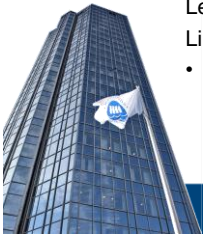


Administration of Operating Systems

DO2003

<http://www.hh.se/do2003>



Lecture 1

Linux and Ubuntu Linux

- Introduction, history and overview



Lecture overview

- At the end of the lecture students are able to:
 - Discuss the history of Linux
 - Describe its main features
 - Download a Ubuntu disk image (.iso file)
 - Install a Ubuntu distribution in VMware Player



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What is Linux?

- Operating System (OS)
 - What is a OS?
 - Manager
- What does it manage?
 - Available resources
- Resources?
 - CPU, memory, storage, input and output
- Two main parts
 - **Kernel** allocates machine resources to all other programs that run on the computer
 - **System programs** perform higher-level housekeeping tasks



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www.linux.com

- Ubuntu
- Kubuntu
- Edubuntu
- Xubuntu

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Overview of Linux

- Linux Kernel
- Multiuser
- Multitask
- Hierarchical filesystem
- Shell
- Utilities
- Portable

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Installation

- Document the current hardware and OS
- Gather and document drivers and software
- Install the OS, document configurations
- Install extra drivers
- Install applications and servers
- Update the system
- Restart and make the system live

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Installation

- Clean, upgrades (recommended), dual-boot
- Live/install DVD, Live/install Desktop CD, Server CD, Alternate CD
 - Server or Desktop
 - CLI (less resources) or GUI (more friendly)
- Physical machine or Virtual Machine

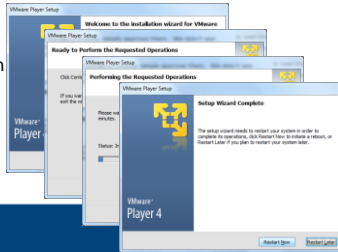
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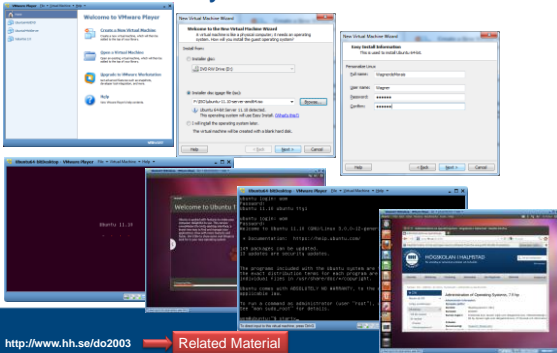
Virtual Machine Software

- SW implementation of a computer that executes programs like a physical computer
 - VMWare client, VirtualBox, ...
- Isolation
- Security
- Power consumption
- Servers
- Testing
- Networks
- Snapshots



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VMware Player + Live/install DVD



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Related Material

Updates

- Software packages
- Repositories
- System updates handles e.g.
 - Security breaches
 - Software/ hardware deadlocks
 - Memory leaks
- Make sure you keep your system updated!



Documentation

- Hardware vendors and versions
- OS distribution and release
- Driver vendors and release
- Application/server distribution and release
- Updates/ upgrades made
- All non-standard configurations
- **man, apropos, info, pinfo, help**



Shell (Command Interpreter and Programming Language)

- Textual environment
- Usually labeled "the shell" or "the prompt"
- Interface between the user and the operating system
- Commands are formatted in the following way
 - `command arg1 arg2 arg3 ...`
 - `man apropos` (know the utility but not how to use)
 - `apropos who` (don't know the utility, but know some keywords)
- Allowed combinations are system specific.
- The file structure is case sensitive





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