

# AppStream

Florian Festi

# Cross Distro App Installer Meeting

- 19<sup>th</sup>-21<sup>th</sup> January 2011 in Nürnberg (SUSE HQ)
  - Yes, last week!
- About 15 People from
  - Debian
  - Fedora / Red Hat (Richard Hughes and me)
  - Mageia (Mandriva)
  - Opendesktop.org
  - SUSE / Novell
  - Ubuntu / Canonical

# Motivation

- Finding and Installing applications is difficult
- UIs are lacking
- Additional (meta) data needed
- Various people are already working on “Application Installers” of some kind
- Problem is pretty much the same for everyone
- Joining effort may make things happen earlier and better

# My Background

- Red Hat employee for 5 years
- RPM Developer
- Yum developer in former life
- Know most parts of the package stack

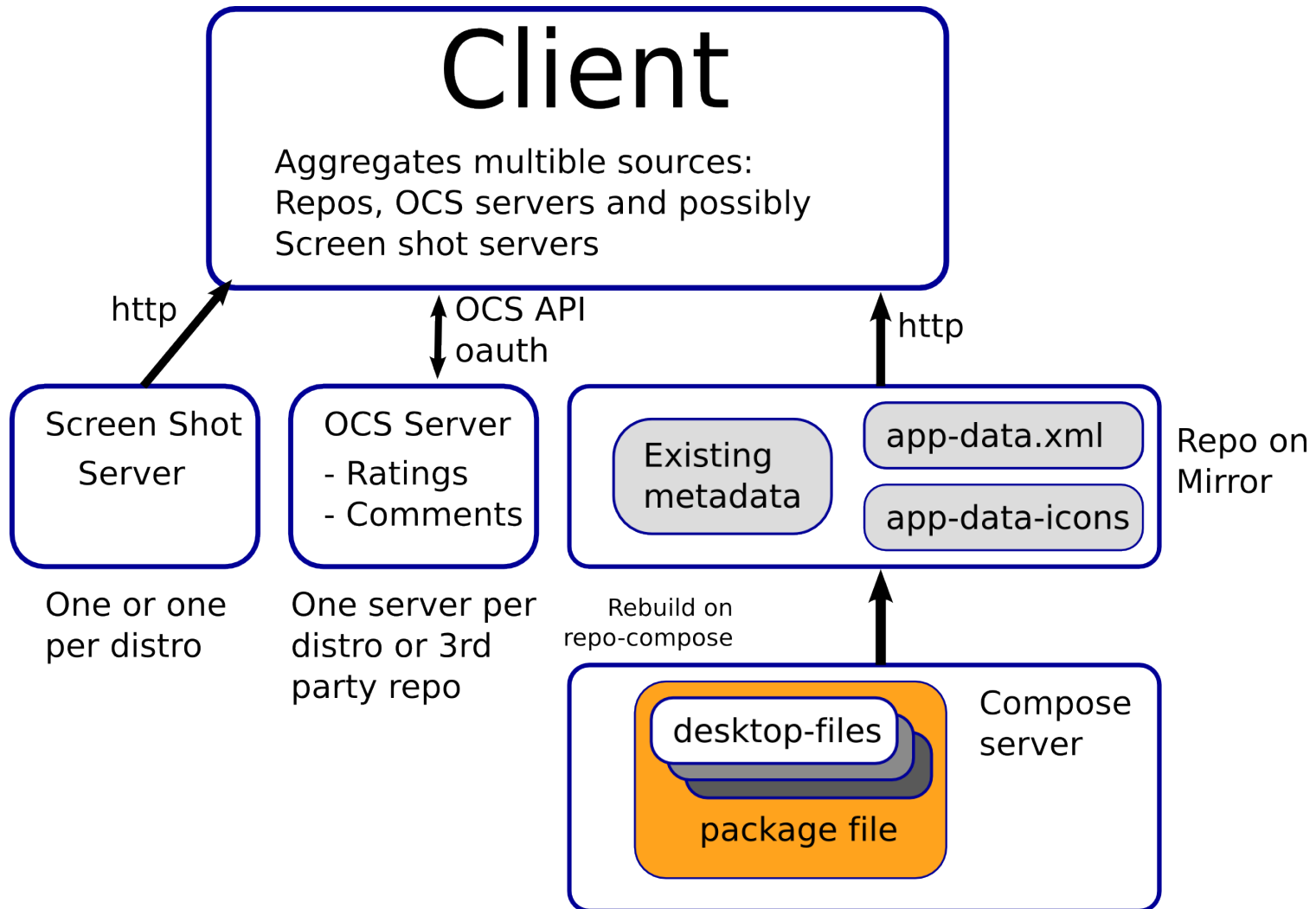
But

- Not a UI person
- Not really a Fedora person
- No clue about Fedora infrastructure

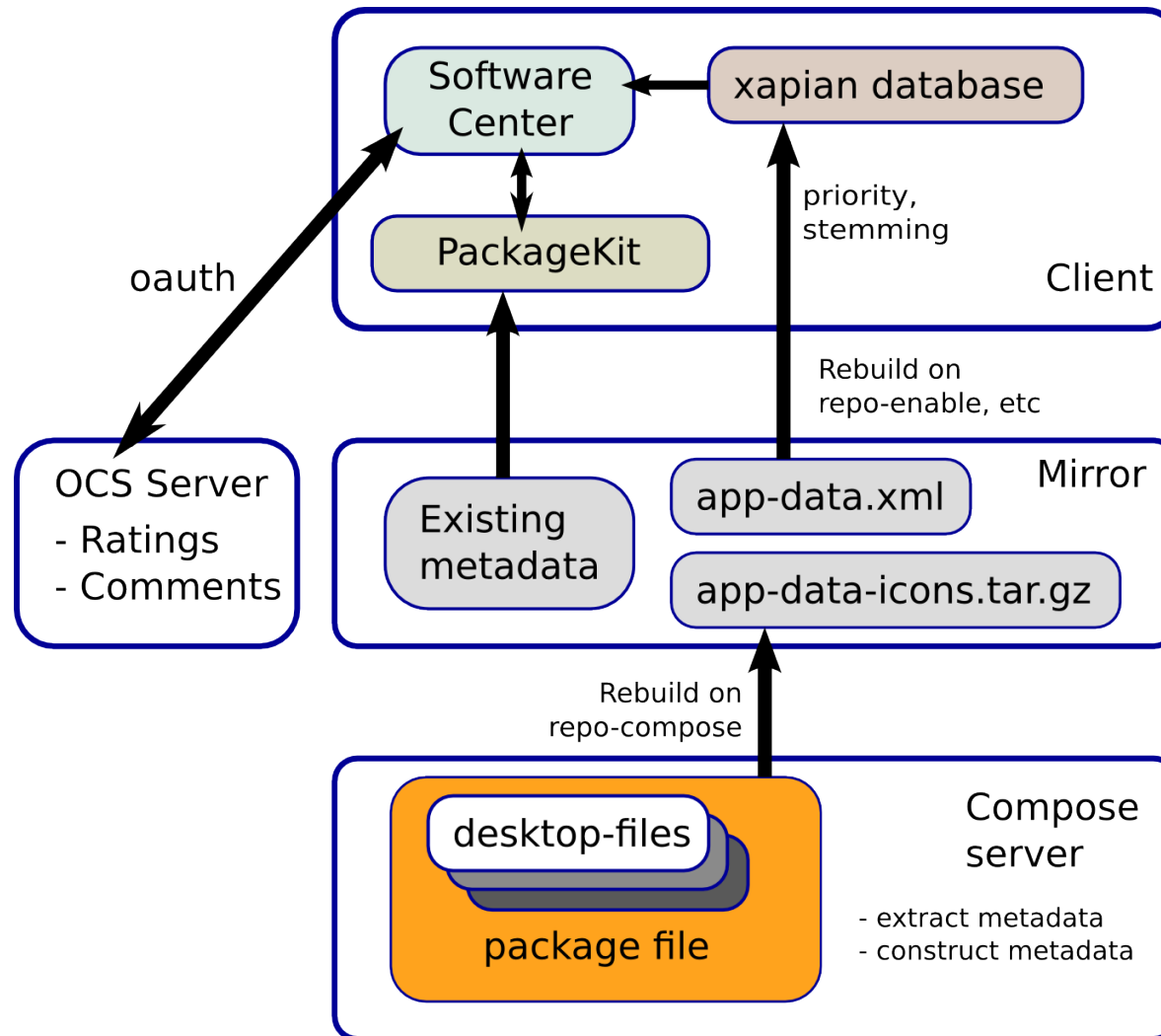
# Parts and Pieces

- Application Meta Data
  - Think .desktop files or menu entries
  - Part of the repositories
- Server with comments and ratings
  - Open Collaboration Server API
  - Integrate with PackageDB?
- Screen Shot server
- Client

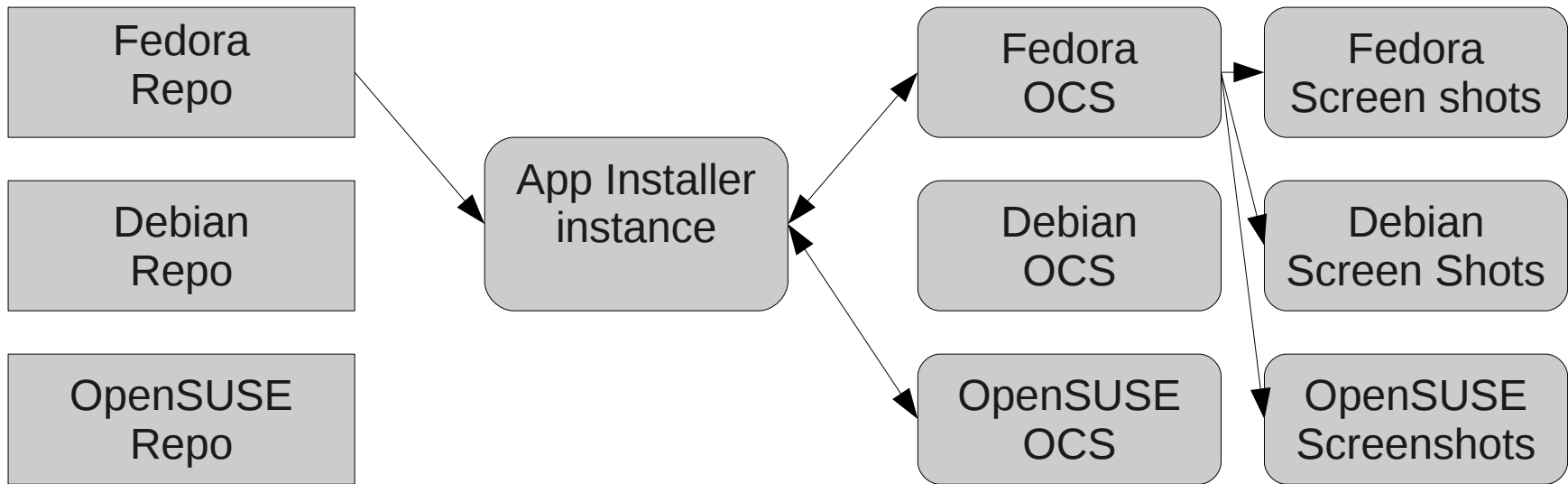
# Architecture



# Implementation plan



# Setup Example





# Application data

- Generated from menu files
- Distribution independent XML format
- Distribution depended details added
  - Package name
- TODO: Extend standard on [opendesktop.org](http://opendesktop.org)
  - Ask upstream to add needed bit
    - Works for all distros
- Put into repository (createrepo)
  - Distro dependent transport

# Client

- GUI Application
  - OCS client
  - Distribution dependent backend (PackageKit)
- Web front end
  - (Guy from Magaia working on this)
- Ubuntu Software Center
  - Still legal issues
- MeeGo App Store

# Software Center

The screenshot displays the Software Center application window. The top menu bar includes 'File', 'Edit', and 'Help'. The left sidebar shows a 'Get Software' section with categories: 'Provided by Debian', 'unofficial-sid', and 'Installed Software'. The main content area shows the 'Avogadro' software page, which includes the Avogadro logo, the title 'Avogadro', the subtitle 'Advanced molecular editor', and an 'Install' button. Below this, a paragraph describes Avogadro as a molecular graphics and modelling system. A list of features is provided, followed by supported file formats and a website link. At the bottom, a preview window of the Avogadro application is shown, featuring a menu bar with 'File', 'Edit', 'View', 'Build', 'Select', 'Extensions', 'Scripts', 'Settings', and 'Help', and a toolbar with 'New', 'Open', 'Save', 'Close', and 'Quit' buttons.

File Edit Help


Get Software

Provided by Debian

unofficial-sid

Installed Software

Get Software Science & Engineering Avogadro

 **Avogadro**  
Advanced molecular editor  
Install

Avogadro is a molecular graphics and modelling system targetted at molecules and biomolecules. It can visualize properties like molecular orbitals or electrostatic potentials and features an intuitive molecular builder.

Features include:

- Molecular modeller with automatic force-field based geometry optimization
- Molecular Mechanics including constraints and conformer searches
- Visualization of molecular orbitals and general isosurfaces
- Visualization of vibrations and plotting of vibrational spectra
- Support for crystallographic unit cells
- Input generation for the Gaussian, GAMESS and MOLPRO quantum chemistry packages
- Flexible plugin architecture and Python scripting

File formats Avogadro can read include PDB, XYZ, CML, CIF, Molden, as well as Gaussian, GAMESS and MOLPRO output.

[Website](#)

Avogadro

File Edit View Build Select Extensions Scripts Settings Help

New Open Save Close Quit

Tools View 1

# Open Collaboration Server

- Software already exists
- Small list of changes needed
- Each distribution will need to run one of its own
  - Keep politics and religion within one distro
- Client can connect to several servers
- Add syncing and comparing later
  - If needed or wanted
- Still looking for people within Fedora to run it

# Screen Shot Server

- Debian already have one
- We probably can use it if we put an proxy in front
- But we probably want one on our own
- OCS data points to screen shots
  - Screen shots in the App Installer
- GUI integration for Uploading might be fancy

# Other Things

- ... not yet part of the overall plan:
- Matching packages between distributions
- Debtags

# Matching Packages

- ... across distributions
- Enrico Zini is working on this
- Needs
  - Source to binary package list
  - Files per package
  - May be more in the future
- Each distro can offer their list in a simple format
- Each distro can run its own matching service

# Matching Packages

- Binary packages
  - Use others descriptions or translations
  - Dynamic fall back for OCS data
  - Import Debtags data into an own database
- Source packages
  - Browse others' patches and spec files
  - May be integrated into PackageDB



# Debtags

- Library science categorization
- Facet based
- Closed tag and facet set
- About 50% of Debian tagged
- Tools to suggest / autodetect tags
- Requires brain power and algorithms
  - World writable UI works fine for them
- Can be used for subdividing search results or categories

# Example Facets

- Admin: Accounting, Automation, Backup, ...
- Field: Arts, Astronomy, Aviation, Biology, ...
- Devel: buildtools, code-generation, compiler, lang:ada, lang:c, lang:c++, ...
- Made-of: Audio, Dictionary, Font, HTML, XML
- Interface: 3d, Cli, Daemon, Shell, Web, X11
- Role: App-data, Devel-lib, Example, Source, ...
- Use: Browsing, Calculating, Chatting, Login, ...

# Links

- <http://distributions.freedesktop.org/wiki/AppStream>
- <http://distributions.freedesktop.org/wiki/Meetings/AppInstaller2011>
- <http://socialdesktop.org/ocs/>
- <http://screenshots.debian.net/>
- <http://enricozini.org/2011/debian/distromatch/>
- <http://debtags.alioth.debian.org/>