# Introduction à la ligne de commande sous Linux

damien.francois@uclouvain.be
olivier.mattelaer@uclouvain.be

UClouvain \ SST \ CISM
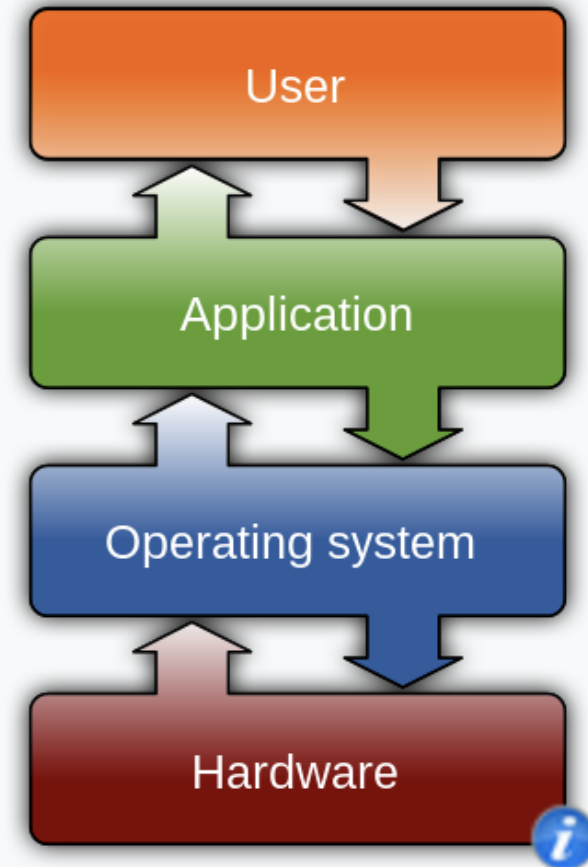
# Agenda:

- Qu'est-ce que Linux?
- Qu'est-ce que la ligne de commande?
- Quand est-ce qu'on joue?

# Evolution of Modern Operating Platforms



Unix

1960

1988- POSIX- Portable OS Standard developed for common architecture

POSIX based Microsoft OS for IBM PC

1991- GNU along with open community lead by Finnish student Linus Torvalds as personal project for university

POSIX standard of Unix like Kernel developed

Unix mini kernel distribution for research

GNU- not UNIX

2008- Modern Mobile OS kernel

Android

2014- Samsung watch

Linux-Kernel

+ GNU based GUI

+ GNU based GUI

+ GNU based GUI

Samsung Galaxy-Watch-2014

Derbian Linux distribution

RedHat-RHEL

Fedora

+ Open source APIs and Utilities

CentOS

Ubuntu

minified Linux Kernel

Ubuntu Mobile OS

Minified Linux as IoT platforms

1977- University Research Purpose- mini Unix kernel- following POSIX

Free BSD

code derived from NeXT, BSD

Year 2000- Darwin is an Kernel code developed by Apple, that was based and derived from NeXT, FreeBSD code ( mini unix kernel) Darwin forms the core set of components upon which macOS, iOS, watchOS, tvOS, and iPadOS are based.

Darwin

Mobile OS based on Darwin

OS X

Mac OS

Later Darwin evolved as OS X commonly known as MacOS and currentversion . OS X mean version OS version 10. X in roman 10.

iOS, watchOS, tvOS, iPadOS

Microsoft-DOS

DOS based OS+ GUI for Commercial PC

Microsoft-Windows NT

Windows 2000 os

Windows-XP

2006- minified DOS+ XP

Mincrosoft Win10

Windows Mobiles

Twitter: @PratikPrakash_
Github: scanpratik
linkedIn: https://www.linkedin.com/in/pratik-prakash/

# Système d'exploitation

- *operating system*, *OS*
- organise l'accès aux ressources au niveau d'un ordinateur
- permet de démarrer des programmes, gérer des fichiers, etc.
- interaction avec l'utilisateur:
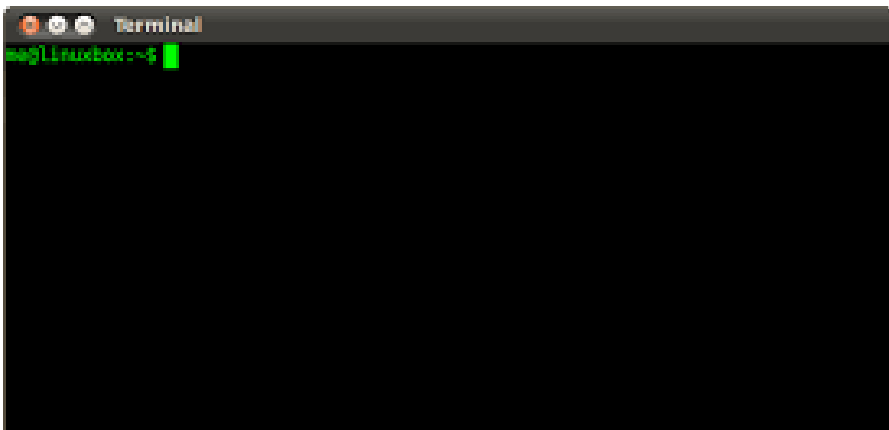  - le "bureau" (GUI)
  - le *shell* (CLI)
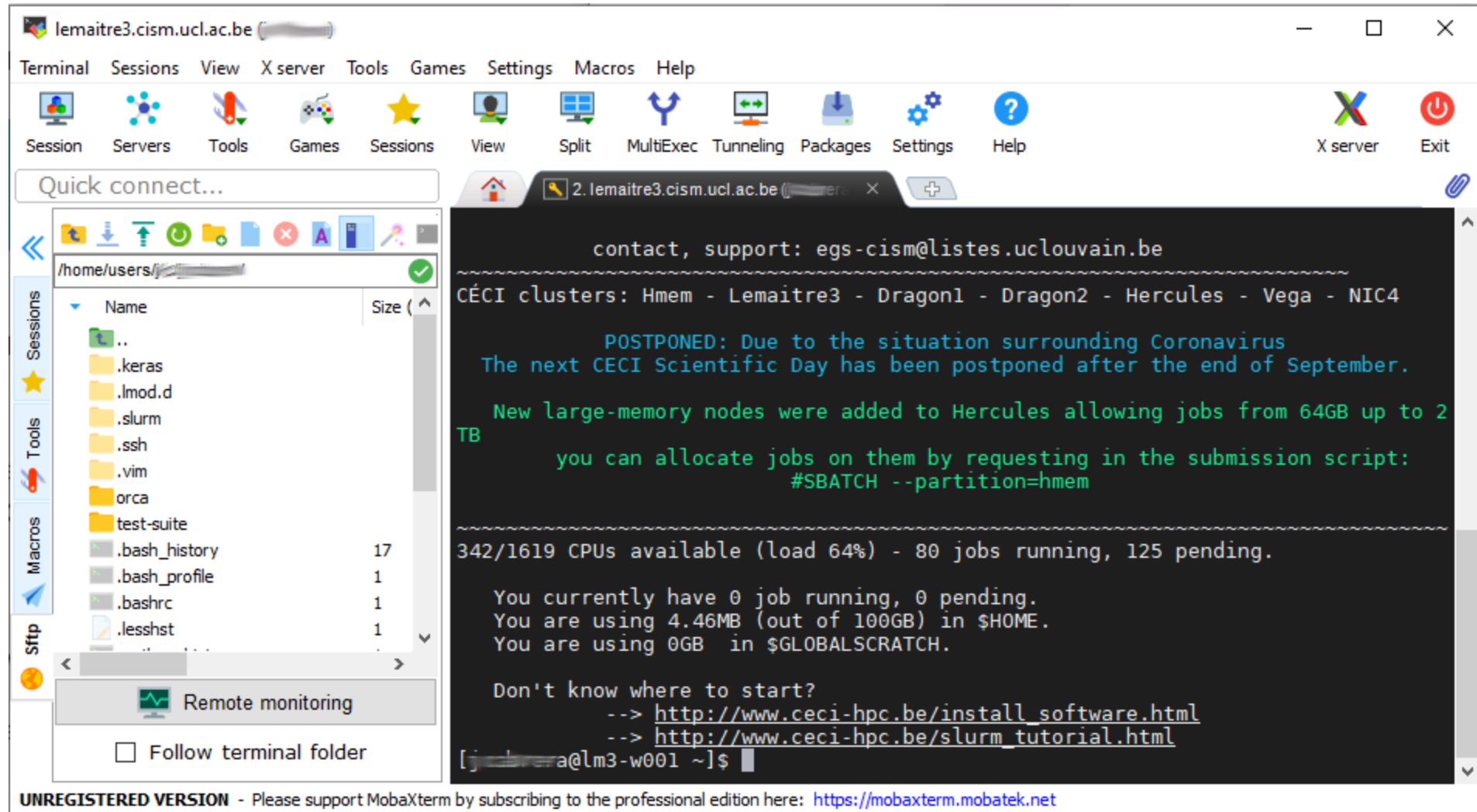
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# Le shell

# Le principe du shell:

- on écrit du texte "simplifié" à l'invite du *prompt* dans le *terminal*
- on appuie sur la touche `Enter` quand on a fini son message
- on attend la réponse, qui s'affiche quand elle est prête
- et on recommence.

Sur les serveurs de calcul Linux, le shell s'appelle `bash`

# Le terminal de MobaXterm



c'est la partie sur fond noir ^^

# La ligne de commande:

- une syntaxe de programmation rudimentaire
- des commandes de base du shell
- un ensemble d'outils en ligne de commande ( `GNU` )
  (dont des jeux)

# Premier jeu "text-based": *Colossal Cave Adventure* 1975

```
.run adven


WELCOME TO ADVENTURE!!  WOULD YOU LIKE INSTRUCTIONS?

yes

SOMEWHERE NEARBY IS COLOSSAL CAVE, WHERE OTHERS HAVE FOUND FORTUNES IN
TREASURE AND GOLD, THOUGH IT IS RUMORED THAT SOME WHO ENTER ARE NEVER
SEEN AGAIN.  MAGIC IS SAID TO WORK IN THE CAVE.  I WILL BE YOUR EYES
AND HANDS.  DIRECT ME WITH COMMANDS OF 1 OR 2 WORDS.  I SHOULD WARN
YOU THAT I LOOK AT ONLY THE FIRST FIVE LETTERS OF EACH WORD, SO YOU'LL
HAVE TO ENTER "NORTHEAST" AS "NE" TO DISTINGUISH IT FROM "NORTH".
(SHOULD YOU GET STUCK, TYPE "HELP" FOR SOME GENERAL HINTS.  FOR INFOR-
MATION ON HOW TO END YOUR ADVENTURE, ETC., TYPE "INFO".)
                           - - -
THIS PROGRAM WAS ORIGINALLY DEVELOPED BY WILLIE CROWTHER.  MOST OF THE
FEATURES OF THE CURRENT PROGRAM WERE ADDED BY DON WOODS (DON @ SU-AI).
CONTACT DON IF YOU HAVE ANY QUESTIONS, COMMENTS, ETC.

YOU ARE STANDING AT THE END OF A ROAD BEFORE A SMALL BRICK BUILDING.
AROUND YOU IS A FOREST.  A SMALL STREAM FLOWS OUT OF THE BUILDING AND
DOWN A GULLY.

east

YOU ARE INSIDE A BUILDING, A WELL HOUSE FOR A LARGE SPRING.

THERE ARE SOME KEYS ON THE GROUND HERE.

THERE IS A SHINY BRASS LAMP NEARBY.

THERE IS FOOD HERE.
```

On vous propose:

# Gameshell

pour apprendre la ligne de
commande Bash

1. se connecter à Manneback
2. taper `gameshell` puis
   touche `Enter`
3. se laisser guider