

## **Documentation**

One of the most intimidating things about using the command line for the first time is that there is just a cursor waiting for something. When asked if somebody would rather take an essay or multiple-choice exam, the answer is almost always the latter. People like to select from options that are provided. It is easier to recognize the correct answer if we have ever seen it before. Think of the command line as a way to get your computer to do anything! Now, let's discuss a way to know what to do.

### **What Documentation Is Available?**

Documentation in linux is usually only in one of two or three places: `/usr/share/doc` and man pages. (Possibly in info pages, too.) All files get installed as a result of installing software. A properly written software package will tag all documentation as such. Assuming that is the case, there is a command that will exclusively show all documentation files for a package. Here it is:

```
# rpm -qd package-name
```

`rpm` is a command for installing software, but can also be used for querying the rpm database (among other things). `rpm` stands for **Red Hat Package Manager**. The `"-q"` option tells rpm to query. The `"-d"` option is asking to specifically query for documentation files on the package passed as the argument.

### **Additional Documentation**

When software vendors give additional explanations with a software package, it will usually be placed in a subdirectory under `/usr/share/doc`. In most cases, documentation about a package is installed with the software package. However, sometimes a package only has documentation in it, such as: `kernel-doc`, `samba-doc`, `sendmail-doc`, etc.

### **man pages**

The man pages are formatted in the "less" format, which allows for easy searching. While you are in a man page you can type `/` and then enter a keyword. If that word is present it will be highlighted on the page and you will be taken to the first result. If there are many instances on the page you can navigate forward through the results by hitting the `"n"` key. To navigate backwards, hit capital `"N"`. `"g"` will take you to the top of the page and capital `"G"` will take you to the bottom.

### **man -k**

Here are a few tricks to using the command line. First, you need to know what command to use. Let's say that you want to use a command to copy a file (already discussed), but you have never done it before. To find out what the copy command is you could use "**man -k copy**." This is going to give you a list of all the "manual pages" that have the word "copy" in the title or short description. From this list you can just get the ones that have certain key words. This is done by sending all the results through a "pipe" (or the "|") and using the "grep" command. For example, if I wanted to find all of the files that have "copy" in the title or description (as we have already done), but only see the results that contained the word "file" then I could use the following command:

```
# man -k copy | grep file
```

This would give me a very short list of commands. One of them is "**cp**" and now I have identified the command to use.

Once you know the command, there are "switches" (or "options") and arguments used with the command to change the function of that command. For example, if I wanted to copy a file and retain all of the permissions and timestamps of the source files, I could use "-a" after the "cp" command, like this:

```
$ cp -a original.file copy.file
```

You will notice that I also put the source and destination files in the command. If I needed to know how to type this command I could simply type "**man cp**" and the manual page shows proper usage for a command.

**cp [OPTION]... SOURCE... DIRECTORY**

Anything that is between square brackets ("[" and "]") is optional.

**man -K**

A bit more time consuming (because it looks through all of the text in all of the man pages) is man -K. When a keyword search does not return anything from the titles and summaries, you can look through all of the man pages' text for a keyword by using the capital K option.

--help

You could also type in "cp" by itself and the command line will prompt me with some

suggestions. In this case, the output is:

```
$ cp: missing file operand
Try `cp --help' for more information.
```

So, the next logical step would be to type:

```
$ cp --help
```

## Useful Websites

### The Distributions' Official Site

<http://www.redhat.com>, <http://www.novell.com> and <http://www.canonical.com> have a search function on every page that allows you to search the knowledgebase for keywords. Ubuntu, OpenSuse and Fedora also have very good communities for answers to common questions.

### The Linux Documentation Project

Besides the man pages there are many online resources available with examples of how to use different commands. We would recommend <http://www.tldp.org> (The Linux Documentation Project).

### Linux Questions

As their tagline suggests: **"LinuxQuestions.org - where Linux users come for help"** This is a great archive of questions asked and answered.

### SuperUser.com

Unlike the previously mentioned sites, superuser.com answers questions about all major operating systems. They do a pretty good job of segregating the results so that when you are searching for something linux related you are not presented with results for Mac and Windows. Also, many search engine results point to superuser.com.

## Activities

- Install a package called **tuned** and list the documentation associated with the package
- How many man pages covering configuration files exist for the openSSH package?
- What is the purpose of the **-v** option with the **rsync** command?
- What is the latest version of Fedora called?