ConneXview

Ethernet Diagnostic Tool
Getting Started

Version 2.1

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www.schneider-electric.com

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Failure to observe this information can result in injury or equipment damage.

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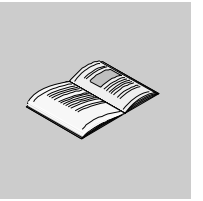
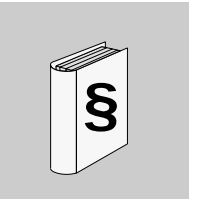


Safety Information



Important Information

NOTICE

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of this symbol to a Danger or Warning safety label indicates that an electrical hazard exists, which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, **will result in** death or serious injury.

⚠ WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, **can result in** death or serious injury.

⚠ CAUTION
CAUTION indicates a potentially hazardous situation which, if not avoided, **can result in** minor or moderate injury.

CAUTION
CAUTION, used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, **can result in** equipment damage.

PLEASE NOTE

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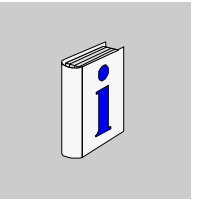
A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and the installation, and has received safety training to recognize and avoid the hazards involved.

About the Book



At a Glance

Document Scope

This document describes the user interface for version 2.1 of the ConneXview Ethernet diagnostic software package.

Related Documents

Title of Documentation	Reference Number
ConneXview Ethernet Diagnostic Tool Reference Guide	31007263 (English), 31008031 (French), 31008032 (German), 31008033 (Italian), 31008034 (Spanish)
ConneXview Device Type Editor Reference Guide	31007264 (English), 31008027 (French), 31008028 (German), 31008029 (Italian), 31008030 (Spanish)
ConneXview Frequently Asked Questions Reference Guide	31007265 (English), 31008023 (French), 31008024 (German), 31008025 (Italian), 31008026 (Spanish)

You can download these technical publications and other technical information from our website at www.schneider-electric.com.

User Comments

We welcome your comments about this document. You can reach us by e-mail at techcomm@schneider-electric.com.

Installing ConneXview

1

Overview

This chapter guides you through the process of installing ConneXview and the Device Type Editor.

What's in this Chapter?

This chapter contains the following topics:

System Requirements

Minimum Requirements

Minimum system requirements depend upon the type of ConneXview installation. There are three types of installations:

- on a single PC, as a stand-alone application (with client and server components installed together as a single, integrated program)
- on a server PC, with both the server and client components installed as part of a client/server installation
- on a remote PC, with only the client component installed as part of a client/server application

Minimum system requirements vary, depending upon the type of installation:

Item	Client	Server and Stand-alone
Processor	Intel 800 MHz CPU (Pentium 4 or later)	Intel 1.2 GHz CPU (Pentium 4 or later)
Memory	512 MB	
Hard disk space	200 MB free space	
Operating system	Windows 2000 or XP	
Network interface	10/100 Ethernet adapter attached to the network via a Cat 5e cable	
Installation media	CD	

Language Availability

The ConneXview software installation includes English, French, German, Italian, and Spanish language versions. Your PC's Regional settings determine the language ConneXview displays at startup.

Installing ConneXview

Overview

ConneXview components can be installed from 2 installation CDs:

- a ConneXview remote client installation CD, or
- a ConneXview server installation CD

The ConneXview remote client installation CD installs only a remote ConneXview client component on a PC connected to a ConneXview server via an Ethernet network.

The ConneXview server installation CD offers 3 different setup types, with components, as follows:

Setup Type	Installs...
Complete Client/Server Installation	All ConneXview client/server components on the server, including: ● ConneXview server ● ConneXview local client ● Device Type Editor
Complete Stand-alone Installation	● ConneXview local client and server components as an integrated stand-alone application ● the Device Type Editor
Custom	One or more of the following components: ● ConneXview stand-alone application (includes both the ConneXview local client and server components as a single, integrated program) ● Device Type Editor ● ConneXview server (including the local client) **Note:** You cannot select both *ConneXview Stand-alone Application* and *ConneXview Server*.

Installing ConneXview

To install ConneXview:

Step	Action
1	Insert the ConneXview CD into your CD-ROM drive.
2	In Windows Explorer, navigate your CD-ROM drive to and select **ConneXview** → **setup.exe**. The installation wizard begins.
3	Select a language for the ConneXview installation process: ● English ● French ● German ● Italian ● Spanish
4	Click **Next**, and follow the on-screen instructions to complete the installation.

Modifying ConneXview

If you have already installed ConneXview, you can change the collection of installed components, as follows:

Step	Action		
1	Insert the ConneXview installation CD into your CD-ROM drive.		
2	In Windows Explorer, navigate your CD-ROM drive to and select: **ConneXview** → **setup.exe**. The wizard begins.		
3	Click **Modify** to add new components or remove already installed components.		
4	Click **Next**. The wizard displays a list of components. **Note:** A check mark indicates a component is currently installed.		
5	Add or remove one or more of the following components:	Using remote client install CD	Using server install CD
	• ConneXview stand-alone application (includes the ConneXview local client and server components as an integrated program)	–	X
	• Device Type Editor	–	X
	• ConneXview Server	–	X
	• ConneXview Remote Client	X	–
6	Click **Next**, and follow the on-screen instructions.		

Repairing ConneXview

If you have already installed ConneXview, you can let the installation wizard repair your installation, as follows:

Step	Action
1	Insert your ConneXview installation CD into your CD-ROM drive.
2	In Windows Explorer, navigate your CD-ROM drive to and select: **ConneXview** → **setup.exe**. The wizard begins.
3	Click **Repair** to reinstall all components installed by the previous setup.
4	Click **Next**, and follow the on-screen instructions.

Uninstalling (Removing) ConneXview

If you have already installed ConneXview, you can uninstall it as follows:

Step	Action
1	Insert the ConneXview CD into your CD-ROM drive.
2	In Windows Explorer, navigate your CD-ROM drive to and select: **ConneXview** → **setup.exe**. The wizard begins.
3	Click **Remove** to uninstall all installed components.
4	Click **Next**, and follow the on-screen instructions.

Registering ConneXview

Overview

Use the ConneXview registration wizard to either:

- register your installation of ConneXview for the first time, or
- transfer license rights from another computer

In either case, registration is a two-step process.

Opening the Registration Wizard

Click **Start** → **Programs** → **Schneider Electric** → **ConneXview** → **Register ConneXview**.

If your installation of ConneXview has never been registered, the wizard will ask:

"Do you want to authorize now?" Click **Yes**.

Using the Registration Wizard

Step	Action
1	The registration wizard welcome screen appears. Click **Next**.
2	Click one of the following buttons, and click **Next**. • **Ask for an authorization code**: Select this option if you are registering ConneXview for the first time • **Transfer license rights**: Transfers authorization *(see page 14)* to or from another PC • **Enter received authorization code**: Select this option to enter an authorization code you received *(see page 14)* via fax or email.
3	If you selected **Ask for an authorization code**, select one of the following registration methods: • **By Web** • **By Web on another PC** • **By Phone** • **By Email** • **By Fax** The wizard displays instructions for your selection in the white space below the option buttons.
4	Follow the instructions displayed for your selection, then click **Next** and continue to follow the instructions set forth by the wizard.

Transferring License Rights

If you selected **Transfer license rights**, complete the transfer license rights to or from another installation of ConneXview as follows:

Step	Action
1	Select the direction of the transfer and the media:
2	Click one of the following buttons, and click **Next**. • Transfer license rights to or from USB device • Transfer license rights to or from computer via network or removable media • Transfer license rights to another person
3	Click **Next** and continue to follow the instructions set forth by the wizard.

Entering the Authorization Code

If you requested an authorization code via fax or email, you can enter the authorization code that you received, as follows:

Step	Action
1	Enter your **Received Authorization Code**.
2	Click **Next** and follow the instructions displayed by the wizard until registration is complete.

Creating a Network Map

2

Overview

This chapter shows you how to use ConneXview's network discovery feature to automatically create a map of your existing network.

What's in this Chapter?

This chapter contains the following topics:

Starting ConneXview

Overview

When you start-up ConneXview for the very first time, the steps you follow depend upon the type and location of your ConneXview installation. Each of the following start-up procedures is described below:

- starting a stand-alone installation
- starting a client/server installation at the server
- starting a client/server installation at a remote client PC

Starting a Stand-alone Application

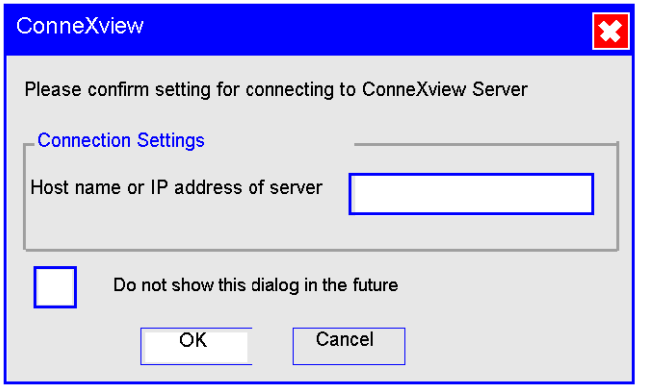
To start-up a stand-alone installation of ConneXview, simply navigate to and select ConneXview–beginning at the Windows Start button–as follows:

Start → Programs → Schneider Electric → ConneXview → ConneXview

ConneXview opens displaying the Start page *(see page 20)*.

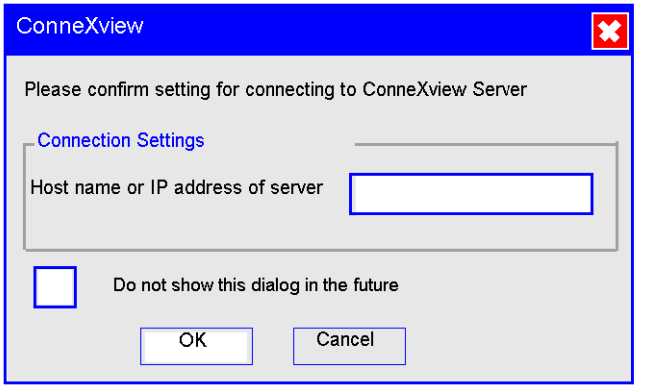
Starting a Client/Server Installation at the Server

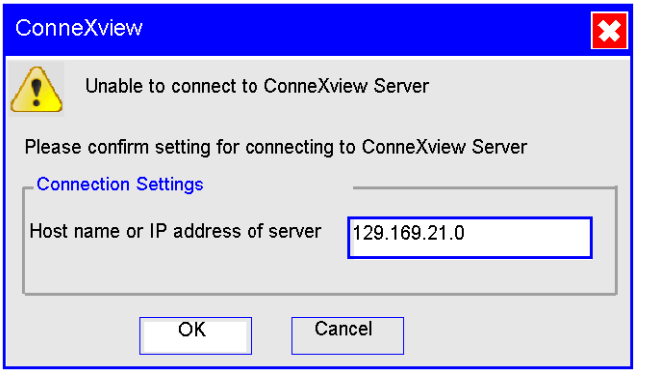
If you are starting-up the ConneXview client installed on the server, follow these steps:

Step	Action
1	On the server PC, navigate to and select: **Start → Programs → Schneider Electric → ConneXview → ConneXview Remote Client** ConneXview displays the following dialog: 
2	Do the following. • Leave the *Host name or IP address of server* field blank. Because the ConneXview server and the client components both reside on the same PC, ConneXview automatically finds and connects to the ConneXview server component. • (Optional): Select the *Do not show this dialog in the future* checkbox to skip this dialog in the future. On future start-ups, ConneXview automatically connects the client to the server.
3	Click **OK**. ConneXview starts-up and displays the Start page *(see page 20)*.

Starting a Remote Client

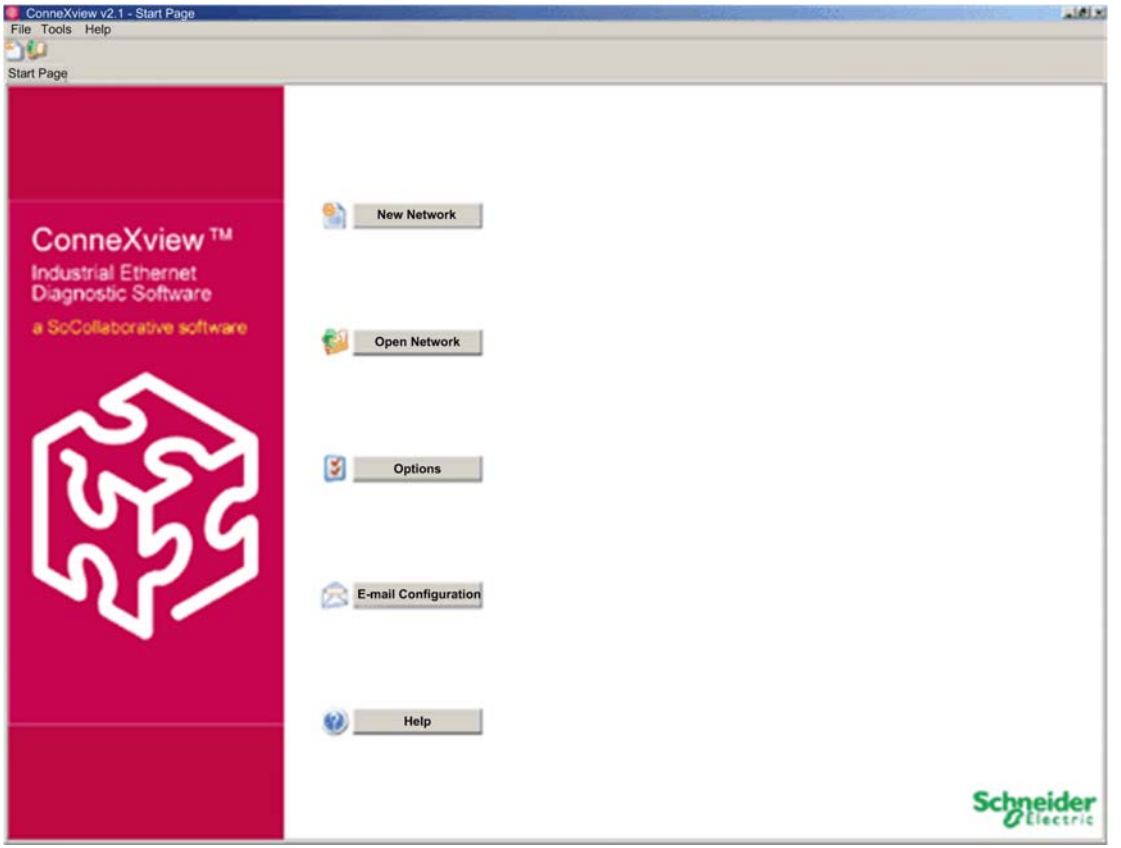
If you are starting-up a remote ConneXview client, you need to identify the IP address of the server PC on which the ConneXview server component resides, as follows:

Step	Action	
1	On the remote PC, select: **Start → All Programs → Schneider Electric → ConneXview → ConneXview Remote Client** The ConneXview client opens and displays the following dialog: 	
2	Complete the above dialog, as follows:	
	Host name/IP address	Type in either the network name or IP address of the server PC.
	Do not show this dialog in the future	(Optional): Select the *Do not show this dialog in the future* checkbox to skip this dialog in the future. On future start-ups, ConneXview connects to the same server PC.

Step	Action
3	Click **OK**. If the connection succeeds, the ConneXview client opens and displays the Start page *(see page 20)*. If the connection fails, the ConneXview client displays the following dialog containing the failed host name or IP address of the server: 
4	If the connection fails, continue to re-enter the host name or IP address and click **OK** until the connection succeeds.

Start Page

When ConneXview opens for the first time, it displays the Start page. This is where you begin to discover and map your existing network.



Creating a New Network Map File

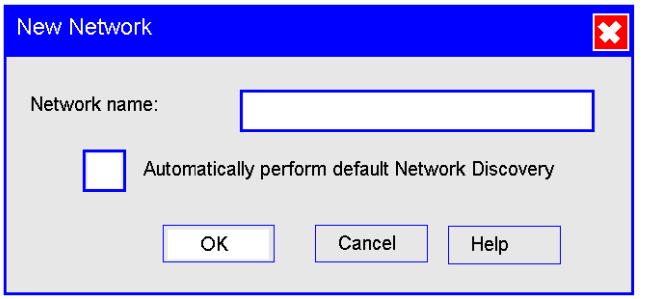
Overview

From the ConneXview Start page, you can create a new network map file. Later, after you let ConneXview perform automatic network discovery, the new network map file will contain information describing:

- each detected network device
- the communication links connecting network devices

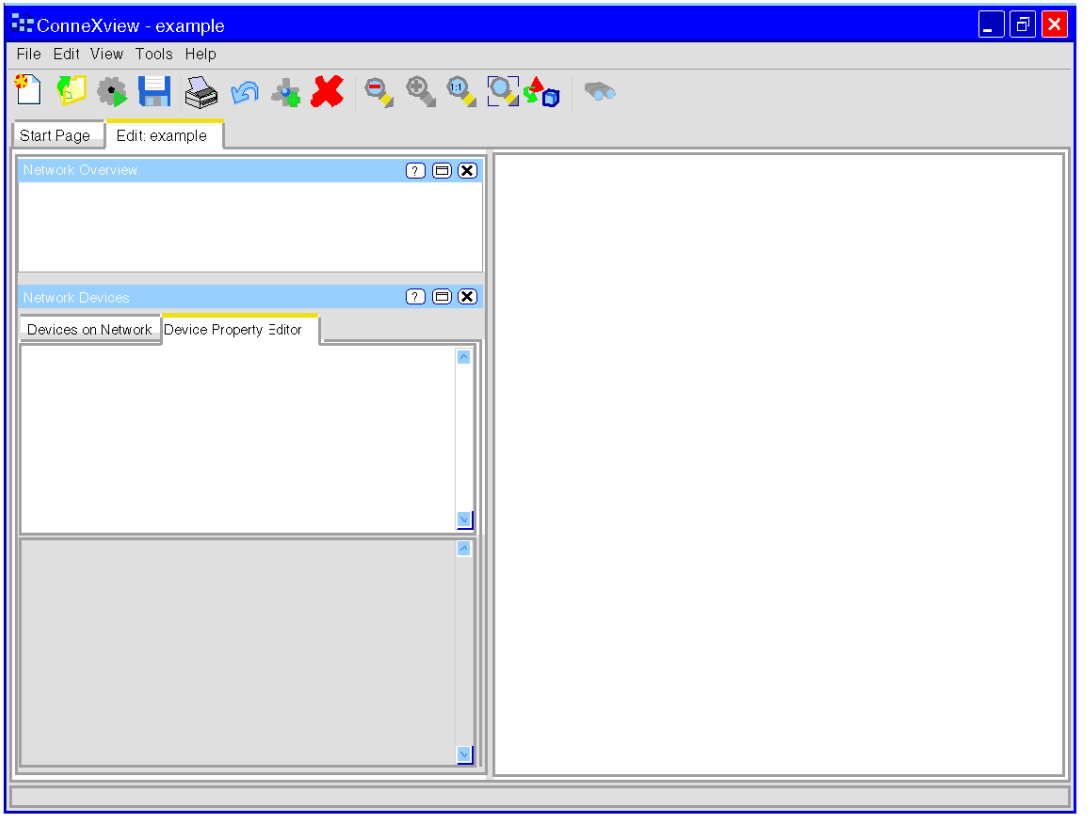
Creating a Network Map

To create a new network map file:

Step	Action
1	Select **New Network...** from either the File menu, Toolbar, or Start page. ConneXview opens the following: 
2	Use this dialog to give your network map a name, as follows: ● Type in a new *Network name*. ● Do not select the checkbox. **Note:** If you select the checkbox, ConneXview immediately begins automatic network discovery when you click **OK**. In this example, network discovery parameters will be configured before performing automatic network discovery.
3	Click **OK**. ConneXview starts-up and displays a blank network map in edit mode (below), where you can configure then perform automatic network discovery.

Edit Mode

ConneXview opens a new, blank network map in its own tab for editing. The new network name ("example") appears in the ConneXview header bar.



Configuring Network Settings

Overview

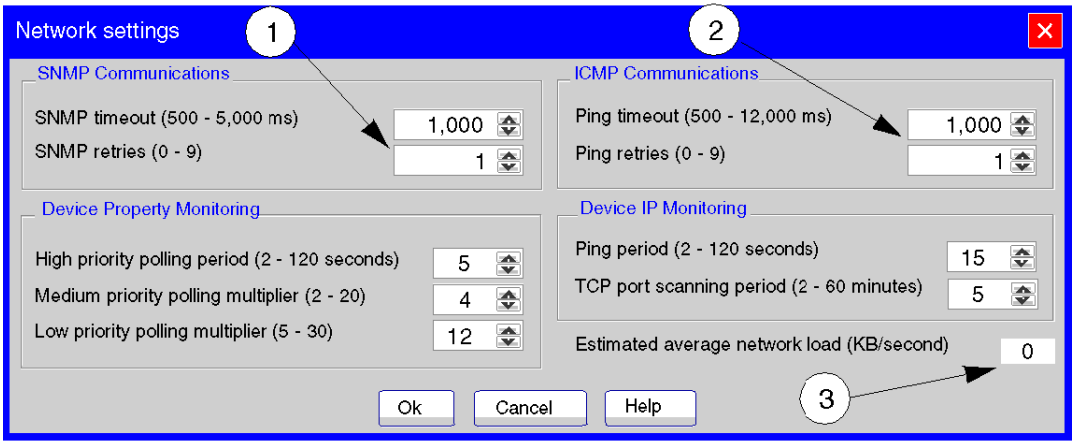
Before you let ConneXview proceed with automatic network discovery, you may want to adjust ConneXview's network settings. When there is excessive communications traffic on the network, ConneXview may not detect devices that are present, but which do not respond to detection queries.

Network Traffic Settings

ConneXview provides configurable settings for timeout and retry persistence:

- a timeout value is the wait time between successive ping or SNMP requests
- a retry value is the number of times ConneXview will attempt to reach a device before generating a timeout alarm

To view and configure ConneXview's network settings–with the Edit tab open–navigate to and select **Edit** → **Network settings...**. The Network settings dialog opens:



1 SNMP timeout and retry setting for managed devices
2 Ping timeout and retry settings for managed devices
3 Estimated traffic load generated by ConneXview

After ConneXview performs automatic network discovery and develops a map of your network, it will also calculate an *Estimated average network load*–in KB/second–that ConneXview itself adds to network traffic. You can review this estimate, and fine tune your network settings to achieve optimal network performance.

When you edit your network settings, remember that:

Changes that *increase* network traffic include:	• decreasing timeout values • increasing the number of retries
Changes that *decrease* network traffic include:	• increasing timeout values • decreasing the number of retries

Configuring Automatic Network Discovery

Overview

Before you let ConneXview automatically discover the devices and communications links on you network, you can:

- identify the network subnet, by means of its IP address and subnet mask
- add every community name (or password) required by network devices
- set the discovery rate ConneXview uses to conduct automatic discovery
- configure advanced discovery settings–including the frequency and persistence of pinging and polling–that ConneXview employs when it searches for network devices

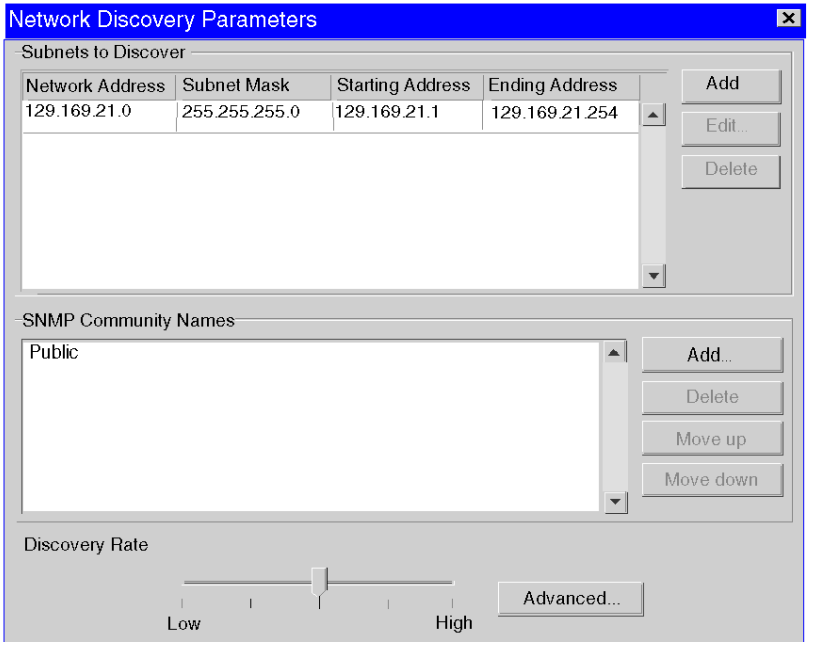
These tasks are described below.

Setting Network Discovery Parameters

You can configure automatic network discovery in the *Network Discovery Parameters* dialog. To open this dialog, either:

- navigate to and select **Tools** → **Discover network...**, or
- click the *Perform network discovery* toolbar button

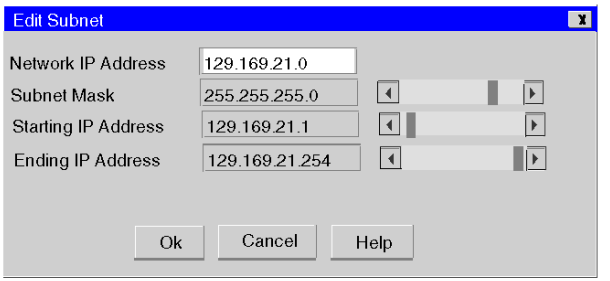
The *Network Discovery Parameters* dialog opens:



Identify Network Subnets

By default, ConneXview identifies and lists all of the subnets to which the server (or stand-alone) PC is connected. Check the subnet mask for each subnet to insure that the subnet includes the correct starting and ending IP addresses.

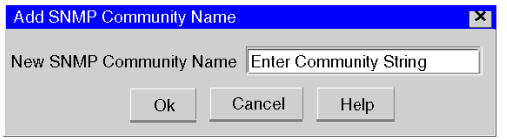
To edit these settings:

Step	Action
1	In the *Subnets to Discover* section of the dialog, select a subnet.
2	Click **Edit...**. The following dialog opens: 
3	Use the scroll bars to increase or decrease the values for the: • Subnet Mask • Starting IP Address • Ending IP Address
4	After the subnet has been accurately defined, click **OK** to close this dialog and return to the *Network Discovery Parameters* dialog.

Add Community Names

Community names are passwords that ConneXview must supply to devices on your network it can gain access to information about network devices. Before you proceed with automatic discovery, add all known community names for every subnet.

Add community names one at a time, as follows:

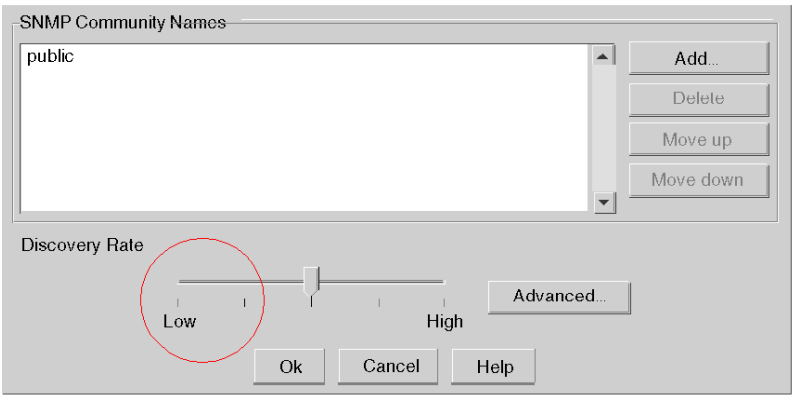
Step	Action
1	In the *SNMP Community Names* section of the dialog, click **Add...**. The following dialog opens: 
2	Type in the community name.
3	Click **OK** to close this dialog and return to the *Network Discovery Parameters* dialog.
4	Repeat steps 1 through 3 for each community name you want to add.

Set Discovery Rate

Best device discovery results are achieved when:

- the computer running ConneXview is connected to the local subnet with a CAT 5E cable connection, and
- your network uses industrial-grade or enterprise routers and switches (not consumer-grade routers)

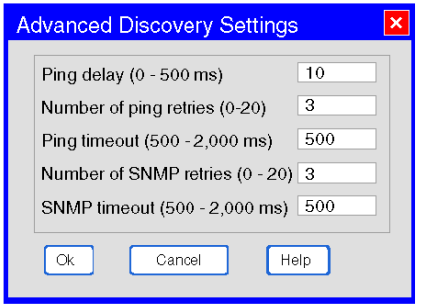
Avoid using a low-bandwidth link (a wireless, a multi-hop WAN link with slow segments, a PPP dial-up) as the connection point for the computer performing discovery. If you must use a low-bandwidth link, make sure you set the *Discovery Rate* slide control to **Low** in the *Network Discovery Parameters* dialog, below:



Advanced Discovery Settings

Sometimes lack of network bandwidth and overutilization can cause ConneXview to fail to discover devices that are active on the network. Typically, these devices cannot respond to queries quickly enough to be detected.

Use the *Advanced Discovery* dialog to help alleviate non-responsiveness due to bandwidth and utilization problems, as follows:

Step	Action
1	In the *Discovery Rate* section, click **Advanced...**. The following dialog opens: 
2	If you increase the delay, retries, and timeout settings in this dialog, the overloaded devices can more likely respond to ConneXview during automatic network discovery.
3	Click **OK** to close this dialog, and return to the *Network Discovery Parameters* dialog.

Mapping the Network

Overview

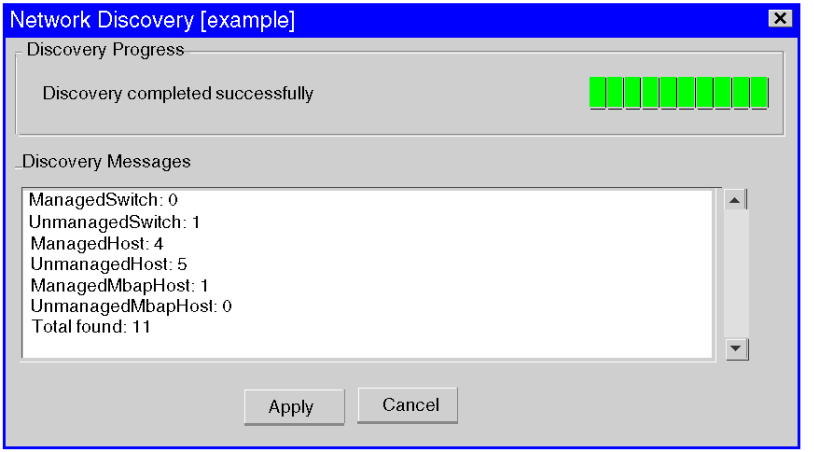
After all network discovery parameters have been configured, the next step is to let ConneXview:

- detect the devices and communications links on your network, and
- draw a map of your network

Detecting Network Devices and Links

In the *Network Discovery Parameters* dialog, click **OK**. The *Network Discovery* dialog opens, displaying the results of ConneXview's network discovery process.

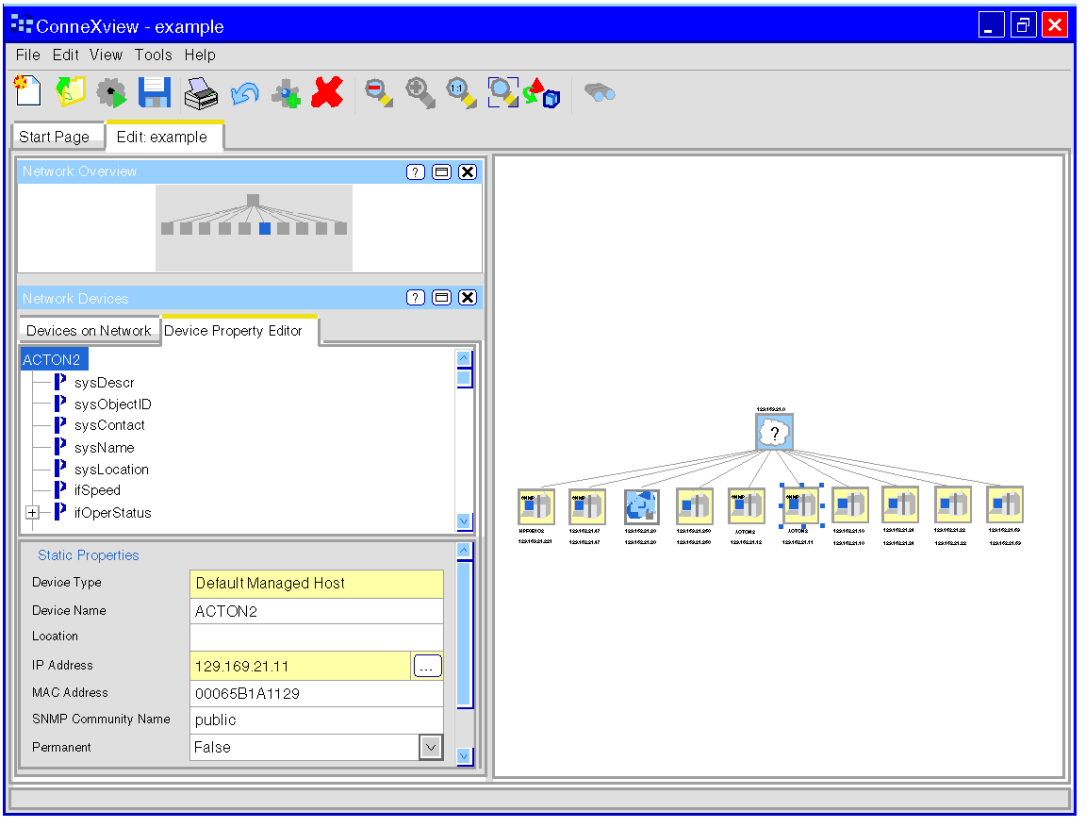
When discovery is finished, the dialog looks like this:



To let ConneXview draw a map of your network, click **Apply**.

Drawing the Network Map

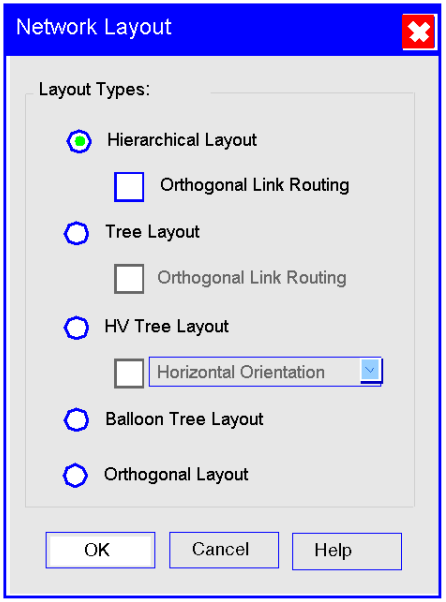
After you apply the results of ConneXview's automatic discovery process, ConneXview displays your new network map in edit mode:



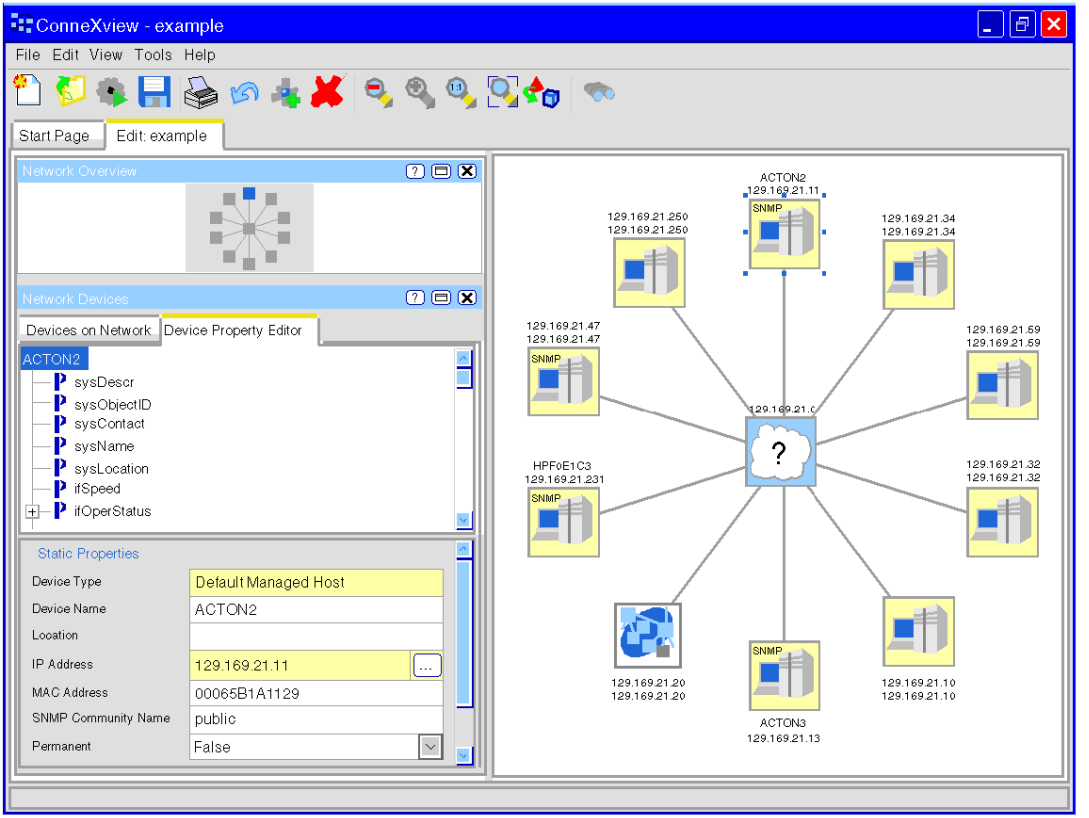
Changing the Network Layout

ConneXview initially displays your new network map in a hierarchical layout. You can change this design, and specify one of several layout types.

To edit your network layout:

Step	Action
1	Do one of the following: ● navigate to and select **View** → **Network layout...**, or ● click the *Perform new network layout* toolbar button  The Network Layout dialog opens, indicating **Hierarchical Layout** is the default selection: 
2	Select the layout type that best suites your network design, for example, **Balloon Tree Layout**.
3	Click **OK**. ConneXview displays the network map in the selected layout (below).

An example of a balloon tree network layout:



Saving the New Network

Be sure to save your network map, as follows:

- after ConneXview detects and automatically draws your network map for the first time
- any time you make any changes to your network map, for example, the network layout change made above

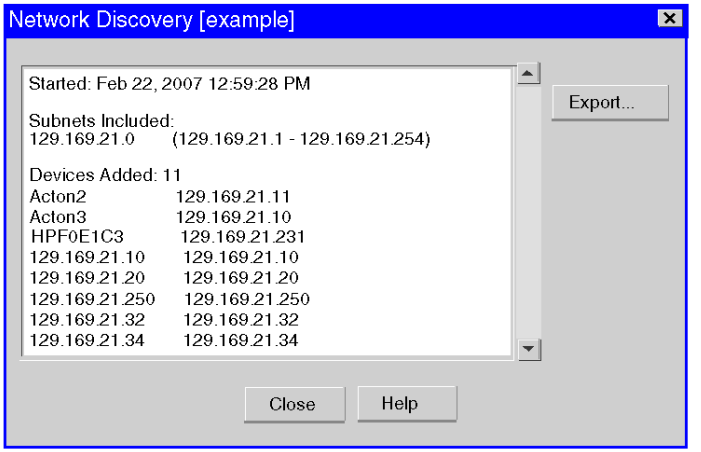
To save your network map, click the *Save changes to network* toolbar button or navigate to and select **File** → **Save**.

Keeping a Record of Automatic Discovery

ConneXview keeps a record of the most recent automatic network discovery operation. This record contains:

- the date and time automatic discovery was performed
- all subnets discovered
- the name and IP address of every device detected and added to the network map
- the total number of each different device type detected
- if you are performing automatic discovery on a pre-existing network, the record also identifies devices that were:
  - forced, i.e., not detected but added to the network map because the device's *Permanent* static property is set to **True**
  - moved to a new location on the network map
  - deleted from the previous iteration of the network map

To export and retain a copy of this record, with ConneXview open in edit mode:

Step	Action
1	Navigate to and select **Tools** → **Discovery report**. The Discovery Report dialog opens: 
2	Click **Export...**. The *Export Discovery Report* dialog–a standard Windows "Save As" dialog–opens.
3	In the *Export Discovery Report* dialog, navigate to the desired PC or network location and click **Export** to save the network discovery report as a .TXT file.

Monitoring the Network

3

Overview

This chapter introduces you to the tools ConneXview provides for monitoring your network, including identifying, diagnosing, and resolving network alarms.

What's in this Chapter?

This chapter contains the following topics:

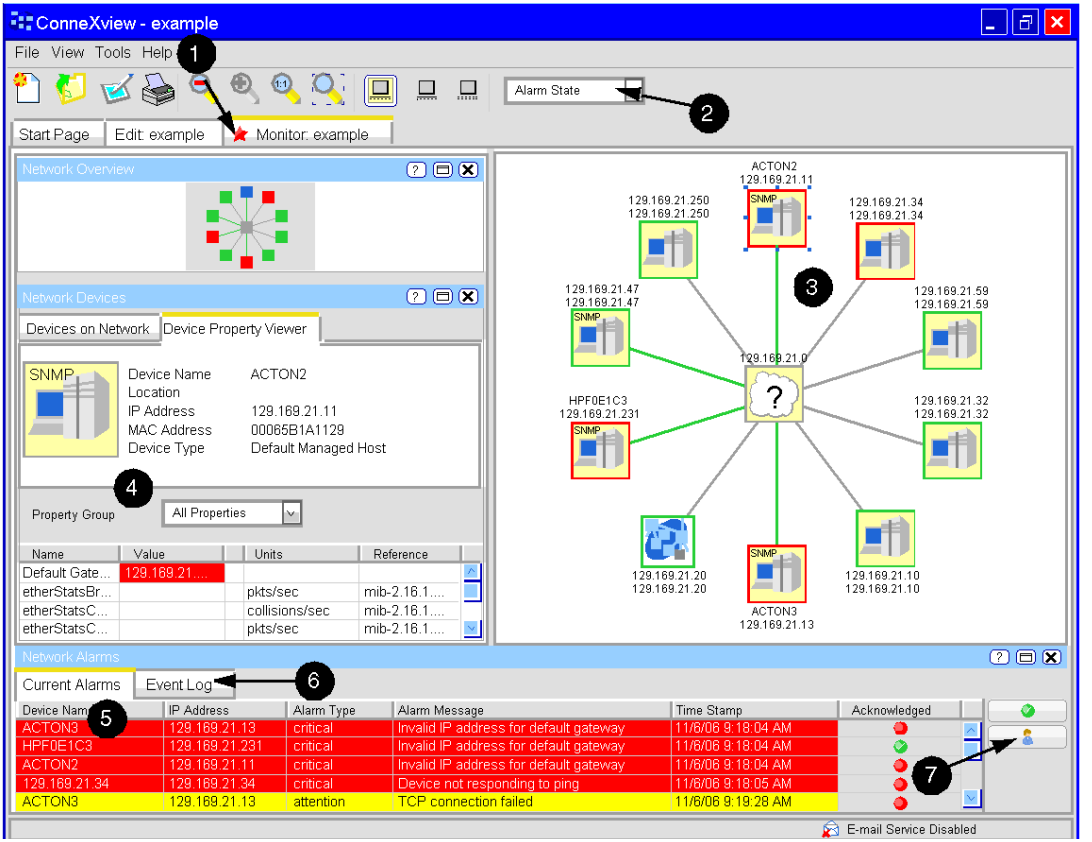
Opening the Network for Monitoring

Overview

ConneXview uses separate tabs to display a network map for editing and for monitoring. To open your network map for monitoring–with your network map already open for editing–either:

- navigate to and select **File** → **Open Monitor**, or
- click the *Open Monitor* toolbar button

ConneXview opens the network map in a new monitoring tab. ConneXview's monitoring features include those enumerated below:



1 alarm indicator (a star indicates at least 1 alarm is active on this network)
2 map coloring scheme list
3 network map viewer
4 device property viewer
5 current alarms list
6 event log tab
7 Network Assistant help button

Using ConneXview's Monitoring Tools

The tasks that you can perform using ConneXview's interconnected monitoring tools include:

- color-coding the map in the network map viewer, so that the color of a device or communications link indicates:
  - its alarm status, or
  - the value of a specified property that has been mapped to color scheme
- viewing the dynamically changing real-time values of your network's device and communications link properties
- identifying, diagnosing, and resolving network alarms as they occur
- viewing a history of network events

Color-Coding the Network Map

Overview

You can color code the map in the network map viewer, so that the color of a device or communications link indicates:

- its alarm status, or
- the value of a property that has been mapped to a color scheme

By default, ConneXview provides color codes for the following device and link properties:

- Interface Bandwidth
- Interface Broadcasts
- Interface Errors
- Interface Load

To select a color scheme for your network map, in the monitor tab either:

- navigate to and select **View** → **Map coloring scheme** → **<color scheme>**, or
- select the desired map color scheme from the *Select map coloring scheme* drop-down list in the ConneXview toolbar

Color Schemes

ConneXview provides the following map coloring schemes:

Selection	**Color scheme**	
	This color...	**Indicates...**
Alarm State	red	critical alarm
	yellow	attention-level alarm
	green	no alarm
	gray	non-managed device
Any one of: • Interface Bandwidth • Interface Broadcasts • Interface Errors • Interface Load	red	High-High threshold exceeded
	yellow	High threshold exceeded
	green	Normal operation
	teal	Low threshold exceeded
	blue	Low-Low threshold exceeded

By default the 4 mapped interface properties begin with the same color-mapping scheme. You can use the Device Type Editor to edit the default property color schemes, or to create a new color scheme for additional device and link properties.

NOTE: The Alarm State color scheme cannot be edited.

For additional information on how to use ConneXview's map coloring scheme, refer to the ConneXview help file topics *Map Coloring Scheme*, and *Device Property Editor*.

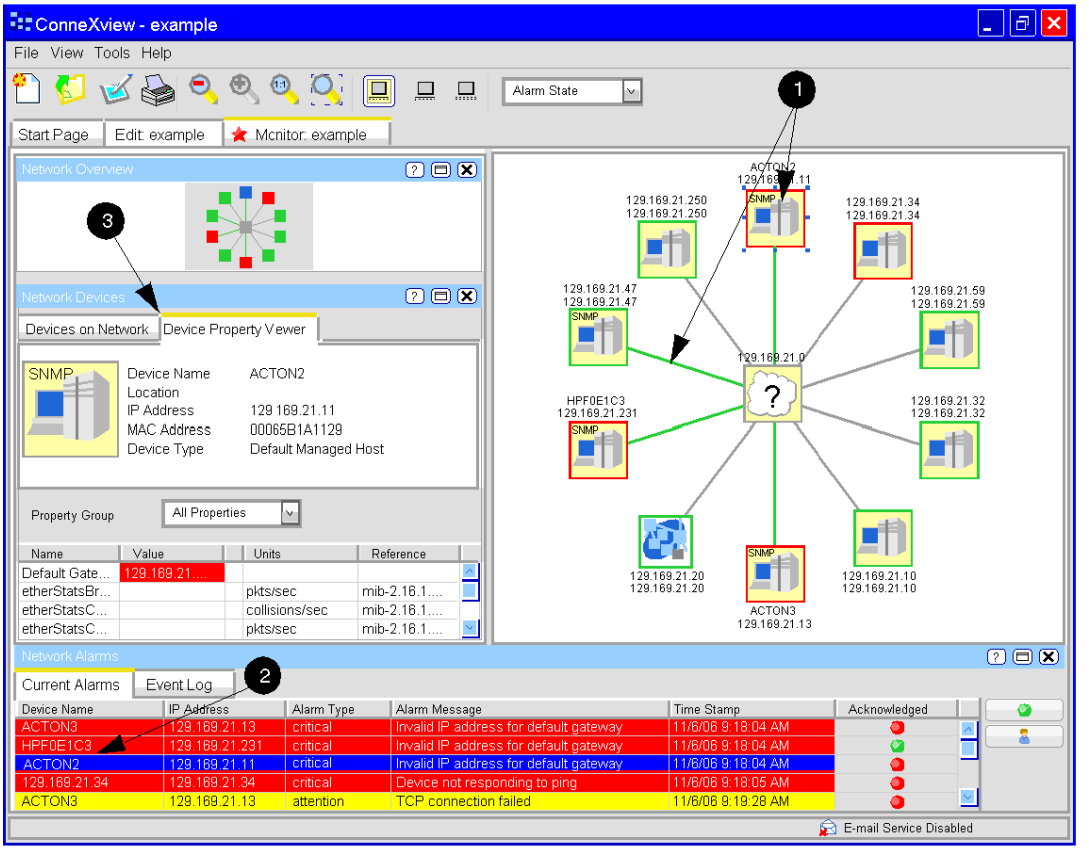
Monitoring Device and Communications Link Properties

Overview

Use the *Device Property Viewer* to display the real-time dynamically-changing values of a selected device or communications link. The *Device Property Viewer* appears as a tabbed page within the *Network Devices* pane, on the left side of ConneXview in monitor mode.

To select a device or link to display its properties in the *Device Property Viewer* either:

- click on a device in the *Network Map Viewer*, or
- click on an alarm in either the *Current Alarms* list or the *Event Log*

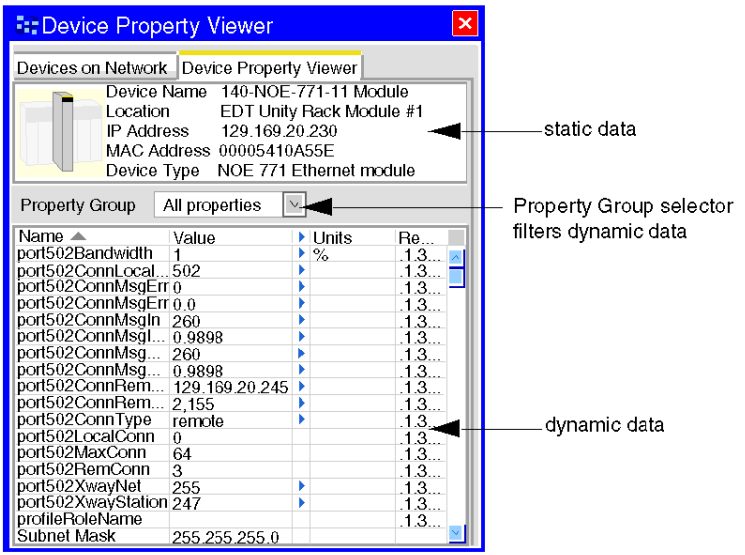


1 Click on a device or link...
2 ... or double-click on an alarm...
3 ... to display device or link properties

Viewing Device Properties

When you select a device, the top and bottom panes of the *Device Property Viewer* display the following information:

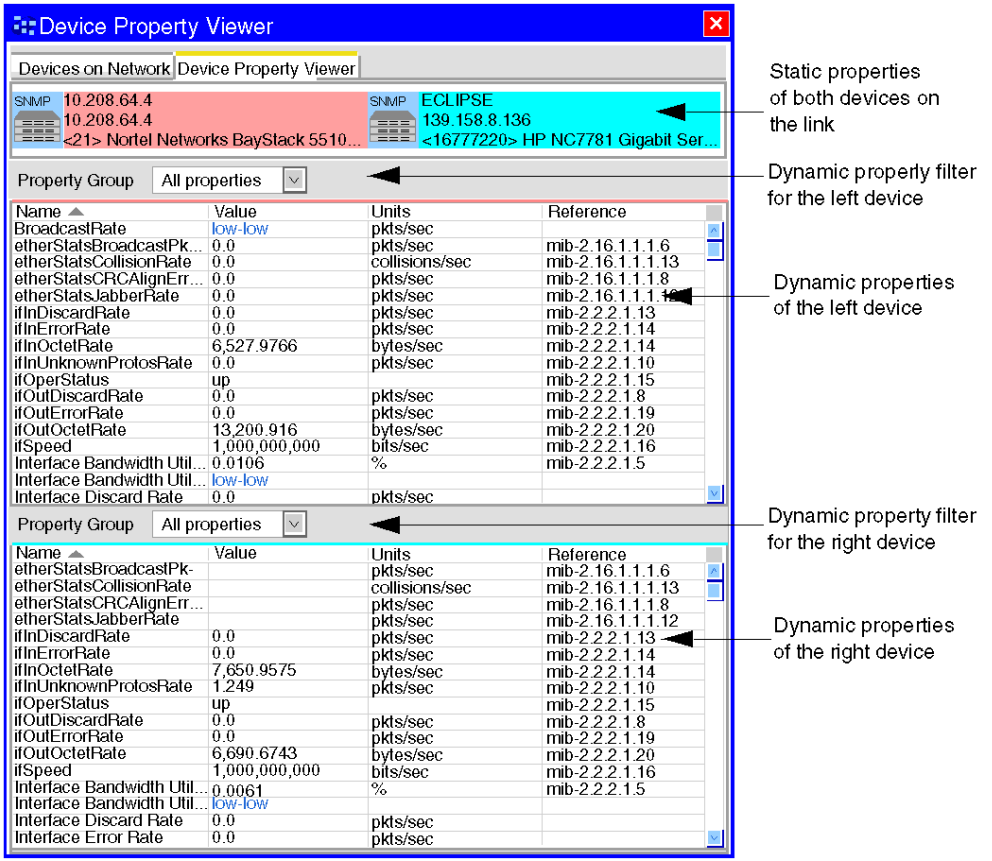
This pane...	Displays...
Top pane	An image of the device and a list of its static properties, such as its name, location on the network, IP address, MAC address, and device type
Bottom pane	• A property group selection list • A grid that displays information about the monitored device's dynamic properties for the selected property group **Notes:** **1** Property groups displayed in the selection list are created and edited in the Device Type Editor. **2** The default property group selection is **All Properties**.



Viewing Communications Link Properties

When you select a communications link, the top and bottom panes of the *Device Property Viewer* display the following information:

This pane...	Displays...
Top pane	• An image of each linked device connected by a line–each device is distinguished by its background color • Static properties for each connected device, including its name, IP Address and communication link interface index
Bottom pane	2 grids, one above the other, each with its own property group selection list. These 2 grids contain the link-related dynamic properties associated with the 2 devices connected by the link: • The top grid displays link-related dynamic properties of the device located on the left side of the top pane • The bottom grid displays link-related dynamic properties of the device located on the right side of the top pane



The background color behind each device in the upper pane matches the background color of its property grid in the lower pane.

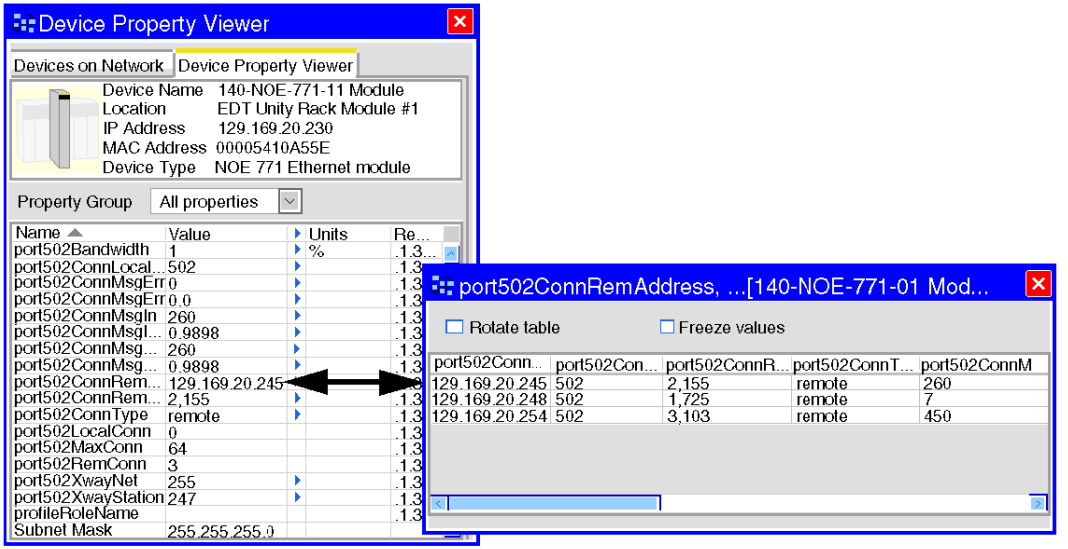
Viewing Dynamic Device Property Values

Some dynamic properties include an array of values, not just a single value. The *Device Property Viewer* displays only the first value in the array. The blue arrow to the right of the *Value* field indicates the presence of additional values.

Click on the arrow to open a Value Table. The Value Table lists:

- all the values in the selected property's array, and
- associated properties from the SNMP MIB table

In the following example, several dynamic properties are arrays of values, as indicated by the right-pointing arrows. If you click on the arrow associated with the port502ConnRemAddress property, you see in the Value Table that it is actually an array of three IP addresses, only the first of which appears in the *Device Property Viewer*.



You need to view the array through a Value Table in order to monitor the dynamic changes that occur in any values other than the first one. You also need to refer to the Value Table to determine which value(s) in the array are generating alarm conditions.

Viewing the Alarm Status of Dynamic Values

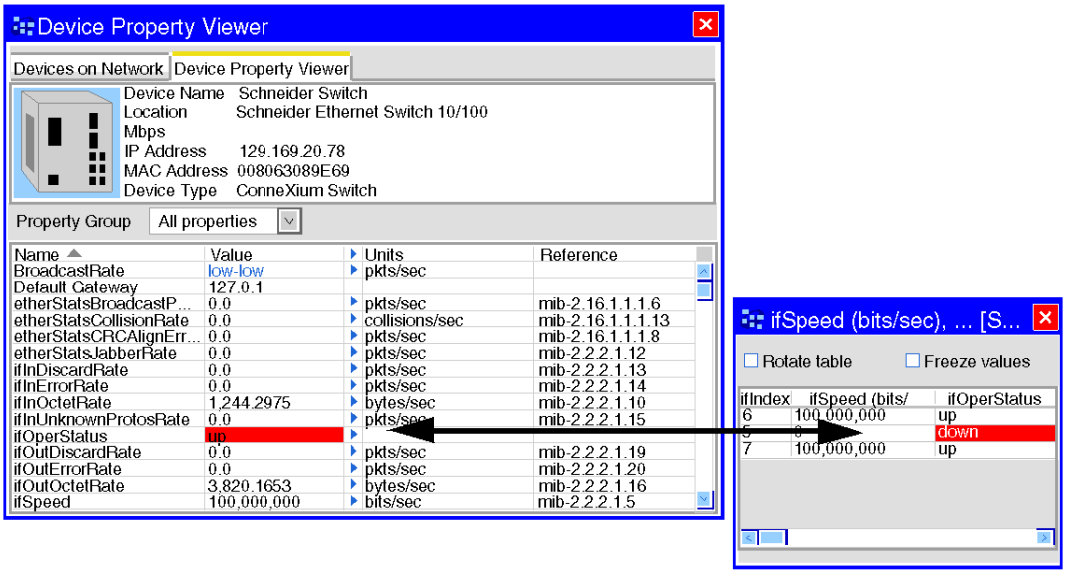
If a change monitor or a limit monitor is triggered for a dynamic property, the background color in the property's Value field indicates the alarm's severity:

- A yellow background indicates that you should pay *attention* to the property value because it has crossed the threshold of normally expected behavior
- A red background indicates that the state of the property value is *critical* and you should address it immediately

If the property represented in the *Device Property Viewer* is an array of values, and alarms have been triggered in any of the values in the array, the color displayed in the Viewer is the color of the highest alarm state in the array.

NOTE: The value displayed in the *Device Property Viewer* is always the first value in the array, not necessarily the value that is experiencing the alarm condition. When you see a colored background in a Value field and a right-pointing arrow next to it, you should click the arrow to open the Value Table in order to determine the actual alarm state(s) of the values in the array.

Here we see that the alarm is actually associated with the second value in the array:



Freezing the View of Dynamic Properties in the Value Table

You can also take a snapshot of property values displayed in a Value Table. Select the **Freeze values** checkbox in the top center of the Table.

When you de-select the **Freeze values** checkbox, the Value Table resumes its dynamic display of property values.

Identifying and Resolving Network Alarms

Overview

An alarm indicates a network problem exists. An alarm is triggered when the value of a monitored device property–with its *Severity* attribute set to either **critical** or **attention**:

- exceeds a pre-set limit, or
- changes more than a pre-set amount, or
- changes to or from one of a pre-set group of values

When an alarm occurs, it must be identified and resolved.

ConneXview can notify you that an alarm exists in two ways:

- visually, with your network map open for monitoring and displaying color-coded notice of alarms in the:
  - monitor tab
  - network map viewer
  - current alarms list
- by email, with ConneXview open or closed

Identifying Alarms

With your network map open for monitoring, ConneXview provides color-coded visual notice of alarms:

- red indicates an alarm of **critical** severity
- yellow indicates an alarm with a severity that requires your **attention**

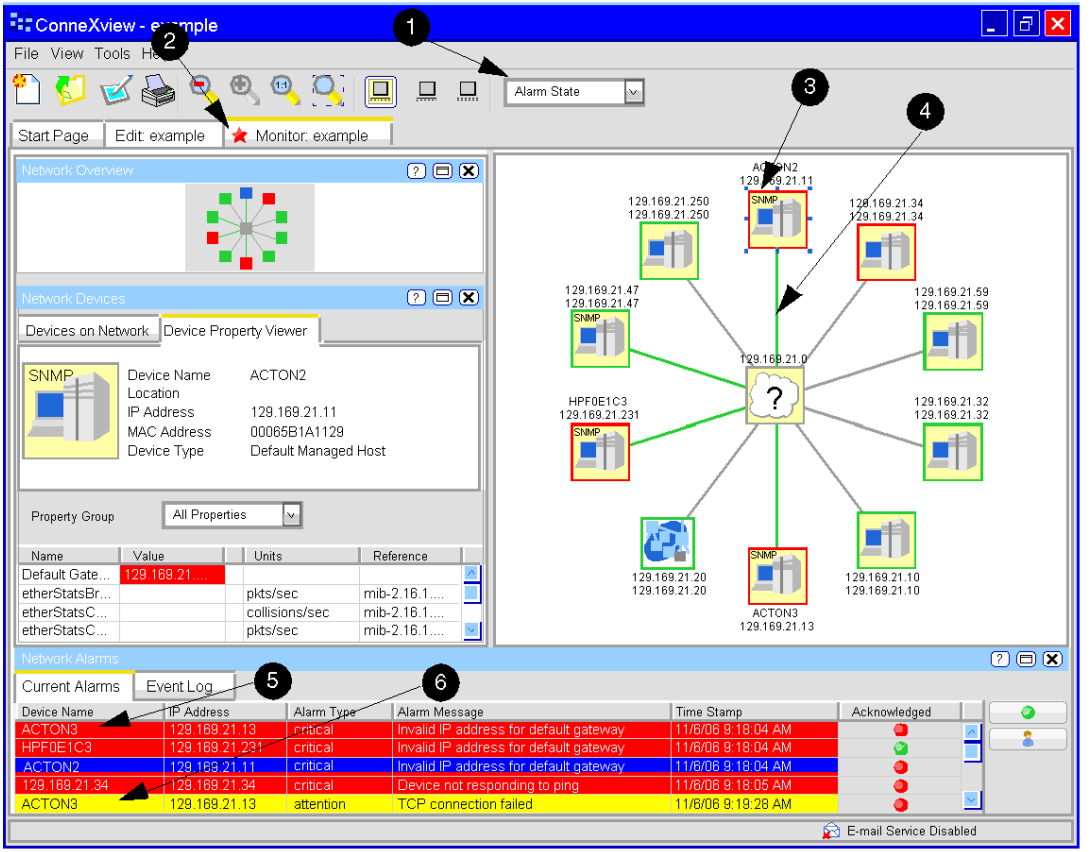
To visually determine that an alarm exists:

Check the...	**And look for...**

Monitor tab	• a red star  indicates the network:
	  • has at least 1 active critical alarm
	  • may also have active non-critical alarms that require attention
	• a yellow star  indicates the network has:
	  • at least 1 active alarm that requires attention
	  • no active critical alarms
	• the absence of a star indicates no active network alarms exist
	Note: Use this feature to monitor the state of "hidden" network maps, which cannot be displayed when you are simultaneously monitoring 2 or more network maps.

Device border in the network map	For a managed device, with the *Map coloring scheme* set to **Alarm State**: • red indicates an active critical alarm • yellow indicates an active alarm that requires attention • green indicates no active alarms • gray indicates the device is an unmanaged device
Communications link in the network map	For a link connected to at least 1 managed device, with the *Map coloring scheme* set to **Alarm State**: • red indicates an active critical alarm triggered by a communications property • yellow indicates an active alarm that requires attention triggered by a communications property • green indicates no active alarms • gray indicates the communications link connects 2 unmanaged devices
Current Alarms list	A row's background color: • red indicates an active critical alarm • yellow indicates an active alarm that requires attention • white indicates an inactive alarm • blue indicates the alarm is currently selected

A network map example, with *Map coloring scheme* set to **Alarm State**:



1 the network map viewer is configured to display the network's alarm state
2 the red star indicates at least 1 critical alarm exists on this network
3 a red device border indicates a critical alarm
4 a green line indicates no alarms on this link
5 the red alarm background indicates an active critical alarm
6 the yellow alarm background indicates an active alarm requiring attention

Email Event Notification Service

You can configure ConneXview to send email notice of network events–including alarms–to specified persons. Use this feature to send notice of alarms to persons who need to know of network problems, but who do not have immediate access to ConneXview's on-screen monitoring features.

ConneXview's email notification service is flexible, and can be configured to send notice for selected networks, device types, and devices.

You can filter the list of e-mail triggering events for each recipient. ConneXview sends e-mail notices to a user-provided SNMP e-mail server at a configurable interval from 1 to 60 minutes.

To configure ConneXview's email event notification service, start at:

Tools → E-mail configuration....

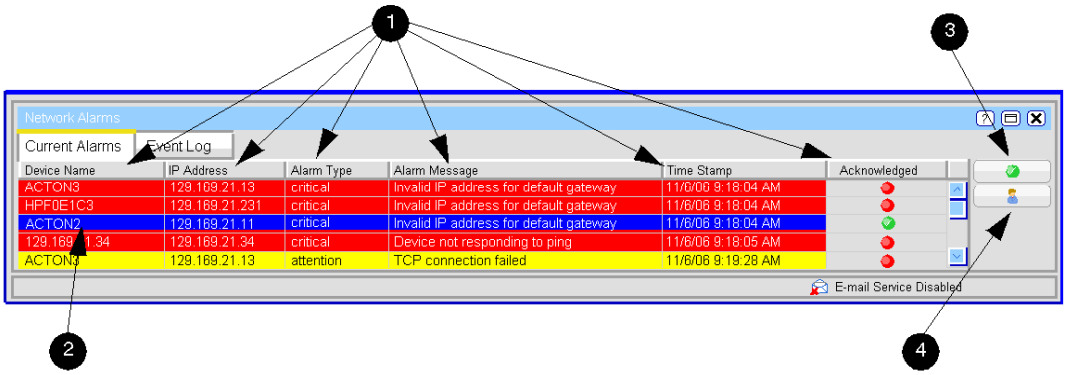
Refer to ConneXview's online help for assistance in configuring this feature.

Resolving Alarms

The Current Alarms page provides tools that help you resolve network alarms, including:

- color-coded indicators of alarm severity
- sortable columns that let you group together alarms by device name, IP address, severity, message, and time stamp
- a flag, presenting a visual record that you have Acknowledged the existence of 1 or more selected alarms
- the Network Assistant, a help file that:
  - defines the alarm
  - indicates possible causes for the alarm
  - suggests actions to take to resolve the alarm

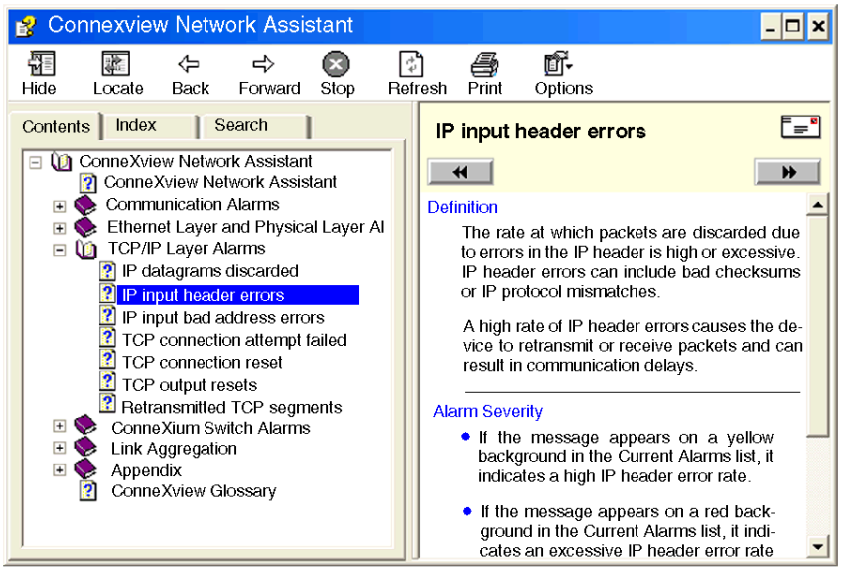
A network map example, with *Map coloring scheme* set to **Alarm State**:



1 Click on a column header to sort A to Z. Click again to sort Z to A.
2 Click on an alarm to select it...
3 ... then click the green button to show the alarm has been Acknowledged...
4 ... finally, click this button to open the Network Assistant for information about the alarm, its cause, and how to fix it.

Network Assistant

The Current Alarms page comes with its own help file - the Network Assistant - that provides alarm-specific troubleshooting assistance for standard devices. To use the Network Assistant, just select an alarm for a standard device in the Network Alarms list, then click on the *Help on alarm* button . The Network Assistant opens displaying a help topic for the selected alarm:



Viewing Network Event History

Overview

Click on the *Event Log* tab in the *Network Alarms* pane to open a history of all network monitoring events. The list includes all network alarms and information only events ConneXview.

Alarms and information events are distinguished by the *Severity* setting of the property monitor that triggers them, as follows:

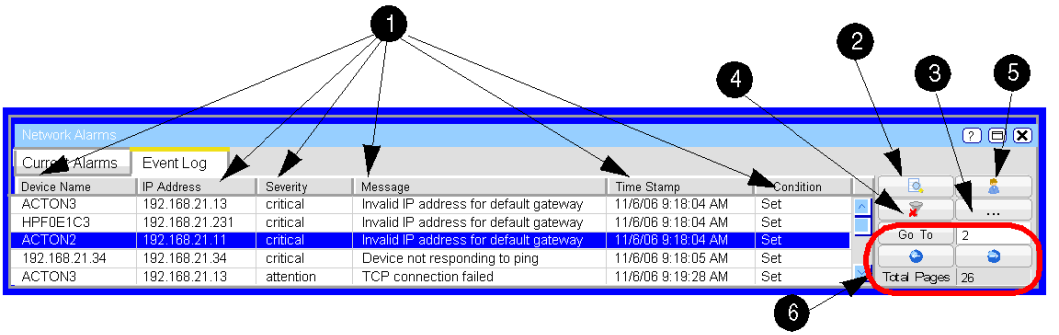
The *Severity* setting of an...	**Is set to...**
alarm	**critical** or **attention**
information only event	**information only**

Use the *Event Log* to:

- sort the list of network events
- filter the list by a specified:
  - date and time range, or
  - device, or
  - both
- open an event history list displaying all events relating to a selected property monitor
- open the Network Assistant to get help for a selected event

Event Log Features

The *Event Log* presents the following features:



1 Click a column header to sort A to Z; click again to sort Z to A.
2 Click this button to open the event history.
3 Click the ellipsis (...) button to configure an event log filter.
4 Click this button to toggle the event log filter on and off.
5 Click this button to open the Network Assistant for the selected event.
6 Use these controls to navigate between event log pages.

Event History

The *Event History* window lists all events triggered by the same property monitor that triggered the event selected in the *Event Log*. There are four conditions that can trigger an event:

- acknowledge
- change
- clear
- set

The meaning of a condition can depend upon the nature of the event (alarm or information only) and the type of property monitor. There are 3 types of property monitors:

change monitor: actuated upon any change in the value of the monitored property

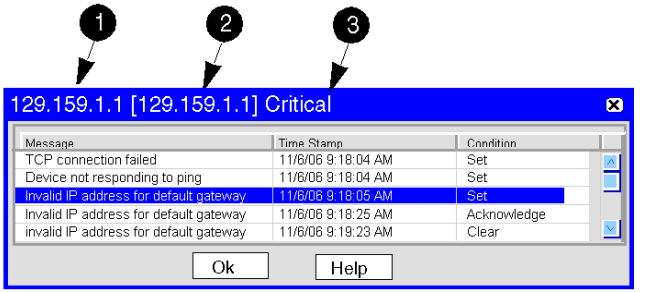
limit monitor: actuated when the value of the monitored property reaches or exceeds a high or low limit setting

state monitor: actuated when a monitored property's value either equals–or does not equal–one of a group of specified values

Event can be triggered as follows:

Event	Triggered when...
Alarm:	The alarm is: ● *set* ● *acknowledged* ● *cleared*
Information only event	For a state monitor, the monitored value has changed: ● to a triggering value (*set*), or ● from a triggering value (*cleared*)
	For a limit monitor, the monitored value has: ● risen above (*set*), or fallen below (*cleared*) a high limit setting, or ● fallen below (*set*), or risen above (*cleared*) a low limit setting
	For a change monitor, the monitored value has *changed*

To open the *Event History* window, click the *Open history for selected event* button:



1 device name
2 device IP address
3 Severity setting of triggering property monitor