

2.2.3 Help Facts

There are several resources available to you that provide help with Linux commands, utilities, and configuration files.

This lesson covers the following topics:

- Man interface
- Info reader
- On-screen help and the help command
- The `/usr/share/doc` directory
- Whatis database

Man Interface

The man interface displays manual (man) pages, which are text-based help files for a specific command, service, or configuration file. A man page shows a command's syntax, options, and related files and commands.

- You can open the man interface to view a man page using **man *command or file***.
 - Use the **-k** option to search all man pages for a specific search term.
 - Example: **man userdel** shows the man pages for the **userdel** command.
 - Example: **man -k user** lists all the commands with *user* in the command name or description.
- Man pages are typically stored in the **/usr/man** or **/usr/share/man** directory. Subdirectories store man pages for different types of commands or languages.
 - Some distributions use the MANPATH environment variable to identify the location where man pages are stored. Type **echo \$MANPATH** to see the value of this variable.
 - Some distributions use the MANPATH_MAP directive in the `/etc/man_db.conf` or `/etc/manpath.config` file to specify the directories where man pages are stored.
- A man page usually consists of several elements that are used to organize the information. Most man pages will include the following:
 - The TITLE section is the first line of the man page. It lists the name of the command or file followed by the section number.
 - The NAME section displays the name of the command or file and a short summary that describes what it does.
 - The SYNOPSIS section reviews the syntax for using a command or a brief overview of what a configuration file is used for.
 - The DESCRIPTION section describes how the command or configuration file works. It also provides a list of options that can be used.

- The AUTHOR section displays the name of the programmer who wrote the command or service referenced in the man page.
- The REPORTING BUGS section provides contact information to report any bugs you discover.
- The COPYRIGHT section identifies who owns the copyright to the command or service referenced in the man page.
- The SEE ALSO section lists man pages or other resources that are related to the current man page.
- The last line of a man page displays the version number and revision date of the command or service.
- Use the following keystrokes to navigate within man pages.
 - Use the Up arrow key to move up one line.
 - Use the Down arrow key to move down one line.
 - Use the PgUp key to move up one display page.
 - Use the PgDn key or the space bar to move up one display page.
 - Use the Home key to go to the beginning of the man page.
 - Use the End key to go to the end of the man page.
 - Use the / key to search for text within the man page and the n key to move to the next occurrence of the searched for text.
 - Use the q key to exit the man page.

Info Reader

The Info reader displays Info pages (which are called Info nodes). Info nodes are similar to man pages, but are more verbose and emphasize how to use Linux commands and utilities. Info nodes use hypertext links to navigate between nodes.

- You can open the info reader to view an info node command using **info command or file**.
 - Example: **info mkdir** opens the info page for the **mkdir** command.
- The top line of the display shows the next and previous info nodes.
- Use the following keystrokes to navigate within info nodes.
 - Use the Up arrow key to move up one line.
 - Use the Down arrow key to move down one line.
 - Use the PgUp key or the Del key to move up one display page.
 - Use the PgDn key or the space bar to move up one display page.
 - Use the h key to show the info help node.
 - Use the Tab key to move to the next hyperlink within the info nodes.
 - Use the Home key to move to the beginning of a node.
 - Use the Enter key to follow the selected hyperlink.
 - Use the n key to move to the next info node.

- Use the p key to move to the previous info node.
- Use the q key to exit the info reader.

On-Screen Help and the Help command

Many commands include on-screen help as one of the options for the command.

- Typically, to view the help available for a command, type:
 - **[command] --help**
 - Example: **jobs --help** displays help on the **jobs** command.
 - **[command] -h**
 - Example: **echo -h** displays help on the **echo** command.
- If the command is typed incorrectly, many commands display the help information automatically.
- In most cases, help is an abbreviated list that shows the command syntax and available options with brief descriptions.
- Although some commands support both switches, the **--help** switch is more common.
- If necessary, pipe the command through **more** using the command **[command] --help | more** to scroll through the on-screen help.

In addition, the **help** command displays information about commands that are built-in to the shell itself.

- To view information about a built-in command that matches a pattern of characters, type:
 - **help [pattern]**
 - Example: **help exec** displays help on the **exec** command.
 - Example: **help ex** displays help on three commands, **exec**, **exit** and **export**.
- The help command has three options:
 - **help -d** outputs a short description for each topic.
 - **help -m** displays command usage in a pseudo-manpage format.
 - **help -s** outputs only a short usage synopsis for each matching topic.

The /usr/share/doc Directory

The /usr/share/doc directory contains documentation resources for many of the different components of the Linux system.

- Within the /usr/share/doc directory are subdirectories for many components.

- Typical files in each subdirectory include:
 - NEWS
 - README
 - AUTHOR
 - OVERVIEW
 - COPYING
- Use the **cat** command to display the contents of the files in each subdirectory.

Whatis Database

Each manual page contains a short description. Both the **whatis** and **apropos** commands use the whatis database, which contains indexes of these short man descriptions.

- The **whatis [keyword]** command displays one-line man page descriptions for commands that exactly match the keyword.
 - The **whatis** results are intended to give you a general idea of what a command or component will do.
 - Example: **whatis grep**
 - If the whatis database has not been created, run the **/usr/sbin/makewhatis** command.
 - Use **makewhatis -u** to update the database after changes have been made to the man pages.
- The **apropos [keyword]** command displays one-line man page descriptions for any command or man page description that contains the keyword.
 - The **apropos** results is intended to help you learn what command or program to use when performing a certain task.
 - Example: **apropos declare**
- Both the **whatis** and **apropos** commands use the whatis database.
 - If the whatis database has not been created, run the **/usr/sbin/makewhatis** command.
 - Use **makewhatis -u** to update the database after changes have been made to the man pages.

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