



Managing the Cisco SRE NAM

This section contains information about managing Prime NAM.

The tables in these sections show only common router and network module commands.

- To view a complete list of available commands, type `?` at the prompt (Example: Router(config-if)# `?`).
- To view a complete list of command keyword options, type `?` at the end of the command (Example: Router# `service-module sm ?`).

The tables group commands by the configuration mode in which they are available. If the same command is available in more than one mode, it might act differently in each mode.

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Shutting Down and Starting Up SRE NAM

To shut down or start up the network module or the SRE NAM application that runs on the module, use commands as needed from the following list of common router and network module commands listed in the table.



Note

Some shutdown commands can potentially disrupt service. If command output for such a command displays a confirmation prompt, confirm by pressing **Enter** or cancel by entering **n** and pressing **Enter**. Alternatively, prevent the prompt from displaying by using the **no-confirm** keyword. Also, some commands shut the module or application down and then immediately restart it.

Table 1: Common Shutdown and Startup Commands

Configuration Mode	Command	Purpose
Router#	service-module sm slot/0 reload	Shuts down the network module operating system gracefully, then restarts it from the bootloader.
Router#	service-module sm slot/0 reset	Resets the hardware on a module. Use only to recover from shutdown or a failed state. Caution Use this command with caution. It does <i>not</i> provide an orderly software shutdown and consequently might impact file operations that are in progress.
Router#	service-module sm slot/0 session	Accesses the specified service engine and begins a network module configuration session.
Router#	service-module sm slot/0 shutdown	Shuts down the network module operating system gracefully. Use when removing or replacing a hot-swappable module during online insertion and removal (OIR).
Router#	service-module sm slot/0 status	Displays configuration and status information for the network module hardware and software.
Router(config)#	shutdown	Shuts down the entire system (host router plus network module) gracefully.
ServiceEngine bootloader>	boot	Starts the helper or application.
ServiceEngine bootloader>	reboot	Shuts down SM-SRE without first saving configuration changes, then reboots it from the bootloader.
root@hostname.domain	reboot	Gracefully reboots SM-SRE from the Prime NAM CLI.
root@hostname.domain	shutdown	Shuts down the SM-SRE application gracefully, then shuts down the module.

Verifying System Status

To verify the status of an installation, upgrade, or downgrade or to troubleshoot problems, use commands as needed from the following list of common router and network module commands.

**Note**

Among keyword options for many **show** commands is provision to display diagnostic output on your screen or to pipe it to a file or a URL.

Table 2: Common Verification and Troubleshooting Commands

Configuration Mode	Command	Purpose
Router#	ping	Pings a specified IP address to check network connectivity (does not accept a hostname as destination).
Router#	show arp	Displays the current Address Resolution Protocol (ARP) table.
Router#	show clock	Displays the current date and time.
Router#	show configuration	Displays the current bootloader configuration as entered by means of the configure command.
Router#	show controllers service-engine	Displays interface debug information.
Router#	show diag	Displays standard Cisco IOS diagnostics information, including information about SM-SRE.
Router#	show hardware	Displays information about network module and host-router hardware.
Router#	show hosts	Displays the default domain name, style of name lookup, list of name-server hosts, and cached list of hostnames and addresses
Router#	show interfaces	Displays information about all hardware interfaces, including network and disk.
Router#	show sm	Displays information about the module side of the router-module interface.
Router#	show ntp status	Displays information about Network Time Protocol (NTP).
Router#	show processes	Displays a list of the running application processes.
Router#	show running-config	Displays the configuration commands that are in effect.

Configuration Mode	Command	Purpose
Router#	show startup-config	Displays the startup configuration.
Router#	show tech-support	Displays general information about the host router that is useful to Cisco technical support for problem diagnosis.
Router#	show version	Displays information about the loaded router, software or network module bootloader version, and also hardware and device information.
Router#	test scp ping	Pings the network module to check network connectivity.
Router#	verify	Displays version information for installed hardware and software.
SE-Module>	ping	Pings a specified IP address to check network connectivity (does not accept a hostname as destination).

Configuring Logging Options and Generating Diagnostics

To configure logging options for SRE NAM, use commands as needed from the list of common network module commands shown in the following tables.



Note

Some keyword options for many of the **log** and **trace** commands is provision to display diagnostic output on your screen or to pipe it to a file or a URL.

Table 3: Common Syslog Commands

Configuration Mode	Command	Purpose
Router#	show log	Displays the contents of the specified log.
	show logs	Displays a list of available log files.
	copy log	Saves the syslog to a destination of your choice.

Table 4: Common Trace Commands

Command	Purpose
clear trace	Clears logged trace events for specified modules.
log trace	Logs configured traces to the network module (can be done locally or remotely).
no trace	Disables tracing for specified modules, entities, or activities.
show errors	Displays error statistics by module, entity, or activity.
show trace	Displays trace settings.
show trace buffer	Displays the contents of the trace buffer.
show trace store	Displays the contents of the traced messages that are stored.
trace	Enables tracing (that is, generates error reports) for specified modules, entities, or activities.

Opening and Closing a Telnet or SSH Session to the Prime NAM

You would typically use the Prime NAM web GUI to monitor and maintain the Prime NAM. If, however, you cannot access the Prime NAM, then you might want to use Telnet or SSH to troubleshoot from the Prime NAM CLI.

If your SM-SRE is not properly configured for Telnet or SSH access (see the xref section), then you need to open a Telnet session to the router in which the SM-SRE is installed, and then open a Prime NAM console session from the router.

Before you begin:

- Configure the Prime NAM system IP address. Optionally, set the Prime NAM system hostname. See the xref.
- Verify Prime NAM network connectivity by performing one of the following ping tests:
 - From a host beyond the gateway, ping the Prime NAM system IP address.
 - From the Prime NAM CLI, ping the Prime NAM system default gateway.

Enter the **exsession on** Prime NAM CLI command. See xref of the xref.

- Install the Prime NAM software K9 cryptographic patch, which you can download from Cisco.com.
- Enter the **exsession on ssh** Prime NAM CLI command. See [Configuring Cisco SRE NAM For Network Connectivity](#)

Opening and Closing a Telnet or SSH Session

This procedure opens and closes a Telnet or SSH session to the Prime NAM.

SUMMARY STEPS

1. Do one of the following:
 - **telnet** {*ip-address* | *hostname*}
 - **ssh** {*ip-address* | *hostname*}
2. At the login prompt, enter **root**.
3. Do one of the following:
 - At the password prompt, enter your password.
 - If you have not changed the password from the factory-set default, enter **root** as the root password.
4. Perform the tasks that you need to perform in the Prime NAM CLI. When you want to end the Telnet or SSH session to the Prime NAM and return to the Cisco IOS CLI, complete Step 5 and Step 6.
5. **exit**
6. **logout**

DETAILED STEPS

	Command or Action	Purpose
Step 1	Do one of the following: <ul style="list-style-type: none"> • telnet {<i>ip-address</i> <i>hostname</i>} • ssh {<i>ip-address</i> <i>hostname</i>} Example: <pre>Router# telnet 10.20.30.40 Router# ssh 10.20.30.40</pre>	Logs in to a host that supports Telnet. or Starts an encrypted session with a remote networking device. Use the Prime NAM system IP address or Prime NAM system hostname.
Step 2	At the login prompt, enter root . Example: <pre>login: root</pre>	Accesses the root (read/write) level of Prime NAM.
Step 3	Do one of the following: <ul style="list-style-type: none"> • At the password prompt, enter your password. • If you have not changed the password from the factory-set default, enter root as the root password. 	—

	Command or Action	Purpose
	Example: Password: root	
Step 4	Perform the tasks that you need to perform in the Prime NAM CLI. When you want to end the Telnet or SSH session to the Prime NAM and return to the Cisco IOS CLI, complete Step 5 and Step 6.	
Step 5	exit Example: root@localhost (sub-custom-filter-capture) # exit root@localhost#	Leaves a subcommand mode. • Return to command mode.
Step 6	logout Example: root@localhost# logout Connection closed by foreign host.	Logs out of the Prime NAM system.

Examples

This section provides the following examples:

- [Opening and Closing a Telnet Session to the Prime NAM Using the Prime NAM System IP Address, on page 8](#)
- [Opening and Closing an SSH Session to the Prime NAM Using the Prime NAM System Hostname, on page 9](#)

Opening and Closing a Telnet Session to the Prime NAM Using the Prime NAM System IP Address

```
Router> telnet 172.20.105.215

Trying 172.20.105.215 ... Open
Cisco Network Analysis Module (SM-SRE)
login: root

Password: <password>
Terminal type: vt100
Cisco Network Analysis Module (SM-SRE) Console, 6.1
Copyright (c) 1999-2014 by cisco Systems, Inc.
WARNING! Default password has not been changed!
root@nam.company.com#
root@nam.company.com# logout
```

```
[Connection to 172.20.105.215 closed by foreign host]
Router>
```

Opening and Closing an SSH Session to the Prime NAM Using the Prime NAM System Hostname

```
host [/home/user] ssh -l root nmnam2

root@nmnam2's password: <password>
Terminal type: vt100
Cisco Network Analysis Module (SM-SRE) Console, 6.1
Copyright (c) 1999-2014 by Cisco Systems, Inc.
WARNING! Default password has not been changed!
root@nmnam2.company.com#
root@nmnam2.company.com# logout

Connection to nmnam2 closed.
host [/home/user]
```

