Dell PowerConnect J–Series J–SRX100 Services Gateway

Hardware Guide

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About This Guide

This topic includes the following sections:

- Objectives on page xi
- Audience on page xi
- Documentation Conventions on page xii
- Repair and Warranty on page xiii
- Requesting Technical Support on page xiii

Objectives

This guide describes hardware components and installation, basic configuration, and basic troubleshooting procedures for the PowerConnect J-Series J-SRX100 Services Gateway. It explains how to prepare your site for the services gateway installation, unpack and install the hardware, power on the services gateway, perform initial software configuration, and perform routine maintenance. After completing the installation and basic configuration procedures covered in this guide, see the Junos OS configuration guides for information about further Junos OS configuration.

Audience

This guide is designed for network administrators who are installing and maintaining a PowerConnect J-Series J-SRX100 Services Gateway or preparing a site for device installation. To use this guide, you need a broad understanding of networks in general and the Internet in particular, networking principles, and network configuration. Any detailed discussion of these concepts is beyond the scope of this guide.

Documentation Conventions

Table 1: Notice Icons

Icon	Meaning	Description
	Informational note	Indicates important features or instructions.
	Caution	Indicates a situation that might result in loss of data or hardware damage.
	Warning	Alerts you to the risk of personal injury or death.
	Laser warning	Alerts you to the risk of personal injury from a laser.

Table 2: Text and Syntax Conventions

Convention	Description	Examples
Bold text like this	Represents text that you type.	To enter configuration mode, type the **configure** command: user@host> **configure**
`Fixed-width text like this`	Represents output that appears on the terminal screen.	user@host> **show chassis alarms** `No alarms currently active`
Italic text like this	• Introduces important new terms. • Identifies book names. • Identifies RFC and Internet draft titles.	• A policy *term* is a named structure that defines match conditions and actions. • *JUNOS System Basics Configuration Guide* • RFC 1997, *BGP Communities Attribute*
Italic text like this	Represents variables (options for which you substitute a value) in commands or configuration statements.	Configure the machine's domain name: [edit] root@# **set system domain-name** *domain-name*
Plain text like this	Represents names of configuration statements, commands, files, and directories; IP addresses; configuration hierarchy levels; or labels on routing platform components.	• To configure a stub area, include the **stub** statement at the **[edit protocols ospf area area-id]** hierarchy level. • The console port is labeled **CONSOLE**.
< > (angle brackets)	Enclose optional keywords or variables.	stub <default-metric *metric*>;
| (pipe symbol)	Indicates a choice between the mutually exclusive keywords or variables on either side of the symbol. The set of choices is often enclosed in parentheses for clarity.	**broadcast | multicast** (*string1* | *string2* | *string3*)

Table 2: Text and Syntax Conventions *(continued)*

Convention	Description	Examples
# (pound sign)	Indicates a comment specified on the same line as the configuration statement to which it applies.	rsvp { # Required for dynamic MPLS only
[ ] (square brackets)	Enclose a variable for which you can substitute one or more values.	**community name members [** *community-ids* **]**

Indention and braces ({ })	Identify a level in the configuration hierarchy.	[edit]
		routing-options {
		    static {
		        route default {
		            nexthop *address*;
		            retain;
		        }
		    }
		}

; (semicolon)	Identifies a leaf statement at a configuration hierarchy level.	
J-Web GUI Conventions		
Bold text like this	Represents J-Web graphical user interface (GUI) items you click or select.	• In the Logical Interfaces box, select **All Interfaces**. • To cancel the configuration, click **Cancel**.
> (bold right angle bracket)	Separates levels in a hierarchy of J-Web selections.	In the configuration editor hierarchy, select **Protocols>Ospf**.

Repair and Warranty

⚠ CAUTION: Many repairs may only be done by a certified service technician. You should only perform troubleshooting and simple repairs as authorized in your product documentation, or as directed by the online or telephone service and support team. Damage due to servicing that is not authorized by Dell is not covered by your warranty. Read and follow the safety instructions that came with the product.

Requesting Technical Support

For technical support, see http://www.support.dell.com .

J–SRX100 Services Gateway Overview

Introduction to the J-SRX100 Services Gateway

This chapter includes the following sections:

- J-SRX100 Services Gateway Description on page 3
- J-SRX100 Services Gateway Features and Functions on page 5

J-SRX100 Services Gateway Description

This topic includes the following sections:

- About the J-SRX100 Services Gateway on page 3
- J-SRX100 Services Gateway Models on page 3
- Accessing the J-SRX100 Services Gateway on page 4

About the J-SRX100 Services Gateway

The J-SRX100 Services Gateway offers features that provide complete functionality and flexibility for delivering secure Internet and intranet access. The services gateway offers stable, reliable, and efficient IP routing in addition to switching support and LAN connectivity. The device provides IP Security (IPsec), virtual private network (VPN), and firewall services for small-sized and medium-sized companies and enterprise branch and remote offices. The J-SRX100 Services Gateway can be connected directly to traditional private networks such as leased lines, Frame Relay, or Multi Protocol Label Switching (MPLS) or to the public Internet.

The J-SRX100S and J-SRX100SU models provide additional features, such as antivirus, antispam, anti-spyware, and web-filtering.

The J-SRX100 Services Gateway runs the Junos OS.

J-SRX100 Services Gateway Models

The J-SRX100 Services Gateway is available in four models, which are listed in Table 3 on page 4.

Table 3: J-SRX100 Services Gateway Models

Product Name	Device Type	Model Number
J-SRX100 Services Gateway	Low Memory	J-SRX100B
J-SRX100 Services Gateway	High Memory	J-SRX100H
J-SRX100 Services Gateway	High Memory NOTE: The J-SRX100S model supports up to 20 users, 4,000 firewall sessions, and 20 IPsec tunnels.	J-SRX100S
J-SRX100 Services Gateway	High Memory NOTE: The J-SRX100SU model supports an unlimited number of users, 32,000 firewall sessions, and 128 IPsec tunnels.	J-SRX100SU

NOTE: You can upgrade from a J-SRX100 Services Gateway Low Memory version to a High Memory version through a license key. You need not order a separate High Memory device.

All J-SRX100 Services Gateways run the Junos OS.

Accessing the J-SRX100 Services Gateway

Two user interfaces are available for monitoring, configuring, troubleshooting, and managing the J-SRX100 Services Gateway:

- J-Web interface: Web-based graphical interface that allows you to operate a services gateway without commands. The J-Web interface provides access to all JUNOS functionality and features.

- JUNOS command-line interface (CLI): Command shell that runs on top of a UNIX-based operating system kernel. The CLI is a straightforward command interface. On a single line, you type commands that are executed when you press the Enter key. The CLI provides command Help and command completion.

Related Documentation

- J-SRX100 Services Gateway Specifications on page 7

- J-SRX100 Services Gateway Features and Functions on page 5

- Upgrading the J-SRX100 Services Gateway Low Memory Version to a High Memory Version on page 59

J-SRX100 Services Gateway Features and Functions

The J-SRX100 Services Gateway is a security optimized, fixed processing system that provides the following features for the Low Memory and High Memory models listed in Table 4 on page 5.

Table 4: J-SRX100 Services Gateway Hardware Features

Features	J-SRX100 Services Gateway Low Memory	J-SRX100 Services Gateway High Memory
DDR Memory	512 MB (software upgradable to High Memory through a license key)	1 GB
Power supply adapter	30 watts	30 watts
AC input voltage	100 to 240 VAC	100 to 240 VAC
Fast Ethernet ports	8	8
Console port	1	1
USB port	1	1
LEDs	4	4
NAND flash	1 GB	1 GB

For more details on Junos OS features and licenses for the J-SRX100 Services Gateway, see the *Junos OS Administration Guide*.

For more information on upgrading a J-SRX100 Services Gateway Low Memory to High Memory, see "Upgrading the J-SRX100 Services Gateway Low Memory Version to a High Memory Version" on page 59.

Related Documentation

- J-SRX100 Services Gateway Description on page 3

- J-SRX100 Services Gateway Specifications on page 7

- Upgrading the J-SRX100 Services Gateway Low Memory Version to a High Memory Version on page 59

J-SRX100 Services Gateway Hardware Components and Specifications

This chapter includes the following sections:

- J-SRX100 Services Gateway Specifications on page 7
- J-SRX100 Services Gateway Front Panel and Back Panel Views on page 9
- J-SRX100 Services Gateway Built-In Interfaces on page 10
- J-SRX100 Services Gateway LEDs on page 12
- J-SRX100 Services Gateway Boot Devices on page 15
- J-SRX100 Services Gateway Power Supply on page 16

J-SRX100 Services Gateway Specifications

The J-SRX100 Services Gateway chassis is a rigid sheet metal structure that houses all the other hardware components (see Figure 1 on page 8).

Table 5 on page 7 provides information on the physical specifications of the device.

Table 5: J-SRX100 Services Gateway Specifications

Specification	Value
Chassis height	1.38 in. (35 mm)
Chassis width	8.5 in. (216 mm)
Chassis depth	5.79 in. (147 mm)
Chassis weight	1.86 lb (844 g)
Average power consumption	- J-SRX100 Services Gateway Low Memory model: 10 watts - J-SRX100 Services Gateway High Memory model: 10 watts
Altitude	No performance degradation to 10,000 ft (3048 m)

Table 5: J-SRX100 Services Gateway Specifications *(continued)*

Specification	Value
Temperature	Normal operation ensured in temperature range of 32ºF (0ºC) to 104ºF (+40ºC)
	Nonoperating storage temperature in shipping container: −40ºF (−40ºC) to 158ºF (70ºC)
	NOTE: The J-SRX100 Services Gateway operating temperature is 35ºC when installed in a rack.
Maximum thermal output	The maximum thermal values for the two models of services gateways are as follows: • Low Memory — AC power: 80 BTU/hour (21.5 W) • High Memory — AC power: 80 BTU/hour (21.5 W) NOTE: These specifications are estimates and subject to change.
Relative humidity	5% - 90%, noncondensing.

Figure 1: J-SRX100 Services Gateway
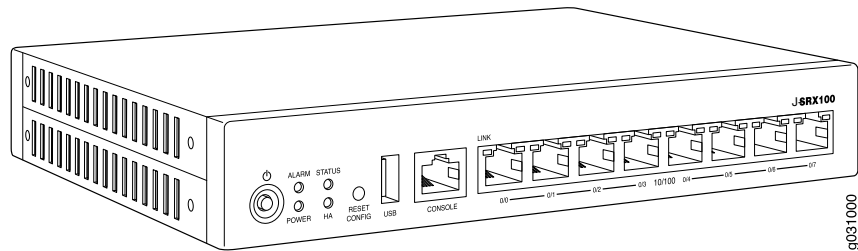
> ⚠ CAUTION: Before removing or installing components of a functioning services gateway, attach an electrostatic discharge (ESD) strap to an ESD point and place the other end of the strap around your bare wrist. Failure to use an ESD strap could result in damage to the services gateway.

Related Documentation

- J-SRX100 Services Gateway Description on page 3
- J-SRX100 Services Gateway Front Panel and Back Panel Views on page 9
- Monitoring the J-SRX100 Services Gateway Components Using LEDs on page 89
- J-SRX100 Services Gateway Electrical Safety Guidelines and Warnings on page 118

J-SRX100 Services Gateway Front Panel and Back Panel Views

This topic contains views of the front and back panels of the J-SRX100 Services Gateway. This topic includes the following sections:

- J-SRX100 Services Gateway Front Panel on page 9
- J-SRX100 Services Gateway Back Panel on page 10

J-SRX100 Services Gateway Front Panel

Figure 2 on page 9 shows the front panel of the J-SRX100 Services Gateway.

Figure 2: J-SRX100 Services Gateway Front Panel
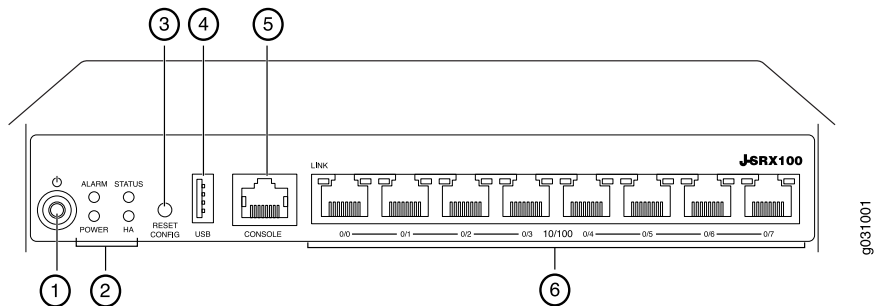
Table 6 on page 9 lists the front panel components of the services gateway.

Table 6: J-SRX100 Services Gateway Front Panel Components

Number	Component
1	Power button
2	LEDs: Alarm, Status, Power, HA
3	Reset Config button
4	Universal serial bus (USB) port
5	Console port
6	Fast Ethernet ports

For more information on the front panel components, see the following topics:

- J-SRX100 Services Gateway Built-In Interfaces on page 10
- J-SRX100 Services Gateway LEDs on page 12
- J-SRX100 Services Gateway Boot Devices on page 15

J-SRX100 Services Gateway Back Panel

Figure 3 on page 10 illustrates the back panel of the J-SRX100 Services Gateway.

Figure 3: J-SRX100 Services Gateway Back Panel
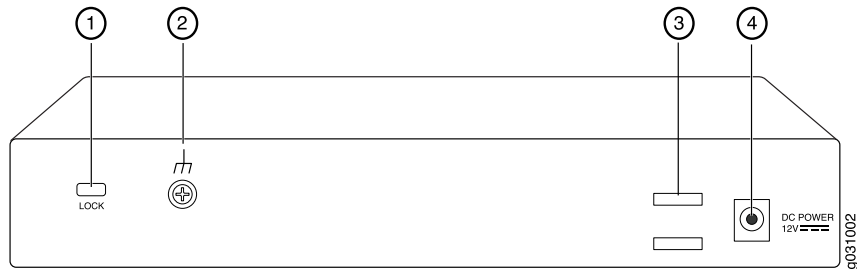
Table 7 on page 10 lists the components available on the back panel of the J-SRX100 Services Gateway.

Table 7: J-SRX100 Services Gateway Back Panel

Number	Component
1	Lock
2	Grounding point
3	Cable tie holder
4	Power supply point

NOTE: The cable tie holder provides support for holding the power cord on the power supply point.

The lock provides the option to lock and secure the device to the installation site.

Related Documentation

- J-SRX100 Services Gateway Specifications on page 7
- J-SRX100 Services Gateway Built-In Interfaces on page 10
- J-SRX100 Services Gateway LEDs on page 12
- J-SRX100 Services Gateway Boot Devices on page 15
- J-SRX100 Services Gateway Power Supply on page 16

J-SRX100 Services Gateway Built-In Interfaces

Table 8 on page 11 summarizes the interface ports supported on the J-SRX100 Services Gateway.

Table 8: J-SRX100 Services Gateway Built-In Hardware Interfaces

Interface Type	Specifications	Description
Fast Ethernet	The Fast Ethernet ports: • Consist of eight fixed ports • Are labeled as port 0/0 to port 0/7 on the front panel • Provide link speeds of 10/100 Mbps • Operate in full-duplex and half-duplex modes • Support flow control • Support autonegotiation • Support autosensing	The Fast Ethernet ports can be used: • To provide LAN connectivity to hubs, switches, local servers, and workstations. • To forward incoming data packets to the device. • To receive outgoing data packets from the device.

Universal Serial Bus (USB)	The USB port:
	
	• Consists of one port
	• Supports the following modes:
	  • Full speed
	  • High speed
	• Complies with USB revision 2.0
		The USB port can be used:
		
		• To support a USB storage device that functions as a secondary boot device in case of internal flash failure on startup, if the USB storage device is installed and configured
		
		NOTE: You must install and configure the USB storage device on the USB port to use it as secondary boot device. Additionally, the USB device must have JUNOS installed.
		
		• To provide the USB interfaces that are used to communicate with many types of JUNOS-supported USB storage devices

Console	The console port: • Consists of one port • Uses an RJ-45 serial cable connector • Supports the RS-232 (EIA-232) standard	The console port can be used: • To provide the console interface. • To function as a management port to log into a device directly. • To configure the device using the CLI.

> NOTE: The Reset Config button is used to remove the current configuration and reset the device to the default configuration.
>
> The button is recessed in the front panel to prevent it from being pressed accidentally.

⚠️ CAUTION: Pressing and holding the Reset Config button for 15 seconds or more deletes all configurations on the device and loads and commits the factory configuration.

Related Documentation
- J-SRX100 Services Gateway Specifications on page 7
- J-SRX100 Services Gateway Front Panel and Back Panel Views on page 9
- J-SRX100 Services Gateway LEDs on page 12
- J-SRX100 Services Gateway Boot Devices on page 15
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J-SRX100 Services Gateway LEDs

This topic includes the following sections:

- J-SRX100 Services Gateway Front Panel LEDs on page 12
- J-SRX100 Services Gateway Ethernet Port LEDs on page 14

J-SRX100 Services Gateway Front Panel LEDs

Figure 4 on page 12 illustrates the front panel LEDs of the J-SRX100 Services Gateway.

📝 NOTE: The numbers in Figure 4 on page 12 correspond to the numbers in Table 9 on page 13.

Figure 4: J-SRX100 Services Gateway Front Panel LEDs
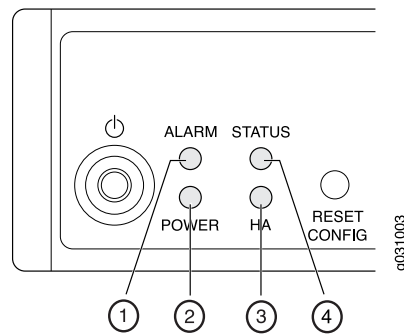
Table 9 on page 13 lists the LED indicators on the J-SRX100 Services Gateway front panel.

Table 9: J-SRX100 Services Gateway Front Panel LEDs

Number	Component	Description	Usage
1	Alarm LED	The Alarm LED has the following indicator colors: • Red and steadily on indicates a major alarm. • Amber and steadily on indicates a minor alarm. • Off indicates that there are currently no alarms.	The Alarm LED can be used to gather information on major or minor alarms or to determine if the device is functioning normally.
2	Power LED	The Power LED has the following indicator colors: • Green and steadily on indicates that the device is functioning normally. • Amber and steadily on indicates that the power button has been pressed and quickly released. The device is gracefully shutting down. • Off indicates that the device is not receiving power.	The Power LED can be used to determine if the device is receiving power.

Table 9: J-SRX100 Services Gateway Front Panel LEDs *(continued)*

Number	Component	Description	Usage
3	HA LED	The HA LED has the following indicator colors: • Green and steadily on indicates that all chassis clustering links are available. • Red and steadily on indicates that the chassis clustering links are not working as expected. • Amber and steadily on indicates that some chassis clustering links are not working as expected. • Off indicates that chassis clustering is not enabled.	The HA LED can be used to determine if chassis clustering is enabled on the device.
4	Status LED	The Status LED has the following indicator colors: • Green and steadily on indicates that the device is functioning normally. • Amber and steadily on indicates that the device is starting up. • Red and steadily on indicates that an error is detected in the device.	The Status LED can be used to determine whether the device is starting up, is functioning normally, or has failed.

J-SRX100 Services Gateway Ethernet Port LEDs

On the J-SRX100 Services Gateway, each Fast Ethernet port has one functional LED on the left side that indicates Link and Activity. In Figure 5 on page 15, this LED is marked as 1.

Figure 5: J-SRX100 Services Gateway Ethernet Port LEDs
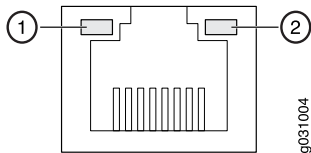
The below table applies only to LED marked 1. Table 10 on page 15 provides the states of this LED.

Table 10: J-SRX100 Services Gateway Built-In Ethernet Port LEDs

Function	Color	State	Description
TX/RX/LINK	Green	Blinking	Link is active. Data communication is taking place.
		Steady	Link is active. No data communication is taking place.
	Unlit	Off	Link is inactive.

NOTE: The LED marked as 2 in the graphic is not functional in this release.

Related Documentation
- J-SRX100 Services Gateway Specifications on page 7
- J-SRX100 Services Gateway Front Panel and Back Panel Views on page 9
- J-SRX100 Services Gateway Built-In Interfaces on page 10
- J-SRX100 Services Gateway Boot Devices on page 15
- J-SRX100 Services Gateway Power Supply on page 16

J-SRX100 Services Gateway Boot Devices

The J-SRX100 Services Gateway can boot from two devices:

- Internal flash
- External USB storage device

Related Documentation
- J-SRX100 Services Gateway Specifications on page 7
- J-SRX100 Services Gateway Front Panel and Back Panel Views on page 9
- J-SRX100 Services Gateway Built-In Interfaces on page 10
- J-SRX100 Services Gateway Power Supply on page 16

J-SRX100 Services Gateway Power Supply

The power supply for the J-SRX100 Services Gateway is external. You must use the power supply adapter provided by the manufacturer to provide power to the services gateway.

NOTE: The power supply adapter (30 W) and the 2-prong power cord are shipped separately for the J-SRX100S and J-SRX100SU models. Contact your Dell customer service representative for more information.

Related Documentation

- J-SRX100 Services Gateway Specifications on page 7
- J-SRX100 Services Gateway Front Panel and Back Panel Views on page 9
- J-SRX100 Services Gateway LEDs on page 12
- J-SRX100 Services Gateway Built-In Interfaces on page 10
- J-SRX100 Services Gateway Boot Devices on page 15
- Monitoring the J-SRX100 Services Gateway Power System on page 92
- J-SRX100 Services Gateway Electrical and Power Requirements on page 26

Setting Up the J–SRX100 Services Gateway

Preparing the Site for J-SRX100 Services Gateway Installation

This chapter provides a checklist to help you prepare your site for installation of the J-SRX100 Services Gateway. Read this chapter to make sure that your site has the proper operating environment and equipment.

This chapter includes the following sections:

- Site Preparation Checklist for the J-SRX100 Services Gateway on page 19
- General Site Guidelines for Installing the J-SRX100 Services Gateway on page 22
- J-SRX100 Services Gateway Cabinet Requirements on page 22
- J-SRX100 Services Gateway Rack Requirements on page 23
- Clearance Requirements for Airflow and Hardware Maintenance of the J-SRX100 Services Gateway on page 24
- J-SRX100 Services Gateway Electrical and Power Requirements on page 26

Site Preparation Checklist for the J-SRX100 Services Gateway

The checklist in Table 11 on page 19 summarizes the tasks you need to perform when preparing a site for installing the J-SRX100 Services Gateway.

Table 11: Site Preparation Checklist for Services Gateway Installation

Item or Task	Additional Information	Performed By	Date	Notes
Environment				
Verify that environmental factors such as temperature and humidity do not exceed device tolerances.	"J-SRX100 Services Gateway Specifications" on page 7			
Power				

Table 11: Site Preparation Checklist for Services Gateway
Installation *(continued)*

Item or Task	Additional Information	Performed By	Date	Notes
• Measure the distance between the external power sources and the device installation site. • Locate sites for connection of system grounding. • Calculate the power consumption and requirements.	"J-SRX100 Services Gateway Site Electrical Wiring Guidelines" on page 123 "J-SRX100 Services Gateway Power Specifications and Requirements" on page 124			
Rack Requirements				
Verify that your rack meets the minimum requirements.	"J-SRX100 Services Gateway Rack Requirements" on page 23			
Rack Installation				
• Plan the rack location, including required space clearances. • Secure the rack to the floor and building structure.	"Preparing the J-SRX100 Services Gateway for Rack-Mount Installation" on page 37			
Cabinet Requirements				
• Verify that your cabinet meets the minimum requirements. • Plan the cabinet location, including required space clearances.	"J-SRX100 Services Gateway Cabinet Requirements" on page 22			
Wall Installation				

Table 11: Site Preparation Checklist for Services Gateway Installation *(continued)*

Item or Task	Additional Information	Performed By	Date	Notes
• Verify that the area selected meets the minimum requirements. • Verify that you have the required hardware to proceed with the installation.	"Preparing the J-SRX100 Services Gateway for Wall-Mount Installation" on page 38			
Desktop Installation				
• Verify that the area selected meets the minimum requirements. • Plan the installation location, including required space clearances and airflow requirements.	"Preparing the J-SRX100 Services Gateway for Desk-Mount Installation" on page 38			
Cables				
• Acquire cables and connectors. • Review the maximum distance allowed for each cable. Choose the length of cable based on the distance between the hardware components being connected. • Plan the cable routing and management.	"Interface Cable and Wire Specifications for the J-SRX100 Services Gateway" on page 127			

Related Documentation

- J-SRX100 Services Gateway Specifications on page 7

- J-SRX100 Services Gateway Safety Requirements, Warnings, and Guidelines on page 41

- Installation Overview for the J-SRX100 Services Gateway on page 28

- General Site Guidelines for Installing the J-SRX100 Services Gateway on page 22

- J-SRX100 Services Gateway Cabinet Requirements on page 22

- J-SRX100 Services Gateway Rack Requirements on page 23

- Clearance Requirements for Airflow and Hardware Maintenance of the J-SRX100 Services Gateway on page 24

General Site Guidelines for Installing the J-SRX100 Services Gateway

Keep the following precautions in mind to help you plan an acceptable operating environment for your J-SRX100 Services Gateway and avoid environmentally caused equipment failures:

- For the operating temperature of the services gateway to be optimal, 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.

- Follow the ESD procedures to avoid damaging equipment. Static discharge can cause components to fail completely or intermittently over time.

> NOTE: The J-SRX100 Services Gateway is fan-less and does not generate any acoustic noise.

Related Documentation
- J-SRX100 Services Gateway Specifications on page 7
- J-SRX100 Services Gateway Safety Requirements, Warnings, and Guidelines on page 41
- J-SRX100 Services Gateway Cabinet Requirements on page 22
- J-SRX100 Services Gateway Rack Requirements on page 23
- Site Preparation Checklist for the J-SRX100 Services Gateway on page 19
- Clearance Requirements for Airflow and Hardware Maintenance of the J-SRX100 Services Gateway on page 24

J-SRX100 Services Gateway Cabinet Requirements

The J-SRX100 Services Gateway can be installed in a standard 31.5 in. (800 mm) or larger enclosed cabinet. Table 12 on page 22 provides the details on cabinet size, clearance, and airflow requirements.

Table 12: J-SRX100 Services Gateway Cabinet Requirements

Cabinet Requirements	Specifications
Cabinet size	19 in. (48.3 cm) as defined in *Cabinets, Racks, Panels, and Associated Equipment* (document number EIA-310–D) published by the Electronics Industry Association (http://www.eia.org). You can mount the gateway horizontally in the cabinet.

Table 12: J-SRX100 Services Gateway Cabinet Requirements *(continued)*

Cabinet Requirements	Specifications
Clearance requirements	• The cabinet is at least 1 U (1.75 in. or 4.5 cm) high. • The outer edges of the mounting brackets extend the width of either chassis to 19 in. (48.3 cm), and the front of the chassis extends approximately 0.5 in. (1.27 cm) beyond the mounting brackets. • The minimum total clearance inside the cabinet is 30.7 in. (78 cm) between the inside of the front door and the inside of the rear door. NOTE: The holes for the mounting brackets chassis are spaced 1.25 in. (3.2 cm) apart, measured from the center of the hole.
Cabinet airflow requirements	• Ensure sufficient ventilation through the cabinet is sufficient to prevent overheating. • Ensure adequate cool air supply to dissipate the thermal output of the device. • Install the device as close as possible to the front of the cabinet so that the cable management system clears the inside of the front door. Installing the chassis close to the front of the cabinet maximizes the clearance in the rear of the cabinet for critical airflow. • Route and dress all cables to minimize the blockage of airflow to and from the chassis. NOTE: A cabinet larger than the minimum required provides better airflow and reduces the chance of overheating.

Related Documentation

- General Site Guidelines for Installing the J-SRX100 Services Gateway on page 22
- J-SRX100 Services Gateway Rack Requirements on page 23
- Site Preparation Checklist for the J-SRX100 Services Gateway on page 19
- Clearance Requirements for Airflow and Hardware Maintenance of the J-SRX100 Services Gateway on page 24

J-SRX100 Services Gateway Rack Requirements

The services gateway can be installed in a rack. Many types of racks are acceptable, including front-mount racks and four-post (telco) racks.

NOTE: The services gateway cannot be center-mounted in racks.

Table 13 on page 24 provides the details on rack size, clearance, and airflow requirements.

Table 13: Rack Requirements for the Services Gateway

Rack Requirements	Specifications
Rack Size	A 19 in. (48.3 cm) rack as defined in *Cabinets, Racks, Panels, and Associated Equipment* (document number EIA-310-D) published by the Electronics Industry Association (http://www.eia.org).
Rack Requirements	• The outer edges of the mounting brackets extend the width of either chassis to 19 in. (48.3 cm). • The front of the chassis extends approximately 0.5 in. (1.27 cm) beyond the mounting ears. • Maximum permissible ambient temperature when two devices are placed side by side in a 19 in. rack is 40ºC.
Spacing of Mounting Bracket and Flange Holes	• The holes within each rack set are spaced at 1 U [1.75 in. (4.5 cm)]. The device can be mounted in any rack that provides holes or hole patterns spaced at 1-U [1.75 in. (4.5 cm)] increments. • 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 1 U (1.75 in.). • The mounting holes in the mounting brackets provided with the device are spaced 1.25 in. (3.2 cm) apart (top and bottom mounting hole).
Connecting to the Building Structure	Always secure the rack in which you are installing the services gateway 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.

Related Documentation
- General Site Guidelines for Installing the J-SRX100 Services Gateway on page 22
- Site Preparation Checklist for the J-SRX100 Services Gateway on page 19
- J-SRX100 Services Gateway Cabinet Requirements on page 22
- Clearance Requirements for Airflow and Hardware Maintenance of the J-SRX100 Services Gateway on page 24

Clearance Requirements for Airflow and Hardware Maintenance of the J-SRX100 Services Gateway

When planning the installation site for the J-SRX100 Services Gateway, you need to allow sufficient clearance around the device.

When planning the installation site for the services gateway, consider the following:

- For the operating temperature of the services gateway to be optimal, the airflow around the chassis must be unrestricted.

- For service personnel to remove and install hardware components, there must be adequate space at the front and back of the device. Allow at least 24 in. (61 cm) both in front of and behind the device.

- If you are mounting the device in a rack with other equipment, or if you are placing it on the desktop near other equipment, ensure that the exhaust from other equipment does not blow into the intake vents of the chassis.

Table 14 on page 25 provides information on the clearance requirements for maintaining the optimum airflow and the distances for facilitating easy maintenance of the device.

Table 14: Clearance Requirements for the J-SRX100 Services Gateway

Location	Recommended Clearance	Requirement for Clearance
Front of the chassis	2.5 in. (6.35 cm)	Space for service personnel to remove and install hardware components
Rear of the chassis	2.5 in. (6.35 cm)	Space for service personnel to remove and install hardware components
Between front-mounting flange and rack or cabinet edge	2.5 in. (6.35 cm)	Space for cable management and organization
Between side of the chassis and any non-heat-producing surface such as a wall or cabinet side	2.5 in. (6.35 cm)	Space for the cooling system to function properly and to maintain unrestricted airflow around the chassis
Between side of the chassis and devices that have fans or blowers	0.4 in. (1 cm)	Space for the cooling system to function properly and to maintain unrestricted airflow around the chassis

NOTE: The air vents are provided on the sides of the chassis for the J-SRX100 Services Gateway.

Related Documentation

- J-SRX100 Services Gateway Description on page 3
- General Site Guidelines for Installing the J-SRX100 Services Gateway on page 22
- Site Preparation Checklist for the J-SRX100 Services Gateway on page 19
- J-SRX100 Services Gateway Cabinet Requirements on page 22
- J-SRX100 Services Gateway Rack Requirements on page 23

J-SRX100 Services Gateway Electrical and Power Requirements

This topic provides information on the factors you must consider while planning the electrical wiring and power availability at your site. These requirements cover the following areas:

- Power specifications and requirements for the device

- Electrical wiring guidelines for the device installation site

- Power, connection, and power cord specifications for the device

- Grounding guidelines and specifications for the device

Related Documentation

- J-SRX100 Services Gateway Site Electrical Wiring Guidelines on page 123

- Site Preparation Checklist for the J-SRX100 Services Gateway on page 19

- Clearance Requirements for Airflow and Hardware Maintenance of the J-SRX100 Services Gateway on page 24

- Installation Overview for the J-SRX100 Services Gateway on page 28

- Interface Cable and Wire Specifications for the J-SRX100 Services Gateway on page 127

- J-SRX100 Services Gateway Power Supply on page 16

Installation Overview for the J-SRX100 Services Gateway

This chapter includes the following section:

- Installation Overview for the J-SRX100 Services Gateway on page 28

Installation Overview for the J-SRX100 Services Gateway

After you have prepared your installation site, you are ready to unpack and install the services gateway. It is important to proceed through the installation process in the order shown in Table 15 on page 28.

Table 15: Installation Process Order for the J-SRX100 Services Gateway

Steps	Process	For More Information, See
1	Review the safety guidelines.	"J-SRX100 Services Gateway Safety Requirements, Warnings, and Guidelines" on page 41
2	Verify that you have prepared your site for the installation of the services gateway using the checklist.	"Site Preparation Checklist for the J-SRX100 Services Gateway" on page 19
3	Follow the instructions for unpacking the services gateway and verify that the parts are received.	"Unpacking the J-SRX100 Services Gateway" on page 33
4	Prepare the services gateway for installation.	"Preparing the J-SRX100 Services Gateway for Rack-Mount Installation" on page 37 "Preparing the J-SRX100 Services Gateway for Desk-Mount Installation" on page 38 "Preparing the J-SRX100 Services Gateway for Wall-Mount Installation" on page 38
5	Install the services gateway.	"Installing the J-SRX100 Services Gateway in a Rack" on page 42 "Installing the J-SRX100 Services Gateway on a Desk" on page 46 "Installing the J-SRX100 Services Gateway on a Wall" on page 47
6	Connect cables to external devices.	"Connecting and Organizing Interface Cables to the J-SRX100 Services Gateway" on page 52
7	Connect the grounding cable.	"Grounding the J-SRX100 Services Gateway" on page 53
8	Power on the services gateway.	"Powering On and Powering Off the J-SRX100 Services Gateway" on page 55

Related • Unpacking the J-SRX100 Services Gateway on page 33

Documentation
- General Site Guidelines for Installing the J-SRX100 Services Gateway on page 22
- Preparing the J-SRX100 Services Gateway for Rack-Mount Installation on page 37
- Preparing the J-SRX100 Services Gateway for Desk-Mount Installation on page 38
- Preparing the J-SRX100 Services Gateway for Wall-Mount Installation on page 38
- Installing the J-SRX100 Services Gateway in a Rack on page 42
- Installing the J-SRX100 Services Gateway on a Desk on page 46
- Installing the J-SRX100 Services Gateway on a Wall on page 47
- Connecting and Organizing Interface Cables to the J-SRX100 Services Gateway on page 52

Required Tools and Parts for Installing and Maintaining the J-SRX100 Services Gateway

This chapter includes the following section:

- Required Tools and Parts for Installing and Maintaining the J-SRX100 Services Gateway on page 31

Required Tools and Parts for Installing and Maintaining the J-SRX100 Services Gateway

Table 16 on page 31 lists the tools and parts required to install and maintain the J-SRX100 Services Gateway.

Table 16: Required Tools and Parts for Installing and Maintaining the J-SRX100 Services Gateway

Task	Tools and Parts	Related Topic
Installing the J-SRX100 Services Gateway	- Phillips (+) screwdriver, numbers 1 and 3 - Tie wrap	"Installing the J-SRX100 Services Gateway in a Rack" on page 42 "Installing the J-SRX100 Services Gateway on a Desk" on page 46 "Installing the J-SRX100 Services Gateway on a Wall" on page 47
Connecting the J-SRX100 Services Gateway	Electrostatic discharge (ESD) grounding wrist strap	"Connecting the J-SRX100 Services Gateway to the Power Supply" on page 51
Grounding the J-SRX100 Services Gateway	Phillips (+) screwdriver, number 1	"Grounding the J-SRX100 Services Gateway" on page 53

Table 16: Required Tools and Parts for Installing and Maintaining the J-SRX100 Services Gateway *(continued)*

Task	Tools and Parts	Related Topic
Packing the J-SRX100 Services Gateway	• Electrostatic bag or antistatic mat, for each component • Electrostatic discharge (ESD) grounding wrist strap	"Packing the J-SRX100 Services Gateway and Components for Shipment" on page 136
Installing the J-SRX100 Services Gateway in a Non-Telco Rack NOTE: This information applies only to the J-SRX100S and J-SRX100SU models.	• Phillips (+) screwdriver, numbers 1, 2, and 3 • Tie wrap • Cage nuts, 10-32 • Screws, 10-32 and 12-24 • Washers, 10-32	"Installing the J-SRX100 Services Gateway in a Rack" on page 42

Related Documentation

- Unpacking the J-SRX100 Services Gateway on page 33

- Installing the J-SRX100 Services Gateway in a Rack on page 42

- Installing the J-SRX100 Services Gateway on a Desk on page 46

- Installing the J-SRX100 Services Gateway on a Wall on page 47

- Grounding the J-SRX100 Services Gateway on page 53

- Connecting the J-SRX100 Services Gateway to the Power Supply on page 51

- Packing the J-SRX100 Services Gateway and Components for Shipment on page 136

CHAPTER 6

Unpacking the J-SRX100 Services Gateway

This chapter includes the following sections:

- Unpacking the J-SRX100 Services Gateway on page 33
- Verifying Parts Received with the J-SRX100 Services Gateway on page 34

Unpacking the J-SRX100 Services Gateway

The J-SRX100 Services Gateway is shipped in a cardboard carton. The carton also contains an accessory box and the *J-SRX100 Services Gateway Quick Start Guide*.

NOTE: The device is maximally protected inside the shipping carton. Do not unpack it until you are ready to begin installation.

To unpack the J-SRX100 Services Gateway:

1. Open the box in which the device is shipped.

2. Verify the parts received against the lists in "Verifying Parts Received with the J-SRX100 Services Gateway" on page 34.

3. Store the shipping box and packing material in case you need to return or move the device at a later time.

Related Documentation
- Required Tools and Parts for Installing and Maintaining the J-SRX100 Services Gateway on page 31
- Verifying Parts Received with the J-SRX100 Services Gateway on page 34
- Preparing the J-SRX100 Services Gateway for Rack-Mount Installation on page 37
- Preparing the J-SRX100 Services Gateway for Desk-Mount Installation on page 38
- Preparing the J-SRX100 Services Gateway for Wall-Mount Installation on page 38
- Installation Overview for the J-SRX100 Services Gateway on page 28

Verifying Parts Received with the J-SRX100 Services Gateway

The J-SRX100 Services Gateway shipment package contains a packing list. Check the parts in the shipment against the items on the packing list. The packing list specifies the part numbers and descriptions of each part in your order.

If any part is missing, contact Dell Support.

A fully configured J-SRX100 Services Gateway contains the chassis with installed components, listed in Table 17 on page 34, and an accessory box, which contains the parts listed in Table 18 on page 34.

> NOTE: The parts shipped with your device can vary depending on the configuration you ordered.

Table 17: Parts List for a Fully Configured J-SRX100 Services Gateway

Component	Quantity
Chassis, with 8xFE ports	1
Power supply adapter (30W)	1
2-prong power cord	1
DB-9 to RJ-45 adapter, straight through, 7 ft.	1

> NOTE: The power supply adapter (30 W) and the 2-prong power cord are shipped separately for the J-SRX100S and J-SRX100SU models. Contact Dell Support for more information.

Table 18: Accessory Parts List for the J-SRX100 Services Gateway

Part	Quantity
Product Warranty	1
End User License Agreement	1
Quick Start Guide	1
Dell SERI	1
Compliance Form Letter	1
Product Registration	1

> NOTE: The mounting kits available for rack, desk, and wall installation of the J-SRX100 Services Gateway must be ordered separately. Contact Dell Support for more information.

Related Documentation

- Required Tools and Parts for Installing and Maintaining the J-SRX100 Services Gateway on page 31

- Unpacking the J-SRX100 Services Gateway on page 33

- Preparing the J-SRX100 Services Gateway for Rack-Mount Installation on page 37

- Preparing the J-SRX100 Services Gateway for Desk-Mount Installation on page 38

- Preparing the J-SRX100 Services Gateway for Wall-Mount Installation on page 38

Preparing the J-SRX100 Services Gateway for Installation

This chapter includes the following sections:

- Preparing the J-SRX100 Services Gateway for Rack-Mount Installation on page 37
- Preparing the J-SRX100 Services Gateway for Desk-Mount Installation on page 38
- Preparing the J-SRX100 Services Gateway for Wall-Mount Installation on page 38

Preparing the J-SRX100 Services Gateway for Rack-Mount Installation

You can mount a J-SRX100 Services Gateway in four-post (telco) racks, enclosed cabinets, and open-frame racks.

> NOTE: The J-SRX100 Services Gateway cannot be center-mounted in racks.

Before mounting the J-SRX100 Services Gateway in a rack:

- Verify that the installation site meets the requirements described in "Site Preparation Checklist for the J-SRX100 Services Gateway" on page 19.

- Verify that the racks or cabinets meet the specific requirements described in "J-SRX100 Services Gateway Rack Requirements" on page 23.

- Place the rack or cabinet in its permanent location, allowing adequate clearance for airflow and maintenance, and secure it to the building structure. For more information, see "Clearance Requirements for Airflow and Hardware Maintenance of the J-SRX100 Services Gateway" on page 24.

- Remove the services gateway chassis from the shipping carton. For unpacking instructions, see "Unpacking the J-SRX100 Services Gateway" on page 33.

- Verify that you have the following parts available in your rack-mounting kit for the J-SRX100 Services Gateway:

  - Rack-mount tray
  - Screws

> ✎ NOTE: The rack-mounting kit is not shipped with the device and must be ordered separately.

Preparing the J-SRX100 Services Gateway for Desk-Mount Installation

You can mount a J-SRX100 Services Gateway on a desk or other level surface horizontally or vertically. The four rubber feet attached to the chassis provide stability.

Before mounting a J-SRX100 Services Gateway on a desk or other level surface:

- Verify that the site meets the requirements described in "Site Preparation Checklist for the J-SRX100 Services Gateway" on page 19.

- Place the desk in its permanent location, allowing adequate clearance for airflow and maintenance, and secure it to the building structure.

- Remove the services gateway chassis from the shipping carton. For unpacking instructions, see "Unpacking the J-SRX100 Services Gateway" on page 33.

- If you are mounting the device vertically on the desk, make sure that the following parts are available in your vertical desk-mounting kit for the J-SRX100 Services Gateway:

  - Vertical stand

  - Screws

> ✎ NOTE: The vertical desk-mounting kit is not shipped with the device and must be ordered separately.

Related Documentation

- Site Preparation Checklist for the J-SRX100 Services Gateway on page 19

- Unpacking the J-SRX100 Services Gateway on page 33

- Clearance Requirements for Airflow and Hardware Maintenance of the J-SRX100 Services Gateway on page 24

- Preparing the J-SRX100 Services Gateway for Rack-Mount Installation on page 37

- Preparing the J-SRX100 Services Gateway for Wall-Mount Installation on page 38

Preparing the J-SRX100 Services Gateway for Wall-Mount Installation

You can mount a J-SRX100 Services Gateway on a wall. The four rubber feet attached to the chassis provide stability.

Before mounting a J-SRX100 Services Gateway on a wall:

- Verify that the site meets the requirements described in "Site Preparation Checklist for the J-SRX100 Services Gateway" on page 19.

- Remove the services gateway chassis from the shipping carton. For unpacking instructions, see "Unpacking the J-SRX100 Services Gateway" on page 33.

- Verify that you have the following parts available in your wall-mounting kit for the J-SRX100 Services Gateway:

  - Wall-mounting brackets

  - Screws

    ![note icon] NOTE: The wall-mounting kit is not shipped with the device and must be ordered separately.

Related Documentation

- Site Preparation Checklist for the J-SRX100 Services Gateway on page 19

- Unpacking the J-SRX100 Services Gateway on page 33

- Clearance Requirements for Airflow and Hardware Maintenance of the J-SRX100 Services Gateway on page 24

- Preparing the J-SRX100 Services Gateway for Rack-Mount Installation on page 37

- Preparing the J-SRX100 Services Gateway for Desk-Mount Installation on page 38

CHAPTER 8

Installing the J-SRX100 Services Gateway

This chapter includes the following sections:

- J-SRX100 Services Gateway Safety Requirements, Warnings, and Guidelines on page 41
- Installing the J-SRX100 Services Gateway on page 41

J-SRX100 Services Gateway Safety Requirements, Warnings, and Guidelines

To avoid harm to yourself or the device as you install and maintain it, follow the guidelines for working with and near electrical equipment, as well as the safety procedures for working with devices. For a discussion of how to make the installation site a safe environment and a list of safety warnings, see the Appendix for "Safety and Regulatory Compliance Information" on page 99.

> NOTE: Providing an exhaustive set of guidelines for working with electrical equipment is beyond the scope of this guide.

Related Documentation
- J-SRX100 Services Gateway General Safety Guidelines and Warnings on page 101
- J-SRX100 Services Gateway Electrical Safety Guidelines and Warnings on page 118
- Required Tools and Parts for Installing and Maintaining the J-SRX100 Services Gateway on page 31
- Preparing the J-SRX100 Services Gateway for Rack-Mount Installation on page 37
- Preparing the J-SRX100 Services Gateway for Desk-Mount Installation on page 38
- Preparing the J-SRX100 Services Gateway for Wall-Mount Installation on page 38
- General Site Guidelines for Installing the J-SRX100 Services Gateway on page 22

Installing the J-SRX100 Services Gateway

This topic includes the following sections:

- Installing the J-SRX100 Services Gateway in a Rack on page 42
- Installing the J-SRX100 Services Gateway in a Non-Telco Rack on page 43

- Installing the J-SRX100 Services Gateway on a Desk on page 46
- Installing the J-SRX100 Services Gateway on a Wall on page 47

Installing the J-SRX100 Services Gateway in a Rack

You can front-mount two J-SRX100 Services Gateways in a rack. Many types of racks are acceptable, including four-post (telco) racks, enclosed cabinets, and open-frame racks. For more information about the type of rack or cabinet the J-SRX100 Services Gateway can be installed into, see "J-SRX100 Services Gateway Rack Requirements" on page 23.

NOTE: If you are installing multiple devices in one rack, install the lowest one first and proceed upward in the rack.

To install the device in a rack:

1. Position the two devices in the rack-mount tray as shown in Figure 6 on page 42.

Figure 6: Installing the J-SRX100 Services Gateway in a Rack
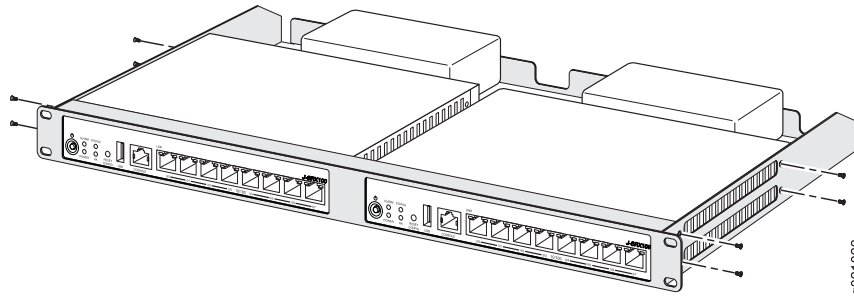
2. Use a number-1 Phillips screwdriver to install the screws that secure the device to the rack-mount tray.

3. Have one person grasp the sides of the rack-mount tray, lift it, and position it in the rack.

4. Align the bottom hole in each side of the rack-mount tray with a hole in each rack rail as shown in Figure 7 on page 43, making sure the rack-mount tray is level.

Figure 7: Hanging the J-SRX100 Services Gateway in a Rack
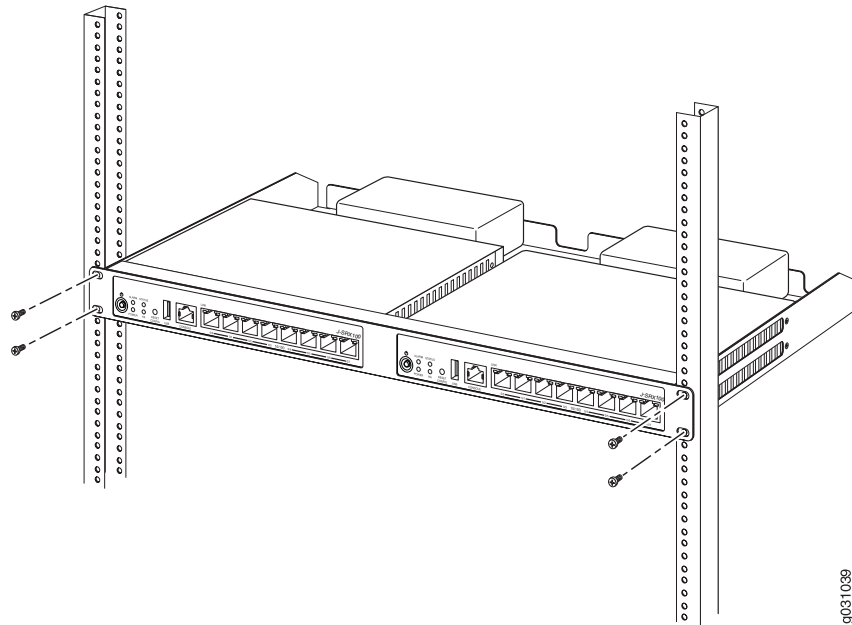
5. Have a second person install a mounting screw into each of the two aligned holes. Use a number-3 Phillips screwdriver to install the mounting screws.

6. Install the second screw in each side of the rack-mount tray.

7. Verify that the mounting screws on one side of the rack-mount tray are aligned with the mounting screws on the opposite side and that the tray is level.

Installing the J-SRX100 Services Gateway in a Non-Telco Rack

The J-SRX100S and J-SRX100SU models can be installed in a non-telco rack. Use the following installation procedure to install the device in a non-telco rack.

Use the cage nuts provided with your rack installation kit for non-telco, square-hole racks that do not have threaded holes. Cage nuts are installed on the inside of the rack-mounting flanges with either the cage-nut-insertion tool or a flat-blade screwdriver.

Step 1 — Attaching/Installing the Cage Nuts to the Non-Telco Rack Using a Cage-Nut-Insertion Tool (Method 1)

To install the cage nuts using a cage-nut-insertion tool:

a. Locate the slot on the rack where you want to mount the device.

b. Insert one edge of the cage nut into the slot from the inside of the rack-mounting flange.

c. Push the tool through the slot and hook the other edge of the cage nut as shown in Figure 8 on page 44.

Figure 8: Installing a Cage Nut Using a Cage-Nut-Insertion Tool
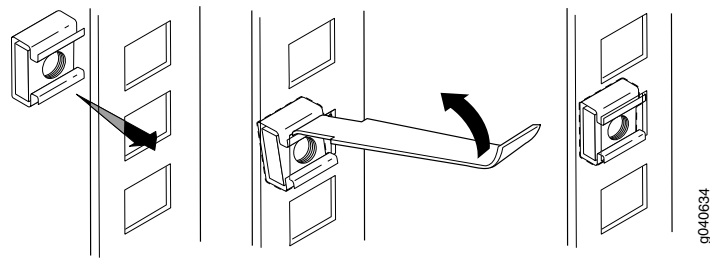
d. Pull the tool and the cage nut back through the slot.

e. Proceed to Step 2—Installing the J-SRX100 Services Gateway in a Non-Telco Rack.

Step 1 — Attaching/Installing the Cage Nuts to the Non-Telco Rack Using a Flat-Blade Screwdriver (Method 2)

To install the cage nuts using a flat-blade screwdriver:

a. Locate the slot on the rack where you want to mount the device.

b. Hold the cage nut in one hand, and compress the cage-nut clip with a flat-blade screwdriver.

c. With the clip compressed, push the edge of the cage nut fully into the slot from the inside of the rack-mounting flange.

d. Release the screwdriver pressure on the clip to lock the cage nut into place as shown in Figure 9 on page 44.

Figure 9: Installing a Cage Nut Using a Flat-Blade Screwdriver
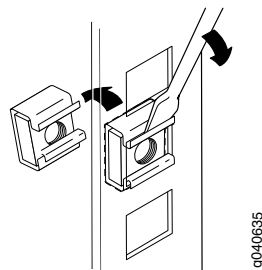
e. Proceed to Step 2—Installing the J-SRX100 Services Gateway in a Non-Telco Rack.

Step 2 — Installing the J-SRX100 Services Gateway in a Non-Telco Rack

a. Position the device or devices in the rack-mount tray as shown in Figure 10 on page 45. Although the figure shows two devices, you can also use the following procedure to install one device.

Figure 10: Installing the J-SRX100 Services Gateway in a Rack
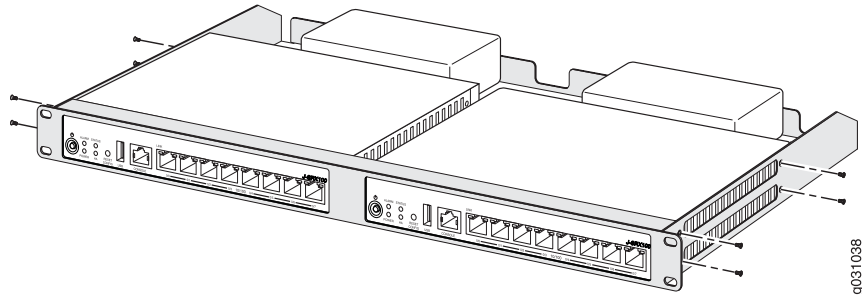
b. Use a number-1 Phillips screwdriver to install the screws that secure the device to the rack-mount tray.

c. Have one person grasp the sides of the rack-mount tray, lift it, and position it in the rack.

d. Align the bottom hole in each side of the rack-mount tray with a hole in each rack rail as shown in Figure 11 on page 45, making sure the rack-mount tray is level.

Figure 11: Hanging the J-SRX100 Services Gateway in a Non-Telco Rack
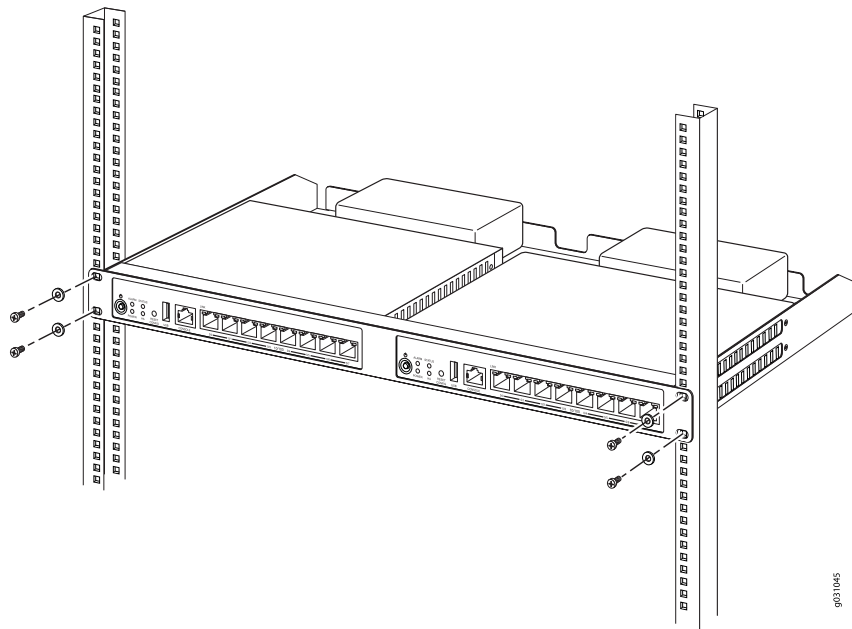
e. Have a second person install the 10-32 screws with washers into each of the two aligned holes on the rack. Use a number-2 Phillips screwdriver to install the mounting screws.

f. Install the second set of 10-32 screws with washers in each side of the rack-mount tray.

g. Verify that the mounting screws on one side of the rack-mount tray are aligned with the mounting screws on the opposite side and that the tray is level.

NOTE: The rack-mounting kit is not shipped with the device and must be ordered separately.

Related Documentation
- Required Tools and Parts for Installing and Maintaining the J-SRX100 Services Gateway on page 31
- Preparing the J-SRX100 Services Gateway for Rack-Mount Installation on page 37
- J-SRX100 Services Gateway Rack Requirements on page 23
- Connecting the J-SRX100 Services Gateway to the Power Supply on page 51
- Clearance Requirements for Airflow and Hardware Maintenance of the J-SRX100 Services Gateway on page 24
- J-SRX100 Services Gateway Safety Requirements, Warnings, and Guidelines on page 41
- Installing the J-SRX100 Services Gateway on a Desk on page 46
- Installing the J-SRX100 Services Gateway on a Wall on page 47

Installing the J-SRX100 Services Gateway on a Desk

You can install the J-SRX100 Services Gateway on a desk, table, or other level surface. The device is shipped with the rubber feet attached. The rubber feet are necessary to stabilize the device on the desk.

You can install the device in a horizontal or vertical position.

NOTE: The desk-mounting kit is not shipped with the device and must be ordered separately.

Horizontal Desk Mounting

The horizontal position is the standard installation position and does not require the vertical installation kit.

To install the device in a horizontal position:

1. Make sure that the rubber feet are attached to the chassis.

2. Place the device on a desk with the logo facing up.

Vertical Desk Mounting

The vertical position requires the vertical installation kit, which consists of a vertical installation stand.

To install the device in a vertical position:

1. Place the device on a flat and level surface with the logo facing up, as shown in Figure 12 on page 47.

Figure 12: Installing the J-SRX100 Services Gateway on a Desk
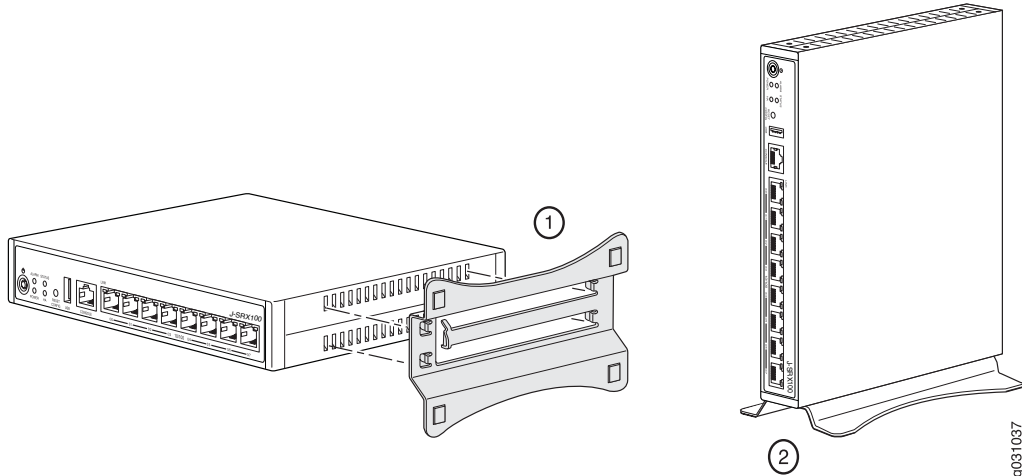
2. Attach the vertical stand to the right side of the chassis as shown in Figure 12 on page 47.

3. Place the chassis vertically on the desk with the stand resting on the desk.

Related Documentation

- Required Tools and Parts for Installing and Maintaining the J-SRX100 Services Gateway on page 31

- Preparing the J-SRX100 Services Gateway for Desk-Mount Installation on page 38

- J-SRX100 Services Gateway Safety Requirements, Warnings, and Guidelines on page 41

- Installing the J-SRX100 Services Gateway in a Rack on page 42

- Installing the J-SRX100 Services Gateway on a Wall on page 47

Installing the J-SRX100 Services Gateway on a Wall

You can install the J-SRX100 Services Gateway on a wall. The device is shipped with the rubber feet attached. The rubber feet help stabilize the device on the wall and enhance airflow.

NOTE: The wall-mounting kit is not shipped with the device and must be ordered separately.

To install the device on a wall:

1. Place the device on a flat and level surface with the logo facing up.

2. Position a mounting bracket on each side of the chassis as shown in Figure 13 on page 48.

Figure 13: Installing the J-SRX100 Services Gateway on a Wall
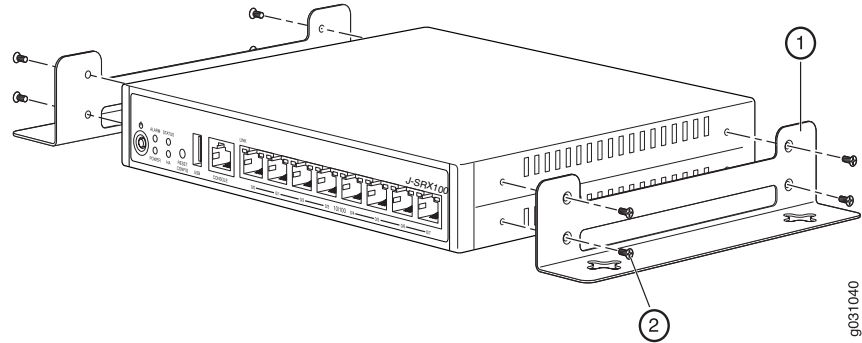
3. Use a number–1 Phillips screwdriver to install the screws that secure the mounting brackets to the chassis.

4. If you are using wall anchors to support the chassis, install two pairs of anchors on the wall with mounting brackets attached.

5. Have one person grasp the sides of the device, lift it, and position it on the wall.

6. Have a second person install two pairs of mounting screws through the bracket holes on either side of the device to secure it to the wall.

7. Verify that the mounting screws on one side are aligned with the mounting screws on the opposite side and that the device is level (see Figure 14 on page 49).

Figure 14: Hanging the J-SRX100 Services Gateway on a Wall
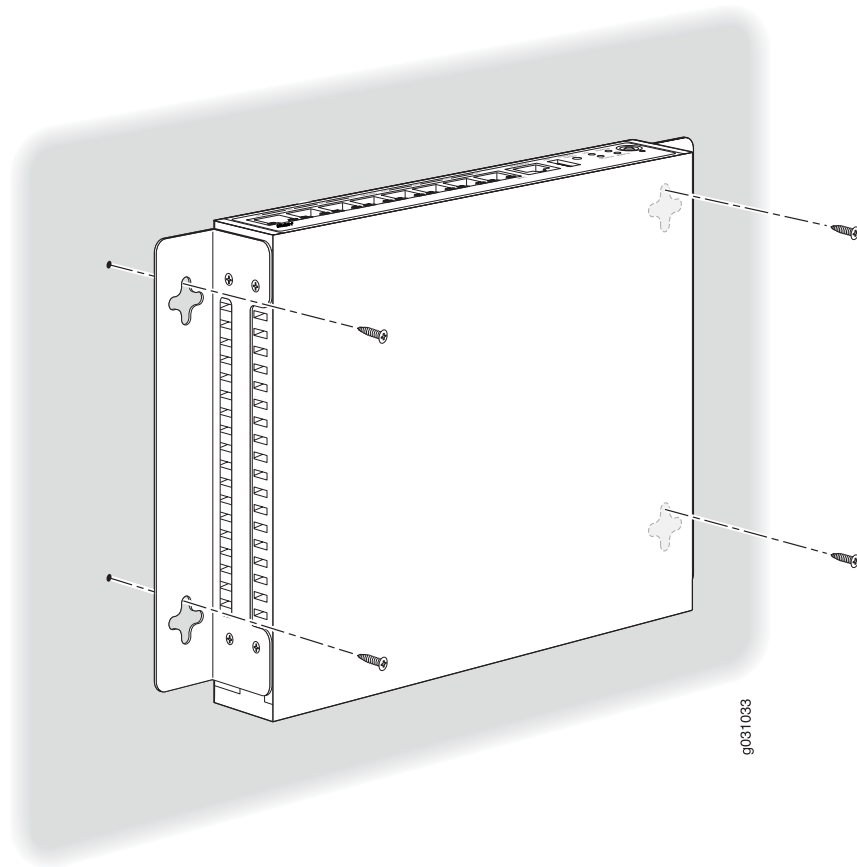
g031033

Related Documentation

- Required Tools and Parts for Installing and Maintaining the J-SRX100 Services Gateway on page 31

- Preparing the J-SRX100 Services Gateway for Wall-Mount Installation on page 38

- J-SRX100 Services Gateway Safety Requirements, Warnings, and Guidelines on page 41

- Installing the J-SRX100 Services Gateway on a Desk on page 46

- Installing the J-SRX100 Services Gateway in a Rack on page 42

- Connecting the J-SRX100 Services Gateway to the Power Supply on page 51

Connecting, Grounding, and Powering On the J–SRX100 Services Gateway

This chapter includes the following sections:

- Connecting the J-SRX100 Services Gateway to the Power Supply on page 51
- Connecting and Organizing Interface Cables to the J-SRX100 Services Gateway on page 52
- Grounding the J-SRX100 Services Gateway on page 53
- Powering On and Powering Off the J-SRX100 Services Gateway on page 55

Connecting the J-SRX100 Services Gateway to the Power Supply

> NOTE: The power supply adapter (30 W) and the 2-prong power cord are shipped separately for the J-SRX100S and J-SRX100SU models. Contact your Dell customer service representative for more information.

To connect the device to the power supply:

> CAUTION: Before connecting the device to the power supply, attach an ESD strap to an ESD point and place the other end of the strap around your bare wrist.

1. Plug the DC connector end of the power cable into the power connector on the back of the device (see Figure 15 on page 52).

2. Plug the AC adapter end of the power cable into an AC power outlet.

Figure 15: Connecting the Services Gateway to Power Supply
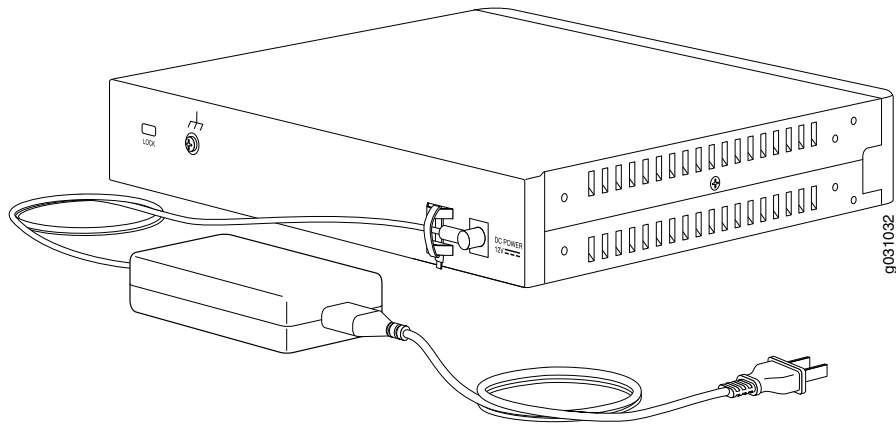
NOTE: The device must be connected to earth ground during normal operation. The protective earthing terminal on the rear of the chassis is provided to connect the device to ground.

CAUTION: We recommend using a surge protector for the power connection.

NOTE: Use the cable tie holder to secure the power cord on to the power supply point.

NOTE: We strongly recommend that you use only the 3-pin power cord supplied with your services gateway. If you are using a 2-pin power cord, then ensure that your device is adequately grounded using the grounding point available on back panel of chassis.

Related Documentation

- Required Tools and Parts for Installing and Maintaining the J-SRX100 Services Gateway on page 31

- Grounding the J-SRX100 Services Gateway on page 53

- Connecting and Organizing Interface Cables to the J-SRX100 Services Gateway on page 52

- J-SRX100 Services Gateway General Safety Guidelines and Warnings on page 101

Connecting and Organizing Interface Cables to the J-SRX100 Services Gateway

You can connect the interfaces installed in the services gateway to various network media. Each type of interface on the services gateway uses a particular medium to

transmit data. You must configure each network interface before it can operate on the device.

To connect and organize an interface cable to the device:

1. Have ready a length of the type of cable used by the interface.

2. Insert the cable connector into the cable connector port on the interface faceplate.

3. Arrange network cables as follows to prevent them from dislodging or developing stress points:

   • Secure cables so that they are not supporting their own weight as they hang to the floor.

   • Place excess cable out of the way in neatly coiled loops.

   • Use fasteners to maintain the shape of cable loops.

Related Documentation
   • Connecting the J-SRX100 Services Gateway to the Power Supply on page 51

   • Grounding the J-SRX100 Services Gateway on page 53

   • Interface Cable and Wire Specifications for the J-SRX100 Services Gateway on page 127

   • J-SRX100 Services Gateway Installation Safety Guidelines and Warnings on page 105

Grounding the J-SRX100 Services Gateway

To meet safety and electromagnetic interference (EMI) requirements and to ensure proper operation, the J-SRX100 Services Gateway must be adequately grounded before power is connected.

Figure 16 on page 53 illustrates how a grounding cable connects to the services gateway.

Figure 16: Grounding the J-SRX100 Services Gateway
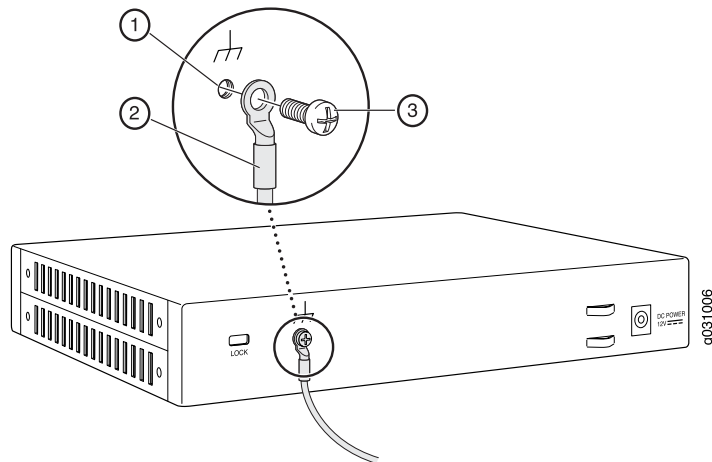
You ground the device by connecting a grounding cable to earth ground and then attaching it to the chassis grounding points using one M3 screw.

⚠ CAUTION: Before device installation begins, a licensed electrician must attach a cable lug to the grounding and power cables that you use. A cable with an incorrectly attached lug can damage the device (for example, by causing a short circuit).

Table 19 on page 54 lists the grounding components of the J-SRX100 Services Gateway.

Table 19: J-SRX100 Services Gateway Grounding Components

Number	Component
1	Grounding point on the chassis
2	Grounding lug
3	Grounding screw (M3 screw)

Table 20 on page 54 lists the specifications of the grounding cable used with the device.

Table 20: Grounding Cable Specifications for the Services Gateway

Grounding Requirement	Specification
Grounding cable	14 AWG single-strand wire cable
Amperage of grounding cable	Up to 4 A
Grounding lug	Ring-type, vinyl-insulated TV14-6R lug or equivalent

To ground the device:

1. Connect the grounding cable to a proper earth ground.

2. Verify that a licensed electrician has attached the cable lug to the grounding cable.

3. Place the grounding cable lug over the grounding point on the middle rear of the chassis.

4. Secure the grounding cable lug to the grounding point with the screw as shown in Figure 16 on page 53.

5. Dress the grounding cable and verify that it does not touch or block access to the services gateway components and that it does not drape where people could trip on it.

📝 NOTE: The device should be permanently connected to ground during operation.

Powering On and Powering Off the J-SRX100 Services Gateway

This topic describes the following procedures:

Powering On the J-SRX100 Services Gateway

To power on the services gateway:

1. Ensure that you have connected the power supply to the device.

2. Insert the plug of the power supply adapter into an AC power source receptacle.

3. Turn on the power to the AC power receptacle.

The device starts automatically as the power supply completes its startup sequence. The Power LED lights during startup and remains on steadily when the device is operating normally.

> NOTE: After the power supply is turned on, it can take up to 60 seconds for status indicators—such as the Status and Power LEDs—to show that the power supply is functioning normally. Ignore error indicators that appear during the first 60 seconds.

> NOTE: If the system is completely powered off when you turn on the power supply, the device starts as the power supply completes its startup sequence. If the device finishes starting and you need to power off the system again, first issue the CLI request system power-off command.

Powering Off the J-SRX100 Services Gateway

You can power off the services gateway in one of the following ways:

- Graceful shutdown—Press and immediately release the Power button. The device begins gracefully shutting down the operating system and then powers itself off.

> ⚠️ WARNING: Use the graceful shutdown method to power off or reboot the services gateway.

- Immediate shutdown—Press the Power button and hold it for ten seconds. The device immediately powers itself off without shutting down the operating system.

> ⚠️ WARNING: Use the immediate shutdown method as a last resort to recover the services gateway if the services gateway operating system is not responding to the graceful shutdown method.

For more information on power button, see "J-SRX100 Services Gateway LEDs" on page 12.

> ⚠️ WARNING: Do not press the Power button while the device is shutting down.

> △ CAUTION: Immediate shutdown can result in data loss and corruption of the file system.

> ✎ NOTE: To remove power completely from the device, unplug the power cord or switch off the AC power source.
>
> After powering off a power supply, wait at least 10 seconds before turning it back on. After powering on a power supply, wait at least 10 seconds before turning it off.
>
> The power button on the services gateway is a standby power switch, which will not turn off the input power to the services gateway.

> 💡 TIP: When you are powering off the device, the CLI displays the following message: Turning the system power off. You can now safely remove the power cable to completely power-off the device.

> ✎ NOTE: You can use the request system reboot CLI command to schedule a reboot to the services gateway using request system reboot.

For more information about halting, powering off, or rebooting the services gateway using CLI, see the *Junos OS Administration Guide.*

Related Documentation

- J-SRX100 Services Gateway Front Panel and Back Panel Views on page 9

- Connecting the J-SRX100 Services Gateway to the Power Supply on page 51

- Grounding the J-SRX100 Services Gateway on page 53

- Using the Reset Config Button on the J-SRX100 Services Gateway on page 93

- Changing the Reset Config Button Behavior on the J-SRX100 Services Gateway on page 94

J-SRX100 Services Gateway Memory Upgrade

This chapter includes the following section:

Upgrading the J-SRX100 Services Gateway Low Memory Version to a High Memory Version

Based on your requirements, you can upgrade from a J-SRX100 Services Gateway Low Memory version to a High Memory version through a license key. You need not order a separate High Memory device.

The double-data-rate (DDR) memory allocation in the J-SRX100 Services Gateway is as follows:

- J-SRX100 Services Gateway High Memory - 1 GB

- J-SRX100 Services Gateway Low Memory - 512 MB

All J-SRX100 Services Gateways have a built-in DDR memory of 1 GB. The J-SRX100 Services Gateway Low Memory devices can utilize a maximum of 512 MB of DDR memory. To utilize 1 GB of DDR memory, you must upgrade your device to a J-SRX100 Services Gateway High Memory version by installing the memory upgrade license. You can install the memory license using the CLI configuration editor. For more information, see the *Junos OS Administration Guide.*

NOTE: When you install the memory upgrade license on a J-SRX100 Services Gateway Low Memory device, the device reboots automatically. When the device is active again, it will function as a High Memory device.

NOTE: The memory upgrade license is a perpetual license. You can activate this feature on the device by directly entering the license key (provided by the licensing management system) in the CLI.

For more information on generating, installing, and managing licenses, see the *Junos OS Administration Guide.*

To obtain a memory license, contact Dell Support.

Related Documentation

- J-SRX100 Services Gateway Features and Functions on page 5
- J-SRX100 Services Gateway Specifications on page 7

J-SRX100 Services Gateway Autoinstallation

This chapter includes the following section:

- J-SRX100 Services Gateway Autoinstallation Overview on page 61

J-SRX100 Services Gateway Autoinstallation Overview

The autoinstallation process begins any time a services gateway is powered on and cannot locate a valid configuration file in the internal flash. Typically, a configuration file is unavailable when a services gateway is powered on for the first time or if the configuration file is deleted from the internal flash. The autoinstallation feature enables you to deploy multiple services gateways from a central location in the network.

If you are setting up many devices, autoinstallation can help automate the configuration process by loading configuration files onto new or existing devices automatically over the network. You can use either the J-Web configuration editor or the CLI configuration editor to configure a device for autoinstallation.

For the autoinstallation process to work, you must store one or more host-specific or default configuration files on a configuration server in the network and have a service available—typically Dynamic Host Configuration Protocol (DHCP)—to assign an IP address to the services gateway.

Autoinstallation takes place automatically when you connect an Ethernet port on a new services gateway to the network and power on the device. To simplify the process, you can explicitly enable autoinstallation on a device and specify a configuration server, an autoinstallation interface, and a protocol for IP address acquisition.

For more information about configuring autoinstallation, see the *Junos OS Administration Guide*.

Related Documentation

- Connecting the J-SRX100 Services Gateway to the Power Supply on page 51
- Grounding the J-SRX100 Services Gateway on page 53
- Powering On and Powering Off the J-SRX100 Services Gateway on page 55

Connecting the J–SRX100 Services Gateway to Management Devices

This chapter includes the following sections:

- Connecting a J-SRX100 Services Gateway to the J-Web Interface on page 63
- Connecting the J-SRX100 Services Gateway to the CLI on page 65
- Connecting the Modem at the J-SRX100 Services Gateway End on page 67
- Connecting the Modem to the Console Port on the J-SRX100 Services Gateway on page 68
- Connecting to the CLI at the User End for the J-SRX100 Services Gateway on page 69

Connecting a J-SRX100 Services Gateway to the J-Web Interface

If you plan to use the J-Web interface to configure the J-SRX100 Services Gateway, you must connect through one of the built-in Ethernet management ports.

To connect to the J-Web interface through any of the ports **fe-0/0/1** to **fe-0/0/7** on the services gateway, see Figure 17 on page 64.

Figure 17: Connecting to the Ethernet Port on a J-SRX100 Services Gateway
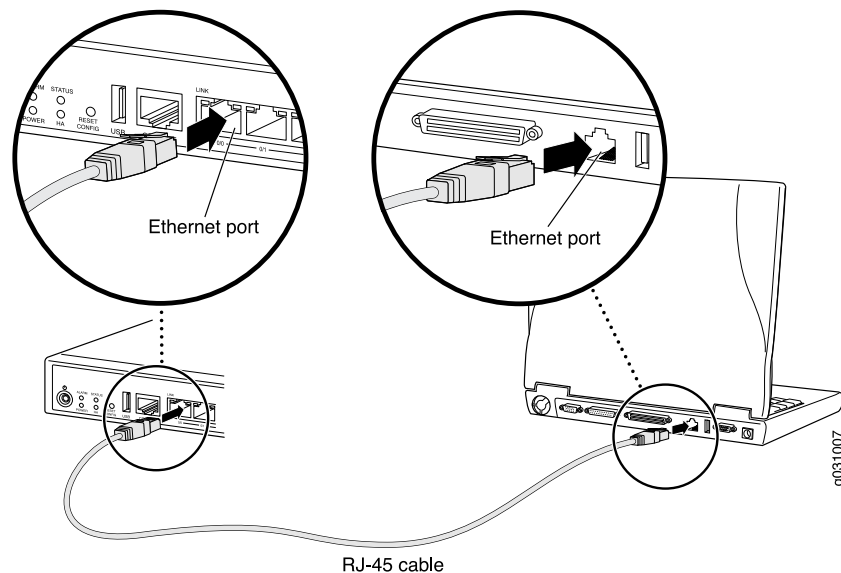
1. From the management device you use to access the J-Web interface (such as a PC or a laptop), verify that the address of the port you connect to is set to one of the following values:

   - Ethernet address on the **192.168.1.0/24** subnetwork other than **192.168.1.1**

   - Ethernet address from a DHCP server

2. Plug one end of the CAT-5e (Ethernet cable) into the Ethernet port on the management device.

3. Connect the other end of the Ethernet cable to the built-in Fast Ethernet port (any of the ports **fe-0/0/1** to **fe-0/0/7**) on the services gateway.

4. Wait until the **Status** LED on the front panel of the services gateway turns solid green.

5. Turn on the power to the management device. The services gateway assigns an IP address to the management device within the **192.168.1.0/24** subnetwork if the management device is configured to use DHCP.

   > NOTE: After connecting the management device to the services gateway, the DHCP server process on the services gateway will assign an IP address automatically to the management device. Ensure that the management device acquires an IP address on the 192.168.1.0/24 subnetwork (other than 192.168.1.1) from the device.

6. From the management device, open a Web browser and enter the IP address **192.168.1.1** in the address field if the management device is configured using the DHCP.

7. Configure basic settings for your services gateway.

> NOTE: You must manually configure the IP address for the management port you are using before you save your initial configuration. When you save the configuration for the first time, you will lose the connection to the services gateway if you have not manually configured the IP address. If you lose the connection through the management interface, you must connect through the Console port.

Related Documentation

- Performing Initial Software Configuration on the J-SRX100 Services Gateway Using the J-Web Interface on page 77
- Connecting the J-SRX100 Services Gateway to the CLI on page 65
- J-SRX100 Services Gateway Software Configuration Overview on page 71
- J-SRX100 Services Gateway Secure Web Access Overview on page 81

Connecting the J-SRX100 Services Gateway to the CLI

This topic includes the following sections:

- Connecting the Services Gateway to the CLI Locally on page 65
- Connecting a J-SRX100 Services Gateway to the CLI Remotely on page 67

Connecting the Services Gateway to the CLI Locally

If you plan to use the CLI to configure the J-SRX100 Services Gateway, you must connect through the console port, as shown in Figure 18 on page 65.

Figure 18: Connecting to the Console Port on a J-SRX100 Services Gateway
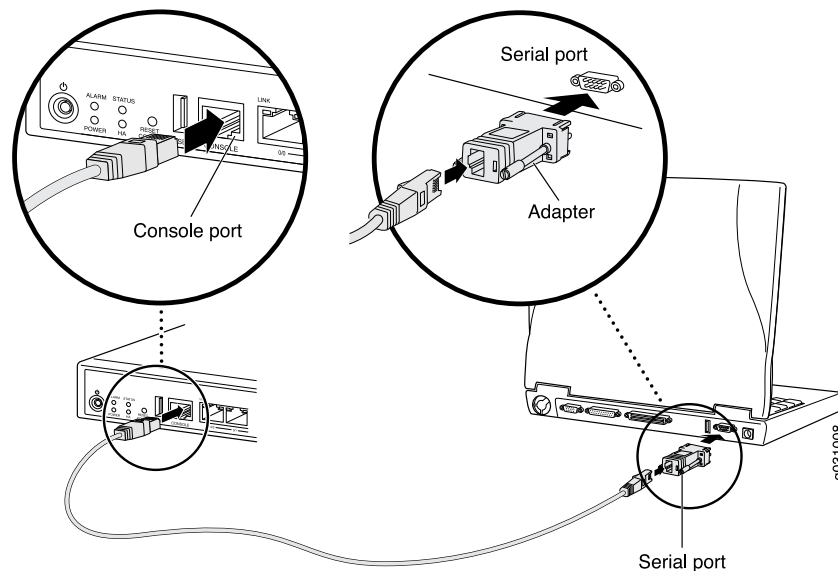
> NOTE: Figure 18 on page 65 shows a connection to a local management device. A remote connection to the services gateway through a modem requires the cable and connector shown (provided in the services gateway accessory box), plus a DB-9 female to DB-25 male (or similar) adapter for your modem, which you must purchase separately.

To connect to the CLI using a local management device through the console port on the services gateway:

1. Turn off power to the services gateway.

2. Turn off power to the management device, such as a PC or laptop computer, that you are using to access the CLI.

3. Plug one end of an Ethernet cable into the RJ-45 to DB-9 serial port adapter supplied with your services gateway (see Figure 18 on page 65).

4. Plug the RJ-45 to DB-9 serial port adapter into the serial port on the management device (see Figure 18 on page 65).

5. Connect the other end of the Ethernet cable to the console port on the services gateway (see Figure 18 on page 65).

6. Turn on the power to the management device.

7. Start your asynchronous terminal emulation application (such as Microsoft Windows HyperTerminal) and select the appropriate **COM** port to use (for example, **COM1**).

8. Configure the port settings shown in Table 21 on page 66.

Table 21: Console Port Settings for the J-SRX100 Services Gateway

Port Settings	Value
Bits per second	9600
Data bits	8
Parity	None
Stop bits	1
Flow control	None

9. Power on the services gateway by pressing the Power button on the front panel.

10. Verify that the **Power** LED on the front panel turns green.

    The terminal emulation screen on your management device displays the startup sequence. When the services gateway has finished starting up, a login prompt appears.

11. Log in as the user **root**. No password is required at initial connection, but you must assign a root password before committing any configuration settings.

Connecting a J-SRX100 Services Gateway to the CLI Remotely

You can connect a J-SRX100 Services Gateway to the CLI from a remote location through two dial-up modems:

- A modem that is connected to the console port on the services gateway

- A second modem connected to a remote management device

The modem connection allows you to remotely perform the same console operations you can perform locally.

Related Documentation
- Performing Initial Software Configuration on the J-SRX100 Services Gateway Using the CLI on page 74

- Connecting a J-SRX100 Services Gateway to the J-Web Interface on page 63

- J-SRX100 Services Gateway Software Configuration Overview on page 71

- J-SRX100 Services Gateway Secure Web Access Overview on page 81

Connecting the Modem at the J-SRX100 Services Gateway End

> NOTE: These instructions use Hayes-compatible modem commands to configure the modem. If your modem is not Hayes-compatible, refer to the documentation for your modem and enter the equivalent modem commands.

To configure the modem on the services gateway end:

1. Connect the modem to a PC or laptop computer.

2. Power on the modem.

3. From the PC or laptop computer, start your asynchronous terminal emulation application (such as Microsoft Windows HyperTerminal) and select the **COM** port to which the modem is connected (for example, **COM1**).

4. Configure the port settings shown in Table 22 on page 67.

Table 22: Port Settings for Configuring the Modem on the Services Gateway End

Port Settings	Value
Bits per second	9600
Data bits	8
Parity	None
Stop bits	1

Table 22: Port Settings for Configuring the Modem on the Services Gateway End *(continued)*

Port Settings	Value
Flow control	None

5. In the HyperTerminal window, enter **AT**.

   For more information on the AT commands, see the *Junos OS Administration Guide*.

   An **OK** response verifies that the modem can communicate successfully with the **COM** port on the PC or laptop.

6. Configure the modem to answer a call on the first ring by entering **ATS0=1**.

7. Configure the modem to accept modem control DTR signals by entering **AT&D1**.

8. Disable flow control by entering **AT&K0**.

9. Save modem settings by entering **AT&W**.

Related Documentation

- Connecting the Modem to the Console Port on the J-SRX100 Services Gateway on page 68

- Connecting to the CLI at the User End for the J-SRX100 Services Gateway on page 69

- J-SRX100 Services Gateway Software Configuration Overview on page 71

Connecting the Modem to the Console Port on the J-SRX100 Services Gateway

To connect the dial-up modem to the console port on the services gateway:

1. Turn off power to the services gateway.

2. Turn off power to the modem.

3. Plug one end of the Ethernet cable supplied with your services gateway into the console port on the services gateway.

4. Plug the other end of the CAT-5e (Ethernet cable) into the RJ-45 to DB-9 serial port adapter supplied with your services gateway.

5. Connect the serial port adapter to a separately purchased DB-9 female to DB-25 male adapter or other adapter appropriate for your modem.

6. Plug the modem adapter into the DB-25 connector on the modem.

7. Connect the modem to your telephone network.

8. Turn on the power to the modem.

9. Power on the services gateway by pressing the Power button on the front panel. Verify that the **Power** LED on the front panel turns green.

> **NOTE:** Most modems have an RS-232 DB-25 connector. You must separately purchase an adapter to connect your modem to the RJ-45 to DB-9 adapter and the Ethernet cable supplied with the services gateway.

Related Documentation

- Connecting the Modem at the J-SRX100 Services Gateway End on page 67
- Connecting to the CLI at the User End for the J-SRX100 Services Gateway on page 69
- J-SRX100 Services Gateway Software Configuration Overview on page 71

Connecting to the CLI at the User End for the J-SRX100 Services Gateway

To remotely connect to the CLI through a dial-up modem connected to the console port on the services gateway:

1. Connect a modem at your remote location to a management device such as a PC or laptop computer.

2. Start your asynchronous terminal emulation application (such as Microsoft Windows HyperTerminal) on the PC or laptop computer.

3. Select the **COM** port to which the modem is connected (for example, **COM1**).

4. Configure the port settings shown in Table 23 on page 69.

Table 23: Port Settings for Connecting CLI at User End

Port Setting	Value
Bits per second	9600
Data bits	8
Parity	None
Stop bits	1
Flow control	None

5. In the HyperTerminal window, enter **AT**.

   For more information on the AT commands, see the *Junos OS Administration Guide*.

   An **OK** response verifies that the modem can communicate successfully with the **COM** port on the PC or laptop.

6. Dial the modem that is connected to the console port on the services gateway by entering **ATDT** *remote-modem-number*. For example, if the number of the modem connected to the console port on the services gateway is **0013033033030**, enter **ATDT 0013033033030**.

The services gateway login prompt appears.

7. Log in as the user **root**. No password is required at initial connection, but you must assign a root password before committing any configuration settings.

Related
Documentation

- Connecting the Modem at the J-SRX100 Services Gateway End on page 67

- Connecting the Modem to the Console Port on the J-SRX100 Services Gateway on page 68

- J-SRX100 Services Gateway Software Configuration Overview on page 71

Performing Initial Software Configuration on the J–SRX100 Services Gateway

This chapter includes the following sections:

- J-SRX100 Services Gateway Software Configuration Overview on page 71
- Performing Initial Software Configuration on the J-SRX100 Services Gateway Using the CLI on page 74
- Performing Initial Software Configuration on the J-SRX100 Services Gateway Using the J-Web Interface on page 77
- J-SRX100 Services Gateway Secure Web Access Overview on page 81

J-SRX100 Services Gateway Software Configuration Overview

This topic includes the following sections:

- Preparing J-SRX100 Services Gateway for Configuration on page 71
- Understanding Built-In Ethernet Ports on page 72
- Mapping the Chassis Cluster Ports on page 72
- Understanding Management Access on page 73

Preparing J-SRX100 Services Gateway for Configuration

When the J-SRX100 services gateway powers on, it tries to boot the Junos OS from the default storage media. If the device fails to boot from the default storage media, it tries to boot from the alternate storage media.

Table 24 on page 71 provides information on the storage media available on J-SRX100 services gateway.

Table 24: Storage Media on J-SRX100 Services Gateway

Storage Media	Type
Internal NAND flash	Default; always present
USB storage device	Alternate

> **NOTE:** The J-SRX100 Services Gateway that ship with JUNOS Release 10.0 or later are formatted with dual-root partitions from the factory.

For more information on dual-root partitioning, see the *Junos OS Administration Guide for Security Devices*.

You configure the services gateway by issuing JUNOS command-line interface (CLI) commands.

Gather the following information before configuring the device:

- Device name to be used on the network

- Domain name the device will use

- IP address and prefix length information for the Ethernet interface

- IP address of a default router

- IP address of a DNS server

- Password for the root user

Understanding Built-In Ethernet Ports

Note the following points about the J-SRX100 Services Gateway management ports:

- The J-SRX100 Services Gateway uses **fe-0/0/1** to **fe-0/0/7** as management ports to perform initial device setup. Before initial configuration, when the factory default configuration is active, the device attempts to perform autoinstallation by obtaining a device configuration through all of its connected interfaces.

- The services gateway acts as a DHCP client out of the built-in Ethernet ports. If the services gateway does not find a DHCP server within a few seconds, the device acts as a DHCP server and assigns an IP address as 192.168.1.1/24. With the device temporarily acting as a DHCP server, you can manually configure it with the J-Web interface.

- Any DHCP client host, for example, a PC or laptop computer, directly connected to any of **fe-0/0/1** to **fe-0/0/7** ports receives an address on the 192.168.1.1/24 network.

Mapping the Chassis Cluster Ports

On the J-SRX100 Services Gateway, the **fxp1** port is not user configurable when the services gateway is operating in chassis cluster mode.

The **fxp0** port is dedicated as the out-of-band management interface for each of the devices in the chassis cluster setup and the **fxp1** port is dedicated as the chassis-cluster control port.

Table 25 on page 73 shows the mapping of the chassis cluster ports.

Table 25: Mapping the Chassis Cluster Ports on a J-SRX100 Services Gateway

FE Ports on J-SRX100 Services Gateway	Management Interface
fe-0/0/6	fxp0 (management port)
fe-0/0/7	fxp1 (control port)

Junos OS automatically creates the fxp0 and fxp1 interfaces on these ports when the J-SRX100 Services Gateway is operating in chassis cluster mode.

For more information, see the following guides:

- *Junos OS Interfaces and Routing Configuration Guide*

- *Junos OS Security Configuration Guide*

Understanding Management Access

Telnet allows you to connect to the services gateway and access the CLI to execute commands from a remote system. The Telnet CLI connections are not encrypted and therefore can be intercepted.

> NOTE: Telnet access to the root user is prohibited. You must use more secure methods, such as SSH, to log in as root.

SSH provides the following features:

- Allows you to connect to the device and access the CLI to execute commands from a remote system

- Encrypts traffic so that it cannot be intercepted (unlike Telnet)

- Can be configured so that connections are authenticated by a digital certificate

- Uses public–private key technology for both connection and authentication

The SSH client software must be installed on the machine where the client application runs. If the SSH private key is encrypted (for greater security), the SSH client must be able to access the passphrase used to decrypt the key.

For information about obtaining SSH software, see http://www.ssh.com and http://www.openssh.com.

If you are using a JUNOScript server to configure and monitor devices, you can activate cleartext access on the device to allow unencrypted text to be sent directly over a Transmission Line Protocol (TCP) connection without using any additional protocol (such as SSH, SSL, or Telnet). For more information about the JUNOScript application programming interface (API), see the *Junos OS JUNOScript API Guide*.

> ✎ NOTE: Information sent in cleartext is not encrypted and therefore can be intercepted.

If the device is operating in a Common Criteria environment, see the *Secure Configuration Guide for Common Criteria and JUNOS-FIPS*.

Related Documentation
- Connecting a J-SRX100 Services Gateway to the J-Web Interface on page 63
- Connecting the J-SRX100 Services Gateway to the CLI on page 65
- Performing Initial Software Configuration on the J-SRX100 Services Gateway Using the CLI on page 74
- Performing Initial Software Configuration on the J-SRX100 Services Gateway Using the J-Web Interface on page 77
- J-SRX100 Services Gateway Secure Web Access Overview on page 81

Performing Initial Software Configuration on the J-SRX100 Services Gateway Using the CLI

This procedure connects the device to the network but does not enable it to forward traffic. For complete information about enabling the device to forward traffic, including examples, see the appropriate Junos OS configuration guides.

To configure the software:

1. Verify that the device is powered on.

2. Log in as the root user. There is no password.

3. Start the CLI.

   root# cli
   root@>

4. Enter configuration mode.

   configure
   [edit]
   root@#

5. Set the root authentication password by entering a cleartext password, an encrypted password, or an SSH public key string (DSA or RSA).

   [edit]
   root@# set system root-authentication plain-text-password
   New password: *password*
   Retype new password: *password*

6. Configure an administrator account on the device.

   [edit]
   root@# set system login user admin class super-user authentication
     plain-text-password

7. Commit the configuration to activate it on the device.

   [edit]
   root@# **commit**

8. Log in as the administrative user you configured in Step 6.

9. Configure the name of the device. If the name includes spaces, enclose the name in quotation marks (" ").

   configure
   [edit]
   admin@# **set system host-name** *host-name*

10. Configure the traffic interface.

    [edit]
    admin@# **set interfaces fe-0/0/1 unit 0 family inet address** *address/prefix-length*

11. Configure the default route.

    [edit]
    admin@# **set routing-options static route 0.0.0.0/0 next-hop** *gateway*

12. Configure basic security zones and bind them to traffic interfaces.

    [edit]
    admin@# **set security zones security-zone untrust interfaces fe-0/0/1**

13. Configure basic security policies.

    [edit]
    admin@# **set security policies from-zone trust to-zone untrust policy** *policy-name*
       match source-address any destination-address any application any
    root@# **set security policies from-zone trust to-zone untrust policy** *policy-name* **then
       permit**

14. Create a NAT rule for source translation of all Internet bound traffic.

    [edit]
    admin@# **set security nat source rule-set interface-nat from zone trust**
    admin@# **set security nat source rule-set interface-nat to zone untrust**
    admin@# **set security nat source rule-set interface-nat rule rule1 match source-address
       0.0.0.0/0 destination-address 0.0.0.0/0**
    admin@# **set security nat source rule-set interface-nat rule rule1 then source-nat
       interface**

15. Check the configuration for validity.

    [edit]
    admin@# **commit check**
    configuration check succeeds

16. Commit the configuration to activate it on the device.

    [edit]
    admin@# **commit**
    commit complete

17. Optionally, display the configuration to verify that it is correct.

    [edit]
    user@host# **show**

```
system {
  host-name devicea;
  domain-name lab.device.net;
  domain-search [ lab.device.net device.net ];
  backup-device 192.168.2.44;
  time-zone America/Los_Angeles;
  root-authentication {
    ssh-rsa "ssh-rsa AAAAB3Nza...D9Y2gXF9ac==root@devicea.lab.device.net";
  }
  name-server {
    10.148.2.32;
  }
  services {
  }
  ntp {
    server 10.148.2.21;
  }
}
interfaces {
  fe-0/0/0 {
    unit 0 {
      family inet {
        address 192.168.1.1/24;
      }
    }
  }
  lo0 {
    unit 0 {
      family inet {
        address 172.16.1.24/32;
      }
    }
  }
}
```

18. Commit the configuration to activate it on the device.

    ```
    [edit]
    admin@# commit
    ```

19. Optionally, configure additional properties by adding the necessary configuration
    statements. Then commit the changes to activate them on the device.

    ```
    [edit]
    admin@host# commit
    ```

20. When you have finished configuring the device, exit configuration mode.

    ```
    [edit]
    admin@host# exit
    admin@host>
    ```

Related Documentation

- Connecting the J-SRX100 Services Gateway to the CLI on page 65

- J-SRX100 Services Gateway Software Configuration Overview on page 71

- Performing Initial Software Configuration on the J-SRX100 Services Gateway Using the J-Web Interface on page 77

- J-SRX100 Services Gateway Secure Web Access Overview on page 81

Performing Initial Software Configuration on the J-SRX100 Services Gateway Using the J-Web Interface

This topic includes the following sections:

- Establishing Basic Connectivity on page 77
- Configuring Basic System Properties on page 78

Establishing Basic Connectivity

To establish basic connectivity:

1. Connect an Ethernet cable from any of the **fe-0/0/1** to **fe-0/0/7** ports to the Ethernet port on the management device (workstation or laptop).

2. Connect the power cable to the device and a power source. (We recommend using a surge protector.) Note the following indications:

   - Power LED (solid green): The device is receiving power.

   - Status LED (solid green): The device is operating normally.

     > NOTE: The services gateway functions as a DHCP server and will assign an IP address to the management device.

3. Ensure that the management device acquires an IP address on the 192.168.1.0/24 subnetwork (other than 192.168.1.1) from the device.

   > NOTE: If an IP address is not assigned to the management device, manually configure an IP address in the 192.168.1.0/24 subnetwork. Do not assign the 192.168.1.1 IP address to the management device, as this IP address is assigned to the device.

4. Access the J-Web interface:

   a. Launch a Web browser from the management device.

   b. Enter **192.168.1.1** in the Address box.

   c. Specify the default username as **root**. Do not enter any value in the Password box.

   d. Press **Enter**. The J-Web Initial Setup page is displayed.

5. Configure the basic settings such as Host Name, Domain Name, Root Password, and IP Address for your services gateway. Ensure that you have configured the IP address, root authentication, and default gateway before you apply the configuration.

> ✎ NOTE: All network and management access settings are optional.

6. Click **Apply** to apply the configuration.

> ✎ NOTE: After configuring the basic settings, the Web session may timeout. Refresh or relaunch the page if the applied configuration page is not displayed .

Configuring Basic System Properties

Table 26 on page 78 through Table 28 on page 79 provide the summary of configuration details for initial setup.

Table 26: Basic Configuration Summary (Device Identification)

Field	Function	Your Action
Host Name	Defines the hostname of the services gateway.	Type the hostname.
Domain Name	Defines the network or subnetwork that the services gateway belongs to.	Type the domain name.
Root Password (required)	Sets the password that user **root** can use to log in to the services gateway.	Type a plaintext password that the system encrypts. NOTE: After a root password has been defined, it is required when you log in to the J-Web user interface or the CLI.
Verify Root Password (required)	Verifies the root password has been typed correctly.	Retype the password.
DNS Name Servers	Specifies a DNS server that the services gateway can use to resolve hostnames into addresses.	Add an IP address by selecting it in the box to the left of the Add button, then clicking **Add**. Delete an IP address by clicking it in the box above the Add button, then clicking **Remove**.
Domain Search	Adds each domain name that includes the services gateway to the configuration so that each domain is included in a DNS search.	Add a domain name by typing it in the box to the left of the Add button, then clicking **Add**. Delete a domain name by , clicking it in the box above the Add button, then clicking **Remove**.

Table 27: Basic Configuration Summary (Management Access)

Field	Function	Your Action
Default Gateway	Defines a default gateway through which to direct packets addressed to networks not explicitly listed in the routing table.	Type a 32-bit IP address in dotted decimal notation.
Loopback Address	Defines a reserved IP address that is always available on the services gateway. If no address is entered, this address is set to **127.0.0.1/32**.	Type a 32-bit IP address and prefix length in dotted decimal notation.
Allow Telnet Access	Allows remote access to the services gateway using Telnet.	Enable Telnet access by selecting the box.
Allow JUNOScript over Clear-Text Access	Allows JUNOScript to access the services gateway using a protocol for sending unencrypted text over a TCP connection.	Enable JUNOScript access over cleartext by selecting the box.
Allow SSH Access	Allows remote access to the services gateway using SSH.	Enable SSH access by selecting the box.

Table 28: Basic Configuration Summary (Date and Time)

Field	Function	Your Action
Date and Time		
Time Zone	Identifies the time zone in which the services gateway is located.	From the list, select the appropriate time zone.
NTP Servers	Specifies an NTP server that the services gateway can reach to synchronize the system time.	Add an IP address by clicking **Add** and entering IP address and then clicking **OK**. Delete an IP address by clicking it in the box and then clicking **Delete**.
Current System Time	Synchronizes the system time with the NTP server or allows you to manually set the system time and date.	• Set the time immediately using the NTP server; select **NTP Servers**. The services gateway sends a request to the NTP server and synchronizes the system time. NOTE: If you are configuring other settings on this page, the services gateway also synchronizes the system time using the NTP server when you click **OK**. • Set the time manually by selecting the **Manual** button. A window allows you to select the current date and time from lists.

To configure basic system properties:

1. In the J-Web interface, select **Configure> System properties** and select the required tab and proceed with configuring the other settings. See Table 26 on page 78 through Table 28 on page 79 for details.

2. Click one of the following buttons:

   - Click **OK** to save changes.

   - Click **Cancel** to cancel your entries and return to the previous page.

   - Click **Commit** to apply the configuration and other pending changes (if any) and click **Discard** to discard pending changes.

3. Configure an interface as follows:

   a. In the J-Web interface, select **Configure>Interfaces**

      The Interfaces page appears and lists the network interfaces present on the services gateway.

   b. Under the Interface Name column, click the interface you want to configure (for example fe-0/0/0).

   c. Under **Logical Interfaces**, click **Add**.

   d. Under **IPv4 Addresses and Prefixes**, click **Add**.

   e. In the IPv4 Address and Prefix fields, enter an IP address and a subnet mask

   f. Click **OK**. The configured IP address is included in the Address Prefix column.

4. Configure the default route as follows

   a. In the J-Web interface, select **Configure>Routing>Static routing**

   b. In the Static Routing page, click **Add**.

   c. Add an IP address for Route and Next-hop.

   d. Click **OK**. The configured IP address is included in the Static Routing page.

5. Configure basic security zones and bind them to traffic interfaces.

   a. In the J-Web interface, under the Configure tab, navigate to **Security > Zones**

   b. Under Security Zone, click **Add**.

   c. Enter a name for the zone in the Zone Name field.

     d. Scroll down to the Interfaces Configuration panel on the page to add an interface to a specific zone.

     e. Click **OK** to save the configuration.

6. Configure basic security policies.

     a. In the J-Web interface, under the Configure tab, navigate to **Security > Policy**.

     b. In the Security Policy page, click **Add**.

     c. Enter a name for the policy and select the source and destination zones.

     d. Enter a source address, destination address, and an application.

     e. Select Policy Action as **Permit**, or **Deny**, or **Reject**.

     f. Click **OK** to save the configuration.

> NOTE: Click **Commit** to apply the configuration and other pending changes (if any) and click **Discard** to discard pending changes.

For more instructions on managing users and operations, monitoring network performance, upgrading software, and diagnosing common problems on a J-SRX100 Series Services Gateway, see the *Junos OS Administration Guide*.

J-SRX100 Services Gateway Secure Web Access Overview

You can manage a services gateway remotely through the J-Web interface. To communicate with the services gateway, the J-Web interface uses Hypertext Transfer Protocol (HTTP). HTTP allows easy Web access but no encryption. The data that is transmitted between the Web browser and the services gateway by means of HTTP is vulnerable to interception and attack. To enable secure Web access, the services gateway supports HTTP over Secure Sockets Layer (HTTPS). You can enable HTTP or HTTPS access on specific interfaces and ports as needed.

The services gateway uses the SSL protocol to provide secure management of services gateways through the J-Web. SSL uses public-private key technology that requires a paired private key and an authentication certificate for providing the SSL service. SSL encrypts communication between your device and the Web browser with a session key negotiated by the SSL server certificate.

An SSL certificate includes identifying information such as a public key and a signature made by a certificate authority (CA). When you access the services gateway through HTTPS, an SSL handshake authenticates the server and the client and begins a secure session. If the information does not match or if the certificate has expired, your access to the services gateway through HTTPS is restricted.

Without SSL encryption, communication between your services gateway and the browser is sent in the open and can be intercepted. We recommend that you enable HTTPS access on your WAN interfaces.

For more information about configuring secure Web access, see the *Junos OS Administration Guide*.

Related
Documentation
- J-SRX100 Services Gateway Software Configuration Overview on page 71

- Performing Initial Software Configuration on the J-SRX100 Services Gateway Using the CLI on page 74

- Performing Initial Software Configuration on the J-SRX100 Services Gateway Using the J-Web Interface on page 77

Maintaining and Monitoring the J-SRX100 Services Gateway

Maintaining the J–SRX100 Services Gateway Hardware Components

This chapter describes how to maintain the hardware components of the J-SRX100 Services Gateway. This chapter includes the following section:

- Maintaining the J-SRX100 Services Gateway Hardware Components on page 85

Maintaining the J-SRX100 Services Gateway Hardware Components

Table 29 on page 85 describes the common tasks for maintaining the hardware components of the services gateway.

Table 29: Maintenance Procedures for the J-SRX100 Services Gateway Hardware Components

Maintenance Procedures	Description
Routine maintenance	For optimum performance of the services gateway, you should regularly perform the following preventive maintenance procedures : - Inspect the installation site for moisture, loose wires or cables, and excessive dust. - Make sure that airflow is unobstructed around the device and into the air intake vents.
Maintaining the power supply	To maintain the power supply on the services gateway: - Make sure that the power and grounding cables are arranged so that they do not obstruct access to other device components. - Periodically inspect the site to ensure that the grounding and power cables connected to the device are securely in place and that there is no moisture accumulating near the device. CAUTION: We recommend using a surge protector for the power connection.

Related Documentation
- Site Preparation Checklist for the J-SRX100 Services Gateway on page 19
- Monitoring the J-SRX100 Services Gateway Chassis Using the CLI on page 87

Monitoring the J-SRX100 Services Gateway

This chapter includes the following sections:

- Monitoring the Hardware Components on the J-SRX100 Services Gateway on page 87
- Resetting the Configuration File When the J-SRX100 Services Gateway Is Inaccessible on page 93
- Dell Support on page 95

Monitoring the Hardware Components on the J-SRX100 Services Gateway

This topic includes the following sections:

- Monitoring the J-SRX100 Services Gateway Chassis Using the CLI on page 87
- Monitoring the J-SRX100 Services Gateway Components Using LEDs on page 89
- Monitoring the J-SRX100 Services Gateway Using Chassis Alarm Conditions on page 91
- Monitoring the J-SRX100 Services Gateway Power System on page 92

Monitoring the J-SRX100 Services Gateway Chassis Using the CLI

You can monitor alarms to troubleshoot hardware problems on a services gateway. The chassis properties include the status of active chassis alarms on the device and the environmental measurements of the device.

To view these chassis properties, select **Monitor**>**Chassis** in the J-Web interface, or enter the following CLI **show** commands:

- **show chassis hardware**
- **show chassis environment**
- **show chassis fpc**
- **show chassis alarms**
- **show chassis hardware detail**

Examples:

The following examples provide the sample output of commands:

- show chassis hardware

user@host > show chassis hardware

```
Item                 Version  Part number  Serial number    Description

Chassis                                    AU0209AF0022       Dell
J-SRX100S

Routing Engine       REV 00   750-02177    BAAA0083
RE-SRX100-HM

FPC 0                                                         FPC

PIC 0                                                         8x FE Base
 PIC

Power Supply 0
```

- show chassis environment

user@host > show chassis environment

```
Class Item                    Status      Measurement

Temp  Routing Engine          OK          43 degrees C / 109 degrees
F

Power Power Supply 0          OK
```

- show chassis fpc

user@host > show chassis fpc

```
          Temp  CPU Utilization (%)   Memory    Utilization (%)

Slot State          (C)  Total  Interrupt     DRAM (MB) Heap      Buffer

  0  Online         ------------------- CPU less FPC --------------------
```

- show chassis alarms

user@host > show chassis alarms

```
    No alarms currently active
```

- show chassis hardware detail

user@host > show chassis hardware detail

```
Item                    Version  Part number  Serial number        Description

Chassis                                       AU0809AF0003        Dell
J-SRX100S

Routing Engine          REV 00   750-02177    BAAA0116
RE-SRX100-HM

  da0      999 MB    ST72682              Nand Flash
  usb0 <addr 1>     DWC OTG root hub 0  vendor 0x0000      uhub0
  usb0 <addr 2>     product 0x005a 90   vendor 0x0409      uhub1
  usb0 <addr 3>     ST72682 High Speed Mode 64218 STMicroelectronics umass0

FPC 0                                                                 FPC

  PIC 0                                                            8x FE Base
 PIC

Power Supply 0
```

> 📝 NOTE: The values given in the usb0 rows provide information for USB level debugging. This information is about USB hub topology.

Related Documentation
- Monitoring the J-SRX100 Services Gateway Components Using LEDs on page 89

- Monitoring the J-SRX100 Services Gateway Using Chassis Alarm Conditions on page 91

- Monitoring the J-SRX100 Services Gateway Power System on page 92

- Maintaining the J-SRX100 Services Gateway Hardware Components on page 85

- Using the Reset Config Button on the J-SRX100 Services Gateway on page 93

- Dell Support on page 95

Monitoring the J-SRX100 Services Gateway Components Using LEDs

Table 30 on page 89 describes the status of the LEDs on startup of the device.

Table 30: Services Gateway LED Status on Startup

LED	State	Description
Status LED	Amber	Indicates that the device is starting up.
Alarm LED	Amber	Indicates that the device is starting up for the first time since no rescue configuration is set. NOTE: When the system is up and running, if the Alarm LED is off, it indicates that no alarms are present on the device.

Table 30: Services Gateway LED Status on Startup *(continued)*

LED	State	Description
Power LED	Green	Indicates that the device is receiving normal power supply.
HA LED	Off	Indicates that the device is not part of chassis clustering set up.

The LEDs available on the services gateway display the status of various components. Table 31 on page 90 describes the LEDs.

Table 31: Component LEDs on the Services Gateway

LED	State	Meaning	Possible Causes and Corrective Actions
Status LED	Green	Indicates that the device is functioning normally.	Normal condition. No action is required.
	Amber	• Indicates that the device is starting up. • Indicates that the Reset Config button is pressed.	Normal condition. No action is required.
	Red	Indicates that an error is detected in the device.	Contact Dell Support. See "Dell Support" on page 95.
Alarm LED	Red	Indicates a major alarm.	Major alarm indicates a critical situation on the services gateway that requires immediate action. See "Monitoring the J-SRX100 Services Gateway Using Chassis Alarm Conditions" on page 91.
	Amber	Indicates a minor alarm.	Minor alarm condition requires monitoring or maintenance. If left unchecked, it might cause an interruption in service or degradation in performance. See "Monitoring the J-SRX100 Services Gateway Using Chassis Alarm Conditions" on page 91.
	Off	Indicates that there are currently no alarms.	Normal condition. No action is required.

Table 31: Component LEDs on the Services Gateway *(continued)*

LED	State	Meaning	Possible Causes and Corrective Actions
Power LED	Green	Indicates that the device is functioning normally.	Normal condition. No action is required.
	Amber	Indicates that the Power button has been pressed and quickly released and the device is gracefully shutting down.	Normal condition. No action is required.
	Off	Off indicates that the device is not receiving power.	Normal condition if the services gateway is switched-off. No action is required. If you have not powered off the services gateway, verify that the AC power cord from the power source to the device is not damaged, the socket is in working condition, and the device has an AC input voltage between 100 and 240 VAC. See "Monitoring the J-SRX100 Services Gateway Power System" on page 92.

Related Documentation

- Monitoring the J-SRX100 Services Gateway Chassis Using the CLI on page 87
- Monitoring the J-SRX100 Services Gateway Using Chassis Alarm Conditions on page 91
- Monitoring the J-SRX100 Services Gateway Power System on page 92
- Using the Reset Config Button on the J-SRX100 Services Gateway on page 93
- Changing the Reset Config Button Behavior on the J-SRX100 Services Gateway on page 94
- Dell Support on page 95

Monitoring the J-SRX100 Services Gateway Using Chassis Alarm Conditions

When the services gateway detects an alarm condition, the alarm LED on the front panel turns red or amber as appropriate.

To view a more detailed description of the alarm cause, issue the **show chassis alarms** CLI command.

For more information on the **show chassis alarms** command, see the *Junos OS Administration Guide.*

Table 32 on page 92 describes alarms that can occur for a J-SRX100 Services Gateway chassis component.

Table 32: J-SRX100 Services Gateway Chassis Alarm Conditions and Corrective Actions

Component	Alarm Conditions	Action	Alarm Severity
Boot media	The services gateway boots from an alternate boot device.	• If the internal flash fails at startup, the services gateway automatically boots itself from the alternative boot device (USB storage device). NOTE: If you configured your services gateway to boot from an alternative boot device, ignore this alarm condition. • Reformat the internal flash and install a bootable image. (See the *Junos OS Administration Guide.*) • If you did not configure the services gateway to boot from an alternative boot device, contact Dell Support. See "Dell Support" on page 95.	Amber (minor)
Hardware components on the services gateway	The services gateway chassis temperature or chassis is too warm	Check the room temperature. See "J-SRX100 Services Gateway Specifications" on page 7.	Amber (minor)
	The services gateway temperature is too high, either because of an internal overheating condition or because the maximum recommended room temperature has been exceeded.	The services gateway shuts down automatically in four minutes.	Red (major)

Related Documentation

- Monitoring the J-SRX100 Services Gateway Chassis Using the CLI on page 87
- Monitoring the J-SRX100 Services Gateway Components Using LEDs on page 89
- Monitoring the J-SRX100 Services Gateway Power System on page 92
- Using the Reset Config Button on the J-SRX100 Services Gateway on page 93
- Changing the Reset Config Button Behavior on the J-SRX100 Services Gateway on page 94
- Dell Support on page 95

Monitoring the J-SRX100 Services Gateway Power System

The LEDs on the services gateway enable you to determine the performance and operation. The Power LED, located on the front panel of the services gateway, indicates the different settings with respect to the power system.

Table 33 on page 93 describes different Power LED status settings and their corrective actions.

Table 33: Services Gateway Power LED Status

LED Status	Meaning	Possible Cause and Corrective Action
Green	Device is receiving power, and the internal power supply is functional.	Normal indication. No action is required.
Amber	Indicates that the power button has been pressed and quickly released.	Normal indication. No action is required.
Off	Indicates that the device is not receiving power.	• Verify that the AC power cord from the power source to the device is not damaged. If the insulation is cracked or broken, immediately replace the cord or cable. • Ensure that the socket you plug in is in working condition. • Ensure the device has an AC input voltage between 100 and 240 VAC. • If you cannot determine the cause of the problem or need additional assistance, see "Dell Support" on page 95.

Related Documentation

- Monitoring the J-SRX100 Services Gateway Chassis Using the CLI on page 87
- Monitoring the J-SRX100 Services Gateway Components Using LEDs on page 89
- Monitoring the J-SRX100 Services Gateway Using Chassis Alarm Conditions on page 91
- Using the Reset Config Button on the J-SRX100 Services Gateway on page 93
- Changing the Reset Config Button Behavior on the J-SRX100 Services Gateway on page 94
- Dell Support on page 95

Resetting the Configuration File When the J-SRX100 Services Gateway Is Inaccessible

This topic includes the following sections:

- Using the Reset Config Button on the J-SRX100 Services Gateway on page 93
- Changing the Reset Config Button Behavior on the J-SRX100 Services Gateway on page 94

Using the Reset Config Button on the J-SRX100 Services Gateway

If a configuration fails or denies management access to the services gateway, you can use the Reset Config button to restore the device to the factory default configuration or

a rescue configuration. For example, if someone inadvertently commits a configuration that denies management access to a services gateway, you can delete the invalid configuration and replace it with a rescue configuration by pressing the Reset Config button.

> 🖊 NOTE: The Reset Config button is recessed to prevent it from being pressed accidentally.

The rescue configuration is a previously committed, valid configuration. You must have previously set the rescue configuration through the J-Web interface or the CLI.

To press the Reset Config button, insert a small probe (such as a straightened paper clip) into the pinhole on the front panel.

- By default, pressing and quickly releasing the Reset Config button loads and commits the rescue configuration through the J-Web interface or the CLI. The Status LED glows amber during this time. For details, see the *Junos OS CLI User Guide*.

- By default, pressing and holding the Reset Config button for 15 seconds or more—until the Status LED glows amber—deletes all configurations on the device, including the backup configurations and rescue configuration, and loads and commits the factory configuration. For details about factory default settings, see the *Junos OS Administration Guide*.

Related Documentation
- Changing the Reset Config Button Behavior on the J-SRX100 Services Gateway on page 94

- Monitoring the J-SRX100 Services Gateway Chassis Using the CLI on page 87

- Monitoring the J-SRX100 Services Gateway Components Using LEDs on page 89

- Monitoring the J-SRX100 Services Gateway Using Chassis Alarm Conditions on page 91

- Monitoring the J-SRX100 Services Gateway Power System on page 92

- Dell Support on page 95

Changing the Reset Config Button Behavior on the J-SRX100 Services Gateway

You can change the default operation of the Reset Config button by limiting how the button resets the services gateway:

- To prevent the Reset Config button from setting the device to the factory default configuration and deleting all other configurations:

  admin@host# set chassis config-button no-clear

  You can still press and quickly release the button to reset it to the rescue configuration.

- To prevent the Reset Config button from setting the device to the rescue configuration:

  admin@host# set chassis config-button no-rescue

You can still press and hold the button for 15 seconds or more to reset the gateway to the factory defaults.

- To disable the button and prevent the device from resetting to either configuration:

  admin@host# set chassis config-button no-clear no-rescue

The **no-rescue** option prevents the Reset Config button from loading the rescue configuration. The **no-clear** option prevents the Reset Config button from deleting all configurations on the services gateway.

To return the function of the Reset Config button to its default behavior, remove the **config-button** statement from the device configuration.

Related Documentation
- Using the Reset Config Button on the J-SRX100 Services Gateway on page 93
- Monitoring the J-SRX100 Services Gateway Chassis Using the CLI on page 87
- Monitoring the J-SRX100 Services Gateway Components Using LEDs on page 89
- Monitoring the J-SRX100 Services Gateway Using Chassis Alarm Conditions on page 91
- Monitoring the J-SRX100 Services Gateway Power System on page 92
- Dell Support on page 95

Dell Support

This topic includes the following section:

- Dell Support on page 95

Dell Support

If you need assistance while troubleshooting a services gateway, please go to the Dell Support website at http://www.support.dell.com .

Related Documentation
- Contacting Dell on page 135

PART 4

Appendixes

Safety and Regulatory Compliance Information

This appendix includes the following sections:

J-SRX100 Services Gateway Definition of Safety Warning Levels

This guide uses the following three levels of safety warnings:

NOTE: You might find this information helpful in a particular situation or might otherwise overlook it.

CAUTION: You need to observe the specified guidelines to avoid minor injury or discomfort to you or severe damage to the services gateway.

WARNING: This symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards

involved with electrical circuitry and be familiar with standard practices for preventing accidents.

Waarschuwing Dit waarschuwingssymbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van standaard maatregelen om ongelukken te voorkomen.

Varoitus Tämä varoitusmerkki merkitsee vaaraa. Olet tilanteessa, joka voi johtaa ruumiinvammaan. Ennen kuin työskentelet minkään laitteiston parissa, ota selvää sähkökytkentöihin liittyvistä vaaroista ja tavanomaisista onnettomuuksien ehkäisykeinoista.

Attention Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant causer des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers posés par les circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents.

Warnung Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu einer Körperverletzung führen könnte. Bevor Sie mit der Arbeit an irgendeinem Gerät beginnen, seien Sie sich der mit elektrischen Stromkreisen verbundenen Gefahren und der Standardpraktiken zur Vermeidung von Unfällen bewußt.

Avvertenza Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di lavorare su qualsiasi apparecchiatura, occorre conoscere i pericoli relativi ai circuiti elettrici ed essere al corrente delle pratiche standard per la prevenzione di incidenti.

Advarsel Dette varselsymbolet betyr fare. Du befinner deg i en situasjon som kan føre til personskade. Før du utfører arbeid på utstyr, må du vare oppmerksom på de faremomentene som elektriske kretser innebærer, samt gjøre deg kjent med vanlig praksis når det gjelder å unngå ulykker.

Aviso Este símbolo de aviso indica perigo. Encontra-se numa situação que lhe poderá causar danos físicos. Antes de começar a trabalhar com qualquer equipamento, familiarize-se com os perigos relacionados com circuitos eléctricos, e com quaisquer práticas comuns que possam prevenir possíveis acidentes.

¡Atención! Este símbolo de aviso significa peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considerar los riesgos que entraña la corriente eléctrica y familiarizarse con los procedimientos estándar de prevención de accidentes.

Varning! Denna varningssymbol signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning

måste du vara medveten om farorna med elkretsar och känna till vanligt förfarande för att förebygga skador.

J-SRX100 Services Gateway General Safety Guidelines and Warnings

General Safety Guidelines and Warnings

The following guidelines help ensure your safety and protect the services gateway from damage. The list of guidelines might not address all potentially hazardous situations in your working environment, so be alert and exercise good judgment at all times.

- Perform only the procedures explicitly described in this guide. Make sure that only authorized service personnel perform other system services.
- Keep the area around the chassis clear and free from dust before, during, and after installation.
- Keep tools away from areas where people could trip on them.
- Wear safety glasses if you are working under any conditions that could be hazardous to your eyes.
- Do not perform any actions that create a potential hazard to people or make the equipment unsafe.
- Never install or manipulate wiring during electrical storms.
- Never install electrical jacks in wet locations unless the jacks are specifically designed for wet environments.
- Do not open or remove chassis covers or sheet metal parts unless instructions are provided in this guide. Such an action could cause severe electrical shock.
- Do not push or force any objects through any opening in the chassis frame. Such an action could result in electrical shock or fire.
- Avoid spilling liquid onto the services gateway chassis or onto any services gateway component. Such an action could cause electrical shock or damage the services gateway.
- Avoid touching uninsulated electrical wires or terminals that have not been disconnected from their power source. Such an action could cause electrical shock.

Qualified Personnel Warning

⚠️ WARNING: Only trained and qualified personnel should install or replace the services gateway.

Waarschuwing Installatie en reparaties mogen uitsluitend door getraind en bevoegd personeel uitgevoerd worden.

Varoitus Ainoastaan koulutettu ja pätevä henkilökunta saa asentaa tai vaihtaa tämän laitteen.

Attention Tout installation ou remplacement de l'appareil doit être réalisé par du personnel qualifié et compétent.

Warnung Gerät nur von geschultem, qualifiziertem Personal installieren oder auswechseln lassen.

Avvertenza Solo personale addestrato e qualificato deve essere autorizzato ad installare o sostituire questo apparecchio.

Advarsel Kun kvalifisert personell med riktig opplæring bør montere eller bytte ut dette utstyret.

Aviso Este equipamento deverá ser instalado ou substituído apenas por pessoal devidamente treinado e qualificado.

¡Atención! Estos equipos deben ser instalados y reemplazados exclusivamente por personal técnico adecuadamente preparado y capacitado.

Varning! Denna utrustning ska endast installeras och bytas ut av utbildad och kvalificerad personal.

Restricted Access Area Warning

⚠️ WARNING: The services gateway is intended for installation in restricted access areas. A restricted access area is an area to which access can be gained only by service personnel through the use of a special tool, lock and key, or other means of security, and which is controlled by the authority responsible for the location.

Waarschuwing Dit toestel is bedoeld voor installatie op plaatsen met beperkte toegang. Een plaats met beperkte toegang is een plaats waar toegang slechts door servicepersoneel verkregen kan worden door middel van een speciaal instrument, een slot en sleutel, of een ander veiligheidsmiddel, en welke beheerd wordt door de overheidsinstantie die verantwoordelijk is voor de locatie.

Varoitus Tämä laite on tarkoitettu asennettavaksi paikkaan, johon pääsy on rajoitettua. Paikka, johon pääsy on rajoitettua, tarkoittaa paikkaa, johon vain huoltohenkilöstö pääsee jonkin erikoistyökalun, lukkoon sopivan avaimen

tai jonkin muun turvalaitteen avulla ja joka on paikasta vastuussa olevien toimivaltaisten henkilöiden valvoma.

Attention Cet appareil est à installer dans des zones d'accès réservé. Ces dernières sont des zones auxquelles seul le personnel de service peut accéder en utilisant un outil spécial, un mécanisme de verrouillage et une clé, ou tout autre moyen de sécurité. L'accès aux zones de sécurité est sous le contrôle de l'autorité responsable de l'emplacement.

Warnung Diese Einheit ist zur Installation in Bereichen mit beschränktem Zutritt vorgesehen. Ein Bereich mit beschränktem Zutritt ist ein Bereich, zu dem nur Wartungspersonal mit einem Spezialwerkzeugs, Schloß und Schlüssel oder anderer Sicherheitsvorkehrungen Zugang hat, und der von dem für die Anlage zuständigen Gremium kontrolliert wird.

Avvertenza Questa unità deve essere installata in un'area ad accesso limitato. Un'area ad accesso limitato è un'area accessibile solo a personale di assistenza tramite un'attrezzo speciale, lucchetto, o altri dispositivi di sicurezza, ed è controllata dall'autorità responsabile della zona.

Advarsel Denne enheten er laget for installasjon i områder med begrenset adgang. Et område med begrenset adgang gir kun adgang til servicepersonale som bruker et spesielt verktøy, lås og nøkkel, eller en annen sikkerhetsanordning, og det kontrolleres av den autoriteten som er ansvarlig for området.

Aviso Esta unidade foi concebida para instalação em áreas de acesso restrito. Uma área de acesso restrito é uma área à qual apenas tem acesso o pessoal de serviço autorizado, que possua uma ferramenta, chave e fechadura especial, ou qualquer outra forma de segurança. Esta área é controlada pela autoridade responsável pelo local.

¡Atención! Esta unidad ha sido diseñada para instalarse en áreas de acceso restringido. Área de acceso restringido significa un área a la que solamente tiene acceso el personal de servicio mediante la utilización de una herramienta especial, cerradura con llave, o algún otro medio de seguridad, y que está bajo el control de la autoridad responsable del local.

Varning! Denna enhet är avsedd för installation i områden med begränsat tillträde. Ett område med begränsat tillträde får endast tillträdas av servicepersonal med ett speciellt verktyg, lås och nyckel, eller annan säkerhetsanordning, och kontrolleras av den auktoritet som ansvarar för området.

Preventing Electrostatic Discharge Damage to the Services Gateway

Many services gateway hardware components are sensitive to damage from static electricity. Some components can be impaired by voltages as low as 30 V. You can easily generate potentially damaging static voltages whenever you handle plastic or foam packing material or if you move components across plastic or carpets. Observe the following guidelines to minimize the potential for electrostatic discharge (ESD) damage, which can cause intermittent or complete component failures:

- Always use an ESD wrist strap or ankle strap, and verify that it is in direct contact with your skin.

⚠ CAUTION: For safety, periodically check the resistance value of the ESD strap. The measurement should be in the range of 1 to 10 Mohms.

- When handling any component that is removed from the chassis, verify that the equipment end of your ESD strap is attached to one of the ESD points on the chassis.

- Avoid contact between the component and your clothing. ESD voltages emitted from clothing can still damage components.

- When removing or installing a component, always place it component-side up on an antistatic surface, in an antistatic card rack, or in an electrostatic bag. If you are returning a component, place it into an electrostatic bag before packing it.

Figure 19: Placing a Component into an Electrostatic Bag
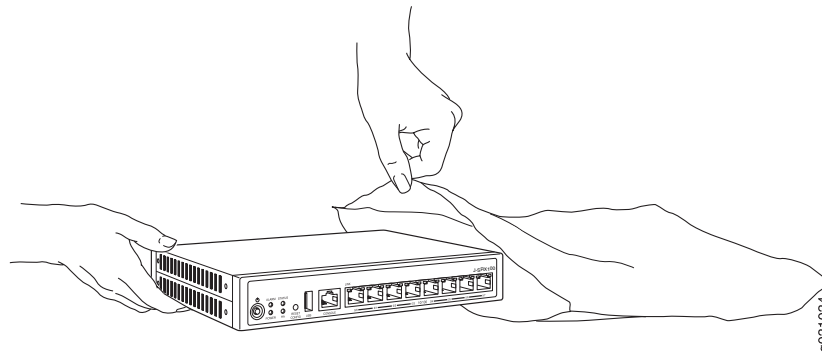
J-SRX100 Services Gateway Fire Safety Requirements

In the event of a fire emergency involving devices and other network equipment, the safety of people is the primary concern. Establish procedures for protecting people in the event of a fire emergency, provide safety training, and properly provision fire-control equipment and fire extinguishers.

In addition, establish procedures to protect your equipment in the event of a fire emergency. Products should be installed in an environment suitable for electronic

equipment. We recommend that fire suppression equipment be available in the event of a fire in the vicinity of the equipment and that all local fire, safety, and electrical codes and ordinances be observed when installing and operating your equipment.

In the event of an electrical hazard or an electrical fire, first turn power off to the equipment at the source. Then use a Type C fire extinguisher to extinguish the fire. Type C fire extinguishers, which use noncorrosive fire retardants such as carbon dioxide (CO_2) and Halotron, are most effective for suppressing electrical fires. Type C fire extinguishers displace the oxygen from the point of combustion to eliminate the fire. For extinguishing fire on or around equipment that draws air from the environment for cooling, use this type of inert oxygen displacement extinguisher instead of an extinguisher that leave residues on equipment.

Do not use multipurpose Type ABC chemical fire extinguishers (dry chemical fire extinguishers) near the equipment. The primary ingredient in these fire extinguishers is monoammonium phosphate, which is very sticky and difficult to clean. In addition, in minute amounts of moisture, monoammonium phosphate can become highly corrosive and corrodes most metals.

Any equipment in a room in which a chemical fire extinguisher has been discharged is subject to premature failure and unreliable operation. The equipment is considered to be irreparably damaged.

NOTE: To keep warranties effective, do not use a dry chemical fire extinguisher to control a fire at or near a J-SRX Series services gateway. If a dry chemical fire extinguisher is used, the unit is no longer eligible for coverage under a service agreement.

We recommend that you dispose of any irreparably damaged equipment in an environmentally responsible manner.

Related Documentation

- J-SRX100 Services Gateway General Safety Guidelines and Warnings on page 101
- J-SRX100 Services Gateway Installation Safety Guidelines and Warnings on page 105

J-SRX100 Services Gateway Installation Safety Guidelines and Warnings

Installation Instructions Warning

WARNING: Read the installation instructions before you connect the services gateway to a power source.

Waarschuwing Raadpleeg de installatie-aanwijzingen voordat u het systeem met de voeding verbindt.

Varoitus Lue asennusohjeet ennen järjestelmän yhdistämistä virtalähteeseen.

Attention Avant de brancher le système sur la source d'alimentation, consulter les directives d'installation.

Warnung Lesen Sie die Installationsanweisungen, bevor Sie das System an die Stromquelle anschließen.

Avvertenza Consultare le istruzioni di installazione prima di collegare il sistema all'alimentatore.

Advarsel Les installasjonsinstruksjonene før systemet kobles til strømkilden.

Aviso Leia as instruções de instalação antes de ligar o sistema à sua fonte de energia.

¡Atención! Ver las instrucciones de instalación antes de conectar el sistema a la red de alimentación.

Varning! Läs installationsanvisningarna innan du kopplar systemet till dess strömförsörjningsenhet.

Rack-Mounting Requirements and Warnings

Ensure that the equipment rack into which the services gateway is installed is evenly and securely supported to avoid the hazardous condition that could result from uneven mechanical loading.

WARNING: To prevent bodily injury when mounting or servicing the services gateway in a rack, take the following precautions to ensure that the system remains stable. The following directives help maintain your safety:

- The services gateway must be installed into a rack that is secured to the building structure.

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

- When mounting the services gateway in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.

- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the services gateway in the rack.

Waarschuwing Om lichamelijk letsel te voorkomen wanneer u dit toestel in een rek monteert of het daar een servicebeurt geeft, moet u speciale voorzorgsmaatregelen nemen om ervoor te zorgen dat het toestel stabiel blijft. De onderstaande richtlijnen worden verstrekt om uw veiligheid te verzekeren:

- De J-SRX Series services gateway moet in een stellage worden geïnstalleerd die aan een bouwsel is verankerd.

- Dit toestel dient onderaan in het rek gemonteerd te worden als het toestel het enige in het rek is.

- Wanneer u dit toestel in een gedeeltelijk gevuld rek monteert, dient u het rek van onderen naar boven te laden met het zwaarste onderdeel onderaan in het rek.

- Als het rek voorzien is van stabiliseringshulpmiddelen, dient u de stabilisatoren te monteren voordat u het toestel in het rek monteert of het daar een servicebeurt geeft.

Varoitus Kun laite asetetaan telineeseen tai huolletaan sen ollessa telineessä, on noudatettava erityisiä varotoimia järjestelmän vakavuuden säilyttämiseksi, jotta vältytään loukkaantumiselta. Noudata seuraavia turvallisuusohjeita:

- J-SRX Series services gateway on asennettava telineeseen, joka on kiinnitetty rakennukseen.

- Jos telineessä ei ole muita laitteita, aseta laite telineen alaosaan.

- Jos laite asetetaan osaksi täytettyyn telineeseen, aloita kuormittaminen sen alaosasta kaikkein raskaimmalla esineellä ja siirry sitten sen yläosaan.

- Jos telinettä varten on vakaimet, asenna ne ennen laitteen asettamista telineeseen tai sen huoltamista siinä.

Attention Pour éviter toute blessure corporelle pendant les opérations de montage ou de réparation de cette unité en casier, il convient de prendre des précautions spéciales afin de maintenir la stabilité du système. Les directives ci-dessous sont destinées à assurer la protection du personnel:

- Le rack sur lequel est monté le J-SRX Series services gateway doit être fixé à la structure du bâtiment.

- Si cette unité constitue la seule unité montée en casier, elle doit être placée dans le bas.

- Si cette unité est montée dans un casier partiellement rempli, charger le casier de bas en haut en plaçant l'élément le plus lourd dans le bas.

- Si le casier est équipé de dispositifs stabilisateurs, installer les stabilisateurs avant de monter ou de réparer l'unité en casier.

Warnung Zur Vermeidung von Körperverletzung beim Anbringen oder Warten dieser Einheit in einem Gestell müssen Sie besondere Vorkehrungen treffen, um sicherzustellen, daß das System stabil bleibt. Die folgenden Richtlinien sollen zur Gewährleistung Ihrer Sicherheit dienen:

- Der J-SRX Series services gateway muß in einem Gestell installiert werden, das in der Gebäudestruktur verankert ist.

- Wenn diese Einheit die einzige im Gestell ist, sollte sie unten im Gestell angebracht werden.

- Bei Anbringung dieser Einheit in einem zum Teil gefüllten Gestell ist das Gestell von unten nach oben zu laden, wobei das schwerste Bauteil unten im Gestell anzubringen ist.

- Wird das Gestell mit Stabilisierungszubehör geliefert, sind zuerst die Stabilisatoren zu installieren, bevor Sie die Einheit im Gestell anbringen oder sie warten.

Avvertenza Per evitare infortuni fisici durante il montaggio o la manutenzione di questa unità in un supporto, occorre osservare speciali precauzioni per garantire che il sistema rimanga stabile. Le seguenti direttive vengono fornite per garantire la sicurezza personale:

- Il J-SRX Series services gateway deve essere installato in un telaio, il quale deve essere fissato alla struttura dell'edificio.

- Questa unità deve venire montata sul fondo del supporto, se si tratta dell'unica unità da montare nel supporto.

- Quando questa unità viene montata in un supporto parzialmente pieno, caricare il supporto dal basso all'alto, con il componente più pesante sistemato sul fondo del supporto.

- Se il supporto è dotato di dispositivi stabilizzanti, installare tali dispositivi prima di montare o di procedere alla manutenzione dell'unità nel supporto.

Advarsel Unngå fysiske skader under montering eller reparasjonsarbeid på denne enheten når den befinner seg i et kabinett. Vær nøye med at systemet er stabilt. Følgende retningslinjer er gitt for å verne om sikkerheten:

- J-SRX Series services gateway må installeres i et stativ som er forankret til bygningsstrukturen.

- Denne enheten bør monteres nederst i kabinettet hvis dette er den eneste enheten i kabinettet.

- Ved montering av denne enheten i et kabinett som er delvis fylt, skal kabinettet lastes fra bunnen og opp med den tyngste komponenten nederst i kabinettet.

- Hvis kabinettet er utstyrt med stabiliseringsutstyr, skal stabilisatorene installeres før montering eller utføring av reparasjonsarbeid på enheten i kabinettet.

Aviso Para se prevenir contra danos corporais ao montar ou reparar esta unidade numa estante, deverá tomar precauções especiais para se certificar

de que o sistema possui um suporte estável. As seguintes directrizes ajudá-lo-ão a efectuar o seu trabalho com segurança:

- O J-SRX Series services gateway deverá ser instalado numa prateleira fixa à estrutura do edificio.

- Esta unidade deverá ser montada na parte inferior da estante, caso seja esta a única unidade a ser montada.

- Ao montar esta unidade numa estante parcialmente ocupada, coloque os itens mais pesados na parte inferior da estante, arrumando-os de baixo para cima.

- Se a estante possuir um dispositivo de estabilização, instale-o antes de montar ou reparar a unidade.

¡Atención! Para evitar lesiones durante el montaje de este equipo sobre un bastidor, o posteriormente durante su mantenimiento, se debe poner mucho cuidado en que el sistema quede bien estable. Para garantizar su seguridad, proceda según las siguientes instrucciones:

- El J-SRX Series services gateway debe instalarse en un bastidor fijado a la estructura del edificio.

- Colocar el equipo en la parte inferior del bastidor, cuando sea la única unidad en el mismo.

- Cuando este equipo se vaya a instalar en un bastidor parcialmente ocupado, comenzar la instalación desde la parte inferior hacia la superior colocando el equipo más pesado en la parte inferior.

- Si el bastidor dispone de dispositivos estabilizadores, instalar éstos antes de montar o proceder al mantenimiento del equipo instalado en el bastidor.

Varning! För att undvika kroppsskada när du installerar eller utför underhållsarbete på denna enhet på en ställning måste du vidta särskilda försiktighetsåtgärder för att försäkra dig om att systemet står stadigt. Följande riktlinjer ges för att trygga din säkerhet:

- J-SRX Series services gateway måste installeras i en ställning som är förankrad i byggnadens struktur.

- Om denna enhet är den enda enheten på ställningen skall den installeras längst ned på ställningen.

- Om denna enhet installeras på en delvis fylld ställning skall ställningen fyllas nedifrån och upp, med de tyngsta enheterna längst ned på ställningen.

- Om ställningen är försedd med stabiliseringsdon skall dessa monteras fast innan enheten installeras eller underhålls på ställningen.

Related Documentation
- J-SRX100 Services Gateway Fire Safety Requirements on page 104

J-SRX100 Services Gateway Laser and LED Safety Guidelines and Warnings

Observe the following guidelines and warnings when working around the J-SRX100 Services Gateway:

Laser and LED Safety Guidelines and Warnings

General Laser Safety Guidelines

When working around devices, observe the following safety guidelines to prevent eye injury:

- Do not look into unterminated ports or at fibers that connect to unknown sources.

- Do not examine unterminated optical ports with optical instruments.

- Avoid direct exposure to the beam.

⚠️ WARNING: Unterminated optical connectors can emit invisible laser radiation. The lens in the human eye focuses all the laser power on the retina, so focusing the eye directly on a laser source—even a low-power laser—could permanently damage the eye.

Class 1 Laser Product Warning

⚠️ WARNING: Class 1 laser product.

Waarschuwing Klasse-1 laser produkt.

Varoitus Luokan 1 lasertuote.

Attention Produit laser de classe I.

Warnung Laserprodukt der Klasse 1.

Avvertenza Prodotto laser di Classe 1.

Advarsel Laserprodukt av klasse 1.

Aviso Produto laser de classe 1.

¡Atención! Producto láser Clase I.

Varning! Laserprodukt av klass 1.

Class 1 LED Product Warning

WARNING: Class 1 LED product.

Waarschuwing Klasse 1 LED-product.

Varoitus Luokan 1 valodiodituote.

Attention Alarme de produit LED Class I.

Warnung Class 1 LED-Produktwarnung.

Avvertenza Avvertenza prodotto LED di Classe 1.

Advarsel LED-produkt i klasse 1.

Aviso Produto de classe 1 com LED.

¡Atención! Aviso sobre producto LED de Clase 1.

Varning! Lysdiodprodukt av klass 1.

Laser Beam Warning

WARNING: Do not stare into the laser beam or view it directly with optical instruments.

Waarschuwing Niet in de straal staren of hem rechtstreeks bekijken met optische instrumenten.

Varoitus Älä katso säteeseen äläkä tarkastele sitä suoraan optisen laitteen avulla.

Attention Ne pas fixer le faisceau des yeux, ni l'observer directement à l'aide d'instruments optiques.

Warnung Nicht direkt in den Strahl blicken und ihn nicht direkt mit optischen Geräten prüfen.

Avvertenza Non fissare il raggio con gli occhi né usare strumenti ottici per osservarlo direttamente.

Advarsel Stirr eller se ikke direkte p strlen med optiske instrumenter.

Aviso Não olhe fixamente para o raio, nem olhe para ele directamente com instrumentos ópticos.

¡Atención! No mirar fijamente el haz ni observarlo directamente con instrumentos ópticos.

Varning! Rikta inte blicken in mot strålen och titta inte direkt på den genom optiska instrument.

Radiation from Open Port Apertures Warning

⚠️ WARNING: Because invisible radiation may be emitted from the aperture of the port when no fiber cable is connected, avoid exposure to radiation and do not stare into open apertures.

Waarschuwing Aangezien onzichtbare straling vanuit de opening van de poort kan komen als er geen fiberkabel aangesloten is, dient blootstelling aan straling en het kijken in open openingen vermeden te worden.

Varoitus Koska portin aukosta voi emittoitua näkymätöntä säteilyä, kun kuitukaapelia ei ole kytkettynä, vältä säteilylle altistumista äläkä katso avoimiin aukkoihin.

Attention Des radiations invisibles à l'il nu pouvant traverser l'ouverture du port lorsqu'aucun câble en fibre optique n'y est connecté, il est recommandé de ne pas regarder fixement l'intérieur de ces ouvertures.

Warnung Aus der Port-Öffnung können unsichtbare Strahlen emittieren, wenn kein Glasfaserkabel angeschlossen ist. Vermeiden Sie es, sich den Strahlungen auszusetzen, und starren Sie nicht in die Öffnungen!

Avvertenza Quando i cavi in fibra non sono inseriti, radiazioni invisibili possono essere emesse attraverso l'apertura della porta. Evitate di esporvi alle radiazioni e non guardate direttamente nelle aperture.

Advarsel Unngå utsettelse for stråling, og stirr ikke inn i åpninger som er åpne, fordi usynlig stråling kan emiteres fra portens åpning når det ikke er tilkoblet en fiberkabel.

Aviso Dada a possibilidade de emissão de radiação invisível através do orifício da via de acesso, quando esta não tiver nenhum cabo de fibra conectado, deverá evitar a exposição à radiação e não deverá olhar fixamente para orifícios que se encontrarem a descoberto.

¡Atención! Debido a que la apertura del puerto puede emitir radiación invisible cuando no existe un cable de fibra conectado, evite mirar directamente a las aperturas para no exponerse a la radiación.

Varning! Osynlig strålning kan avges från en portöppning utan ansluten fiberkabel och du bör därför undvika att bli utsatt för strålning genom att inte stirra in i oskyddade öppningar.

Related Documentation

- J-SRX100 Services Gateway Installation Safety Guidelines and Warnings on page 105
- J-SRX100 Services Gateway Maintenance and Operational Safety Guidelines and Warnings on page 113

J-SRX100 Services Gateway Maintenance and Operational Safety Guidelines and Warnings

As you maintain the services gateway, observe the following guidelines and warnings:

- Safety Guidelines and Warnings on page 113

Safety Guidelines and Warnings

Battery Handling Warning

⚠️ WARNING: Replacing the battery incorrectly might result in an explosion. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Waarschuwing Er is ontploffingsgevaar als de batterij verkeerd vervangen wordt. Vervang de batterij slechts met hetzelfde of een equivalent type dat door de fabrikant aanbevolen is. Gebruikte batterijen dienen overeenkomstig fabrieksvoorschriften weggeworpen te worden.

Varoitus Räjähdyksen vaara, jos akku on vaihdettu väärään akkuun. Käytä vaihtamiseen ainoastaan saman- tai vastaavantyyppistä akkua, joka on valmistajan suosittelema. Hävitä käytetyt akut valmistajan ohjeiden mukaan.

Attention Danger d'explosion si la pile n'est pas remplacée correctement. Ne la remplacer que par une pile de type semblable ou équivalent, recommandée par le fabricant. Jeter les piles usagées conformément aux instructions du fabricant.

Warnung Bei Einsetzen einer falschen Batterie besteht Explosionsgefahr. Ersetzen Sie die Batterie nur durch den gleichen oder vom Hersteller empfohlenen Batterietyp. Entsorgen Sie die benutzten Batterien nach den Anweisungen des Herstellers.

Avvertenza Pericolo di esplosione se la batteria non è installata correttamente. Sostituire solo con una di tipo uguale o equivalente, consigliata dal produttore. Eliminare le batterie usate secondo le istruzioni del produttore.

Advarsel Det kan være fare for eksplosjon hvis batteriet skiftes på feil måte. Skift kun med samme eller tilsvarende type som er anbefalt av produsenten. Kasser brukte batterier i henhold til produsentens instruksjoner.

Aviso Existe perigo de explosão se a bateria for substituída incorrectamente. Substitua a bateria por uma bateria igual ou de um tipo equivalente recomendado pelo fabricante. Destrua as baterias usadas conforme as instruções do fabricante.

¡Atención! Existe peligro de explosión si la batería se reemplaza de manera incorrecta. Reemplazar la batería exclusivamente con el mismo tipo o el

equivalente recomendado por el fabricante. Desechar las baterías gastadas según las instrucciones del fabricante.

Varning! Explosionsfara vid felaktigt batteribyte. Ersätt endast batteriet med samma batterityp som rekommenderas av tillverkaren eller motsvarande. Följ tillverkarens anvisningar vid kassering av använda batterier.

Jewelry Removal Warning

WARNING: 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 weld the metal object to the terminals.

Waarschuwing Alvorens aan apparatuur te werken die met elektrische leidingen is verbonden, sieraden (inclusief ringen, kettingen en horloges) verwijderen. Metalen voorwerpen worden warm wanneer ze met stroom en aarde zijn verbonden, en kunnen ernstige brandwonden veroorzaken of het metalen voorwerp aan de aansluitklemmen lassen.

Varoitus Ennen kuin työskentelet voimavirtajohtoihin kytkettyjen laitteiden parissa, ota pois kaikki korut (sormukset, kaulakorut ja kellot mukaan lukien). Metalliesineet kuumenevat, kun ne ovat yhteydessä sähkövirran ja maan kanssa, ja ne voivat aiheuttaa vakavia palovammoja tai hitsata metalliesineet kiinni liitäntänapoihin.

Attention Avant d'accéder à cet équipement connecté aux lignes électriques, ôter tout bijou (anneaux, colliers et montres compris). Lorsqu'ils sont branchés à l'alimentation et reliés à la terre, les objets métalliques chauffent, ce qui peut provoquer des blessures graves ou souder l'objet métallique aux bornes.

Warnung Vor der Arbeit an Geräten, die an das Netz angeschlossen sind, jeglichen Schmuck (einschließlich Ringe, Ketten und Uhren) abnehmen. Metallgegenstände erhitzen sich, wenn sie an das Netz und die Erde angeschlossen werden, und können schwere Verbrennungen verursachen oder an die Anschlußklemmen angeschweißt werden.

Avvertenza Prima di intervenire su apparecchiature collegate alle linee di alimentazione, togliersi qualsiasi monile (inclusi anelli, collane, braccialetti ed orologi). Gli oggetti metallici si riscaldano quando sono collegati tra punti di alimentazione e massa: possono causare ustioni gravi oppure il metallo può saldarsi ai terminali.

Advarsel Fjern alle smykker (inkludert ringer, halskjeder og klokker) før du skal arbeide på utstyr som er koblet til kraftledninger. Metallgjenstander som er koblet til kraftledninger og jord blir svært varme og kan forårsake alvorlige brannskader eller smelte fast til polene.

Aviso Antes de trabalhar em equipamento que esteja ligado a linhas de corrente, retire todas as jóias que estiver a usar (incluindo anéis, fios e relógios). Os objectos metálicos aquecerão em contacto com a corrente e em contacto com a ligação à terra, podendo causar queimaduras graves ou ficarem soldados aos terminais.

¡Atención! Antes de operar sobre equipos conectados a líneas de alimentación, quitarse las joyas (incluidos anillos, collares y relojes). Los objetos de metal se calientan cuando se conectan a la alimentación y a tierra, lo que puede ocasionar quemaduras graves o que los objetos metálicos queden soldados a los bornes.

Varning! Tag av alla smycken (inklusive ringar, halsband och armbandsur) innan du arbetar på utrustning som är kopplad till kraftledningar. Metallobjekt hettas upp när de kopplas ihop med ström och jord och kan förorsaka allvarliga brännskador; metallobjekt kan också sammansvetsas med kontakterna.

Lightning Activity Warning

WARNING: Do not work on the system or connect or disconnect cables during periods of lightning activity.

Waarschuwing Tijdens onweer dat gepaard gaat met bliksem, dient u niet aan het systeem te werken of kabels aan te sluiten of te ontkoppelen.

Varoitus Älä työskentele järjestelmän parissa äläkä yhdistä tai irrota kaapeleita ukkosilmalla.

Attention Ne pas travailler sur le système ni brancher ou débrancher les câbles pendant un orage.

Warnung Arbeiten Sie nicht am System und schließen Sie keine Kabel an bzw. trennen Sie keine ab, wenn es gewittert.

Avvertenza Non lavorare sul sistema o collegare oppure scollegare i cavi durante un temporale con fulmini.

Advarsel Utfør aldri arbeid på systemet, eller koble kabler til eller fra systemet når det tordner eller lyner.

Aviso Não trabalhe no sistema ou ligue e desligue cabos durante períodos de mau tempo (trovoada).

¡Atención! No operar el sistema ni conectar o desconectar cables durante el transcurso de descargas eléctricas en la atmósfera.

Varning! Vid åska skall du aldrig utföra arbete på systemet eller ansluta eller koppla loss kablar.

Operating Temperature Warning

⚠️ **WARNING:** To prevent the services gateway from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of 104°F (40°C). To prevent airflow restriction, allow at least 6 in. (15.2 cm) of clearance around the ventilation openings.

Waarschuwing Om te voorkomen dat welke services gateway van de J-SRX Series services gateway dan ook oververhit raakt, dient u deze niet te bedienen op een plaats waar de maximale aanbevolen omgevingstemperatuur van 40°C wordt overschreden. Om te voorkomen dat de luchtstroom wordt beperkt, dient er minstens 15,2 cm speling rond de ventilatie-openingen te zijn.

Varoitus Ettei J-SRX Series services gateway-sarjan reititin ylikuumentuisi, sitä ei saa käyttää tilassa, jonka lämpötila ylittää korkeimman suositellun ympäristölämpötilan 40°C. Ettei ilmanvaihto estyisi, tuuletusaukkojen ympärille on jätettävä ainakin 15,2 cm tilaa.

Attention Pour éviter toute surchauffe des routeurs de la gamme J-SRX Series services gateway, ne l'utilisez pas dans une zone où la température ambiante est supérieure à 40°C. Pour permettre un flot d'air constant, dégagez un espace d'au moins 15,2 cm autour des ouvertures de ventilations.

Warnung Um einen services gateway der services gateway vor Überhitzung zu schützen, darf dieser nicht in einer Gegend betrieben werden, in der die Umgebungstemperatur das empfohlene Maximum von 40°C überschreitet. Um Lüftungsverschluß zu verhindern, achten Sie darauf, daß mindestens 15,2 cm lichter Raum um die Lüftungsöffnungen herum frei bleibt.

Avvertenza Per evitare il surriscaldamento dei services gateway, non adoperateli in un locale che ecceda la temperatura ambientale massima di 40°C. Per evitare che la circolazione dell'aria sia impedita, lasciate uno spazio di almeno 15.2 cm di fronte alle aperture delle ventole.

Advarsel Unngå overoppheting av eventuelle rutere i J-SRX Series services gateway Disse skal ikke brukes på steder der den anbefalte maksimale omgivelsestemperaturen overstiger 40°C (104°F). Sørg for at klaringen rundt lufteåpningene er minst 15,2 cm (6 tommer) for å forhindre nedsatt luftsirkulasjon.

Aviso Para evitar o sobreaquecimento do encaminhador J-SRX Series services gateway, não utilize este equipamento numa área que exceda a temperatura máxima recomendada de 40°C. Para evitar a restrição à circulação de ar, deixe pelo menos um espaço de 15,2 cm à volta das aberturas de ventilação.

¡Atención! Para impedir que un encaminador de la serie J-SRX Series services gateway se recaliente, no lo haga funcionar en un área en la que se supere la temperatura ambiente máxima recomendada de 40°C. Para impedir la

restricción de la entrada de aire, deje un espacio mínimo de 15,2 cm alrededor de las aperturas para ventilación.

Varning! Förhindra att en J-SRX Series services gateway överhettas genom att inte använda den i ett område där den maximalt rekommenderade omgivningstemperaturen på 40°C överskrids. Förhindra att luftcirkulationen inskränks genom att se till att det finns fritt utrymme på minst 15,2 cm omkring ventilationsöppningarna.

Product Disposal Warning

⚠️ WARNING: Disposal of this product must be handled according to all national laws and regulations.

Waarschuwing Dit produkt dient volgens alle landelijke wetten en voorschriften te worden afgedankt.

Varoitus Tämän tuotteen lopullisesta hävittämisestä tulee huolehtia kaikkia valtakunnallisia lakeja ja säännöksiä noudattaen.

Attention La mise au rebut définitive de ce produit doit être effectuée conformément à toutes les lois et réglementations en vigueur.

Warnung Dieses Produkt muß den geltenden Gesetzen und Vorschriften entsprechend entsorgt werden.

Avvertenza L'eliminazione finale di questo prodotto deve essere eseguita osservando le normative italiane vigenti in materia

Advarsel Endelig disponering av dette produktet må skje i henhold til nasjonale lover og forskrifter.

Aviso A descartagem final deste produto deverá ser efectuada de acordo com os regulamentos e a legislação nacional.

¡Atención! El desecho final de este producto debe realizarse según todas las leyes y regulaciones nacionales

Varning! Slutlig kassering av denna produkt bör skötas i enlighet med landets alla lagar och föreskrifter.

Related Documentation

- J-SRX100 Services Gateway Laser and LED Safety Guidelines and Warnings on page 110
- J-SRX100 Services Gateway Electrical Safety Guidelines and Warnings on page 118

J-SRX100 Services Gateway Electrical Safety Guidelines and Warnings

When working on equipment powered by electricity, follow the guidelines described in the following topics:

- Electrical Safety Guidelines and Warnings on page 118

Electrical Safety Guidelines and Warnings

In Case of Electrical Accident

If an electrical accident results in an injury, take the following actions in this order:

1. Use caution. Be aware of potentially hazardous conditions that could cause further injury.

2. Disconnect power from the services gateway.

3. If possible, send another person to get medical aid. Otherwise, assess the condition of the victim, then call for help.

General Electrical Safety Guidelines and Warnings

- Install the services gateway in compliance with the following local, national, or international electrical codes:

  - United States—National Fire Protection Association (NFPA 70), United States National Electrical Code

  - Canada—Canadian Electrical Code, Part 1, CSA C22.1

  - Other countries—International Electromechanical Commission (IEC) 60364, Part 1 through Part 7

  - Evaluated to the TN power system

- Locate the emergency power-off switch for the room in which you are working so that if an electrical accident occurs, you can quickly turn off the power.

- Do not work alone if potentially hazardous conditions exist anywhere in your workspace.

- Never assume that power is disconnected from a circuit. Always check the circuit before starting to work.

- Carefully look for possible hazards in your work area, such as moist floors, ungrounded power extension cords, and missing safety grounds.

- Operate the services gateway within marked electrical ratings and product usage instructions.

- For the services gateway and peripheral equipment to function safely and correctly, use the cables and connectors specified for the attached peripheral equipment, and make certain they are in good condition.

Related Documentation

- J-SRX100 Services Gateway Electrical and Power Requirements on page 26

- J-SRX100 Services Gateway Maintenance and Operational Safety Guidelines and Warnings on page 113

- J-SRX100 Services Gateway Agency Approvals on page 119

- Grounding the J-SRX100 Services Gateway on page 53

J-SRX100 Services Gateway Agency Approvals

The services gateway complies with the following standards:

- Safety

  - CSA 60950-1 (2003) Safety of Information Technology Equipment

  - UL 60950-1 (2003) Safety of Information Technology Equipment

  - EN 60950-1 (2001) Safety of Information Technology Equipment

  - IEC 60950-1 (2001) Safety of Information Technology Equipment (with country deviations)

  - EN 60825-1 +A1+A2 (1994) Safety of Laser Products - Part 1: Equipment Classification

  - EN 60825-2 (2000) Safety of Laser Products - Part 2: Safety of Optical Fiber Comm. Systems

- EMC

  - EN 300 386 V1.3.3 (2005) Telecom Network Equipment - EMC requirements

- EMI

  - FCC Part 15 Class B (2007) USA Radiated Emissions

  - EN 55022 Class B (2006) European Radiated Emissions

  - VCCI Class B (2007) Japanese Radiated Emissions

- Immunity

  - EN 55024 +A1+A2 (1998) Information Technology Equipment Immunity Characteristics

  - EN-61000-3-2 (2006) Power Line Harmonics

  - EN-61000-3-3 +A1 +A2 +A3 (1995) Power Line Voltage Fluctuations

  - EN-61000-4-2 +A1 +A2 (1995) Electrostatic Discharge

  - EN-61000-4-3 +A1+A2 (2002) Radiated Immunity

  - EN-61000-4-4 (2004) Electrical Fast Transients

  - EN-61000-4-5 (2006) Surge

  - EN-61000-4-6 (2007) Immunity to Conducted Disturbances

  - EN-61000-4-11 (2004) Voltage Dips and Sags

Related Documentation
- J-SRX100 Services Gateway Electrical Safety Guidelines and Warnings on page 118
- J-SRX100 Services Gateway Compliance Statements for EMC Requirements on page 120
- J-SRX100 Services Gateway Compliance Statements for Environmental Requirements on page 121

J-SRX100 Services Gateway Compliance Statements for EMC Requirements

Canada

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

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

European Community

This is a Class B product.

Japan

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＢ情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをして下さい。

The preceding translates as follows:

This is a Class B product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this product is used near

a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

United States

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

Related Documentation
- J-SRX100 Services Gateway Agency Approvals on page 119
- J-SRX100 Services Gateway Compliance Statements for Environmental Requirements on page 121

J-SRX100 Services Gateway Compliance Statements for Environmental Requirements

This topic includes the compliance statement for the following environmental requirement:

Lithium Battery

Batteries in this product are not based on mercury, lead, or cadmium substances. The batteries used in this product are in compliance with EU Directives 91/157/EEC, 93/86/EEC, and 98/101/EEC. The product documentation includes instructional information about the proper method of reclamation and recycling.

Related Documentation
- J-SRX100 Services Gateway Compliance Statements for EMC Requirements on page 120
- J-SRX100 Services Gateway Agency Approvals on page 119

J-SRX100 Services Gateway Power Guidelines, Requirements, and Specifications

This appendix includes the following sections:

- J-SRX100 Services Gateway Site Electrical Wiring Guidelines on page 123
- J-SRX100 Services Gateway Power Specifications and Requirements on page 124

J-SRX100 Services Gateway Site Electrical Wiring Guidelines

Table 34 on page 123 describes the factors you must consider while planning the electrical wiring for the services gateway at your site.

⚠️ CAUTION: It is particularly important to provide a properly grounded and shielded environment and to use electrical surge-suppression devices.

Table 34: Site Electrical Wiring Guidelines for the Services Gateway

Site Wiring Factor	Guideline

Signaling Limitations	To ensure that signaling functions optimally:
	
	• Install wires correctly.
	  Improperly installed wires can emit radio interference.
	• Do not exceed the recommended distances or pass wires between buildings.
	  The potential for damage from lightning strikes increases if wires exceed recommended distances or if wires pass between buildings.
	• Shield all conductors.
	  The electromagnetic pulse (EMP) caused by lightning can damage unshielded conductors and destroy electronic devices.

Table 34: Site Electrical Wiring Guidelines for the Services
Gateway *(continued)*

Site Wiring Factor	Guideline
Radio Frequency Interference (RFI)	To reduce or eliminate the emission of RFI from your site wiring: • Use twisted-pair cable with a good distribution of grounding conductors. • Use a high-quality twisted-pair cable with one ground conductor for each data signal when applicable, if you must exceed the recommended distances.
Electromagnetic Compatibility (EMC)	Provide a properly grounded and shielded environment and use electrical surge-suppression devices. Strong sources of electromagnetic interference (EMI) can cause the following damage: • Destroy the signal drivers and receivers in the device • Conduct power surges over the lines into the equipment, resulting in an electrical hazard NOTE: If your site is susceptible to problems with EMC, particularly from lightning or radio transmitters, you may want to seek expert advice.

⚠ CAUTION: To comply with intrabuilding lightning/surge requirements, the intrabuilding wiring must be shielded. The shielding for the wiring must be grounded at both ends.

Related Documentation

- General Site Guidelines for Installing the J-SRX100 Services Gateway on page 22
- Monitoring the J-SRX100 Services Gateway Power System on page 92
- J-SRX100 Services Gateway Electrical and Power Requirements on page 26
- J-SRX100 Services Gateway Power Specifications and Requirements on page 124

J-SRX100 Services Gateway Power Specifications and Requirements

The AC power system electrical specifications for the J-SRX100 Services Gateway are listed in Table 35 on page 124.

Table 35: Power System Electrical Specifications for the J-SRX100 Services Gateway

Power Requirement	Specification
AC input voltage	100 to 240 VAC
AC input line frequency	50 to 60 Hz

Table 35: Power System Electrical Specifications for the J-SRX100 Services Gateway *(continued)*

Power Requirement	Specification
AC system current rating	1 A maximum

⚠️ WARNING: The AC power cord for the services gateway is intended for use with the device only and not for any other use.

Related Documentation

- J-SRX100 Services Gateway Power Supply on page 16

- Clearance Requirements for Airflow and Hardware Maintenance of the J-SRX100 Services Gateway on page 24

- J-SRX100 Services Gateway Site Electrical Wiring Guidelines on page 123

- Site Preparation Checklist for the J-SRX100 Services Gateway on page 19

- Monitoring the J-SRX100 Services Gateway Power System on page 92

- Maintaining the J-SRX100 Services Gateway Hardware Components on page 85

J-SRX100 Services Gateway Interface Cable Specifications and Connector Pinouts

This appendix includes the following sections:

- Interface Cable and Wire Specifications for the J-SRX100 Services Gateway on page 127
- RJ-45 Connector Pinouts for the J-SRX100 Services Gateway Ethernet Port on page 127
- RJ-45 Connector Pinouts for the J-SRX100 Services Gateway Console Port on page 128

Interface Cable and Wire Specifications for the J-SRX100 Services Gateway

Table 36 on page 127 lists the specifications for the cables that connect to ports.

Table 36: Cable and Wire Specifications for Ports

Port	Cable Specification	Cable/Wire Required	Maximum Length	Device Receptacle
Console port	RS-232 (EIA-232) serial cable	One 6-ft (1.83-m) length with DB-9/RJ-45 connectors	6 ft (1.83 m)	RJ-45
Ethernet port	CAT-5e (Category 5) cable or equivalent suitable for 100BASE-T operation	One 15-ft (4.57-m) length with RJ-45/RJ-45 connectors	328 ft (100 m)	RJ-45

Related Documentation

- RJ-45 Connector Pinouts for the J-SRX100 Services Gateway Ethernet Port on page 127
- RJ-45 Connector Pinouts for the J-SRX100 Services Gateway Console Port on page 128
- J-SRX100 Services Gateway Front Panel and Back Panel Views on page 9

RJ-45 Connector Pinouts for the J-SRX100 Services Gateway Ethernet Port

Figure 20 on page 128 shows the RJ-45 cable connector pinouts for Ethernet ports.

Figure 20: Ethernet Cable Connector (RJ-45)
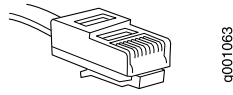
Table 37 on page 128 describes the RJ-45 connector pinouts for the Ethernet port.

Table 37: RJ-45 Connector Pinouts for the Services Gateway Ethernet Port

Pin	Signal
1	TX+
2	TX -
3	RX+
4	Termination network
5	Termination network
6	RX-
7	Termination network
8	Termination network

Related Documentation

- Interface Cable and Wire Specifications for the J-SRX100 Services Gateway on page 127
- RJ-45 Connector Pinouts for the J-SRX100 Services Gateway Console Port on page 128

RJ-45 Connector Pinouts for the J-SRX100 Services Gateway Console Port

Figure 21 on page 128 shows the RJ-45 connector pinouts for the console port.

Figure 21: Console Cable Connector
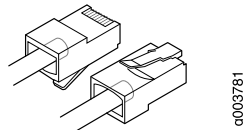
Table 38 on page 128 describes the RJ-45 connector pinouts for the console port.

Table 38: RJ-45 Connector Pinouts for Services Gateway Console Port

Pin	Signal	Description
1	RTS	Request to Send

Table 38: RJ-45 Connector Pinouts for Services Gateway Console Port *(continued)*

Pin	Signal	Description
2	DTR	Data Terminal Ready
3	TXD	Transmit Data
4	Ground	Signal Ground
5	Ground	Signal Ground
6	RXD	Receive Data
7	DSR/DCD	Data Set Ready
8	CTS	Clear to Send

Related Documentation

- Interface Cable and Wire Specifications for the J-SRX100 Services Gateway on page 127
- RJ-45 Connector Pinouts for the J-SRX100 Services Gateway Ethernet Port on page 127

Getting Help

This section contains information about getting help for questions about the PowerConnect J—SRX Series products. The topics covered in this section include:

Obtaining Assistance

If you experience a problem with your services gateway, you can complete the following steps to diagnose and troubleshoot the problem:

1. Fill out the diagnostics checklist. See "Diagnostics Checklist" on page 134.

2. Use Dell's extensive suite of online services available at Dell Support (http://www.support.dell.com) for help with installation and troubleshooting procedures. See "Online Services" on page 132 for a more extensive list of Dell Support online.

3. If the preceding steps have not resolved the problem, see "Contacting Dell" on page 135.

> NOTE: Call Dell Support from a telephone near or at the computer so that the support staff can assist you with any necessary procedures.

> ![NOTE icon] NOTE: Dell's Express Service Code system may not be available in all countries.

When prompted by Dell's automated telephone system, enter your Express Service Code to route the call directly to the proper support personnel. For instructions on using the Dell Support, see "Support Service" on page 133.

> ![NOTE icon] NOTE: Some of the following services are not always available in all locations outside the continental U.S. Call your local Dell representative for information on availability.

Online Services

You can learn about Dell products and services on the following websites:

- http://www.dell.com
- http://www.dell.com/ap (Asian/Pacific countries only)
- http://www.dell.com/jp (Japan only)
- http://www.euro.dell.com (Europe only)
- http://www.dell.com/la (Latin American and Caribbean countries)
- http://www.dell.ca (Canada only)

You can access Dell Support through the following websites and e-mail addresses:

- Dell Support websites
  - http://www.support.dell.com
  - http://support.jp.dell.com (Japan only)
  - http://support.euro.dell.com (Europe only)
- Dell Support e-mail addresses
  - mobile_support@us.dell.com
  - support@us.dell.com
  - la-techsupport@dell.com (Latin America and Caribbean countries only)
  - apsupport@dell.com (Asian/Pacific countries only)
- Dell Marketing and Sales e-mail addresses
  - apmarketing@dell.com (Asian/Pacific countries only)
  - sales_canada@dell.com (Canada only)
- Anonymous file transfer protocol (FTP)

- ftp://ftp.dell.com

Log in as user: anonymous, and use your e-mail address as your password.

Automated Order-Status Service

To check on the status of any Dell products that you have ordered, you can go to http://www.support.dell.com, or you can call the automated order-status service. A recording prompts you for the information needed to locate and report on your order. For the telephone number to call for your region, see "Contacting Dell" on page 135.

Support Service

Dell's support service is available 24 hours a day, 7 days a week, to answer your questions about Dell hardware. Our support staff use computer-based diagnostics to provide fast, accurate answers. To contact Dell's support service, see "Before You Call" on page 134 and then see the contact information for your region.

Dell Enterprise Training and Certification

Dell Enterprise Training and Certification is available; see http://www.dell.com/training for more information. This service may not be offered in all locations.

Problems With Your Order

If you have a problem with your order, such as missing parts, wrong parts, or incorrect billing, contact Dell for customer assistance. Have your invoice or packing slip handy when you call. For the telephone number to call for your region, see "Contacting Dell" on page 135.

Product Information

If you need information about additional products available from Dell, or if you would like to place an order, visit the Dell website at http://www.dell.com. For the telephone number to call for your region or to speak to a sales specialist, see "Contacting Dell" on page 135.

Returning Items for Warranty Repair or Credit

Prepare all items being returned, whether for repair or credit, as follows:

1. Call Dell to obtain a Return Material Authorization Number, and write it clearly and prominently on the outside of the box. For the telephone number to call for your region, see "Contacting Dell" on page 135.

2. Include a copy of the invoice and a letter describing the reason for the return.

3. Include a copy of the Diagnostics Checklist (see "Diagnostics Checklist" on page 134), indicating the tests that you have run and any error messages reported by the Dell Diagnostics.

4. Include any accessories that belong with the item(s) being returned (such as power cables, media such as CDs, and guides) if the return is for credit.

5. Pack the equipment to be returned in the original (or equivalent) packing materials.

You are responsible for paying shipping expenses. You are also responsible for insuring any product returned, and you assume the risk of loss during shipment to Dell. Collect On Delivery (C.O.D.) packages are not accepted.

Returns that are missing any of the preceding requirements will be refused at Dell's receiving dock and returned to you.

Before You Call

> NOTE: Have your Express Service Code ready when you call. The code helps Dell's automated-support telephone system direct your call more efficiently.

Remember to fill out the Diagnostics Checklist (see "Diagnostics Checklist" on page 134). If possible, turn on your computer before you call Dell for assistance and call from a telephone at or near the computer. You may be asked to type some commands at the keyboard, relay detailed information during operations, or try other troubleshooting steps possible only at the computer itself. Ensure that the services gateway documentation is available.

> WARNING: Before working inside your device, follow the safety instructions in the Safety, Environmental, and Regulatory Information that shipped with your system.

Diagnostics Checklist

Name:

Date:

Address:

Phone number:

Service Tag (bar code on the back or bottom of the device):

Express Service Code:

Return Material Authorization Number (if provided by Dell support technician):

Operating system and version:

Devices:

Expansion cards:

Are you connected to a network? Yes No

Network, version, and network adapter:

Programs and versions:

See your operating system documentation to determine the contents of the system's start-up files. If the computer is connected to a printer, print each file. Otherwise, record the contents of each file before calling Dell.

Error message, beep code, or diagnostic code:

Description of problem and troubleshooting procedures you performed:

Contacting Dell

For customers in the United States, call 800-WWW.DELL (800.999.3355).

> NOTE: If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

1. Visit www.support.dell.com.

2. Click your country or region at the bottom of the page. For a full listing of countries and regions, click **All**.

3. In the Support menu, click **All Support**.

4. Choose the method of contacting Dell that is convenient for you.

Locating the J-SRX100 Services Gateway Component Serial Number and Agency Labels

Listing the J-SRX100 Services Gateway and Component Details with the CLI

Before request an RMA, you must find the serial number on the J-SRX100 Services Gateway or component.

To list all of the J-SRX100 Services Gateway components and their serial numbers, enter the following command-line interface (CLI) command:

```
user@host> show chassis hardware
Hardware inventory:
Item                  Version  Part number  Serial number      Description

Chassis                                     AU0209AF0022       J-SRX100-lm

Routing Engine        REV 00   750-02177    BAAA0083           RE-SRX100-HIGHMEM
```

```
FPC 0                                                          FPC

PIC 0                                                          8x FE Base PIC

Power Supply 0
```

J-SRX100 Services Gateway Chassis Serial Number and Agency Labels

The J-SRX100 Services Gateway has a serial number ID and agency labels on the bottom of the chassis as shown in Figure 22 on page 136.

Figure 22: Location of J-SRX100 Services Gateway Serial Number and Agency Labels
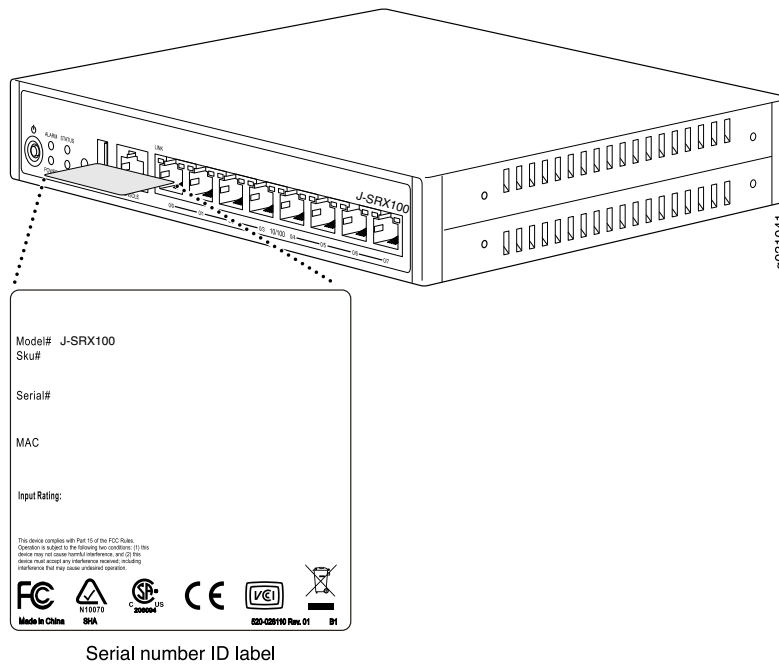
Serial number ID label

Packing the J-SRX100 Services Gateway and Components for Shipment

This section describes how to pack the services gateway or components for shipment.

Packing the Services Gateway for Shipment

To pack the services gateway for shipment:

1. Retrieve the shipping carton and packing materials in which the device was originally shipped. If you do not have these materials, contact your customer representative about approved packaging materials.

2. Attach an electrostatic discharge (ESD) grounding strap to your bare wrist and connect the strap to the ESD point on the chassis or to an outside ESD point if the device is disconnected from earth ground.

3. On the console or other management device such as a PC or laptop connected to the services gateway, enter CLI operational mode and issue the following command to shut down the services gateway software:

   user@host> request system power-off

   Wait until a message appears on the console confirming that the operating system has halted.

4. Shut down power to the device by pressing the Power button on the front panel of the device.

5. Disconnect power from the device.

6. Remove the cables that connect to all external devices.

7. Remove all field-replaceable units (FRUs) from the device.

8. If the device is installed on a wall or rack, have one person support the weight of the device while another person unscrews and removes the mounting screws.

9. Place the device in the shipping carton.

10. Cover the device with an ESD bag, and place the packing foam on top of and around the device.

11. Replace the accessory box on top of the packing foam.

12. Securely tape the box closed.

13. Write the Return Materials Authorization (RMA) number on the exterior of the box to ensure proper tracking.

Packing the Components for Shipment

Follow these guidelines for packing and shipping individual components of the services gateway:

- When you return a component, make sure that it is adequately protected with packing materials and packed so that the pieces are prevented from moving around inside the carton.

- Use the original shipping materials if they are available.

- Write the Return Materials Authorization (RMA) number on the exterior of the box to ensure proper tracking.

⚠ CAUTION: Do not stack any of the services gateway components during packing.

Related Documentation
- Required Tools and Parts for Installing and Maintaining the J-SRX100 Services Gateway on page 31

- Locating the J-SRX100 Services Gateway Component Serial Number and Agency Labels on page 135

- Dell Support on page 95

Dell Support

If you need assistance while troubleshooting a services gateway, please go to the Dell Support website at http://www.support.dell.com.

PART 5

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