

Chapter 17

Upgrading to Release 7.x from Release 5.x

This chapter explains how to use the JUNOS 7.x jinstall package to upgrade to JUNOS Release 7.x from Release 5.x. After you upgrade to 7.x, you can use the jbundle package for subsequent upgrades or downgrades. 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 (from outside the United States).



NOTE: Before upgrading, you should back up the currently running and active file system and configuration so that you can recover to a known, stable environment in case the upgrade is unsuccessful:

```
user@host> request system snapshot
```

The installation process removes most stored files on the router, such as configuration templates and shell scripts. The only exceptions are log, juniper.conf, and SSH files. To preserve the stored files, copy them to another system before upgrading or downgrading the router.

To upgrade to or downgrade from JUNOS Release 7.x, follow these steps:

1. Download the software packages you need from the Juniper Networks Support Web site, <http://www.juniper.net/support/>. Choose either the United States and Canada version or the Worldwide version.

To download the software packages, you must have a service contract and an access account. If you do not have an access account, complete the registration form at the Juniper Networks Web site, <https://www.juniper.net/registration/Register.jsp>.



NOTE: When installing software using the jinstall package, we recommend that you access the router by means of the console serial management port. We recommend that you upgrade and downgrade software packages out-of-band using the console because in-band connections can be lost during the downgrade or upgrade process.

If the console serial management port cannot be used, you can connect to the router through the management Ethernet port fxp0. However, important messages that might be generated during the upgrade process will not be available.

2. Log in to the Juniper Networks Web site.
3. Download the jinstall package to your local host.
4. Copy the jinstall package to the router. You might want to copy it to the /var/tmp directory, which is on the rotating media (hard disk) and is a large file system.

```
user@host> file copy ftp://username:prompt@ftp.hostname.net/
filename /var/tmp/filename
```



NOTE: When upgrading or downgrading JUNOS software, we recommend that you use the validate option with the request system software add command to check that the candidate software is compatible with the current configuration. By default, when you add a package with a different release number, the validation check is done automatically.

We do not recommend using the no-validate option to suppress validation. For more information about this command, see the *JUNOS Protocols, Class of Service, and System Basics Command Reference*.

5. Add the jinstall package:

```
user@host> request system software add /var/tmp/jinstall-package-name
NOTICE: Validating configuration against jinstall-package-name
Checking compatibility with configuration
Initializing...
Using jbase-7.x-package-name
Using /var/tmp/jinstall-7.x-package-name
Verified MD5 checksum of
/var/validate/tmp/jinstall/jinstall-7.x-package-name
Using
/var/validate/tmp/jinstall-signed/jinstall-7.x-package-name
Using /var/validate/tmp/jinstall/jbundle-7.x-package-name
Using /var/validate/tmp/jbundle/jbase-7.x-package-name
Using /var/validate/tmp/jbundle/jkernel-7.x-package-name
Using /var/validate/tmp/jbundle/jcrypto-7.x-package-name
Using /var/validate/tmp/jbundle/jpfe-7.x-package-name
Using /var/validate/tmp/jbundle/jdocs-7.x-package-name
Using /var/validate/tmp/jbundle/jroute-7.x-package-name
Validating against /config/juniper.conf
mgd: commit complete
Validation succeeded
Installing package
'/var/tmp/jinstall-7.x-package-name' ...
Verified MD5 checksum of jinstall-7.x-package-name
Auto-deleting old jinstall...
Deleting saved config files ...
Deleting bootstrap installer ...
Adding jinstall...
```

WARNING: This package will load JUNOS software *release-number*.
 WARNING: It will save JUNOS configuration files, log files, and SSH keys
 WARNING: (if configured), but erase all other files and information
 WARNING: stored on this machine. This is the pre-installation stage
 WARNING: and all the software is loaded when you reboot the system.

Saving the config files ...
 Installing the bootstrap installer ...

WARNING: A REBOOT IS REQUIRED TO LOAD THIS SOFTWARE CORRECTLY. Use
 WARNING: the 'request system reboot' command when software installation is
 WARNING: complete. To abort the installation, do not reboot your system,
 WARNING: instead use the 'request system software delete jinstall'
 WARNING: command as soon as this operation completes.

Saving package file in /var/sw/pkg/ jinstall-*package-name* ...
 Saving state for rollback ...



NOTE: A package is installed only if the Message Digest 5 (MD5) checksum within it matches the MD5 hash recorded in its corresponding .md5 file. (For example, jinstall-7.xR1-export-signed.tgz contains jinstall-7.xR1-export.tgz and jinstall-7.xR1-export.tgz.md5. The jinstall-7.xR1-export.tgz package will only be installed if it matches the MD5 hash recorded in jinstall-7.xR1-export.tgz.md5.) For information about packages, see “Package Names” on page 302



NOTE: The jbundle package cannot be used to upgrade from JUNOS Release 5.x to Release JUNOS 7.x.

Use the jinstall package to completely reinstall the software. This package rebuilds the file system but retains configuration, log files, and similar information from the previous version.

6. Reboot the router to load the JUNOS software:

```
user@host> request system reboot
Reboot the system ? [yes,no] (no) yes
Shutdown NOW!
```



NOTE: To quit the installation, do not reboot your system; instead, issue the request system software delete jinstall command when software installation completes. During the upgrade, the mirror on the flash drive is not operational. It cannot be enabled until you repartition the hard disk.

All the software is loaded when you issue the reboot command. Loading the software can take 5 to 10 minutes.

7. The router then reboots from the primary boot device on which you just installed the software. When the reboot is complete, the router displays the login prompt.



NOTE: After you add a JUNOS 7.x jinstall package, you cannot issue the request system software rollback command to return to the previously installed software. To return to the previously installed software, use the jbundle package that corresponds with the previously installed software.

8. Log in and verify the version of software running after the router reboots. Issue the show log message or show version command.
9. Repartition the hard disk. Issue the request system partition hard-disk command.



NOTE: The hard disk repartitioning happens during the first reboot after you issue the request system partition hard-disk command.

```
user@host> request system partition hard-disk
```

```
WARNING: The hard disk is about to be partitioned. The contents
WARNING: of /altroot and /altconfig will be saved and restored.
WARNING: All other data is at risk. This is the setup stage, the
WARNING: partition happens during the next reboot.
```

```
Setting up to partition the hard disk ...
```

```
WARNING: A REBOOT IS REQUIRED TO PARTITION THE HARD DISK. Use the
WARNING: 'request system reboot' command when you are ready to proceed
WARNING: with the partitioning. To abort the partition of the hard disk
WARNING: use the 'request system partition abort' command.
```

```
user@host>
```

10. Reboot the router to repartition the hard disk.

```
user@host> request system reboot
Reboot the system ? [yes,no] (no) yes
Shutdown NOW!
```



NOTE: To quit the repartition, do not reboot your system; instead, issue the request system partition abort command after the request system partition hard-disk command completes.

11. After you have upgraded or downgraded the software and are satisfied that the new software is successfully running, issue the request system snapshot command to back up the new software.

The request system snapshot command causes the root file system to be backed up to /altroot, and /config to be backed up to /altconfig. The root and /config file systems are on the router's flash drive, and the /altroot and /altconfig file systems are on the router's hard disk.



NOTE: After you issue the request system snapshot command, you cannot return to the previous version of the software, because the running and backup copies of the software are identical.

To return to the previous version of JUNOS software, you must reinstall that software following these upgrade or downgrade procedures.
