Module 2 Cheat Sheet - Introduction to Linux Commands

Getting information

Return your user name:

1. 1

1. whoami

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Return your user and group id:

1. 1

1. id

Copied!

Return operating system name, username, and other info:

1. 1

1. uname -a

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Display reference manual for a command:

1. 1

1. man top

Copied!

List available man pages, including a brief description for each command:

1. 1

1. man -k .

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Get help on a command:

1. 1

   1. curl --help

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Return the current date and time:

1. 1

   1. date

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Navigating and working with directories

List files and directories by date, newest to last:

1. 1

   1. ls -lrt

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Find files in directory tree that end in `.sh`:

1. 1

   1. find -name \'*.sh\'

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Return path to present working directory:

1. 1

   1. pwd

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Make a new directory:

1. 1

   1. mkdir new_folder

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Change the current directory:

Up one level:

1. 1

   1. cd ../

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To home:

1. 1
1. `cd ~` or `cd

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To some other directory: `cd path_to_directory`

Remove directory verbosely:

1. 1
1. `rmdir temp_directory -v`

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Monitoring system performance and status

List selection of/all running processes and their PIDs:

1. 1
1. `ps`

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1. 1
1. `ps -e`

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Display resource usage:

1. 1
1. `top`

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List mounted file systems and usage:

1. 1
1. `df`

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Creating, copying, moving, and deleting files:

Create an empty file or update existing file's timestamp:

1. 1

    1. `touch a_new_file.txt`

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Copy a file:

1. 1

    1. `cp file.txt new_path/new_name.txt`

Copied!

Change file name or path:

1. 1

    1. `mv this_file.txt that_path/that_file.txt`

Copied!

Remove a file verbosely:

1. 1

    1. `rm this_old_file.txt -v`

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Working with file permissions

Change/modify file permissions to 'execute' for all users:

1. 1

    1. `chmod  +x  my_script.sh`

Copied!

Change/modify file permissions to 'execute' only for you, the current user:

1. 1

    1. `chmod u+x my_file.txt`

Copied!

Remove 'read' permissions from group and other users:

1. 1

    1. `chmod go-r`

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Displaying file and string contents

Display file contents:

    1. 1

    1. cat my_shell_script.sh

Copied!

Display file contents page-by-page:

    1. 1

    1. more ReadMe.txt

Copied!

Display first 10 lines of file:

    1. 1

    1. head -10 data_table.csv

Copied!

Display last 10 lines of file:

    1. 1

    1. tail -10 data_table.csv

Copied!

Display string or variable value:

    1. 1
    2. 2

    1. echo "I am not a robot"
    2. echo "I am $USERNAME"

Copied!

Basic text wrangling

Sorting lines and dropping duplicates:

Sort and display lines of file alphanumerically:

    1. 1

```
1. sort text_file.txt
```

Copied!

In reverse order:

```
1. 1
1. sort -r text_file.txt
```

Copied!

Drop consecutive duplicated lines and display result:

```
1. 1
1. uniq list_with_duplicated_lines.txt
```

Copied!

Displaying basic stats:

Display the count of lines, words, or characters in a file:

Lines:

```
1. 1
1. wc  -l table_of_data.csv
```

Copied!

Words:

```
1. 1
1. wc  -w my_essay.txt
```

Copied!

Characters:

```
1. 1
1. wc  -m some_document.txt
```

Copied!

Extracting lines of text containing a pattern:

Some frequently used options for `grep`:

Option	Description
-n	Print line numbers along with matching lines
-c	Get the count of matching lines
-i	Ignore the case of the text while matching

Option	Description
-v	Print all lines which do not contain the pattern
-w	Match only if the pattern matches whole words

Extract lines containing the word "hello", case insensitive and whole words only:

1. 1

    1. `grep  -iw hello  a_bunch_of_hellos.txt`

Copied!

Extract lines containing the pattern "hello" from all files in the current directory ending in `.txt`:

1. 1

    1. `grep  -l hello  *.txt`

Copied!

Merge two or more files line-by-line, aligned as columns:

Suppose you have three files containing the first and last names of your customers, plus their phone numbers.

Use `paste` to align file contents into a Tab-delimited table, one row for each customer:

1. 1

    1. `paste first_name.txt last_name.text phone_number.txt`

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Use a comma as a delimiter instead of the default Tab delimiter:

1. 1

    1. `paste -d "," first_name.txt last_name.text phone_number.txt`

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Use the `cut` command to extract a column from a table-like file:

Suppose you have a text file whos rows consist of first and last names of customers, delimited by a comma.

Extract first names, line-by-line:

1. 1

    1. `cut -d "," -f 1 names.csv`

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Extract the second to fifth characters (bytes) from each line of a file:

1. 1

1. `cut -b 2-5 my_text_file.txt`

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Extract the characters (bytes) from each line of a file, starting from the 10th byte to the end of the line:

1. 1

1. `cut -b 10- my_text_file.txt`

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Compression and archiving

Archive a set of files:

1. 1

1. `tar -cvf my_archive.tar.gz file1 file2 file3`

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Compress a set of files:

1. 1
2. 2

1. `zip my_zipped_files.zip file1 file2`
2. `zip my_zipped_folders.zip directory1 directory2`

Copied!

Extract files from a compressed zip archive:

1. 1
2. 2

1. `unzip my_zipped_file.zip`
2. `unzip my_zipped_file.zip -d extract_to_this_direcory`

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Working with networking commands

Print hostname:

1. 1

1. `hostname`

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Send packets to URL and print response:

1. 1

```
1. ping  www.google.com
```

Copied!

Display or configure system network interfaces:

1. 1
2. 2

```
1. ifconfig
2. ip
```

Copied!

Display contents of file at a URL:

1. 1

```
1. curl  <url>
```

Copied!

Download file from a URL:

1. 1

```
1. wget  <url>
```

Copied!

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Change Log

Date (YYYY-MM-DD)	Version	Changed By	Change Description
2023-05-04	1.4	Benny Li	Added code blocks
2023-04-26	1.3	Nick Yi	QA Pass
2023-04-10	1.2	Nick Yi	ID Review
2023-02-14	1.1	Jeff Grossman	Update to reflect module content
2022-12-23	1.0	Jeff Grossman	Split from existing reading and added new content