Troubleshoot the "OSPF Neighbor Down: Too Many retransmissions" Error Message

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Introduction

This document describes how to troubleshoot the OSPF-5-ADJCHG: … Neighbor Down: Too many retransmissions Open Shortest Path First (OSPF) error message.

Error Message Description

An OSPF adjacency goes down and this error message is generated:

<#root>

```
%OSPF-5-ADJCHG: Process 1, Nbr 10.1.1.1 on TenGigabitEthernet2/1 from FULL
 to DOWN, Neighbor Down: Too many retransmissions
```

This error message means that the retransmissions of the OSPF packets occur until OSPF reaches its limit of 25 retransmissions. At that point, the OSPF adjacency goes down and the error message is generated.

Troubleshooting Commands

Enter the **show ip ospf neighbor detail** command in order to check the OSPF retransmissions. Here is an example output from the **show ip ospf neighbor detail** command:

<#root>

```
Router#

show ip ospf neighbor gigabitEthernet 0/1 detail


 Neighbor 10.100.100.1, interface address 10.1.1.1
     In the area 0 via interface GigabitEthernet0/1
     Neighbor priority is 0, State is LOADING, 5 state changes
     DR is 0.0.0.0 BDR is 0.0.0.0
     Options is 0x12 in Hello (E-bit L-bit )
     Options is 0x52 in DBD (E-bit L-bit O-bit)
     LLS Options is 0x1 (LR)
     Dead timer due in 00:00:33
     Neighbor is up for 00:02:06
```

```
     Index 1/1, retransmission queue length 0, number of retransmission 0
     First 0x0(0)/0x0(0) Next 0x0(0)/0x0(0)
     Last retransmission scan length is 0, maximum is 0
     Last retransmission scan time is 0 msec, maximum is 0 msec


Number of retransmissions for last link state request packet 25


     Poll due in 00:00:03
```

Alternatively, you can enter the **show ip ospf retransmission-list** command in order to check the OSPF retransmissions. This command displays a list that contains all of the link-state advertisements (LSAs) that wait to be sent again. Here is an example output from the **show ip ospf retransmission-list** command:

<#root>

Router#

show ip ospf retransmission-list serial 0

```
              OSPF Router with ID (192.168.1.12) (Process ID 1)

   Neighbor 192.168.1.11, interface Serial0 address 172.16.1.11
   Link state retransmission due in 3764 msec, Queue length 2
   Type   LS ID          ADV RTR        Seq NO       Age    Checksum
   1      192.168.1.12   192.168.1.12   0x80000210   0      0xB196
```

Possible Causes

Here are some of the possible causes that can lead to the generation of the error message (this is not a complete list):

- There is packet loss on the link, which causes the OSPF packets to be dropped.
- The **ip ospf mtu-ignore** command has been configured. Refer to the IP OSPF MTU-Ignore Command Cisco document for more information.
- There is an issue that is related to the Maximum Transmission Unit (MTU) and the size of the OSPF packets. Refer to the OSPF, MTU and LSA Packing Tech Note Cisco document for more information.