

Historical Introduction to open source and Linux

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What is Linux

- A fully-networked 32/64-Bit Unix-like Operating System
 - Unix Tools Like grep (explained later)
 - Compilers Like C, C++, Fortran, Smalltalk, Ada
 - Network Tools Like telnet, ftp, ping, traceroute
- Multi-user, Multitasking, Multiprocessor
- Has the X Windows GUI
- Coexists with other Operating Systems
- Runs on multiple platforms
- Includes the Source Code

Where did it come from?

- **Linus Torvalds** created it
 - with assistance from programmers around the world
 - first posted on Internet in 1991
- Linux 1.0 in 1994; 2.2 in 1999
- Today used on 7-10 million computers
 - with 1000's of programmers working to enhance it

Open Source Software

- When programmers on the Internet can read, redistribute, and modify the source for a piece of software, **it evolves**
- People improve it, people adapt it, people fix bugs. And this can happen at a speed that, compared to conventional software development, seems **astounding**

How do you get it?

- Download it from the Internet
- From a “Distribution” (e.g. **Ubuntu**)
 - Linux kernel
 - X Windows system and GUI
 - Web, e-mail, FTP servers
 - Installation & configuration support
 - 3rd party apps
 - Hardware support

Why is it significant?

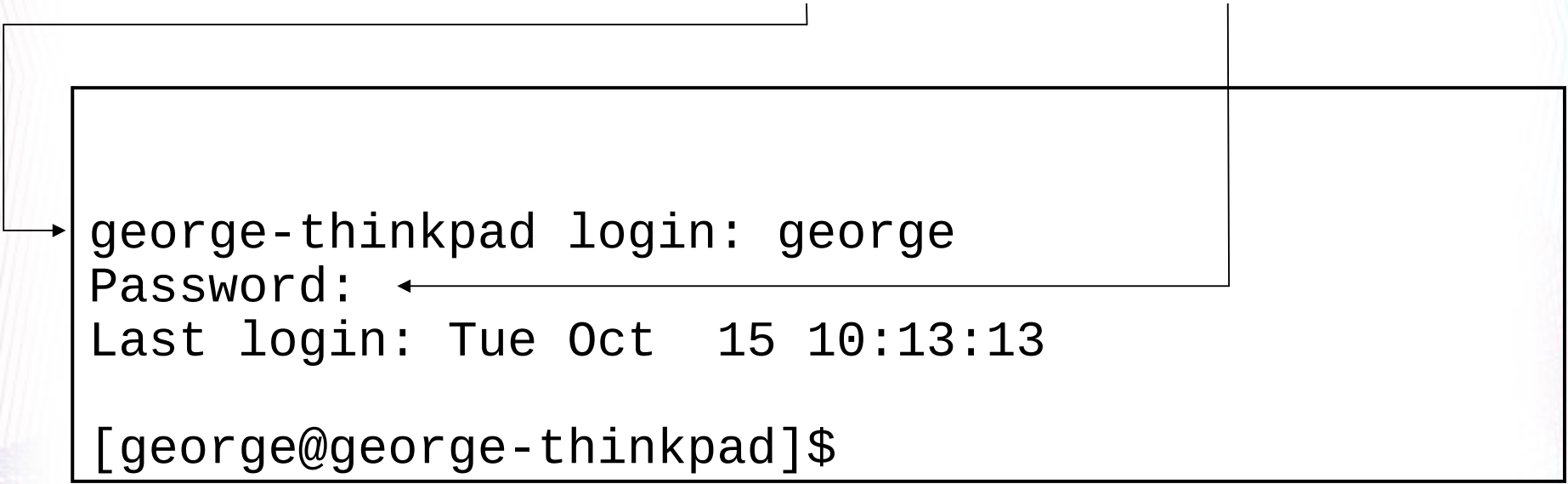
- Growing popularity
- Powerful
 - Runs on multiple hardware platforms
 - Users like its speed and stability
 - No requirement for latest hardware
- It's "free"
 - Licensed under GPL
 - Vendors are distributors who package Linux

Logging In

- Connect to the Linux system using telnet:
 - vt100, vt220, vt320
 - ansi
 - tty
 - X-windows
- Able to login more than once with same user
- No 'MW' problems!

Logging In

- Before you can use it you must login by specifying your account and password:



```
→ george-thinkpad login: george
Password: ←
Last login: Tue Oct 15 10:13:13

[george@george-thinkpad]$
```

The diagram shows a terminal window with a login prompt. A line points from the text 'Before you can use it you must login by specifying your account and password:' to the 'Password:' prompt in the terminal. The terminal output shows the user 'george' has logged in successfully, displaying the last login time and the current shell prompt.

Rule Number 1

- Do not login as root unless you have to
- root is the system superuser (the “maint” of Linux but more “dangerous”)
 - Normal protection mechanisms can be overridden
 - Careless use can cause damage
 - Has access to everything by default
- root is the only user defined when you install
 - First thing is to change root’s password
 - The second job is to define “normal” users for everyday use