Manage Alarms

This chapter explains how to view and manage the alarms and conditions on a Cisco ONS 15310-CL and Cisco ONS 15310-MA.

Cisco Transport Controller (CTC) detects and reports SONET alarms generated by the ONS 15310-CL, ONS 15310-MA, and the larger SONET network. You can use CTC to monitor and manage alarms at a card, node, or network level.

Before You Begin

This section lists the chapter procedures (NTPs). Turn to a procedure for applicable tasks (DLPs).

1. NTP-C56 Document Existing Provisioning, page 9-2—Complete this procedure as needed to print and export node information.

2. NTP-C57 View Alarms, History, Events, and Conditions, page 9-2—Complete this procedure as needed to see alarms and conditions occurring on the node and a complete history of alarm and condition messages.

3. NTP-C58 Delete Cleared Alarms from Display, page 9-3—Complete this procedure as needed to delete cleared alarm information that is no longer needed.

4. NTP-C59 View Alarm-Affected Circuits, page 9-5—Complete this procedure as needed to find circuits that are affected by a particular alarm or condition.

5. NTP-C60 Create, Download, and Assign Alarm Severity Profiles, page 9-6—Complete this procedure as needed to change the default severity for certain alarms; assign the new severities to a port, card, or node; and delete alarm profiles.

6. NTP-C61 Enable, Modify, or Disable Alarm Severity Filtering, page 9-7—Complete this procedure as needed to enable, disable, or modify alarm severity filtering in the Conditions, Alarms, or History screens; or you can enable, modify, and disable alarm severity filtering at the node or network level.

7. NTP-C62 Suppress Alarms or Discontinue Alarm Suppression, page 9-7—Complete this procedure as needed to suppress reported alarms at the port, card, or node level and disable the suppress command to resume normal alarm reporting.

8. NTP-C63 Provision External Alarms and Controls, page 9-8—Complete this procedure as needed to provision external alarms and controls on the 15310-CL-CTX card (ONS 15310-CL) or CTX2500 card (ONS 15310-MA).

NTP-C56 Document Existing Provisioning

Purpose	This procedure prints card, node, or network CTC information in graphical or tabular form on a Windows-provisioned printer. It also exports card, node, or network information as delineated text files to other applications. This procedure is useful for network record keeping and troubleshooting.
Tools/Equipment	Printer connected to the CTC computer by a direct or network connection
Prerequisite Procedures	DLP-C29 Log into CTC, page 17-44
Required/As needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

Step 1 Complete the "DLP-C29 Log into CTC" task on page 17-44 at the node that has the information you want to record or save. If you are already logged in, continue with Step 2.

Step 2 As needed, complete the "DLP-C222 Print CTC Data" task on page 19-18.

Step 3 As needed, complete the "DLP-C223 Export CTC Data" task on page 19-20.

Stop. You have completed this procedure.

NTP-C57 View Alarms, History, Events, and Conditions

Purpose	This procedure views current or historical alarms and conditions for a card, a node, or network. The information is useful for monitoring and troubleshooting hardware and software events.
Tools/Equipment	None
Prerequisite Procedures	None
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 Log into the node that contains the alarms you want to view. See the "DLP-C29 Log into CTC" task on page 17-44 for instructions. If you are already logged in, proceed to Step 2.

Step 2 Complete the "DLP-C72 View Alarms" task on page 17-87 as needed.

Step 3 Complete the "DLP-C73 View Alarm or Event History" task on page 17-90 as needed.

Step 4 Complete the "DLP-C74 Change the Maximum Number of Session Entries for Alarm History" task on page 17-92 as needed.

Step 5 Complete the "DLP-C75 Display Alarms and Conditions Using Time Zone" task on page 17-93 as needed.

Step 6 Complete the "DLP-C76 Synchronize Alarms" task on page 17-93 as needed.

Step 7 Complete the "DLP-C77 View Conditions" task on page 17-94 as needed.

Stop. You have completed this procedure.

NTP-C58 Delete Cleared Alarms from Display

Purpose	This procedure deletes Cleared (C) status alarms from the alarms window. The procedure can be used to delete transient messages from the CTC History window.
Tools/Equipment	None
Prerequisite Procedures	None
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

Step 1 Log into a node where you want to delete alarms. See the for instructions. If you are already logged in, continue with Step 2.

Step 2 To delete cleared node-level alarms:

  a. In node view, click the **Alarms** tab.

  b. Click **Delete Cleared Alarms**, referring to the following rules:

   • If the Autodelete Cleared Alarms check box is checked, an alarm disappears from the window when it is cleared.

   • If the Autodelete Cleared Alarms check box is not checked, an alarm remains in the window when it is cleared. The alarm appears white in the window and has a Clear (C) severity. The alarm can be removed by clicking the Delete Cleared Alarms button.

This action removes any cleared ONS 15310-CL alarms from the Alarms display. The rows of cleared alarms turn white and have a C in their status (ST) column (Figure 9-1). The ONS 15310-MA Conditions window is shown. The ONS 15310-CL Conditions window is very similar to it.

Figure 9-1 **ONS 15310-MA Node View Conditions Window**

Step 3 To delete cleared card-level alarms:

    a. In node view, double-click the card graphic for the card you want to open.

    b. Click the **Alarms** tab and then click **Delete Cleared Alarms**, referring to the following rules:

- If the Autodelete Cleared Alarms check box is checked, an alarm disappears from the window when it is cleared.

- If the Autodelete Cleared Alarms check box is not checked, an alarm remains in the window when it is cleared. The alarm appears white in the window and has a Clear (C) severity. The alarm can be removed by clicking the Delete Cleared Alarms button.

Step 4 To delete cleared network-level alarms:

    a. From the **View menu choose Go to Network View**.

    b. Click the **Alarms** tab and then click **Delete Cleared Alarms**, referring to the following rules:

- If the Autodelete Cleared Alarms check box is checked, an alarm disappears from the window when it is cleared.

- If the Autodelete Cleared Alarms check box is not checked, an alarm remains in the window when it is cleared. The alarm appears white in the window and has a Clear (CL) severity. The alarm can be removed by clicking the Delete Cleared Alarms button.

Step 5 To remove the transient messages from the History window, click **Delete Cleared Alarms**.Transient messages are single messages, not raise-and-clear pairs (that is, they do not have companion messages stating they are cleared).

Stop. You have completed this procedure.

NTP-C59 View Alarm-Affected Circuits

Purpose	Use this procedure to view all circuits, if any, affected by an alarm or condition.
Tools/Equipment	None
Prerequisite Procedures	NTP-C57 View Alarms, History, Events, and Conditions, page 9-2
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

Step 1   Complete the "DLP-C29 Log into CTC" task on page 17-44. If you are already logged in, continue with Step 2.

Step 2   In the network, node, or card view, click the **Alarms** tab or **Conditions** tab and then right-click anywhere in the row of an active alarm or condition.

✎
Note   The node view is the default, but you can also navigate to the Alarms tab in the network view or card view to perform Step 2.

The Select Affected Circuit option appears on the shortcut menu (Figure 9-2). The ONS 15310-MA Conditions window is shown. The ONS 15310-CL Conditions window is very similar.

Figure 9-2   ONS 15310-MA Select Affected Circuits Option

Step 3   Left-click or right-click **Select Affected Circuits**.

The **Circuits** window appears with the affected circuits highlighted.

Step 4   If you want to search for particular circuits, see the "DLP-C78 Search for Circuits" task on page 17-95.

Stop. You have completed this procedure.

NTP-C60 Create, Download, and Assign Alarm Severity Profiles

Purpose	This procedure creates a customized alarm profile at the network, node, or card level; assigns custom severities individually to a port, card, or node; and deletes alarm profiles.
Tools/Equipment	None
Prerequisite Procedures	None
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 Complete the "DLP-C29 Log into CTC" task on page 17-44 at the node where you want to create an alarm profile. If you are already logged in, continue with Step 2 to create, clone or modify an alarm profile, or go to Step 3 to download an alarm profile.

Step 2 Complete the "DLP-C79 Create a Cloned Alarm Severity Profile" task on page 17-96. This task clones a current alarm profile and then renames and customizes it.

Step 3 Complete the "DLP-C80 Download an Alarm Severity Profile" task on page 17-99. This task downloads an alarm severity profile from a CD or a node.

> ✎ **Note** After storing a created or downloaded alarm profile, you must go to the node (either by logging into it or clicking on it from the network view) and activate the profile by applying it to the shelf, one or more cards, or one or more ports.

Step 4 As necessary, complete the "DLP-C81 Apply Alarm Profiles to Ports" task on page 17-100 or the "DLP-C82 Apply Alarm Profiles to Cards and Nodes" task on page 17-101.

Step 5 As needed, complete the "DLP-C83 Delete Alarm Severity Profiles" task on page 17-103.

Stop. You have completed this procedure.

NTP-C61 Enable, Modify, or Disable Alarm Severity Filtering

Purpose	This procedure starts, changes, or stops alarm filtering for one or more severities in the Alarms, Conditions, and History windows in all network nodes.
Tools/Equipment	None
Prerequisite Procedures	None
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

Step 1 Complete the "DLP-C29 Log into CTC" task on page 17-44. If you are already logged in, continue with Step 2.

Step 2 As necessary, complete the "DLP-C84 Enable Alarm Filtering" task on page 17-104 to enable alarm filtering at the card, node, and network views for all nodes in the network. Alarm filtering can be enabled for alarms or conditions.

Step 3 As necessary, complete the "DLP-C85 Modify Alarm and Condition Filtering Parameters" task on page 17-105 to modify the alarm filtering for network nodes to show or hide particular alarms or conditions.

Step 4 As necessary, complete the "DLP-C88 Disable Alarm Filtering" task on page 17-109 to disable alarm profile filtering for all network nodes.

Stop. You have completed this procedure.

NTP-C62 Suppress Alarms or Discontinue Alarm Suppression

Purpose	This procedure prevents alarms from being reported for a port, card, or node in circumstances when an alarm or condition is known to exist but you do not want to include it in the Alarms or History display. This procedure also resumes normal alarm reporting by discontinuing the suppression.
Tools/Equipment	None
Prerequisite Procedures	None
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 Complete the "DLP-C29 Log into CTC" task on page 17-44. If you are already logged in, continue with Step 2.

Step 2 Complete the "DLP-C86 Suppress Alarm Reporting" task on page 17-107 to enable the node to send autonomous messages that clear specific raised alarms and cause suppressed alarms to appear in the Conditions window.

> **Note**   Suppressing one or more alarms prevents them from appearing in Alarm or History windows or in any other clients. The suppress command causes CTC to display them in the Conditions window with their severity, their severity color code, and service-affecting status.

Step 3   Complete the "DLP-C87 Discontinue Alarm Suppression" task on page 17-108 to discontinue alarm suppression and resume normal alarm reporting.

Stop. You have completed this procedure.

NTP-C63 Provision External Alarms and Controls

Purpose	Use this procedure to create external (environmental) alarms and controls on the 15310-CL and ONS 15310-MA.
Tools/Equipment	None
Prerequisite Procedures	DLP-C9 Install External Alarm Cables on the ONS 15310-CL, page 17-12
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

> **Note**   External alarm physical connections are made using the ALARM port on the front of the ONS 15310-CL and ONS 15310-MA. The alarms and controls are provisioned using the 15310-CL-CTX and CTX2500 card view. For information about the 15310-CL-CTX and CTX2500 external alarms and controls, virtual wire, and orderwire, refer to the *Cisco ONS 15310-CL and Cisco ONS 15310-MA Reference Manual*.

Step 1   In the node view, double-click the active 15310-CL-CTX or CTX2500 card. The card view appears.

Step 2   If you are provisioning external alarms, click the **Provisioning > External Alarms** tabs (Figure 9-3). (The view is similar for either platform.) If you are not provisioning external alarms, continue with Step 7.

Step 3   To add User Defined Alarm Types, complete the"DLP-C277 Create User Defined Alarm Types" task on page 19-92. If you are not adding User Defined Alarm Types continue with Step 4

Figure 9-3 **External Alarms for the ONS 15310-MA**
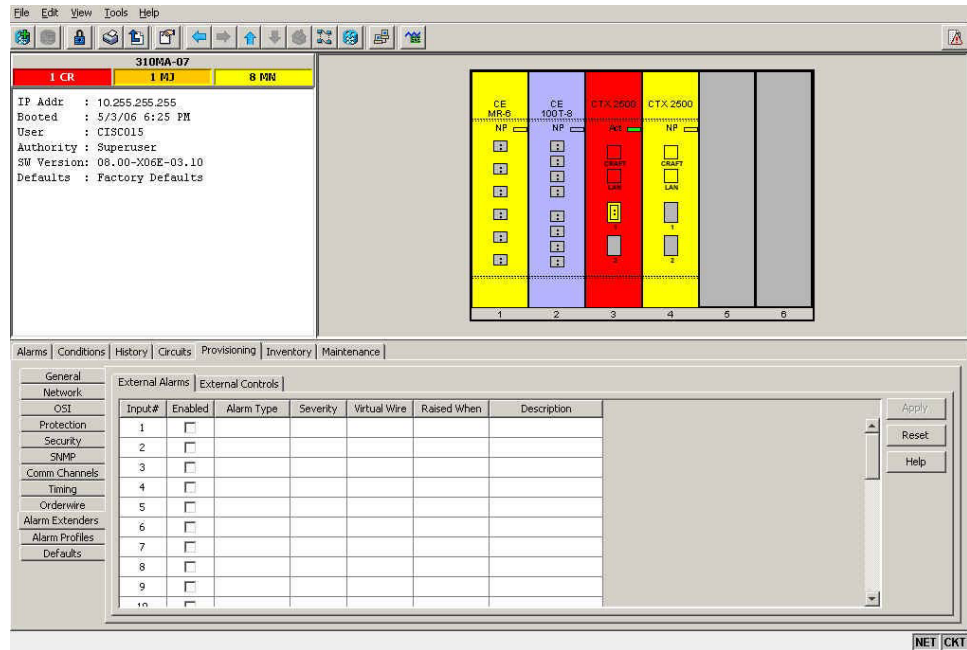
Step 4   Complete the following fields for each external device wired to the controller card:

  • Enabled—Check this check box to activate the fields for the alarm input number.

  • Alarm Type—Choose an option from the **Alarm Type** drop-down list.

  • Severity—Choose an option from the **Severity** drop-down list.

    The severity determines the severity the alarm has in the Alarms and History tabs and determines whether the LEDs are activated. Critical (CR), Major (MJ), and Minor (MN) alarms activate the 15310-CL-CTX and CTX2500 LEDs. Not-Alarmed (NA) and Not-Reported (NR) do not activate LEDs, but do report the information in CTC.

  • Virtual Wire—Choose an option to assign the external device to a virtual wire. Otherwise, do not change the None default. For information about the virtual wire, see the *Cisco ONS 15310-CL and Cisco ONS 15310-MA Reference Manual*.

  • Raised When—Choose the condition (open or closed) that triggers the alarm.

  • Description—A default description is provided; enter a different description if needed.

Step 5   To provision up to six virtual wire inputs for external devices, complete Step 4 for each additional device.

Step 6   Click **Apply**.

Step 7   If you are provisioning external control outputs for external devices connected to the controller card, click the **External Controls** tab (Figure 9-3).

Step 8   Complete the following fields for each external control wired to the controller card:

  • Enabled—Check this check box to activate the Control Type, Trigger Type, and Description columns for the alarm input number.

  • Control Type—Choose an option: air conditioner, engine, fan, generator, heat, light, sprinkler, or miscellaneous.

- Trigger Type—Choose a trigger type: a local minor, major, or critical alarm; a remote minor, major, or critical alarm; or a virtual wire activation.

- Description—Enter a description.

Step 9   To provision a second external control, complete Step 8 for the additional device.

Step 10   Click **Apply**.

Stop. You have completed this procedure.