12.8.4 Linux Application Management Facts

When installing software on a Linux system, you usually install a precompiled application or service from a software *package*. Packages contain executables (and other files) that have been precompiled and configured for a specific hardware architecture and Linux distribution.

Use the shell commands listed in the following table to manage the applications and processes on Linux:

Command	Description
yum	The yum command installs packages on Linux systems that use the Red Hat Package Manager (RPM). The yum command can automatically locate and download RPM packages for you by searching one or more repositories on the internet. It can install the package and all of its dependencies at the same time. The syntax for using yum is as follows: ▪ **yum install *package_name*** installs the specified package. ▪ **yum remove *package_name*** uninstalls the specified package. ▪ **yum list installed** lists all packages installed. ▪ **yum list installed *package_name*** checks to see if the specified package is installed. ▪ **yum list available** displays a list of all packages available for installation within the internet repositories yum is configured to use. ▪ **yum list updates** generates a list of updates available for all installed packages. ▪ **yum update *package_name*** installs updates for the specified package. ▪ **yum info *package_name*** displays information about the specified package, including its version and dependencies. ▪ **yum search *keyword*** searches for any packages that contain the specified keyword in the description, summary, or package name fields within the internet repositories yum is configured to use.
apt-get	The apt-get command installs packages on Linux systems that use the Debian Package Manager (dpkg). The apt-get command can automatically locate and download Debian packages for you by searching one or more repositories on the internet. It installs the package and all of its dependencies at the same time. The syntax for using apt-get is as follows: ▪ **apt-get install *package_name*** installs the specified package. ▪ **apt-get remove *package_name*** uninstalls the specified package. ▪ **apt-get update** displays information about all packages available within the internet repositories apt-get is configured to use. ▪ **apt-get dist-upgrade** upgrades all installed packages to the newest version.
ps	The ps utility is used to display running processes on a Linux system. Many options can be used with the ps command. Several commonly used options include: ▪ **ps** displays only those processes associated with the current shell session. ▪ **ps -e** displays all processes running on the system. ▪ **ps -f** displays extended information about processes. This option can be combined with the **-e** option to display extended information about all of the processes running on the system. ▪ **ps -l** displays information about processes in long format. This option can be combined with the **-e** and **-f** options to display extended process information in long format. The following fields can be displayed in the output of the ps command, depending upon which options are included with the command: ▪ **PID** displays the process ID of the process. ▪ **TTY** displays the name of the shell session the process is running within. ▪ **TIME** displays the amount of CPU time used by the process. ▪ **CMD** displays the name of the command that was run to create the process. ▪ **UID** displays the user ID that owns the process. ▪ **PPID** displays the PID of the process's parent. ▪ **C** displays the amount of CPU utilization consumed by the process. ▪ **STIME** displays the time that the process started. ▪ **F** displays any flags associated with the process. ▪ **S** displays the current state of the process. ▪ **PRI** displays the priority of the process. ▪ **NI** displays the nice value of the process. ▪ **SZ** displays the size of the process in RAM.

Use the **man *utility_name*** command at the shell prompt to view the syntax along with all of the options that can be used with these commands.