JAN JAN M. GARCIA **ASSIGNMENT** **NETWORK ADMINISTRATION**

BSIT 2-1 **MA'AM SHEIANN REYNOSO**

Most-Used Linux Commands

1. ls Command

ls is probably the first command every Linux user typed in their terminal. It allows you to list the contents of the directory you want (the current directory by default), including files and other nested directories.

For example, to colorize the output of the **ls** command, you can use the following:

```
ls --color=auto
```

Now the ls command output is colorized, and you can appreciate the difference between a directory and a file.

But typing ls with the color flag would be inefficient; that's why we use the alias command.

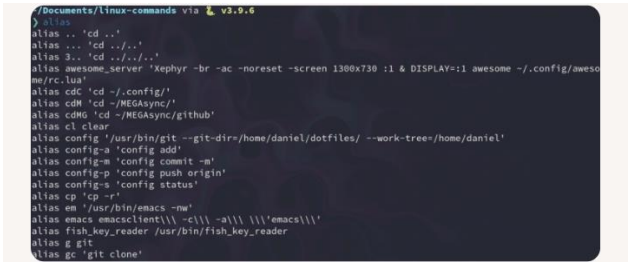
2. alias Command

The **alias command** lets you define temporary aliases in your shell session. When creating an alias, you instruct your shell to replace a word with a series of commands.

```
alias ls="ls --color=auto"
```

For example, to set **ls** to have color without typing the **--color** flag every time, you would use:

As you can see, the alias command takes one key-value pair parameter: alias NAME="VALUE". Note that the value must be inside quotes.



If you want to list all the aliases you have in your shell session, you can run the alias command without argument.

3. unalias Command

As the name suggests, the **unalias** command aims to remove an **alias** from the already defined aliases. To remove the previous **ls** alias, you can use:

```
unalias ls
```

4. pwd Command

The **pwd** command stands for “print working directory,” and it outputs the absolute path of the directory you’re in. For example, if your username is “john” and you’re in your Documents directory, its absolute path would be:

```
/home/john/Documents
```

To use it, simply type pwd in the terminal:

```
pwd

# My result: /home/kinsta/Documents/linux-commands
```

5. cd Command

The **cd** command is highly popular, along with **ls**. It refers to “change directory” and, as its name suggests, switches you to the directory you’re trying to access.

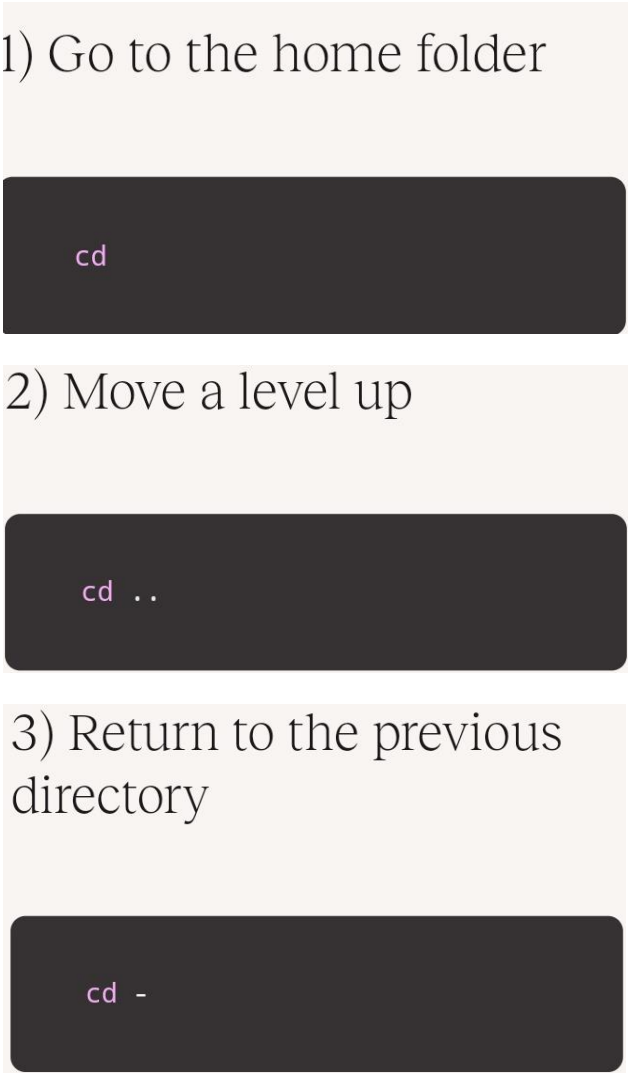
For instance, if you’re inside your Documents directory and you’re trying to access one of its subfolders called **Videos**, you can enter it by typing:

```
cd Videos
```

You can also supply the absolute path of the folder:

```
cd /home/kinsta/Documents/Videos
```

There are some tricks with the cd command that can save you a lot of time when playing around with it:



6. cp Command

It’s so easy to copy files and folders directly in the Linux terminal that sometimes it can replace conventional file managers.

To use the **cp** command, just type it along with the source and destination files:

```
cp file_to_copy.txt new_file.txt
```

You can also copy entire directories by using the recursive flag:

```
cp -r dir_to_copy/ new_copy_dir/
```

Remember that in Linux, folders end with a forward slash (`/`).

7. **rm** Command

Now that you know how to copy files, it'll be helpful to know how to remove them.

You can use the **rm** command to remove files and directories. Be careful while using it, though, because it's very difficult (yet not impossible) to recover files deleted this way.

To delete a regular file, you'd type:

```
rm file_to_copy.txt
```

If you want to delete an empty directory, you can use the recursive (`-r`) flag:

```
rm -r dir_to_remove/
```

On the other hand, to remove a directory with content inside of it, you need to use the force (-f) and recursive flags:

```
rm -rf dir_with_content_to_remove/
```

> **Info**
>
> Be careful with this – you can erase a whole day of work by misusing these two flags!

8. mv Command

You use the **mv** command to move (or rename) files and directories through your file system.

To use this command, you'd type its name with the source and destination files:

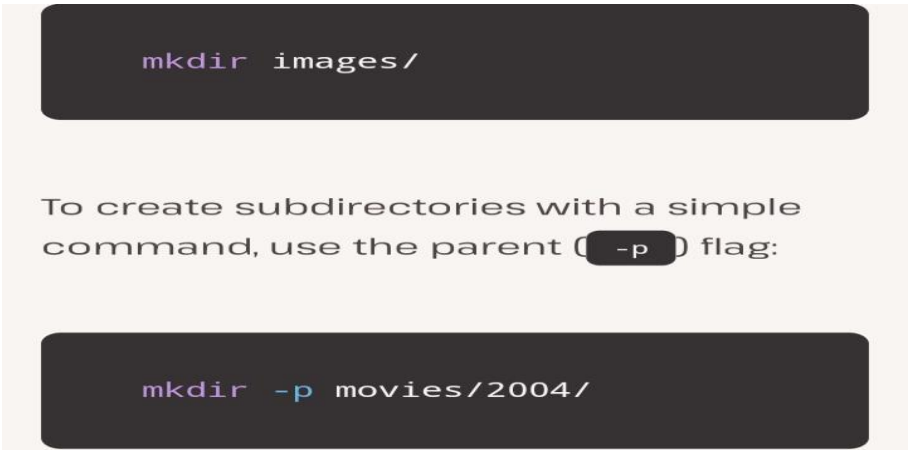
...where **./** is the directory you're currently in.

You also can use **mv** to rename files while keeping them in the same directory:

9. mkdir Command

To create folders in the shell, you use the **mkdir** command. Just specify the new folder's name, ensure it doesn't exist, and you're ready to go.

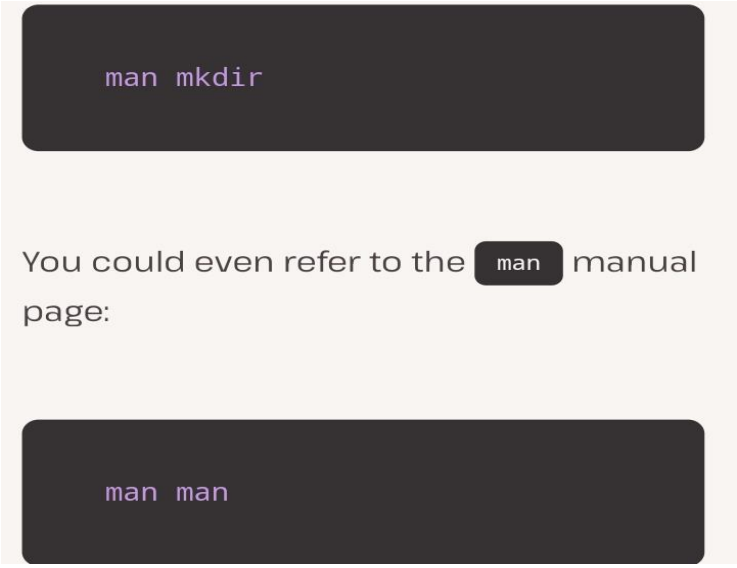
For example, to make a directory to keep all of your images, just type:



10. man Command

Another essential Linux command is **man**. It displays the manual page of any other command (as long as it has one).

To see the manual page of the **mkdir** command, type



CISCO COMMANDS

	Cisco Command	Command Abbreviation	Mode Compatability
5	**Show interfaces**	sh int	User EXEC & Privileged EXEC
4	**Copy running-config startup-config**	wr	Privileged EXEC
3	**Show IP Route**	sh ip ro	User EXEC & Privileged EXEC
2	**Show IP interface brief**	sh ip int brie	User EXEC & Privileged EXEC
1	**Show running-config**	sh run -or- wr t	Privileged EXEC

1: Show running-config

Probably the most useful of all the Cisco show commands is **show running-config.** With this command, you get to see the router's entire active configuration. Every command you have typed. Every default command applied. All this great information is available with a single IOS command. It's that simple. You get to see the IP addresses, interfaces, passwords (that are in clear text), routing protocols and other settings. This command can only be used in **Privileged EXEC mode.**

This command can be abbreviated **sh run or wr t.**

2: Show IP interface brief

We mentioned that the show interfaces command gives you a lot of useful information about all your router's interfaces. Sometimes you want precise, specific information to answer the questions: Is the interface up? What are the IP addresses assigned to the interfaces? The show IP interface brief command gives you the answers to these questions and is the best summary of the status, protocol and IP addresses of your interfaces. This command can be used in both **User EXEC** and **Privileged EXEC mode.**

This command can be abbreviated **sh ip int brie.**

3: Show IP route

Routers learn about networks, either statically or dynamically, and save the best path to those networks in their routing table. Once you know that your interfaces are up and you have saved your configuration, you want to verify that your router has convergence, which means that your router has accurate information about network reachability.

The **show IP route** command displays every known connected and destination network, the method used to learn about these networks, the next-hop IP address and the local interface used to get to each known destination network. This command can be used in both User-EXEC and Privileged EXEC mode.

This command can be abbreviated **sh ip ro.**

4: Copy running-config startup-config

Once you make changes to the router's configuration, it's important to remember to save those changes. This command copies the active running config in RAM that you have modified to the startup config in flash memory. By copying the configuration into flash, it will be saved when the router is powered off and restarted. This command can only be used in **Privileged EXEC mode.**

A shortcut for this command is **wr** (which is short for write memory).

5: Show Interfaces

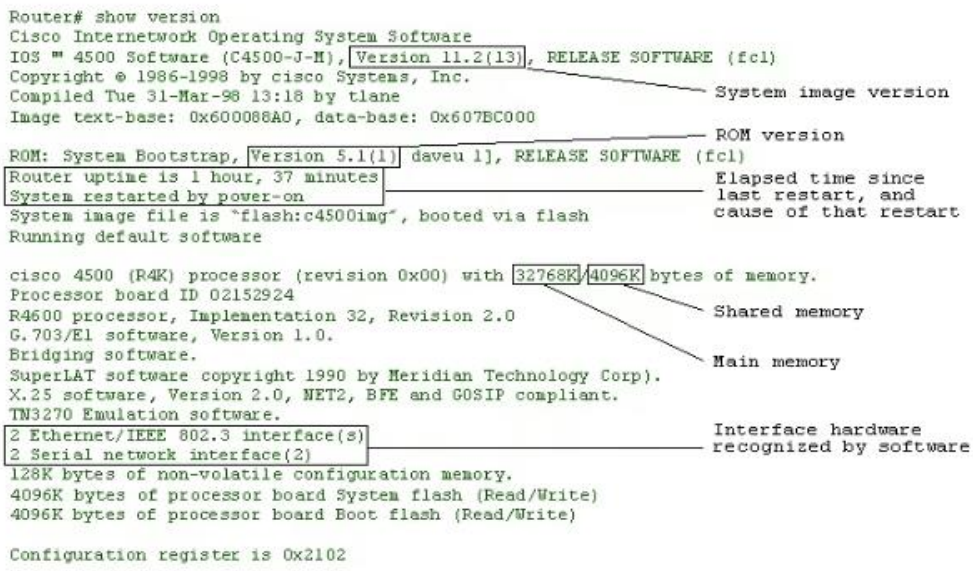
It's important to know what type of interfaces are on your router, important statistics about those interfaces and whether they are up or down. The show interfaces command is a very verbose command that provides a lot of output.

You may have to pick through that output to find what you are looking for; just about everything to do with interfaces is shown in the output from this command, for example interface type, speed, IP address, and errors on the interface. This command can be used in both **User EXEC** and **Privileged EXEC mode.**

This command can be abbreviated as **sh int**.

6. show version

You will use the show version command in the simulation environment. This command displays the configuration of the system hardware, the software version, and the names and sources of configuration files and the boot images. This command also displays information about how the system was last started and how long the router has been running since that start. Sample output from the **show version** command follows:



7.show logging

This command displays the state of syslog error and event logging, including **host** addresses, and whether console logging is enabled. This command also displays Simple Network Management Protocol (**SNMP**) configuration parameters and protocol activity.

```
Router# show logging
Syslog logging: enabled
     Console logging: disabled
     Monitor logging: level debugging, 266 messages logged.
     Trap logging: level informational, 266 messages logged.
     Logging to 192.180.2.238
SNMP logging: disabled, retransmission after 30 seconds
    0 messages logged
```

The following table describes significant fields shown in the command display.

Field	Description
Syslog Logging	When enabled, system logging messages are sent to a UNIX host that acts as a syslog server; that is, it captures and saves the messages.
Console Logging	If enabled, this field states the level; otherwise, it displays disabled.
Monitor Logging	This shows the minimum level of severity required for a log message to be sent to a monitor terminal (not the console).
Trap Logging	This field gives the minimum level of severity required for a log message to be sent to a syslog server.
SNMP Logging	This field shows whether SNMP logging is enabled and the number of messages logged, and the retransmission interval.

8. show tech-support

Use this command to help collect general information about the router when you are reporting a problem to the Cisco Technical Assistance Center (TAC). This command displays the equivalent of the following show commands:

- show version
- show running-config
- show controllers
- show stacks
- show interfaces
- show buffers
- show processes memory
- show processes cpu

The output of most of these commands is of use only to your technical support representative.

9. The "?"

It may seem entirely too obvious that you should know how to type ? to ask for help when using the Cisco IOS. However, the Cisco IOS is completely different from other operating systems when it comes to using the question mark (help key). As the IOS is a command-line operating system with thousands of possible commands and parameters, using the ? can save your day.

You can use the command in many ways. First, use it when you don't know what command to type. For example, type ? at the command line for a list of all possible commands. You can also use ? when you don't know what a command's next parameter should be. For example, you might type show ip ? If the router requires no other parameters for the command, the router will offer <CR> as the only option.

Finally, use ? to see all commands that start with a particular letter. For example, show c? will return a list of commands that start with the letter "c".

10. debug

The **debug** command has many options and does not work by itself. It provides detailed debugging output on a certain application, protocol, or service. For example, debug ip routing will tell

you every time a route is added to or removed from the router. Debugging can be dangerous as its process takes priority over all others. Be prepared to disable the feature using the no debug command or undebug all command.

References

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