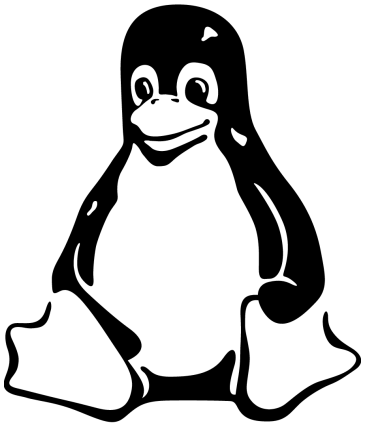
Linux user's adventures in Windows land

Petteri Mannersalo,
petteri.mannersalo@vtt.fi

Business from technology

Outline

- Linux timeline
- User experiences since 1992
- Why to use Linux
- Why not to use Linux
- Deploying linux in a company



What is Linux

- Linux, also known as GNU/Linux, is a free, UNIX-like operating system, developed originally for home PCs, but which now runs on practically every hardware platform available including PowerPC, Macintosh, DEC Alpha, Sun Sparc, ARM, Mainframes, and many others.
- Linux aims for POSIX compliancy to maintain maximum compatibility with other UNIX-like systems.
- With millions of users worldwide, Linux is probably the most popular UNIX-like OS in the world.

Timeline (by wikipedia)

- 1983: Richard Stallman creates the GNU project with the goal of creating a free operating system.
- 1989: Richard Stallman writes the first version of the GNU General Public License.
- 1991: The Linux kernel is publicly announced on 25 August by the 21 year old Finnish student Linus Benedict Torvalds.
- 1992: The Linux kernel is relicensed under the GNU GPL. The first so called “Linux distributions” are created.
- 1993: Over 100 developers work on the Linux kernel. With their assistance the kernel is adapted to the GNU environment, which creates a large spectrum of application types for Linux. The oldest currently existing Linux distribution, Slackware, is released for the first time. Later in the same year, the Debian project is established.

Timeline

- 1994: Torvalds judges all components of the kernel to be fully matured: he releases version 1.0 of Linux. The XFree86 project contributes a graphic user interface (GUI). In this year the companies Red Hat and SUSE publish version 1.0 of their Linux distributions.
- 1995: Linux is ported to the DEC Alpha and to the Sun SPARC. Over the following years it is ported to an ever greater number of platforms.
- 1996: Version 2.0 of the Linux kernel is released. The kernel can now serve several processors at the same time, and thereby becomes a serious alternative for many companies.

Timeline

- 1998: Many major companies such as IBM, Compaq and Oracle announce their support for Linux. In addition a group of programmers begins developing the graphic user interface KDE.
- 1999: A group of developers begin work on the graphic environment GNOME, which should become a free replacement for KDE, which depended on the then proprietary Qt toolkit. During the year IBM announces an extensive project for the support of Linux.
- 2004: The XFree86 team splits up and joins with the existing X Window standards body to form the X.Org Foundation, which results in a substantially faster development of the X Window Server for Linux.

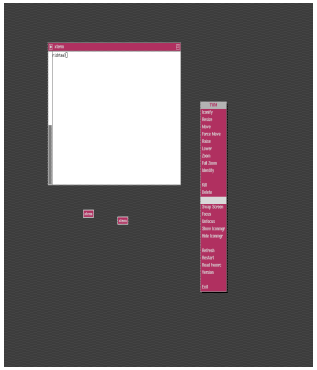
Today

- Several different distributions
  - Debian, Fedora, Gentoo, Knoppix, Mandriva, Slackware, Suse, Ubuntu, etc.
- The Linux is being used in desktop computers, super computers, servers, PDA's, embedded devices, etc.
- Market share
  - Desktops (0.5-2.2 %)
  - Servers (~ 20 %, IDC 2007)

User experiences: TKK, Inst. Of Math., 1992-1996

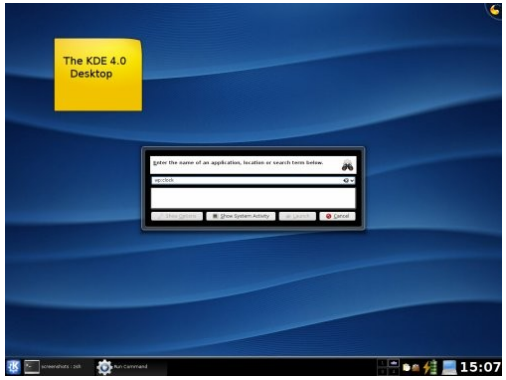
- Full support by the local linux expert
- First installation in 1992, Softlanding Linux System (SLS)
  - To use old i386 pc's as X-terminals to connect and operate on unix main frames
  - Windows 3.1 didn't offer such functionality.
- Window managers: from twm via fwm to sawfish
- No need for any windows applications.

TWM screenshot



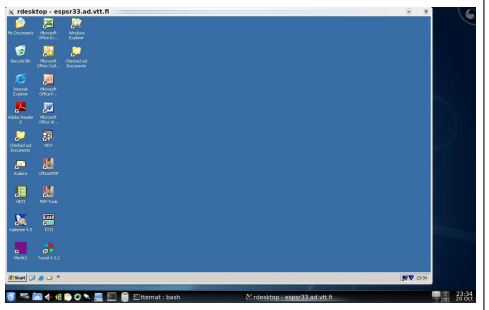
User experiences: VTT 1997-

- No linux support
  - Have to learn the system administration skills
- Very few linux desktop users
  - Linux usage is focused on research projects
- Distributions: debian, gentoo and ubuntu.
- Desktops: gnome and kde
- Computing mostly done in the PC, few mainframe applications



User experiences: VTT 1997-

- The research work does not require Windows applications
- VTT bureaucracy has still quite many windows-only applications
  - Solution: dual boot or/and terminal server
- Calendar and email systems are not fully linux compatible



Why to use linux: general reasons

- Security
  - Hardly any viruses
  - The security flaws are quickly repaired by the community
- It's free
  - The support may cost but no more than for windows environments
- Open source and free applications
  - Huge collection of software
  - All the advantages using open source applications
- Next generation desktop environments KDE and Gnome
- Linux runs perfectly well also on older hardware

Why to use Linux

- Full control on the computer
- Very stable
- Great programming and software developing possibilities
- High quality technical and scientific documents are easy to produce
  - TeX typesetting system
- Unix shell
- Easy remote usage
- Interests to learn and try new things

Why not use linux

- No Linux support by the organization
  - The user has not enough knowledge to administrate the system
  - Being a lone linux user may cause too much extra trouble
- Constant usage of some windows-only proprietary software
  - Sometimes dual boot or terminal server is a solution
  - Office applications in Windows and Linux are not 100% compatible
  - Gaming
- Hardware is not supported by Linux

Deploying linux in a company

- There are many organizations and companies where the fully linux based solution would be possible
  - Whether it is economically and productionally feasible solution has to studied carefully
  - Penetration should be planned in all levels of employees, from office clerks to the bosses
    - There is often (but unfortunately not always) Open Source programs that can replace these "essential" proprietary software
    - The basic office applications, like word processing, email, etc., are so similar that they do not hinder the transition from Windows to Linux

Deploying linux in a company

- In most case, both Windows and Linux environment can be supported by the organization without substansial extra costs
  - Typically expert organizations, like VTT
  - When purchasing new computer systems (mail server, ERP, etc.) one of the main selection criteria should be the usability in any OS.
  - Requiring that the helpdesk has knowledge on other OS's than Windows.

THANK YOU!