Managing Inventory

This chapter describes how to manage inventory using Cisco Prime Optical. It contains the following sections:

Overview

Managing inventory involves maintaining a record of all of the network element (NE) resources installed in the network to support the provisioning of services. It should include collecting information about locations, quantities of equipment, model numbers, serial numbers, versions, installation dates, and so on.

Inventory management is one of the fundamental network management functions. When forecasting service growth or even attempting to provision a new service, it is necessary to know the current network inventory. Can the existing inventory support the forecast growth or new service requests, or must additional equipment be ordered and installed onsite? Can your hardware support a new software release? You will need to check the type and revision of hardware to determine the answer. Has a recall been issued by the vendor for a certain hardware revision of a board? Are you affected? You will need to check the inventory again.

Prime Optical allows you to add NEs, and it autodiscovers the details about the NE itself and the contained physical inventory. Prime Optical remains automatically synchronized with changes relating to inventory that might occur in the network. All inventory information is stored in the Prime Optical database and is available at any time.

Inventory management includes the discovery of the NEs from the EMS, and ongoing synchronization with the NEs. It also includes the ability to provide the inventory to a higher-level NMS through a northbound interface.

Prime Optical can quickly capture, display, and store an inventory of the NEs on your network. It allows you to view information about the NEs, installed software, and software licenses. Prime Optical also lets you edit the inventory information for the NEs in your network.

For passive NEs, you can add inventory information manually. You can also add inventory information for unmanaged NEs or for NEs from other vendors.

Prime Optical allows you to export inventory reports to a flat text file with a user-specified delimiter character. This file can be imported easily into a spreadsheet application for further analysis.

Note Japanese characters are supported for inventory reports. When generating a report from the Domain NE table, choose **File > HTML Report** for a report that includes Japanese characters.

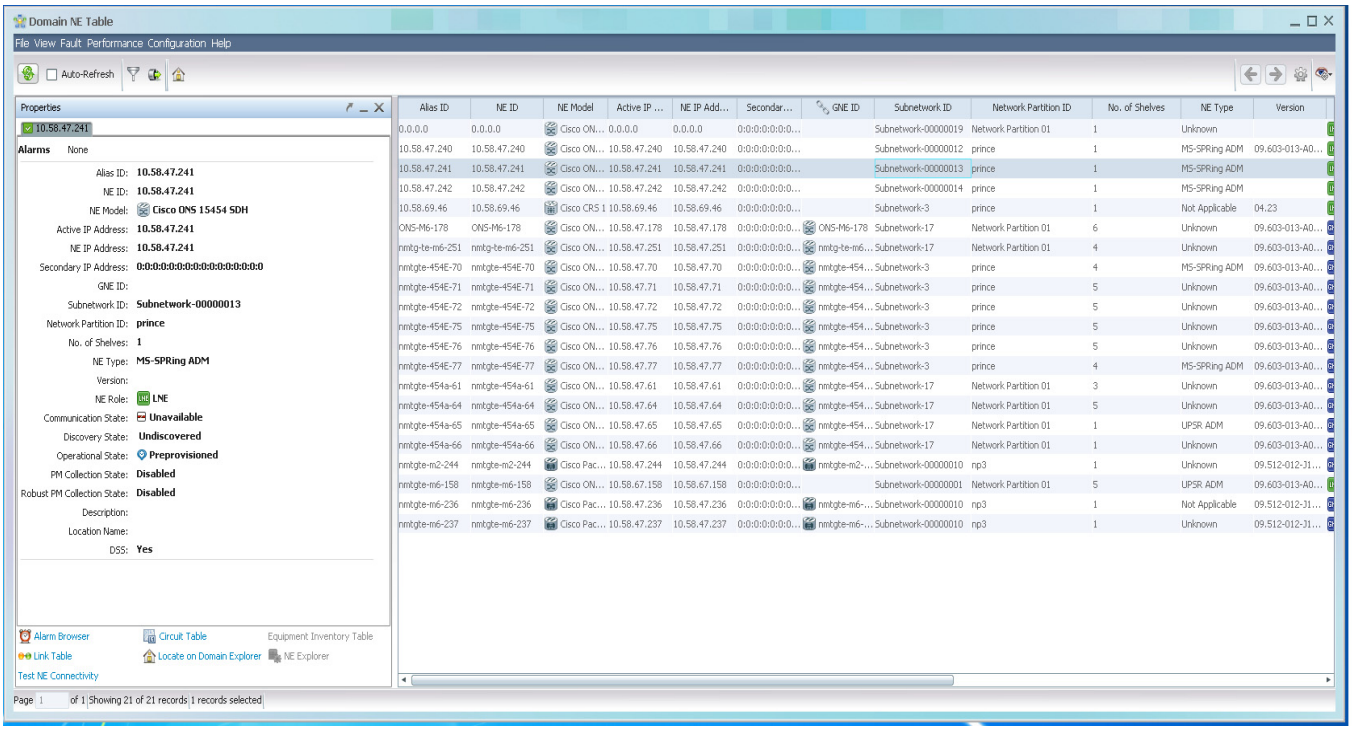
Prime Optical provides two levels of inventory reports:

- A complete list of all the NEs that belong to a specific group or to the entire domain. See Domain NE Table, page 11-2.
- A detailed list of cards and modules installed on the NEs. See Equipment Inventory Table, page 11-10.

Domain NE Table

The Domain NE table displays an inventory of all the NEs in the selected Prime Optical domain, group, or subnetwork. Based on your selection criteria, the Domain NE table tells you which NEs are in or out of service, available or unavailable, and so on. The following figure shows an example of the Domain NE table.

Figure 11-1 Domain NE Table



Note See Appendix A, "Icons and Menus Displayed in Prime Optical" for details of all the icons displayed in the window.

You can test NE connectivity, locate an NE on the Domain Explorer, and launch the Alarm Browser from the Domain NE Table. You can also launch the NE Explorer, Equipment Inventory Table, Circuit Report, and Link Table from the **Configuration** menu in the Domain NE Table.

You can also change the state of an NE by selecting the NE and then choosing **Configuration > Change State**. The following options are available:

- Mark In Service
- Mark Out of Service
- Mark Under Maintenance

Note All of the above features can also be launched by right-clicking an NE in the Domain NE table and selecting the appropriate option from the popup menu that appears.

Viewing the Domain NE Table

Select a node in the Domain Explorer or Subnetwork Explorer tree and choose **File > Domain NE Table**. The following table provides descriptions.

Table 11-1 Field Descriptions for the Domain NE Table

Field	Description
Alias ID	Alias name of the NE.
NE ID	Name of the selected NE.
NE Model	Selected NE model: • Cisco ONS 15216 • Cisco ONS 15305 • Cisco ONS 15310 CL • Cisco ONS 15310 MA or Cisco ONS 15310 MA SDH • Cisco ONS 15327 • Cisco ONS 15454 or Cisco ONS 15454 SDH • Cisco ONS 15600 or Cisco ONS 15600 SDH
Active IP Address	IP address of the GNE, in IPv4 or IPv6 format.
NE IP Address	IP address of the NE, in IPv4 or IPv6 format. Prime Optical tries to connect to the NE using an IPv4 address. If the IPv4 address is unreachable, Prime Optical tries to connect to the NE using its IPv6 address, if configured and reachable. **Note** If the node is a gateway network element (GNE) or a LAN-connected network element (LNE), the NE IP address is the same as the active IP address.
Secondary IP Address	Secondary IP address of the NE. If the IPv6 address is unreachable, Prime Optical tries to connect to the NE using its IPv4 address. **Note** If IPv6 is not configured on the NE, the IP address 0:0:0:0:0:0:0:0 is shown.
GNE ID	ID for the GNE on the selected NE's ring.
Subnetwork ID	Name of the subnetwork associated with the selected NE.
Network Partition ID	Name of the network partition to which this NE is associated.
No. of Shelves	Number of shelves supported by the NE.
NE Type	Type of NE.

Table 11-1 Field Descriptions for the Domain NE Table (continued)

Field	Description
Version	NE software version that is running.
NE Role	Role of the selected NE.
Communication State	Connectivity state between Prime Optical and the selected NE: Available, Unavailable, and Initialization Failed.
Discovery State	Discovery state of the selected NE: Initializing or Synch Configuration.
Operational State	Current operational state of the system: In Service, Under Maintenance, or Out of Service.
PM Collection State (*not applicable to ONS 15216*)	Whether performance monitoring collection is enabled or disabled. You can configure the PM collection state in the Domain Explorer > Network Element Properties pane > Status tab.
Robust PM Collection State (*not applicable to all NEs*)	Whether robust PM collection is enabled or disabled. You can configure the robust PM collection state in the Domain Explorer > Network Element Properties pane > Status tab. **Note** You cannot collect robust PM data until at least one 15-minute or one 1-day interval has been collected in normal operation. **Note** Robust PM data collection applies only to CTC-based NEs and to the ONS 15305. Robust PM collection is not supported for the ONS 15216. **Note** You can collect up to 8 hours of 15-minute robust PM data for CTC-based NEs. **Note** You can collect up to the previous day's 1-day robust PM data for CTC-based NEs.
Description	Information that a user might have entered to describe the selected NE.
Location Name	Geographic location of the NE.
DSS	Indicates whether or not the selected CTC-based SONET or CTC-based SDH NE serves as a designated SOCKS server (DSS). If so, the NE manages connectivity among other NEs through firewalls. Values for the DSS column are Yes, No, and Not Applicable.

Tip The Dashboard window displays an NE counter icon. This counter lists the total number of NEs in the domain. Click the counter to open the Domain NE table.

Filtering the Domain NE Table

Step 1 Select a node in the Domain Explorer or Subnetwork Explorer tree.

Step 2 Choose **File > Domain NE Table**. The Domain NE table opens. (See Figure 11-1.)

Step 3 Choose **File > Filter** (or click the **Filter Data** tool). The Filter dialog box opens.

Step 4 Specify the filter criteria to display the results in the Domain NE table. The following table describes the fields in the filter.

Step 5 Click **OK**. The filtered data is displayed in the Domain NE table.

Table 11-2 Field Descriptions for the Domain NE Table Filter

Field	Description
NE ID Tab	
Available NE ID/Selected NE ID	List of available NE IDs. Click **Add** and **Remove** to move NE IDs to and from the Selected NE ID list. **Note** Use the scroll bars at the bottom and right side of the Available NE ID list and the Selected NE ID list to display all options in the lists.
Inventory Tab	
Communication State	Filters NEs according to their communication state (Available, Unavailable, and Initialization Failed).
Operational State	Filters NEs according to their operational state (In Service, Out of Service, Preprovisioned, or Under Maintenance).
PM Collection State	Filters NEs according to their PM collection state (Enabled; 5,10,15 Min Collection; 1 Day Collection; Disabled).
Robust PM Collection State	Filters NEs according to their robust PM data collection state (Enabled, 15 Min Collection, 1 Day Collection, Disabled).
GNE	Filters domain inventory data based on GNE IDs. You can select <ALL> to filter all GNE IDs or you can choose a particular GNE ID from the drop-down list.
NP ID Tab	
Available Network Partitions/Selected Network Partitions	Filters domain inventory data based on network partition. Click **Add** and **Remove** to move network partitions to and from the Selected Network Partitions list. **Note** Use the scroll bars at the bottom and right side of the Available Network Partitions list and the Selected Network Partitions list to display all options in the lists.

Viewing NE Properties from the Domain NE Table

To view NE properties from the Domain NE Table, do the following:

Step 1 From the **Toggle Frames Visibility** drop-down list, select **Properties**. A dockable Properties window displays the following NE properties:

- Alias ID
- NE ID
- NE Model
- Active IP Address
- NE IP Address
- Secondary IP Address
- GNE ID
- Subnetwork ID
- Network Partition ID

- No. of Shelves
- NE Type
- Version
- NE Role
- Communication State
- Discovery State
- Operational State
- PM Collection State (not applicable to ONS 15216)
- Robust PM Collection State (not applicable to all NEs)
- Description
- Location Name
- DSS

The following links are also available at the bottom of the Properties window:

- Alarm Browser—Launches the Alarm Browser for the selected NE.
- Circuit Report—Launches the Circuit Report for the selected NE.
- Equipment Inventory Table—Launches the Equipment Inventory Table for the selected NE.
- Link Table—Launches the Link Table for the selected NE.
- Locate on Domain Explorer—Locates the selected NE on the Domain Explorer.
- NE Explorer—Launches the NE Explorer for the selected NE.
- Test NE Connectivity—Tests connectivity to the selected NE using the community string configured in the Prime Optical client.

Viewing the ENE Devices Table

Use the ENE Devices table to view subtending end network elements (ENEs) that are supported by a given GNE. The GNE-ENE relationship is calculated on a theoretical projection, which does not necessarily equate to a real network situation.

Step 1 Select a GNE node in the Domain Explorer or Subnetwork Explorer tree.

Step 2 Choose **File > ENE Devices**. The ENE Devices table opens.

The fields in the ENE Devices table are identical to the fields in the Domain NE table (see Table 11-1), except that the ENE Devices table shows only those ENEs that are associated with the selected GNE.

Viewing the TNE Devices Table

Use the TNE Devices table to view information about each tunnel NE (TNE) that Prime Optical manages. The Edit menu options allow you to open, close, or modify an individual TL1 tunnel.

Step 1 Select any node in the Domain Explorer or Subnetwork Explorer tree.

Step 2 Choose **File > TNE Devices**. The TNE Devices (Tunnel) table opens. The following table provides descriptions.

Step 3 (Optional) To open, close, or modify a TL1 tunnel, select an individual TNE in the table and choose any of the following menu options:

- **Edit > Open Tunnel**—Opens a TL1 tunnel on the selected TNE. See Opening a TL1 Tunnel, page 11-8.
- **Edit > Close Tunnel**—Closes the TL1 tunnel on the selected TNE. See Closing a TL1 Tunnel, page 11-9.
- **Edit > Modify Tunnel**—Allows you to modify the settings of the selected TNE. See Modifying a TL1 Tunnel, page 11-10.

Table 11-3 Field Descriptions for the TNE Devices Table

Field	Description
TNE ID	ID of the selected tunnel NE.
Alias ID	Alias of the selected tunnel NE.
GNE IP Address	IP address of the non-Cisco GNE.
TL1 Port Number	Port number used by the non-Cisco GNE to support the TL1 tunnel.
Encoding Type	Type of encoding used by the selected tunnel NE. Values are LV + Base64 Payload, LV + Binary Payload, or Raw.
Tunnel Status	Status of the selected TL1 tunnel.

Filtering the TNE Devices Table

Step 1 Select any node in the Domain Explorer or Subnetwork Explorer tree.

Step 2 Choose **File > TNE Devices**. The TNE Devices (Tunnel) table opens.

Step 3 Choose **File > Filter** (or click the **Filter Data** tool). The Filter dialog box opens.

Step 4 Specify the filter criteria to display the results in the TNE Devices (Tunnel) table. The following table describes the fields in the filter.

Step 5 Click **OK**. The filtered data is displayed in the TNE Devices (Tunnel) table.

Table 11-4 Field Descriptions for the TNE Devices Table Filter

Field	Description
TNE ID Tab	
Available Network Partitions/Selected Network Partitions	Filters TL1 tunnel data based on network partition. Click **Add** and **Remove** to move network partitions to and from the Selected Network Partitions list.
GNE IP Address Tab	
Available Network Partitions/Selected Network Partitions	Filters GNE IP address data based on network partition. Click **Add** and **Remove** to move network partitions to and from the Selected Network Partitions list.
Tunnel Status Tab	
Connection Type	Filters TL1 tunnel data based on the status of the tunnel connection. Check any of the following check boxes: • Open—Filters on open TL1 tunnels. • Close—Filters on closed TL1 tunnels. • Initial—Filters on TL1 tunnels that are initializing.

Opening a TL1 Tunnel

Use the Open TL1 Tunnel dialog box to open a TL1 tunnel on the selected TNE.

Step 1 Select any node in the Domain Explorer or Subnetwork Explorer tree.

Step 2 Choose **File > TNE Devices**. The TNE Devices (Tunnel) table opens.

Step 3 In the TNE Devices table, select an individual TNE and choose **Edit > Open Tunnel** (or click the **Open Tunnel** tool). The Open TL1 Tunnel dialog box opens. The following table provides descriptions.

Note The Open Tunnel menu option and tool are dimmed if the TNE Devices table is empty.

Step 4 After making your selections, click **Finish**. The Job Monitor table (**Administration > Job Monitor**) reports the result of the operation.

Table 11-5 Field Descriptions for the Open TL1 Tunnel Dialog Box

Field	Description
TNE ID	*Display only.* ID of the selected tunnel NE.
Alias ID	*Display only.* Alias of the selected tunnel NE.
GNE IP Address	*Display only.* IP address of the non-Cisco GNE.
Port	*Display only.* Port number used by the non-Cisco GNE to support the TL1 tunnel.
TL1 Encoding	*Display only.* Type of encoding used by the selected tunnel NE. Values are LV + Base64 Payload, LV + Binary Payload, or Raw.

Table 11-5 Field Descriptions for the Open TL1 Tunnel Dialog Box (continued)

Field	Description
Job Comments	Enter comments about the TL1 tunnel, if needed.
Time (*time zone*)	Set a time to open the TL1 tunnel. Click **Now** to open the tunnel immediately, or click **At Time** and specify when to open the tunnel, in 5-minute increments. **Note** The time zone can be GMT, a user-defined offset from GMT, or local time, depending on what is specified in the User Preferences dialog box.

Closing a TL1 Tunnel

Use the Close TL1 Tunnel dialog box to close the TL1 tunnel on the selected TNE.

Step 1 Select any node in the Domain Explorer or Subnetwork Explorer tree.

Step 2 Choose **File > TNE Devices**. The TNE Devices (Tunnel) table opens.

Step 3 In the TNE Devices table, select an individual TNE and choose **Edit > Close Tunnel** (or click the **Close Tunnel** tool). The Close TL1 Tunnel dialog box opens. The following table provides descriptions.

Step 4 After making your selections, click **Finish**. A warning message is displayed, alerting you that closing a tunnel will result in loss of connectivity to the selected TNE and all of its ENEs.

The Job Monitor table (**Administration > Job Monitor**) reports the result of the operation.

Table 11-6 Field Descriptions for the Close TL1 Tunnel Dialog Box

Field	Description
TNE ID	*Display only.* ID of the selected tunnel NE.
Alias ID	*Display only.* Alias of the selected tunnel NE.
GNE IP Address	*Display only.* IP address of the non-Cisco GNE.
Port	*Display only.* Port number used by the non-Cisco GNE to support the TL1 tunnel.
TL1 Encoding	*Display only.* Type of encoding used by the selected tunnel NE. Values are LV + Base64 Payload, LV + Binary Payload, or Raw.
Job Comments	Enter comments about the TL1 tunnel closure, if needed.
Time (*time zone*)	Set a time for the TL1 tunnel closure. Click **Now** to close the tunnel immediately, or click **At Time** and specify when to close the tunnel, in 5-minute increments. **Note** The time zone can be GMT, a user-defined offset from GMT, or local time, depending on what is specified in the User Preferences dialog box.

Modifying a TL1 Tunnel

Use the Modify TL1 Tunnel dialog box to modify the settings of an individual TNE.

Step 1 Select any node in the Domain Explorer or Subnetwork Explorer tree.

Step 2 Choose **File > TNE Devices**. The TNE Devices (Tunnel) table opens.

Step 3 In the TNE Devices table, select an individual TNE and choose **Edit > Modify Tunnel** (or click the **Modify Tunnel** tool). The Modify TL1 Tunnel dialog box opens. The following table provides descriptions.

Step 4 After modifying the selections, click **Finish**. The Job Monitor table (**Administration > Job Monitor**) reports the result of the operation.

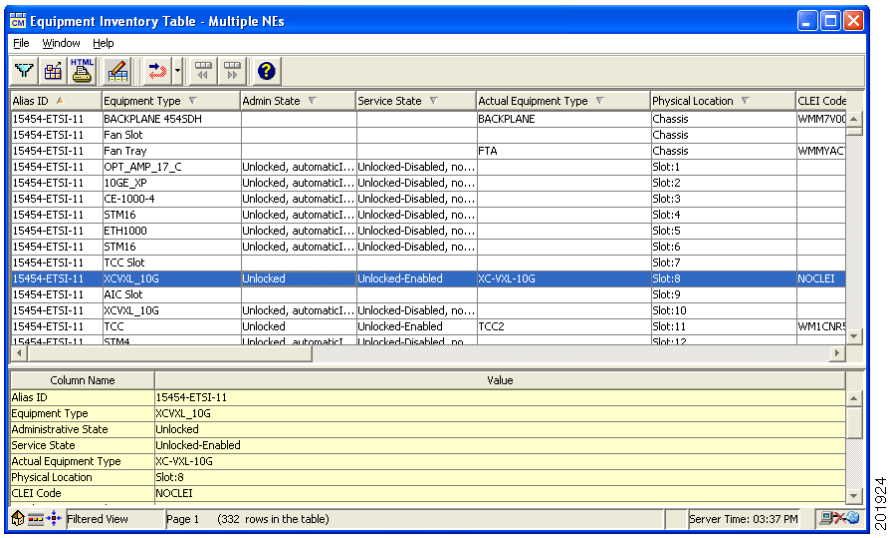
Table 11-7 Field Descriptions for the Modify TL1 Tunnel Dialog Box

Field	Description
TNE ID	*Display only.* ID of the selected tunnel NE.
Alias ID	*Display only.* Alias of the selected tunnel NE.
GNE IP Address	Modify the IP address of the non-Cisco GNE.
Port	Modify the port number used by the non-Cisco GNE to support the TL1 tunnel.
TL1 Encoding	Modify the type of encoding used by the selected tunnel NE. Values are LV + Base64 Payload, LV + Binary Payload, or Raw.
Job Comments	Enter comments about the TL1 tunnel modification, if needed.
Time (*time zone*)	Set a time for the tunnel modification. Click **Now** to begin modification immediately, or click **At Time** and specify when to begin modification, in 5-minute increments. **Note** The time zone can be GMT, a user-defined offset from GMT, or local time, depending on what is specified in the User Preferences dialog box.

Equipment Inventory Table

The Equipment Inventory table displays a complete inventory of the components of the selected NE or of the NEs in a group or subnetwork. The following figure shows an example of the Equipment Inventory table.

Figure 11-2 Equipment Inventory Table



Note See Appendix A, "Icons and Menus Displayed in Prime Optical" for details of all the icons displayed in the window.

Viewing an Equipment Inventory Table

Step 1 In the Domain Explorer or Subnetwork Explorer tree, select the NE, group, or subnetwork for which you want to view inventory data, and choose **Configuration**.

Step 2 From the Configuration menu, select the NE model and choose **Equipment Inventory Table**. The Equipment Inventory table for the selected NE model opens.

The following sections provide information about the individual Equipment Inventory tables:

- ONS 15216 Equipment Inventory Table, page 11-11
- ONS 15305 Equipment Inventory Table, page 11-12
- Equipment Inventory Table for CTC-Based NEs, page 11-12

Note The Equipment Inventory table is not available for unmanaged NEs.

ONS 15216 Equipment Inventory Table

The ONS 15216 Equipment Inventory table displays a complete list of the ONS 15216 system inventory. The following table provides descriptions.

Table 11-8 Field Descriptions for the ONS 15216 Equipment Inventory Table

Field	Description
Alias ID	Alias name of the NE.
Equipment Type	NE model type.
Physical Location	Location where the NE is installed.
Wavelength(s)	Number of wavelengths for this NE.
CLEI Code	CLEI code for the device. CLEI code is an industry-standard code that precisely defines a component.
Product Name	Name of the product.
Serial Number	Serial number of the device.
NE ID	Name of the selected NE.

ONS 15305 Equipment Inventory Table

The ONS 15305 Equipment Inventory table displays a complete list of the ONS 15305 system inventory. The following table provides descriptions.

Table 11-9 Field Descriptions for the ONS 15305 Equipment Inventory Table

Field	Description
Alias NE ID	Alias name of the NE.
Module Name	Generic type of card.
Physical Location	Slot number where the card appears.
Install State	Installation state of the card.
Expected Module	Default card for the slot.
Operational State	Operational state of the card. (Not applicable if the slot is empty.)
Software Version	Version of software present on the card. (Not applicable if the slot is empty.)
Board Serial Number	Serial number of the card.
Hardware Version	Hardware version of the card. (Not applicable if the slot is empty.)
NE ID	Name of the selected NE.

Equipment Inventory Table for CTC-Based NEs

The Equipment Inventory table for CTC-based NEs displays a complete list of the ONS 15305 R3.0, ONS 15310 CL, ONS 15310 MA SONET, ONS 15310 MA SDH, ONS 15327, ONS 15454 SONET, ONS 15454 SDH, ONS 15454-M6, ONS 15454-M2, ONS 15600 SONET, ONS 15600 SDH, CPT 600, or CPT 200 system inventory. This section contains the following tables:

- Field Descriptions for the Equipment Inventory Table—CTC-Based NEs

- Service State and Fault Secondary State Values
- Available Equipment Inventory Fields for Passive Cards

The following table lists common field descriptions for the Equipment Inventory table.

Table 11-10 Field Descriptions for the Equipment Inventory Table—CTC-Based NEs

Field	Description
Alias ID	Alias name of the NE.
Equipment Type	Generic type of card.
Admin State	User-assigned designation that drives whether an entity is in service or out of service. The administrative state is the driver for the service state. For SONET nodes, values are: • IS—In Service. Able to carry traffic. • OOS, DSBLD—Out of Service. Unable to carry traffic. • IS, AINS—Auto In Service. Alarm reporting is suppressed, but traffic is carried. • OOS, MT—Out of Service, Maintenance. Alarm reporting is suppressed, but traffic is carried and loopbacks are allowed. • OOS, OOG—Out of Service, Out of Group. This state is used to place a member circuit out of the group and to stop sending traffic. OOS, OOG applies only to the cross-connects on the end node where the VCAT resides. For intermediate nodes, the cross-connects are OOS, MT. For SDH nodes, corresponding values are: • Unlocked (corresponds to IS) • Locked (corresponds to OOS) • Failed (corresponds to FLT) • Locked Maintenance (corresponds to OOS, MT) • Unlocked Automatic In Service (corresponds to IS, AINS) **Note** If the NE release does not support the administrative state, this field shows *N/A*.

Table 11-10 Field Descriptions for the Equipment Inventory Table—CTC-Based NEs (continued)

Field	Description
Service State	Overall availability of the entity. Values are: • IS-NR—In Service–Normal. • OOS-AU—Out of Service–Autonomous. • OOS-MA—Out of Service–Management. • OOS-AUMA—Out of Service–Autonomous and Management. In addition, a secondary state provides additional information about the status of the entity. Values for secondary state are: • AINS—Automatic In Service. • DSBLD—Traffic is disabled on the entity. • FLT—Fault secondary state. When an entity is faulted, an FLT state is raised. Equipment and ports in FLT state should be cleared as they transition. Transition states are listed in Table 11-11. • LPBK—Port or connection has a loopback on it. • MEA—Mismatch of equipment due to invalid equipment insertion. • MT—Maintenance, as per the administrative state change. • SWDL—Software download in progress. • UAS—Unassigned. The entity does not exist, has not been created, or has been deleted. • UEQ—Unequipped. There is nothing in the slot. See Table 11-11 for the Service state–Secondary state possible values. **Note** If the NE release does not support the service state, this field shows *N/A*.
Actual Equipment Type	Specific type of card. This field also shows small form-factor pluggable (SFP) information (such as wavelength, reach, and payload rate), Channel Express (CXP), C Form-Factor Pluggable (CFP), and 10-Gigabit Small Form-Factor Pluggable (XFP) for all line cards and pluggable I/O modules (PIMs) that support pluggable port modules (PPMs). **Note** For the Customer Access Panel2 (CAP2) module on the ONS 15600, Prime Optical displays “CAP” for the Equipment Type and “15600-CAP2” for the Actual Equipment Type.
Physical Location	• Slot number where the card appears. • Unit number of passive units. • FOG number of the PTSA_GE panels. For PPMs, this field contains the slot number and the PPM numbers.
CLEI Code	CLEI code for the card. CLEI code is an industry-standard code that precisely defines a component.
Hardware Part Number	Part number used for the card.
Serial Number	Serial number of the card.
Note	Any user-entered comments relating to the equipment.
Hardware Revision	Hardware revision number of the card.
Firmware Version	Firmware version of the card.

Table 11-10 Field Descriptions for the Equipment Inventory Table—CTC-Based NEs (continued)

Field	Description
Inventory Code	Inventory code of the card.
Application Filename	Name of the file that the card loads from the TCC or XTC flash in order to run its application.
Other Information	Additional information entered by the manufacturer.
Equipment State	Current state of the card. Values are: • Active • Deleted • Empty • Failed • Loading • Mismatch • Not Present • Standby
Product ID	Product ID string of 63 characters maximum. If the card does not support the product ID, the field shows *N/A*.
Version ID	Version ID string in the format *V99_*. The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows *N/A*.
NE ID	Name of the selected NE.

The following table lists the service state and fault secondary state values.

Table 11-11 Service State and Fault Secondary State Values

Service State-Secondary State Possible Values	Initial State Transition	Final State Transition
Equipment		
IS-NR	FLT	OOS-AU, FLT
OOS-AU, FLT	All AE Cleared	IS-NR
OOS-AU, FLT	ED: OOS, MT RMV	OOS-AUMA, FLT & MT
OOS-MA, MT	FLT	OOS-AUMA, FLT & MT
OOS-AUMA	FLT	OOS-AUMA, FLT
OOS-AUMA, FLT & MT	All AE Cleared	OOS-MA
Port		
IS-NR	FLT	OOS-AU, FLT
OOS-AU. FLT	FLT Cleared	IS-NR
OOS-AU, AINS	FLT	OOS-AU, AINS & FLT
OOS-AU, AINS & FLT	FLT Cleared	OOS-AU, AINS
OOS-MA, MT	FLT	OOS-AUMA & FLT & MT
OOAS-AUMA & FLT & MT	FLT Cleared	OOS-MA & MT

Table 11-11 Service State and Fault Secondary State Values (continued)

Service State-Secondary State Possible Values	Initial State Transition	Final State Transition
OOS-AUMA & LPBK & MT	FLT	OOS-MA & LPBK & MT & FLT
OOS-AUMA & LPBK & MT & FLT	FLT Cleared	OOS-MA & LPBK & MT & FLT

Passive units are optical devices that the controller card cannot manage and that are not configurable using software. Passive units can be provisioned only in CTC. The following table lists the field descriptions for passive cards.

Table 11-12 Available Equipment Inventory Fields for Passive Cards

Passive Card Type	Fields
USB-connected	• Equipment Type • Administrative State • Service State • Actual Equipment Type • Physical Location • Equipment State • CLEI Code • HW Part Number • Serial Number • HW Revision
Not USB-connected	• Equipment Type • Administrative State • Service State • Actual Equipment Type • Physical Location • Equipment State

Adding a Note to the Equipment Inventory Table

The User Note dialog box allows you to view and add user notes to CTC-based equipment that has a valid serial number in the Equipment Inventory table. If a piece of equipment has a note, a User Note tool appears under the Note column. Comments are visible to all users. You can open the User Note dialog box only if you have read/write permissions. These permissions are configurable in the User Profile wizard > NE Configuration Management category > Equipment Inventory row.

Note You can add user notes only for CTC-based NEs.

Step 1 In the Domain Explorer window, choose **Configuration > CTC-Based SONET NEs > Equipment Inventory Table**.

The Equipment Inventory table opens.

Step 2 Select a piece of equipment and choose **Edit > User Note**. The following table describes the fields in the User Note dialog box.

Table 11-13 Field Descriptions for the User Note Dialog Box

Field	Description
Note	Provides space for you to type your comments about the selected equipment. The maximum length of this field is 2048 characters. To add comments to the previous comments, click the **Append** radio button. To overwrite the previous comments, click **Replace**. To delete the comments, click **Delete**. **Note** You cannot enable and disable the Replace and Delete functions in the Control Panel.
History	Displays comments entered by previous users.

Exporting Equipment Inventory Table Data

You can schedule the export of Equipment Inventory table data to a flat file.

The Export Equipment Inventory Table dialog box allows you to export the data as comma-separated values (CSVs) or tab-separated values (TSVs), which are formats commonly used to import data into spreadsheet and database applications for further analysis and manipulation. You can also select a user-specified character as a separator.

Tip If you export data to Microsoft Excel, save the exported file with ".csv" as the filename extension.

To open the Export dialog box, open the Equipment Inventory table for the NE(s); then, click the **Export Data to File** tool (or choose **File > Export**). The following table provides descriptions. After making your selections, click **OK** to export the data.

Table 11-14 Field Descriptions for the Export Equipment Inventory Table Dialog Box

Field	Description
Field Separator	
Comma separated	If selected, the data is exported as comma-separated values.
Tab separated	If selected, the data is exported as tab-separated values.

Table 11-14 Field Descriptions for the Export Equipment Inventory Table Dialog Box (continued)

Field	Description
Other	If selected, the data is exported with the separator that you specify in the Other text field. **Note** If you specify a character as a separator and your data contains the same character, the character in the data is automatically enclosed in double quotes. This allows the spreadsheet or database application to understand that the character is part of your data. Regardless of whether you select Comma separated, Tab separated, or Other, Prime Optical automatically encloses text in double quotes if it has a separator.
Export	
Selected row(s)	If selected, only the selected rows in the current page are exported.
All rows in current page	If selected, all rows in the current page are exported.
Export Data	
Local (file)	If selected, data is exported to a local file on your system. Specify the path directory and the filename. With the Local option, you can export selected rows or all rows in the Equipment Inventory table. By default, exported data is stored in the C:\Cisco\TransportManagerClient*version*\exports file.
Server (dir)	If selected, data is exported to a directory on the server. The directory path is a fixed, display-only string. With the Server option, you can export all rows in the Equipment Inventory table; you cannot export selected rows. By default, exported data is stored in the /opt/CiscoTransportManagerServer/export directory.
Time	
Time (*time zone*)	Set a time for the export. Click **Now** to begin exporting immediately, or click **At Time** and specify when to begin exporting, in 5-minute increments. For local exports, you can only select **Now**. For server exports, you can select **Now** or **At Time**. **Note** The time zone can be GMT, a user-defined offset from GMT, or local time, depending on what is specified in the User Preferences dialog box.
Repeat	
Once	If selected, the export of inventory data to the server occurs once.
Daily	If selected, the export of inventory data to the server occurs daily.
Weekly	If selected, the export of inventory data to the server occurs weekly.
Monthly	If selected, the export of inventory data to the server occurs monthly.
Job Comments	
Job Comments	Enter comments about the export. The comments will be attached to the scheduled job.

Filtering the Equipment Inventory Table

Step 1 Select a node in the Domain Explorer or Subnetwork Explorer tree.

Step 2 Choose **Configuration > CTC-Based SONET NEs > Equipment Inventory Table**. The Equipment Inventory table opens. (See Figure 11-2.)

Step 3 Choose **File > Filter** (or click the **Filter Data** tool). The Filter dialog box opens.

Step 4 Specify the filter criteria to display the results in the table. The following table describes the fields in the filter.

Step 5 Click **OK**. The filtered data is displayed in the Equipment Inventory table.

Table 11-15 Field Descriptions for the Equipment Inventory Table Filter

Field	Description
NE ID Tab	
Available NE ID/Selected NE ID	List of available NE IDs. Click **Add** and **Remove** to move NE IDs to and from the Selected NE ID list. **Note** Use the scroll bars at the bottom and right side of the Available NE ID list and the Selected NE ID list to display all options in the lists.
Other Tab	
Disregard All Other Filter Criteria	Check this check box to ignore all other filter criteria.
Exclude out of service NEs	Check this check box to exclude any NEs that are marked Out of Service.
Actual Equipment Type	NE model type.
HW Part Number	Part number used for the card.
Hardware Version	Hardware version of the card. (Not applicable if the slot is empty.)
Firmware Version	Firmware version of the card.
CLEI Code	CLEI code for the device. CLEI code is an industry-standard code that precisely defines a component.