

Linux Administration

Using the command line

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The Bash shell

- Bash is the most common shell available on Linux; others are available, this is generally the one used by default.
- All examples and exercises presented here are using Bash.

Using the command line

- Commands and options are case sensitive.
- Arguments are usually separated by spaces.
- Options may have a short version (dash and a letter) and a long version (two dashes and the option name).
- Short options can usually be merged (-abc is equivalent to -a -b -c).
- Options are not the same from one command to another.

Accessing the command line

- When booting the kernel a console will be made accessible for user connection.
- Additional consoles can be accessed by using keyboard shortcuts (usually Ctrl + Alt + F1 to Ctrl + Alt + F6)
- Remote connection via SSH will give you access to a console.
- Terminal console emulators are available in a graphical environment.

Navigating the command line

- **The Tab key will let you auto-complete commands and file names.**
- Commands are saved in the history.
- You can recall and navigate your command history with the up and down arrow keys.
- Additional key shortcuts are available:
 - beginning of the line: ctrl + a
 - end of the line: ctrl + e
 - next word: alt + f
 - previous word: alt + b
 - erasing characters: ctrl + h
 - disconnecting: ctrl + d

Bash history

- The “history” command will display all commands recorded for your account. A number is displayed next to each entry.
- Typing !123 will recall the command from entry 123.
- The history can be personalized to add more entries, add timestamps, ignore specific commands, ...

Terminal multiplexer

- A terminal multiplexer will allow you to keep an active terminal on a system between logout.
- This could be used to maintain a stable environment when using an unreliable network connection, or when running very long processes.

Using tmux

- Launch tmux by using the command of the same name.
- Start working in the new terminal.
- Press the key Ctrl + B then D to detach from the active session.
- Later on, use the command “tmux ls” to list the active sessions.
- Launch the command “tmux attach -t 0” to access the existing session 0.

Getting help

- Almost all commands are documented with a manual page (aka 'manpage')
- To access a manpage, just enter: `man <command>`
- To quit the man page, press the 'q' key
- Manpages are also available for files, system calls or libraries.
- When you don't know what manpage to read, use the 'apropos' command: `apropos <keyword>`