

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.

- ALC-IN-PROGRESS-RX, on page 2
- ALC-IN-PROGRESS-TX, on page 2
- ALC-PROC-FAILED-RX , on page 3
- ALC-PROC-FAILED-TX, on page 4
- APC-BLOCKED-RX, on page 5
- APC-BLOCKED-TX, on page 6
- APC-OUT-OF-RANGE-TX, on page 6
- APC-OUT-OF-RANGE-RX, on page 7
- APC-PARTIAL-TOPOLOGY, on page 8
- ASE-LOADING-DISABLED, on page 8
- NEIGHBOUR-MISSING, on page 9
- RAMAN-TUNE-FAILED, on page 10
- RAMAN-TUNE-GAIN-UNREACHABLE, on page 10
- RAMAN-TUNE-IN-PROGRESS, on page 11
- RAMAN-TURNUP-FAIL, on page 11
- RX-BELOW-MIN-PSD, on page 12
- SPAN-LOSS-OUT-OF-RANGE, on page 12
- SPAN-LOSS-BASELINE-DEVIATION-OUT-OF-RANGE, on page 13
- SIGNAL-BIDIR-SPAN-LOSS-MISMATCH, on page 13
- SIGNAL-OSC-SPAN-LOSS-DIFF-OUT-OF-RANGE, on page 14
- APC-TARGET-PSD-NOT-MET-RX, on page 15
- APC-TARGET-PSD-NOT-MET-TX, on page 16
- OTDR-ABS-ATTENUATION-EXCEEDED-RX, on page 16
- OTDR-ABS-ATTENUATION-EXCEEDED-TX, on page 17
- OTDR-ABS-ORL-EXCEEDED-RX, on page 17
- OTDR-ABS-ORL-EXCEEDED-TX, on page 18
- OTDR-ABS-REFLECTANCE-EXCEEDED-RX, on page 19
- OTDR-ABS-REFLECTANCE-EXCEEDED-TX, on page 19
- OTDR-SCAN-FAILED-RX, on page 20
- OTDR-SCAN-FAILED-TX, on page 20

• OTDR-SCAN-IN-PROGRESS-RX, on page 21
• OTDR-SCAN-IN-PROGRESS-TX, on page 21

ALC-IN-PROGRESS-RX

Default Severity: Minor (MN), Service-Affecting (SA)

Logical Object: Controller OTS

The *Automatic-link-calibration procedure is running in RX direction* (ALC-IN-PROGRESS-RX) alarm is raised when the ALC pre-check conditions are cleared and ALC calibration starts on RX ports of a link.

Clear the ALC-IN-PROGRESS-RX Alarm

To clear this alarm:

SUMMARY STEPS

1. Collect logs to gather detailed diagnostic information. Use the **show tech-support** command in privileged EXEC mode:
2. Wait until the ALC calibration is completed on the port.
3. Manually terminate the ALC calibration on the port.

DETAILED STEPS

Procedure

Step 1 Collect logs to gather detailed diagnostic information. Use the **show tech-support** command in privileged EXEC mode:

Example:

```
RP/0/RP0/CPU0:ios#show tech-support
```

Step 2 Wait until the ALC calibration is completed on the port.

Step 3 Manually terminate the ALC calibration on the port.

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). Provide the logs collected in step 1 to Cisco TAC.

ALC-IN-PROGRESS-TX

Default Severity: Minor (MN), Service-Affecting (SA)

Logical Object: Controller OTS

The *Automatic-link-calibration procedure is running in TX direction* (ALC-IN-PROGRESS-TX) alarm is raised when the ALC pre-check conditions are clear and ALC calibration starts on TX ports of a link.

Clear the ALC-IN-PROGRESS-TX Alarm

To clear this alarm:

SUMMARY STEPS

1. Wait until the ALC calibration is completed on the port.
2. Manually terminate the ALC calibration on the port.

DETAILED STEPS

Procedure

Step 1 Wait until the ALC calibration is completed on the port.

Step 2 Manually terminate the ALC calibration on the port.

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).

ALC-PROC-FAILED-RX

Default Severity: Critical (CR), Service-Affecting (SA)

Logical Object: Controller OTS

The *Automatic-link-calibration procedure failed in RX direction* (ALC-PROC-FAILED-RX) alarm is raised when the ALC procedure fails on the far-end OLT due to:

- A fiber cut on the far end OLT node.
- An OSC fail or shutdown.
- An APC-OUT-OF-RANGE condition or APC is unable to reach target PSD power.
- OLC process is restarted.
- Span loss values provided to the link tuner are invalid or not supported.

Clear the ALC-PROC-FAILED-RX Alarm

To clear this alarm:

SUMMARY STEPS

1. Check and repair any cuts in the fiber cable in the RX direction.
2. Verify and fix any faults on the RX port using the **show olc alc-local status** command.
3. Verify and fix any power fluctuations causing the APC-OUT-OF-RANGE condition or preventing APC from reaching the target PSD power.

4. Initiate the ALC procedure using the **olc alc-start controller ots R/S/I/P** command.

DETAILED STEPS

Procedure

Step 1	Check and repair any cuts in the fiber cable in the RX direction.
Step 2	Verify and fix any faults on the RX port using the **show olc alc-local status** command.
Step 3	Verify and fix any power fluctuations causing the APC-OUT-OF-RANGE condition or preventing APC from reaching the target PSD power.
Step 4	Initiate the ALC procedure using the **olc alc-start controller ots R/S/I/P** command.

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).

ALC-PROC-FAILED-TX

Default Severity: Critical (CR), Service-Affecting (SA)

Logical Object: Controller OTS

The *Automatic-link-calibration procedure failed in TX direction* (ALC-PROC-FAILED-TX) alarm is raised when the ALC procedure fails on a TX port due to:

- A fiber cut in the TX direction of the span in the network.
- An OSC fail or shutdown.
- OSRI is enabled on the transmit node.
- An APC-OUT-OF-RANGE condition or APC is unable to reach target PSD power.
- OLC process is restarted.
- Span loss values provided to the link tuner are invalid or not supported.

Clear the ALC-PROC-FAILED-TX Alarm

To clear this alarm:

SUMMARY STEPS

1. Check and repair any cuts in the TX direction.
2. Verify and fix any faults on the TX port using the **show olc alc-local status** command.
3. Verify and fix any power fluctuations causing the APC-OUT-OF-RANGE condition or preventing APC from reaching the target PSD power.
4. Check if OSRI has shut down the amplifier using the **show olc apc** command.
5. Initiate the ALC procedure using the **olc alc-start controller ots R/S/I/P** command.

DETAILED STEPS

Procedure

Step 1 Check and repair any cuts in the TX direction.

Step 2 Verify and fix any faults on the TX port using the **show olc alc-local status** command.

Step 3 Verify and fix any power fluctuations causing the APC-OUT-OF-RANGE condition or preventing APC from reaching the target PSD power.

Step 4 Check if OSRI has shut down the amplifier using the **show olc apc** command.

Step 5 Initiate the ALC procedure using the **olc alc-start controller ots R/S/I/P** command.

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-BLOCKED-RX

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

Logical Object: OTS Controller

The APC-BLOCKED-RX alarm is raised when:

- The APC domain (OLT—OLT) is down due to:
  - Fiber cut in the receive (RX) direction of the span in the network.
  - Network events such as: OTS controller fail or shutdown, OSC fail or shutdown, LC reload, RP reload, and power cycle 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-RX Alarm

This alarm gets cleared when:

- The fiber issues are resolved and the network connectivity is restored in the receive direction.
- All the participating nodes are recovered from High Availability (HA) events.
- The end-to-end topology is discovered using the **show olc apc** command.
- All the safety conditions are cleared from the network.

- Verify that all the agent nodes in the domain have APC enabled using the **show olc apc-local** command.

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-BLOCKED-TX

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

Logical Object: OTS Controller

The APC-BLOCKED-TX alarm is raised when:

- The APC domain (OLT—OLT) is down due to:
  - Fiber cut in the transmit (TX) direction of the span in the network.
  - Network events such as: OTS controller fail or shutdown, OSC fail or shutdown, LC reload, RP reload, and power cycle 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-TX Alarm

This alarm gets cleared when:

- The fiber issues are resolved and the network connectivity is restored in the transmit direction.
- All the participating nodes are recovered from High Availability (HA) events.
- The end-to-end topology is discovered using the **show olc apc** command.
- All the safety conditions are cleared from the network.
- Verify that all the agent nodes in the domain have APC enabled using the **show olc apc-local** command.

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-TX

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

Logical Object: OTS Controller

The APC-OUT-OF-RANGE-TX alarm is raised when the APC system fails to regulate and achieve the target PSD power level in the transmit direction.

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 span loss and the amplifier gain is not enough to achieve the target PSD.

Clear the APC-OUT-OF-RANGE-TX 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 using the **controller ots egress-ampli-gain-range** *{normal | extended}*.
- 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 TX power is configured as required using the **show controllers osc** command. If required, configure the TX power using the **controller osc transmit-power** *value* command.
- Check and clear if there are any SPAN-LOSS-OUT-OF-RANGE alarms.

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-RX

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

Logical Object: OTS Controller

The APC-OUT-OF-RANGE-RX alarm is raised when the APC system fails to regulate and achieve the target PSD power level in the receive direction.

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 span loss and the amplifier gain is not enough to achieve the target PSD.

Clear the APC-OUT-OF-RANGE-RX 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 using the **controller ots egress-ampli-gain-range** *{normal | extended}*.

- 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 RX power is configured as required using the **show controllers osc** command. If required, configure the RX power using the **controller osc transmit-power** *value* command.
- Check and clear if there are any SPAN-LOSS-OUT-OF-RANGE alarms.

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-PARTIAL-TOPOLOGY

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

Logical Object: OTS Controller

The APC-PARTIAL-TOPOLOGY 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/shutdown, OSC fail/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.

Clear the APC-PARTIAL-TOPOLOGY 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 able to discover the topology OLT to OLT.
- All the safety conditions are cleared from the network.

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).

ASE-LOADING-DISABLED

Default Severity: NotAllarmed (NA), Non-Service-Affecting (NSA)

Logical Object: OTS-OCH, OTS Controller

The *ASE Loading Disabled*(ASE-LOADING-DISABLED) alarm is raised if the ASE Loading is disabled at the channel or spectrum level.

Clear the ASE-LOADING-DISABLED Alarm

This alarm is cleared automatically when ASE loading disabled configuration is removed.

To clear this alarm, perform these steps:

Procedure

To remove the ASE loading disabled configuration, perform one of these commands.

- At the spectrum level, use the **no ase-loading disable** command.
- At the channel level, use the **no channel-id 1 ase-loading disable** command.

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).

Note
When the ASE Loading Disabled alarm is present on a channel and the optical cross-connect port for that channel is changed without deleting the existing optical cross-connect, the channel status changes from ASE to NXC and then back to ASE. However, the alarm continues to be active with its original timestamp.

NEIGHBOUR-MISSING

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

Logical Object: OTS Controller

The *Neighbour not found* alarm is raised when a neighbour node is not discoverable or unreachable. This can happen due to any of the following reasons:

- OSPF configuration is not correct.
- Cut in the fiber cable that connects to the neighboring node.

Note From 25.3.x, this alarm is not raised when the OSC Controller is in the *admin-down* state.

Clear the NEIGHBOUR-MISSING Alarm

This alarm is cleared when the neighbour node is reachable and OSPF is able to discover the topology.

To clear the alarm:

Procedure

Step 1 Check the OSPF neighbors connections are established using the **show ospf neighbor** command.

Step 2 Check the OSPF configurations are correct. For more details, refer to the Understanding Remote Node Management Using OSC.

Step 3 Check and repair any cuts in the fiber cable that connects to the neighboring node.

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 tuning turns the Raman pumps off and goes into blocked state because of high Raman back reflection (BR).

  If peer nodes are unreachable due to span down, OSC fail, DFB fail and High Availability events like powercycle and card cold reload. Raman tuning requires communication between peer nodes to run.

Clear the RAMAN-TUNE-FAILED Alarm

This alarm gets cleared when:

- Clear the high BR by cleaning the fiber and port, and reconnect the fiber to the port. When BR is at acceptable levels, the system triggers Raman tuning and turns the Raman pumps on which in turn clears the alarm.
- Check the OSPF neighbors are established using the **show ospf neighbor** command. When OSPF neighbors are established, Raman Tuning is started automatically 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

Configure the target Raman gain to the maximum possible value. This triggers the Raman tuning with the new target gain which clears the alarm. Use the following commands to configure the target Raman gain:

configure

optical-line-control

controller ots *Rack/Slot/Instance/Port*

raman-tuning raman-gain-target *value*

commit

end

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 in progress.

Clear the RAMAN-TUNE-IN-PROGRESS Alarm

This alarm is cleared automatically when any of the following conditions are met:

- Raman tuning is completed. To check the status of Raman tuning, use the **show olc raman-tuning** command.
- Raman tuning is disabled. To disable Raman tuning, use the **raman-tuning disable** command.

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-TURNUP-FAIL

Default Severity: Major(MJ), Service-Affecting (SA)

Logical Object: OTS Controller

The RAMAN-TURNUP-FAIL alarm is raised when:

- a reflective event occurs within the critical distance of 20 km, with reflective event magnitude between -40 dB and -30 dB, and the minimum relaxation factor is not configured.
- the reflective event magnitude exceeds -30 dB within the 20 km critical distance, it is a strict No-Go scenario — even a 100% relaxation factor will not prevent the alarm.

Clear the RAMAN-TURNUP-Fail Alarm

Perform one of these steps to clear the alram:

Procedure

- Clear the reflective events within the 20 km critical distance that are reported as No-Go events, and then re-trigger the Raman turn-up check.
- If the No-Go event is relaxable, configure the reported minimum relaxation factor and re-trigger the Raman turn-up check.
- Force trigger the Raman turn up using this command.olc force-raman-turn-up controller Ots R/S/I/P

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).

RX-BELOW-MIN-PSD

Default Severity: Major (MJ), Service-Affecting (SA)

Logical Object: Controller

The *Receive Channel Power Below Minimum Power Spectral Density* alarm is raised on a OLT Add/Drop port when the input power of channel falls below the configured minimum Power Spectral Density (PSD) threshold. The default value for the minimum PSD threshold is *-24* dBm.

Clear the RX-BELOW-MIN-PSD Alarm

This alarm is cleared when the input channel power exceeds the minimum PSD threshold value.

To clear the alarm:

Before you begin

Procedure

Step 1 Check the PSD values using the **show olc apc-local regulation-info** command.
If the *Ampli-Input PSD* value of a channel is below the *PSD Minumum* threshold, proceed to the next step.

Step 2 Change the minimum PSD threshold using the **psd-min <value>** command.

SPAN-LOSS-OUT-OF-RANGE

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

Logical Object: OTS Controller

The Span Loss Value Out Of Range (SPAN-LOSS-OUT-OF-RANGE) alarm is raised when the span loss measured is not within the configured threshold range.

The hysteresis value used for this alarm is 0.5dB.

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

Check and fix any fiber related issues using the OTDR scan measurements results stored in the SOR file. Use the **show controllers ots R/S/I/P otdr-info direction** command to view the OTDR scan events and the location of the SOR file.

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-BASELINE-DEVIATION-OUT-OF-RANGE

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

Logical Object: OTS Controller

The *Rx span loss deviated from baseline* (SPAN-LOSS-BASELINE-DEVIATION-OUT-OF-RANGE) alarm is raised when the measured Rx signal span loss falls outside the calculated range defined as **baselined span loss − minimum deviation** (lower limit) and **baselined span loss + maximum deviation** (upper limit).

The hysteresis value used for this alarm is 0.5dBm.

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

To clear this alarm, perform these steps.

Procedure

Step 1 Check and fix any fiber related issues using the **show controllers ots R/S/I/P otdr-info direction** command.

Step 2 Check the baseline values using the **show olc alc-local baseline controller ots***R/S/I/P* command.

Step 3 Change the minimum and maximum thresold values for the baseline span loss.

For more details about changing the baseline span loss threshold values, see Configure Baseline Threshold.

Step 4 Initiate the ALC procedure using the **olc alc-start controller ots R/S/I/P** command.

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).

SIGNAL-BIDIR-SPAN-LOSS-MISMATCH

Default Severity: Minor (MN), NotServiceAffecting (NSA)

Logical Object: OTS (0/0/NXR0)

The *Bidirectional Span Loss Mismatch* (SIGNAL-BIDIR-SPAN-LOSS-MISMATCH) alarm is raised when the difference between the Rx and Tx signal span loss (apparent signal span loss for Raman span) crosses the configured *bidir-mismatch-tolerance* threshold value.

Note Ensure that the tolerance value is configured to be greater than 0.5dB. Setting the tolerance value to 0.5dB or less can cause the alarm to repeatedly toggle.

Clear the SIGNAL-BIDIR-SPAN-LOSS-MISMATCH alarm

To clear this alarm, perform these steps.

Procedure

Step 1 Run the **show olc span-loss** command to verify that the difference between Rx and Tx signal span loss is not greater than the configured *bidir-mismatch-tolerance* value.

Step 2 Compare the current measured span loss values with baseline values and identify whether span loss has increased in either direction.

Step 3 Fix the underlying cause of span degradation so that Rx and Tx signal span loss values become symmetrical.

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).

SIGNAL-OSC-SPAN-LOSS-DIFF-OUT-OF-RANGE

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

Logical Object: OTS Controller

The *Difference in Rx OSC span loss and Rx signal span loss exceeded threshold* (SIGNAL-OSC-SPAN-LOSS-DIFF-OUT-OF-RANGE) alarm is raised when the difference between the *Rx OSC span loss* and *Rx signal span loss* is not within the configured threshold range.

The hysteresis value used for this alarm is 0.5dBm.

Clear the SIGNAL-OSC-SPAN-LOSS-DIFF-OUT-OF-RANGE Alarm

To clear this alarm, perform these steps.

Procedure

Step 1 Check and fix any fiber related issues using the **show controllers ots R/S/I/P otdr-info direction** command.

Step 2 Check the Rx OSC span loss and Rx signal span loss values using the **show olc span-loss** command.

Step 3 Change the threshold values for **payload-osc-min-deviation** and **payload-osc-max-deviation** parameters.

For more details about changing the OSC threshold values, see Configure Span Loss Thresholds.

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-TARGET-PSD-NOT-MET-RX

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

Logical Object: Optical Line Controller

Note The default value for APC-ALARM-DISCREPANCY-THRESHOLD is set to 1dB and the default value of APC-ALARM-HOLD-OFF-TIMER is set to 30 secs.

The APC-TARGET-PSD-NOT-MET-RX alarm is raised when:

- The difference between the target PSD and current PSD value is more than the APC-ALARM-DISCREPANCY-THRESHOLD value in the receive direction after the APC-ALARM-HOLD-OFF-TIMER expires.
- There is a change in spanloss in the upstream direction for a short time.
- There is no change in spanloss, the reduction in power can also lead to the discrepancy which can raise the alarm.

Clear the APC-TARGET-PSD-NOT-MET-RX Alarm

This alarm gets cleared when:

- The Force APC Correction is done using the CLI **olc start-apc-correction** at the respective controller.
- If the alarm is raised due to the change in spanloss in the upstream direction for a short time, it is cleared once the APC correction is completed. Use the Use the **show olc apc** command to view APC status.
- If the alarm is raised due to no change in spanloss or reduction in power then the amplifier must be checked for the power reduction which is causing the discrepancy. To check if automatic power reduction is enabled on a node amplifier, use the **show olc apc** command.

Note APC-ALARM-DISCREPANCY-THRESHOLD and APC-ALARM-HOLD-OFF-TIMER are configurable parameters that can be configured to required values.

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-TARGET-PSD-NOT-MET-TX

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

Logical Object: Optical Line Controller

Note The default value for APC-ALARM-DISCREPANCY-THRESHOLD is set to 1dB and the default value of APC-ALARM-HOLD-OFF-TIMER is set to 30 secs.

The TARGET-PSD-NOT-MET-TX alarm is raised when:

- The difference between the target PSD and current PSD value is more than the APC-ALARM-DISCREPANCY-THRESHOLD value in the transmit direction after the APC-ALARM-HOLD-OFF-TIMER expires.
- There is a change in spanloss in the upstream direction for a short time.
- There is no change in spanloss, the reduction in power can also lead to the discrepancy which can raise the alarm.

Clear the APC-TARGET-PSD-NOT-MET-TX Alarm

This alarm gets cleared when:

- The Force APC Correction is done using the CLI **olc start-apc-correction** at the respective controller.
- If the alarm is raised due to the change in spanloss in the upstream direction for a short time, it is cleared once the APC correction is completed.
- If the alarm is raised due to no change in spanloss or reduction in power then the amplifier must be checked for the power reduction which is causing the discrepancy.

Note APC-ALARM-DISCREPANCY-THRESHOLD and APC-ALARM-HOLD-OFF-TIMER are configurable parameters that can be configured to required values.

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).

OTDR-ABS-ATTENUATION-EXCEEDED-RX

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

Logical Object: OTS Controller

The OTDR-ABS-ATTENUATION-EXCEEDED-RX alarm is raised when any attenuation event in the last scan exceeds the **otdr rx excess-attenuation-threshold**.

Clear the OTDR-ABS-ATTENUATION-EXCEEDED-RX Alarm

Procedure

The alarm is cleared automatically when one of the following conditions is satisfied:

- The value of the **otdr rx excess-attenuation-threshold** that is configured is lower than the magnitude of the attenuation event.
- The attenuation event in the last scan is below the threshold.

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).

OTDR-ABS-ATTENUATION-EXCEEDED-TX

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

Logical Object: OTS Controller

The OTDR-ABS-ATTENUATION-EXCEEDED-TX alarm is raised when any attenuation event in the last scan exceeds the **otdr tx excess-attenuation-threshold**.

Clear the OTDR-ABS-ATTENUATION-EXCEEDED-TX Alarm

Procedure

The alarm is cleared automatically when one of the following conditions is satisfied:

- The value of the **otdr rx excess-attenuation-threshold** that is configured is lower than the magnitude of the attenuation event.
- The attenuation event in the last scan is below the threshold.

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).

OTDR-ABS-ORL-EXCEEDED-RX

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

Logical Object: OTS Controller

The ORL Exceeded Threshold - Receive Direction alarm is raised if the current ORL value is below its threshold value.

Clear the OTDR-ABS-ORL-EXCEEDED-RX Alarm

Procedure

Step 1 Clean the fiber causing the major reflection contribution.

Major reflection contribution can be found in the OTDR Scans.

Step 2 Alternatively, reduce the ORL threshold using the command **Controller Ots** *R/S/I/P* **otdr rx auto excess-orl-threshold** *value*

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).

OTDR-ABS-ORL-EXCEEDED-TX

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

Logical Object: OTS Controller

The ORL Exceeded Threshold - Transmit Direction alarm is raised if the current ORL value is below its threshold value.

Clear the OTDR-ABS-ORL-EXCEEDED-TX Alarm

Procedure

Step 1 Clean the fiber causing the major reflection contribution.

Major reflection contribution can be found in the OTDR Scans.

Step 2 Alternatively, reduce the ORL threshold using the command **Controller Ots** *R/S/I/P* **otdr tx auto excess-orl-threshold** *value*

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).

OTDR-ABS-REFLECTANCE-EXCEEDED-RX

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

Logical Object: OTS Controller

The OTDR Reflectance Exceeded Absolute Threshold - Receive Direction alarm is raised when the reflectance event in the last scan exceeds the absolute threshold in the Rx direction.

Clear the OTDR-ABS-REFLECTANCE-EXCEEDED-RX Alarm

Procedure

The alarm is cleared automatically when one of the following conditions is satisfied:

- The excess reflection threshold that is configured is lower than the magnitude of the reflective event.
- The reflectance event in the last scan is below the threshold.

If the alarm does not clear, log in to 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).

OTDR-ABS-REFLECTANCE-EXCEEDED-TX

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

Logical Object: OTS Controller

The OTDR Reflectance Exceeded Absolute Threshold - Transmit Direction alarm is raised when the reflectance event in the last scan exceeds the absolute threshold in the Tx direction.

Clear the OTDR-ABS-REFLECTANCE-EXCEEDED-TX Alarm

Procedure

The alarm is cleared automatically when one of the following conditions is satisfied:

- The excess reflection threshold that is configured is lower than the magnitude of the reflective event.
- The reflectance event in the last scan is below the threshold.

If the alarm does not clear, log in to 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).

OTDR-SCAN-FAILED-RX

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

Logical Object: OTS Controller

The OTDR Scan Failed - Receive Direction is raised when the OTDR scan fails and no result is provided to the user.

Clear the OTDR-SCAN-FAILED-RX Alarm

Procedure

This alarm is cleared after performing a successful OTDR scan in Rx direction.

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).

OTDR-SCAN-FAILED-TX

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

Logical Object: OTS Controller

The OTDR Scan Failed - Transmit Direction alarm is raised when the OTDR scan fails and no result is provided to the user.

Clear the OTDR-SCAN-FAILED-TX Alarm

Procedure

This alarm is cleared after performing a successful OTDR scan in Tx direction.

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).

OTDR-SCAN-IN-PROGRESS-RX

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

Logical Object: OTS Controller

The OTDR Scan In Progress – Receive Direction alarm is raised when OTDR scan is running in Rx direction.

Clear the OTDR-SCAN-IN-PROGRESS-RX Alarm

Procedure

The alarm is cleared automatically when the OTDR scan is completed or terminated by the user.

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).

OTDR-SCAN-IN-PROGRESS-TX

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

Logical Object: OTS Controller

The OTDR Scan In Progress – Transmit Direction alarm is raised when OTDR scan is running in Tx direction.

Clear the OTDR-SCAN-IN-PROGRESS-TX Alarm

Procedure

The alarm is cleared automatically when the OTDR scan is completed or terminated by the user.

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).