tunnel. If the IP addresses or prefixes are removed from the prefix list, they are dynamically rerouted back on the TE tunnel path.

See the [Autoroute Announce and Forwarding Adjacencies For OSPFv3](#) module in *IP Routing: OSPF Configuration Guide* for details on configuring auto route announce and forwarding adjacencies For OSPFv3.

How to Configure OSPFv3 Autoroute Exclude

Configuring OSPFv3 Autoroute Exclude

SUMMARY STEPS

1. `enable`
2. `configure terminal`
3. `router ospfv3 process-ID`
4. `address-family ipv6 unicast`
5. `mpls traffic-engineering autoroute-exclude prefix-list prefix-list-name`
6. `end`

DETAILED STEPS

| | Command or Action | Purpose |
|--------|---|--|
| Step 1 | <code>enable</code> Example: Device> <code>enable</code> | Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted. |
| Step 2 | <code>configure terminal</code> Example: Device# <code>configure terminal</code> | Enters global configuration mode. |

| | Command or Action | Purpose |
|--------|--|--|
| Step 3 | router ospfv3 <i>process-ID</i> Example: Device(config)# router ospfv3 18 | Configures OSPFv3 routing process and enters OSPF router configuration mode. |
| Step 4 | address-family ipv6 unicast Example: Device(config-router)# address-family ipv6 unicast | Enters IPv6 address family configuration mode for OSPFv3. |
| Step 5 | mpls traffic-engineering autoroute-exclude prefix-list <i>prefix-list-name</i> Example: Device(config-router-af)# mpls traffic-engineering autoroute-exclude prefix-list kmd | Allows specific destinations and prefixes to avoid routing through TE tunnels. <ul style="list-style-type: none"> • Prefixes that are excluded do not use a TE tunnel path. |
| Step 6 | end Example: Device(config-router-af)# end | Exits address family configuration mode and returns to privileged EXEC mode. |

Configuration Examples for OSPFv3 Autoroute Exclude

Example: Configuring OSPFv3 Autoroute Exclude

```

!
router ospfv3 18
  address-family ipv6 unicast
    mpls traffic-engineering autoroute-exclude prefix-list kmd
!

```

Additional References for OSPFv3 Autoroute Exclude

Related Documents

| Related Topic | Document Title |
|--------------------|---|
| Cisco IOS commands | Cisco IOS Master Command List, All Releases |
| Configuring OSPF | <i>IP Routing: OSPF Configuration Guide</i> |

| Related Topic | Document Title |
|--|--|
| Autoroute Announce and Forwarding Adjacencies For OSPFv3 | <i>IP Routing: OSPF Configuration Guide</i> |
| Configuring Basic Cisco Express Forwarding | <i>IP Switching: Cisco Express Forwarding Configuration Guide</i> |
| MPLS Traffic Engineering Tunnel Source | <i>MPLS Traffic Engineering Path Calculation and Setup Configuration Guide</i> |

Technical Assistance

| Description | Link |
|---|---|
| <p>The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies.</p> <p>To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds.</p> <p>Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.</p> | http://www.cisco.com/support |

Feature Information for OSPFv3 Autoroute Exclude

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

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Table 1: Feature Information for OSPFv3 Autoroute Exclude

| Feature Name | Releases | Feature Information |
|--------------------------|----------|--|
| OSPFv3 Autoroute Exclude | | <p>OSPFv3 Autoroute Exclude feature allows you to use specific destinations and prefix-list to specify a list of prefixes that are routed using native paths instead of TE tunnels for packet transport. IPv6 routes over TE tunnels are supported by OSPFv3 using autoroute announce or forwarding adjacencies.</p> <p>The following commands were introduced or modified: mpls traffic-engineering autoroute-exclude prefix list.</p> |

