

Router Configuration Windows

This chapter describes the components of the following windows:

- Router Configuration
 - Configuration Text
 - Save Configuration Information
 - Interface Parameters

The Router Configuration window is used to access router configuration attributes. As there are numerous router related attributes, many windows can be displayed from actions initiated in the Router Configuration window. See “IP Configuration Windows” for detailed information about IP-related attributes and the corresponding windows displayed as a result of clicking on IP-related buttons. See “IPX Configuration Windows” for detailed information about IPX-related attributes and the corresponding windows displayed as a result of clicking on IPX-related buttons.

Note The Connectivity Baseline allows router and router interface attributes to be viewed, *not* modified. The Connectivity Solver allows router and router interface attributes to be modified as well. Router attribute modification is only possible when using the last scenario in the Connectivity Tools window’s Scenarios list. When using any other scenario, including the initial baseline scenario, the attributes may only be *viewed*. It is through the modification of router attributes that “what-if” simulations occur.

General Window Components

The following buttons are present in several windows. For brevity, they are described once here.

- Context

The **Context** button is used as a mechanism for switching the context from one Router Configuration window to or from another. It allows navigation to and from subsequently invoked windows. For example, if you click on the **Routing Table** button in the Router Configuration window, the IP Routing Table window is displayed. Clicking on the **Context** button at this point displays Router and IP Routing Table menu options. Select the Router option to dismiss the IP Routing Table window and display the Router Configuration window.
- Apply

Click on the **Apply** button to apply changes you have made in the current window. This button is not displayed when using the Connectivity Baseline, when the initial baseline scenario is selected, or when a baseline scenario other than the last scenario in the Scenarios list in the Connectivity Tools window is selected.

- Revert

Click on the **Revert** button to undo the changes made since you last clicked on the **Apply** button. This button is not displayed when using the Connectivity Baseline, when the initial baseline scenario is selected, or when a baseline scenario other than the last scenario in the Scenarios list in the Connectivity Tools window is selected.

- Close

Click on the **Close** button to dismiss the current window.

- Help

Provided you have access to a Mosaic™ or Netscape™ HTML browser, clicking on the **Help** button displays documentation about the corresponding window. The HTML browser specified by the ECSP_HELPVIEWER environment variable is used for this purpose.

Router Configuration Window

You display the Router Configuration window in one of the following ways:

- by double-clicking on a router icon in the Topology window
- by double-clicking on a router entry in the Find Device window's Results list or by selecting a router entry and then clicking on the **Parameters** button
- by double-clicking on a router entry in the Round Trip Path window's Round Trip Path list
- by double-clicking on an entry in the Report window's Diagnostic Report list
- by selecting a router entry in the Configuration Changes window and then clicking on the **Parameters** button.
- by pressing the right mouse button over a router icon in the Topology window and then selecting the **Display Parameters** option.

See "Topology Window" for detailed information about the Topology window. See "Round Trip Path Window" for detailed information about the Round Trip Path window and "Find Device Window" for detailed information about the Find Device window. Tutorials pertaining to some of the features described in this chapter are provided in the *Enterprise/Solver Connectivity Tools User's Guide*.

A Router Configuration window, shown in Figure 8-1, is used to view and modify router and router interface attributes. Placing the cursor or clicking (if the mouse is set to click-to-focus mode) within a Router Configuration window highlights that router's icon in the Topology window if it is displayed.

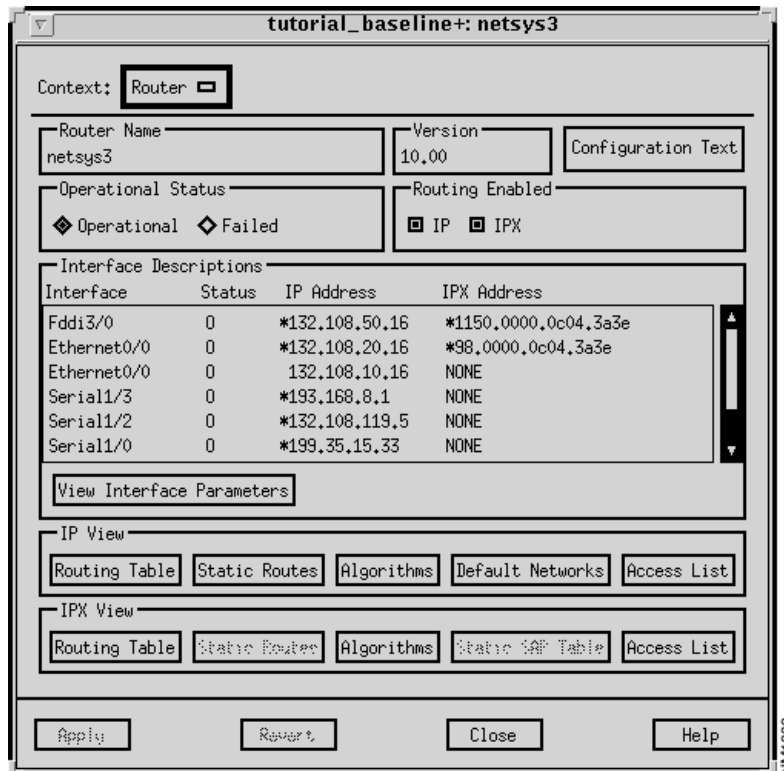


Figure 8-1 Router Configuration Window: netsys3 router

Router Configuration Window Components

This window's components are described in the following sections. See "General Window Components" for a description of the **Context**, **Apply**, **Revert**, **Close**, and **Help** buttons.

Router Name

The name of the router is displayed in this pane.

Version

The IOS software version number as specified by the **version** command in the router configuration file, is displayed in this pane.

Configuration Text

Click on this button to display the Configuration Text window. A version of the router configuration file, showing the commands modeled by the Connectivity Tools, is displayed. When using the Connectivity Baseline, the contents of this file do not change. When using the Connectivity Solver, modifications made to the current router attributes are also shown in this text file. You can save the configuration text file for future reference. See "Configuration Text Window" for a detailed description of the Configuration Text window components.

Operational Status Buttons

Click on the appropriate toggle button to change the operational status of the router to the desired setting (**Operational/Failed**). Clicking on the **Failed** button followed by the **Apply** button turns the corresponding router icon in the Topology window red. Subsequently clicking on the **Operational** button followed by the **Apply** button turns the corresponding icon in the Topology window back to its original color. `Operational` is the default setting.

Note These buttons are not functional when using the Connectivity Baseline or when the baseline scenario or any scenario other than the last scenario in the Scenarios list in the Connectivity Tools window is selected.

Routing Enabled Buttons - IP and IPX

Click on the appropriate toggle button to enable/disable the router for IP and/or IPX routing.

Interface Descriptions - Interface

The symbolic interface names supported by the router, as specified by the **interface** command in the router configuration file, are listed in this column. Also listed are the router's slot and/or port numbers. For example, the **Interface** entry `Ethernet2/5` corresponds to an Ethernet interface using the Cisco Series 7000 backplane slot number 2 and port number 5. To obtain additional information about or modify a particular interface's attributes, select it from the list of interfaces, then click on the **View Interface Parameters** button. The Interface Parameters window is displayed. See "Interface Parameters Window" for a description of the Interface Parameters window components.

Interface Descriptions - Status

The current state of the router interface is displayed in this column. The state is either Operational (O) or Failed (F).

Interface Descriptions - IP Address

The router interfaces' IP addresses, in dotted-decimal format, as specified by the `ip address` interface subcommand in the router configuration file, are listed in this column. The primary address is displayed with an asterisk as the first character, whereas secondary addresses do not have an asterisk as a first character.

Interface Descriptions - IPX Address

The router interfaces' IPX addresses as specified by the `ipx address` interface subcommand in the router configuration file, are listed in this column.

Interface Descriptions - View Interface Parameters Button

Click on this button to switch the context from the Router Configuration window to the Interface Parameters window. An interface entry in the Interface Descriptions list in the Router Configuration window *must* be selected prior to clicking this button. See "Interface Parameters Window" for a detailed description of the Interface Parameters window components.

IP View - Routing Table Button

Click on this button to switch the context from the Router Configuration window to the IP Routing Table window. Information about the Routing Table as computed in simulation is provided in the IP Routing Table window. See “IP Routing Table Window” for a detailed description of the IP Routing Table window components.

Note This feature is not available in the Connectivity Baseline.

IP View - Static Routes Button

Click on this button to switch the context from the Router Configuration window to the IP Static Routes window. Information about the static routes configured for this router is provided in the IP Static Routes window. See “IP Static Routes Window” for a detailed description of the IP Static Routes window components.

IP View - Algorithms Button

Click on this button to switch the context from the Router Configuration window to the IP Routing Algorithms window. Information about the algorithms used to calculate the Routing Table is provided in the IP Routing Algorithms window. See “IP Routing Algorithms Window” for a detailed description of the IP Routing Algorithms window components.

IP View - Default Networks Button

Click on this button to switch the context from the Router Configuration window to the IP Default Networks window. Information about the default networks configured for this router is provided in the Default Networks window. See “IP Default Networks Window” for a detailed description of the Default Networks window components.

IP View - Access List Button

Click on this button to switch the context from the Router Configuration window to the IP Access List Summary window. A summary of the existing IP Access List numbers and the interfaces and/or routing algorithms they apply to are displayed in this window. See “IP Access List Summary Window” for a detailed description of the IP Access List Summary window components.

IPX View - Routing Table Button

Click on this button to switch the context from the Router Configuration window to the IPX Routing Table window. Information about the routing table as computed in simulation are provided in the IPX Routing Table window. See “IPX Routing Table Window” for a detailed description of the IPX Routing Table window components.

Note This feature is not available in the Connectivity Baseline.

IPX View - Static Routes Button

Click on this button to switch the context from the Router Configuration window to the IPX Static Routes window. Information about the static routes configured for this router are provided in the IPX Static Routes window.

Note This feature is not implemented at this time.

IPX View - Algorithms

Click on this button to switch the context from the Router Configuration window to the IPX Routing Algorithms window. Information about the algorithms used to calculate the routing table are provided in the IPX Routing Algorithms window. See “RIP IPX Algorithm Window” for a detailed description of the IPX Routing Algorithms window components.

IPX View - Static SAP Table

Click on this button to switch the context from the Router Configuration window to the Static SAP Table window. Information about the SAP Table entries are provided in the Static SAP Table window.

Note This feature is not implemented at this time.

IPX View - Access List Button

Click on this button to switch the context from the Router Configuration window to the IPX Access List Summary window. A summary of the existing IPX Access List numbers and the interfaces and/or routing algorithms they apply to are displayed in this window. See “IPX Access List Summary Window” for a detailed description of the IPX Access List Summary window components.

Configuration Text Window

The Configuration Text window, shown in Figure 8-2, is displayed in one of the following manners:

- clicking on the **Configuration Text** button in the Router Configuration window
- clicking on the **Config Text** button in the Configuration Changes window

This window displays a version of the router’s configuration file currently understood by the Connectivity Tools, including any router attribute modifications you have made in a scenario. The purpose of this file is to more easily allow you to track the changes made to routers during “what-if” analysis.

Warning The router configuration information displayed in this text file is *not* a usable configuration file for actual implementation in a router. It is a *subset* of the actual router configuration, as only those configuration commands that were parsed to build the baseline are included. It also *does not* include **no** commands. Certain parts of the configuration text file may be useful as is. If so, you can save the router configuration text file and cut and paste the changes into the actual router configuration file.

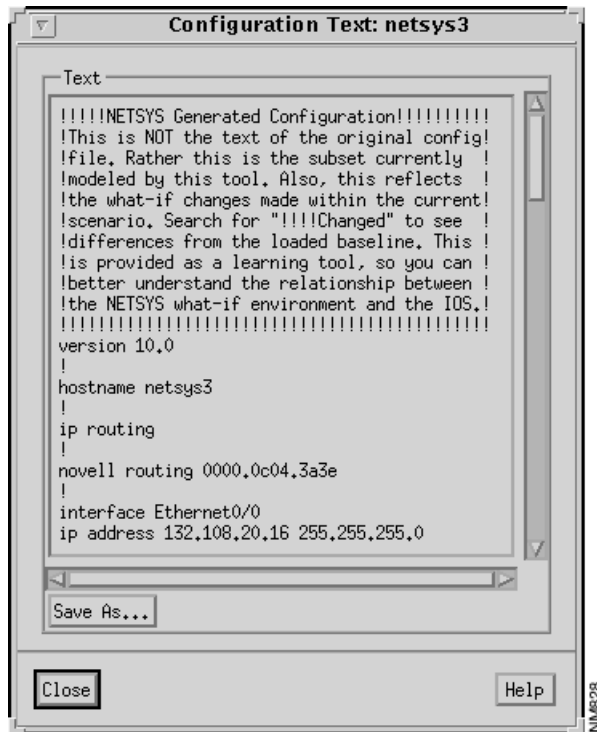


Figure 8-2 Configuration Text Window: `netsys3` Router

Configuration Text Window Components

This window's components are described in the following sections. See "General Window Components" for a description of the **Close** and **Help** buttons.

Text

A version of the router configuration file, showing the commands modeled by the Connectivity Tools, is displayed in this pane. When using the Connectivity Baseline, the contents of this file do not change. When using the Connectivity Solver, modifications you have made to the current router attributes through "what-if" scenarios are denoted by `!!!!Changed` appearing in this text file. For example, if you turn off the IP split horizon feature on an interface, the interface's split horizon entry in the router configuration file changes from `ip split-horizon` to `no ip split-horizon`. You can save the configuration text file for future reference.

Note If you add, delete, or create an access list, the `!!!!Changed` comment is inserted in the router's configuration text file. When you edit an existing access list row, a `!!!!Changed` comment does *not* appear in the configuration text file. However, the modified access list rule is actually inserted in the configuration text file.

The following limitations exist with the configuration text being displayed:

- only the router commands modeled by the Connectivity Tools are included in this version of the router configuration file
- if you plan to merge commands from this configuration into the original router configuration, you can either start with this information and add “no” versions of some commands as necessary, or make use of the “delta commands” feature which automates much of this procedure. See “Configuration Changes Window” for detailed information on the “delta commands” feature.

Save As Button

Click on this button to save a copy of the router configuration text file. The Save Configuration Information window, shown in Figure 8-3, is displayed.

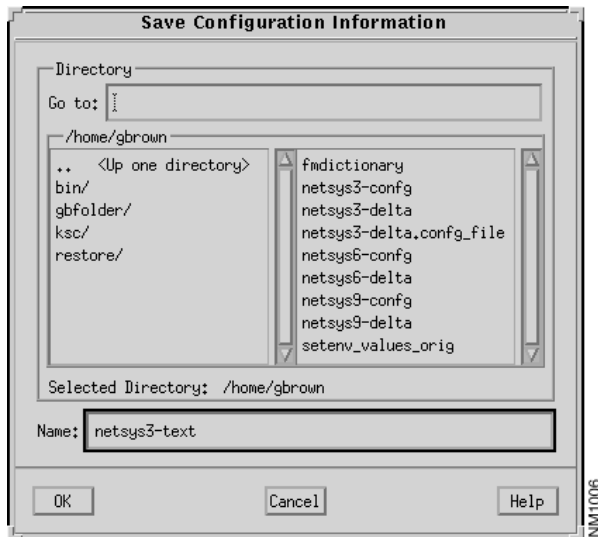


Figure 8-3 Save Configuration Information Window

Specify the name of the file in the **Name** field and its location in the **Go to** field. Navigation through the directories can also be accomplished by double-clicking on an entry in the list of directories displayed in the left pane. The files residing in the current directory are listed in the right pane. The **Selected Directory** field displays the current directory you have either specified or navigated to. The default directory is your home directory. The default file name has a format of *router_name-text*. Click on the **OK** button to save the configuration text to the specified file.

Interface Parameters Window

The Interface Parameters window, shown in Figure 8-4, is displayed when you select a router interface from the Interface Descriptions list in the Router Configuration window, then click on the **View Interface Parameters** button. This window allows you to view or modify the selected router's interface and port attributes. You are also able to view or modify the router's IP and IPX protocol specific parameters from this window.

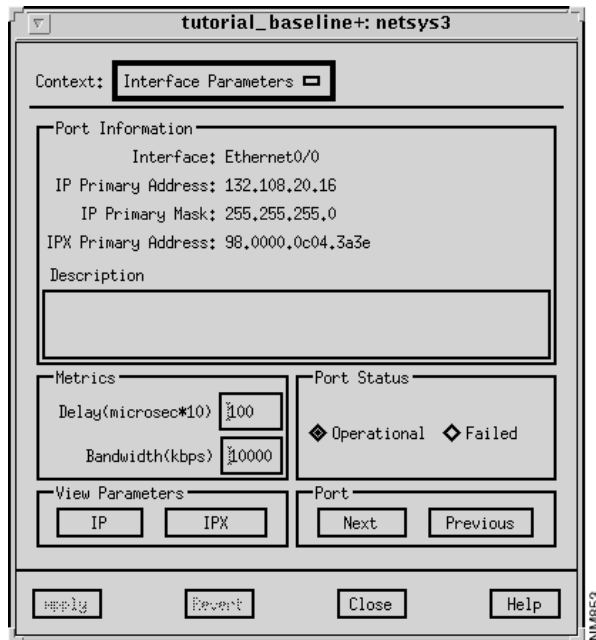


Figure 8-4 Interface Parameters Window: netsys3 Router

Interface Parameters Window Components

This window's components are described in the following sections. See "General Window Components" for a description of the **Context**, **Apply**, **Revert**, **Close**, and **Help** buttons.

Port Information - Interface

The symbolic interface name, as specified by the **interface** command in the router configuration file, of the router selected in the Interface Description list is displayed in this column. Also displayed are the router's slot and port numbers. For example, the `Interface` entry `Ethernet1/0` corresponds to an Ethernet interface using the Cisco Series 7000 backplane slot number 1, port number 0.

Port Information - IP Primary Address

The primary IP address, in dotted-decimal format, of the router port as specified by the `ip address` interface subcommand in the router configuration file is displayed here. For example, `132.108.48.13` is an IP primary address.

Port Information - IP Primary Mask

The primary IP network address mask, in dotted-decimal format, of the router port as specified by the `ip address` interface subcommand in the router configuration file is displayed here. For example, `255.255.255.0` is an IP primary address mask.

Port Information - IPX Primary Address

The router port's IPX primary address as specified by the `ipx address` interface subcommand in the router configuration file, is displayed here. IPX primary addresses are usually provided as network numbers (32-bits in length written in hexadecimal) followed by a host address (48-bits in length written in hexadecimal) separated by dots. An example IPX primary address of `1148.0000.0c03.ceab` specifies a network number of 1148 and a host address of `0000.0c03.ceab`.

Port Information - Description

This pane provides a description of this router's interface as specified by the `description` interface subcommand in the router configuration file.

Metrics - Delay

The default delay interval, in microseconds times ten, is displayed in this field. The value is determined by the type of media the port is configured for, as shown in Table 8-1. The port's default delay value can be modified by specifying a new value in the text field, pressing **Return**, and then clicking on the **Apply** button.

Metrics - Bandwidth

The default bandwidth, in Kbps, is displayed in this field. The value is determined by the type of media the port is configured for, as shown in Table 8-1. The port's default bandwidth value can be modified by specifying a new value in the text field, pressing **Return**, and then clicking on the **Apply** button.

Table 8-1 Default Port Delay and Bandwidth Values

Media Type	Delay (microseconds times 10)	Bandwidth (Kbps)
Ethernet	100	10,000
FDDI	10	100,000
Tokenring	63	16,000
Loopback	5	1
Serial	2000	1544
HSSI	2000	45,045

Port Status

Click on the appropriate toggle button to set the operational status of the router interface to the desired setting (**Operational/Failed**). `Operational` is the default setting.

Note These buttons are not functional when using the Connectivity Baseline, the initial baseline scenario, or when a baseline scenario, other than the last scenario in the Scenarios list in the Connectivity Tools window, is selected.

View Parameters - IP Button

Click on this button to switch the context from the Interface Parameters window to the IP Interface Parameters window. The interface parameters specific to the IP routing protocol are found in this window. See “Router Configuration Windows” for detailed descriptions of the IP Interface Parameters window components as well as the other IP-related window components.

View Parameters - IPX Button

Click on this button to switch the context from the Interface Parameters window to the IPX Interface Parameters window. The interface parameters specific to the IPX routing protocol are found in this window. See “IPX Configuration Windows” for detailed descriptions of the IPX Interface Parameters window as well as the other IPX-related window components.

Port - Next Button

Click on this button to display the router interface attributes of the port following the selected interface in the Interface Descriptions list. To display the current port’s interface attributes again, click on the **Previous** button.

Port - Previous Button

Click on this button to display the router interface attributes of the port listed prior to the current interface in the Interface Descriptions list. To display the current port’s interface attributes again, click on the **Next** button.

