CHAPTER 3

# Creating a Topology

## Overview

This chapter presents a tutorial describing how to display a baseline topology and how to use the features available in the Topology window. The Topology window presents a visual representation of a network represented by a baseline. The Topology window is used in conjunction with other Connectivity Tools features to accomplish the tasks described in this tutorial. Refer to "Creating and Opening a Baseline" for information on how to create and load a baseline into the baseline model.

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**Note** We recommend you proceed through this tutorial with the Connectivity Baseliner or Connectivity Solver running.

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This tutorial describes how to:

**Step 1** Display a baseline topology.

**Step 2** Search for a specific device within the topology:

- using the **Find Device** option
- using the **Round Trip Path** List

**Step 3** Display the attributes of a router.

**Step 4** Zoom in on a particular topology area.

**Step 5** Print the topology.

**Step 6** Display IP or IPX routes in the topology.

# Tutorial

Having proceeded through the steps of creating and opening a baseline, as described in the first tutorial, the Connectivity Tools window, shown in Figure 3-1, is displayed.


**Figure 3-1 Connectivity Tools Window (Solver): Baseline Scenario Created**

**Step 1** Click on the **Topology** button.

By default, the *tutorial_baseline* topology is displayed as a campus IP view in the Topology window, as shown in Figure 3-2.

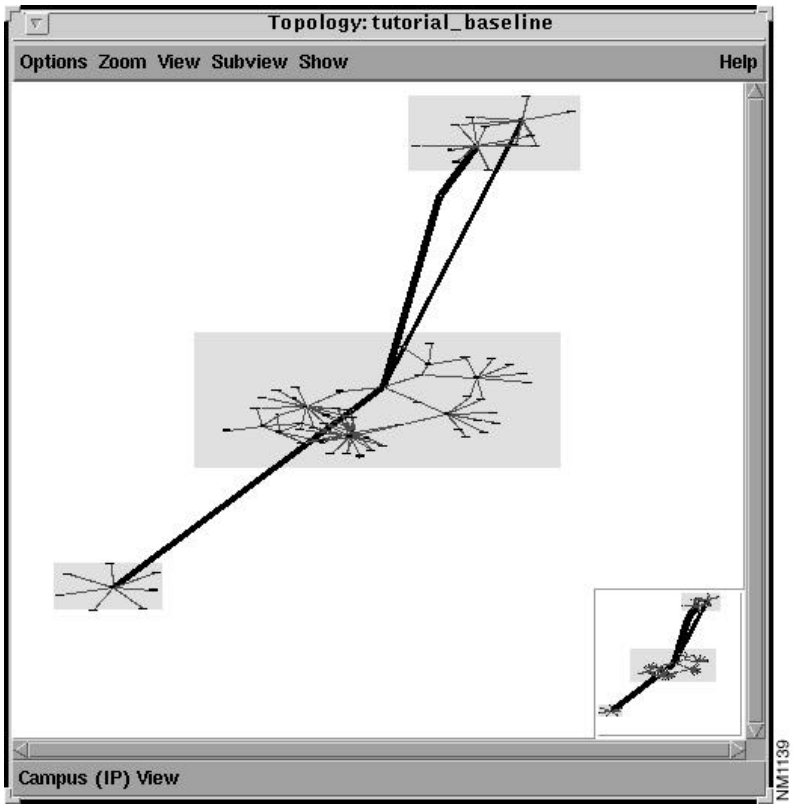


**Figure 3-2 Topology Window: tutorial_baseline Campus IP View**

To display the topology in a flat view, as shown in Figure 3-3, select the **View>Flat** menu option.

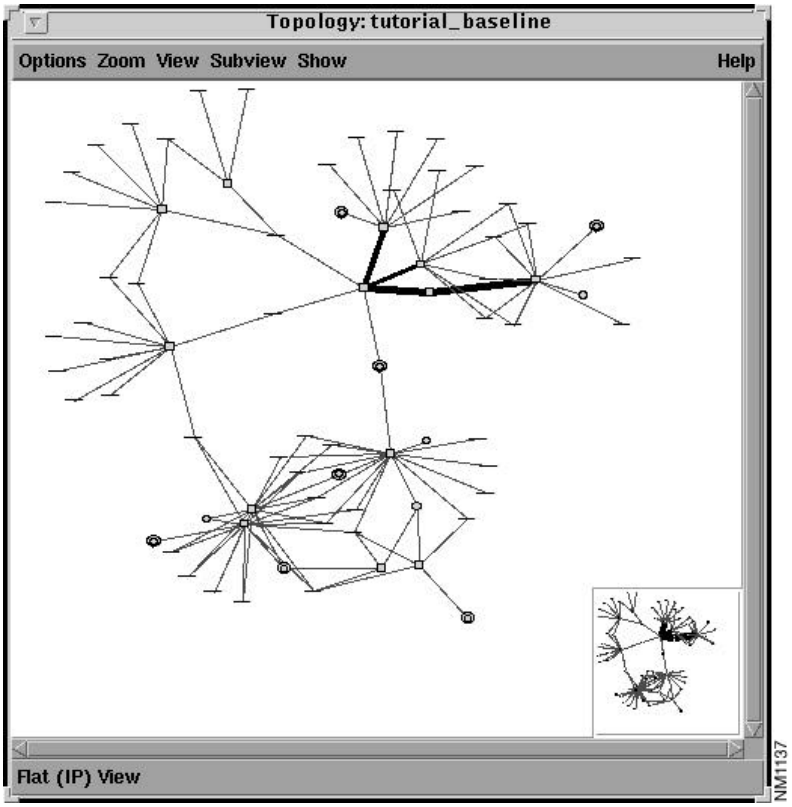


**Figure 3-3 Topology Window: Flat IP View**

**Note** You can permanently display the Options, Zoom, View, Subview, and Show menus by pressing **ADJUST** over a menu and then dragging and dropping the menu to the location on the screen you desire. You then have easy to access to the menu options. To dismiss the menu options, click **SELECT** on the menu.

Various options are available, via the Show menu, for determining the display characteristics of the Topology window. Network element names/addresses, links, campus labels, terminal LANs, a summary map, a Status Bar, and mouse button functions can all be displayed, or not, depending on the Show menu options selected. The color scheme and fonts used in the Topology window can also be modified by selecting the **Options>Preferences** menu option. See Chapter 4, “Creating the Topology,” in the *Enterprise/Solver Connectivity Tools Reference Guide* for detailed information about the menu options provided within the Topology window.

A device can be located within the Topology window in one of the following ways:

- using the Find Device feature from the Connectivity Tools window
- placing the cursor within a device or network element’s configuration window

- slowly moving the cursor over the network element icons. The router name or LAN element's address is displayed in the right-hand portion of the Status Bar in the Topology window.
- selecting an entry from the **Round Trip Path** list in the Round Trip Path window (only available with the Connectivity Solver.)

**Step 2** Select the **Options>Find Device** menu option in the Connectivity Tools window.

The Find Device window, as shown in Figure 3-4, is displayed when you click on the **Search** button with the default selections in effect. A search for all routers known by the current baseline is performed with the default options in effect. The known routers are displayed in the **Results** list.

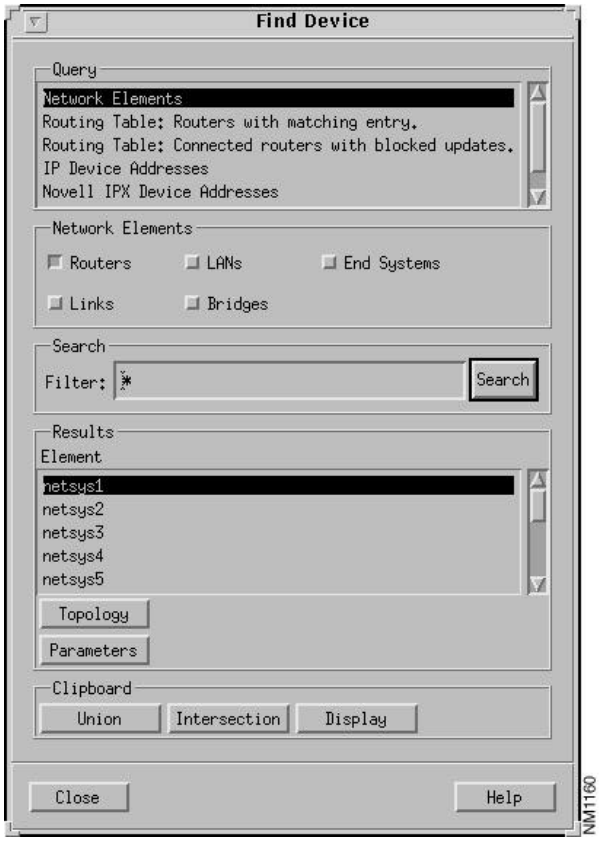


**Figure 3-4 Connectivity Tools Find Device Window**

**Step 3** Select the **netsys5** router entry in the **Results** list.

The **netsys5** router icon is highlighted in the Topology window, as shown in Figure 3-5.

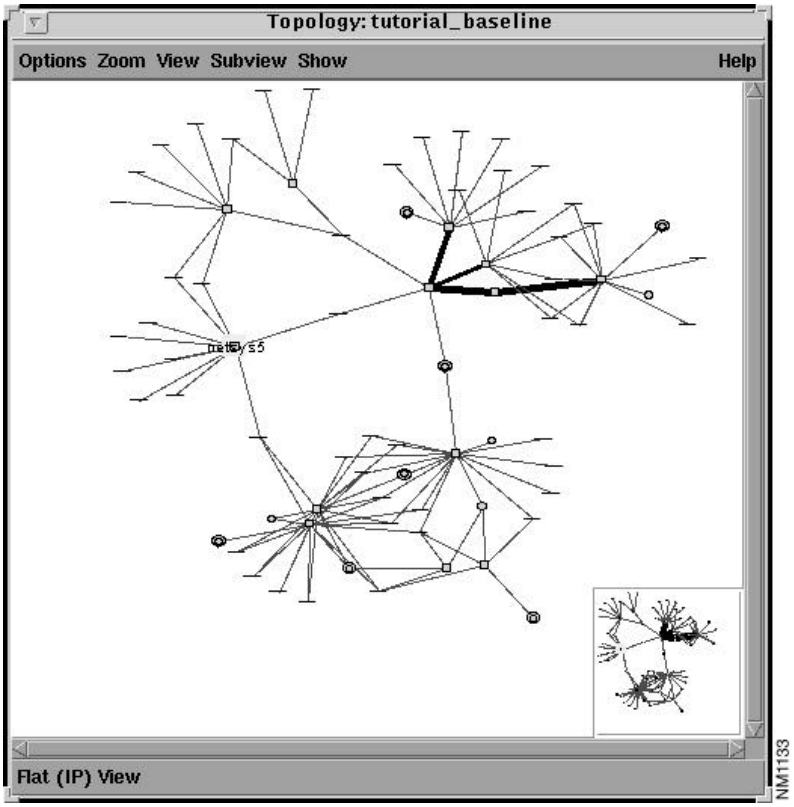


**Figure 3-5 Topology Window: Search Results (netsys5 router) Highlighted**

**Step 4** To view or modify the **netsys5** router attributes, double-click on its highlighted router icon.

The Router Configuration window is displayed, shown in Figure 3-6. To display the attributes of a LAN element, double-click on a LAN element icon. To display the attributes of a Link segment, double-click on a link segment icon. To make it easier to know when the cursor is over a particular device, the device name or element address is displayed in the Status Bar in the Topology window. When the name/address is present, double-click to display the corresponding Router/LAN/Link/End System Configuration window.

An alternative method for displaying a network element configuration window is to select the desired network element entry in the Find Device window's **Results** list, then click on the **Parameters** button.

When using the Connectivity Baseliner, the network element attributes can only be viewed. When using the Connectivity Solver, the network element attributes can be modified, as well as viewed. To modify network element attributes and connectivity requirements, the following restrictions exist:

- you must be using the Connectivity Solver
- you must *not* be using the initial baseline scenario
- you must be using the last scenario (when multiple scenarios have been created) in the Connectivity Tools window's **Scenarios** list.

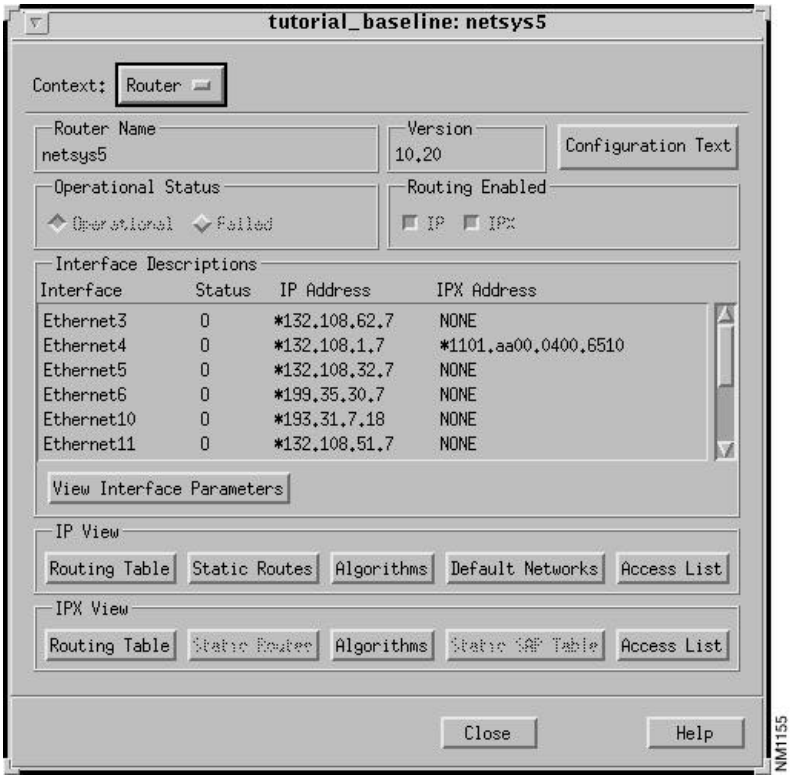


**Figure 3-6 Router Configuration Window for the netsys5 Router**

The icon shapes representing devices (routers), links, and LAN segments (Token Ring, FDDI, LAN), and links (serial, HSSI, Frame Relay, BRI) are as follows:

- router - rectangle
- TokenRing - ellipse
- FDDI - ellipse within an ellipse
- LAN - horizontal line
- link - thin line
- serial link - thick line

**Step 5** Select the **Zoom>In** menu option.

The Topology window is redrawn as shown in Figure 3-7. To zoom in on a specific area in the topology, use this option or double-click **MENU** in the desired area in the Topology window. Draw a bounding box around the specific area to focus on (zoom in option.) Click **ADJUST** to display the area within the bounded box in a smaller scale (zoom out option.) Double-click **MENU** to display the entire topology within the Topology window (all to fit option.)

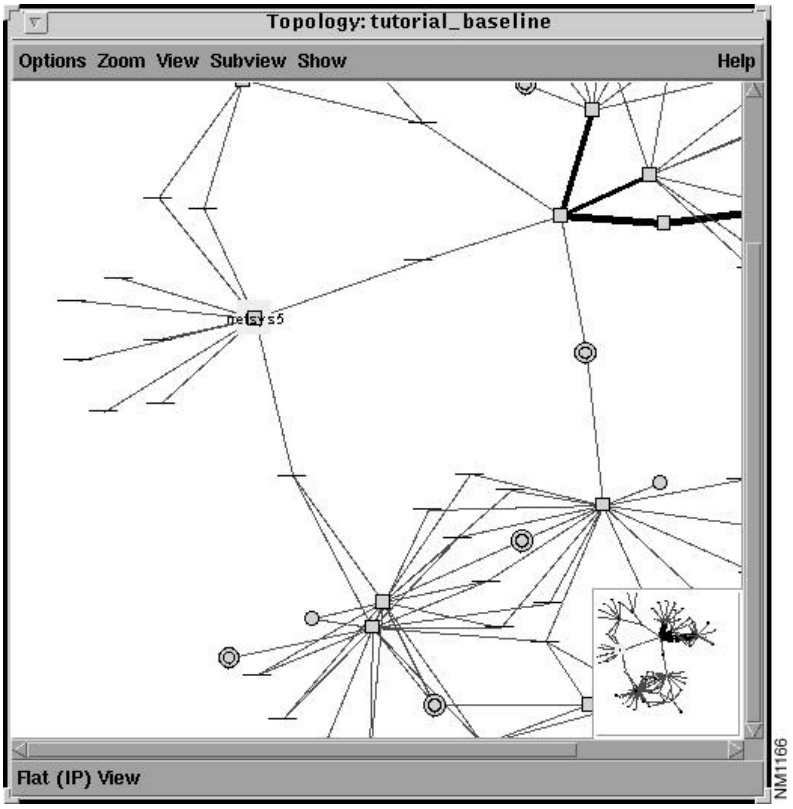


**Figure 3-7 Zoomed In Topology Window**

**Step 6** Select the **Options>Print** menu option.

The Print Options window, shown in Figure 3-8, is displayed. The topology can be printed to a file (in PostScript format) and/or to a PostScript printer using the default print command.

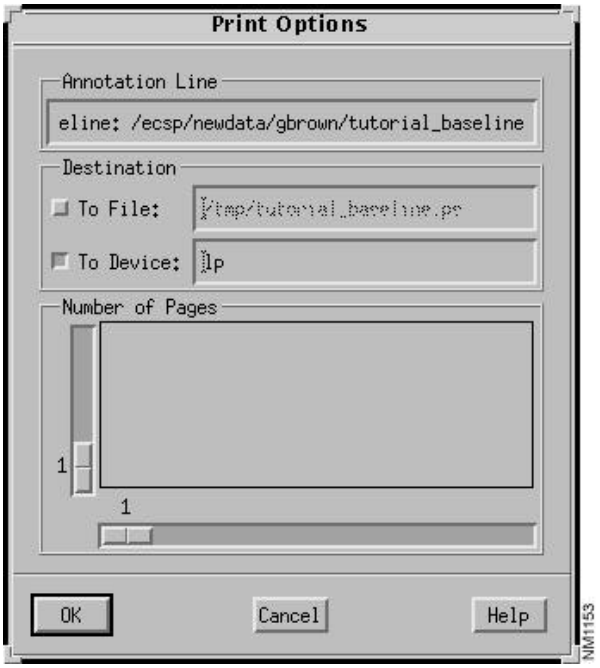


**Figure 3-8 Topology Print Options Window**

**Step 7** Click on the **To Device** button, specify a print command if different from the default, then click on the **OK** button.

A copy of the topology is sent to the default PostScript printer using the **lp** print command.

**Step 8** Select the **Subview>IPX** menu option to display the IPX paths in the Topology window, as shown in Figure 3-9.

Click on the **Subview>IP** menu option to display the IP paths again.

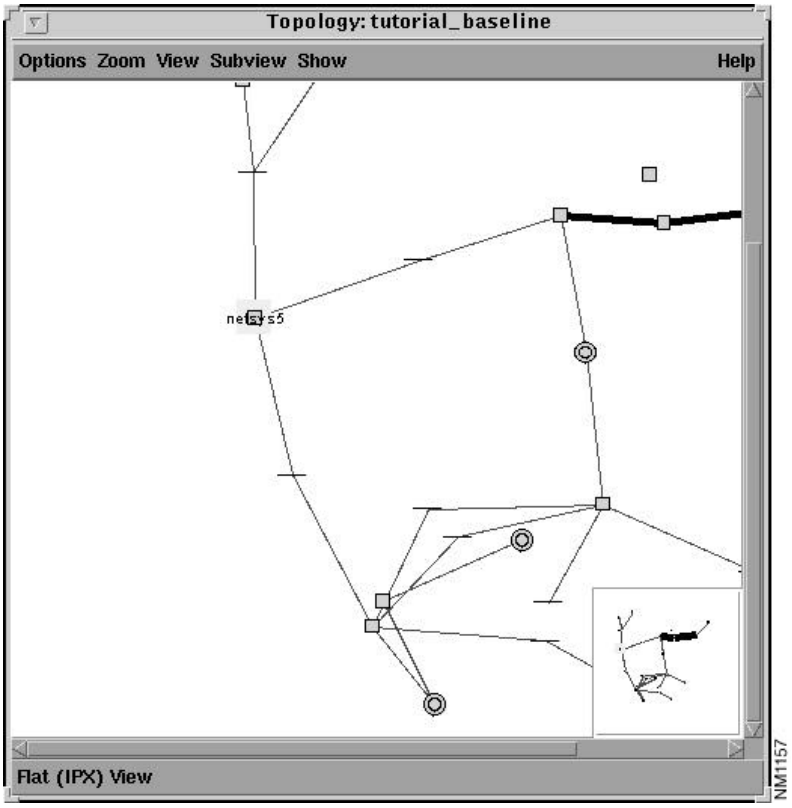


**Figure 3-9 Topology Window: IPX Paths Displayed (zoomed-in display)**

When using the Connectivity Solver, the Requirements Analysis and Round Trip Path windows can be used to locate a router and display paths in the Topology window. To use the Round Trip Path window to locate a network element, connectivity requirements must be viewed or created. The details of viewing and creating connectivity requirements are described in “Round Trip IP Connectivity Requirements.”