



# OSPF Retransmissions Limit

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## Feature History

Release	Modification
12.2(11)T	This feature was introduced.

This feature module describes the change in how the Open Shortest Path First (OSPF) protocol handles retransmissions and includes the following sections:

- [Feature Overview, page 1](#)
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## Feature Overview

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.

## Restrictions

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.

## Related Features and Technologies

This feature is an extension of the OSPF routing protocol. For more information about configuring OSPF and configuring route summarization and filtering, refer to the “[Configuring OSPF](#)” chapter of the *Cisco IOS IP Configuration Guide* and the *Cisco IOS IP Command Reference, Volume 2 of 3: Routing Protocols*.

## Supported Platforms

The **limit-retransmissions** command is supported for the following platforms in Cisco IOS Release 12.2(11)T:

- Cisco AS5300
- Cisco AS5400
- Cisco AS5800
- Cisco 1400 series
- Cisco 1600 series
- Cisco 1600R series
- Cisco 1710
- Cisco 1720
- Cisco 1721
- Cisco 1750
- Cisco 1751
- Cisco 2500 series
- Cisco 2600 series
- Cisco 3620
- Cisco 3631
- Cisco 3640
- Cisco 3725
- Cisco 3745
- Cisco 3660
- Cisco IGX 8400 Series URM
- Cisco MC3810
- Cisco 7100 series
- Cisco 7200 series

- Cisco 7500 series
- Cisco uBR7200 series

### Determining Platform Support Through Cisco Feature Navigator

Cisco IOS software is packaged in feature sets that are supported on specific platforms. To get updated information regarding platform support for this feature, access Cisco Feature Navigator. Cisco Feature Navigator dynamically updates the list of supported platforms as new platform support is added for the feature.

Cisco Feature Navigator is a web-based tool that enables you to determine which Cisco IOS software images support a specific set of features and which features are supported in a specific Cisco IOS image. You can search by feature or release. Under the release section, you can compare releases side by side to display both the features unique to each software release and the features in common.

To access Cisco Feature Navigator, you must have an account on Cisco.com. If you have forgotten or lost your account information, send a blank e-mail to [cco-locksmith@cisco.com](mailto:cco-locksmith@cisco.com). An automatic check will verify that your e-mail address is registered with Cisco.com. If the check is successful, account details with a new random password will be e-mailed to you. Qualified users can establish an account on Cisco.com by following the directions found at this URL:

<http://www.cisco.com/register>

Cisco Feature Navigator is updated regularly when major Cisco IOS software releases and technology releases occur. For the most current information, go to the Cisco Feature Navigator home page at the following URL:

<http://www.cisco.com/go/fn>

### Availability of Cisco IOS Software Images

Platform support for particular Cisco IOS software releases is dependent on the availability of the software images for those platforms. Software images for some platforms may be deferred, delayed, or changed without prior notice. For updated information about platform support and availability of software images for each Cisco IOS software release, refer to the online release notes or, if supported, Cisco Feature Navigator.

## Configuration Tasks

See the following sections for configuration tasks for the OSPF retransmission limits feature. Each task in the list is identified as either required or optional:

- [Setting OSPF Retransmission Limits](#) (required)

## Setting OSPF Retransmission Limits

To set OSPF retransmission limits, use the following commands beginning in router configuration mode:

	Command	Purpose
<b>Step 1</b>	Router(config)# <b>router ospf</b> <i>process-id</i>	Configures the router to run an OSPF process.
<b>Step 2</b>	Router(config-router)# <b>limit retransmissions</b> {[ <b>dc</b> { <i>max-number</i>   <b>disable</b> }] [ <b>non-dc</b> { <i>max-number</i>   <b>disable</b> }]}	Sets the limit in the number of retransmissions of database exchange and update packets for both demand and non-demand circuits.

## Command Reference

This section documents the new **limit retransmissions** command that changes or removes the limit in the number of retransmissions of database exchange and update packets for both demand and non-demand circuits. All other commands used with this feature are documented in the Cisco IOS Release 12.2 command reference publications.

# limit retransmissions

To change or remove the limit in the number of retransmissions of database exchange and update packets for both demand and non-demand circuits, use the **limit retransmissions** command in router configuration mode. To reset the maximum number of retransmissions back to the default value of 24, use the **no** form of this command.

```
limit retransmissions {[dc {max-number | disable}] [non-dc {max-number | disable}]}
```

```
no limit transmissions [dc | non-dc]
```

## Syntax Description

<b>dc</b>	Demand circuit retransmissions
<i>max-number</i>	Maximum number of retransmissions. Range of 1 to 255
<b>non-dc</b>	Non-demand circuit retransmissions
<b>disable</b>	Disables or removes the limit to the number of retransmissions

## Defaults

Maximum number of retransmissions is 24.

## Command Modes

Router configuration

## Command History

Release	Modification
12.2(11)T	This command was introduced.

## Usage Guidelines

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. This provides for backward compatibility for previous or other releases of Cisco IOS or other routers that do not have this feature.



### Note

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.

## Examples

The following example shows how to set the maximum number of demand circuit retransmissions to 10:

```
limit retransmissions dc 10
```

The following example shows how to remove the limit for the number of demand circuit retransmissions:

```
limit retransmissions dc disable
```

The following example shows how to set the maximum number of demand circuit retransmissions to 10 and to set the maximum number of non-demand circuit retransmissions to 20:

```
limit retransmissions dc 10 non-dc 20
```

The following example shows how to set the maximum number of demand circuit retransmissions to 10, and to remove the limit for the number of non-demand circuit retransmissions:

```
limit retransmissions dc 10 non-dc disable
```

The following example shows how to reset both the demand circuit and non-demand circuit maximum number of retransmissions back to the default of 24:

```
no limit retransmissions
```

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**Related Commands**

<b>Command</b>	<b>Description</b>
<b>router ospf</b>	Configures an OSPF routing process.

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