Source Mage: a Linux Distribution

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SMGL/Grimoire

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Full name:
Source Mage GNU/Linux

- Linux kernel
- GNU environment (userspace)
- Free Software
- Source distribution (rolling-release)
- Magic theme for distribution tools
- Mascot: "Quoth the raven"

Linux

Linux is:

- Operating system kernel
- UNIX-like system
- Free Software
- Condensation point of a movement around Free Software

Distribution

A distribution is a collection of software, including

- a kernel (often Linux),
- basic system software (often GNU tools),
- graphical Interface (X11, desktop environment / window manager),
- application software
  (Browser, Office, LaTeX, IDEs, graphics, games, ...)
- and tools for installing and configuring the above.

Advantages of a distribution, compared to installing stuff yourself:

- *one* interface for software installation
- common, consistent configuration of the whole system (to an extend)
- sorting menues of applications for category instead of vendor
- database of available software
- tracking of dependencies and conflicts between software packages
- tools to keep the whole system up-to-date – including application software

Disadvantages of a Distribution

Disavantages:

- limited inclusion of (commercial) Software due to licensing issues (usually almost exclusively Free / Open Source Software, FOSS)
- often complicated install of software that is *not* in the distribution

Source Distribution

Binary distributions: Software is pre-built and pre-configured (for certain features) for a certain class of computer systems.

Source Distributions: Software is built on the user's computer, including change of build-time options.

Pro source:

- **customization** to the user's needs
- possibly better performance of the applications

Contra source:

- more time needed for installation
- possibly more, unwanted, work for users without any special needs;-)

Source Mage uses a magic theme for defining its terms:

Sorcery name of the collection of system management software (written as Bash scripts)

Spell metainfo and scripts used to install a specific piece of software

Grimoire collection of spells in different sections (the package database)

Mage An empowered user of Source Mage!

Terms 2

System management tools include:

sorcery   configuration of the tools, menu-driven interface to some

cast   installation of a package

dispel   removing of a package

summon   aquire (download) souce code of a package

gaze   general inspection tool

cleanse   repair damanged installations, cleanup

Software Installation

Find a spell (e.g. with "mpg" in its name):

- `gaze search -name mpg`

Read something about it:

- `gaze what mpg123`

Installation (with build options):

- `cast mpg123`

Removal:

- `dispel mpg123`

Build Configuration and Dependencies

- Build configuration with questions before build, asked by `cast`.
- Spell author defines the questions.
- Dependencies are taken care of.
- *Optional* dependencies are confirmed (or not!) by the user.

Grimoires

Standard grimoires:

- `stable`
- `games`
- `test`

...but also:

- `z-rejected` (certain non-Free software and binary packages)

- Spells are implemented naturally as shell scripts
- different scrips for the steps:
  `CONFIGURE, DEPENDS, BUILD, INSTALL,` ...
- easy to modify or to create
  (Just write down the steps of in shell commands!)
- The GNU standard installation
  (`configure && make && make install`)
  is even done implicitly when you omit scripts.

A minimal spell consists of only one descriptive file, mainly for name, version and source URL.

Vision

Motto: *Linux so advanced, it may as well be magic.*

- Free Software (some non-free software in `z-rejected`)
- `grimoires` and `sorcery` licensed under GPL
- no artificial limits on the user's possibilities

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All the power and control to the user!

(No, performance is not the main issue.)

Contact

- Website: http://sourcemage.org/
- mailing lists (see website)
- IRC: #sourcemage on irc.freenode.org
- ask me;-)

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  Hey, Thomas Orgis, this *already is* the last slide!