

Understanding Software Installation on EX-series Switches

An EX-series switch is delivered with the JUNOS software preinstalled. As new features and software fixes become available, you must upgrade your software to use them. You can also downgrade a newly purchased system to a previous JUNOS software release if you want to maintain consistent versions in your network.

This topic covers:

- Overview of the Software Installation Process on page 1
- Software Package Security on page 1
- Installing Software on a Virtual Chassis on page 1
- Installing Software on EX 8200 Series Switches on page 2
- Troubleshooting Software Installation on page 2

Overview of the Software Installation Process

An EX-series switch is delivered with the JUNOS software preinstalled. When you connect power to the switch, it starts (boots) up from the installed software.

You upgrade the JUNOS software on an EX-series switch by copying a software package to your switch or another system on your local network, then use either the J-Web interface or the CLI to install the new software package on the switch. Finally, you reboot the switch, at which time it boots from the upgraded software.

During a successful upgrade, the upgrade package removes all files from `/var/tmp` and completely reinstalls the existing software. It retains configuration files, and similar information, such as secure shell and host keys, from the previous version. The previous software package is preserved in a separate disk partition, and you can manually revert back to it if necessary. If the software installation fails for any reason, such as loss of power during the installation process, the system returns to the originally active installation when you reboot.

After a successful upgrade, remember to back up the new current configuration to the secondary device.

Software Package Security

All JUNOS software is delivered in signed packages that contain digital signatures to ensure official Juniper Networks software. For more information about signed software packages, see the *JUNOS Software Installation and Upgrade Guide* at <http://www.juniper.net/techpubs/software/junos/>.

Installing Software on a Virtual Chassis

You can connect individual EX 4200 switches together to form one unit and manage the unit as a single chassis, called a virtual chassis. The virtual chassis operates as a single network entity comprised of members. Each member of a virtual chassis runs JUNOS software packages.

For ease of management, the virtual chassis provides flexible methods to upgrade software releases. You can deploy a new software release to all of the members of a virtual chassis or to only a particular member.

Installing Software on EX 8200 Series Switches

To install software on an EX 8200 series switch that has two Routing Engines without disrupting network operation, you can perform a JUNOS software installation on each Routing Engine separately, starting with the backup.

You must first disable graceful Routing Engine switchover (GRES) by using the **deactivate chassis redundancy** command. Then install the new JUNOS software release on the backup Routing Engine while keeping the currently running software version on the master Routing Engine. After making sure that the new software version is running correctly on the backup Routing Engine, transfer routing control to the backup Routing Engine, install the new software on the new backup Routing Engine, then re-enable GRES.

See the *JUNOS Software Software Installation and Upgrade Guide* at <http://www.juniper.net/techpubs/software/junos/junos94/> for additional details on installing software on a system with redundant routing engines.

Troubleshooting Software Installation

If the JUNOS software loads but the CLI is not working for any reason, or if the switch has no software installed, you can use the recovery installation procedure to install the JUNOS software on the switch. See *Troubleshooting Software Installation*



NOTE: You can also use this procedure to load two versions of JUNOS software in separate partitions on the switch.

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- Related Topics**
- Downloading Software Packages from Juniper Networks
 - Installing Software on EX-series Switches (J-Web Procedure)
 - Installing Software on EX-series Switches (CLI Procedure)
 - Troubleshooting Software Installation