



## OSPF Retransmissions Limit

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The OSPF Retransmissions Limit feature adds a limit to the number of retransmissions of database exchange and update packets for both demand and non-demand circuits. The retransmission of these packets stops once this retry limit is reached, thus preventing unnecessary use of the link in continual retransmission of the packets if, for some reason, a neighbor is not responding during adjacency forming. This feature module describes the change in how the Open Shortest Path First (OSPF) protocol handles retransmissions.

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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](http://www.cisco.com/go/cfn). An account on Cisco.com is not required.

## Restrictions For OSPF Retransmissions Limit

The limit to the number of retransmissions does not apply for update packets on nonbroadcast multiaccess (NBMA) point-to-multipoint direct circuits. In this situation, the dead timer is used to end communication with non-responding neighbors and thus stop the retransmissions.

# Information About OSPF Retransmissions Limit

## Overview About OSPF Retransmissions Limit

Cisco IOS Release 12.2(4)T added a limit to the number of retransmissions of database exchange and update packets for both demand and non-demand circuits. The retransmission of these packets stops once this retry limit is reached, thus preventing unnecessary use of the link in continual retransmission of the packets if, for some reason, a neighbor is not responding during adjacency forming.

The limit for both demand circuit and non-demand circuit retransmissions is 24.

The limit-retransmissions command allows you to either remove (disable) the limit or change the maximum number of retransmissions to be a number from 1 to 255.

## Benefits

The limit-retransmissions command provides for backward compatibility for previous or other releases of Cisco IOS or other routers that do not have this feature.

## How to Configure OSPF Retransmissions Limit

### Setting OSPF Retransmission Limits

#### SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **router ospf *process-ID***
4. **limit retransmissions**{[**dc** {*max-number* | **disable**}] [**non-dc** {*max-number* | **disable**}]}
5. **end**

#### DETAILED STEPS

|        | Command or Action                                      | Purpose                                                                 |
|--------|--------------------------------------------------------|-------------------------------------------------------------------------|
| Step 1 | <b>enable</b><br><br><b>Example:</b><br>Device> enable | Enables privileged EXEC mode.<br><br>• Enter your password if prompted. |

|               | Command or Action                                                                                                                                                                    | Purpose                                                                                                                          |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 2</b> | <b>configure terminal</b><br><br><b>Example:</b><br>Device# configure terminal                                                                                                       | Enters global configuration mode.                                                                                                |
| <b>Step 3</b> | <b>router ospf <i>process-ID</i></b><br><br><b>Example:</b><br>Device(config)# router ospf 18                                                                                        | Configures OSPF routing process and enters OSPF router configuration mode.                                                       |
| <b>Step 4</b> | <b>limit retransmissions {[dc {<i>max-number</i>   disable}] [non-dc {<i>max-number</i>   disable}]}</b><br><br><b>Example:</b><br>Device(config-router)# limit retransmissions dc 5 | Sets the limit in the number of retransmissions of database exchange and update packets for both demand and non-demand circuits. |
| <b>Step 5</b> | <b>end</b><br><br><b>Example:</b><br>Device(config-router)# end                                                                                                                      | Exits address router configuration mode and returns to privileged EXEC mode.                                                     |

## Configuration Examples for OSPF Retransmissions Limit

### Example: Configuring OSPF Retransmissions Limit

```
router ospf 18
 limit retransmissions dc 5
```

## Additional References for OSPF Retransmissions Limit

### Related Documents

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

| Related Topic | Document Title                            |
|---------------|-------------------------------------------|
| OSPF Commands | <i>IP Routing: OSPF Command Reference</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> | <a href="http://www.cisco.com/support">http://www.cisco.com/support</a> |

## Feature Information for OSPF Retransmissions Limit

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.

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

**Table 1: Feature Information for OSPF Retransmissions Limit**

| Feature Name               | Releases               | Feature Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OSPF Retransmissions Limit | 12.2(11)T<br>15.2(1)SY | <p>The OSPF Retransmissions Limit feature adds a limit to the number of retransmissions of database exchange and update packets for both demand and non-demand circuits. The retransmission of these packets stops once this retry limit is reached, thus preventing unnecessary use of the link in continual retransmission of the packets if, for some reason, a neighbor is not responding during adjacency forming. .</p> <p>The following commands were introduced or modified: <b>limit retransmissions</b> .</p> |

