

Linuxtage

Vertiefungskurs

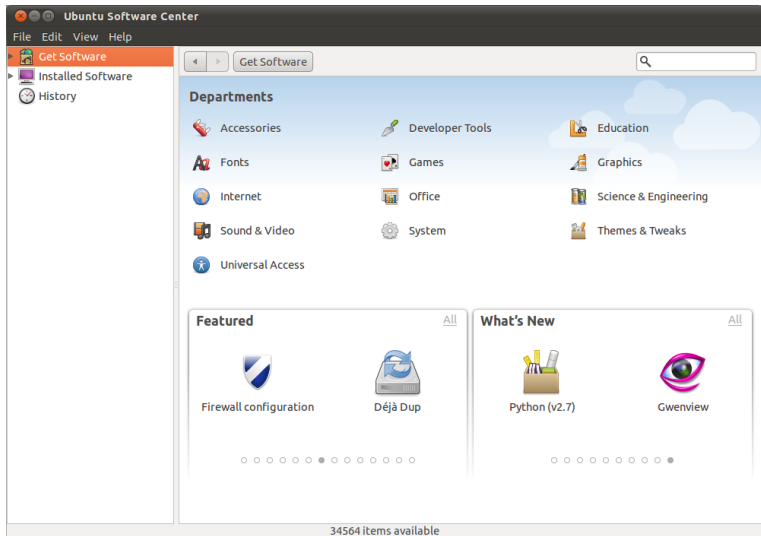
projekt
NEPTUN

The **Alt**ernative^{ch}
For a Sustainable Digital World

[project 21]
Studentische Organisation für nachhaltige Entwicklung

- How to install, remove and update software
- Software: a short who's who
- Some ETH specific configurations
- Various other topics: filesystem, shell, ... ?

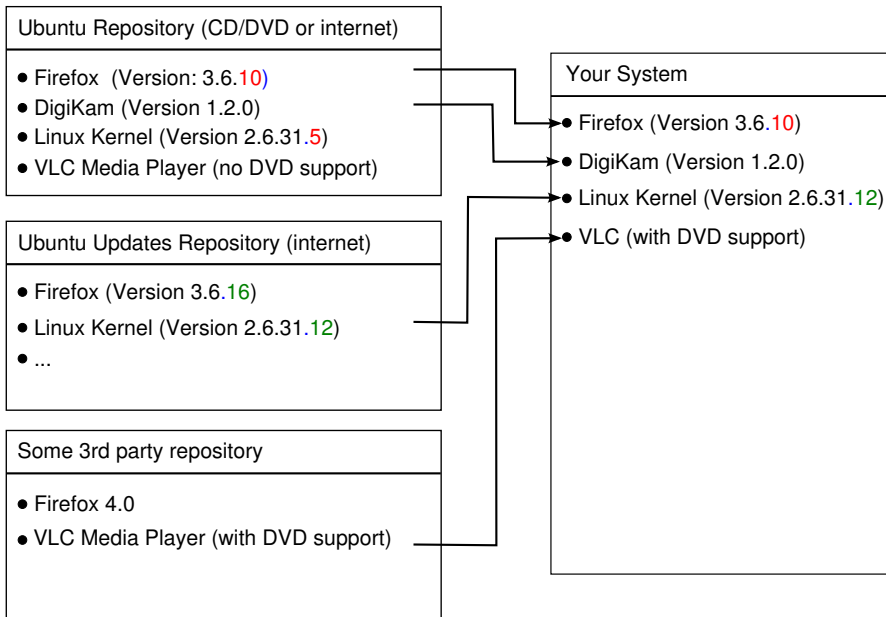
The package manager



The 3 Linux software keywords

- All* software comes in so called *packages*.
- Packages are stored in *repositories*.
- Packages and repositories are managed by the *package manager*.

Repositories



The Very Short Linux Software Howto

- Don't go search for software on a website
- Use your package manager for everything!
- If you can't find it, ask Google

Proprietary software?

- Often offer no software repository
- In that case download the package from the website
- Sometimes dependencies are not specified (ex. Skype)

Bitmap graphics

- GIMP (GNU Image Manipulation Program)

Photo management

- DigiKam 
- Shotwell 
- F-Spot 
- (Google's Picasa)

Vector graphics

- Inkscape

The OpenOffice.org / LibreOffice family.

- Calc, Writer, Impress, Draw. . .

L^AT_EX

- texlive-latex (main L^AT_EX package)
- Kile^{KS} (graphical editor)
- emacs-auctex (for the brave, once mastered fastest L^AT_EX ever)

The classics (Great for keyboard-only editing)

- Emacs
- Vim

Other text editors:

- Kate^{KS}

IDEs

- Eclipse
- KDevelop^{KS}
- Anjuta^e
- Qt Creator

The “iTunes-like” category

- Amarok 
- Banshee 
- Rythmbox 
- Songbird

Video Players

- VLC
- MPlayer, Xine
- Totem 
- Kaffeine 

The scientist's workhorses

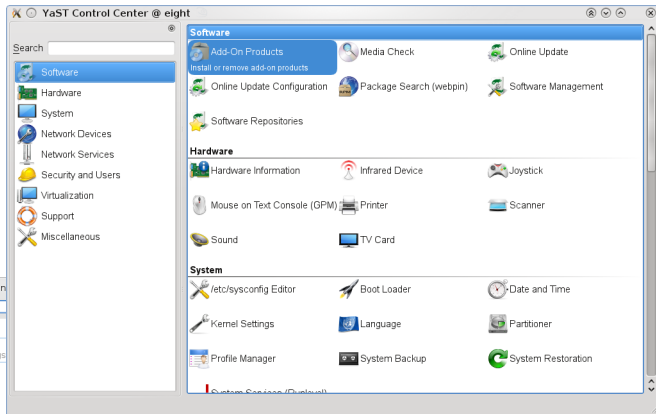
- Mathematica
- Matlab / Maple
- SPSS

(At least for ETH Students
freely available on IDES)

Other software

- Skype
- Google Earth, Picasa
- Lightzone, Bibble Pro
- ...

A short tour of YaST



Luca Gugelmann (lucag) on

Search:

YaST Administrator Settings

Install Software

System Information

Run Command...

Places

Home

vertiefung

nobackup


playground

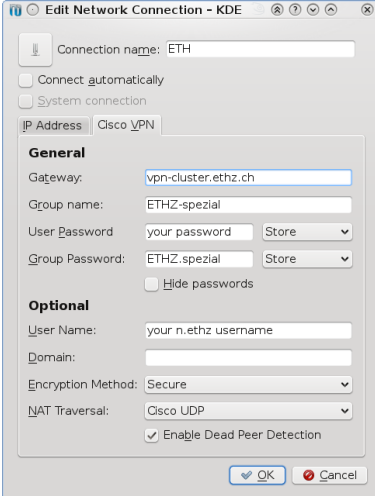


For Ubuntu users:

- Start your package manager (“Ubuntu software center”)
- Search for “vpnc”
- Install the package “network management framework (VPNC plugin, GNOME UI)”

Configurations for the ETH: VPN

- Find the NetworkManager icon 
- Click and select “Manage connections. . .”
- Choose the “VPN” tab
- Add. . .
- Choose “VPNC”
- Fill in the details as on the right



The screenshot shows the 'Edit Network Connection - KDE' window. The 'Connection name' is 'ETH'. The 'Cisco VPN' tab is selected. The 'General' section includes: Gateway: vpn-cluster.ethz.ch; Group name: ETHZ-spezial; User Password: your password (with a 'Store' dropdown); Group Password: ETHZ.spezial (with a 'Store' dropdown); and a 'Hide passwords' checkbox. The 'Optional' section includes: User Name: your n.ethz username; Domain: (empty); Encryption Method: Secure (dropdown); NAT Traversal: Cisco UDP (dropdown); and a checked 'Enable Dead Peer Detection' checkbox. 'OK' and 'Cancel' buttons are at the bottom right.

Follow the guide at:

www.tux.ethz.ch/wiki/index.php/Drucken_per_VPP

The directory structure

Linux knows no “drive letters”. All storage media are *mounted* on a common directory tree and become branches of it.

Home sweet home!

Your kingdom (as a user!) resides in `/home/username`. It contains all your personal configuration files and all your data.

“Hidden” files start with a “.” (a dot), configuration files are hidden in your home folder. E.g. `.kde4`, `.bash_profile`.

Some important folders

<code>/</code>	The starting point of the directory tree.
<code>/bin</code>	Essential programs.
<code>/lib</code>	Essential libraries.
<code>/dev</code>	Device files, UNIX' way of talking to the hardware.
<code>/etc</code>	System-wide configuration files.
<code>/home</code>	Where all the users' home directories are.
<code>/var</code>	Files with state information of running programs.
<code>/tmp</code>	Temporary data. Safe to clean up!
<code>/usr/bin</code>	Most other programs.
<code>/usr/lib</code>	Most other libraries.
<code>...</code>	

The command line interface: basics

A small cheatsheet:

<code>man command</code>	Look up the manual for <code>command</code>
<code>pwd</code>	Print name of the current directory
<code>ls</code>	Print the contents of the current directory
<code>ls -l</code>	... in long form
<code>ls -al</code>	... in long form including hidden files
<code>cd dir</code>	change to directory <code>dir</code>
<code>mv a b</code>	Move file <code>a</code> to <code>b</code>
<code>cp a b</code>	Copy file <code>a</code> to <code>b</code>
<code>rm a</code>	Remove file <code>a</code>
<code>rm -r dir</code>	Remove <i>recursively</i> directory <code>dir</code>

The command line interface: doing some more

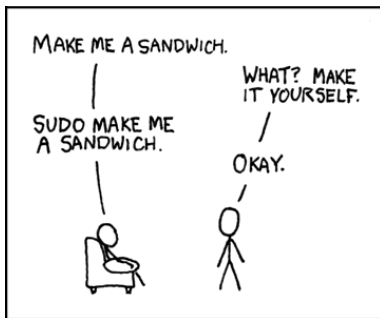
<code>cat file</code>	Print contents of <code>file</code>
<code>less file</code>	Paginate <code>file</code> and show it in a text viewer
<code>grep pattern file</code>	Find lines in <code>file</code> matching <code>pattern</code>
<code>find . -name pattern</code>	Find filenames matching <code>pattern</code> below the current directory.

Google for “linux cheat sheet” to get all sorts of lists of commands.

The command line interface: what you often see on forums

`apt-get install package` For Ubuntu users, install `package`
`zypper install package` For openSUSE users, install `package`

The superuser



With 'sudo `command`' you can run commands as the superuser, a.k.a. root. Unless you use it, it is almost impossible to trash the system. (You can still lose all your data though.)

- You can find a guided tutorial at <http://linuxcommand.org>
- The “Bash guide for beginners” and “Advanced bash scripting guide” at tldp.org/guides.html

- The Linux users' Wiki at ETH:
www.tux.ethz.ch
- The complete openSUSE documentation:
www.novell.com/documentation/opensuse114/
- The Ubuntu documentation:
help.ubuntu.com
- The linux documentation project guides:
tldp.org/guides.html

Das Linux-Buch auf Deutsch, von Michael Kofler. Die 10. Auflage trägt den Titel “Linux 2011”. Bei Amazon für 50€.

You can contact us (the TheAlternative people) at:

`look@thealternative.ch`