**Verifying a Package’s Integrity**

There may be situations where you need to verify that the package is working properly. For example, if users are complaining about problems with running the software that came with the package, or you suspect that someone has been tampering with your computer, you may want to verify the package.

Verify an installed RPM with the **-V** option (or **--verify**) like so:

[**Click here to view code image**](ch03_images.html#p073pro04a)

# **rpm -V logrotate**  
S.5....T.  c /etc/logrotate.conf

The status of the package is returned as a series of nine characters indicating the results of nine different tests:

**S—**The file size differs.

**M—**The mode differs (permissions or type of file).

**5—**The MD5 sum differs; this is also seen by **--checksig**.

**D—**The device’s major/minor number doesn’t match.

**L—**A readLink(2) path problem exists.

**U—**The user ownership was altered.

**G—**The group ownership was altered.

**T—**The modification time is different from the original.

**P—**The capabilities set on the file differs.

Following the nine tests is an [attribute](gloss01.html#gloss_20) marker that helps you understand if the file should change as part of normal operations. The most common option is a configuration file, indicated by the letter **c**.

The output shown indicates that **/etc/logrotate.conf** is a configuration file that has changed in size, content, and modification time, since the RPM was installed.

Change is not always a bad thing. Configuration files change often because the defaults provided by the distribution may not line up with your needs. Email configurations, log cleanup policies, and web server configurations are all things that get customized frequently and therefore show up as changes. If you expect them to change, you can ignore the output, which is why configuration files have the separate attribute marker. If you see a change to binaries, such as **/bin/ls**, you should be suspicious.

To verify the state of all the packages on the system, you add an -**a** instead of specifying a package name, as such:

# **rpm -Va**

If you want to log the state of your configuration files for comparison against a future date, you can check the condition of every configuration file on the system and write it to a file with this command:

[**Click here to view code image**](ch03_images.html#p074pro01a)

rpm -Vac > /root/somelog.txt