What Do %OSPF−4−ERRRCV Error Messages Mean?

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Introduction

The `%OSPF−4−ERRRCV` error message indicates that an Open Shortest Path First (OSPF) router has received an invalid OSPF packet. These are the possible causes:

- Mismatched area ID
- Bad checksum
- OSPF not enabled on the receiving interface
- OSPF not enabled on the receiving interface due to bug CSCdr48014
- Bad version
- Invalid type
- Bad link−state update advertisement count
- Bad link−state update length

The first three items in the list are the most common causes of the `%OSPF−4−ERRRCV` error message, and are discussed in more detail below.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

This document is not restricted to specific software and hardware versions.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Problem – Mismatched Area ID

```
%OSPF-4-ERRRCV: Received invalid packet: mismatch area ID, from backbone area
must be virtual-link but not found from 170.170.3.3, Ethernet0
```

The router generating this message received an invalid OSPF packet on Ethernet 0 from neighbor 170.170.3.3. The packet is invalid because its area ID is area 0 (the backbone area). This implies that the receiving router's Ethernet 0 interface is not in area 0. Note that the neighboring router, which has its interface in area 0, won't display this message in its console logs. Only the router whose interface is in an area other than area 0 generates the error message.

Solution

To avoid these messages, make sure that both sides have the same area ID by checking the network statement under OSPF in the router configuration. For example, if the link 10.10.10.0/24 between two routers should be in area 1, make sure the network statement on both routers includes this particular link in area 1. The network command on both routers would look like this:

```
router ospf 1
 network 10.10.10.0 0.0.0.255 area 1
```

Problem – Bad Checksum

```
%OSPF-4-ERRRCV: Received invalid packet: Bad Checksum from 144.100.21.141,
TokenRing0/0
```

The router generating this message has received an invalid OSPF packet on TokenRing0/0 from neighbor 144.100.21.141. The packet is invalid because the OSPF checksum is incorrect. The cause of the bad checksum is difficult to define. Some possible causes of the problem are:

- A device between the neighbors, such as a switch, is corrupting the packet.
- The sending router's packet is invalid. In this case, either the sending router's interface is bad, or the error is caused by a software bug.
- The receiving router is calculating the wrong checksum. In this case, either the receiving router's interface is bad, or the error is caused by a software bug. This is the least likely cause of this error message.

Solution

This problem can be difficult to troubleshoot, but you can start with this solution. Cisco has found that this solution is effective in 90 percent of cases. It is important to complete these steps in order:

1. Change the cable between the routers. In the previous example, this would be the router that sends the bad packet (144.100.21.141) and the router that complains about these bad packets.
2. If the previous step does not fix the problem, use a different port on the switch in between the routers.
3. If the previous step does not fix the problem, connect the routers directly using a crossover cable (whenever physical location allows). If you receive no further messages, the switch is most likely corrupting the packet.

If none of the above solves the problem, contact the Cisco Technical Support and work with an engineer to look for a bug in the Cisco IOS® Software, or for a possible Return Material Authorization (RMA) for partial or full parts replacement.

Problem – OSPF not Enabled on the Receiving Interface

```
%OSPF−4−ERRRCV: Received invalid packet: OSPF not enabled on interface
from 141.108.16.4, Serial0.100
```

The router generating this message received a packet from 141.108.16.4 on Serial0.100, but OSPF is not enabled on the Serial0.100 interface. This message is only generated once for a non−OSPF interface.

Solution

This problem is rarely seen on a router. To solve this problem, make sure OSPF is enabled on the interface. Try re−entering the network statement in the router configuration. To verify if OSPF is enabled on the interface mentioned above, type the following command:

```
R1#show ip ospf interface serial0.100
```

If OSPF is not enabled, either the command output will be empty or it will say that OSPF is not enabled on the interface.

Problem – OSPF not Enabled on the Receiving Interface Due to Bug CSCdr48014

There could be a situation where the OSPF updates may be corrupted in the Cisco 7500 Series router configured with OSPF, MPLS and CEF. IP routes are temporarily deleted from the IP routing table and a loss of connectivity may occur. This is due to Cisco bug ID CSCdr48014 (registered customers only) .

Solution

Upgrade your Cisco IOS to the latest IOS release.

%OSPF−5−ADJCHG: Process ID , Nbr [ip−address] on GigabitEthernet 1/0/3 from FULL to DOWN

The error %OSPF-5-ADJCHG: Process ID , Nbr [ip-address] on GigabitEthernet 1/0/3 from FULL to DOWN is caused due to Bidirectional Forwarding Detection (BFD) errors. BFD can potentially generate false alarms–signaling a link failure when one does not exist.

The timers used for BFD are so intensive CPU cycle, or a brief interval of data corruption or queue congestion could potentially cause BFD to miss enough control packets to allow the detect−timer to expire. The Minimum Transmit Interval, Minimum Receive Interval and Multiplier are recommended to be set as 100 100 3 respectively. Configuring **process−max−timer 50** is also recommended to prevent unpredictable CPU unavailability.

Related Information

- **OSPF Technology Support**
- **IP Routing Technology Support**

- **Technical Support & Documentation – Cisco Systems**