

Intel® Device View

User Guide



intel®

Year 2000 Capable

An Intel product, when used in accordance with its associated documentation, is “Year 2000 Capable” when, upon installation, it accurately stores, displays, processes, provides, and/or receives date data from, into, and between the twentieth and twenty-first centuries, including leap year calculations, provided that all other technology used in combination with said product properly exchanges date data with it.

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Quick Start

For complete installation instructions and requirements, see Chapter 1.

1

Run the install program

Put the Intel® Device View CD-ROM in your computer's CD-ROM drive. The Intel Device View installation screen appears. If it doesn't appear, run `autoplay.exe` from the CD-ROM.

2

Choose a version to install

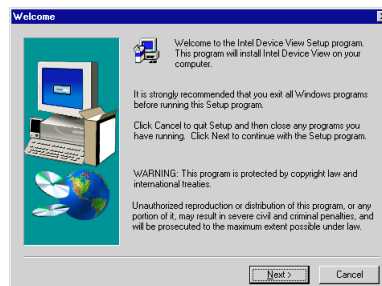
- Click **Install for Windows*** to install Intel Device View on a Windows NT* or Windows 95 or 98 PC.
- Click **Install for Web** to install Intel Device View on a Web server.
- Click **Install as Plug-in** to install Intel network device support for Hewlett-Packard OpenView* or Intel LANDesk® Network Manager.



3

Follow the steps in the wizard

After you've chosen the version you want to install, follow the steps in the installation wizard to complete the installation.



4

Run Intel Device View

Windows version

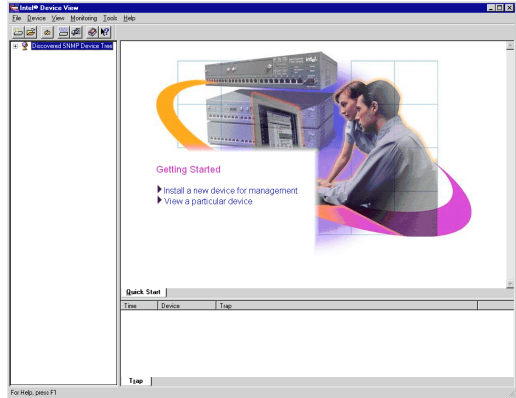
Click the Intel Device View – Windows icon in the Intel Device View program group.

Web version

- To run Intel Device View from the Web server, click the Intel Device View – Web icon in the Intel Device View program group.
- To view Intel Device View from another PC on your network, enter the following URL in Internet Explorer's Address field:

http://servername/devview/main.htm

where *servername* is the IP address or name of the Intel Device View server.



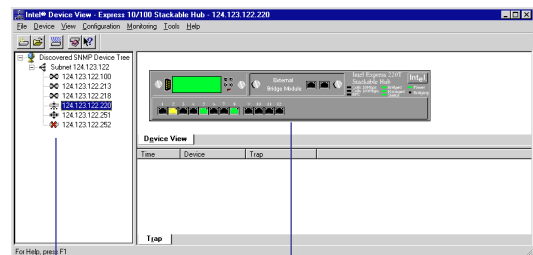
5

Manage devices

Double-click a device icon in the device tree. The device image appears.

- To view management options for a port, right-click the port.
- To view management options for the device, right-click anywhere else on the device image.

For more information on managing devices, see Chapter 3



Device Tree

Device image

1

Installation

Overview

This chapter explains how to install Intel Device View and lists system requirements for each version of the program.

Intel Device View supports these Intel network devices:

Hubs	Intel Express 200 Series and 10/100 Stackable Hubs (requires optional Management Module) Intel Express 100BASE-T Stackable Hubs (requires optional Network Management Module)
Switches	Intel Express 500 Series Switches Intel Express 10 Series Switches Intel Express 100FX Switches Intel Express 10/100 Fast Ethernet Switches Intel Express 100BASE-TX Switching Hubs
Routers	Intel Express 8100 Routers Intel Express 9000 Series Routers

Choosing a version

When you install Intel Device View, you have three installation options:

Install for Windows

The Windows version of Intel Device View allows you to manage Intel networking devices from a single PC on the network.

Install for Web

The Web version of Intel Device View is hosted on a Web server and allows you to manage Intel devices from any PC on the network running Windows 95, Windows 98, or Windows NT 4.0 or later and Internet Explorer 4.0x.

Install as Plug-in

The plug-in versions of Intel Device View provide Intel network device support for Hewlett-Packard OpenView Network Node Manager® (version B.05.01 or later) for Windows NT® and Intel LANdesk® Network Manager. For more information, see the documentation that ships with those programs.

System requirements

Windows version

Minimum hardware requirements

Recommended processor	133 MHz or faster Intel Pentium®, Pentium Pro, or Pentium II Processor
Memory	At least 32 MB
Disk space	At least 25 MB
Operating system	<ul style="list-style-type: none">• Windows 95 or 98• Windows NT 4.0 or later (server or workstation)

Web version

Server hardware

Recommended processor	133 MHz or faster Intel Pentium, Pentium Pro, or Pentium II Processor
Memory	At least 32 MB
Disk space	At least 25 MB

Server software

Operating system	Windows NT 4.0 or later (server or workstation)
Web server	Recommended: <ul style="list-style-type: none">• Internet Information Server* (IIS) 2.0 or later• Peer Web Services* 2.0 or later• Netscape Enterprise Web Server* 3.01 or 3.5.1 Other Web servers require additional setup. See the Readme file for more information.

Web client

Recommended processor	133 MHz or faster Intel Pentium, Pentium Pro, or Pentium II Processor
Memory	At least 32 MB
Disk space	At least 25 MB
Operating system	<ul style="list-style-type: none"> • Windows 95 or 98 • Windows NT 4.0 or later (server or workstation)
Web browser	Internet Explorer 4.0x or later (included on Intel Device View CD-ROM)

Note

Intel Device View does not support Netscape Navigator*.

LANDesk Network Manager plug-in

See the *Intel LANDesk Network Manager User Guide* for system requirements.

HP OpenView plug-in

Intel Device View supports HP OpenView Network Node Manager release B.05.01 or later for Windows NT. See the OpenView documentation for system requirements.

Installing Intel Device View

Note

If you're installing Intel Device View on a Windows NT PC, you must log in with **Administrator** rights.

Before you install Intel Device View, make sure your PC meets the system requirements on pages 5-6.

- 1 Put the Intel Device View CD-ROM in your computer's CD-ROM drive. The Intel Device View installation screen appears. If it doesn't appear, run `autoplay.exe` from the CD-ROM.



- 2 Choose the version of Intel Device View you want to install.
 - Click **Install for Windows** to install Intel Device View for use on this PC only.
 - Click **Install for Web** to install Intel Device View on a web server. You will be able to access the Device View server from any PC on your network with Internet Explorer 4.0x or later.
 - Click **Install as Plug-in** to install Intel network device support for HP OpenView or Intel LANDesk Network Manager. This option isn't available if you don't have OpenView or LANDesk Network Manager installed on the PC.
- 3 Follow the on-screen instructions in the installation program.

2

Using Intel Device View

Overview

This chapter explains how to start Intel Device View and use some of its basic features.

All the procedures described in this chapter are the same for the Windows, Web, and plug-in versions of Intel Device View.

For more information on managing devices, see Chapter 3.

Starting Intel Device View

Windows version

Click the Intel Device View – Windows icon in the Intel Device View program group. The main page appears.

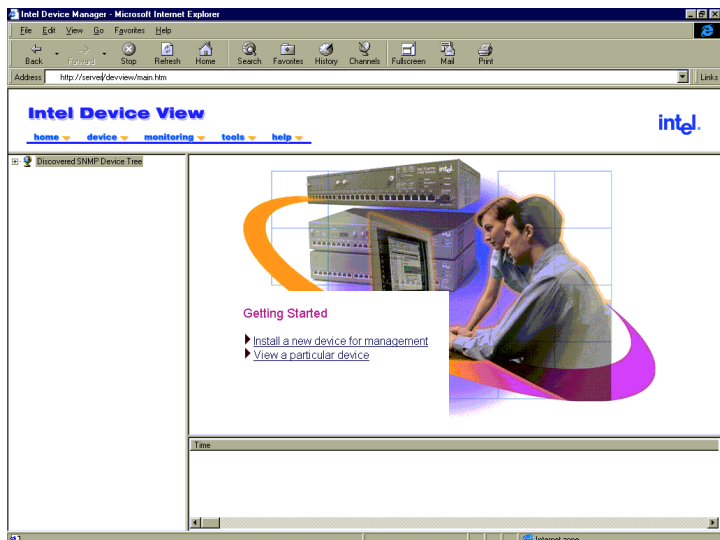
Web version

- To run Intel Device View on the Device View server, click the Intel Device View – Web icon in the Intel Device View program group.
- To view Intel Device View from another PC on your network, enter the following URL in Internet Explorer's Address field:

`http://servername/devview/main.htm`

where *servername* is the IP address or name of the Intel Device View server.

The main screen appears.



Installing a new device

After you've installed a new hub, switch, or router on your network, you can use Intel Device View's Device Install wizard to configure the device for management.

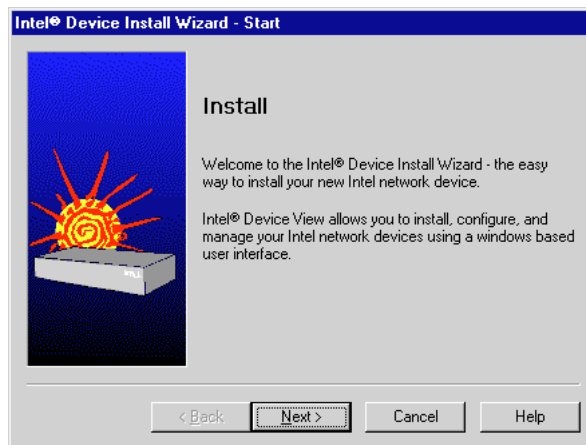
These devices support the Device Install wizard:

- Intel Express 500 Series Switches
- Intel Express 8100 Routers
- Intel Express 9000 Series Routers
- Intel Express 10 Series Switches
- Intel Express 100FX Switches
- Intel Express Stackable Hubs (with Management Module firmware version 2.1 or later)

To install and configure a new device for management

- 1 Start Intel Device View.
- 2 Double-click the device icon in the Unconfigured Devices branch of the Device Tree.

Unconfigured devices are identified by MAC address.
The Device Install wizard appears.

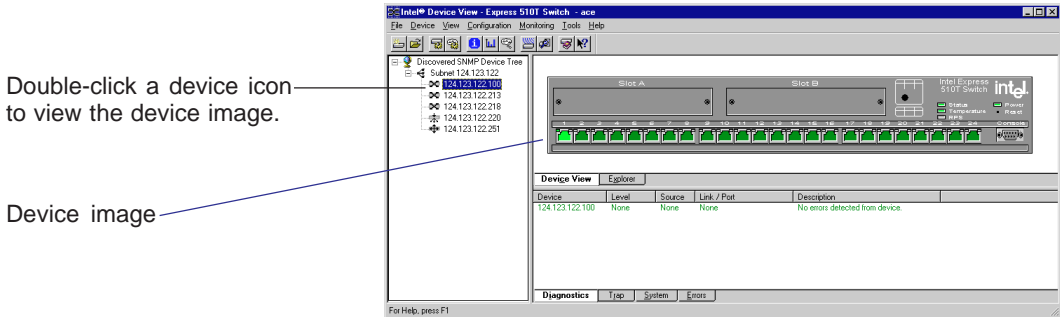


- 3 Follow the instructions in the wizard.

Managing a device

To manage a device

- 1 In the Device Tree, double-click the icon of the device you want to manage. The device image appears.



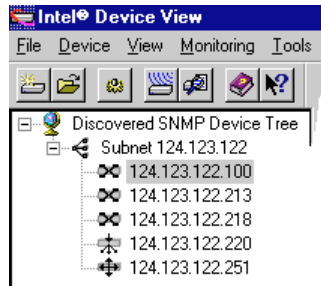
- 2 Select a management option:

- Right-click a port to view management options for the port.
- Right-click anywhere else on the device image to view management options for the device.

Different devices have different management options available. See the documentation that shipped with the device for more information about its features.









Using the Device Tree

When you start Intel Device View, the Device Discovery service begins searching for supported Intel network devices on your network. As it discovers devices, the Device Discovery service adds an icon for each device to the Device Tree on the left side of the screen.



Each type of device is represented by a unique icon in the Device Tree.

Device Tree icons

-  Device Tree root
-  Subnet
-  Intel Express Stackable Hub
-  Intel Express Switch
-  Intel Express Router
-  Intel NetportExpress™ Print Server
-  Unconfigured or unrecognized device
-  Non-responding device

The Device Tree works much like Windows Explorer. To expand the root or a subnet, click the (+) next to the icon. To collapse the view, click the (-) next to the icon. Double-click a device icon to view the device image.

Adding a device to the Device Tree

To add a device to the Device Tree

- 1 Right-click anywhere on the Device Tree.
- 2 Click Add Device on the menu that appears.
- 3 In the Add an SNMP device dialog box, enter the IP address of the device you want to add.
- 4 Fill in the other fields if necessary.
- 5 Click OK.

The new device's icon appears in the Device Tree.

Refreshing the Device Tree

Refreshing the Device Tree updates it to show any newly discovered devices and changes in device status.

To refresh the Device Tree

- 1 Right-click anywhere on the Device Tree.
- 2 Click Refresh on the menu that appears.

Deleting a device from the Device Tree

Deleting a device from the Device Tree does not affect the actual device in any way.

To delete a device from the Device Tree

- 1 Right-click the device you want to remove.
- 2 Click Delete on the menu that appears.

Finding a device in the Device Tree

To find a particular device

- 1 Right-click anywhere on the Device Tree.
- 2 Click Find on the menu that appears.
- 3 In the Find Device dialog box, enter the IP address of the device you want to find in the tree.
- 4 Click OK.

The device's icon is highlighted in the Device Tree.

Views and windows

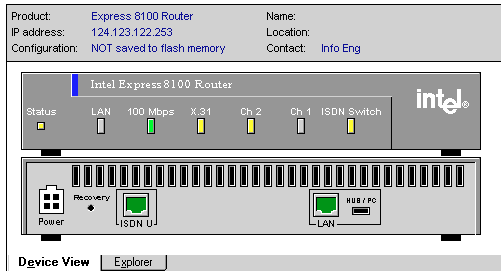
Intel Device View provides several different views and windows that display different types of information about the device you're managing.

To change to a different view or window, click its tab. Not all devices support all views and windows.

Device view

The Device view is Intel Device View's primary display. You can fully manage a device using this view.

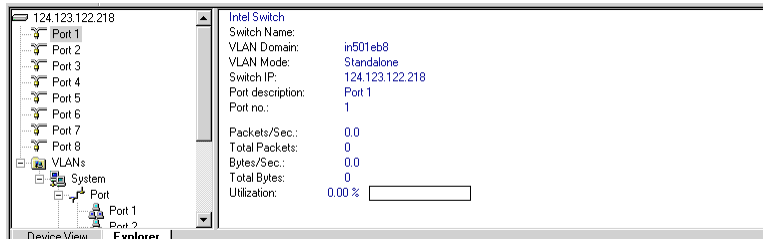
Right-click a device or one of its ports to view management options.



Explorer view

Intel Device View's Explorer view allows you to view a logical view of management information for switches and routers.

Right-click the Explorer tree for management options.



Diagnostics window

The Diagnostics window lists all diagnostic messages sent by the device being managed.

Level	Source	Link / Port	Description
Error	ISDN ...	ISDN U	Connection to the ISDN switch failed.

Trap window

The Trap window lists all traps received by the Device View PC or server.

Time	Device	Trap
17:12:31	0.0.0.0	Failed to bind socket to port
17:12:31	0.0.0.0	Unable to activate local TRA...
17:12:31	0.0.0.0	Trap reception permanently d...

Traps are color coded based on severity.

System window

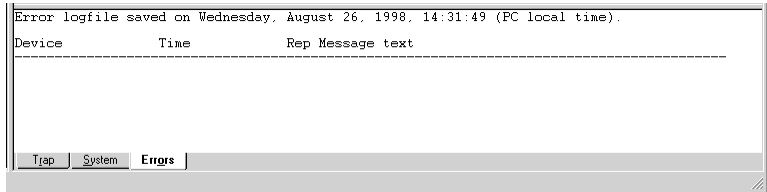
The System window displays a log of all the major events that have occurred on the switch or router being managed. All events list date and time.

System logfile saved on Wednesday, August 26, 1998, 14:24:56 (PC local time).

Device	Time	Rep	Message text
124.123.122.100	Aug 19 12:33:04		Station operative
124.123.122.100	Aug 19 12:42:44		Manager session timed out
124.123.122.100	Aug 22 11:41:57		Port 1's forwarding mode has changed to Store-and-Forw
124.123.122.100	Aug 22 11:42:23		Port 1's forwarding mode has changed to Cut-Through fir
124.123.122.100	Aug 22 12:03:38		Port 1's forwarding mode has changed to Store-and-Forw
124.123.122.100	Aug 22 12:04:04		Port 1's forwarding mode has changed to Cut-Through fir
124.123.122.100	Aug 27 14:23:26		Port 2's forwarding mode has changed to Store-and-Forw

Errors window

The Error view lists all error messages generated by the switch or router being managed.



3

Managing Devices

Overview

This chapter describes how to perform several management tasks on Intel hubs, switches, and routers. For more detailed information on product features, see the documentation that shipped with the device.

Managing Intel Express Stackable Hubs

Note
Hubs must have Management Modules to support Intel Device View.

Intel Device View supports these Intel stackable hubs:

- Express 220T Stackable Hub
- Express 210T Stackable Hub
- Express 10/100 Stackable Hub
- Express 100BASE-T Stackable Hub

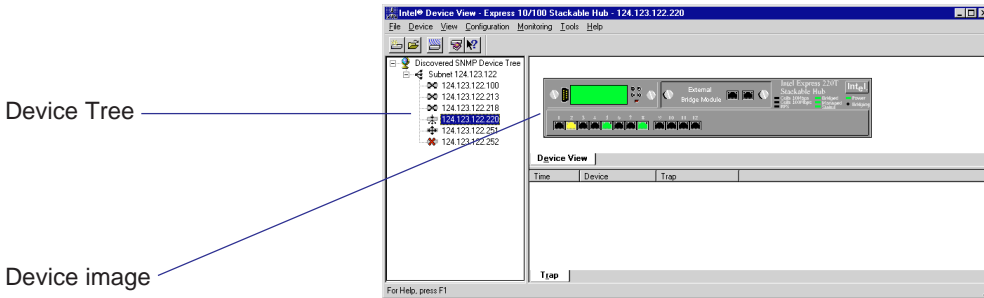
To manage an Intel Express Stackable Hub

- 1 Double-click the Intel Express Stackable Hub icon in the Device Tree.



Express Stackable Hub icon

The device image appears on the screen.



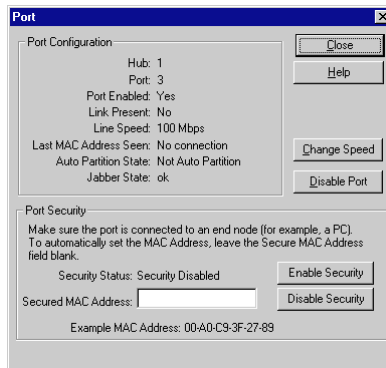
- 2 Choose a management option:
 - To view management options for a port, right-click the port.
 - To view management options for the hub or management module, right-click anywhere else on the hub image.

Basic management tasks

This section describes some basic hub management tasks. For more information on these or other procedures, see the documentation that ships with the hub and management module.

Managing a port

- 1 Right-click the port you want to manage.
- 2 Click Configure Port on the menu that appears. The Port dialog box appears.



To change port speed (Express 220T only)

The Intel Express 220T Stackable Hub allows you to force port speed to 10 or 100Mbps.

- 1 Click Change Speed in the Port dialog box.
- 2 Click Yes.

To disable a port

You can disable a port on the hub when the connected device is disrupting network traffic.

- 1 Click Disable Port in the Port dialog box.
- 2 Click Yes.

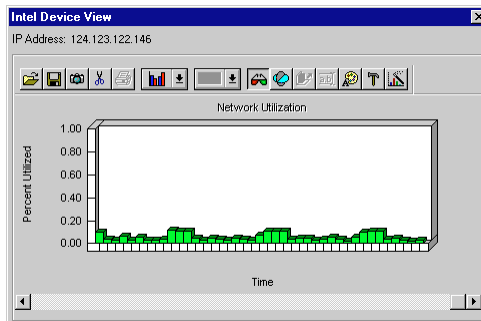
To set port security (Express 220T only)

Setting port security “secures” a port for use by a specific MAC address. If another MAC address uses the port, the port is disabled.

- 1 Configure port security settings:
 - To use the first MAC address detected on the port, leave the Secured MAC Address box blank.
 - To use a specific MAC address, type the MAC address in the Secured MAC Address box.
- 2 Click Enable Security.

Graphing device activity

Intel Device View allows you to view graphs of port, hub, and stack utilization and statistics.



To graph device activity

- 1 Right-click anywhere on the hub image except a port.
- 2 Click Graph, then click one of the graphing options on the menu that appears.

Adding a trap receiver

Add a trap receiver when you want a management PC alerted of an event that occurs on the hub.

To add a trap receiver

- 1 Right-click the hub image.
- 2 Click Management Module, then click Trap Receiver Configuration on the menu that appears.
- 3 Click Add in the Trap Receivers dialog box.
- 4 Type the IP address and community string of the PC you want to receive traps from the Management Module, then click Add.



- 5 Click Close.

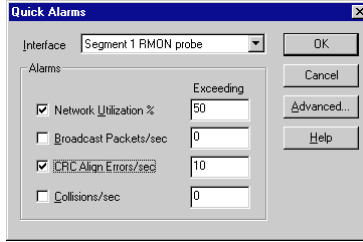
Setting alarms

An alarm monitors a variable and generates an event (an SNMP trap, log event, or both) when a limit is exceeded. The Quick Alarms dialog box allows you to automatically set up rising alarms on these commonly-used SNMP variables:

- Network utilization exceeding 50%
- Broadcast packets exceeding 3000 per second
- CRC align errors exceeding 10 per second
- Collisions exceeding 30000 per second

To set Quick Alarms

- 1 Right-click the hub image.
- 2 On the menu that appears, click RMON, Alarms, and Configure. The Alarms Table dialog box appears.
- 3 Click Add. The Quick Alarms dialog box appears.



- 4 Select the segment you want to monitor in the Interface pull-down box. Segment 1 is the 10Mbps segment. Segment 2 is the 100Mbps segment.
- 5 Check the statistic you want to monitor and change the threshold value if necessary.
- 6 Click OK, then click Close.

Managing Intel Express Switches

This section describes some basic switch management tasks. For more information on these or other procedures, see the documentation that ships with the switch.

Intel Device View supports these Intel switches:

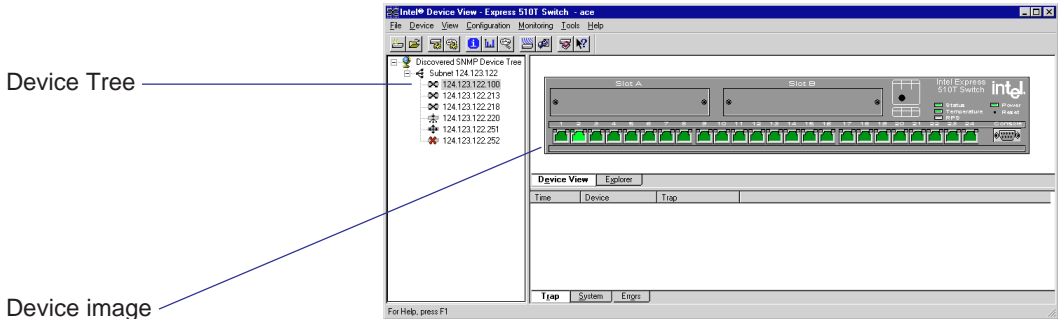
- Intel Express 500 Series Switches
- Intel Express 10 Series Switches
- Intel Express 100FX Switches
- Intel Express 10/100 Fast Ethernet Switches
- Intel Express 100BASE-TX Switching Hubs

To manage an Intel Express 500 Series Switch

- 1 Double click the Intel Express Switch icon in the Device Tree.



The device image appears on the screen.



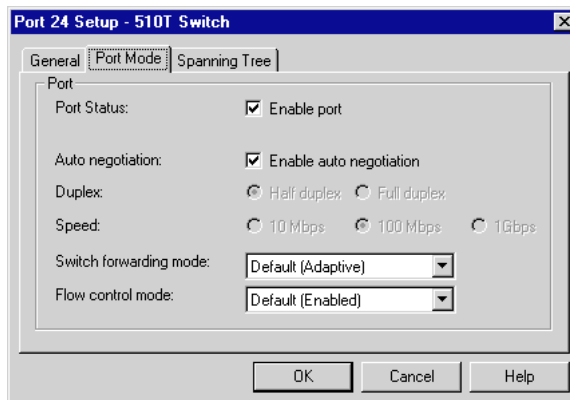
- 2 Choose a management option:

- To view management options for a port, right-click the port.
- To view management options for the switch or stack of switches, right-click anywhere else on the switch image.

Basic management tasks

Managing a port

- 1 Right-click the port you want to manage.
- 2 Click Port Setup on the menu that appears.
The Port Setup dialog box appears.



To set port speed and duplex mode

- 1 Click the Port Mode tab in the Port Setup dialog box.
- 2 Configure port settings:
 - To let the port automatically determine speed and duplex mode settings, check the Enable auto negotiation box (default setting).
 - To force the speed and duplex mode settings, clear the Enable auto negotiation box, then check the appropriate speed and duplex mode buttons.
- 3 Click OK.

To disable a port

You can disable a port on the switch when the connected device is disrupting network traffic.

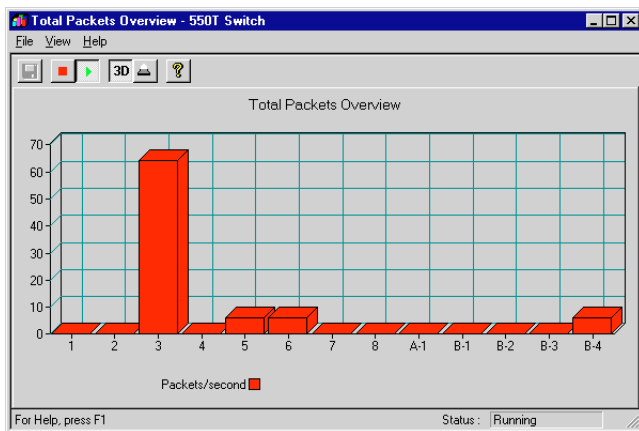
- 1 Click the Port Mode tab in the Port Setup dialog box.
- 2 Clear the Enable port box, then click OK.

Graphing device activity

Intel Device View allows you to view graphs of total packets, transmitted packets, received packets, and errors.

To graph device activity

- 1 Right-click anywhere on the switch image, except a port.
- 2 Click Device Activity, then click one of the graphing options on the menu that appears.



To graph port activity

- 1 Right-click a port.
- 2 Click Port Activity, then click either Tx packets or Rx packets.

Adding a trap receiver

Add a trap receiver when you want a management PC alerted of an event that occurs on the switch.

To add a trap receiver

- 1 Right-click anywhere on the switch image, except a port.
- 2 Click Device Setup on the menu that appears.
- 3 Click the Traps tab in the Device Setup dialog box.

Note

Press This PC in the Web version of Intel Device View to use the Web server as a trap receiver.

- 4 Click Add.
- 5 Choose the IP address of the trap receiver.
 - To use the PC you’re managing from, click This PC.
 - To send traps to another PC on the network, type the IP address and community string of the PC you want to use.



- 6 Click OK, then click OK on the Device Setup dialog box.

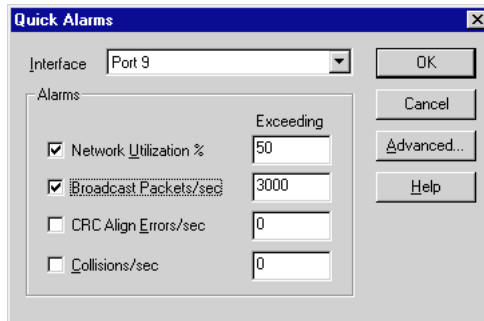
Setting alarms

An alarm monitors a variable and generates an event (an SNMP trap, log event, or both) when a limit is exceeded. The Quick Alarms dialog box allows you to automatically set up rising alarms on these commonly-used SNMP variables:

- Network utilization exceeding 50%
- Broadcast packets exceeding 3000 per second
- CRC align errors exceeding 10 per second
- Collisions exceeding 30000 per second

To set a Quick Alarm

- 1 Right-click the switch image.
- 2 On the menu that appears, click Monitoring, RMON, Alarms, and Configure.
The Alarms Table dialog box appears.
- 3 Click Add.
The Quick Alarms dialog box appears.



- 4 Select the port you want to monitor in the Interface pull-down box.
- 5 Check the statistic you want to monitor and change the threshold value if necessary.
- 6 Click OK, then click Close.

Managing Intel Express Routers

This section describes some basic router management tasks. For more information on these or other procedures, see the documentation that ships with the router.

Intel Device View supports these Intel routers:

- Intel Express 8100 Routers
- Intel Express 9000 Series Routers

To manage an Express Router

- 1 Double-click the Express router icon in the Device Tree.

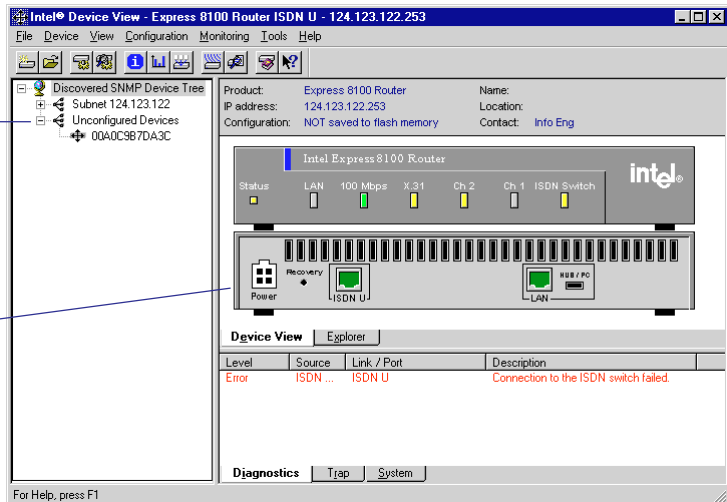


Express Router icon

The device image appears on the screen.

Device Tree

Device image



- 2 Choose a management option:

- To view management options for a port, right-click the port.
- To view management options for the router, right-click anywhere else on the router image.

Basic management tasks

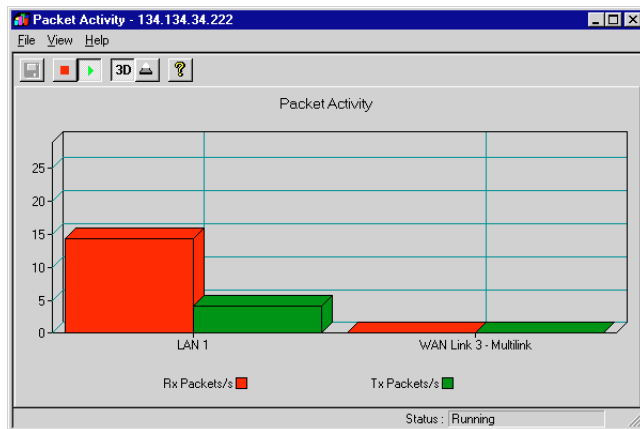
This section describes some basic router management tasks. For more information on these or other procedures, see the documentation that ships with the router.

Monitoring WAN traffic

To monitor WAN traffic

- 1 Right-click anywhere on the router image, except a port.
- 2 Click Link Activity, then click one of the options on the menu that appears.

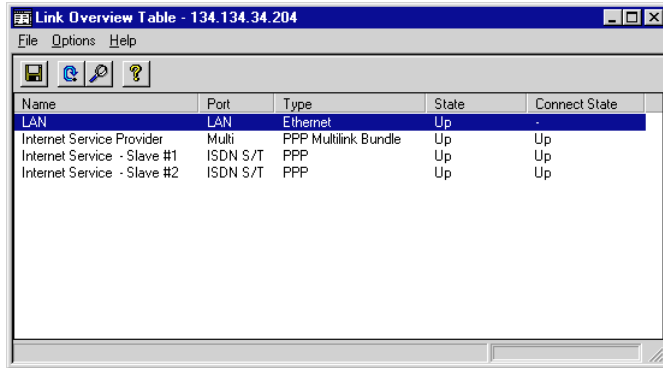
The activity graph appears.



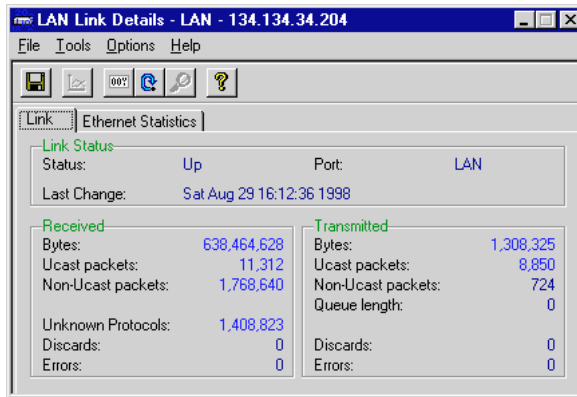
Checking link status

To check link status

- 1 Right-click anywhere on the router image, except a port.
- 2 Click Links Overview on the menu that appears.
The Link Overview Table appears.



- 3 Double-click a name for more information. The Link Details dialog box appears.



Adding a trap receiver

Add a trap receiver when you want a management PC alerted of an event that occurs on the router.

- 1 Right-click anywhere on the router image, except a port.
- 2 Click Configuration, then click Management Setup on the menu that appears.
- 3 Click the Traps tab in the Management Setup dialog box.
- 4 Click Add.

Note

Press This PC in the Web version of Intel Device View to use the Web server as a trap receiver.

- 5 Choose the IP address of the trap receiver.
 - To use the PC you're managing from, click This PC.
 - To send traps to another PC on the network, type the IP address and community string of the PC you want to use.



- 6 Click OK, then click OK on the Management Setup dialog box.

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