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

Copied!

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 .

Copied!

Get help on a command:

1. 1
   1. curl --help

Copied!

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\'
```
Copied!

Return path to present working directory:

1. 1

```
1. pwd
```
Copied!

Make a new directory:

1. 1

```
1. mkdir new_folder
```
Copied!

Change the current directory:

Up one level:

1. 1

```
1. cd ../
```
Copied!

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
```
Copied!

Monitoring system performance and status

List selection of/all running processes and their PIDs:

1. 1

```
1. ps
```
Copied!

1. 1

```
1. ps -e
```
Copied!

Display resource usage:

1. 1

```
1. top
```
Copied!

List mounted file systems and usage:

1. 1

```
1. df
```
Copied!

Creating, copying, moving, and deleting files:

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

1. 1
   1. touch a_new_file.txt

Copied!

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

Copied!

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`

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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
-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
```

Copied!

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
```

Copied!

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
```

Copied!

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

1. 1

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

Copied!

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
```

Copied!

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
```

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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
```

Copied!

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!

Authors

Jeff Grossman
Sam Propupchuk

Other Contributors

Rav Ahuja

Change Log

Date (YYYY-MM-DD)	Version	Changed By	Change Description
2023-05-04	1.4	Benny Li	Added code blocks

Date (YYYY-MM-DD)	Version	Changed By	Change Description
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