

INTRODUCTION TO LINUX

(in an HPC context)

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BACKGROUND AND HISTORY

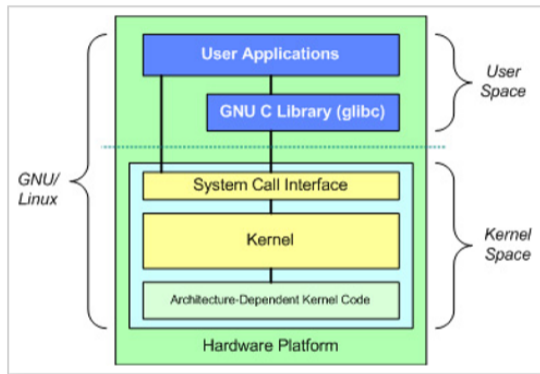
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INTRODUCTION TO LINUX

- 1969: Unix (Bell Laboratories)
 - Written in C
 - Already a successor to Multics
 - Over time, many variations

- 1990: POSIX Standard
 - Interface that all Unix systems implement
 - Adopted by Unix-like systems (including Linux)
 - Already many tools that we still use

- Two separate initiatives:
 - **GNU (GNU's Not Unix)**
 - 1984: Richard Stallman and others
 - **Linux**
 - 1991: Linus Torvals
- Nowadays: GNU/Linux:
 - **Linux kernel**
 - **GNU utilities**
- Many distributions (**distros**)



- High reliability (e.g. servers): Red Hat Enterprise Linux
 - Developer “playground”: Fedora
 - Community variant: CentOS (HoRUS cluster)
- User-friendliness: Ubuntu
 - Community variant: Mint
 - “Parent”: Debian
- Workplace (especially Germany): Suse
- Specialized: e.g. Kali Linux (hacking tools)
 - Also runnable without installation

- Computers with Linux:
 - **500 out of the Top 500 supercomputers (2020)**
 - (Web) servers: 95 %
 - Mobile devices: 60 – 80 % of mobile devices (almost all Android)
 - Desktop PCs: 1 – 2 %

- Popular desktop distros (no good figures):
 - **Ubuntu**
 - **Linux Mint**