

The openSUSE Build Service

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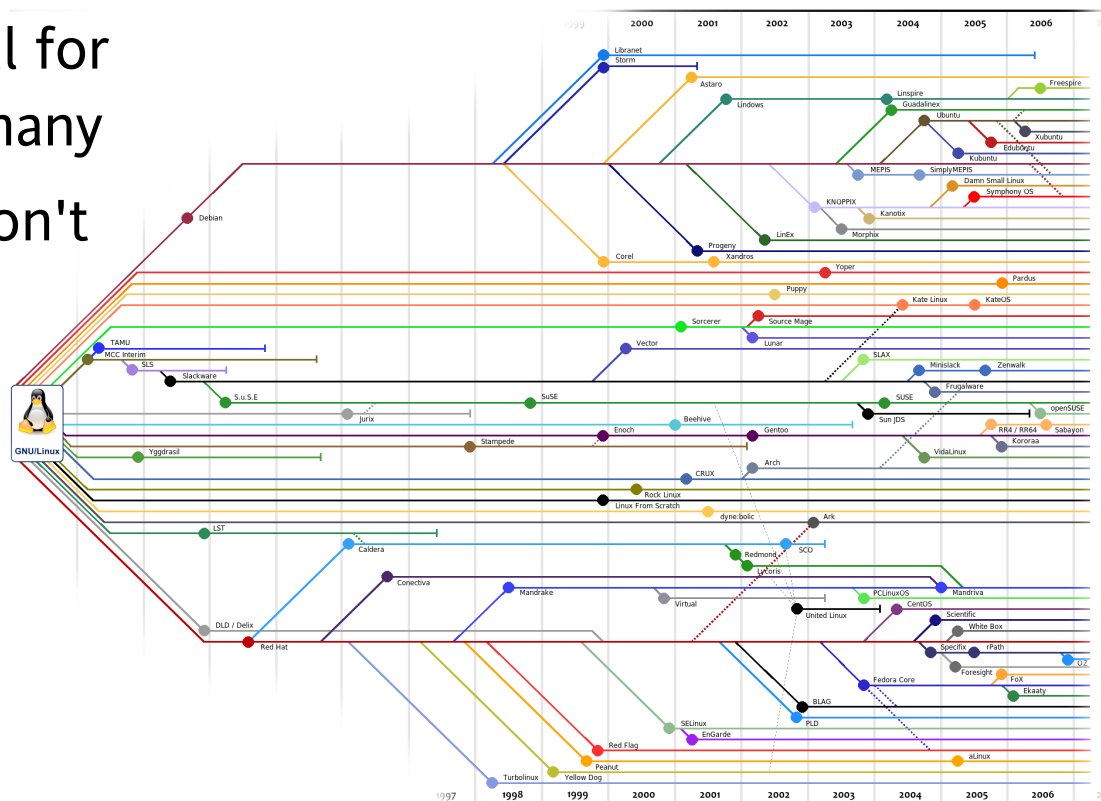
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The problem



Too many platforms

- Many linux distributions
- Uneconomical for ISVs to target many
- Developers don't like packaging





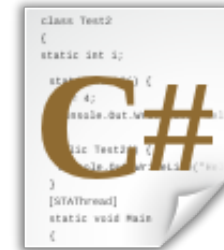
Too many package formats

- RPM
- DEB
- MSI
- TGZ
- ebuilds
- Conary



SRC Installation difficulty

- ./configure
- cmake
- make
- make install
- checkinstall
- bksys
- scons
- tar.gz
- jars





Result

- Not much published software for free platforms
- Poor packages
- Difficult to find software
- Difficult to install software

The solution:
openSUSE Build Service



1 Source, Many builds

- Upload source once
- Build for as many target platforms as desired
- Platform combinations
- Automatic Rebuilds
- Automatic repository creation



Hosted Service

- Build hardware provided
(Courtesy of AMD & Novell)
- Package hosting



Not solved

- Expert distro knowledge required
 - Where to put files
 - The \$DISTRO way
- Different spec/control files required for each distribution.
 - But 1 .spec for all RPM possible
- Auto-spec generation

Build Service Overview



The official description

“An open and complete distribution development platform”

“Infrastructure for development of the future openSUSE based distributions.”

“A tool to for software developers/vendors to compile, release and publish their software for the broad user audience”

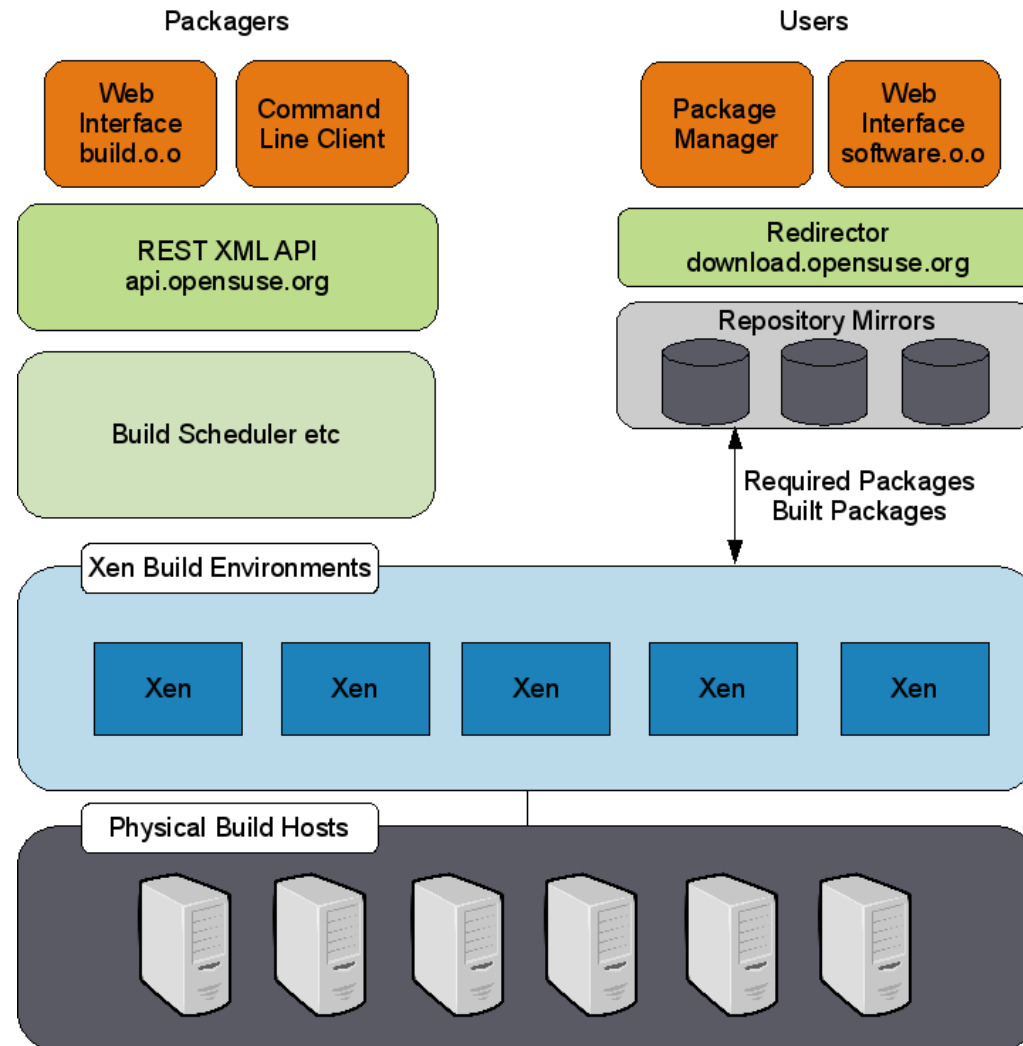


Developer friendly

- Licence : GPL
- Hosted service
- Upstream integration
- Project chaining
- Package Linking
- Automatic Rebuilds

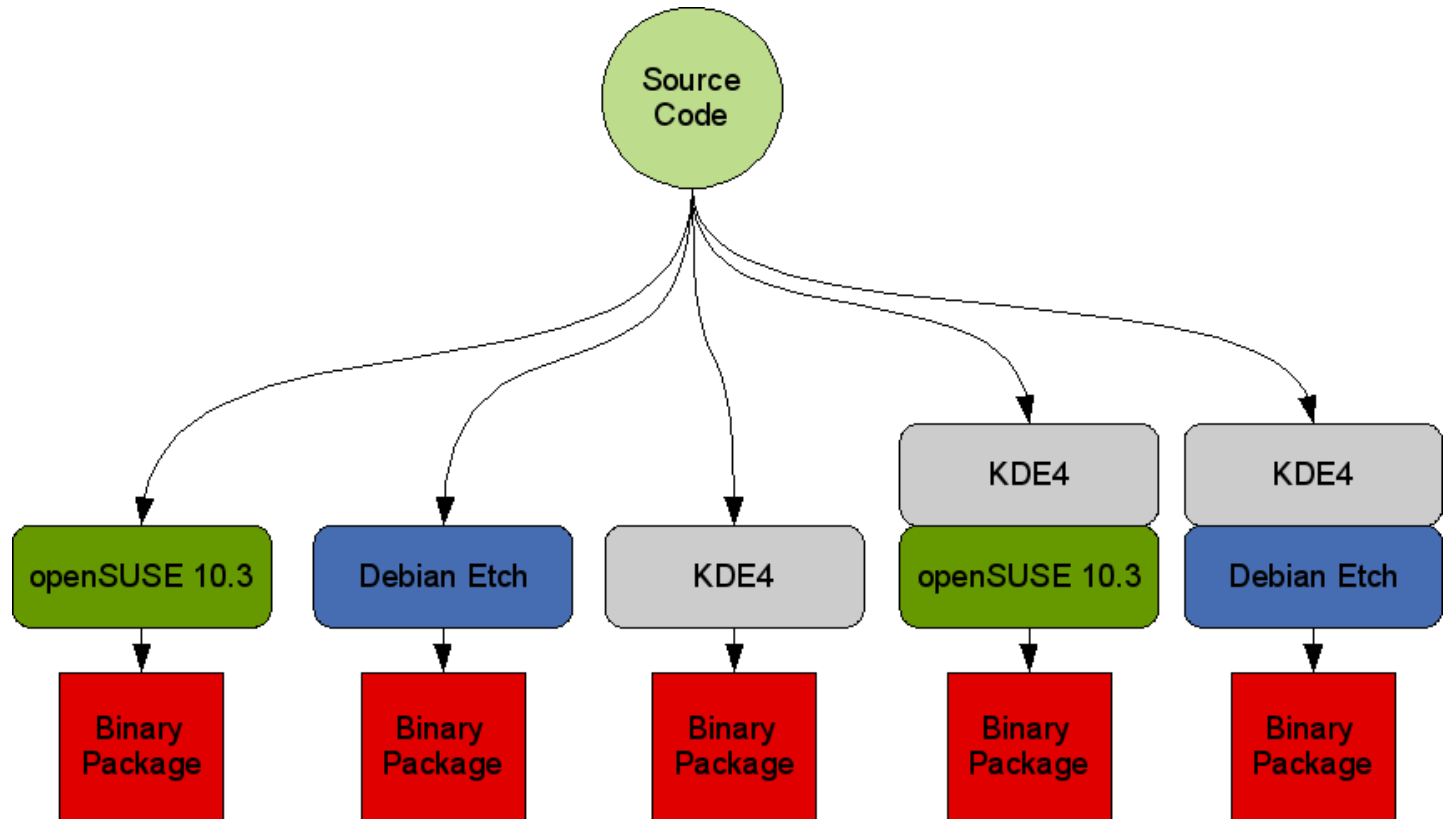


The big picture

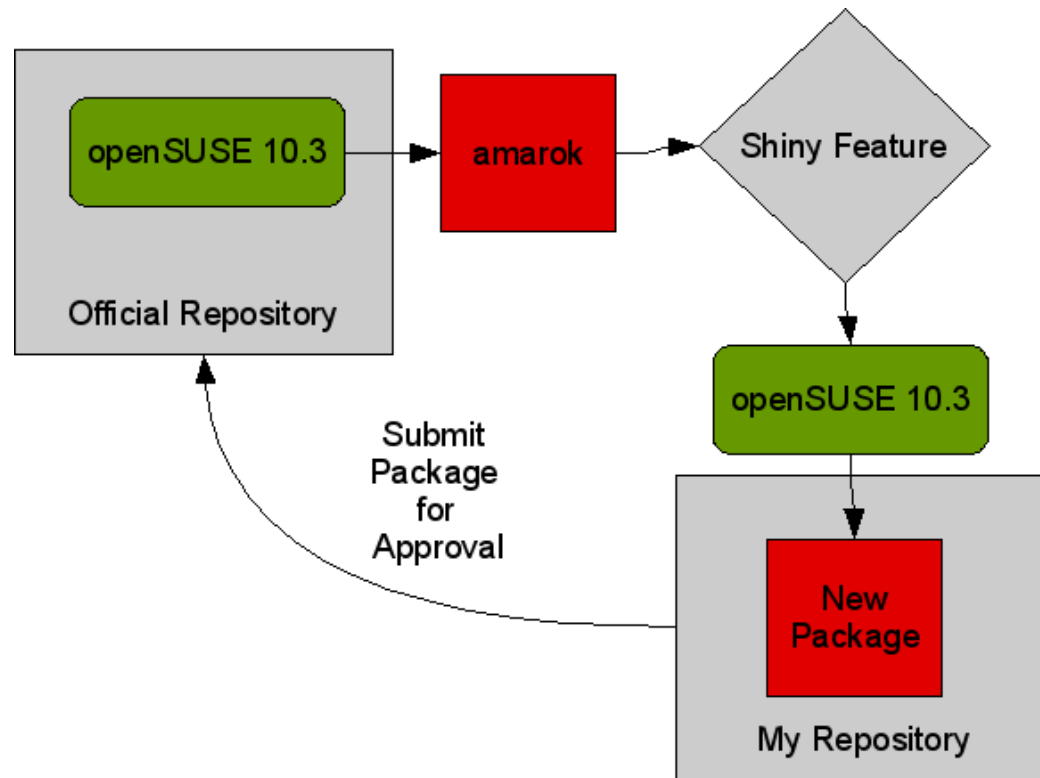




Project Chaining



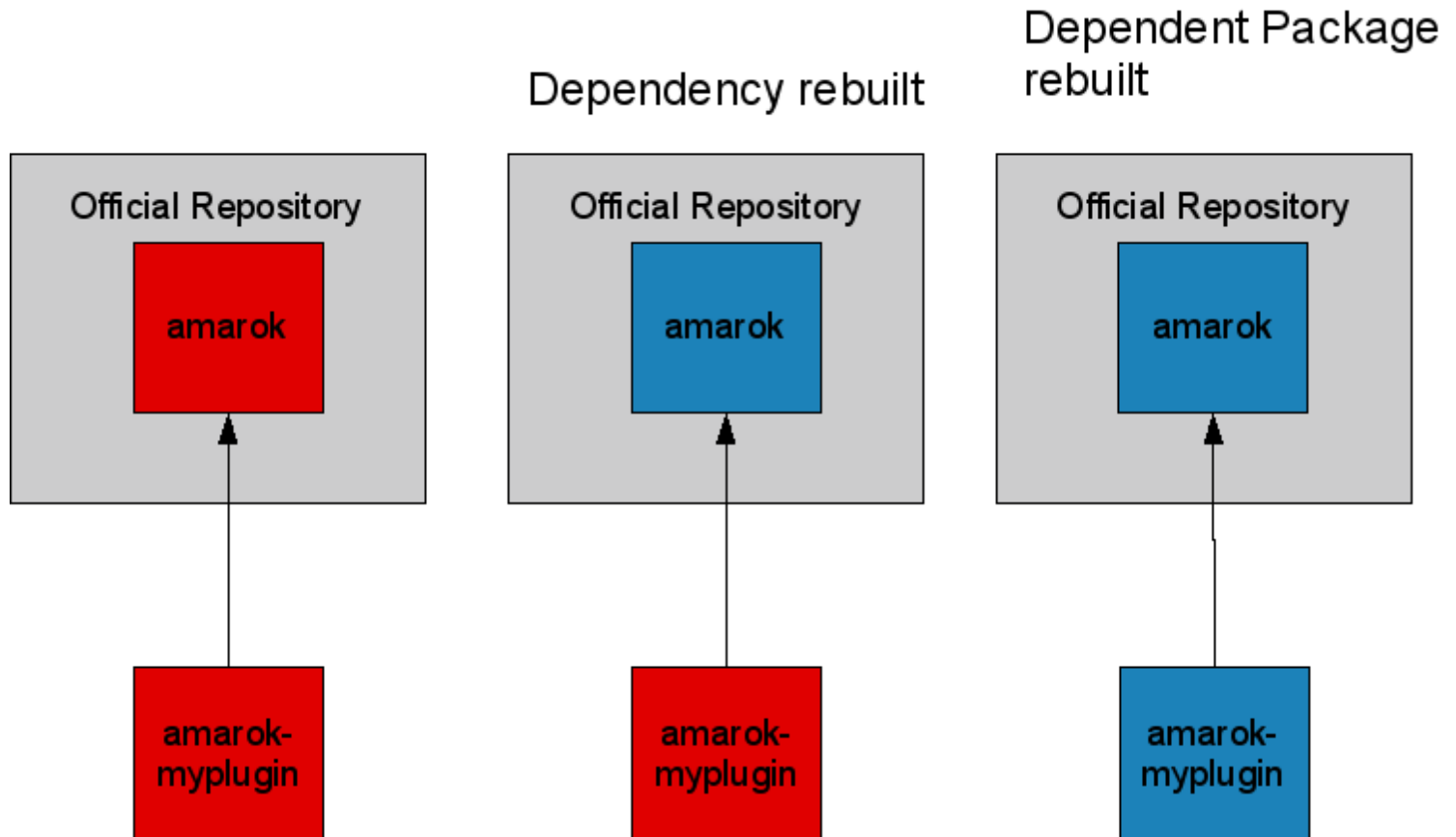
Linking



- Links & Aggregates



Automatic Rebuilds





Web Client

- Ruby on Rails
- Lower learning curve
- Still missing features



Web Client

The screenshot shows a web browser window displaying the openSUSE Build Service web client. The browser address bar shows the URL: `http://build.opensuse.org/project/show?project=openSUSE%3ATools`. The page header includes the openSUSE logo and the text "openSUSE build service". A user is logged in as "benjaminw", with links for "Watched Projects", "Home Project", and "Logout". The breadcrumb navigation shows "Builder > Projects > openSUSE:Tools".

The main content area displays the project name "openSUSE.org tools (openSUSE:Tools)" with a star rating of five stars. Below this, there are links for "[Watch this project]" and "[Create Subproject]". A description states: "Tools for the openSUSE.org project. These are mainly the openSUSE Build Service Server and command line tools." There is also a link for "[Edit Project Information]".

The interface is divided into three main sections:

- Tags:** A section with a "Show all tags" link.
- Involved Users:** A list of maintainers with checkboxes for each: adrianSUSE, cwh, sax2, poemi, rengelhard, rguenther, cschum, and mischroe. There is an "[Add User]" link below.
- Packages:** A list of packages with a filter input field. The packages listed are: build, kiwi, kiwi-images, obs-server, osc, perl-Socket-MsgHdr, perl-XML-XPath, richclient, webpin, xdg-utils, and yast2-metapackage-handler. There are "[Add Package]" and "[Link Package from other Project]" links below.
- Build Repositories:** A table showing build statistics for various repositories.

Name	i586	x86_64	Action
Debian_Etch Debian:Etch/standard Goto Repository	succeeded: 2 failed: 1 disabled: 8	n/a build: n/a publish: n/a	[Remove]
Fedora_7 Fedora:7/standard Goto Repository	succeeded: 4 disabled: 7	succeeded: 3 failed: 1 disabled: 7	[Remove]
Fedora_Core_5 Fedora:Core5/standard Goto Repository	succeeded: 4 disabled: 7	succeeded: 3 failed: 1 disabled: 7	[Remove]
Fedora_Core_6 Fedora:Core6/standard Goto Repository	succeeded: 4 disabled: 7	succeeded: 3 failed: 1 disabled: 7	[Remove]



End user interface

The screenshot shows a web browser window titled "Software.openSUSE.org - Konqueror". The address bar shows "http://software.opensuse.org/search". The page features a navigation menu on the left with sections: "openSUSE" (Get Software, openSUSE Wiki, Build Software), "Getting Help" (Download Help, Burn CD/DVD Image(s), Installation Guides, Official Manuals), "External Software" (Software Search, Package Repositories), and "Other Options" (Mirror List, Latest Development Version, openSUSE 10.2, SUSE Linux 10.1, Expert view). The main content area is titled "Get Software from the openSUSE Build Service" and contains a search bar with "amarok" entered and a dropdown menu set to "openSUSE 10.3". Below the search bar, it displays "1 collections and 13 binaries from 7 source packages" and a "Permanent link to this result". The first result is "amarok [Software collection]" with a "1-Click Install" button. The second result is "amarok" with a "1-Click Install" button. At the bottom, there is a "Manual Package Download" section with links for i586, src, and x86_64 architectures. The right sidebar contains sections: "Get openSUSE" with a download icon, "Sponsored by" with the AMD logo, and "Buy openSUSE" with an image of the openSUSE 10.3 box and a "Pre-order openSUSE 10.3!" link.



Other features

- oscupstream
- CLI client
- Rich client
- Local builds

Demos



Packager Web Interface

<http://build.opensuse.org/>

- View Projects & Packages
- Build Package



Packager CLI

- Checkout project
- Modify
- Checkin



Integration API

<https://api.opensuse.org/apidocs/>

- View sample message



End user web interface

<http://software.opensuse.org>

- Locate software
- Install

Future



Future plans

- Windows Support
- Incremental improvements
- More hardware for hosted service
- Use for truly open distribution development
- Third party integrations

Further resources



Resources

- http://en.opensuse.org/Build_Service
- <irc://irc.freenode.net/#opensuse-buildservice>
- <mailto:opensuse-buildservice@opensuse.org>

Questions?