

Installing System Upgrades for the ERX-310 Router

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This document describes installation procedures for upgrading switch route processor (SRP) modules and I/O modules for the Juniper Networks ERX-310 router.

You can also find these upgrade instructions and complete hardware documentation on the Juniper Networks technical documentation Web page, which is located at <http://www.juniper.net/techpubs/>.

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Overview

Juniper Networks E-series routers contain SRP modules, which perform system management, routing table calculations and maintenance, forwarding table computations, statistics processing, configuration storage, and other control functions. SRP modules are PowerPC-based systems with their own memory, nonvolatile disk storage, and power supply. The ERX-310 uses one SRP module.

To upgrade any chassis or SRP module, you follow this general process:

1. Check to see how much memory is currently installed on the router.
2. Prepare for the upgrade by checking the contents of the upgrade kit and assembling all tools and materials.
3. Halt the system.
4. Remove the SRP module from the chassis.
5. Remove the old SODIMMs, if necessary, and install the new SODIMMs.
6. Reinstall the SRP module in the chassis.
7. Restore the saved JUNOS software configuration or perform a fresh configuration.

The following sections provide specific instructions on how to perform an upgrade on the various chassis and specific SRPs.

Upgrading the ERX-310 Router

This section describes upgrading the SRP memory and I/O module on the ERX-310 router. Prepare for the upgrade by ensuring you have the following items:

- Flathead screwdriver
- Phillips screwdriver
- Antistatic wrist strap
- Antistatic mat and bags to hold components
- The SRP upgrade kit

Upgrading Memory on the ERX-310 Router

This section describes how to upgrade memory on the SRP for the ERX-310 router.



WARNING: Do not insert any metal object, such as a screwdriver, or place your hand into an open slot or the backplane when the E-series router is on. Remove jewelry

(including rings, necklaces, and watches) before working on equipment that is connected to power lines. These actions prevent electric shock and serious injuries.



CAUTION: When handling modules, use an antistatic wrist strap connected to the router's ESD grounding jack, and hold modules by their edges. Do not touch the components, pins, leads, or solder connections. These actions help to protect the module from damage by electrostatic discharge.

Checking Existing Memory

Before you install the memory upgrade, issue the `show hardware` command to check how much memory is currently installed. The resulting output shows the total amount of memory on each SRP module.

Removing the SRP Module

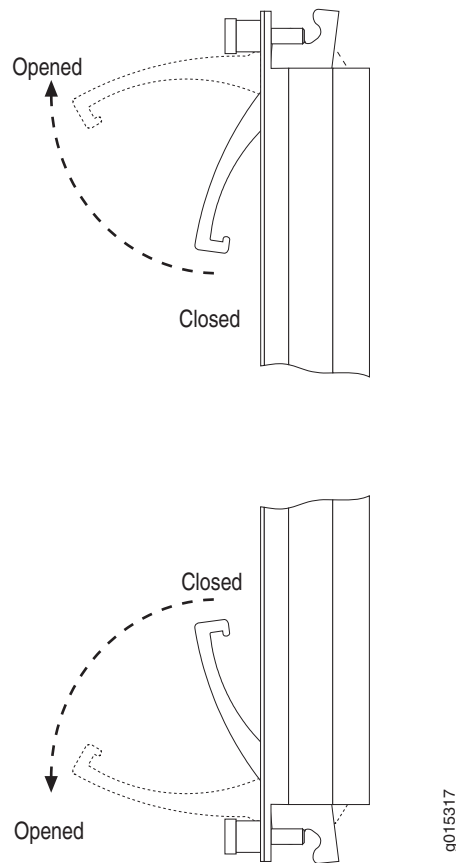
To remove the SRP module:

1. Enter the `halt` command and wait for the OK and FAIL LEDs on the SRP module to start blinking.



CAUTION: If you do not use the `halt` command before removing or powering down an SRP, your system's NVS card may become corrupted.

2. Place the antistatic wrist strap on your wrist, and connect the strap to the ESD grounding jack on your router. On the ERX-310, the grounding jacks are located in the lower-right corner on the rear of the chassis and on the lower-left of the front of the chassis.
3. Use a Phillips screwdriver to loosen the thumbscrews located at the top and bottom of the LED panel on the SRP module.
4. Move the ejector handles located at the top and bottom of the module so that they are in the open position, as shown in Figure 1.

Figure 1: Ejector Handle Positions

CAUTION: Always handle the module by its edges. Do not touch the components, pins, leads, or solder connections.

5. Carefully slide the module out of the chassis.
6. Place the module on a flat surface so that the memory sockets and NVS card are facing up.

Removing Old SODIMMs

If you are upgrading from lower-memory SODIMMs, you must remove them to install the new SODIMMs as described in this section. If your SRP has no SODIMMs installed, go to “Installing New SODIMMs” on page 5. The SODIMM sockets are close to the NVS card and have a cream-colored ceramic connector on one edge. To remove the SODIMMs:

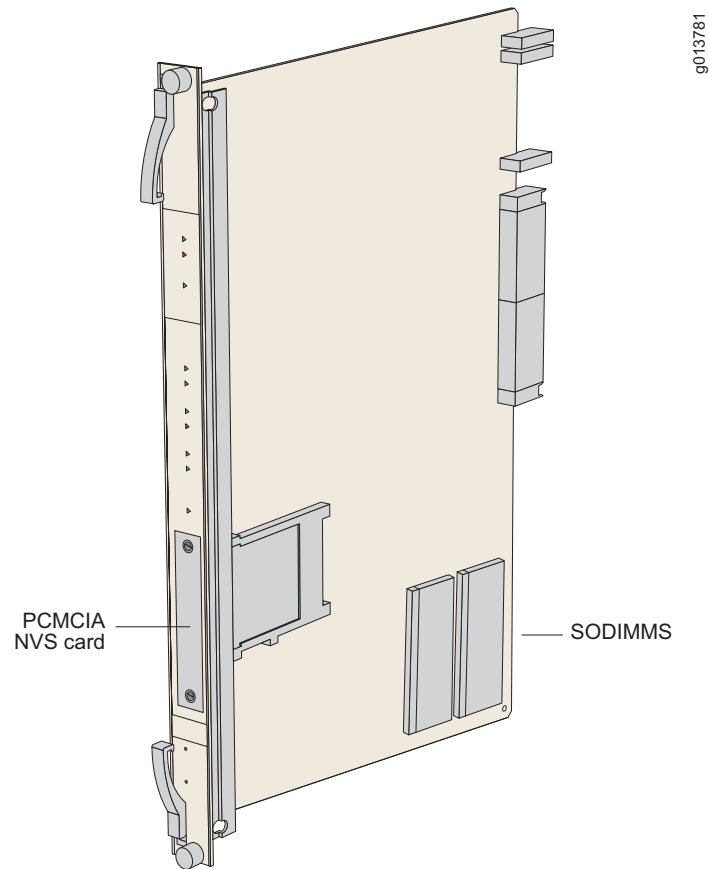
1. Push down on the back edge of a SODIMM to release it from the socket (see Figure 2).
2. Gently pull up and out to disconnect the SODIMM from the connector and remove it from the socket.

Installing New SODIMMs

To install the new SODIMMs:

1. Locate the two SODIMM sockets on the SRP module (see Figure 2).

Figure 2: Location of SODIMMs on the ERX-310 SRP Module



2. Align the notches in the new SODIMM with the ceramic connector on the SRP module.
3. Insert the new SODIMM at a 45-degree angle into the connector. Align the notch in the long gold edge of the SODIMM with the notch in the connector.

When the SODIMM is completely inserted, the notch on the long gold edge will no longer be visible.

4. Press the top surface downward into the socket until the socket spring snaps into place and secures the SODIMM.
5. Repeat Steps 2, 3, and 4 with the remaining SODIMM.
6. Attach the faceplate label as described in “Attaching the New Faceplate Label” on page 6 .
7. Complete the memory upgrade as described in “Completing the Memory Upgrade” on page 6 .

Completing the Memory Upgrade

After you have installed the memory upgrade components, complete the SRP memory upgrade:

1. Slide the SRP module back into the chassis.
2. Close the ejector handles and tighten the thumbscrews.

The SRP module reboots after you reinstall it.

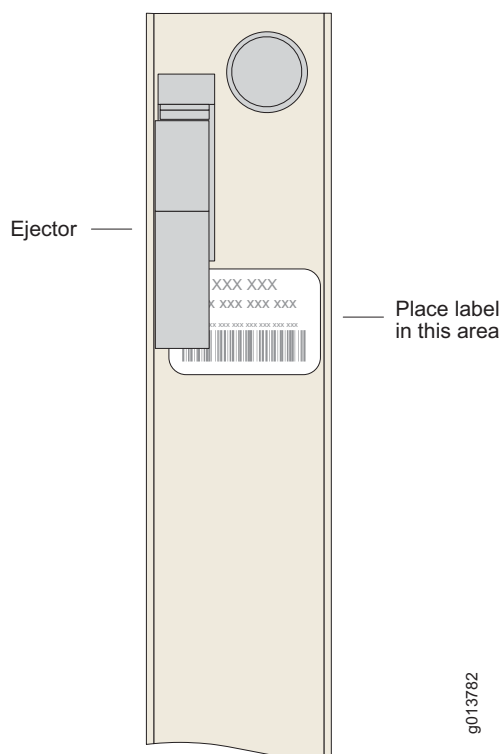
3. Issue the `show hardware` command and verify that the correct amount of memory is now present.

Attaching the New Faceplate Label

After you have installed all the new components in your upgrade kit, attach the new faceplate label to the SRP module. The label indicates the new memory and nonvolatile storage (if applicable) you installed. Follow this procedure:

1. Ground yourself using an antistatic wrist strap or other device.
2. Remove the backing on the faceplate label.
3. Attach the label to the faceplate above the bottom ejector as shown in Figure 3 for the ERX-310.

Figure 3: Faceplate Label for ERX-310 Router



4. You are ready to reinstall the SRP module. For the ERX-310 router, go to “Completing the Memory Upgrade” on page 6 .

Registering the Upgraded System

Registering your system upgrades ensures that Juniper Networks has accurate and up-to-date information about your current hardware configuration if you need technical support in the future.

For instructions, go to the Juniper Networks Web site at <http://www.juniper.net/support/>.

List of Technical Publications

Table 1 lists and describes the E-series document set. A complete list of abbreviations used in this document set, along with their spelled-out terms, is provided in the *JUNOS System Basics Configuration Guide, Appendix A, Abbreviations and Acronyms* .

Table 1: Juniper Networks E-series Technical Publications

Document	Description
<i>E-series Hardware Guide</i>	Provides the necessary procedures for getting the router operational, including information on installing, cabling, powering up, configuring the router for management access, and general troubleshooting. Describes SRP modules, line modules, and I/O modules available for the E-series routers.
<i>E-series Module Guide</i>	Provides detailed specifications for line modules and I/O modules, and information about the compatibility of these modules with JUNOS software releases. Lists the layer 2 protocols, layer 3 protocols, and applications that line modules and their corresponding I/O modules support. Provides module LED information.
<i>JUNOS System Basics Configuration Guide</i>	Describes planning and configuring your network, managing the router, configuring passwords and security, configuring the router clock, and configuring virtual routers. Includes a list of references that provide information on the protocols and features supported by the router.
<i>JUNOS Physical Layer Configuration Guide</i>	Describes configuring physical layer interfaces.
<i>JUNOS Link Layer Configuration Guide</i>	Describes configuring link layer interfaces.
<i>JUNOS Routing Protocols Configuration Guide, Vol. 1</i>	Provides information about configuring routing policy and configuring IP, IP routing, and IP security.
<i>JUNOS Routing Protocols Configuration Guide, Vol. 2</i>	Describes BGP routing, MPLS, BGP-MPLS VPNs, and encapsulation of layer 2 services.
<i>JUNOS Policy and QoS Configuration Guide</i>	Provides information about configuring policy management and quality of service (QoS).
<i>JUNOS Broadband Access Configuration Guide</i>	Provides information about configuring remote access.
<i>JUNOS Command Reference Guide A to M</i>	Together comprise the <i>JUNOS Command Reference Guide</i> . Contain important information about commands implemented in the system software. Use to look up command descriptions, command syntax, a command's related mode, or a description of a command's parameters. Use with the JUNOS configuration guides.
<i>JUNOS Command Reference Guide N to Z</i>	
Release Notes	
<i>JUNOS Release Notes</i>	<p>In the <i>Release Notes</i>, you will find the latest information about features, changes, known problems, resolved problems, and system maximum values. If the information in the Release Notes differs from the information found in the documentation set, follow the Release Notes.</p> <p>Release notes are included on the corresponding software CD and are available on the Web.</p>

Requesting Support

For technical support, open a support case using the Case Manager link at <http://www.juniper.net/support/> or call 1-888-314-JTAC (within the United States) or 1-408-745-9500 (outside the United States).

Revision History

17 September 2004—Revision 1.

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