



CHAPTER 11

Viewing the Network Element Inventory

The Cisco ANA solution maintains continuous, real-time discovery of all the physical and logical entities of the network inventory and the relationships among them. It automatically reflects in its distributed system inventory every addition, deletion and modification that occurs in the network.



Note The window displayed for all the devices is similar in appearance, but the information that can be viewed for each device may vary.

These topics describe how to view the physical and logical inventory of a selected device in any mapped network:

- [Opening the Inventory Window, page 11-1](#), describes how to open the Inventory window. In addition, it describes the Inventory window, including the tree pane, device view panel, toolbar, ticket pane and workspace.
- [Viewing Physical Inventory, page 11-6](#), describes how to view the physical inventory of a selected device and port. In addition, it describes opening the port utilization graph, and managing port alarms.
- [Viewing Logical Inventory, page 11-8](#), describes how to view the logical inventory of a selected device.
- [Opening the DLCI/VC/Cross Connect Table, page 11-10](#), describes how to open the DLCI, VC, or Cross Connect table on a selected port.

The Inventory window also enables the user to view all the tickets that are collected on the selected NE in the ticket pane. For more information, see [Ticket Pane, page 11-6](#).

Opening the Inventory Window

The Inventory window enables you to perform the following functions:

- View physical and logical inventory information.
- View tickets for the device.
- Open the port utilization graph.
- Open the DLCI, VC and Cross Connect tables.
- Open the Cisco PathTracer.
- Add or remove links.

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- Manage the alarms being sent on a port.
- Open the Command Builder to create customized commands.
- Open the Cisco ANA Soft Properties Manager to extend the amount of information displayed. For more information, see the [Cisco Active Network Abstraction 3.6.6 Customization User Guide](#).

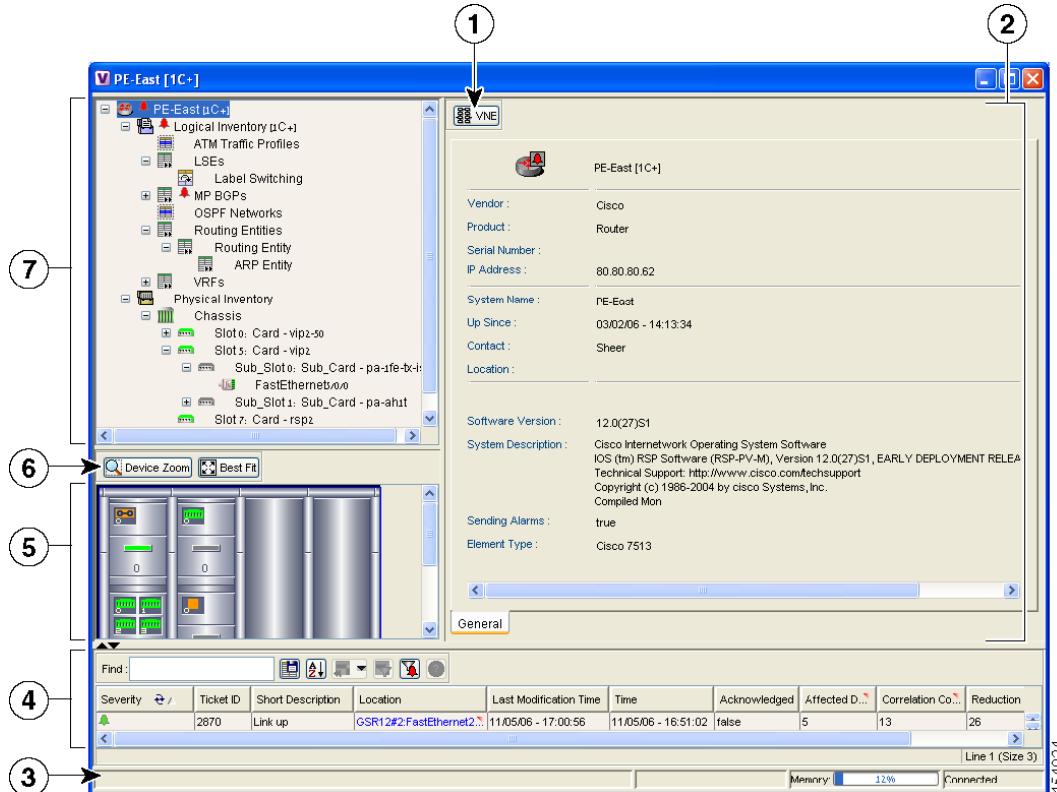
For more specific information on MPLS-TE (Traffic Engineering) tunnels and Cisco ANA Network's Traffic Engineering Tunnel viewing capabilities, see the [Cisco Active Network Abstraction 3.6.6 MPLS User Guide](#).

To open the Inventory window, do one of the following:

- Double-click a device in the tree pane or map pane,
- Select a device in the tree pane or map pane or device view and on the toolbar click  ,
- Right-click a device in the tree pane or map pane to display the Device shortcut menu and select **Inventory**.

[Figure 11-1](#) provides an example of an inventory window.

Figure 11-1 Inventory Window



1	VNE Properties icon (launches VNE view)	5	Device view panel
2	Properties pane, including tabs and tables	6	Device view panel toolbar
3	Status bar	7	Tree pane
4	Ticket pane		

- To view physical inventory information, open the  physical inventory branch.
- To view logical inventory information, open the  logical inventory branch. For more information about logical inventory information see [Viewing Logical Inventory, page 11-8](#).



Note Click in the top right corner to close the Inventory window.

The Inventory window displays the physical and logical inventory for the selected device. The Inventory window is divided into the following areas:

- [Tree Pane, page 11-3](#)
- [Device View Panel, page 11-5](#)
- [Device View Panel Toolbar, page 11-5](#)
- [Ticket Pane, page 11-6](#)
- [Information Tabs and Tables in the Properties Pane, page 11-6](#)

All the areas displayed in the Inventory window are correlated; this means that selecting an option in one area affects the information displayed in the other areas.

The information displayed in the Inventory window varies according to the network element or network element component selected in the tree pane.

For more information about the right-click shortcut menus that are displayed in the Inventory window, see [Cisco ANA NetworkVision Shortcut Menus, page 2-22](#).

Tree Pane

The tree pane displays a tree-and-branch representation of the selected device and all its modules. The tree pane is divided into two main branches: logical inventory and physical inventory.

The window heading and the highest level of the tree pane displays the name of the VNE given to the device as defined in Cisco ANA Manage. The highest level of the tree pane also displays the device icon and status. For more information about icons, see [Appendix A, “Icon Reference.”](#)

The color of the device icon in the tree pane reflects its severity. In addition, the color of the network element component in the device view panel is the same as the color of the network element component in the tree pane. For more information about severity and status, see [Network Element Status Indicators, page 2-13](#).

The branches of the tree pane display the different network element components, for example, a chassis, card and so on. When a network element component is selected in the tree pane, the information displayed in the Information tabs and tables in the properties pane is updated. The branches in the tree pane can be expanded and collapsed to display and hide information as needed.

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Figure 11-1 displays the different network element component icons used to display physical inventory in the tree pane of the Inventory window.

Table 11-1 Physical Inventory Icons

Icon	Device
	Chassis
	Shelf
	Slot/Subslot
	Port/Logical Port
	Unmanaged Port

For more information about the device icons displayed, see [Appendix A, “Icon Reference.”](#) A business tag can be attached to the selected network element component by right-clicking. For more information about business tags, see [Chapter 12, “Working with Business Tags.”](#)

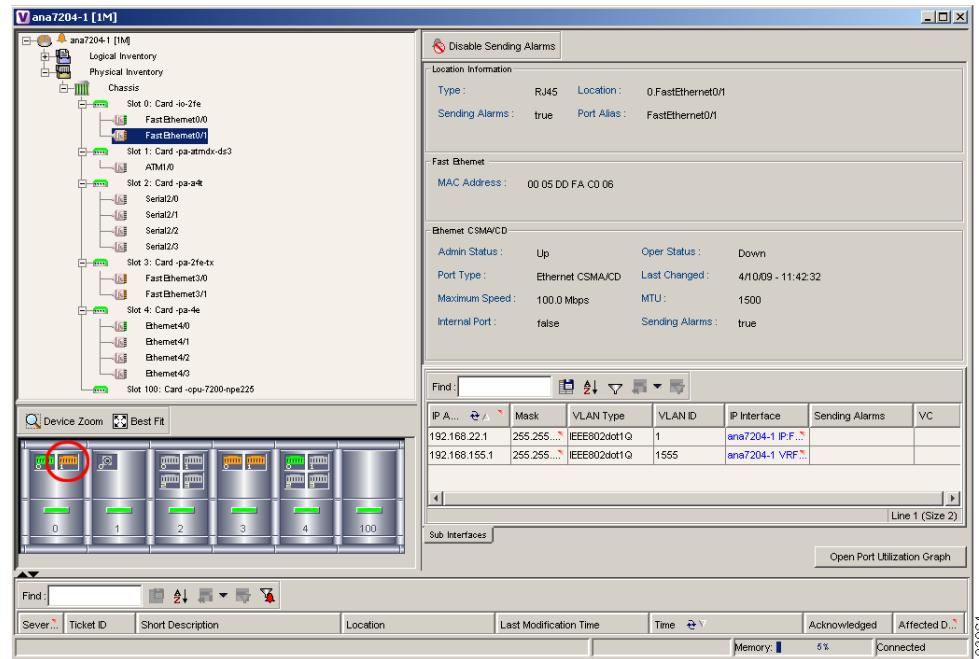
For more information about the right-click menus that are displayed in the tree pane of the Inventory window, see [Cisco ANA NetworkVision Shortcut Menus, page 2-22.](#)

Device View Panel

The device view panel provides a way for you to visually locate network elements in the chassis and identify their status. All occupied slots in the chassis are rendered in the device view panel. If a port is down, it is shown in red in both the tree pane and the device view panel, allowing you to quickly pinpoint the problem.

Figure 11-2 is an example of a device view panel for a Cisco 7204VXR router. The six slots in the device view panel correspond to the six slots in the physical inventory tree. **Figure 11-2** also illustrates what is displayed when the user clicks the circled port. Cisco ANA displays both the element's properties and its location in the physical inventory tree.

Figure 11-2 Device View Panel



Device View Panel Toolbar

The Inventory window contains the following tools that are connected to the device view panel:

	Displays an enhanced view of the network element components within the device in the browse box as you move over the device view panel with the selection tool.
	Fits the entire view of the device displayed in the device view panel.

Ticket Pane

The ticket pane is displayed at the bottom of the Inventory window. The tickets displayed relate to the element selected in the tree pane. For more information about the ticket pane, see [Ticket Pane, page 2-11](#).



Note The ticket pane can be displayed or hidden by clicking the arrows displayed below the device view panel.

Information Tabs and Tables in the Properties Pane

The Information tabs and tables in the properties pane enable you to view physical and logical inventory information, depending on your selection in the tree pane or device view panel, for example, chassis or port information. The inventory information displayed in the Inventory window varies according to the device or network element component selected in the tree pane.

The properties pane displays context-sensitive tabs and toolbars; the tools displayed depend on your selection in the tree pane or device view panel. For example, when an ATM port is selected, the Show VC Table tool is displayed on the toolbar.

In addition, the user can display the properties of a row in a table by double-clicking the row in the table or by right-clicking it and selecting Properties from the shortcut menu.

For more information about the toolbar displayed in the table of the properties pane, see [Working with Cisco ANA NetworkVision Tables, page 2-29](#).

Viewing Physical Inventory

Each device that is managed by Cisco ANA is modeled in the same manner. The physical inventory reflects the physical components of the managed network element. Cisco ANA NetworkVision enables the user to view physical inventory information for the following modules:

- Device—for a detailed description of device properties, see [Viewing the Properties of a Device, page 10-1](#).
- Chassis
- Shelves
- Slots
- Subslots
- Ports, including logical ports

Pluggable transceiver modules on Cisco equipment are displayed in a three-level hierarchy:

container object

module (such as an SFP container)

port (such as an SFP or GBIC port)



Note Cisco ANA supports IPv6 on certain devices running VPNs over MPLS networks. For information this support, see the [Cisco Active Network Abstraction 3.6.5 MPLS User Guide](#).

Physical inventory is continuously updated for both status and configuration. The addition of a new card, removal of a card or any change to the device is reflected by the VNE and updated instantly.

The system also includes built-in properties (system properties) for each network element. This includes information such as MAC address, MTU and media type.

**Note**

The window displayed for all the devices is similar in appearance. However the network element components contained in each device can vary, for example, chassis, shelf, subport and so on.

The information displayed in the Inventory window changes according to the device type, device and network element component selected in the tree pane.

The following buttons may be displayed in the Inventory window for physical inventory:

- Show DLCI Table | Show VC Table | Show Cross Connect Table—Displays the DLCI, VC, or Cross Connect table of the selected port. For more information, see [Opening the DLCI/VC/Cross Connect Table, page 11-10](#).
- Open Port Utilization Graph—Displays the selected port traffic statistics: Rx/Tx Rate and Rx/Tx Rate History. For more information, see [Opening the Port Utilization Graph, page 11-7](#).
- Disable Sending Alarms—Enables the user to manage the alarms on a port. For more information, see [Managing Port Alarms, page 11-8](#).

For information about configuring topology from a port, see [Adding Static Links, page 14-7](#).

Opening the Port Utilization Graph

Cisco ANA NetworkVision enables you to display the online information of a port: Rx/Tx Rate and Rx/Tx Rate History.

To open the port utilization graph:

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- Step 1** Open the Inventory window and double-click the required port. The properties window for that port opens.
- Step 2** Click **Open Port Utilization Graph** in the port properties window. The Port Statistics dialog box is displayed.

The following areas are displayed in the Port Statistics dialog box:

- Rx Rate—The reception rate as a percentage.
- Rx Rate History—The reception rate history is graphically displayed.
- Tx Rate—The transmission rate as a percentage.
- Tx Rate History—The transmission rate history is graphically displayed.

- Step 3** Click to close the Port Statistics dialog box.
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Managing Port Alarms

The user can enable or disable the alarms on a selected port. By default, alarms are enabled on all ports. When the alarms are disabled on a port, no alarms will be generated for the port and they will not be displayed in the ticket pane.

To disable a port alarm:

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- Step 1** Open the Inventory window to select the required port.
- Step 2** Do one of the following from the physical inventory tree:
- Right-click the required port and choose **Disable Sending Alarms**,
 - Click the port, and click **Disable Sending Alarms** in the context pane.

The Sending Alarms field in the Location Information area of the Context pane displays the value false. This indicates that the alarm for the required port has been disabled. In addition, the toolbar in the properties pane now displays the Enable Sending Alarms tool.

The user can enable the alarms on a port at any time.

To enable a port alarm:

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- Step 1** Open the Inventory window to select the required port.
- Step 2** In the physical inventory tree, click the port and click **Enable Sending Alarms**. in the context pane.
- The Sending Alarms field in the Location Information area of the properties pane displays the value true. This indicates that the alarm for the required port has been enabled.
- In addition, the toolbar in the properties pane now displays the Disable Sending Alarms tool.
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Viewing Logical Inventory

Cisco ANA NetworkVision enables you to view logical inventory information. Cisco ANA maintains logical inventory for each device. The logical inventory reflects dynamic data such as configuration data, forwarding and service-related components, which affect traffic handling in the device.

The information displayed in the Inventory window changes according to the device type and branch selected in the tree pane.

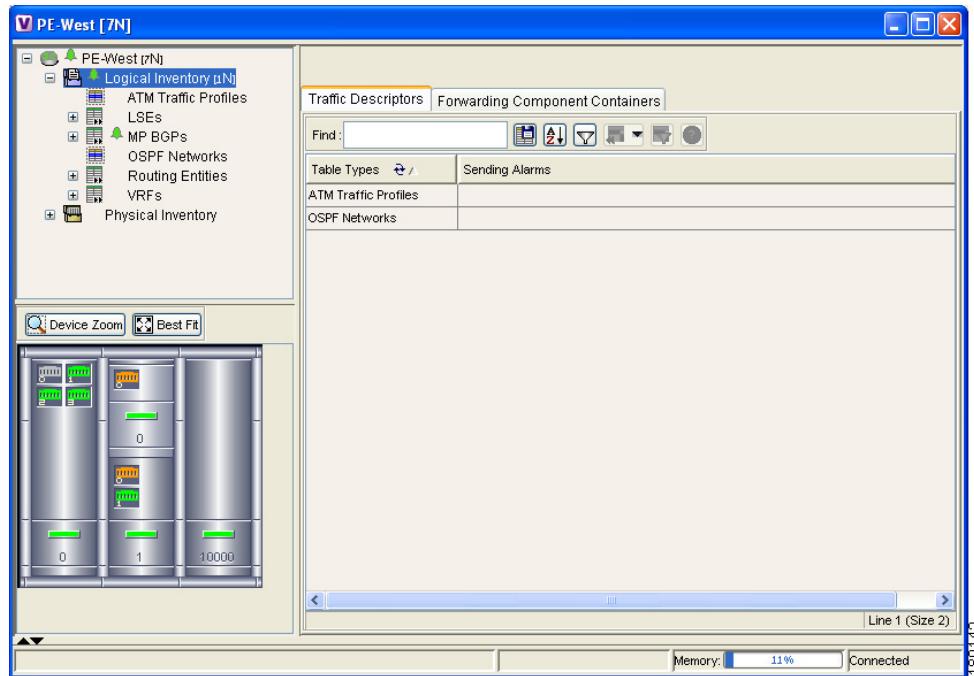


- Note** Cisco ANA supports IPv6 on certain devices running VPNs over MPLS networks. For information this support, see the [Cisco Active Network Abstraction 3.6.5 MPLS User Guide](#).
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Logical Inventory Window

Logical inventory information is displayed in the Inventory window, which can be divided into tabs, for example, Traffic Descriptors and Forwarding Component Containers, as shown in [Figure 11-3](#).

Figure 11-3 Logical Inventory Information Displayed in the Inventory Window



For more information about opening the Inventory window, see [Opening the Inventory Window, page 11-1](#).

The Traffic Descriptors tab enables you to view the profiles for which logical inventory information can be displayed, for example, Frame Relay Traffic Profiles and ARP Entities.

The logical device information is also updated in the model of the network element in order to accurately reflect the traffic handling which is being performed by the device at any time.

The Forwarding Component Containers tab enables you to view a list of context profiles for which logical inventory information can be displayed, for example, VRFs and Routing Entities.



Cisco ANA NetworkVision now provides enhanced support for the Generic SNMP VNE. The user can now view Bridge and ARP table information.

Opening the DLCI/VC/Cross Connect Table

The DLCI/VC/Cross Connect Table enables you to view DLCI, VC, and Cross Connect information on a selected port. For example, the Cross Connect table enables you to view in and out port cross connect information, including cross connect information for unmanaged networks, Frame Relay, and ATM devices.

To open the DLCI/VC/Cross Connect table:

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- Step 1** Right-click a device in the tree pane or context pane and choose **Inventory**. The Inventory window for the selected device is displayed.
 - Step 2** Open the physical inventory branch and drill down to the required port.
 - Step 3** Click **Show DLCI Table/Show VC Table/Show Cross Connect Table** on the toolbar of the Context pane. The relevant dialog box is displayed.
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