Bash Cheat Sheet

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Contents

1 Navigation

- *pwd*: print working directory
- *cd*: change directory according to path given

2 Listing Files

- ls: listing a directory content, common option:
  - -l list format
  - -a all files even hidden ones

3 Reading files

- *cat*: allow to read a file's content, common options:
  - -n line numbering in the output
- *more*: display one screen at a time when the file is large
- *less*: a version more sophisticated of *more* with navigation forward and backward option +F monitor changes in the file (monitoring log files)
- *head*: allow to print top N number of lines from a file
- *tail*: allow to print last N number of lines from a file

4 Files management

- *touch*: create a file
- *rm*: delete files or directory (no going back!)
- *mkdir*: create directory
- *rmdir*: delete directory if empty
- *mv*: move file
- *cp*: copy file
- *ln*: create symlink with the -s option

5 Wildcards

- using the Wildcards for file management
- * replace any chain of character
- ? replace only one character
- a-z any character from a to z small caps
- 0-9 any digit

6 Finding files

- *which*: search in the PATH to find a file
- *locate*: find a path of a binary
- *find*: find allow to walk a hierarchy to search for files and directories. The main options are:
  - *-name*: search by name
  - *-iname*: search by name case insensitive
  - *-type f/d/l/s*: search by type (files, directories, links, sockets)
  - *-size*: search by file size
  - *-user*: search by user

7 Pipeline

Every program running on the command line in Linux has 3 data streams:

- *STDIN(0)*: standard input
- *STDOUT(1)*: standard output
- *STDERR(2)*: standard error

Pipping and redirection means that we may connect these streams between different programs (STDOUT of one program to the STDIN of another)

8 grep, sed, cut and awk

- *grep*: searches text files for a given regex. Common option -r for recursive
- *sed*: stream editor, text editing on stream text
- *cut*: extract a section of text from a line. Common options:
  - *-f*: field number
  - *-d*: field delimiter
- *awk*: programming language for text processing. Common options:
  - *-F*: field separator
  - *print*: subcommand which outputs the result

9 Comparing files

- *comm*: compares two text files. Output three columns:
  - *column 1*: lines that are unique to the first file
  - *column 2*: lines that are unique to the second file
  - *column 3*: lines that are shared by both file

  option -n where n is either 1, 2 or 3 to suppress the columns not needed
- *diff*: detect differences between files. Popular format options:
  - *-c*: context format
  - *-u*: unified format
  - *-B*: skip blank line
  - *-d*: smallest set of differences

10 Editing files from command line

- *nano*: simple text editor not installed by default on linux
  - *ctrl + O*: save a file
  - *ctrl + X*: exit the editor
  - *ctrl + W*: search for a string
- *vi or vim*: powerful text editor installed by default on most linux system
  - *:q*: quit the file without saving (normal mode)
  - *:w*: write the file (normal mode)
  - *i*: entering in insert mode
  - *ESC*: come back in normal mode