

Free Software In Biology Using Debian-Med

A Resource For Information Agents and Computational Grids

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Debian

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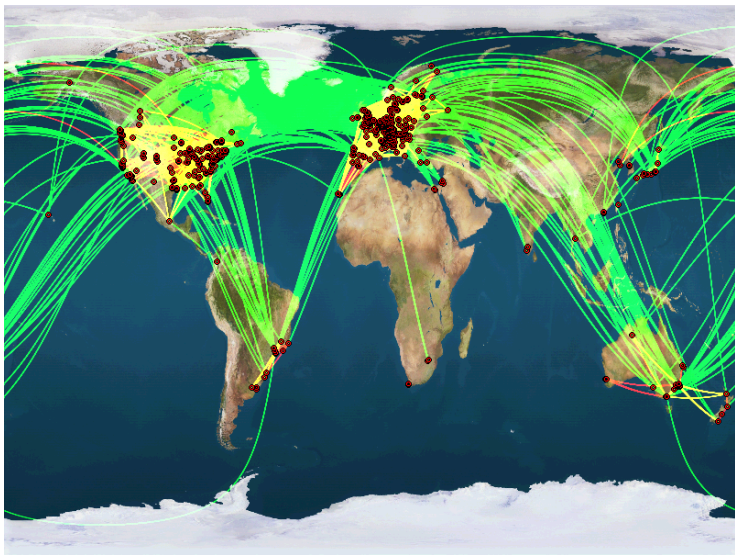
Overview

1 Debian-Med

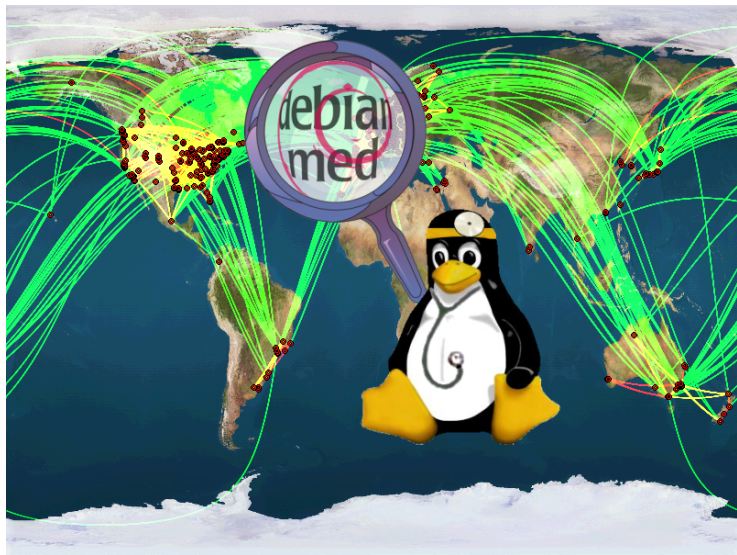
2 Realisation

3 Conclusions

Debian



Debian-Med



Differences to commercial distributions

Commercial distributor

Company

Employees

CDs, Service

Business plan

Certified

Beginners

Rpm

Market

Structure

Persons

Sells

Release

Oracle, SAP, etc.

Preferred by

Packages

Customisation

Debian

Organisation

Volunteers

Nothing

If 0 RC-bugs

Runs in principle

Administrators

Deb

Do-O-Cracy

Customising Debian

- Debian > 10000 packages
- Focus on *medical subset* of those packages
- Packaging and integrating other medical software
- Easy installation and configuration
- Maintaining a general infrastructure for medical users
- General overview about free medical software
- Propagate the idea of Free Software in medicine
- Completely integrated into Debian - **no fork**

Basic ideas

*Do not make a separate distribution but
make Debian fit for medical care*

*No development of medical software - just
smooth integration of third-party software*

*Debian-Developer = missing link between
upstream author and user*

Debian - adaptable for any purpose?

- Developed by about 1000 volunteers
- Flexible, not bound on commercial interest
- Strict rules (policy) glue all things together
- Common interest of each individual developer:
Get the best operating system for himself.
- Some developers work in the field of medicine
- In contrast to employees of companies every single Debian developer has the freedom and ability to realize his vision
- Every developer is able to influence the development of Debian - he just has to *do* it.

Do-O-Cracy = "The doer decides"

Road map to come closer to Debian-Med

- 1 Join Debian-Med mailing list
- 2 Visit Debian-Med web site
- 3 Check what is missing
 - Ask for official inclusion
 - Sponsoring program
 - No point in keeping good quality softwares outside of Debian.
- 4 Special configuration
 - Possibilities of Custom Debian Distributions
 - More than collecting software
 - Bringing software to target user
 - Preconfiguration
- 5 Any DFSG compatible software can be included
 - Everyday package building tasks can be saved
 - Share workload with other people following the same road

What are packages

- Main part of the work of a distributor
- Contains
 - Executable programs
 - configuration
 - `{pre/post}install + {pre/post}remove` scripts
 - Relations to other packages
- More than just an archive of files
- Enables easy handling
 - Ensures compliance of all dependencies
 - Clean upgrades
 - Easy handling of security updates
- Basis of modern GNU/Linux distributions

Problem: Increasing number of packages

Meta-Packages

- 1 Relations on other Debian packages (essential)
 - "Depends" for necessary packages
 - "Recommends" for interesting packages
 - "Suggests" for not so important or non-free packages
- 2 Menu entries (recommended)
 - Customisation of default entries possible
 - Documentation entry if useful
- 3 Adapted configuration (optional)
 - *debconf* questions or pre-seeding
 - *cfengine* scripts

Role based user menus



Group effort

- Heterogeneous shape of Free Software in biology
- Continuous updates & novel tools
- Several maintainers
- Adherence to a policy
- Inter-institutional software projects as in computational grids and mobile agent technology

Features of Debian-Med

- Dedication to software in computational biology
- Comfortable technical infrastructure
- Support of every high quality biological project
- Build a community based on technical matters

Debian for Information Agents & Computational Grids?

- Popular, solid, well tested base system
- Includes several interesting applications, more to come
- Great internationalisation support
- Interesting tools
 - FAI (Fully Automatic Installation)
 - *debootstrap*
- Do-O-Cracy

Future

- First steps are done ...
- Set of meta packages ready
- Great interest from developers and users
- Drastic technical enhancement by using future tools
- Knoppix based Live-CD

This talk is available at
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