Zlib1g

This uses the compression schemes for creating *.gz* files. We test this by creating a compressed tar file using the zib scheme.

Libacl1

This package is used for file permissions through its Access Control Lists (ACL's). We test this by using the *chmod* command to change file permissions and ownership.

Libbz2-1.0

This introduces the *bzip* command into the environment which can zip files using different tiers of compression. These files end with the *.bz2* extension. We test this by using the *bzip2* command to compress miscellaneous files.

Libblkid1

This package is used to gather information about and access block devices (disks). We test this package by using the *blkid* command introduced by this package.

Libpam-modules

This package is used to help use the Pluggable Authentication Modules (PAM) and is essentially used to verify and grant access to correct users. To test this package, we run commands using *sudo* and run *login*. Further testing might include setting up an SSH server and allowing another terminal to authenticate via logging in.

Dpkg

This package is used to download, build, install, and remove debian packages. To test this, we use commands such as *apt* and *apt-get*.

Tar

This package is used to create compressed files using the *.tar* suffix. To test this package, we use the *tar* command.

Coreutils

This package is used to implement many of Linux's most widely used commands which are essential to Unix use. To test this, we use commands such as *mkdir*, *rmdir*, *cat,* and more.

Libuuid1

This package contains the tools for creating Universally Unique Identifiers (UUID's). To test this package, we use the *uuidgen* command with its different flags and options.

Passwd

This package is used to create and manipulate passwords for authentication as well as manipulate group data. To test this package, we use commands like *passwd* to change users' passwords.

Adduser

This package contains the tools necessary for creating a new user on the Ubuntu system. To test this package, we use the package's commands like *adduser*.

Debconf

This package is used to do system-wide configuration. To test this package, we use commands like *apt* and *apt-get* as well as the *debconf command*.

Libpam-runtime

This package is used for user authentication during runtime. To test this command, we do both successful and failed logins to different users. We also use the *sudo* command.

Sed

This package introduces the tools necessary for the *sed* command to the environment. The Sed package is useful for doing quick searches and edits of files. To test this package, we use the *sed* command with several options.

Perl-base

This package contains the components that the computer needs to execute perl scripts. To test this package, we create a basic script in Perl, and then execute that script.

Libattr1

This package provides the functionality needed for extended attribute handling in the environment. To test this package, we use the *setfattr* command which is included in the package.

Debianutils

This package is used to provide basic Debian-based utilities to the environment. To test this package, we use commands that come with the package like *which*.

Lsb-base

This package is used to ensure that the Linux kernel is standardized. To test this package, we use basic commands which get and set information about the computer such as *id* and *passwd*.

Libgpg-error0

This package is for defining the error values for many gpg variants and packages. To test this, we try to use the *gpg* command with faulty arguments and setups to get errors.

Util-linux

This package provides utilities for system maintenance. To test this package, we use commands like *uuidgen* and *kill*.

Bsdutils

This package provides many of the basic utilities for Berkeley Software Distributions (BSD's). We test this with commands like *logger* and *wall*.

Grep

This package contains the information for the grep command which is used to search command line outputs using Regex. We test this package using the *grep* package.

Base-files

This package helps with creating many of the important base files in the environment. To test this package, we read from some of the files using *cat*.

Findutils

The findutils package provides the programs which are used to find files in an environment. To test this package, we use commands like *locate* and *find*.

Gzip

This package is important for creating compressed files with *.gz* suffixes. To test this package, we compress files using the gzip compression scheme.

Libpam0g

This package contains the shared library for the LinuxPAM package. It is important for Pluggable Authentication Modules (PAM's) which helps with authentication. To test this, we use commands like *adduser* and *login*.

Login

This package is important for logging into an environment's user accounts by helping with authentication. To test this package, we use commands such as *login*.

Ncurses-bin

This package is used to create the menus that users see when using programs that configure the file system for instance. To test this package, we run commands such as make menuconfig on a kernel folder.

Libstdc++6

This package contains the basic utilities for c++ programs. To test this package, we compile and run a simple c++ program.

ncurses-base

This package provides the basic utilities for the ncurses package. To test this, we do the same as when testing the ncurses package.

Apt

This package is for downloading, installing, and deleting packages in the system. To test this, we run the *apt* command.

Gpgv

This package contains the gpgv command which is essentially just the verification part of the gpg package. To test this, we use the *gpgv* command.

hostname

This package provides commands which can be used to display the system's DNS name, and to display or set its hostname or NIS domain name. To test this, we use commands such as *hostname* and *domainname*.

Base-passwd

This package is used to set up the Debian base system master password and group files. To test this package, we use commands such as *passwd*.

Libsepol1

This package is the SELinux library which has programs and commands embedded for manipulating binary security policies. To test this package, we manipulate the environment's SELinux policy.

Libselinux1

This package provides the static libraries and header files needed for developing SELinux applications. To test this package, we manipulate the SELinux policy using commands like *SELINUXTYPE=mls*.

Sysvinit-utils

This package contains the important System-V-like utilities. To test this package, we use commands like *lastb* and *pidof*.

Libc6

This package contains the basic utilities for c programs. To test this package, we compile and run a simple c program.

Libss2

This package is a command-line interface parsing library. To test this package, we just need to use the command line and this package will help with parsing our inputs.

Netbase

This package provides the environment with its networking capabilities. To test this package, we use commands like *ping* and *curl* to establish UDP and TCP connections.

Readline-common

This package helps programs set up a command line interface. To test this package, we use commands like man which require user input through the command line to quit for instance.

Bash

This package helps with the command line as well as the bash scripting language. To test this, we create and execute a bash script.

Libpopt0

This package is mainly for parsing arguments which are passed to programs via the command line. To test this, we create a c program which takes command line arguments and execute it.

Procps

This package is mainly for process management in the environment. To test this package, we run commands like *ps* and *watch*.

Ucf

This package contains the programs and functionality for manipulating the configuration files in the environment. To test UCF, we run the *ucf* command with an example file which turns the *VERBOSE* variable from a 0 to a 1.

Libpcre3

This package contains the data for using regular expressions in Linux. To test this package, we use regular expressions to search an arbitrary text file.

E2fsprogs

This is a package which helps maintain Linux's external filesystems. To test this package, we use commands like *logsave* which writes to one of this package's files.

Mount

This package has all of the programs and commands for mounting file systems in the environment. To test this package, we use commands like *mount*.

Libslang2

The libslang package is a special package for developing multi-platform c applications. To test this, we execute an SLang-based script from the internet.

Libedit2

This is a package which contains a command line editor library providing generic line editing, history, and tokenization functions. It also helps with command line history. To test this, we are using some of the examples found within libedit's repository.