

# RPM Dependencies

[coursera.org/learn/linux-tools-for-developers/supplement/KNA7Z/rpm-dependencies](https://coursera.org/learn/linux-tools-for-developers/supplement/KNA7Z/rpm-dependencies)

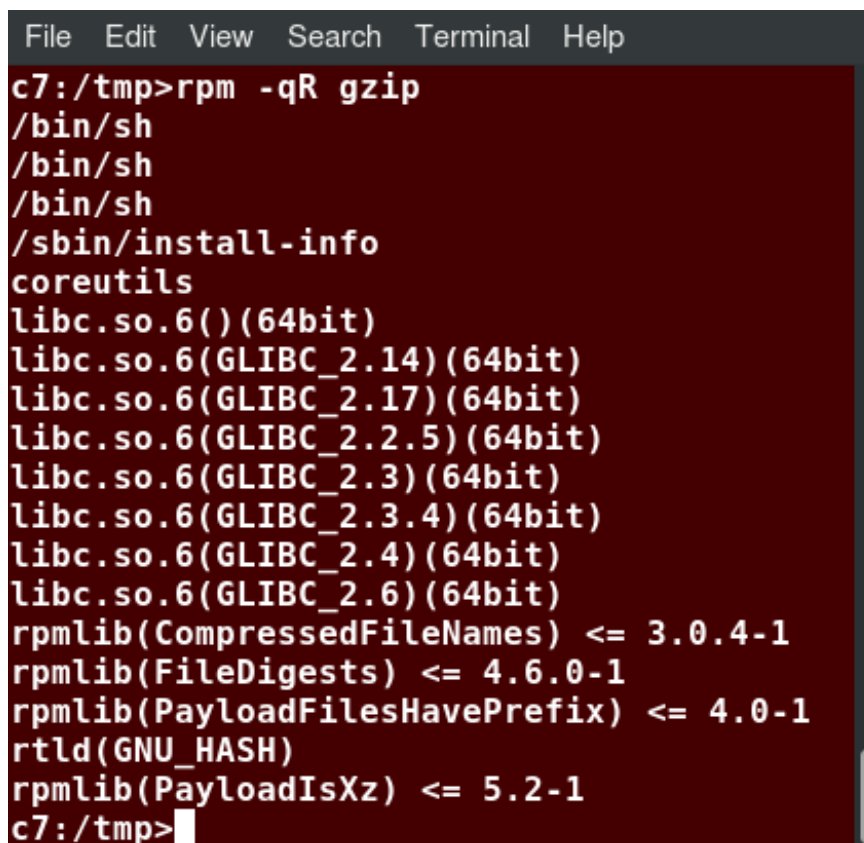
In the **spec** file you may specify three types of dependency information:

- Capabilities that this package provides
- Capabilities that this package requires
- Packages that this package requires.

A capability is a required function or class of functions. You can see what libraries a package requires with:

```
$ rpm -qR package
```

as in:

A terminal window with a dark background and light-colored text. The window has a menu bar at the top with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The terminal shows the command 'rpm -qR gzip' being executed in a directory 'c7:/tmp'. The output lists various dependencies for the 'gzip' package, including system binaries like '/bin/sh' and '/sbin/install-info', core utilities, and several versions of the libc library (64bit). It also lists RPM library capabilities like 'CompressedFileNames', 'FileDigests', 'PayloadFilesHavePrefix', and 'PayloadIsXz' with their respective version constraints. The prompt 'c7:/tmp>' is visible at the bottom.

```
File Edit View Search Terminal Help
c7:/tmp>rpm -qR gzip
/bin/sh
/bin/sh
/bin/sh
/sbin/install-info
coreutils
libc.so.6()(64bit)
libc.so.6(GLIBC_2.14)(64bit)
libc.so.6(GLIBC_2.17)(64bit)
libc.so.6(GLIBC_2.2.5)(64bit)
libc.so.6(GLIBC_2.3)(64bit)
libc.so.6(GLIBC_2.3.4)(64bit)
libc.so.6(GLIBC_2.4)(64bit)
libc.so.6(GLIBC_2.6)(64bit)
rpmlib(CompressedFileNames) <= 3.0.4-1
rpmlib(FileDigests) <= 4.6.0-1
rpmlib(PayloadFilesHavePrefix) <= 4.0-1
rtld(GNU_HASH)
rpmlib(PayloadIsXz) <= 5.2-1
c7:/tmp>
```

You can also see what libraries a package provides as in:

```
File Edit View Search Terminal Help
c7:/tmp>rpm -q --provides gzip
/bin/gunzip
/bin/gzip
/bin/zcat
bundled(gnulib)
gzip = 1.5-9.el7
gzip(x86-64) = 1.5-9.el7
c7:/tmp>
```

The names you see as the capabilities is not the full path name of the library; instead, it is what is called the **soname** of the library.

Any dynamic libraries in the files section of the **spec** are automatically added as capabilities that the package provides. In addition, RPM will automatically run scripts (called **find-requires** and **find-provides**) that determine which dynamic libraries your binary requires, so these will automatically be added to the list of capabilities that your package requires.

If your package has other requirements besides dynamic libraries, you can specify that another package must be installed by putting code of this format in the header section of your **spec** file:

requires: package

requires: package >= version

requires: package >= version-build

In addition to the >= **test** (which requires that a package of the version specified or later is installed), you can also use >, =, <, and <=.