

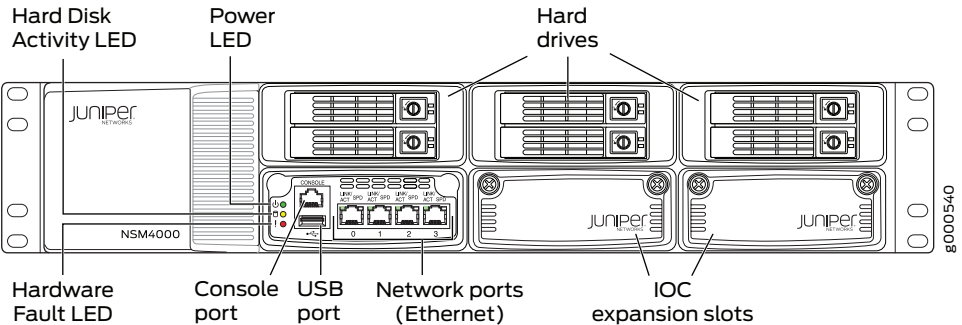
How to Set Up Your NSM4000 Appliance



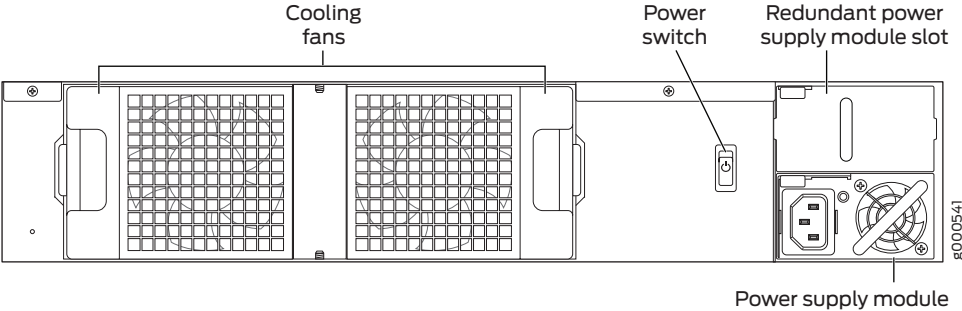
Juniper Networks NSM4000 is an appliance version of Network and Security Manager (NSM), a software application that centralizes control and management of your Juniper Networks devices. With NSM, Juniper Networks delivers integrated, policy-based security and network management for network and security devices.

An NSM4000 appliance simplifies the complexity of network administration by providing a single, integrated management interface that controls device parameters.

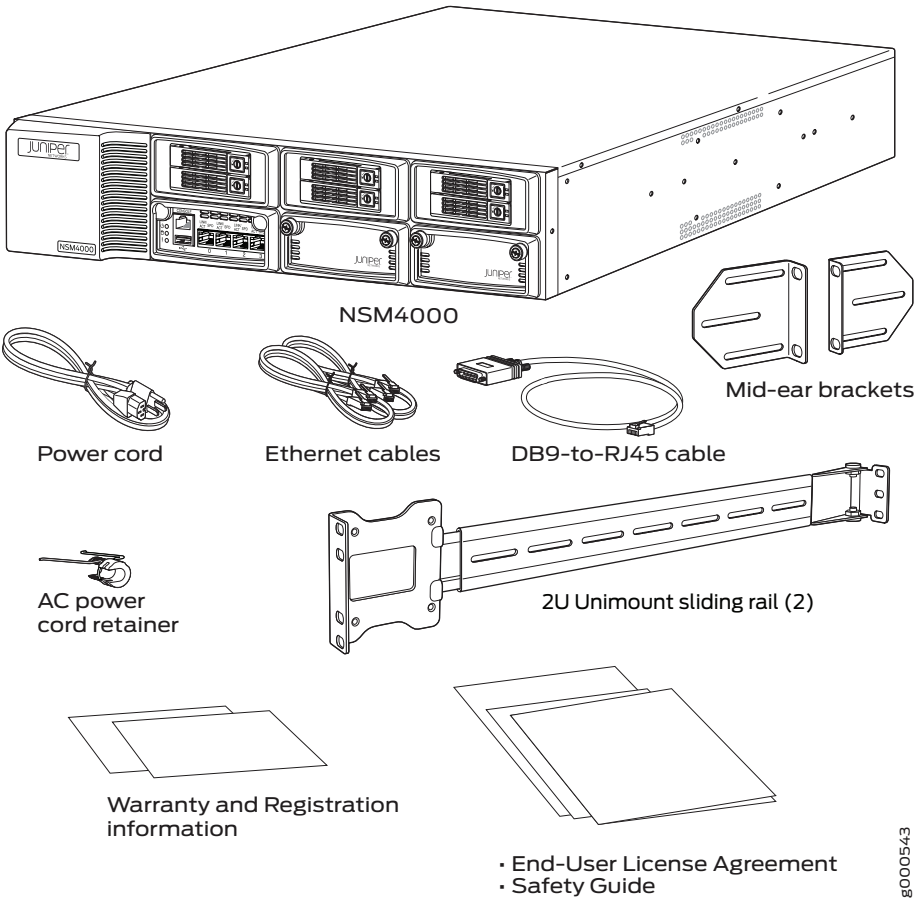
Front Panel



Back Panel



NSM4000 Appliance Package Contents

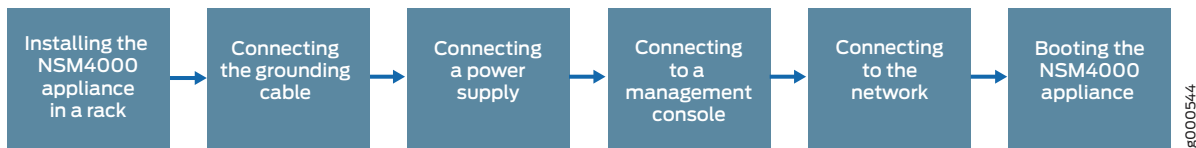


Physical Specifications

Dimensions (H x W x D)	17.81 in. x 17.31 in. x 3.5 in.
Chassis weight	28.05 lb
Power supply	250 W AC module
	560 W DC module



Hardware Setup Process



Step 1: Installing the NSM4000 Appliance in a Rack

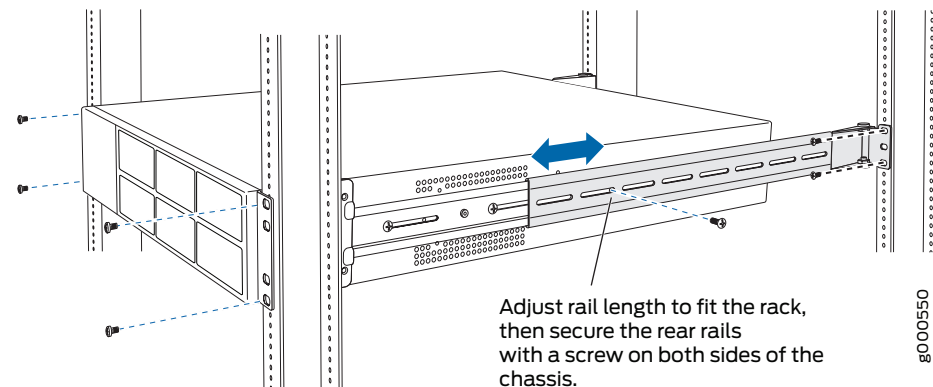
1. Unpack the shipping carton and verify the contents.
2. Position the NSM4000 appliance in front of the rack.



NOTE: Two people must perform this step where one person holds the chassis while the other inserts the screws.

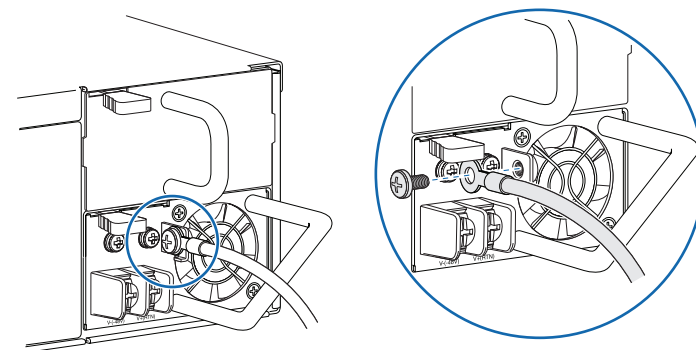
3. Insert four rack-mount screws on each side of the NSM4000 appliance to secure the front of the chassis to the equipment rack.
4. Slide the rear-mount rail brackets into the side rail brackets on either side of the chassis and align the side rail brackets with the rear equipment rack posts.
5. Secure each rear-mount rail bracket to the equipment rack with two screws.
6. Insert locking screws on the sides of the rear-mount brackets to secure the front and rear mounting brackets in place.
7. Verify that the mounting screws on one side of the rack are aligned with the mounting screws on the opposite side and that the NSM4000 appliance is level.

For various rack-installation methods, see the *NSM4000 Hardware Guide*.



Step 2: Connecting the Grounding Cable

1. Connect the grounding cable to a proper earth ground.
2. Place the grounding cable lug over the grounding point on the lower rear of the chassis.
3. Secure the grounding cable lug to the grounding point with the screw.

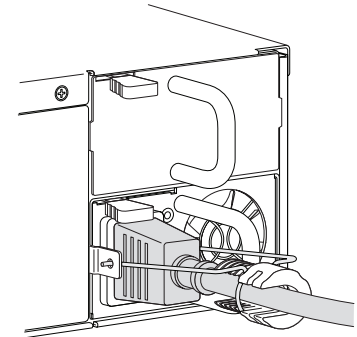


Step 3: Connecting a Power Supply

You can power on the NSM4000 appliance by connecting either an AC or a DC power supply to the NSM4000 appliance.

Connecting an AC Power Supply to the NSM4000 Appliance

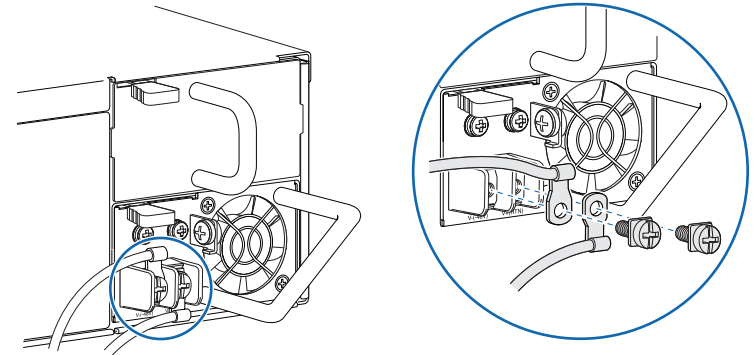
1. Ensure that the AC power supply module is fully inserted into the chassis.
2. Squeeze the two sides of the power cord retainer clip and insert the L-shaped ends of the wire clip into the holes in the bracket on each side of the AC power cord inlet on the faceplate of the AC power supply module.
3. Insert the coupler end of the power cord into the AC power cord inlet on the faceplate of the AC power supply.
4. Push the cord into the slot in the adjustment nut of the power cord retainer. Turn the nut until it is tight against the base of the coupler and the slot in the nut is turned 90° from the top of the NSM4000 appliance.
5. Insert the power cord plug into an AC power source outlet.



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Connecting a DC Power Supply to the NSM4000 Appliance

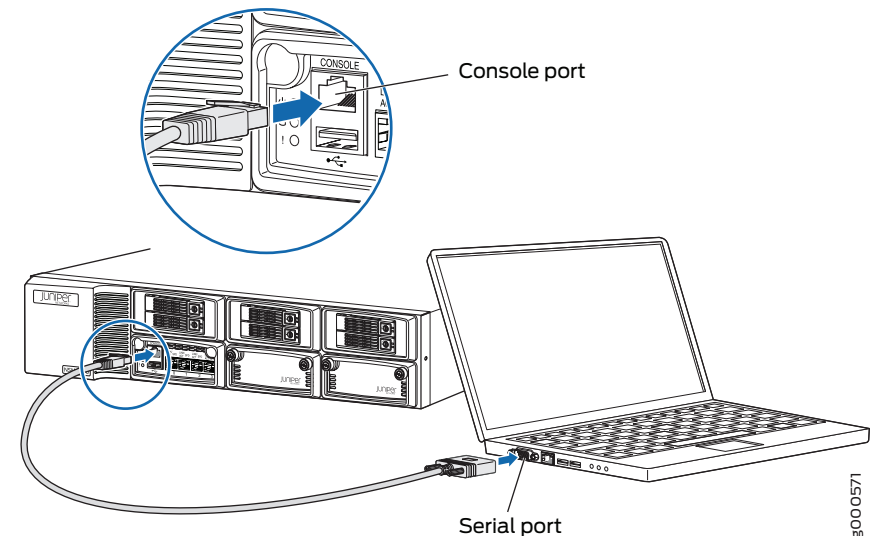
1. Ensure that the DC power supply module is fully inserted into the chassis.
2. Ensure that the input circuit breaker is open so that the voltage across the DC power source cable leads is 0 V and the cable leads will not become active when you connect the DC power.
3. Remove the screws on the terminals and connect the stripped and twisted wires to the wire clamps under the DC terminal screws.
4. Use the terminal screws to secure the power source cables to the power feed on the NSM4000 appliance by attaching the twisted wires that are attached to the cables to the appropriate terminals.
5. Attach the plastic safety cover and close the input circuit breaker.



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Step 4: Connecting to a Management Console

1. Connect the RJ45-to-DB9-serial-port adapter to the serial port of the management device (laptop or PC) that you use to access the NSM CLI.
2. Connect one end of the Ethernet cable to the console port (labeled CONSOLE) on the front panel of the NSM4000 appliance.
3. Connect the other end of the Ethernet cable to the RJ45-to-DB9-serial-port adapter.

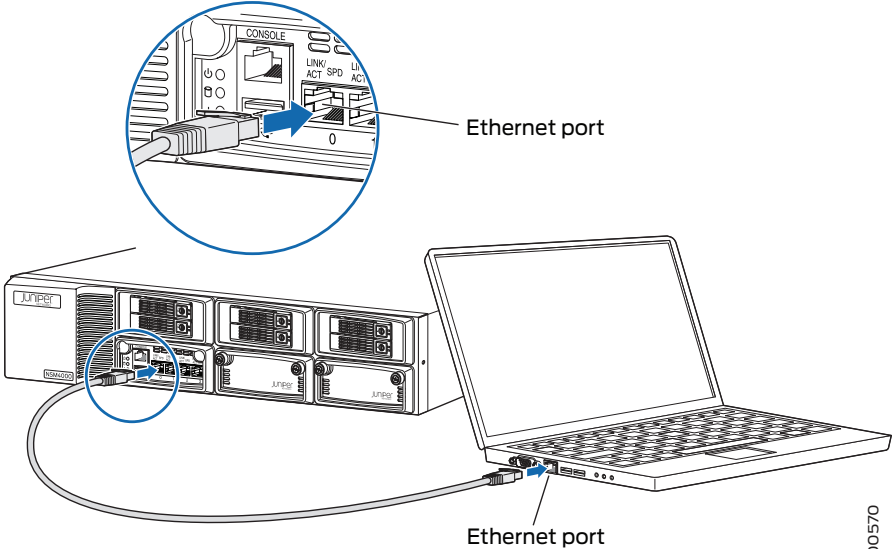


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Step 5: Connecting to the Network

1. Plug one end of the Ethernet cable into the port labeled 3.
- 

NOTE: If you are using multiple Ethernet interfaces, use the ports labeled 2/1/0.
2. Plug the other end of the Ethernet cable(s) into the network that contains the Web UI clients and the other NSM nodes in the fabric.



Step 6: Booting the NSM4000 Appliance

Before you can boot the NSM4000 appliance, the following prerequisites are required:

- The console terminal or terminal emulation utility is configured.
- The management device (PC or laptop) that is connected to the NSM4000 appliance's console port is powered on.

The NSM4000 appliance powers on when you supply power to the power supply module. The NSM4000 appliance LEDs indicate the following performance:

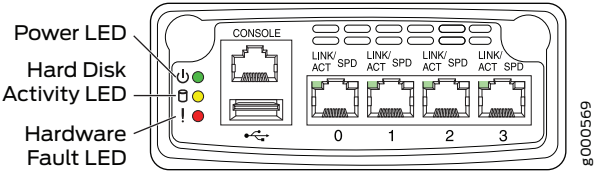
LED	State
POWER	Solid green (receiving power)
	Amber (standby mode)
Hardware Fault	Solid red (a faulty fan, power supply, or temperature alarm)
Hard Disk Activity	Yellow (hard disk is in use)

As the NSM4000 appliance is shipped with the NSM software installed, the serial console displays diagnostic information when the NSM4000 appliance is booting. When booting is complete, the serial console displays the following login prompt:

NSM4000.juniper.net login:



You are now ready to configure the NSM4000 appliance.



Initial Configuration Process



Factory-Default Settings

The NSM4000 appliance is shipped with NSM 2012.2R7 on CentOS version 6.5.

Port and Interface Settings		
Port Label	Interface	IP Address
0	eth3	Unassigned
1	eth2	Unassigned
2	eth1	Unassigned
3	eth0	Unassigned

Gather Configuration Information

Gather information about your network and configuration settings that you will use for configuring the device.

Required

IP address

Default gateway

Subnet mask

New password for admin user
(Default is "abc123")

Static route

Reconfigure NSM Regional Server

Password for 'super' user

GUI server one-time password

Cfmuser password

NSM license type (Specify a license file, or
select Base Install)

Optional

New hostname

DNS servers

Time zone and NTP servers

E-mail address for admin local status

Step 1: Setting Up Your NSM4000 Appliance

1. Log in to NSM with **admin** as your default login name and **abc123** as your default password. Change your default password when prompted.



NOTE: All passwords are case-sensitive.

2. The serial console prompts to enter the IP address, subnet mask, and default gateway for the interface **eth0**.

```
Juniper NSMExpress Appliance
NSM 2012.2R7

NSM4000.juniper.net login: admin
Password: *****

Welcome to NSM4000 Initial Installation Setup
...changing admin password
Enter current password: *****

Changing password for user admin.
New password: *****

BAD PASSWORD: it is too simplistic/systematic
BAD PASSWORD: is too simple
Retype new password: *****|

passwd: all authentication tokens updated successfully.

--- NSM operational mode ---
Your NSMExpress appliance is a Regional Server.

Please enter new IP address for interface eth0
10.204.92.111

Please enter new subnet mask for interface eth0
255.255.254.0

Enter the default gateway as a dotted-decimal IP address:
10.204.93.254

Applying Changes...
Re-loading database
ADDRCONF(NETDEV_UP): eth0: link is not ready
Determining if ip address 10.204.92.111 is already in use for device eth0..
RTNETLINK answers: File exists
Done!
Release version updated successfully
Upgrading the Postgresql packages to 8.4.10...

Your NSMExpress is now active on the network.
To configure your system via a web browser, connect to:
https://10.204.92.111/administration

To configure your system via command line, type:
nsm_setup

For operation of NSM server, switch to user "nsm".
Please consult NSM product documentation for details.

[admin@NSM4000 ~]$
```


Step 2: Installing the Regional Server

1. Enter the `sudo su -` command to login as a root user.
2. Enter the admin password.
3. Enter the `nsm_setup` command to configure the NSMXpress settings.
The serial console displays the NSMXpress Settings Menu.
4. Enter `9` to reconfigure the NSM regional server.
The serial console displays the NSM Configuration Main Menu.
5. Enter the following options to configure the corresponding parameters:

Options	Parameters	Description
1	Management IP	Primary IP address of your management server for eth0.
2	NSM 'super' password	This password is used by the NSM superuser (also referred to as the NSM administrator).
3	GUI server one-time password	This password authenticates the GUI server to its peers in a high-availability configuration, and to the Central Manager.
4	Cfmuser password	This password is used to authenticate the ConfigFileVersions directory.
6	NSM License type	<ul style="list-style-type: none">• Enter 1 [base-install] to use the built-in limited device license for as many as 25 devices.• Enter 2 to enter the filename of the license file you purchased from Juniper Networks that permits you to manage more than 25 devices.

See the *NSM4000 Hardware Guide* for information about FIPS Support, NSM License type, High Availability and Advanced Options.

6. Enter `A` to save the updated settings and install the NSM regional server.

```
[admin@NSM4000 ~]$ sudo su -
[sudo] password for admin:
[root@NSM4000 ~]# nsm_setup

welcome to the NSMXpress network settings utility.

Initializing, please wait
NSMXpress Settings Menu

1> Change Password
2> Set Interfaces
3> Set Routing
4> Change Hostname
5> Set DNS Servers
6> Change Time Options
7> Forward Local Status Emails
8> System Security Update
9> Reconfigure NSM Regional Server
10> Configure Extended HA

Q> Quit
R> Redraw menu

Choice [1-10,Q,R]: 9

Applying system changes before processing NSM changes.
Note: after running NSM configuration, the setup utility will exit.

NSM Configuration Main Menu

1> Management IP [10.204.92.114]
   The IP address on this server that will be
   used for management

2> NSM 'super' password []
   Password for 'super' user

3> GUI server one-time password []
   Password to initiate authentication
   between HA peers and to Central Manager.
   This password must be the same for all
   NSM servers in this installation.

4> Cfmuser password []
   CfmPassword for ConfigFileVersions directory

5> FIPS support [n]
   Enable FIPS support or not

6> NSM License type []
   Specify a license file, or select "Base Install"
   to use the built-in limited device license.

7> Menu: High Availability [off]

8> Menu: Advanced Options

A> Apply settings
C> Cancel all changes and quit
R> Redraw menu

Choice [1-8,A,C,R]:
```

Step 3: Verifying the Settings

Access the URL (<https://<IP address of the NSM4000 appliance>/administration>) to ensure appropriate configuration. If the page does not load, perform the following checks to identify the problem:

- Enter the `ifconfig eth0` command to verify that the IP address is correctly assigned to the eth0 interface.
- Enter the `/etc/init.d/httpd status` command to verify that the http service is running.
- Enter the `ping <NSM4000 IP address>` command on the management device (laptop or PC) to verify the communication between the NSM4000 appliance and the management device.
- Verify the physical connections between the NSM4000 appliance and the network. See “Step 5: Connecting to the Network” on page 4.



With this step, you have successfully completed the initial configuration and your NSM4000 appliance is ready for use.

Login to NSM4000

You must enter a username and password to login to the NSM4000 server on 10.204.92.111.

Username

Password

Powering Off the NSM4000 Appliance

1. Enter the `sudo su -` command to log in as a root user.
2. Enter the admin password.
3. Enter the following commands to perform the specified tasks:
 - Enter the `reboot` command to reboot the NSM4000 appliance.
 - Enter the `shutdown -h now` command to shutdown the NSM4000 appliance.

References

- **NSM Documentation**
http://www.juniper.net/techpubs/en_US/nsm2012.2/information-products/pathway-pages/nsmxpress/2012.2/index.html
- **Technical Support**
<http://www.juniper.net/support/requesting-support.html>
- **NSM4000 Hardware Guide**
https://www.juniper.net/techpubs/en_US/release-independent/nsm/information-products/pathway-pages/hardware/nsm4000/nsm4000-index.html