

Part No. 320199-B  
December 2005

4655 Great America Parkway  
Santa Clara, CA 95054

# Installing and Using the Security & Routing Element Manager (SREM)

Nortel Secure Network Access Switch  
Software Release 1.0



**NORTEL**

## **Copyright © Nortel Networks Limited 2005. All rights reserved.**

The information in this document is subject to change without notice. The statements, configurations, technical data, and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. Users must take full responsibility for their applications of any products specified in this document. The information in this document is proprietary to Nortel Networks Inc.

The software described in this document is furnished under a license agreement and may be used only in accordance with the terms of that license. The software license agreement is included in this document.

## **Trademarks**

\*Nortel, Nortel Networks, the Nortel logo, the Globemark, Passport, BayStack, and Contivity are trademarks of Nortel Networks.

All other products or services may be trademarks or registered trademarks of their respective owners.

The asterisk after a name denotes a trademarked item.

## **Restricted rights legend**

Use, duplication, or disclosure by the United States Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013.

Notwithstanding any other license agreement that may pertain to, or accompany the delivery of, this computer software, the rights of the United States Government regarding its use, reproduction, and disclosure are as set forth in the Commercial Computer Software-Restricted Rights clause at FAR 52.227-19.

## **Export**

This product, software and related technology is subject to U.S. export control and may be subject to export or import regulations in other countries. Purchaser must strictly comply with all such laws and regulations. A license to export or reexport may be required by the U.S. Department of Commerce.

## **Statement of conditions**

In the interest of improving internal design, operational function, and/or reliability, Nortel Networks Inc. reserves the right to make changes to the products described in this document without notice.

Nortel Networks Inc. does not assume any liability that may occur due to the use or application of the product(s) or circuit layout(s) described herein.

Portions of the code in this software product may be Copyright © 1988, Regents of the University of California. All rights reserved. Redistribution and use in source and binary forms of such portions are permitted, provided that the above copyright notice and this paragraph are duplicated in all such forms and that any documentation, advertising materials, and other materials related to such distribution and use acknowledge that such portions of the software were developed by the University of California, Berkeley. The name of the University may not be used to endorse or promote products derived from such portions of the software without specific prior written permission.

SUCH PORTIONS OF THE SOFTWARE ARE PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

---

In addition, the program and information contained herein are licensed only pursuant to a license agreement that contains restrictions on use and disclosure (that may incorporate by reference certain limitations and notices imposed by third parties).

## Licensing

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>).

This product includes cryptographic software written by Eric Young ([ey@cryptsoft.com](mailto:ey@cryptsoft.com)).

This product includes software written by Tim Hudson ([tjh@cryptsoft.com](mailto:tjh@cryptsoft.com)).

This product includes software developed by the Apache Software Foundation (<http://www.apache.org/>).

This product includes a TAP-Win32 driver derived from the CIPE-Win32 kernel driver, Copyright © Damion K. Wilson, and is licensed under the GPL.

Portions of the TunnelGuard code include software licensed from The Legion of the Bouncy Castle.

## Nortel Networks Inc. software license agreement

This Software License Agreement (“License Agreement”) is between you, the end-user (“Customer”) and Nortel Networks Corporation and its subsidiaries and affiliates (“Nortel Networks”). PLEASE READ THE FOLLOWING CAREFULLY. YOU MUST ACCEPT THESE LICENSE TERMS IN ORDER TO DOWNLOAD AND/OR USE THE SOFTWARE. USE OF THE SOFTWARE CONSTITUTES YOUR ACCEPTANCE OF THIS LICENSE AGREEMENT. If you do not accept these terms and conditions, return the Software, unused and in the original shipping container, within 30 days of purchase to obtain a credit for the full purchase price.

“Software” is owned or licensed by Nortel Networks, its parent or one of its subsidiaries or affiliates, and is copyrighted and licensed, not sold. Software consists of machine-readable instructions, its components, data, audio-visual content (such as images, text, recordings or pictures) and related licensed materials including all whole or partial copies. Nortel Networks grants you a license to use the Software only in the country where you acquired the Software. You obtain no rights other than those granted to you under this License Agreement. You are responsible for the selection of the Software and for the installation of, use of, and results obtained from the Software.

**1. Licensed Use of Software.** Nortel Networks grants Customer a nonexclusive license to use a copy of the Software on only one machine at any one time or to the extent of the activation or authorized usage level, whichever is applicable. To the extent Software is furnished for use with designated hardware or Customer furnished equipment (“CFE”), Customer is granted a nonexclusive license to use Software only on such hardware or CFE, as applicable. Software contains trade secrets and Customer agrees to treat Software as confidential information using the same care and discretion Customer uses with its own similar information that it does not wish to disclose, publish or disseminate. Customer will ensure that anyone who uses the Software does so only in compliance with the terms of this Agreement. Customer shall not a) use, copy, modify, transfer or distribute the Software except as expressly authorized; b) reverse assemble, reverse compile, reverse engineer or otherwise translate the Software; c) create derivative works or modifications unless expressly authorized; or d) sublicense, rent or lease the Software. Licensors of intellectual property to Nortel Networks are beneficiaries of this provision. Upon termination or breach of the license by Customer or in the event designated hardware or CFE is no longer in use, Customer will promptly return the Software to Nortel Networks or certify its destruction. Nortel Networks may audit by remote polling or other reasonable means to determine Customer’s Software activation or usage levels. If suppliers of third party software included in Software require Nortel Networks to include additional or different terms, Customer agrees to abide by such terms provided by Nortel Networks with respect to such third party software.

**2. Warranty.** Except as may be otherwise expressly agreed to in writing between Nortel Networks and Customer, Software is provided “AS IS” without any warranties (conditions) of any kind. NORTEL NETWORKS DISCLAIMS ALL WARRANTIES (CONDITIONS) FOR THE SOFTWARE, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A

PARTICULAR PURPOSE AND ANY WARRANTY OF NON-INFRINGEMENT. Nortel Networks is not obligated to provide support of any kind for the Software. Some jurisdictions do not allow exclusion of implied warranties, and, in such event, the above exclusions may not apply.

**3. Limitation of Remedies.** IN NO EVENT SHALL NORTEL NETWORKS OR ITS AGENTS OR SUPPLIERS BE LIABLE FOR ANY OF THE FOLLOWING: a) DAMAGES BASED ON ANY THIRD PARTY CLAIM; b) LOSS OF, OR DAMAGE TO, CUSTOMER'S RECORDS, FILES OR DATA; OR c) DIRECT, INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS OR SAVINGS), WHETHER IN CONTRACT, TORT OR OTHERWISE (INCLUDING NEGLIGENCE) ARISING OUT OF YOUR USE OF THE SOFTWARE, EVEN IF NORTEL NETWORKS, ITS AGENTS OR SUPPLIERS HAVE BEEN ADVISED OF THEIR POSSIBILITY. The foregoing limitations of remedies also apply to any developer and/or supplier of the Software. Such developer and/or supplier is an intended beneficiary of this Section. Some jurisdictions do not allow these limitations or exclusions and, in such event, they may not apply.

**4. General**

- a. If Customer is the United States Government, the following paragraph shall apply: All Nortel Networks Software available under this License Agreement is commercial computer software and commercial computer software documentation and, in the event Software is licensed for or on behalf of the United States Government, the respective rights to the software and software documentation are governed by Nortel Networks standard commercial license in accordance with U.S. Federal Regulations at 48 C.F.R. Sections 12.212 (for non-DoD entities) and 48 C.F.R. 227.7202 (for DoD entities).
- b. Customer may terminate the license at any time. Nortel Networks may terminate the license if Customer fails to comply with the terms and conditions of this license. In either event, upon termination, Customer must either return the Software to Nortel Networks or certify its destruction.
- c. Customer is responsible for payment of any taxes, including personal property taxes, resulting from Customer's use of the Software. Customer agrees to comply with all applicable laws including all applicable export and import laws and regulations.
- d. Neither party may bring an action, regardless of form, more than two years after the cause of the action arose.
- e. The terms and conditions of this License Agreement form the complete and exclusive agreement between Customer and Nortel Networks.
- f. This License Agreement is governed by the laws of the country in which Customer acquires the Software. If the Software is acquired in the United States, then this License Agreement is governed by the laws of the state of New York.

---

# Contents

---

<b>List of Figures</b> .....	<b>7</b>
<b>List of Tables</b> .....	<b>9</b>
<b>Preface</b> .....	<b>11</b>
Before you begin .....	11
Text conventions .....	12
Related information .....	13
Publications .....	14
Online .....	14
How to get help .....	15
<b>Chapter 1: Installing SREM</b> .....	<b>17</b>
SREM installation precautions .....	17
System requirements .....	18
Removing previous versions of SREM .....	19
Accessing the uninstall application .....	19
Uninstalling SREM .....	20
Installing SREM on your system .....	23
<b>Chapter 2: SREM Screen Descriptions</b> .....	<b>29</b>
SREM window areas .....	29
Menus .....	31
Toolbar items .....	34
Indicator icons .....	35
Screen icons .....	36
Right-click menu .....	37

<b>Chapter 3: Using SREM</b> .....	<b>39</b>
Accessing the SREM software .....	39
Opening SREM .....	39
Quitting SREM .....	40
Viewing SREM online help .....	40
Configuring SREM settings .....	42
Managing network access devices from the SREM .....	43
Adding a new network access device .....	44
Deleting a network access device .....	45
Grouping network access devices in SREM .....	46
Logging into a network access device .....	47
Saving a network configuration .....	47
Opening a network configuration .....	48
Managing changes within the SREM .....	49
Cutting, copying, and pasting data between devices .....	49
Changing field values in the SREM .....	51
Applying and saving changes in the SREM .....	51
Viewing and confirming unapplied changes .....	52
Using the Log Browser tool .....	53

---

## Figures

---

Figure 1	Introduction .....	21
Figure 2	Uninstall Options .....	21
Figure 3	Choose Product Features .....	22
Figure 4	Uninstall Complete .....	23
Figure 5	InstallAnywhere .....	23
Figure 6	Introduction .....	24
Figure 7	Close all running instances of Security & Routing Element Manager ...	24
Figure 8	Choose Install Folder .....	25
Figure 9	Choose Shortcut Folder .....	26
Figure 10	Launching uninstaller .....	26
Figure 11	Pre-Installation Summary .....	27
Figure 12	Install Complete .....	28
Figure 13	Main SREM screen .....	30
Figure 14	SREM toolbar .....	34
Figure 15	Change Manager tab .....	36
Figure 16	Statistics Manager tab .....	37
Figure 17	Right-click menu example .....	38
Figure 18	SREM online help .....	41
Figure 19	Options window .....	42
Figure 20	New Device window .....	44
Figure 21	Right-click menu .....	46
Figure 22	New Sub Network dialog box .....	46
Figure 23	Save window .....	48
Figure 24	Open window .....	49
Figure 25	Right-click menu .....	50
Figure 26	Paste As... window .....	50

## 8 Figures

---

Figure 27	Change Manager tab .....	52
Figure 28	Log Browser .....	53
Figure 29	Retrieval Criteria — Definition View .....	54
Figure 30	Retrieval Criteria — Summary View .....	54



---

# Tables

---

Table 1	Main SREM window .....	29
Table 2	File menu .....	31
Table 3	Edit menu .....	32
Table 4	View menu .....	32
Table 5	Tools menu .....	33
Table 6	Window menu .....	33
Table 7	Help menu .....	34
Table 8	Toolbar items .....	34
Table 9	Indicator icons .....	35
Table 10	Screen icons .....	36
Table 11	Right-click menu options .....	38
Table 12	Online help icons .....	41
Table 13	SREM Options .....	43
Table 14	New Device fields .....	45



---

## Preface

---

This document provides generic instructions for installing and using the Security & Routing Element Manager (SREM) software.

Security & Routing Element Manager (SREM) is a graphical user interface (GUI) that runs in an online, interactive mode. SREM allows the management of multiple devices (for example, the Nortel SNAS 4050) from one application. To use SREM, you must have network connectivity to a management station running SREM in one of the supported environments.

### Before you begin

This guide is intended for network administrators who have the following background:

- basic knowledge of networks, Ethernet bridging, and IP routing
- familiarity with networking concepts and terminology
- experience with windowing systems or GUIs
- basic knowledge of network topologies

Before using this guide, you must complete the following procedures. For a new switch:

**1** Install the switch.

For installation instructions, see *Nortel Secure Network Access Switch 4050 Installation Guide* (320846-A).

**2** Connect the switch to the network.

For more information, see *Nortel Secure Network Access Solution Guide* (320817-A).

**3** Complete the basic switch configuration using CLI commands.

For more information, see *Nortel Secure Network Access Switch 4050 User Guide* (320818-A).

## Text conventions

This guide uses the following text conventions:

angle brackets (< >)	Enter text based on the description inside the brackets. Do not type the brackets when entering the command. Example: If the command syntax is <code>ping &lt;ip_address&gt;</code> , you enter <b>ping 192.32.10.12</b>
<b>bold body text</b>	Objects such as window names, dialog box names, and icons, as well as user interface objects such as buttons, tabs, and menu items.
<b>bold Courier text</b>	Command names, options, and text that you must enter. Example: Use the <b>dinfo</b> command. Example: Enter <b>show ip {alerts routes}</b> .
braces ({} )	Required elements in syntax descriptions where there is more than one option. You must choose only one of the options. Do not type the braces when entering the command. Example: If the command syntax is <code>show ip {alerts routes}</code> , you must enter either <b>show ip alerts</b> or <b>show ip routes</b> , but not both.
brackets ([ ] )	Optional elements in syntax descriptions. Do not type the brackets when entering the command. Example: If the command syntax is <code>show ip interfaces [-alerts]</code> , you can enter either <b>show ip interfaces</b> or <b>show ip interfaces -alerts</b> .

---

ellipsis points ( . . . )	Repeat the last element of the command as needed. Example: If the command syntax is <code>ethernet/2/1 [&lt;parameter&gt; &lt;value&gt;] . . .</code> , you enter <b>ethernet/2/1</b> and as many parameter-value pairs as needed.
<i>italic text</i>	Variables in command syntax descriptions. Also indicates new terms and book titles. Where a variable is two or more words, the words are connected by an underscore. Example: If the command syntax is <code>show at &lt;valid_route&gt;</code> , <i>valid_route</i> is one variable and you substitute one value for it.
plain Courier text	Command syntax and system output, for example, prompts and system messages. Example: <code>Set Trap Monitor Filters</code>
separator ( > )	Menu paths. Example: <b>Protocols &gt; IP</b> identifies the <b>IP</b> command on the <b>Protocols</b> menu.
vertical line (   )	Options for command keywords and arguments. Enter only one of the options. Do not type the vertical line when entering the command. Example: If the command syntax is <code>show ip {alerts routes}</code> , you enter either <b>show ip alerts</b> or <b>show ip routes</b> , but not both.

## Related information

This section lists information sources that relate to this document.

## Publications

Refer to the following publications for information on the Nortel SNA solution:

- *Nortel Secure Network Access Solution Guide (320817-A)*
- *Nortel Secure Network Access Switch 4050 Installation Guide (320846-A)*
- *Nortel Secure Network Access Switch 4050 User Guide (320818-A)*
- *Installing and Using the Security & Routing Element Manager (SREM) (320199-B)*
- *Release Notes for Nortel Ethernet Routing Switch 5500 Series, Software Release 4.3 (217468-B)*
- *Release Notes for the Ethernet Routing Switch 8300, Software Release 2.2.8 (316811-E)*
- *Release Notes for the Nortel Secure Network Access Solution, Software Release 1.0 (320850-A)*
- *Release Notes for Enterprise Switch Manager (ESM), Software Release 5.1 (209960-H)*
- *Using Enterprise Switch Manager Release 5.1 (208963-F)*

## Online

To access Nortel technical documentation online, go to the Nortel web site:

[www.nortel.com/support](http://www.nortel.com/support)

You can download current versions of technical documentation. To locate documents, browse by category or search using the product name or number.

You can print the technical manuals and release notes free, directly from the Internet. Use Adobe\* Reader\* to open the manuals and release notes, search for the sections you need, and print them on most standard printers. Go to the Adobe Systems site at [www.adobe.com](http://www.adobe.com) to download a free copy of Adobe Reader.

## How to get help

If you purchased a service contract for your Nortel product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller for assistance.

If you purchased a Nortel service program, use the [www.nortel.com/help](http://www.nortel.com/help) web page to locate information to contact Nortel for assistance:

- To obtain Nortel Technical Support contact information, click the **CONTACT US** link on the left side of the page.
- To call a Nortel Technical Solutions Center for assistance, click the **CALL US** link on the left side of the page to find the telephone number for your region.

An Express Routing Code (ERC) is available for many Nortel products and services. When you use an ERC, your call is routed to a technical support person who specializes in supporting that product or service. To locate the ERC for your product or service, go to the [www.nortel.com/help](http://www.nortel.com/help) web page and follow these links:

- 1 Click **CONTACT US** on the left side of the **HELP** web page.
- 2 Click **Technical Support** on the **CONTACT US** web page.
- 3 Click **Express Routing Codes** on the **TECHNICAL SUPPORT** web page.





---

# Chapter 1

## Installing SREM

---

The Security & Router Element Manager (SREM) is a graphical user interface that allows users to configure and monitor a variety of devices, including the Nortel Secure Network Access Switch 4050 (Nortel SNAS 4050) and the Nortel Secure Router 6200 Series.

SREM runs in an online, interactive mode, and allows the management of multiple devices from a single application.

This chapter includes the following topics:

Topic	Page
<a href="#">SREM installation precautions</a>	17
<a href="#">System requirements</a>	18
<a href="#">Removing previous versions of SREM</a>	19
<a href="#">Installing SREM on your system</a>	23

## SREM installation precautions

The following warnings apply to SREM on all operating environments:

- If you have other Nortel devices in your network, and are running earlier versions of SREM software, you must install the newest version of SREM in order to access the switches running the latest software.

- To maintain multiple versions of SREM on your system, choose a different installation folder for each new version of SREM.

To replace an existing version of SREM, you must complete the uninstall process first. The uninstall process is launched when:

- the SREM uninstall process is started manually (“[Accessing the uninstall application](#)” on page 19)
- the install folder selected during an SREM installation already contains a version of the software

- SREM saves the IP addresses that are visited to an encrypted network configuration (.xvn) file. Uninstalling SREM does not remove this settings file.

For details about creating a network configuration file, refer to “[Saving a network configuration](#)” on page 47.

- The network configuration file containing IP addresses visited from a previous SREM version is automatically used by a newly installed SREM version. If you do not wish to use the existing network configuration file, rename or delete the network configuration file before starting the SREM.

## System requirements

Before you install SREM, ensure that you have the current installation file and that your system meets the following minimum requirements:

- Java Runtime Environment 1.4.2\_02 or later ([www.java.com/](http://www.java.com/))
- Win 2k, Win NT 4.0 or later, Windows XP
- Hardware: P3 1.2 GHz or higher
- Memory: 512 MB
- Hard drive space: 72.5 MB

## Removing previous versions of SREM

Removing previous versions of SREM is an optional process. Multiple versions of SREM can exist on one system, as long as each version is installed in a separate location. If you decide to allow previous versions of SREM to remain, then you must choose a different folder to use during the installation process.

For details about the Uninstall process, refer to [“Uninstalling SREM” on page 20](#).

### Accessing the uninstall application

If you attempt to install SREM in a folder that already contains a version of the software, then you are prompted to uninstall the existing version automatically before completing the install process.

There are also two ways to access the SREM uninstall application manually:

- [“Using the Start Menu shortcut”](#)
- [“Using Windows Explorer”](#)

#### Using the Start Menu shortcut

Remove existing versions of SREM software with the Uninstall Security & Routing Element Manager option, created in the Windows Start menu during installation.

For example, to remove SREM from a Windows XP system using the default program group, choose the following option from the Windows Start menu: **All Programs > Nortel Networks Device Manager > Uninstall Security & Routing Element Manager**.

## Using Windows Explorer

If no program group was added to the Windows Start menu during installation, then complete the following steps to access the SREM uninstall software:

- 1 Navigate to the folder where the SREM software is installed using Windows Explorer.
- 2 Open the Uninstall\_Security & Routing Element Manager sub-folder.
- 3 Run the *Uninstall Security & Routing Element Manager.exe* file.



**Note:** If more than one version of SREM software is installed, be sure that you select the correct software version to uninstall.

---

## Uninstalling SREM

Use the following procedure to remove SREM from your system.

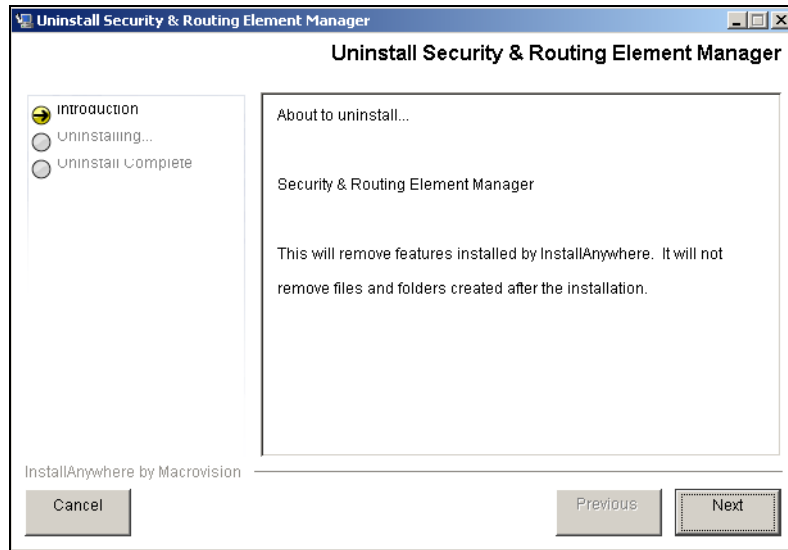
- 1 Start the SREM uninstall application.



**Note:** The uninstall process can be started using steps described in [“Accessing the uninstall application” on page 19](#), or by attempting to install SREM into a directory that contains an existing SREM installation.

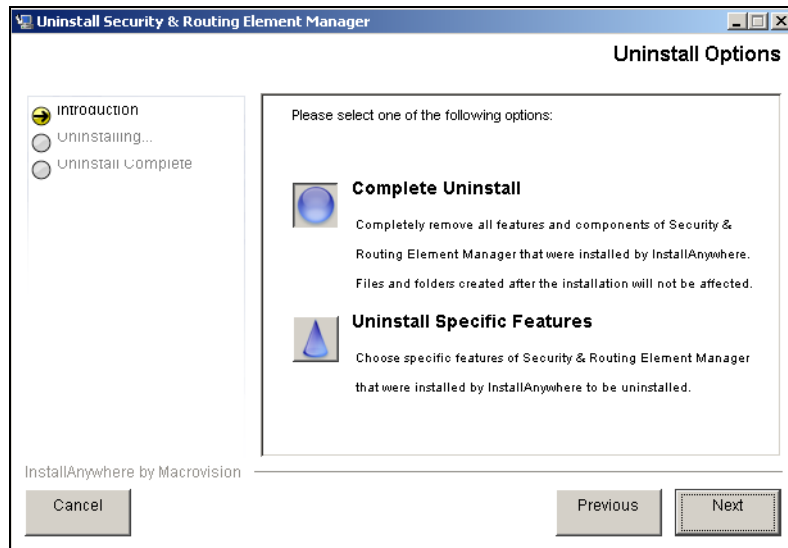
---

The Uninstall Security & Routing Element Manager Introduction screen appears ([Figure 1 on page 21](#)).

**Figure 1** Introduction

2 Click **Next**.

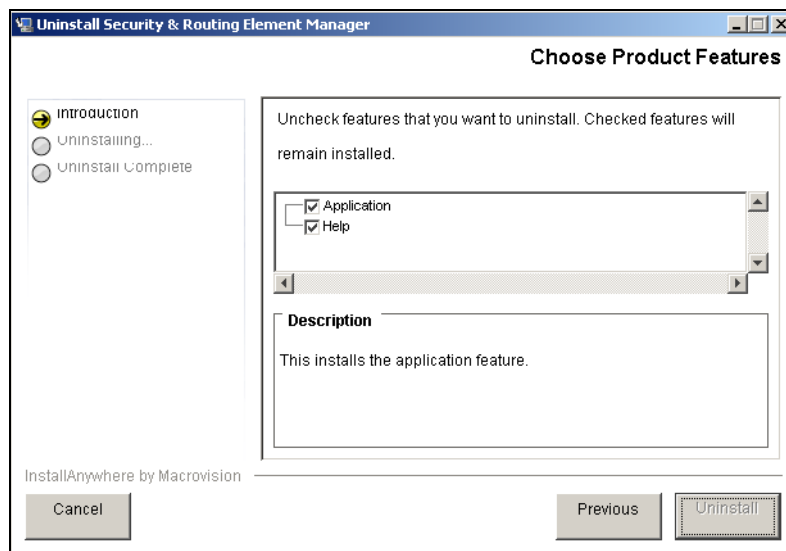
The Uninstall Options screen appears (Figure 2).

**Figure 2** Uninstall Options

- 3 Select the uninstall type from the following options:
  - **Complete Uninstall** — Remove the existing instance of SREM completely. Continue with [step 6](#).
  - **Uninstall Specific Features** — Remove only specific features from the existing SREM installation. Continue with [step 4](#).
- 4 Click **Next**.

The Choose Product Features screen appears, listing specific features that can be removed ([Figure 3](#)).

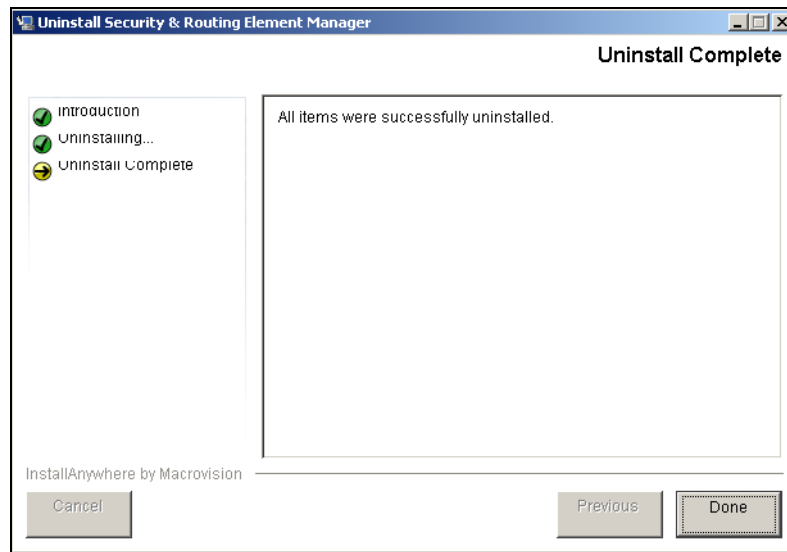
**Figure 3** Choose Product Features



- 5 Select only the feature you wish to uninstall from the list.
 

A description of a feature appears when it is selected. To remove all features, click **Previous** and select the **Complete Uninstall** option.
- 6 Click **Next** if beginning a complete uninstall, or **Uninstall** if only removing selected features.

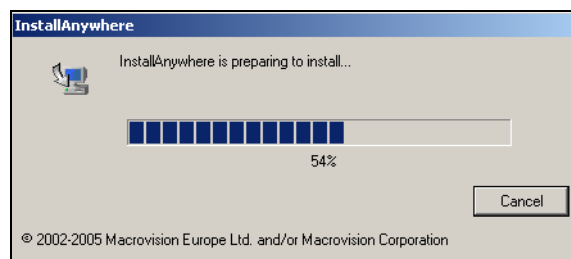
The uninstall progress is displayed as the application is uninstalled. The Uninstall Complete window appears ([Figure 4 on page 23](#)) when the application had been completely uninstalled from your system.

**Figure 4** Uninstall Complete

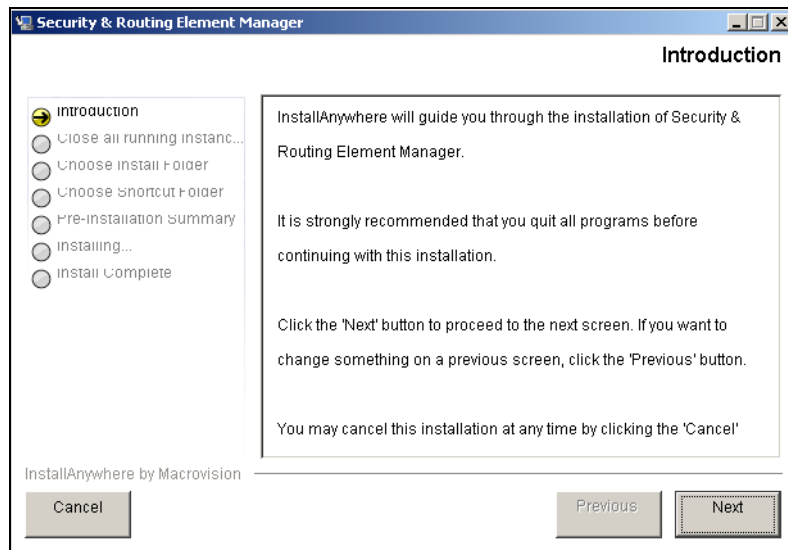
- 7 Click **Done** to exit the uninstall application.

## Installing SREM on your system

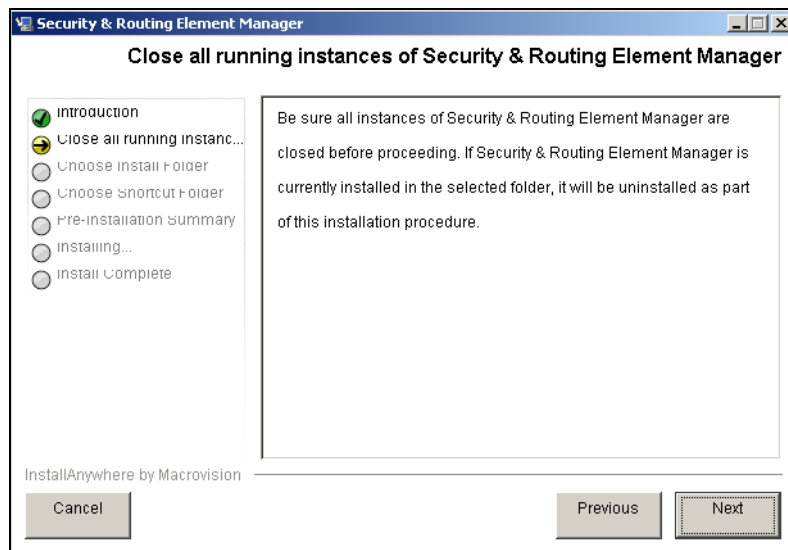
- 1 Insert the Software Install CD, or download the Installation file on your system, and browse to the *srem\_1.2.0.0\_<build>.exe* file.
- 2 Double-click *srem\_1.2.0.0\_<build>.exe* to launch the **InstallAnywhere** application (Figure 5).

**Figure 5** InstallAnywhere

After the InstallAnywhere application is installed, the Security & Routing Element Manager Introduction screen appears (Figure 6 on page 24).

**Figure 6** Introduction**3** Click **Next**.

The Close all running instances of Security & Routing Element Manager screen appears (Figure 7).

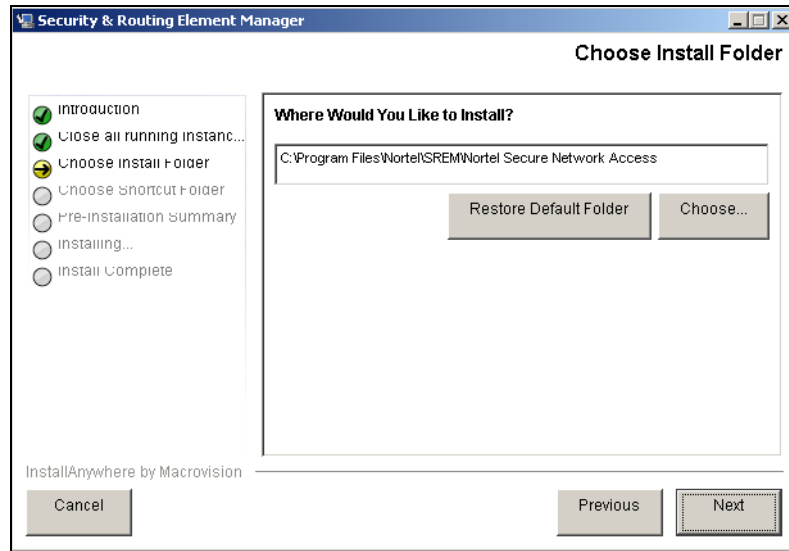
**Figure 7** Close all running instances of Security & Routing Element Manager



4 Click **Next**.

The Choose Install Folder screen appears (Figure 8).

**Figure 8** Choose Install Folder



5 Click **Restore Default Folder** to use the default location for SREM, or click **Choose** to select a different installation folder.

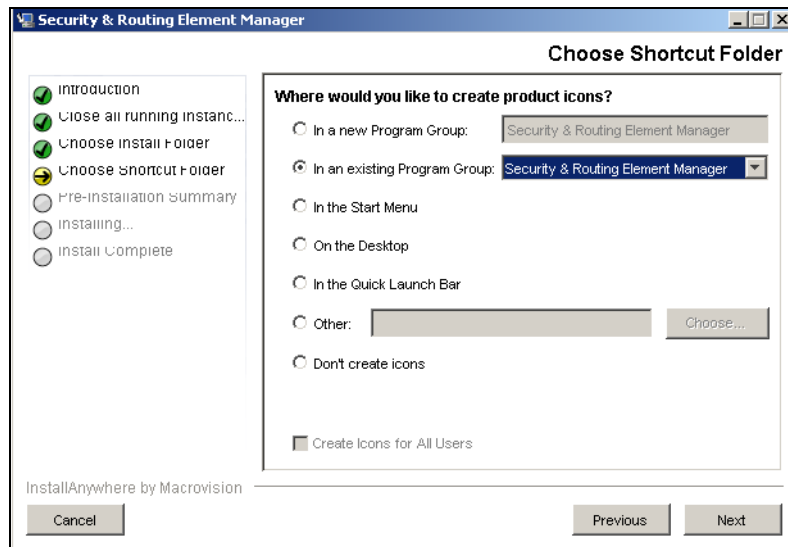


**Note:** To replace an SREM installation on your computer, select the same storage path as the existing version. The existing SREM version will be uninstalled before the current installation is completed.

To install multiple instances of SREM on your computer, choose a storage path that does not conflict with existing versions.

6 Click **Next**.

The Choose Shortcut Folder screen appears (Figure 9 on page 26).

**Figure 9** Choose Shortcut Folder

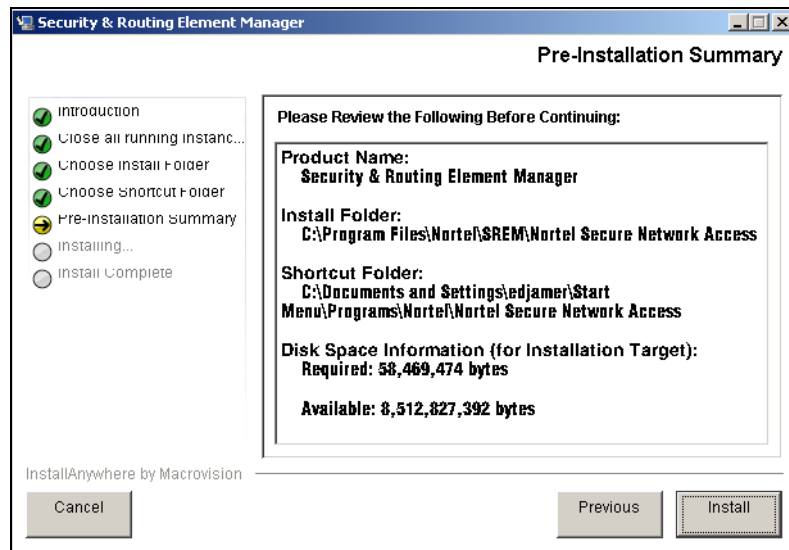
- 7 Confirm the default shortcut location, or select the shortcut path from the listed options.
- 8 Click **Next**.

If the selected install folder already contains a version of SREM, then the Launching uninstaller screen appears ([Figure 10](#)) and you are prompted to remove the existing version of SREM before continuing.

**Figure 10** Launching uninstaller

For details about removing an existing SREM installation, see [“Uninstalling SREM” on page 20](#).

If the selected install folder is empty, or if you complete the required uninstall process, then the Pre-Installation Summary screen appears ([Figure 11 on page 27](#)). This screen displays a summary of the installation choices you have made for confirmation.

**Figure 11** Pre-Installation Summary

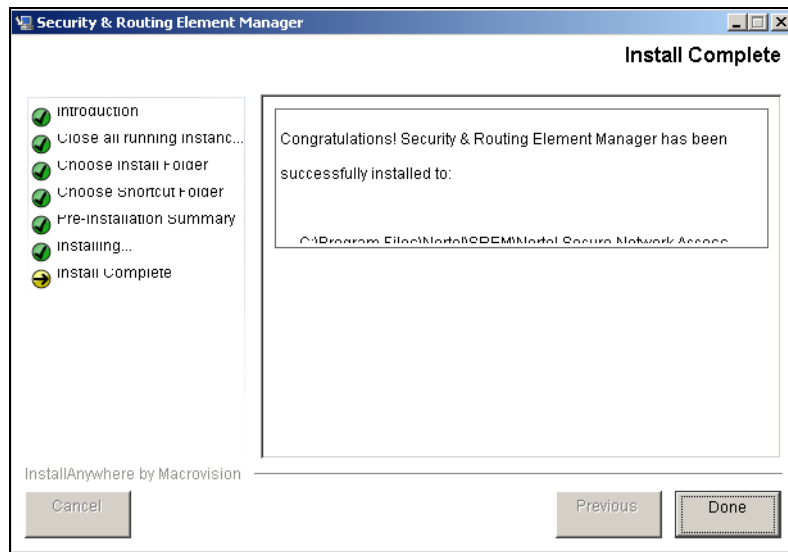
**9** Review your choices in the **Pre-Installation Summary** screen.

If the install or shortcut folders are incorrect, click **Previous** to return to the appropriate screen and update that information.

**10** Click **Install** to accept displayed information and install SREM.

The installation process begins. After a successful installation, the Install Complete screen (Figure 12 on page 28) appears.

**Figure 12** Install Complete



**11** Click **Done** to exit the installation.

SREM is now installed on your machine. For instructions on starting the SREM software, see [“Opening SREM” on page 39](#).

---

## Chapter 2

# SREM Screen Descriptions

---

This section is a quick tour of the SREM screens and menus. General procedures for opening and using SREM can be found in [“Using SREM” on page 39](#).

This chapter includes the following topics:

Topic	Page
<a href="#">SREM window areas</a>	29
<a href="#">Indicator icons</a>	35
<a href="#">Screen icons</a>	36
<a href="#">Right-click menu</a>	37

## SREM window areas

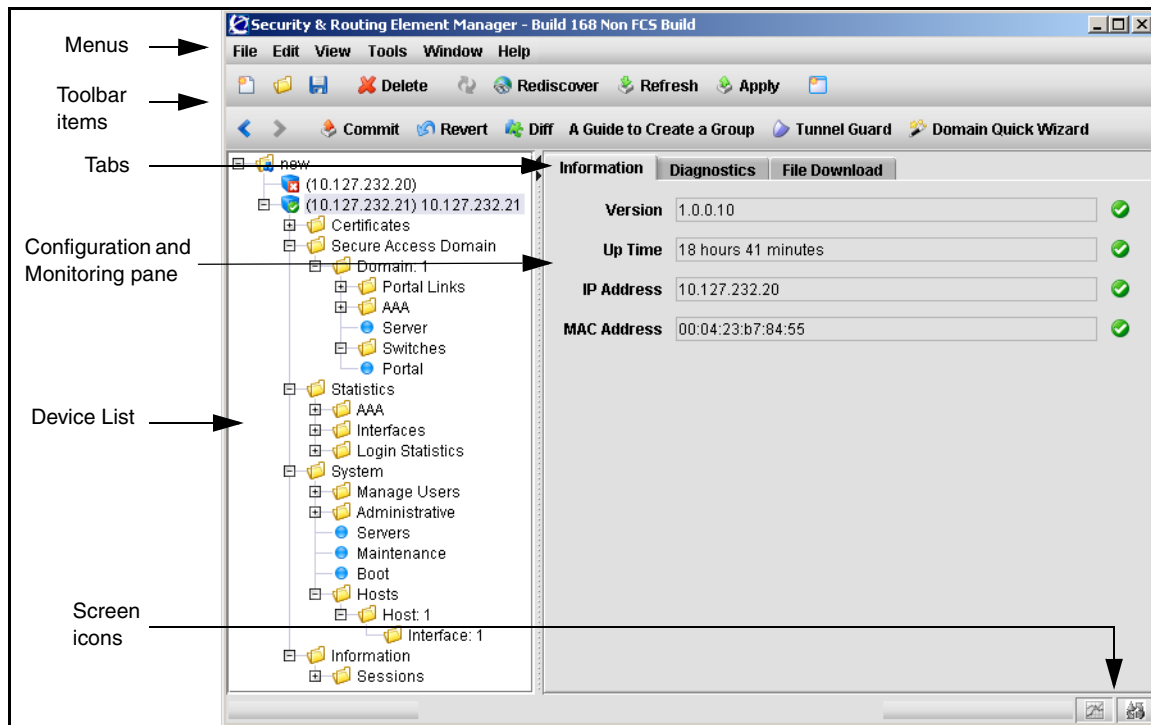
This section is an overview of the areas of the SREM screen. [Table 1](#) describes the six key areas of the SREM interface, as shown in [Figure 13 on page 30](#).

**Table 1** Main SREM window

Screen element	Description
Menus	See <a href="#">“Menus” on page 31</a> .
Toolbar items	See <a href="#">“Toolbar items” on page 34</a> .
Tabs	Screen areas that the user can select to monitor and configure additional device options.
Configuration and Monitoring pane	Area where the user views, updates and configures device options. Required fields are marked with asterisk (*).

**Table 1** Main SREM window (continued)

Screen element	Description
Device list	Allows you to select, view, expand, and collapse configured devices. When you expand a device, you see any devices or components configured under it in the device hierarchy. Devices with subdevices or components are referred to as “parents.”
Screen icons	Allows quick access to some common screens.

**Figure 13** Main SREM screen

## Menus

This section describes the SREM menu available options.

- **File** — Used to manage network devices and configuration files. Refer to [“File menu items” on page 31](#) for details about the File menu items.
- **Edit** — Used to remove network devices from the current configuration. Refer to [“Edit menu items” on page 32](#) for details about the Edit menu items.
- **View** — Used to control and manage the SREM screens being viewed. Refer to [“View menu items” on page 32](#) for details about the View menu items.
- **Tools** — Used to access additional SREM options and built-in tools. Refer to [“Tools menu items” on page 33](#) for details about the Tools menu items.
- **Window** — Used to open additional instances of the SREM window. Refer to [“Window menu items” on page 33](#) for details about the Window menu items.
- **Help** — Used to access information and details about the SREM. Refer to [“Help menu items” on page 34](#) for details about the Help menu items.

### File menu items

The menu items available from the File menu are described in [Table 2](#).

**Table 2** File menu

Menu option	Description
New Sub Network	Create a Sub Network under the selected network.
New	Open the New Device screen.
Open	Open the Open window, which allows you to select network configuration files.
Save	Save a previously saved configuration, or opens the Save window to allow you to save a configuration in a user-defined location if no previously saved configuration exists.
Save As	Open the Save window to allow you to select a save location for the network configuration file.
Exit	Quit SREM.

## Edit menu items

The menu items available from the Edit menu are described in [Table 3](#).

**Table 3** Edit menu

Menu option	Description
Delete	Delete the highlighted device or attribute.

## View menu items

The menu items available from the View menu are described in [Table 4](#).

**Table 4** View menu

Menu option	Description
Back	Revert to the previous view.
Forward	Jump to the next view, if you reverted to a previous view.
Rediscover	Rediscover the selected device, or any discoverable component in the Device List if no device is selected.
Revert to Default	Revert all attributes on the selected screen to their default value.
Refresh	Refresh attributes displayed in the Configuration and Monitoring pane.
Apply	Apply changes made in SREM to the network access device.
Screens	Open any currently visible tab from the Configuration and Monitoring pane for the selected device. This option is only available after a device is configured.
Commit	Commit any configuration changes to the device.
Revert	Refresh attributes displayed in the Configuration and Monitoring pane
Diff	Open the Configuration Modifications screen, which lists all configuration changes made during this session.
Disconnect	Terminates connectivity to the selected device.
A Guide to Create a Group	Open a wizard that helps you quickly create a Group within an existing domain.



**Table 4** View menu (continued)

Menu option	Description
Tunnel Guard	Open the Nortel Networks TunnelGuard Software and Rule Definition Tool.
Domain Quick Wizard	Open a wizard that helps you quickly create a domain.

## Tools menu items

The menu items available from the Tools menu are described in [Table 5](#).

**Table 5** Tools menu

Menu option	Description
Options	Open the Options dialog box for setting generic SREM options. See <a href="#">“Configuring SREM settings” on page 42</a> for additional details.
SSH Known Hosts	View and delete SSH Known Hosts.
Launch Log Browser	Query trace options, statistics, alarms, account, and security audit logs. See <a href="#">“Using the Log Browser tool” on page 53</a> .

## Window menu items

The menu items available from the Window menu are described in [Table 6](#).

**Table 6** Window menu

Menu option	Description
New Window	Open a second, synchronized occurrence of SREM. Use this option to view configuration info for two devices at the same time.

## Help menu items

The menu items available from the Help menu are described in [Table 7](#).

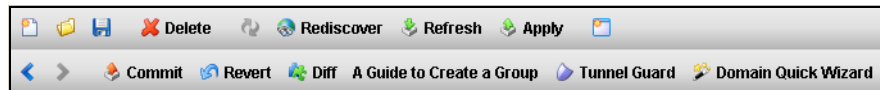
**Table 7** Help menu

Menu option	Description
Contents	Open the SREM help system. SREM help is divided into generic and device-specific sections. When this menu item is selected, context sensitive help appears for the current screen or device, as applicable.
About	Display details about the SREM software version.

## Toolbar items

This section is an overview of the toolbar items available on the SREM screen, as shown in [Figure 14](#).

**Figure 14** SREM toolbar



[Table 8](#) provides descriptions of each toolbar item.

**Table 8** Toolbar items

Item	Description
<b>First row</b>	
New	Clear the Device List.
Open	Open the Device List.
Save	Save the Device List.
Delete	Delete currently selected devices/components.
Revert to Default	Revert all attributes on the selected screen to the default value.
Rediscover	Refresh the Device List hierarchy by clearing cached data.
Refresh	Refresh attributes on the Configuration and Monitoring Pane.
Apply	Update the selected device with new entries made on the Configuration and Monitoring Pane.



**Table 8** Toolbar items (continued)

Item	Description
New Window	Open another SREM window with the same devices in the Device List.
<b>Second row</b>	
<	Open the previously displayed Configuration and Monitoring Pane.
>	Open the next Configuration and Monitoring Pane, if you opened a previous screen.
Commit	Commit configuration changes to the device.
Revert	Refresh attributes displayed in the Configuration and Monitoring pane
Diff	Open a screen that lists the existing configuration changes.
Disconnect	Terminates connectivity to the selected device.
A Guide to Create a Group	Open a wizard to help you quickly create a Group within a domain.
Tunnel Guard	Open the Nortel Networks TunnelGuard Software and Rule Definition Tool.
Domain Quick Wizard	Open a wizard to help you quickly create a domain.



## Indicator icons

Icons that identify the status of an entered or displayed component or device are described in [Table 9](#).

**Table 9** Indicator icons

Icon	Name	Description
	Valid	Parameter values were successfully retrieved from the device and are in sync with the device.
	Modified	The parameter changed in SREM but has not yet been applied to the device.



**Table 9** Indicator icons (continued)

Icon	Name	Description
	Error	The parameter changed in SREM and a failure occurred while applying it to the device.
	Unknown	The parameter value cannot be retrieved from the device.

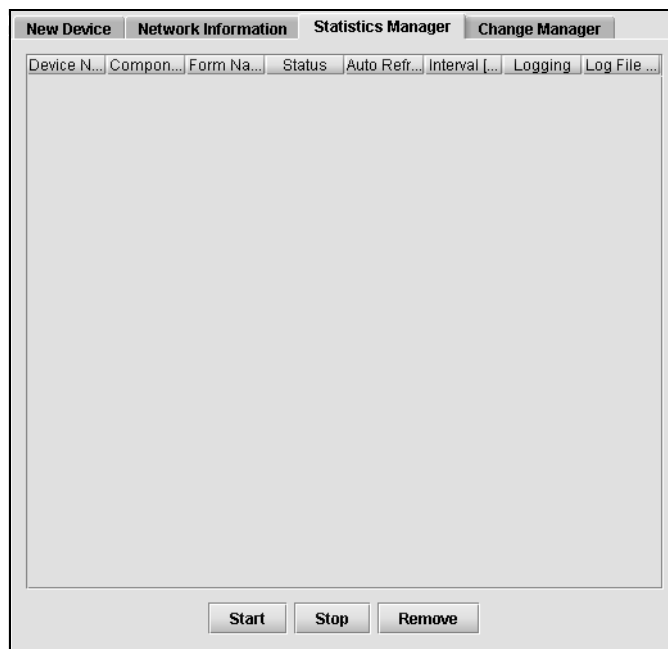
## Screen icons

Icons in the bottom, right corner of the SREM screen are described in [Table 10](#).

**Table 10** Screen icons

Icon	Name	Description
	Change Manager	Opens the Change Manager tab ( <a href="#">Figure 15 on page 36</a> ) where you view, delete or apply unapplied configurations to the network access device.
	Statistics Manager	Opens the Statistics Manager tab ( <a href="#">Figure 16 on page 37</a> ) where you view statistics gathered from the selected network access device.

**Figure 15** Change Manager tab

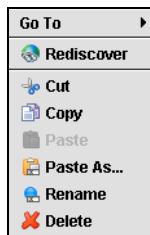
**Figure 16** Statistics Manager tab

## Right-click menu

Open the Right-click menu by highlighting a device or I/O and clicking the alternate, or secondary button on your mouse. The right-click menu varies according to the device or parameter selected. In addition to cut/paste and renaming functionality, the Right-click menu provides quick access to tabs in the Configuring and Monitoring pane and to buttons available on the toolbar for the selected equipment.

When you right-click a network access device in the Device List, the right-click menu also contains all toolbar options.

[Figure 17](#) illustrates a generic right-click menu that is displayed when you click on devices and options in the Device List.

**Figure 17** Right-click menu example**Table 11** Right-click menu options

Menu option	Description
Go To	Select to select an available tab from the Configuration and Monitoring pane.
Rediscover	Select to rediscover component changes on the device from this parent, down through the hierarchy.
Cut	Transfer configuration data from one parameter to be pasted to another parameter. See <Blue_Ref><\$elemparamumCutting, copying, and pasting data between devices (page 49).
Copy	Copy configuration data from one parameter to be pasted to another parameter. See <Blue_Ref><\$elemparamumCutting, copying, and pasting data between devices (page 49).
Paste	Copy configuration data that you have “cut” or “pasted” from another parameter. See <Blue_Ref><\$elemparamumCutting, copying, and pasting data between devices (page 49).
Paste As	Operates like Paste, but allows you to change the name of the index attribute, so that the paste can be performed on the same device by changing only the name but keeping all other values.
Rename	Rename the selected equipment. For an I/O card, Rename allows you to change the slot number.
Delete	Delete the selected configuration.

---

## Chapter 3 s

# Using SREM

---

This section provides procedures for general or common SREM tasks. For more detailed SREM procedures and interface descriptions, refer to the online help.

This chapter includes the following topics:

Topic	Page
<a href="#">Accessing the SREM software</a>	39
<a href="#">Configuring SREM settings</a>	42
<a href="#">Managing network access devices from the SREM</a>	43
<a href="#">Managing changes within the SREM</a>	49
<a href="#">Using the Log Browser tool</a>	53

## Accessing the SREM software

This section covers the following tasks:

- [“Opening SREM” on page 39](#)
- [“Quitting SREM” on page 40](#)
- [“Viewing SREM online help” on page 40](#)

## Opening SREM

Several different methods exist to access the SREM software, depending on the options selected during installation. To open the SREM application on your local system, use one of the following directions:

- From the Windows Start menu, select **All Programs > Nortel > Security & Routing Element Manager**.
- From the desktop, click the SREM icon (if you installed icons on your workstation during the installation process).
- Using Windows Explorer, locate the SREM installation folder and run the *Security & Routing Element Manager.exe* file. The default folder location for this file is: C:\Program Files\Nortel\SREM\Nortel Secure Network Access.

## Quitting SREM

Use the following procedure to quit the SREM application on your local system.

- 1 Apply and commit any unsaved changes. (See [“Applying and saving changes in the SREM” on page 51](#) for details.)
- 2 Select **File > Exit**.  
A confirmation window appears.
- 3 Click **Yes** to quit the SREM application.

## Viewing SREM online help

The help system contains procedures for configuring and monitoring a network access device through SREM and context sensitive descriptions for each screen and window.

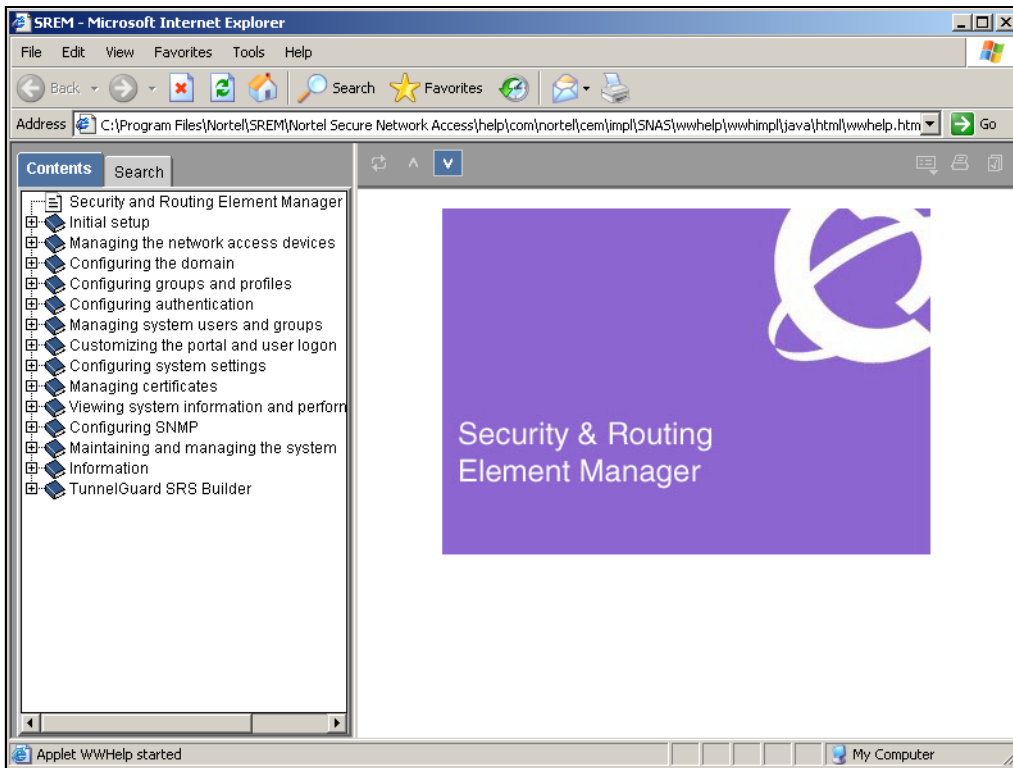
To open the SREM online help system, do one of the following:

- Click **Help > Contents** from the main menu.
- Press F1 on your keyboard.





The online help content appears in a new web browser instance (Figure 18). If the SREM screen that is active when online help is opened has context sensitive help available, then the content displayed will related to that screen.

**Figure 18** SREM online help







To view available online help content use either the navigation tree on the left side of the web browser or the toolbar icons described in Table 12.

**Table 12** Online help icons

Icon	Name	Description
	Show Navigation	Display the navigation tree. This icon is only available when viewing context sensitive help where the navigation tree is not already visible.
	Show in Contents	Show the displayed page in the navigation tree. This icon is only available when the navigation tree is already visible.

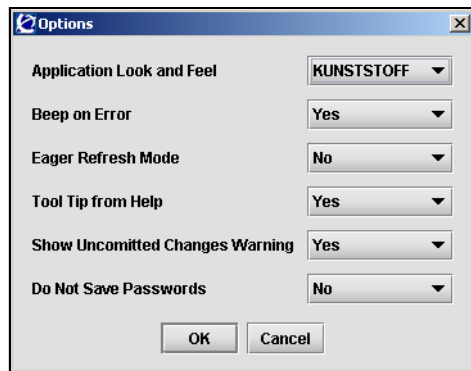
**Table 12** Online help icons (continued)

Icon	Name	Description
	Previous	Display the previous page of online help content.
	Next	Display the next page of online help content.
	Print	Print the currently displayed help content page. Using this icon will print only the content displayed in the actual help screen. Toolbar icons and the navigation tree are not printed.
	Bookmark	Bookmark the currently displayed help content page.

## Configuring SREM settings

Use the following procedure to change general configuration settings for SREM.

- 1 Open SREM.
- 2 Select **Tools > Options** to open the **Options** window ([Figure 19](#)).

**Figure 19** Options window

- 3 Change the desired settings, as described in [Table 13](#).

**Table 13** SREM Options

Option	Description
Application Look and Feel	Allows you to configure how the application looks. Configuration changes to the Application Look and Feel setting take affect after you restart SREM.
Beep on Error	Select Yes from the list to have SREM beep when an error is made.
Eager Refresh Mode	Automatically refreshes the Configuration and Monitoring pane with changes applied to the device.
Tool Tip from Help	Select Yes to view tooltip help over certain fields and buttons.
Show Uncommitted Changes Warning	Select Yes to have SREM prompt you that uncommitted changes exist.
Do Not Save Passwords	Select Yes to force SREM to check passwords every time. <b>Important Note:</b> If you select No for this option, unauthorized users might gain access to the SREM. Use caution when you change this option.

- 4 Click **OK**.

A prompt is displayed that tells you that the application must be restarted for changes to take effect.

- 5 Click **OK** to restart your system.

## Managing network access devices from the SREM

This section covers the following tasks:

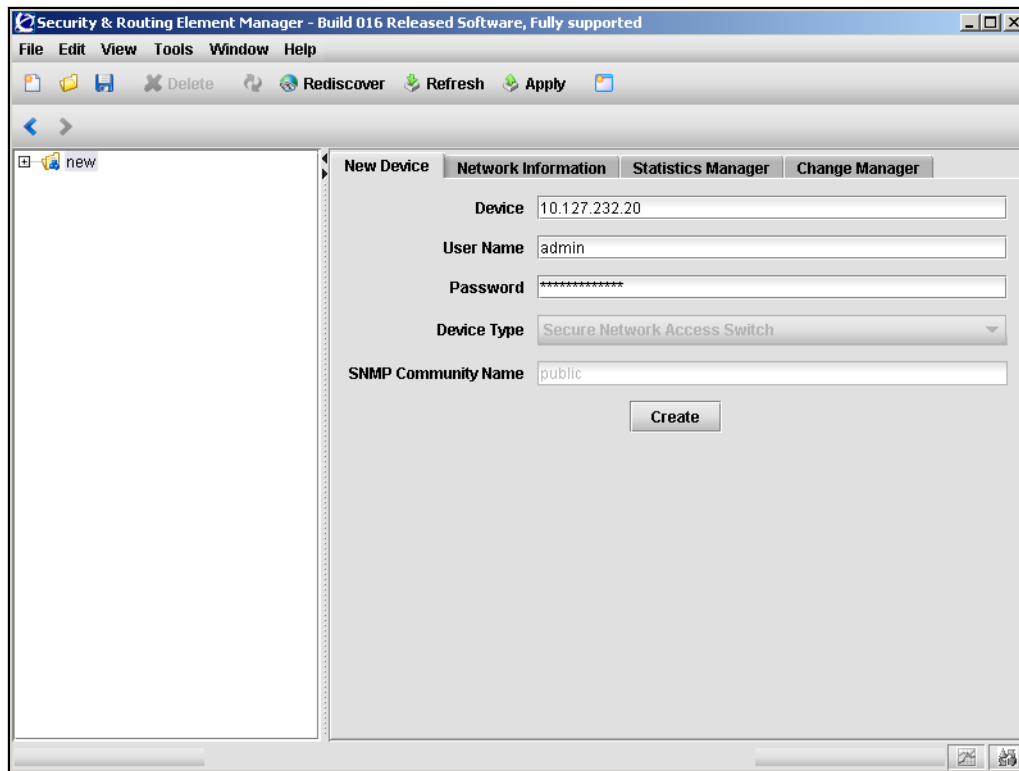
- [“Adding a new network access device” on page 44](#)
- [“Deleting a network access device” on page 45](#)
- [“Grouping network access devices in SREM” on page 46](#)
- [“Logging into a network access device” on page 47](#)
- [“Saving a network configuration” on page 47](#)
- [“Opening a network configuration” on page 48](#)

## Adding a new network access device

Use the following procedure to add a new network access device through SREM.

- 1 Open SREM.
- 2 Click **New** on the toolbar to open the **New Device** window (Figure 20).

**Figure 20** New Device window



- 3** Enter the connection details for this new device in the applicable fields. [Table 14](#) describes the New Device fields.

**Table 14** New Device fields

Field	Description
Device	Specifies the IP address for the network access device you are adding.
User Name	Specifies the user name to connect with the specified device.
Password	Specifies the password to connect with the specified device.
Device Type	Specifies the type of network access device to connect to. The default value is Secure Network Access Switch. <b>Note:</b> This field is not editable for this release.
SNMP Community Name	Specifies the SNMP community name setting. This field is not used for Secure Network Access Switch device types. The default value is public. <b>Note:</b> This field is not editable in this release.

- 4** Click **Create**.

SREM will attempt to connect to the network access device. One of two results follows:

- If SREM connects to the network access device successfully, the network access device appears in the Device List.
- If SREM cannot connect to the specified device, check the IP and login information, and click **Try Again**.

## Deleting a network access device

Use the following procedure to add a new network access device through SREM.

- 1** Open SREM.
- 2** Select the network access device you want to delete in the Device List.
- 3** Select **Edit > Delete**.

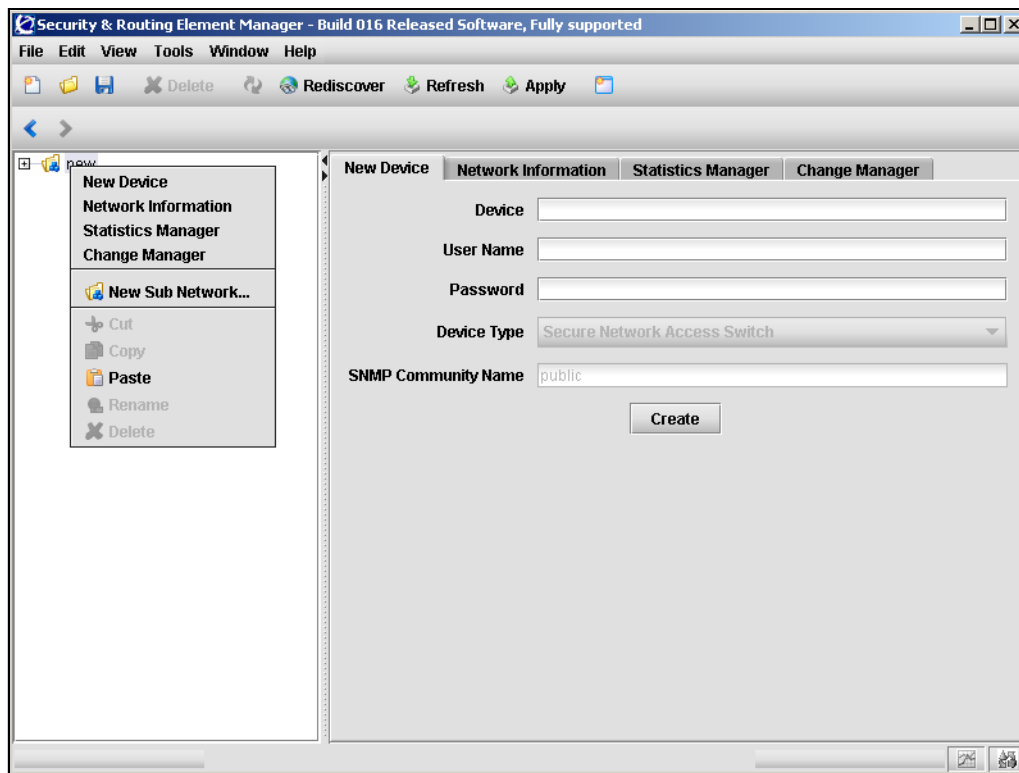
The network access device disappears from the Device List.

## Grouping network access devices in SREM

Use the following procedure to organize the SREM device list by creating Sub Networks of network access devices.

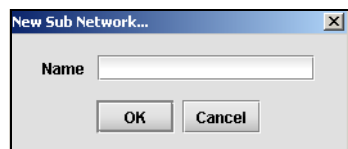
- 1 Right-click the **New** icon in the Device List, and select **New Sub Network** in the right-click menu (Figure 21).

**Figure 21** Right-click menu



The New Sub Network dialog box (Figure 22) is displayed.

**Figure 22** New Sub Network dialog box



- 2 Type the name of your Sub Network in the **Name** field.
- 3 Click **OK**.
- 4 Right-click the new Sub Network in the Device List, and select **New Device**. The New Device tab (Figure 20 on page 44) is displayed.
- 5 Type the IP address, User Name, and password for the new device.
- 6 Click **Create**.  
SREM finds the new device and adds it to the Sub Network.
- 7 Continue configuring the new device and adding new devices to the Sub Network, as required.

## Logging into a network access device

Use the following procedure to log into a network access device through SREM, if SREM does not discover the device automatically at start up.

- 1 Open SREM.
- 2 In the Device List, Highlight the IP for the device you want to log in to.
- 3 Click **Rediscover**.  
If SREM cannot rediscover the device, a Discovery Failed window is displayed with an error message and the required login fields.
- 4 Type the User Name and Password for the device.
- 5 Click **Try Again**.

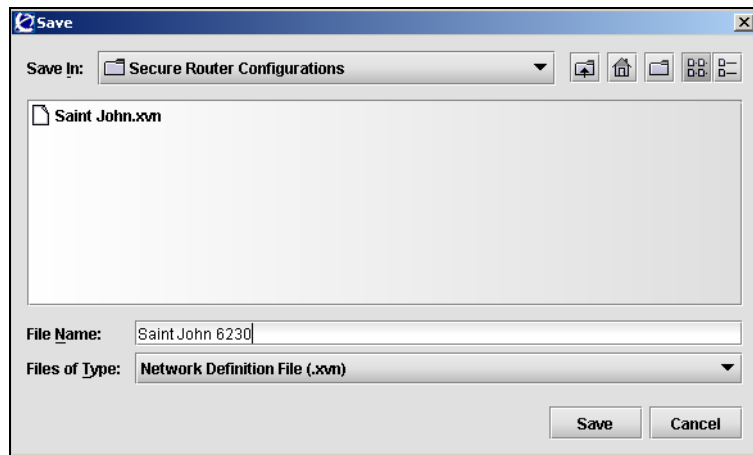
## Saving a network configuration

Use the following procedure to save information you configured for a network access device.

- 1 Configure the network access device as required.

- 2 Select **File > Save As** to open the **Save** window (Figure 23).

**Figure 23** Save window



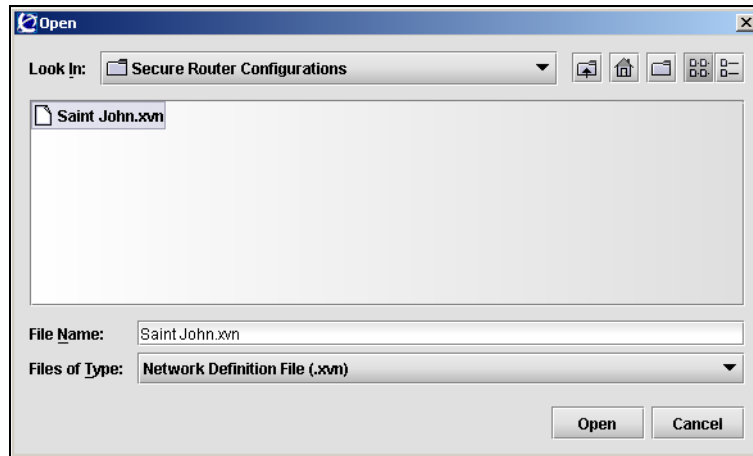
- 3 Navigate to the folder where you want to save the configuration file.
- 4 Type a name for the configuration in the **File Name** field.
- 5 Ensure that Network Definition File (.xvn) is displayed in the **Files of Type** field.
- 6 Click **Save**.

## Opening a network configuration

Use the following procedure to open a saved configuration for a network access device or network element.

- 1 Open SREM.
- 2 Select **File > Open** to open the **Open** window (Figure 24 on page 49).



**Figure 24** Open window

- 3 Navigate to the Network Configuration File (.xvn) you want to open.
- 4 Highlight the file you want to open.
- 5 Click **Open**.

## Managing changes within the SREM

This section covers the following tasks:

- [“Cutting, copying, and pasting data between devices” on page 49](#)
- [“Changing field values in the SREM” on page 51](#)
- [“Applying and saving changes in the SREM” on page 51](#)
- [“Viewing and confirming unapplied changes” on page 52](#)

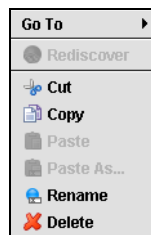
### Cutting, copying, and pasting data between devices

Cut, copy and paste information between devices, such as interface cards, to save time when you enter data. If you are entering similar data for several devices, SREM allows you to cut, copy and paste information between devices.

If moving information between multiple network access devices, SREM allows you to cut and paste information from one device to another. Copying is not enabled between devices because you cannot have multiple network access devices in the Device List with the same configuration data.

- 1 In the Device List, right-click the device with information that you want to cut or copy.
- 2 Select **Cut** or **Copy** in the right-click menu ([Figure 21](#)).

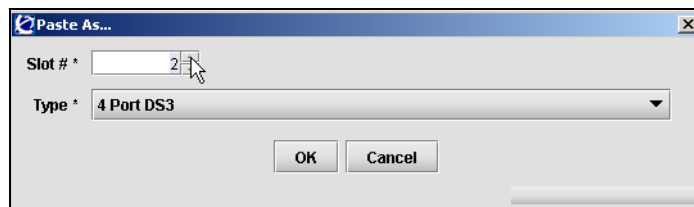
**Figure 25** Right-click menu



- 3 In the Device List, right-click the device heading for the network access device where you want to paste the copied information.
- 4 Select **Paste As** in the right-click menu.

The **Paste As** window appears ([Figure 26](#)).

**Figure 26** Paste As... window



- 5 Select the slot for the card to which you want to paste the copied data.
- 6 Click **OK**.

## Changing field values in the SREM

SREM uses standard windows components to display and edit information. The most common components includes editable text boxes, lists to select from, and checkboxes to select.

Some special actions to be aware of when using SREM include:

- “Selecting and deselecting table items”
- “Copying, cutting, and pasting values”

### Selecting and deselecting table items

To select an item from a table in SREM, click on the table row to highlight that item. To select multiple items in a table, or to deselect a row that is highlighted, hold the Ctrl key and select the desired table row.

### Copying, cutting, and pasting values

Fields that are editable can use the standard copy, cut, and paste short-cut keys, although these options are not present in the Edit menu.

- To copy selected values, press Ctrl-C.
- To cut selected values (where applicable), press Ctrl-X.
- To paste existing values into editable fields, press Ctrl-V.

## Applying and saving changes in the SREM

Applying and saving changes in SREM is a two step process.

- 1 Click Apply on the toolbar to send changes to the device.

Changes that have been applied in SREM are sent to and stored on the device, but are not yet permanent.

- 2 Click Commit on the toolbar to make all applied changes permanent on the device.

Now, changes are made permanent and take full effect. In some cases, you may need press Rediscover to view all changes in SREM.

## Viewing and confirming unapplied changes

Use the following procedure to open the Change Manager tab and view configurations entered in SREM but not applied to the network access device.

- 1 Open SREM.
- 2 Click the **Change Manager** icon in the bottom-right corner of the SREM window to open the Change Manager tab ([Figure 27](#)).

**Figure 27** Change Manager tab



See “[Screen icons](#)” on [page 36](#) for more information about the Change Manager icon.

- 3 If you want to commit the displayed changes, click **Apply All**.

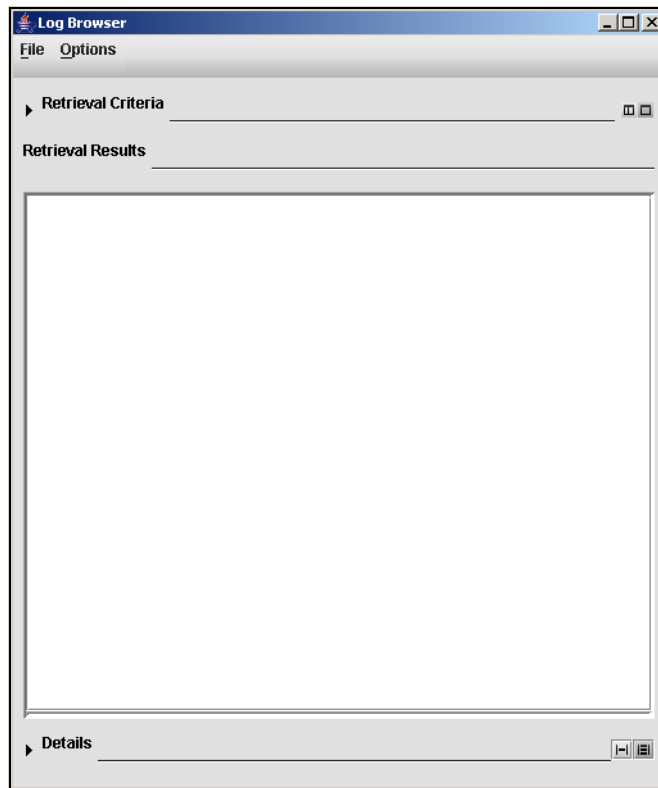
## Using the Log Browser tool

To easily browse log files generated by SREM, a Log Browser tool is available. To access and use the Log Browser, perform the following steps:

- 1 Select **Tools > Launch Log Browser** from the SREM menu.

The Log Browser tool appears (Figure 28).

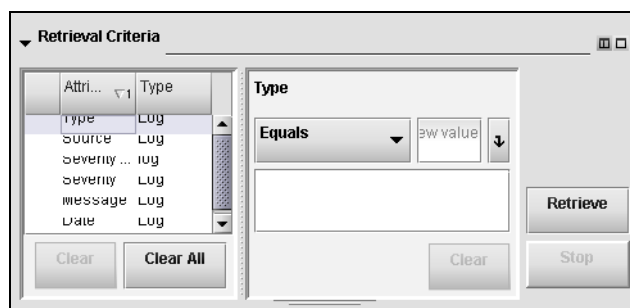
**Figure 28** Log Browser



**Note:** When using Log Browser, the Retrieval Criteria and Details sections can be viewed or hidden by clicking the small arrows beside the section name. Hide these sections as necessary to see the entire Log Browser tool on systems with low screen resolution.

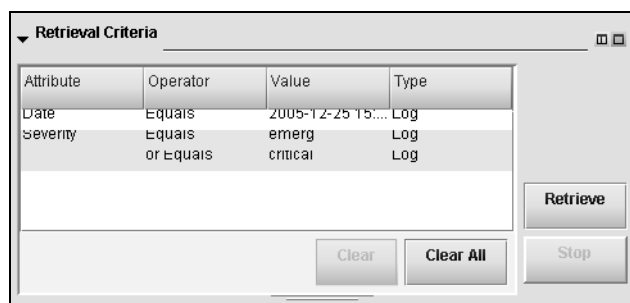
- 2 Select **File > Open > Open NSNAS Log File** from the Log Browser menu.  
A dialog box appears, allowing you to specify a log file on the current system.
- 3 Select the Nortel SNAS 4050 log file to view.  
The Retrieval Criteria list displays Attributes that can be used to limit log results that are displayed.
- 4 Check to ensure the Retrieval Criteria section is in **Definition View**.  
The Definition View allows you to specify attributes and attribute values to sort and view the log entries (Figure 29).

**Figure 29** Retrieval Criteria — Definition View



- 5 Select a criteria from the list, and set the desired values in the space available.  
After a criteria has been added to the Retrieval list, a checkmark appears beside the name of that criteria.
- 6 Repeat [step 5](#) for each criteria you want to use to sort log file entries.
- 7 Confirm the current list of criteria by changing the Retrieval Criteria section to **Summary View** (Figure 30).

**Figure 30** Retrieval Criteria — Summary View



- 8** Click Retrieve to display all log entries that match the specified criteria.  
The Retrieval Results section displays the number of matches discovered, and lists all log entries in the retrieval table.
- 9** Select a log entry from the Retrieval Results section to view the details of that particular entry.  
The log entry appears in the Details section.

