JA2500 Junos Space Appliance Quick Start

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This document describes how to install the Juniper Networks JA2500 Junos Space Appliance.

Contents

JA2500 Appliance Quick Start Description

This Quick Start contains information you need to install and configure the JA2500 appliance quickly. For complete installation instructions, see the *JA2500 Junos Space Appliance Hardware Guide* at http://www.juniper.net/techpubs/en_US/release-independent/junos-space/index.html.

⚠️ WARNING: This Quick Start contains a summary of safety warnings in "Safety Warnings" on page 26. For a complete list of warnings for this appliance, including translations, see the *JA2500 Junos Space Appliance Hardware Guide*.

The JA2500 appliance has a 2-U, rack-mountable chassis with dimensions of 17.81 in. x 17.31 in. x 3.5 in. (45.2 cm x 44 cm x 8.89 cm). The appliance ships with a single AC power supply module; an additional power supply module can be installed in the power supply slot in the rear panel of the appliance. In addition, the JA2500 appliance can also be powered on by using one or two DC power supply modules.

The appliance has six 1-TB hard drives in a RAID 10 configuration. Two externally accessible cooling fans provide the required airflow and cooling for the appliance.

Figure 1 on page 3 shows the front panel of the JA2500 appliance and Figure 2 on page 4 shows the rear panel.

Figure 1: Front Panel of the JA2500 Appliance

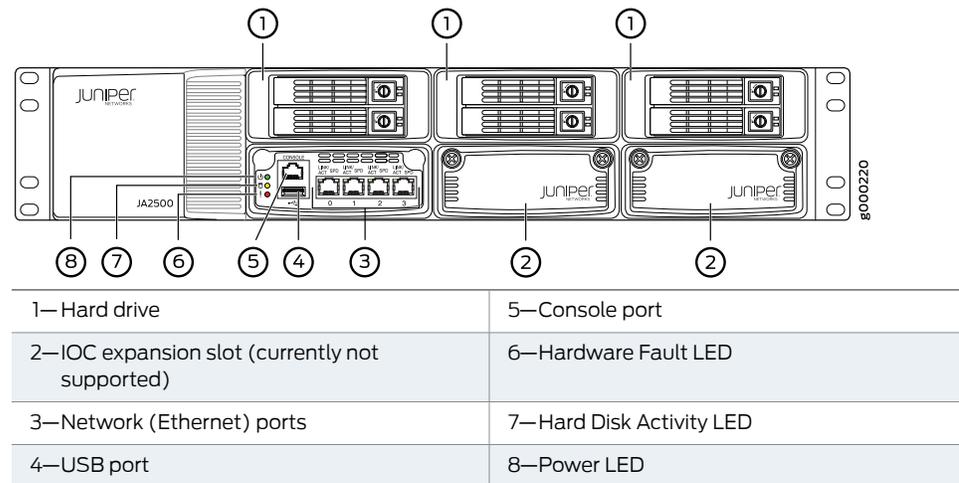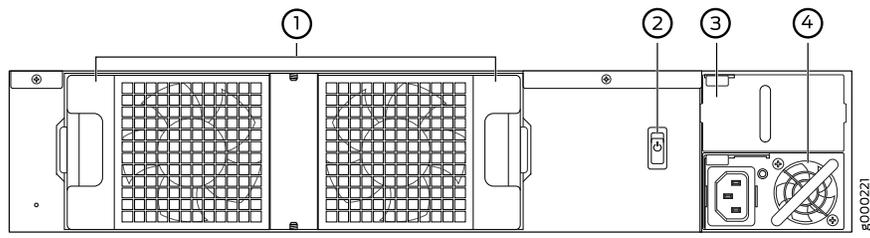|	
1—Hard drive	5—Console port
2—IOC expansion slot (currently not supported)	6—Hardware Fault LED
3—Network (Ethernet) ports	7—Hard Disk Activity LED
4—USB port	8—Power LED

Figure 2: Rear Panel of the JA2500 Appliance

1—Cooling fans	3—Redundant power supply module slot
2—Power switch	4—Power supply module

Step 1: Prepare the Site for JA2500 Appliance Installation

Rack Requirements

- You can install the JA2500 appliance in a two-post or four-post rack. The rack size requirements are as follows:

  - A 19-in. (48.3-cm) rack as defined in Cabinets, Racks, Panels, and Associated Equipment (document number EIA-310-D) published by the Electronic Components Industry Association (http://www.ecianow.org)

  - A 600-mm rack as defined in the four-part Equipment Engineering (EE); European telecommunications standard for equipment practice (document numbers ETS 300 119-1 through 119-4) published by the European Telecommunications Standards Institute (http://www.etsi.org)

    The horizontal spacing between the rails in a rack that complies with this standard is wider than the appliance's mounting brackets, which measure 19 in. (48.3 cm) from outer edge to outer edge. Use approved wing devices to narrow the opening between the rails as required

- The rack rails must be spaced wide enough to accommodate the external dimensions of the JA2500 appliance chassis. The shipping dimensions of a JA2500 appliance are 17.81 in. x 17.31 in. x 3.5 in. (45.2 cm x 44 cm x 8.89 cm).

- The outer edges of the mounting brackets extend the width of the chassis to 19 in. (48.3 cm).

- The front of the chassis extends approximately 0.5 in. (1.27 cm) beyond the mounting ears.

- The holes within each rack set are spaced at 2-U [3.5 in (8.9 cm)]. Therefore, the appliance can be mounted in a rack that provides holes or hole patterns spaced at 2-U [3.5 in (8.9 cm)] increments, or in a rack that provides holes or hole patterns spaced at 1-U [1.75 in. (4.5 cm)] increments as long as there is 2x1-U space available in the rack.

- The mounting brackets and front-mount flanges used to attach the chassis to a rack are designed to fasten to holes spaced at rack distances of 2-U [3.5 in (8.9 cm)] increments, or in a rack that provides holes or hole patterns spaced at 1-U [1.75 in. (4.5 cm)] increments as long as there is 2x1-U space available in the rack.

- The mounting holes in the mounting brackets provided with the device are spaced 1.25 in. (3.2 cm) apart (top and bottom mounting holes).

- Always secure the rack in which you are installing the appliance to the structure of the building. If your geographical area is subject to earthquakes, bolt the rack to the floor. For maximum stability, also secure the rack to ceiling brackets.

- For the cooling system to function properly, the airflow around the chassis must be unrestricted. Allow sufficient clearance between the front and back of the chassis and adjacent equipment. Ensure that there is adequate circulation in the installation location.

- The rack must be strong enough to support the weight of the fully configured appliance, up to 31.2 lb (14.15 kg).

- The appliance should be mounted at the bottom of the rack if it is the only unit in the rack.

- Install the appliance only in restricted areas, such as dedicated equipment rooms and equipment closets, in accordance with Articles 110–16, 110–17, and 110–18 of the National Electrical Code, ANSI/NFPA 70.

Tools Required to Install the Appliance in a Rack

- Phillips (+) screwdriver, number 2
- Phillips (+) screwdriver, number 3
- (Optional) Tie wrap

Step 2: Install the JA2500 Appliance

Unpack the JA2500 Appliance

The JA2500 Appliance is shipped in a cardboard carton along with the items listed in .

> **CAUTION:** The JA2500 appliance is maximally protected inside the shipping carton. Do not unpack it until you are ready to begin installation.

> **WARNING:** The shipping dimensions of a JA2500 appliance are 17.81 in x 17.31 in x 3.5 in (45.2 cm x 44 cm x 8.89 cm), and the appliance shipping weight is 28.05 lb (12.72 kg). Use the correct lifting technique when you move the appliance. (Refer to *Chassis Lifting Guidelines for Junos Space Appliances* in the *JA2500 Junos Space Appliance Hardware Guide* for more details.)

To unpack the appliance, do the following:

1. Move the shipping carton to a staging area as close to the installation site as possible, ensuring that you have enough room to remove the system components.

2. Position the carton so that the arrows are pointing up.

3. Open the top flaps on the shipping carton.

4. Pull out the packing material holding the appliance in place.

5. Read the *General Safety Guidelines and Warnings* in the *JA2500 Junos Space Appliance Hardware Guide* carefully.

6. Remove the appliance from the shipping carton.

7. Verify the appliance chassis components received against the packing list. Table 1 on page 7 lists the items provided with the appliance.

8. Save the shipping carton and packing materials in case you need to move or ship the appliance later.

Table 1: Items in the JA2500 Appliance Shipping Carton

Component	Quantity
Junos Space JA2500 appliance chassis	1
Power cable	1
Mounting kits	2
RJ–45 to DB–9F cable with adapter, 7 ft console cable	1
7-ft, blue, Category 5e cable	2
Safety Information Reference for Hardware Platforms	1

Mount the JA2500 Appliance

You can mount the JA2500 appliance in one of the following configurations:

- Front-and-Rear Mounting the JA2500 Appliance Flush to a Rack on page 7
- Front-and-Rear Mounting the JA2500 Appliance Recessed in a Rack on page 8
- Midmounting the JA2500 Appliance in a Two-Post Rack on page 9

Front-and-Rear Mounting the JA2500 Appliance Flush to a Rack

To mount the JA2500 appliance front and rear flush to a rack, do the following:

1. Insert four rack-mount screws on each side of the appliance to secure the front of the chassis to the equipment rack.

2. Slide the rear-mount rail brackets into the backs of the front rails on either side of the chassis and align with your rear equipment rack posts, as shown in Figure 3 on page 8.

3. Secure the rear-mount rail brackets to your equipment rack with two rack-mount screws each.

4. Insert locking screws on the sides of the rear-mount brackets to secure the front and rear mounting brackets in place.

Figure 3: Front-and-Rear Mounting Flush to a Rack
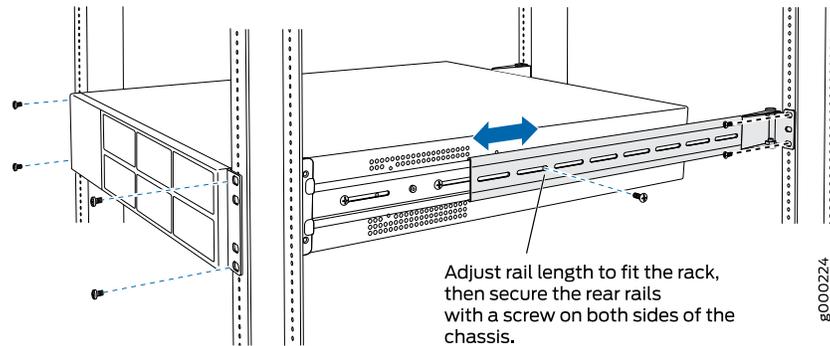
Adjust rail length to fit the rack, then secure the rear rails with a screw on both sides of the chassis.

5. Verify that the mounting screws on one side of the rack are aligned with the mounting screws on the opposite side and that the appliance is level.

Front-and-Rear Mounting the JA2500 Appliance Recessed in a Rack

The recessed position allows network and console cables to be routed through the sides of the equipment rack and through the holes of the recessed front rails on either side of the unit. This enables easy cable routing on the racks with limited cable management.

To mount the JA2500 appliance front and rear recessed in a rack, do the following:

1. Remove the rear screws on each side of the appliance's front rails and the two small screws toward the front of the chassis.

2. Loosen the side-rail screws of the chassis and slide the front rails of the system backward, as far as they will move.

3. Tighten the side-rail screws.

4. Insert the two small screws in the recessed holes on the front rails and tighten.

5. Slide the rear-mount rail brackets into the backs of the front rails on either side of the chassis and align with your rear equipment rack posts. Secure the rear-mount rail brackets to your equipment rack with two rack mount screws each, as shown in .

Figure 4: Front-and-Rear Mounting Recessed in a Rack
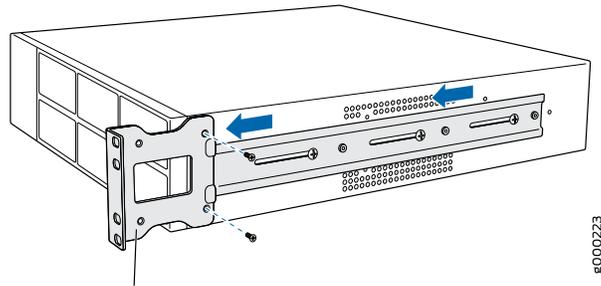
Mounting bracket, positioned forward for recessed mounting.

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 appliance is level.

Midmounting the JA2500 Appliance in a Two-Post Rack

This option allows the appliance to be mounted so that there is even clearance on the front and rear of the rack.

To mount the appliance in a two-post rack, do the following:

1. Remove the two front-mount rails from either side of the chassis.

2. Insert one midmount bracket to the center on either side of the chassis.

3. Attach the chassis to the equipment rack and insert the other two midmount brackets on either side of the appliance to secure the chassis to the backs of the post, as shown in .

Figure 5: Midmoounting in a Two-Post Rack

Attach the front bracket to the chassis, and secure
the chassis to the post. Attach the rear bracket to the
other side of the post, and secure the chassis to
the rear bracket, adjusting the bracket width as needed.

4. Verify that the mounting screws on one side of the rack are aligned with the mounting screws on the opposite side and that the appliance is level.
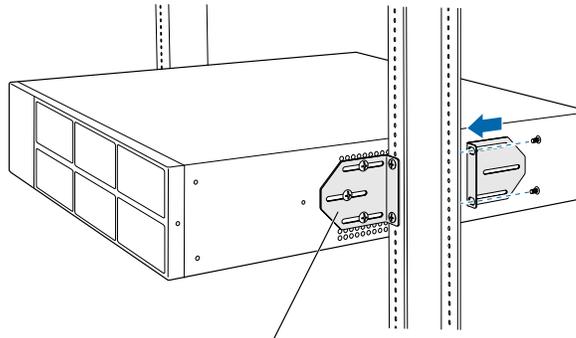
Step 3: Connect Power to the JA2500 Appliance

(Optional) Before you connect power to the Junos Space Appliance, attach an electrostatic discharge (ESD) grounding strap to your bare wrist and connect the strap to an external ESD point.

- Connecting AC Power to the JA2500 Appliance on page 10
- Connecting DC Power to the JA2500 Appliance on page 12

Connecting AC Power to the JA2500 Appliance

Before you begin connecting AC power to a JA2500 Appliance:

- Ensure that you have grounded the appliance.

⚠️ CAUTION: Grounding for Junos Space Appliances is provided through the power supply ground. Ensure that you connect the AC power supply module in the appliance into a grounded AC power outlet by using an AC power cord (with the grounding pin) appropriate for your geographical location. (See the *AC Power Cord Specifications for Junos Space Appliances* in the *JA2500 Junos Space Appliance Hardware Guide*).

ⓘ NOTE: If you have installed an additional power supply module, then each power supply module must be connected to a dedicated power source outlet.

To connect AC power to the JA2500 Appliance, do the following:

1. Ensure that the 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, as shown in .

Figure 6: Connecting an AC Power Supply
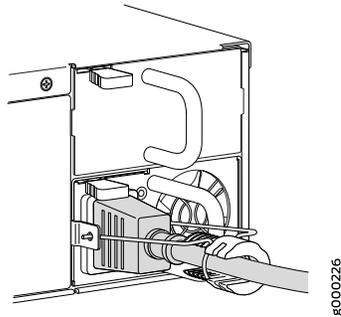
3. Locate the power cord or cords shipped with the appliance; the cords have plugs appropriate for your geographical location.

> ⚡ WARNING: Ensure that the power cord does not block access to appliance components or drape where people can trip on it.

4. Insert the coupler end of the power cord into the AC power cord inlet on the faceplate of the AC power supply.

5. 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 appliance, as shown in.

6. If the AC power source outlet has a power switch, set it to the OFF position.

7. Insert the power cord plug into an AC power source outlet.

8. If the AC power source outlet has a power switch, set it to the ON position.

The JA2500 Appliance powers on when you supply power to the power supply module. When the power supply module is correctly installed and functioning normally, the LED on the power supply module displays green when the power supply module is powering the appliance, and amber when the power supply module is in standby mode (not powering the appliance).

Connecting DC Power to the JA2500 Appliance

Before connecting the JA2500 Appliance to a DC power source, do the following:

- Ensure that you have read the guidelines in the *DC Power Electrical Safety Guidelines* topic in the *JA2500 Junos Space Appliance Hardware Guide*.

- Ensure that you have taken the necessary precautions to prevent ESD damage.

- Ensure that you have grounded the appliance by connecting the DC power supply grounding cable to earth ground.

CAUTION: Before you connect power to the Junos Space Appliance, in order to meet the safety requirements and ensure proper operation, get a licensed electrician to attach a cable lug to the grounding and power cables that you supply. A cable with an incorrectly attached lug can damage the appliance (for example, by causing a short circuit).

- Ensure that you have the following parts and tools available:

  - DC power source cables (12-14 AWG) with ends of the wire stripped ~12mm and twisted

  - Phillips (+) screwdriver, number 1

You connect DC source power to the appliance by attaching power cables from external DC power sources to the terminal studs on the DC power supply module faceplates.

WARNING: DC-powered Junos Space Appliances are intended for installation only in restricted access locations.

WARNING: Before you perform the following procedure, ensure that power is removed from the DC circuit. To ensure that all power is off, locate the circuit breaker on the panel board that services the DC circuit, switch the circuit breaker to the OFF position, and tape the switch handle of the circuit breaker in the OFF position.

To connect the DC source power to the JA2500 appliance, do the following:

1. Ensure that the power supply module is fully inserted in 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 that the cable leads will not become active when you connect the DC power.

3. Remove the clear plastic cover protecting the terminal on the faceplate.

4. Remove the screws on the terminals by using the screwdriver. Save the screws.

5. Connect the stripped and twisted wires to wire clamps under the DC terminal screws as shown in Figure 7 on page 13.

Figure 7: Connecting a DC Power Supply
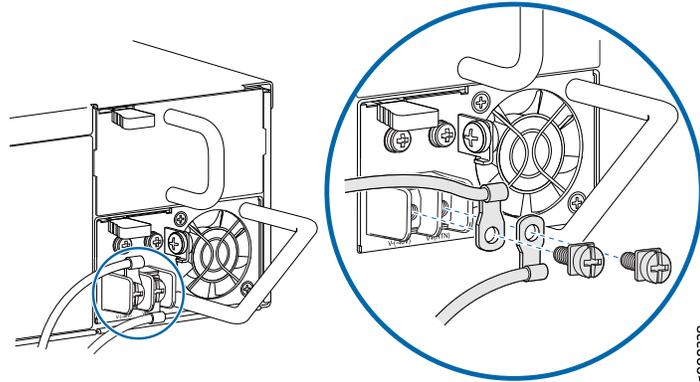
6. Use the terminal screws to secure the power source cables to the power feed on the appliance by attaching the twisted wires that are attached to the cables to the appropriate terminals.

7. Remove the screw on the grounding terminal by using the screwdriver. Save the screw.

   The grounding terminal is located to the right and above the terminals, as shown in Figure 8 on page 13.

Figure 8: DC Power Supply Grounding
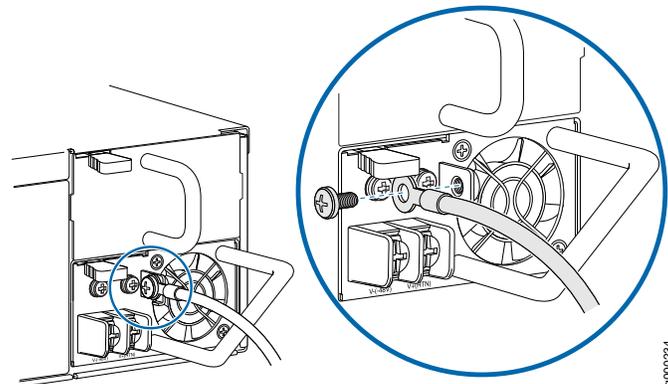
8. Connect the grounding lug to the earthing terminal using the screw, as shown in Figure 8 on page 13.

9. Attach the plastic safety cover.

10. Close the input circuit breaker.

The JA2500 Appliance powers on when you supply power to the power supply module. If the power supply module is correctly installed and functioning normally, the LED on the power supply module displays green when the power supply module is powering the appliance, and amber when the power supply module is in standby mode (not powering the appliance).

Step 4: Connect External Devices and Cables

Connecting the JA2500 Appliance to a Management Console

Every JA2500 appliance has a console port with an RJ-45 connector that you can use to connect the appliance to the management console or to a console server. An RJ-45 cable, as shown in Figure 9 on page 14, and an RJ-45 to DB-9 serial port adapter are supplied with the appliance.

Figure 9: Ethernet Cable Connector
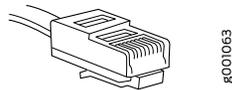
To connect the appliance to a management console, do the following:

1. Connect the RJ-45 to DB-9 serial port adapter to the serial port of the management device (laptop or PC) that you will use to access the Junos Space CLI.

    (i) NOTE: If your laptop or PC does not have a DB-9 male connector pin and you want to connect your laptop or PC directly to the appliance, use a combination of the RJ-45 to DB-9 female adapter supplied with the appliance and a USB to DB-9 male adapter. You must provide the USB to DB-9 male adapter.

2. Connect one end of the Ethernet cable into the console port (labeled **CONSOLE**) on the front panel of the appliance.

3. Connect the other end of the Ethernet cable into the RJ-45 to DB-9 serial port adapter.

Connecting the JA2500 Appliance to the Network

Though the JA2500 appliance has four Ethernet interfaces, only three, labeled **0** (eth0), **1** (eth1), and **3** (eth3), can be used; the other Ethernet interface, labeled **2**, is reserved for future use. The eth0 Ethernet interface must be mandatorily connected to a network for managing the Junos Space Web client and devices. Connecting the eth1 interface to the network containing the Junos Space nodes and the eth3 interface to the device management network is optional.
For information about the Ethernet Interfaces in JA2500 appliance, see *Junos Space Ethernet Interfaces Overview*.

To connect the appliance to a network, do the following:

1. Plug one end of the Ethernet cable into the port labeled **0**.

2. Plug the other end of the Ethernet cable into the network.

   > *i* NOTE: **If you choose to connect the JA2500 appliance to both Ethernet interfaces, then you should plug the other end of the Ethernet cable into the network that contains the Web UI clients and the other Junos Space nodes in the fabric.**

3. (Optional) If you are using eth1 Ethernet interface, take an Ethernet cable, plug one end of the Ethernet cable into the port labeled **1**, and the other end into the network that contains the Junos Space nodes in the fabric.

4. (Optional) If you are using eth3 Ethernet interface, take an Ethernet cable, plug one end of the Ethernet cable into the port labeled **3**, and the other end into the network that contains the devices being managed by Junos Space.

Step 5: Boot the JA2500 Appliance

Before you begin booting the Junos Space Appliance, ensure that you have configured a console terminal or terminal emulation utility to use the following serial connection parameters:

- Baud rate: 9600 bits per second

- Data: 8 bits

- Flow control: None

- Parity: None

- Stop bits: 1

NOTE: If you have turned on power to the power supply module, then the JA2500 appliance starts booting automatically.

To boot the JA2500 appliance, do the following:

1. Power on the management device (PC or laptop) that is connected to the appliance's console port.

2. (Optional) Power on the Junos Space Appliance by toggling the power switch located at the rear panel of the appliance.

   The appliance is shipped with a version of the Junos Space Network Management Platform software installed. When the appliance is powered on, the serial console displays diagnostic information before booting. When booting is complete, the serial console displays the login prompt. You are now ready to configure the appliance.

Step 6: Configure the JA2500 Appliance

You can configure a JA2500 Appliance as a Junos Space node or as a specialized node used for fault monitoring and performance monitoring (FMPM).

Before you begin, ensure that you have the relevant information (depending on whether you are configuring a Junos Space node or an FMPM node) shown in Table 2 on page 17 available:

Table 2: Information Required for Junos Space Appliance Configuration

Description	Required for Configuring Junos Space Node?	Required for Configuring FMPM Node?
IP address and subnet mask or prefix of the eth0 interface	Yes	Yes
IP address of the default gateway	Yes	Yes
IP address of the name server	Yes	Yes
IP address and subnet mask of the eth1 interface NOTE: From Junos Space Network Management Platform Release 14.1R1 onward, you can configure the eth1 Ethernet interface as an administrative interface.	Yes, only if you are configuring the eth1 interface	Yes, only if you are configuring the eth1 interface
IP address of the default gateway for the eth1 interface	Yes, only if the IP address for the eth1 interface is not in the same subnet as the VIP address	Yes, only if the IP address of the eth1 interface is not in the same subnet as the VIP address
IP address and subnet mask or prefix of the eth3 interface	Yes, only if you are configuring the eth3 interface	No
IP address of the default gateway for the eth3 interface	Yes, only if you are configuring the eth3 interface	No
Virtual IP (VIP) address NOTE: The VIP address must be in the same subnet as the IP address assigned to the eth0 interface.	Yes NOTE: The VIP address is used to access the Junos Space Network Management Platform GUI through a Web browser.	Yes NOTE: This is the VIP address of the FMPM nodes and is used for communications between Junos Space nodes and FMPM nodes. This VIP address must be different from the VIP address used to access the Web GUI.
NTP server settings with which the Junos Space Appliance synchronizes its time.	Yes	Yes

i NOTE: From Junos Space Network Management Platform Release 14.1R2 onward, you can configure Junos Space Ethernet interfaces with only IPv4 addresses, or both IPv4 and IPv6 addresses.

To configure a Junos Space Appliance as a Junos Space node or an FMPM node, do the following:

1. At the serial console login prompt, type the default username (**admin**) and press Enter.

2. Type the default password (**abc123**) and press Enter.

    You are prompted to change your password.

3. To change the default password, do the following:

    a. Type the default password and press Enter.

    b. Type your new password and press Enter.

    c. Retype your new password and press Enter.

    If the password has been changed successfully, the message **passwd: all authentication tokens updated successfully** is displayed.

    i NOTE: All passwords are case-sensitive.

4. Type the new password to log in to the appliance and press Enter.

5. You can configure the appliance as a Junos Space node or as an FMPM node.

    • To configure the appliance as a Junos Space node, do the following:

    a. Type **S** to proceed with the configuration of the appliance as a Junos Space node with full Junos Space Network Management Platform functionality. Every Junos Space installation requires at least one Junos Space node.

    b. Configure the Ethernet interface eth0.

        i NOTE: If you are configuring the appliance as part of a cluster (fabric), then all nodes in that fabric must be in the same subnet.

        • To configure the IPv4 address for the eth0 interface:

       i. Type **1** and press Enter.

      ii. Type the IPv4 address for eth0 interface in dotted-decimal notation and press Enter.

     iii. Type the subnet mask for the IPv4 address and press Enter.

     iv. Type the IPv4 address of the default gateway in dotted-decimal notation and press Enter.

- (Optional) To configure both IPv4 and IPv6 address for the eth0 interface:

       i. Type **2**.

      ii. Type the IPv4 address for eth0 interface in dotted-decimal notation and press Enter.

     iii. Type the subnet mask for the IPv4 address and press Enter.

     iv. Type the IPv4 address of the default gateway in dotted-decimal notation and press Enter.

      v. Type the IPv6 address and prefix for the eth0 interface and press Enter.

     vi. Type the IPv6 address of the default gateway for the eth0 interface and press Enter.

c. Type the IPv4 address of the name server for the eth0 interface and press Enter.

d. Type the IPv6 address of the name server for the eth0 interface and press Enter.

e. Specify whether you want to configure a separate interface for device management or not:

- Type **Y** if you want to use a different Ethernet interface (eth3) to manage devices.

  > *i*   NOTE: On a Junos Space fabric with two or more Junos Space nodes, if you configure the eth3 interface as the device management interface on one Junos Space node, then you must also configure the eth3 interface as the device management interface on all the other Junos Space nodes in that fabric.

- To configure the IPv4 address of the eth3 interface:

  i. Type **1**.

  ii. Type the IPv4 address for eth3 interface in dotted-decimal notation and press Enter.

  iii. Type the new subnet mask of the IPv4 address in dotted-decimal notation and press Enter.

  iv. Type the IPv4 address of the default gateway for the eth3 Ethernet interface in dotted-decimal notation and press Enter.

  v. Type the IPv4 address of the name server for the eth3 interface and press Enter.

- To configure the IPv6 address of the eth3 interface:

  i. Type **2**.

  ii. Type the IPv6 address with prefix for the eth3 interface and press Enter.

  iii. Type the IPv6 address of the default gateway for the eth3 interface and press Enter.

  iv. Type the IPv6 address of the name server for the eth3 interface and press Enter.

- To configure both IPv4 and IPv6 addresses:

  i. Type **3**.

  ii. Type the IPv4 address for the eth3 interface in dotted-decimal notation and press Enter.

  iii. Type a subnet mask for the IPv4 address in dotted-decimal notation and press Enter.

  iv. Type the IPv4 address of the default gateway for the eth3 interface in dotted-decimal notation and press Enter.

  v. Type the IPv6 address and prefix for the eth3 interface and press Enter.

> ℹ️ NOTE: You must provide an IPv6 address for the name server if you configure an IPv6 address for the eth3 interface.

    vi. Type the IPv6 address of the default gateway for the eth3 interface and press Enter.

    vii. Type the IPv4 address of the name server for the eth3 interface and press Enter.

    viii. Type the IPv6 address of the name server for the eth3 interface and press Enter.

- Type **N** if you want to use only the Ethernet interface eth0 to manage devices and the Junos Space Web clients.

f. Specify whether the appliance is to be added to an existing cluster (fabric) or is the first node in a cluster:

- Type **y** to add the appliance to an existing cluster.

  A summary of the settings that you configured is displayed.

- Type **n** if you do not want to add the appliance to an existing cluster, or if the appliance is the first node in a cluster.

  i. Type **1** to configure the IPv4 and IPv6 addresses that will be used to access Junos Space Network Management Platform through a browser.

  > ℹ️ NOTE: The IP address for Web access [Virtual IP address (VIP)}must be in the same subnet as the IP address for the eth0 interface, but must be a different IP address.

  ii. Type the IPv4 address for VIP in dotted-decimal notation and press Enter.

  iii. (Optional)Type the IPv6 address and prefix for VIP.

  If you configure only an IPv4 address for the eth0 interface, you need not configure the IPv6 address for the FMPM service.

g. Add an NTP server or specify the current time for the node. Do one of the following:

- To add an NTP server, type **y**, enter the hostname of the NTP server when prompted, and press Enter.

- To specify the current time (UTC), type **n**, enter the time, and press Enter.

h. Type a name for the node and press Enter.

When you access Junos Space Network Management Platform using the Web GUI, the appliance is displayed with the configured name.

i. If you are configuring the appliance as a standalone node or as the first node of the cluster (fabric), type a password for accessing the appliance in maintenance mode and press Enter.

NOTE:
- You can choose a password that is at least eight characters long and contains characters from at least three of the following four character classes: uppercase letters, lowercase letters, numbers (0 through 9), and special characters. Ab(3)def, o0*wwrty, and 9Rtsgukj are some examples of valid password for maintenance mode.

- When you configure the other nodes in a cluster (fabric), you are not prompted to enter a maintenance-mode password. The maintenance-mode password that you specify when you configure the first node of the cluster is applicable to all other nodes in that cluster (fabric); in other words, the entire cluster of nodes has the same maintenance-mode password.

j. Retype the password for accessing the appliance in maintenance mode and press Enter.

If the password has been changed successfully, a confirmation message is displayed along with a summary of the settings that you configured for the appliance.

A sample of the settings summary is as follows:

```
Settings Summary:

> IPv4 Change: eth0 is 192.0.2.50 / 255.255.0.0
> Default IPv4 Gateway = 192.0.2.150 on eth0
> IPV6 Change: eth0 is 2001:db8:0:1:192:0:2:50 / 64
> Default IPv6 Gateway = 2001:db8:0:1:192:0:2:150 on eth0
> IPv4 DNS add: 192.0.2.10
> DNS add: 2001:db8:0:1:192:0:2:10
> IPv4 Change: eth3 is 192.0.2.55 / 255.255.0.0
> Default IPv4 Gateway = 192.0.2.155 on eth0
> IPV6 Change: eth3 is 2001:db8:20:1:192:0:2:55 / 64
> Default IPv6 Gateway = 2001:db8:20:1:192:0:2:155 on eth3
> IPv4 DNS add: 192.0.2.12
> DNS add: 2001:db8:20:1:192:0:2:12
> Create as first node or standalone
> Web IPv4 address 192.0.2.60
> Web IPv6 address is 2001:db8:0:1:192:0:2:60/64
> NTP add: device1.example.com
```

```
> Node display name is "node1"
> Password for Junos Space maintenance mode is set.


A> Apply settings
C> Change settings
Q> Quit and set up later
R> Redraw Menu

Choice  [ACQR]:
```

- To configure the appliance as a primary or standalone FMPM node, do the following:

  > **NOTE:** You can also configure an appliance as a secondary or backup FMPM node. For details, refer to the *Configuring a Junos Space Appliance as a Backup or Secondary FMPM Node for High Availability* topic in the *JA2500 Junos Space Appliance Hardware Guide*.

  a. Type **F** to proceed with the configuration of the appliance as an FMPM node.

  b. Configure the Ethernet interface eth0.

     > **NOTE:** If you are configuring the appliance as part of a cluster (fabric), then all nodes in that fabric must be in the same subnet.

     - To configure the IPv4 address for the eth0 interface:

       i. Type **1**.

       ii. Type the IPv4 address for eth0 interface in dotted-decimal notation and press Enter.

       iii. Type the subnet mask for the IPv4 address and press Enter.

       iv. Type the IPv4 address of the default gateway in dotted-decimal notation and press Enter.

     - (Optional) To configure both IPv4 and IPv6 address for the eth0 interface:

       i. Type **2**.

       ii. Type the IPv4 address for eth0 interface in dotted-decimal notation and press Enter.

       iii. Type the subnet mask for the IPv4 address and press Enter.

iv. Type the IPv4 address of the default gateway in dotted-decimal notation and press Enter.

v. Type the IPv6 address and prefix for the eth0 interface and press Enter.

vi. Type the IPv6 address of the default gateway for the eth0 interface and press Enter.

c. Type **P** to configure the node as a standalone or primary FMPM node.

d. Type **1** to configure the IPv4 and IPv6 addresses for the FMPM service.

e. Type the IPv4 address for the FMPM service and press Enter.

f. (Optional) Type the IPv6 address for the FMPM service and press Enter.

If you configure only an IPv4 address for the eth0 interface, you need not configure the IPv6 address for the FMPM service.

g. You must add an NTP server or specify the current time for the node. Do one of the following:

- To add an NTP server, type **y**, enter the hostname of the NTP server when prompted, and press Enter.
- To specify the current time (UTC), type **n**, enter the time, and press Enter.

A summary of the settings that you configured is displayed.

6. Review the settings that you configured.

7. You can change the settings, quit without applying the settings, or apply the settings. Do one of the following:

- To apply the settings, type **A**. The settings that you configured are applied and a series of messages is displayed on the console, and then the Junos Space Settings Menu is displayed.
- To change the settings, type **C**, and follow the prompts on the CLI.
- To quit the configuration without applying the settings, type **Q**.

> ⚠️ CAUTION: **If you quit the configuration without applying the settings, then all the settings are discarded.**

8. (Optional) If you have applied the settings, then type **Q** to quit.

You are taken to the console login prompt.

The configuration of the appliance as a Junos Space node or an FMPM node is now complete. If you configured the appliance as a Junos Space node, you can access the node by typing the address configured for the Web GUI in a browser.

> *i* NOTE: After you configure an FMPM node, you must add it to the Junos Space fabric using the Junos Space Network Management Platform. For more information, see the *Adding a Node to an Existing Junos Space Fabric* topic in the *Junos Space Network Management Platform Workspaces Feature Guide*.

Step 7 (Optional): Configuring the eth1 Interface

You use the eth1 interface as the administrative interface for the Junos Space or FMPM node. When the Junos Space or FMPM node reboots after the basic configuration, configure the eth1 interface.

> *i* NOTE:
> - From Junos Space Network Management Platform Release 14.1R1 onward, you can configure the eth1 Ethernet interface as an administrative interface.
> - The eth1 interface must be configured separately for each node in a multinode fabric.
> - If you configure the eth1 interface, SSH is disabled on the eth0 and the eth3 interfaces. You can then access the CLI of the Junos Space appliance only through the eth1 interface.

To configure the eth1 interface:

1. On the Junos Space Settings Menu, type **6** to access the shell.

   You are prompted to enter your password.

2. Type your password and press Enter.

   The shell prompt appears.

3. At the shell prompt, type **jmp_config** and press Enter.

   You are prompted to enter the IP address of the eth1 interface.

4. Type the IP address of the eth1 interface in dotted decimal notation and press Enter.

   The IP address can be in the same subnet as the virtual IP (VIP) address or in a different subnet. If the IP address is not in the same subnet as the VIP address, you are prompted to enter the subnet mask and then the default gateway for the eth1 interface.

5. (Optional) Type the subnet mask for the eth1 interface in dotted decimal notation and press Enter.

6. (Optional) Type the default gateway in dotted decimal notation and press Enter.

    The eth1 interface is configured.

7. To verify that the eth1 address is configured, run the **ifconfig eth1** command and check that the IP address displayed for eth1 is the same as the one that you configured.

    You can now access the Junos Space or FMPM node through the eth1 interface to perform administrative tasks.

To troubleshoot issues in configuring the eth1 interface, refer to the **/var/log/changeEth1.log** file.

Safety Warnings

This is a summary of the safety warnings. For a complete list of warnings, see the *JA2500 Junos Space Appliance Hardware Guide*.

> WARNING: **Failure to observe these safety warnings can result in serious physical injury.**

- Permit only trained and qualified personnel to install or replace the JA2500 appliance.

- Perform only the procedures described in this quick start and the *JA2500 Junos Space Appliance Hardware Guide*. Other services must be performed only by authorized service personnel.

- Before installing the appliance, read the planning instructions in the *JA2500 Junos Space Appliance Hardware Guide* to make sure that the site meets power, environmental, and clearance requirements for the appliance.

- Before connecting the appliance to a power source, read the installation instructions in the *JA2500 Junos Space Appliance Hardware Guide*.

- Installing a JA2500 appliance requires one person to lift the appliance and a second person to install the mounting screws.

- If the rack has stabilizing devices, install them in the rack before mounting or servicing the appliance in the rack.

- Before installing or after removing an electrical component, always place it component-side up on an antistatic mat placed on a flat, stable surface or in an antistatic bag.

- Do not work on the appliance or connect or disconnect cables during electrical storms. Before working on equipment that is connected to power lines, remove jewelry, including rings, necklaces, and watches. Metal objects heat up when connected to power and ground and can cause serious burns or become welded to the terminals.

- When you install the appliance, always make the ground connection first and disconnect it last.

- Wire the DC power supply using the appropriate lugs. Always connect the ground wire first and disconnect it last.

- AC-powered devices are shipped with a three-wire electrical cord with a grounding-type plug that fits only a grounding-type power outlet. Do not circumvent this safety feature. Equipment grounding must comply with local and national electrical codes.

- AC power cable warning (Japan):

⚠ **WARNING:** **The attached power cable is only for this product. Do not use the cable for another product.**

注意

附属の電源コードセットはこの製品専用です。
他の電気機器には使用しないでください。

g017253

Compliance Statements for EMC Requirements for JA2500

This topic describes the electromagnetic compatibility (EMC) requirements for the Junos Space JA2500 appliance:

Canada

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

European Community

This is a Class A device. In a domestic environment this device might cause radio interference, in which case the user needs to take adequate measures.

Japan

この装置は、クラス A 情報技術装置です。この装置を家庭環境で使用する
と電波妨害を引き起こすことがあります。この場合には使用者が適切な対策
を講ずるよう要求されることがあります。　　　　　　　　VCCI-A

The preceding translates as follows:

This is a Class A device. In a domestic environment this device might cause radio interference, in which case the user needs to take adequate measures.

VCCI-A

United States

The device has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, might cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users need to correct the interference at their own expense.

Requesting Technical Support

Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or Partner Support Service support contract, or are covered under warranty, and need postsales technical support, you can access our tools and resources online or open a case with JTAC.

- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the *JTAC User Guide* located at https://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf.

- Product warranties—For product warranty information, visit https://www.juniper.net/support/warranty/.

- JTAC Hours of Operation —The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

Self-Help Online Tools and Resources

For quick and easy problem resolution, Juniper Networks has designed an online self-service portal called the Customer Support Center (CSC) that provides you with the following features:

- Find CSC offerings: https://www.juniper.net/customers/support/

- Find product documentation: https://www.juniper.net/documentation/

- Find solutions and answer questions using our Knowledge Base: https://kb.juniper.net/

- Download the latest versions of software and review release notes: https://www.juniper.net/customers/csc/software/

- Search technical bulletins for relevant hardware and software notifications: https://kb.juniper.net/InfoCenter/

- Join and participate in the Juniper Networks Community Forum: https://www.juniper.net/company/communities/

- Open a case online in the CSC Case Management tool: https://www.juniper.net/cm/

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool: https://entitlementsearch.juniper.net/entitlementsearch/

Opening a Case with JTAC

You can open a case with JTAC on the Web or by telephone.

- Use the Case Management tool in the CSC at https://www.juniper.net/cm/.

- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

For international or direct-dial options in countries without toll-free numbers, visit us at https://www.juniper.net/support/requesting-support.html

Revision History

March 2014—Initial release

January 2015—Revision 2

August 2015—Revision 3

June 2016—Revision 4

June 2016—Revision 5

September 2018—Revision 6