



Troubleshooting of Optical Application Alarms

This chapter provides a description, severity, and troubleshooting procedure for each commonly encountered Cisco NCS 1010 optical application alarm and condition. When an alarm is raised, refer to its clearing procedure.

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APC-BLOCKED

Default Severity: Minor (MN), Non-Service-Affecting (NSA)

Logical Object: OTS Controller

The APC-BLOCKED alarm is raised when:

- The APC domain (OLT—OLT) is down due to:
 - Fiber cut in one of the spans in the network.
 - Network events such as: OTS controller fail or shutdown, OSC fail or shutdown, LC reload, RP reload, and powercycle events.
- The topology is not discovered by the OSPF end-to-end and the connection bring up is pending.
- The user configured amplifier safety conditions, such as Optical safety remote interlock (OSRI) and Automatic power reduction (APR), and so on.
- Safety condition is triggered due to a High Back Reflection event.
- The participating agent nodes have locally disabled the APC.

Clear the APC-BLOCKED Alarm

This alarm gets cleared when:

- The fiber issues in the network are resolved and the connectivity is restored.
- All the participating nodes are recovered from HA events.
- The OSPF is up end-to-end.
- All the safety conditions are cleared from the network.
- All the agent nodes are APC enabled in the domain.

If the alarm does not clear, log into the Technical Support Website at <http://www.cisco.com/c/en/us/support/index.html> for more information or call Cisco TAC (1 800 553-2447).

APC-OUT-OF-RANGE

Default Severity: Minor (MN), Non-Service-Affecting (NSA)

Logical Object: OTS Controller

The APC-Out-Of-Range alarm is raised when the APC system fails to regulate and achieve the target PSD power level.

The possible conditions are:

- amplifier gain is exhausted in a particular gain range
- WSS range (0-25 dB) is exhausted for a single or multiple channels
- DGE range (0-3 dB) is exhausted for a single or multiple channels
- increased spanloss and the amplifier gain is not enough to achieve the target PSD.

Clear the APC-OUT-OF-RANGE Alarm

This alarm gets cleared in the following conditions:

- If the requested amplifier gain is outside the current configured gain range, change it to the correct gain-range. Once the requested gain is configured, this alarm gets cleared.
- If the WSS range is exhausted for a channel, check and correct the power levels on the add ports and ensure that there is no extra attenuation added due to a bad patchcord.
- check the transponder TX port and ensure that the TX power is configured as required.
- clear the spanloss alarm by rectifying the fiber issues which helps to restore the powerlevel.

If the alarm does not clear, log into the Technical Support Website at <http://www.cisco.com/c/en/us/support/index.html> for more information or call Cisco TAC (1 800 553-2447).

RAMAN-TUNE-FAILED

Default Severity: Not Alarmed (NA), Non-Service-Affecting (NSA)

Logical Object: OTS Controller

The RAMAN-TUNE-FAILED alarm is raised when Raman tuning is blocked due to:

- Raman pumps are shutdown due to a Back Reflection event
- Peer node unreachable due to span down, OSC fail, DFB fail and High Availability events like powercycle and card cold reload

Clear the RAMAN-TUNE-FAILED Alarm

This alarm gets cleared when:

- the Back Reflection (BR) event gets cleared, the Raman Tuner clears the alarm and resumes tuning.
- the neighborhood restores the Raman Tuner and completes calibration.

If the alarm does not clear, log into the Technical Support Website at <http://www.cisco.com/c/en/us/support/index.html> for more information or call Cisco TAC (1 800 553-2447).

RAMAN_TUNE_GAIN_UNREACHABLE

Default Severity: Not Alarmed (NA), Non-Service-Affecting (NSA)

Logical Object: OTS Controller

The RAMAN-TUNE-GAIN-UNREACHABLE alarm is raised when Raman Tuner is unable to achieve the target gain set by the user or algorithm.

Clear the RAMAN_TUNE_GAIN_UNREACHABLE Alarm

This alarm gets cleared when the difference between the Raman Gain target and the actual gain achieved is below 3.5 dB.

If the alarm does not clear, log into the Technical Support Website at <http://www.cisco.com/c/en/us/support/index.html> for more information or call Cisco TAC (1 800 553-2447).

RAMAN-TUNE-IN-PROGRESS

Default Severity: Major (MJ), Non-Service-Affecting (NSA)

Logical Object: OTS Controller

The RAMAN-TUNE-IN-PROGRESS alarm is raised when Raman tuning is initiated and is in progress.

Clear the RAMAN-TUNE-IN-PROGRESS Alarm

This alarm gets cleared when Raman Tuner completes the TUNING (TUNED state) by configuring Raman pumps as per the target provided by the algorithm or the user configured raman gain target.

If the alarm does not clear, log into the Technical Support Website at <http://www.cisco.com/c/en/us/support/index.html> for more information or call Cisco TAC (1 800 553-2447).

SPAN-LOSS-OUT-OF-RANGE

Default Severity: Minor (MN), Non-Service-Affecting (NSA)

Logical Object: OTS Controller

The SPAN-LOSS-OUT-OF-RANGE alarm is raised when the span loss measured is not within the configured threshold range.

Clear the SPAN-LOSS-OUT-OF-RANGE Alarm

To clear this alarm check the fiber issues in the span using OTDR and fix the additional losses incurred.

If the alarm does not clear, log into the Technical Support Website at

<http://www.cisco.com/c/en/us/support/index.html> for more information or call Cisco TAC (1 800 553-2447).