



## Installation Requirements

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Before you install Prime NAM, you must review the following sections:

- [Cisco SRE NAM Specifications, page 1](#)
- [Before You Begin, page 3](#)
- [Configuring the Cisco SRE Module Interface, page 3](#)

## Cisco SRE NAM Specifications

The following sections contain information on Cisco SRE NAM specifications.

## Supported External Software Interfaces

Cisco SRE NAM supports the following external software interfaces:

- CLI over Telnet, SSH and sessions for the router/IOS
- SNMP
- HTTP/HTTPS
- NBI

## Supported Branch Routers

Cisco SRE NAM can be deployed in any network module slot in the Cisco router platforms listed in the following table. Only one Prime NAM can be installed in a Cisco branch router.

**Table 1: Cisco SRE NAM Supported Router Platforms**

Router Platform	IOS Version (Minimum)
Cisco 3945E ISR	Cisco IOS 15.1(1T)

Router Platform	IOS Version (Minimum)
Cisco 3925E ISR	Cisco IOS 15.1(1T)
Cisco 3945 ISR	Cisco IOS 15.0(1)M
Cisco 3925 ISR	Cisco IOS 15.0(1)M
Cisco 2951 ISR	Cisco IOS 15.0(1)M
Cisco 2921 ISR	Cisco IOS 15.0(1)M
Cisco 2911 ISR	Cisco IOS 15.0(1)M

To determine which IOS release your router is currently running, examine the output of the **show version** command.

All Cisco SM-SRE models ship from the factory with the hardware preinstalled as listed in the following table.

**Table 2: Cisco SM-SRE Hardware**

Model	Processor	Hard Disk	Memory	eUSB Flash
SM-SRE-700-K9	1.86 GHz single core	500 GB (SATA)	4 GB	2 GB
SM-SRE-900-K9	1.86 GHz dual core	2 x 500 GB (SATA)	4 GB	2 GB

If you need to install the SM-SRE network module, see the following documents for detailed information:

- [Connecting Cisco NAM Enhanced Network Modules to the Network](#)
- [Cisco Network Modules and Interface Cards Regulatory Compliance and Safety Information](#)
- [Cisco SRE Service Module Configuration and Installation Guide](#)

## Hardware Interface

The host router and network module use several interfaces for internal and external communication. Each interface is configurable both from the router by using the Cisco IOS CLI and from the module by using the module's CLI.

The Cisco SRE NAM can monitor traffic on both the external and the internal interface at the same time. However, only one can be used for management traffic.

	On This Hardware Interface...	Configure These Settings...	Using This Configuration Method

1	Router interface (for example, Gig0/0)	Standard router settings	Router's Cisco IOS CLI
2	Router side interface to SM-SRE. This is the <i>sm</i> interface on the router.	Module's IP address and default gateway router	
3	INTERNAL interface of the SM-SRE. This is a Gigabit Ethernet (GE) interface.	All other module and SM-SRE application settings	Module's SM-SRE CLI, GUI, telnet, SSH interface, or SNMP
4	EXTERNAL interface of the SM-SRE. This is a Gigabit Ethernet interface.	Support for data requests and transfers from outside sources	

## Before You Begin

Before you begin installing Prime NAM software, do the following:

- Make a note of the network module location in the host router:
  - *slot*—Number of the router chassis slot for the module. After you install the module, you can get this information from the router's **show running-config** command output and look for interface SM.
  - *port*—Port number of the module interface. This value is always 0.



### Note

You need this information for [Configuring the SRE Interface on the Router](#), on page 4 and [Closing a Session](#), on page 7 .

- Verify that your download FTP or TFTP file server is accessible:
  - FTP file server—Use for installations, backups, and restores.
  - TFTP file server—Use (on the FTP-file-server machine) for boothelper operations to recover from a failed installation.

## Configuring the Cisco SRE Module Interface

This section describes how to configure basic network parameters for the SRE service module using the Cisco IOS CLI. This section contains information on the following tasks:

- [Configuring the SRE Interface on the Router](#), on page 4
- [Opening a Session](#) , on page 6
- [Closing a Session](#), on page 7

**Note**

If you lose power or connection during any of the following procedures, the system usually detects the interruption and tries to recover. If it fails to do so, fully reinstall the system using IOS commands. See the [Installing Cisco SRE NAM Using IOS Commands](#).

You can configure the network module by means of either the CLI or the GUI. This document presents CLI configuration instructions. For GUI configuration instructions, see the GUI's online help

## Configuring the SRE Interface on the Router

Your first configuration task is to set up network module interfaces to the host router and to its external links. This configuration enables you to access the module to install and configure the SRE service module.

**Note**

The first few steps open the host-router CLI and access the router's interface to the module. The subsequent steps configure the interface.

From the Host-Router CLI

### SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **interface sm *slot/0***
4. Do one of the following:
  - **ip address** *router-side-ip-address subnet-mask*
  - **ip unnumbered** *type number*
5. **service-module ip address** *module-side-ip-address subnet-mask*
6. **service-module external ip address** *external-ip-address subnet-mask*
7. **service-module ip default-gateway** *gateway-ip-address*
8. **end**
9. **copy running-config startup-config**
10. **show running-config**

### DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<b>enable</b>  <b>Example:</b> Router> enable	Enters privileged EXEC mode on the host router. Enter your password if prompted.

	Command or Action	Purpose
<b>Step 2</b>	<p><b>configure terminal</b></p> <p><b>Example:</b></p> <pre>Router# configure terminal</pre>	Enters global configuration mode on the host router.
<b>Step 3</b>	<p><b>interface sm slot/0</b></p> <p><b>Example:</b></p> <pre>Router(config)# interface sm 1/0</pre>	Enters interface configuration mode for the slot and port where the network module resides.
<b>Step 4</b>	<p>Do one of the following:</p> <ul style="list-style-type: none"> <li>• <b>ip address</b> <i>router-side-ip-address subnet-mask</i></li> <li>• <b>ip unnumbered</b> <i>type number</i></li> </ul> <p><b>Example:</b></p> <pre>Router(config-if)# ip address 10.0.0.20 255.255.255.0</pre> <p><b>Example:</b></p> <pre>Router(config-if)# ip unnumbered ethernet 0/0</pre>	<p>Specifies the router interface to the module. Arguments are as follows:</p> <ul style="list-style-type: none"> <li>• <i>router-side-ip-address subnet-mask</i>—IP address and subnet mask for the interface.</li> <li>• <i>type number</i>—Type and number of another interface on which the router has an assigned IP address. It cannot be another unnumbered interface. Serial interfaces using High Level Data Link Control (HDLC), Point-to-Point Protocol (PPP), Link Access Procedure, Balanced (LAPB), Frame Relay encapsulations, Serial Line Internet Protocol (SLIP), and tunnel interfaces can be unnumbered.</li> </ul>
<b>Step 5</b>	<p><b>service-module ip address</b> <i>module-side-ip-address subnet-mask</i></p> <p><b>Example:</b></p> <pre>Router(config-if)# service-module ip address 172.0.0.20 255.255.255.0</pre>	<p>Specifies the IP address for the module interface to the router. Arguments are as follows:</p> <ul style="list-style-type: none"> <li>• <i>module-side-ip-address</i>—IP address for the interface</li> <li>• <i>subnet-mask</i>—Subnet mask to append to the IP address; must be in the same subnet as the host router</li> </ul> <p>This command selects and configures the internal interface for management traffic. This command is equivalent to using the commands <b>ip interface internal</b> and <b>ip address &lt;address&gt; &lt;mask&gt;</b> on the SRE service module CLI.</p> <p><b>Note</b> If you want to use the external interface for management traffic, use <b>Step 6</b> instead. Either Step 5 or Step 6 must be performed. If neither is done, the installation will not succeed.</p>
<b>Step 6</b>	<p><b>service-module external ip address</b> <i>external-ip-address subnet-mask</i></p> <p><b>Example:</b></p> <pre>Router(config-if)# service-module external ip address 172.0.0.30 255.255.255.0</pre>	<p>Specifies the IP address for the external LAN interface on the module. Arguments are as follows:</p> <ul style="list-style-type: none"> <li>• <i>external-ip-address</i>—IP address for the interface</li> <li>• <i>subnet-mask</i>—Subnet mask to append to the IP address</li> </ul> <p>This command selects and configures the external interface for management traffic. This command is equivalent to using the commands <b>ip interface</b></p>

	Command or Action	Purpose
		<p><b>external</b> and <b>ip address &lt;address&gt; &lt;mask&gt;</b> on the SRE service module CLI.</p> <p><b>Note</b> If you want to use the internal interface for management traffic, use <b>Step 5</b> instead. Either Step 5 or Step 6 must be performed. If neither is done, the installation will not succeed.</p>
<b>Step 7</b>	<p><b>service-module ip default-gateway gateway-ip-address</b></p> <p><b>Example:</b></p> <pre>Router(config-if)# service-module ip default-gateway 10.0.0.40</pre>	<p>Specifies the IP address for the default gateway router for the module. The argument is as follows:</p> <ul style="list-style-type: none"> <li>• <i>gateway-ip-address</i>—IP address for the gateway router</li> </ul> <p><b>Note</b> Use this step only if you used <b>Step 5</b> or <b>Step 6</b>.</p>
<b>Step 8</b>	<p><b>end</b></p> <p><b>Example:</b></p> <pre>Router(config-if)# exit</pre>	Returns to global configuration mode on the host router.
<b>Step 9</b>	<p><b>copy running-config startup-config</b></p> <p><b>Example:</b></p> <pre>Router# copy running-config startup-config</pre>	Saves the router's new running configuration.
<b>Step 10</b>	<p><b>show running-config</b></p> <p><b>Example:</b></p> <pre>Router# show running-config</pre>	Displays the router's running configuration, so that you can verify address configurations.

## Examples

The following partial output from the **show running-config** command shows how the interfaces are configured.

```
interface sm 1/0
ip address 10.0.0.20 255.255.255.0
service-module ip address 10.0.0.21 255.255.255.0
service-module ip default-gateway 10.0.0.20
```

## Opening a Session

This section describes how to open a session on the SRE service module.



### Note

Before you install your application software, opening a session brings up the bootloader. After you install the software, opening a session brings up the application. You can conduct only one session at a time.

## SUMMARY STEPS

1. **enable**
2. **service-module sm slot/0 session clear**
3. **service-module sm slot/0 session**

## DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<b>enable</b>  <b>Example:</b> Router> enable	Enters privileged EXEC mode on the host router. Enter your password if prompted.
<b>Step 2</b>	<b>service-module sm slot/0 session clear</b>  <b>Example:</b> Router# service-module sm 1/0 session clear  <b>Example:</b> [confirm] [OK] Router#	Make sure there is not an existing session which will prevent this session to login successfully.
<b>Step 3</b>	<b>service-module sm slot/0 session</b>  <b>Example:</b> Router# service-module sm 1/0 session Trying 172.20.98.151, 2066 ... Open Cisco Network Analysis Module (SM-SRE) NAM.domain.name login:	Begins a session on the specified module.

## Closing a Session

This section describes how to close a session on the SRE service module.



### Note

Before you install your application software, opening a session brings up the bootloader. After you install the software, opening a session brings up the application. You can conduct only one session at a time. The CLI command **exit** automatically closes a session.

## SUMMARY STEPS

1. From the NAM CLI, NAM login, NAM helper, or NAM bootloader prompts, press **Control-Shift-6 x**.
2. From the Router CLI, do one of the following:
  - **disconnect**
  - **service-module sm slot/0 session clear**

## DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	From the NAM CLI, NAM login, NAM helper, or NAM bootloader prompts, press <b>Control-Shift-6 x</b> .	<p><b>Note</b> This key sequence returns you to the router prompt. Closes the service-module session and returns to the router CLI.</p> <p><b>Note</b> The service-module session stays up until you clear it in the next step. While it remains up, you can return to it from the router CLI by pressing <b>Enter</b>.</p>
<b>Step 2</b>	<p>From the Router CLI, do one of the following:</p> <ul style="list-style-type: none"> <li>• <b>disconnect</b></li> <li>• <b>service-module sm slot/0 session clear</b></li> </ul> <p><b>Example:</b></p> <pre>Router# service-module sm 1/0 session clear [confirm] [OK] Router#</pre>	<p>Disconnects the session connection or clears the service module session for the specified module.</p> <p>When prompted to confirm this command, press <b>Enter</b>.</p>