

## Installing Software on an EX 8200 series Switch with Redundant Routing Engines (CLI Procedure)

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For an EX 8200 series switch with redundant Routing Engines, you can minimize disrupting network operation during a JUNOS software upgrade by upgrading the Routing Engines separately, starting with the backup Routing Engine.

To upgrade the software package on an EX 8200 series switch with one installed Routing Engine, see *Installing Software on an EX-series Switch with a Single Routing Engine (CLI Procedure)*.

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, switch device control to the backup Routing Engine. Finally, install the new software on the new backup Routing Engine.

To upgrade the JUNOS software on the switch, perform the following tasks:

1. Preparing the Switch for the Software Installation on page 1
2. Installing Software on the Backup Routing Engine on page 2
3. Installing Software on the Default Master Routing Engine on page 3
4. Returning Routing Control to the Default Master Routing Engine (Optional) on page 4

### Preparing the Switch for the Software Installation

Perform the following steps before installing the software:

1. Log in to the master Routing Engine's console.

For information on logging in to the Routing Engine through the console port, see *Connecting and Configuring an EX-series Switch (CLI Procedure)*.

2. Enter the JUNOS software CLI configuration mode:

- a. Start the CLI from the shell prompt:

```
user@switch:RE% cli
```

You will see:

```
{master}  
user@switch>
```

- b. Enter configuration mode:

```
user@switch> configure
```

You will see:

```
{master}[[edit]
```

user@switch#

3. Disable GRES (graceful Routing Engine switchover):

[edit]

user@switch# **deactivate chassis redundancy graceful-switchover**

4. Save the configuration change on both Routing Engines:

[edit]

user@switch# **commit synchronize**



**NOTE:** To ensure the most recent configuration changes are committed before the software upgrade, perform this step even if GRES was previously disabled.

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5. Exit out of the CLI configuration mode:

[edit]

user@switch# **exit**

6. (Optional) Back up the current software configuration to a second storage option. See the *JUNOS Software Installation and Upgrade Guide* at <http://www.juniper.net/techpubs/software/junos/junos95/index.html> for instructions on performing this task.

## ***Installing Software on the Backup Routing Engine***

Once the EX 8200 series switch is ready, you first install the software on the backup Routing Engine. This enables the master Routing Engine to continue operations, minimizing the disruption to your network.

1. Download the software by following the procedures in Downloading Software Packages from Juniper Networks.
2. Copy the software package to the switch. We recommend that you use FTP to copy the file to the `/var/tmp` directory.
3. Log in to the backup Routing Engine's console.
4. Install the new software package:

```
user@switch> request system software add validate  
/var/tmp/package-name-m.nZx-distribution.tgz
```

where *package-name-m.nZx-distribution.tgz* is, for example, *jinstall-ex-8200-9.5R1.5-domestic-signed.tgz*.

For more information on the `request system software add` command, see the *JUNOS Software System Basics and Services Command Reference* at <http://www.juniper.net/techpubs/software/junos/junos95/index.html>.



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**NOTE:** To abort the installation, do not reboot your device; instead, finish the installation and then issue the **request system software delete** *package-name-m.nZx-distribution.tgz* command, where *package-name-m.nZx-distribution.tgz* is, for example, *jinstall-ex-4200-9.4R1.5-domestic-signed.tgz*. This is your last chance to stop the installation.

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5. Reboot to start the new software:

```
user@switch> request system reboot  
Reboot the system? [yes, no] (no) yes
```

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**NOTE:** You must reboot the switch to load the new installation of the JUNOS software.

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6. After the reboot has completed, log in and verify the new version of the software is properly installed:

```
user@switch> show version
```

## ***Installing Software on the Default Master Routing Engine***

To switch device control to the backup Routing Engine and then upgrade or downgrade the master Routing Engine software:

1. Log in to the master Routing Engine console port.
2. Transfer device control to the backup Routing Engine:

```
user@switch> request chassis routing-engine master switch
```

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**NOTE:** Because GRES is disabled, this switchover causes all line cards in the switch to reload. All network traffic passing through these line cards is lost during the line card reloads.

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3. Verify that the default backup Routing Engine (shown as slot 1 in the command output) is now the master Routing Engine:

```
user@switch> show chassis routing-engine
```

You will see:

Routing Engine status:

Slot 0:

Current state	Backup
Election priority	Master (default)

Routing Engine status:

Slot 1:

Current state	Master
Election priority	Backup (default)

4. Install the new software package using the `request system software add` command:

```
user@switch> request system software add validate  
/var/tmp/jinstall-ex-8200-9.5R1.5-domestic-signed.tgz
```

5. Reboot the Routing Engine:

```
user@switch> request system reboot  
Reboot the system? [yes, no] (no) yes
```

When the reboot completes, the prompt will reappear. Wait for this prompt to reappear before proceeding to the next step.

6. Log in to the default backup Routing Engine (slot 1) through the console port.
7. Re-enable GRES:

```
[edit]  
user@switch# activate chassis redundancy graceful-switchover
```

Re-enabling GRES allows any future Routing Engine switchovers to occur without the loss of any network traffic.

8. Enter the `commit synchronize` command to save the configuration change:

```
[edit]  
user@switch# commit synchronize
```

9. Log in and verify the version of the software installed.

If you want to return routing control to the Routing Engine that was the master Routing Engine at the beginning of the procedure (the default master Routing Engine), perform the next task.

## ***Returning Routing Control to the Default Master Routing Engine (Optional)***

The switch can maintain normal operations with the Routing Engine in slot 1 acting as the master Routing Engine after the software upgrade, so only perform this task if you want to return routing control to the default master Routing Engine in slot 0.

1. Transfer routing control back to the default master Routing Engine:

```
user@switch> request chassis routing-engine master switch
```

2. Verify that the default master Routing Engine (slot 0) is indeed the master Routing Engine:

```
user@switch> show chassis routing-engine
```

You will see:

```
Routing Engine status:  
Slot 0:  
  Current state      Master  
  Election priority  Master (default)  
Routing Engine status:  
Slot 1:
```

Current state	Backup
Election priority	Backup (default)

- Related Topics**
- Installing Software on EX-series Switches (J-Web Procedure)
  - Troubleshooting Software Installation
  - JUNOS Software Package Names
  - Understanding Software Installation on EX-series Switches
  - Understanding EX 8208 Switch Component and Functionality Redundancy

