

## 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 System Basics and Services 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 322

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**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 information from the previous version. (Logs and other types of auxiliary information may be erased during installation.)

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6. If desired, add the optional *jweb* package. For more information, see “Installing the J-Web Package” on page 342.
7. 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.

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

- 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 downgrade to another supported release, follow the instructions for upgrading, but replace the JUNOS 7.x `jinstall` package with one labeled for the appropriate release.

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- Log in and verify the version of software running after the router reboots. Issue the `show log message` or `show version` command.
- 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.

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**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.

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