

OPEN-SOURCE EBOOK

# ++101 LINUX COMMANDS

BOBBY ILIEV

# Table of Contents

<b>101 Linux commands Open-source eBook</b> .....	<b>16</b>
Hacktoberfest .....	17
About me .....	18
Ebook PDF Generation Tool .....	20
Book Cover .....	21
License .....	22
<b>The ls command</b> .....	<b>23</b>
<b>The cd command</b> .....	<b>25</b>
<b>The cat command</b> .....	<b>27</b>
<b>The tac command</b> .....	<b>30</b>
<b>The head command</b> .....	<b>32</b>
<b>The tail command</b> .....	<b>34</b>
<b>The pwd command</b> .....	<b>37</b>
<b>The touch Command</b> .....	<b>39</b>
<b>The cal Command</b> .....	<b>42</b>
<b>The bc command</b> .....	<b>45</b>

<b>The df command</b>	<b>48</b>
<b>The help command</b>	<b>51</b>
Syntax	52
Options	53
Example	54
<b>The factor command</b>	<b>55</b>
Syntax	56
Options	57
Examples	58
<b>The uname command</b>	<b>59</b>
Syntax:	60
Examples	61
Options	62
<b>The mkdir command</b>	<b>63</b>
Syntax	64
Examples	65
Options	66
<b>The gzip command</b>	<b>67</b>
<b>Usage</b>	<b>68</b>
Compress a file	69
Decompress a file	70
Compress multiple files:	71
Decompress multiple files:	72

## Show memory usage

**Action:** --- Output the memory usage - available and used, as well as swap

**Details:** --- Outputted values are not human-readable (are in bytes)

**Command:**

```
free
```

## Show memory usage in human-readable form

**Action:** --- Output the memory usage - available and used, as well as swap

**Details:** --- Outputted values ARE human-readable (are in GB / MB)

**Command:**

```
free -h
```

# The `top/htop` command

`top` is the default command-line utility that comes pre-installed on Linux distributions and Unix-like operating systems. It is used for displaying information about the system and its top CPU-consuming processes as well as RAM usage.

`htop` is interactive process-viewer and process-manager for Linux and Unix-like operating system based on ncurses. If you take `top` and put it on steroids, you get `htop`.

## Comparison between top and htop:

Feature	top	htop
Type	Interactive system-monitor, process-viewer and process-manager	Interactive system-monitor, process-viewer and process-manager
Operating System	Linux distributions, macOS	Linux distributions, macOS
Installation	Built-in and is always there. Also has more adoption due to this fact.	Doesn't come preinstalled on most Linux distros. Manual installation is needed
User Interface	Basic text only	Colorful and nicer text-graphics interface
Scrolling Support	No	Yes, supports horizontal and vertical scrolling
Mouse Support	No	Yes
Process utilization	Displays processes but not in tree format	Yes, including user and kernel threads
Scrolling Support	No	Yes, supports horizontal and vertical scrolling
Mouse Support	No	Yes
Process utilization	Displays processes but not in tree format	Yes, including user and kernel threads
Network Utilization	No	No
Disk Utilization	No	No
Comments	Has a learning curve for some advanced options like searching, sending messages to processes, etc. It is good to have some knowledge of top because it is the default process viewer on many systems.	Easier to use and supports vi like searching with <code>/</code> . Sending messages to processes (kill, renice) is easier and doesn't require typing in the process number like top.

## Examples:

### top

1. To display dynamic real-time information about running processes:

```
top
```

2. Sorting processes by internal memory size (default order - process ID):

```
top -o mem
```

3. Sorting processes first by CPU, then by running time:

```
top -o cpu -O time
```

4. Display only processes owned by given user:

```
top -user {user_name}
```

### htop

1. Display dynamic real-time information about running processes. An enhanced version of **top**.

```
htop
```

2. displaying processes owned by a specific user:

```
htop --user {user_name}
```

3. Sort processes by a specified **sort\_item** (use **htop --sort help** for



available options):

```
htop --sort {sort_item}
```

## Example

```
$ passwd
```

**The syntax of the `passwd` command is :**

```
$ passwd [options] [LOGIN]
```

## options

`-a, --all`  
This option can be used only with `-S` and causes show status **for** all users.

`-d, --delete`  
Delete a user's **password**.

**`-e, --expire`**  
**Immediately expire an account's password.**

`-h, --help`  
Display help message and exit.

`-i, --inactive`  
This option is used to disable an account after the password has been expired **for** a number of days.

`-k, --keep-tokens`  
Indicate password change should be performed only **for** expired authentication tokens (passwords).

`-l, --lock`  
Lock the password of the named account.

`-q, --quiet`  
Quiet mode.

`-r, --repository`  
change password **in** repository.

`-S, --status`  
Display account status information.

# The **w** command

The **w** command displays information about the users that are currently active on the machine and their [processes](#).

## Examples:

1. Running the **w** command without [arguments](#) shows a list of logged on users and their processes.

```
w
```

2. Show information for the user named *hope*.

```
w hope
```

## Syntax:

```
finger [-l] [-m] [-p] [-s] [username]
```

## Additional Flags and their Functionalities:

Short Flag	Long Flag	Description
<b>-h</b>	<b>--no-header</b>	Don't print the header.
<b>-u</b>	<b>--no-current</b>	Ignores the username while figuring out the current process and cpu times. <i>(To see an example of this, switch to the root user with <b>su</b> and then run both <b>w</b> and <b>w -u</b>.)</i>
<b>-s</b>	<b>--short</b>	Display abbreviated output <i>(don't print the login time, JCPU or PCPU times).</i>

This is a sample from "101 Linux Commands eBook" by Bobby Iliev the Hacktoberfest  
community.

For more information, [Click here](#).