Troubleshooting Threshold Alarm Problems

This chapter describes how to troubleshoot threshold alarm problems. This chapter contains the following sections:

7.1 Overview

Threshold alarms indicate that a configured range is exceeded.

7.2 Initial Troubleshooting Checklist

Follow this initial checklist before proceeding with the troubleshooting procedures:

- Issue **show interfaces** commands to ensure that all interfaces are administratively up and that there are no reported errors.
- Issue the **show facility-alarm status** command to display the alarms on the interfaces.
- Ensure that all optical connectors are clean. Refer to the *Cisco ONS 15540 ESPx Cleaning Procedures for Fiber Optic Connections document*.

7.3 Troubleshooting Threshold Alarms

This section contains troubleshooting procedures for threshold alarm problems.

7.3.1 8b10b CVRD Alarm Indicates Signal Fail or Signal Degrade

Symptom An 8b10b CVRD alarm indicates signal fail or signal degrade.

Table 7-1 describes the potential causes of the symptom and the solutions.

Table 7-1 8b10b CVRD Alarm Indicates Signal Fail or Signal Degrade

Possible Problem	Solution
Excessive attenuation or overloading on a 2.5-Gbps transponder interface.	1. Measure the receive power level. Ensure that it is within –28 dBm and –8 dBm. Adjust the attenuation if necessary. 2. Check the network cable for sharp bends and ensure the connectors are clean and connected properly. Refer to the *Cisco ONS 15540 ESPx Cleaning Procedures for Fiber Optic Connections* document.
Excessive attenuation or overloading on a 10-GE transponder interface.	1. Measure the receive power level. Ensure that it is within –22 dBm and –8 dBm. Adjust the attenuation if necessary. 2. Check the network cable for sharp bends and ensure the connectors are clean and connected properly. Refer to the *Cisco ONS 15540 ESPx Cleaning Procedures for Fiber Optic Connections* document.

7.3.2 CDL-HEC Alarm Indicates Signal Fail or Signal Degrade

Symptom A CDL-HEC alarm indicates signal fail or signal degrade.

Table 7-2 describes the potential causes of the symptom and the solutions.

Table 7-2 CDL-HEC Alarm Indicates Signal Fail or Signal Degrade

Possible Problem	Solution
Excessive attenuation or overloading on a 10-GE transponder interface.	1. Measure the receive power level. Ensure that it is within –22 dBm and –8 dBm. Adjust the attenuation if necessary. 2. Check the network cable for sharp bends and ensure the connectors are clean and connected properly. Refer to the *Cisco ONS 15540 ESPx Cleaning Procedures for Fiber Optic Connections* document.

7.3.3 64b66b CVRD Alarm Indicates Signal Fail or Signal Degrade

Symptom A 64b66b CVRD alarm indicates signal fail or signal degrade.

Table 7-3 describes the potential causes of the symptom and the solutions.

Table 7-3 64b66b CVRD Alarm Indicates Signal Fail or Signal Degrade

Possible Problem	Solution
Excessive attenuation or overloading on a 10-GE transponder interface.	1. Measure the receive power level. Ensure that it is within –22 dBm and –8 dBm. Adjust the attenuation if necessary. 2. Check the network cable for sharp bends and ensure the connectors are clean and connected properly. Refer to the *Cisco ONS 15540 ESPx Cleaning Procedures for Fiber Optic Connections* document.

7.3.4 B1 CVRD Alarm Indicates Signal Fail or Signal Degrade

Symptom A B1 CVRD alarm indicates signal fail or signal degrade.

Table 7-4 describes the potential causes of the symptom and the solutions.

Table 7-4 B1 CVRD Alarm Indicates Signal Fail or Signal Degrade

Possible Problem	Solution
Excessive attenuation or overloading on a SONET/SDH interface.	1. Measure the receive power level. Ensure that it is within –25 dBm and –8 dBm for a multimode interface and within –19 dBm and –1.5 dBm for a single mode interface. Adjust the attenuation if necessary. 2. Check the network cable for sharp bends and ensure the connectors are clean and connected properly. Refer to the *Cisco ONS 15540 ESPx Cleaning Procedures for Fiber Optic Connections* document.

7.3.5 Threshold Exceeded Messages Continuously Hitting the Console

Symptom Threshold exceeded messages continuously hitting the console.

Table 7-5 describes the potential cause of the symptom and the solution.

Table 7-5 Threshold Exceeded Messages Continuously Hitting the Console

Possible Problem	Solution
Receive signal is fluctuating on the edge of the configured threshold.	1. Measure the interface receive power level. Ensure that it is within specifications. Adjust the attenuation if necessary. 2. Check the network cable for sharp bends and ensure the connectors are clean and connected properly. Refer to the *Cisco ONS 15540 ESPx Cleaning Procedures for Fiber Optic Connections* document.

7.3.6 SNMP Traps Are Not Generated

Symptom SNMP traps are not generated.

Table 7-6 describes the potential cause of the symptom and the solution.

Table 7-6 SNMP Traps Are Not Generated

Possible Problem	Solution
SNMP configuration is incorrect.	Issue the **show running-config** command to verify the SNMP configuration and correct if necessary.