Open Build Service
Cross-Distribution Packaging

Sascha Peilicke
<saschpe@suse.de>

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openSUSE®

Intro

- The Open Build Service

  - Formerly known as the '*openSUSE Buildservice*'

  - It's a cross-distribution collaboration platform to build

    - Packages for all major distros,

    - Distributions (like openSUSE),

    - ISO's, appliances or VM's

  - Currently 29100 registered developers 149000 packages in 30800 repositories

  - Logo (WIP):

Features

- Takes care of dependency changes, rebuild as needed
- Automagically creates download repositories
- Publish to world-wide mirroring infrastructure
- Can pull from Git, SVN, ...
- Supports semi-automatic package generation and update
- Allows local development

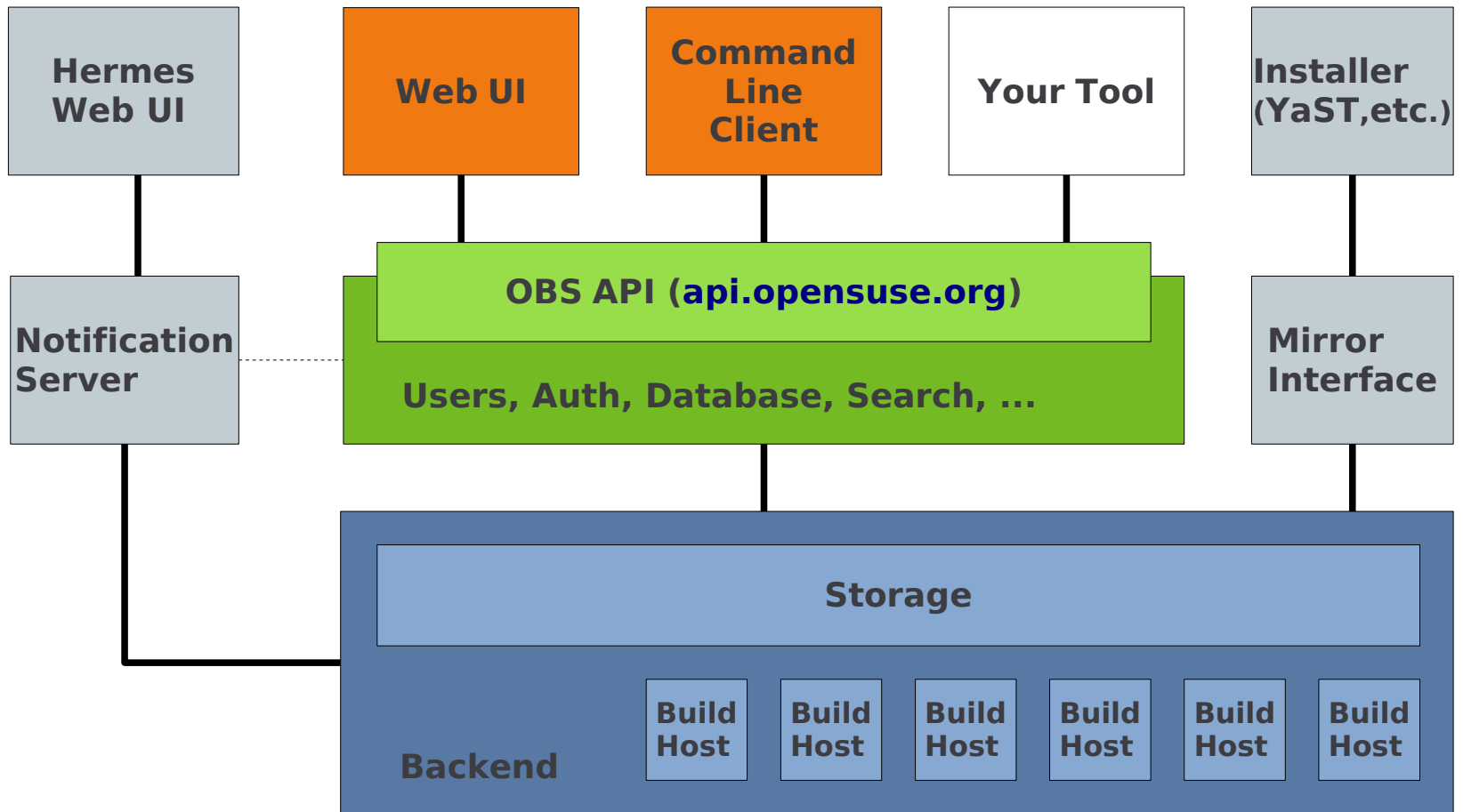| Build Status		
Debian_5.0	i586	succeeded
	x86_64	succeeded
Debian_6.0	i586	succeeded
	x86_64	succeeded
Fedora_12	i586	succeeded
	x86_64	succeeded
Fedora_13	i586	succeeded
	x86_64	succeeded
Fedora_14	i586	succeeded
	x86_64	succeeded
Mandriva_2009.1	i586	succeeded
	x86_64	succeeded
Mandriva_2010	i586	succeeded
	x86_64	succeeded
Mandriva_2010.1	i586	succeeded
	x86_64	succeeded
SLE_11	i586	succeeded
	x86_64	succeeded
ScientificLinux_6	i586	succeeded
	x86_64	succeeded
openSUSE_11.2	i586	succeeded
	x86_64	succeeded
openSUSE_11.3	i586	succeeded
	x86_64	succeeded
openSUSE_11.4	i586	succeeded
	x86_64	succeeded
openSUSE_Factory	i586	succeeded
	x86_64	succeeded
openSUSE_Tumbleweed	i586	succeeded
	x86_64	succeeded
xUbuntu_10.04	i586	succeeded
	x86_64	succeeded

Features

- Instances can connect
- Consists of
  - a web interface
  - command-line client (osc)
  - public API interface
    - HTTP, XML, REST, ...
- Android client
- (Mostly) test driven
- Something for everyone:
  - *Perl, Python, Ruby (Rails), Shell, C, HTML, CSS, JavaScript, SQL, XML, XPath, ...*

The big picture

Hermes Web UI

Web UI

Command Line Client

Your Tool

Installer (YaST,etc.)

OBS API (api.opensuse.org)

Notification Server

Users, Auth, Database, Search, ...

Mirror Interface

Storage

Backend

Build Host

Build Host

Build Host

Build Host

Build Host

Build Host

Web interface

Welcome to openSUSE Build Service

The openSUSE Build Service is the the public instance of the Open Build Service (OBS)
development of the openSUSE distribution and to offer packages from same source for F
Ubuntu, SUSE Linux Enterprise and other distributions..

Please find further details of this service on our wiki pages

This instance offers a special package search interface. Users of any distribution can se
packages for their distribution. For developers it is an efficient place to build up groups ar
through its project model.

My Projects   All Projects   Search   New Project   Status Monitor

Latest Updates

| ibus-table-others | 5 min ago |
PTSerif-fonts	7 min ago
vala-0.12	8 min ago
atheme	9 min ago
darktable	11 min ago
root	20 min ago

News

CentOS 6 got added	2 weeks ago	adrianSuSE
Fedora 12 and 13 have been moved to DISCONTINUED	6 weeks ago	adrianSuSE
Schedulers have catched up the backlog. Normal operation.	6 weeks ago	adrianSuSE
Scheduler re-read all sources, no jobs get currently started, but submissions can be done anyway.	6 weeks ago	adrianSuSE
OBS means "Open Build Service" from now on: http://news.opensuse.org/2011/05/26/opensuse-renames-obs/	2 months ago	adrianSuSE

Web interface - Statistics
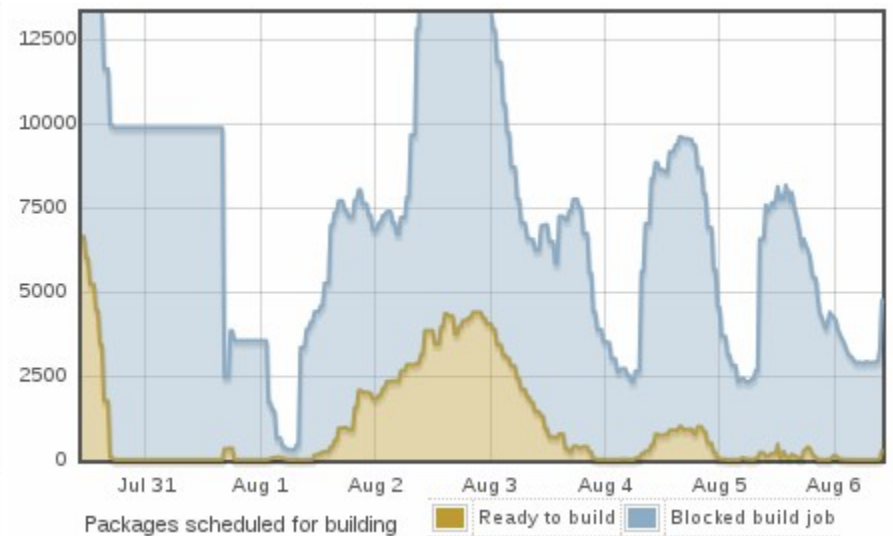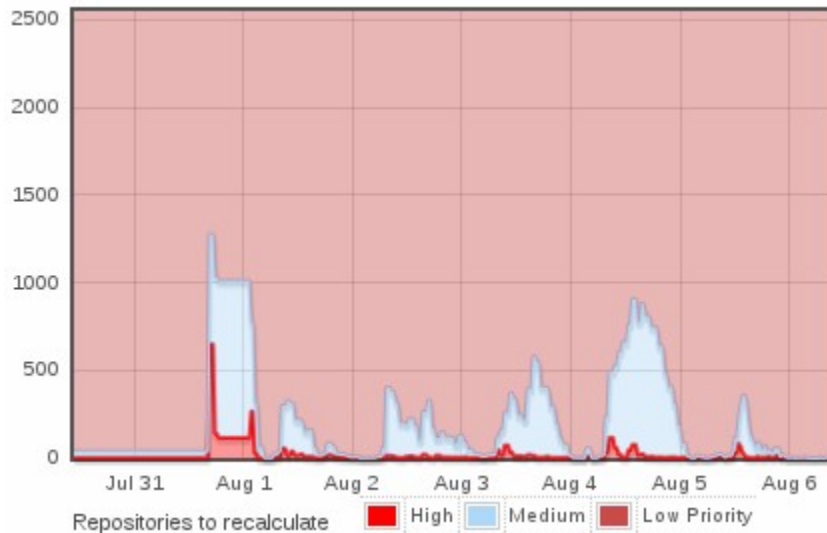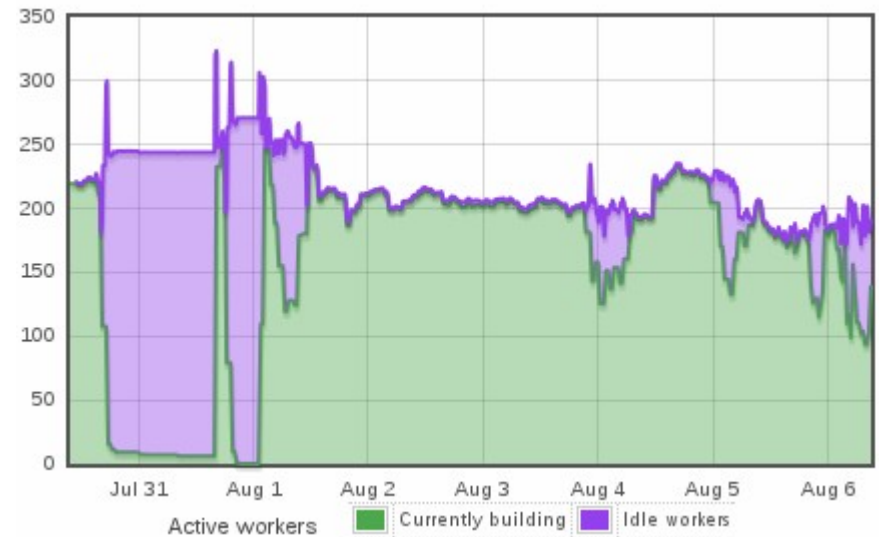
Creating a package

- Want to package an *awesome app™*
- Let's take *choqok* as an example!

Creating a package - Files

· Requirements:
  - Source tarball (ha, easy!)
  - Build recipe (balls needed...)
    > Spec file for RPMs
    > Debian control files
  - Patience
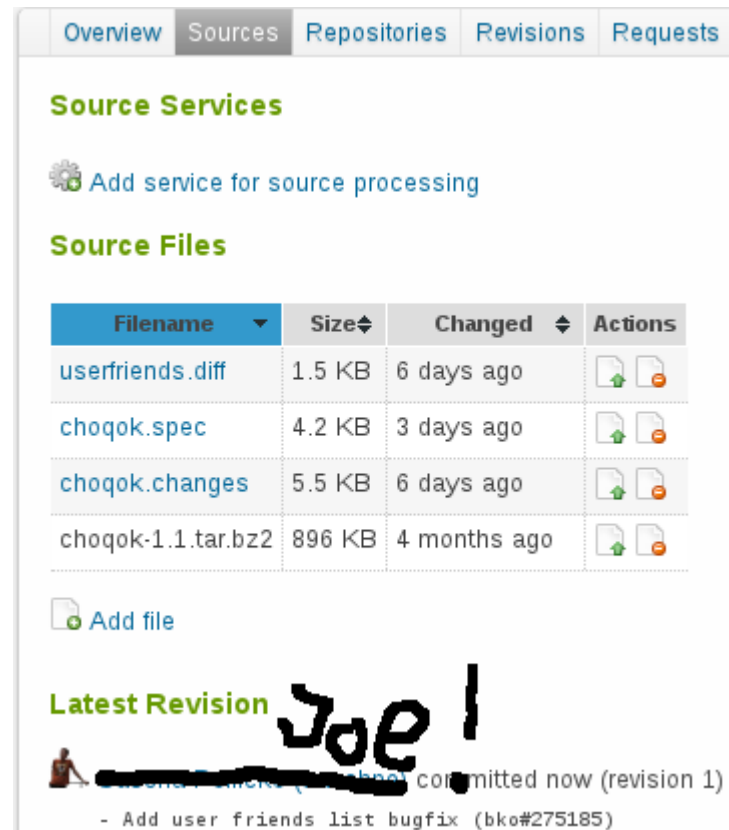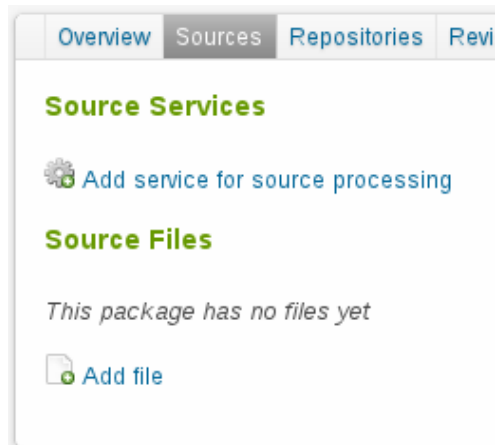
Creating a package – The inevitable

- · You have to write spec files
- · Can be automated:
  - – cpanspec
  - – gem2rpm
  - – py2pack
  - – obs generator (blogs.kde.org/node/4177)
- · Helpful tools:
  - – spec cleaner
  - – rpmlint

```
Name:           choqok
Version:        1.1
Release:        8
License:        GPLv3
Summary:        Micro-Blogging Client
Url:            http://choqok.gnufolks.org
Group:          Productivity/Networking/Other
Source:         %{name}-%{version}.tar.bz2
Patch0:         userfriends.diff
BuildRequires:  libkde4-devel qoauth-devel

%description
A Free/Open Source micro-blogging client
for KDE.

%prep
%setup -q
%patch0 -p1

%build
%cmake_kde4
%make_jobs

%install
%kde4_makeinstall

%files
%doc AUTHORS COPYING README
%{_bindir}/choqok
%{_libdir}/libchoqok.so.*
...

%changelog
```

Creating a package – Waiting

- Once built locally, upload to OBS...
- Wait for dependencies or other packages...
- Find some bugs locally...

Creating a package – Fetch it, use it

- Finally, the masterpiece compiled
- So, you wanna download and distribute it...

go

A compiled, garbage-collected, concurrent programming language

Go is an expressive, concurrent, garbage collected systems programming language that is type safe and memory safe. It has pointers but no pointer arithmetic. Go has fast builds, clean syntax, garbage collection, methods for any type, and run-time reflection. It feels like a dynamic language but has the speed and safety of a static language.

Information

- 8 files
- 2 errors
- Devel package for openSUSE:Factory
- 2 derived packages

Go here

Actions

- Report Bug
- Download package
- Branch package
- Submit package
- Edit description
- Delete package

Select Your Operating System

Fedora   Mandriva   openSUSE   RHEL   SLE

Install using One Click Install

openSUSE Factory   openSUSE Tumbleweed   openSUSE 11.4   openSUSE 11.3

Add repository and install manually

Grab binary packages directly

More download options...

Select Your Operating System

Fedora   Mandriva   openSUSE   RHEL   SLE

Add repository and install manually   (hide)

For **Fedora 15** run the following as **root**:

```
cd /etc/yum/repos.d/
wget http://download.opensuse.org/repositories/devel:languages:go/Fedora_15/devel:languages:go.repo
yum install go
```

For **Fedora 14** run the following as **root**:

```
cd /etc/yum/repos.d/
wget http://download.opensuse.org/repositories/devel:languages:go/Fedora_14/devel:languages:go.repo
yum install go
```

Grab binary packages directly   (hide)

Packages for **Fedora 15**:

- go-0.0.r59-2.1.i386.rpm
- go-0.0.r59-2.1.src.rpm
- go-0.0.r59-2.1.x86_64.rpm
- go-doc-0.0.r59-2.1.i386.rpm
- go-doc-0.0.r59-2.1.x86_64.rpm
- go-emacs-0.0.r59-2.1.i386.rpm
- go-emacs-0.0.r59-2.1.x86_64.rpm
- go-kate-0.0.r59-2.1.i386.rpm
- go-kate-0.0.r59-2.1.x86_64.rpm
- go-vim-0.0.r59-2.1.i386.rpm
- go-vim-0.0.r59-2.1.x86_64.rpm

Creating a package – Sharing

- You should send it somewhere:
  - BTW. how about **openSUSE:Factory**?
  - Has fierce reviewers...
  - Gets you lot'sa cudos
  - (Actually a devel project is needed first)

How it ends up – A request

saschpe | 28 Requests | Home Project | Log Out

Request 77854 accepted and forwarded to openSUSE:Factory / python-Shed_Skin (request 78047)

Request #77854 (accepted)

Actions

Type▼	Source	⬍	Target	⬍	Info
submit	home:babelworx:ldig:bra...devel:languages:python / python-Shed_Skin		devel:languages:python / python-Shed_Skin		ⓘ

```
license update: GPL-3.0+
has an or later clause
```

History

Date ▲	State ⬍	User ⬍	Comment
1 day ago	new	Ciaran Farrell (babelworx)	
now	accepted	Sascha Peilicke (saschpe)	

Diff View

File python-Shed_Skin.changes:

```
2  1    --- python-Shed_Skin.changes (revision 2)
   2    +++ python-Shed_Skin.changes (revision 2)
   3    @@ -1,4 +1,10 @@
   4    -------------------------------------------------------------
   5    +Wed Aug  3 10:23:31 UTC 2011 - cfarrell@novell.com
   6    +
   7    +- license update: GPL-3.0+
   8    +  has an or later clause
   9    +
   10   +-------------------------------------------------------------
   11    Fri Jul  1 08:27:11 UTC 2011 - saschpe@suse.de
   12
   13    - Initial version
```

File python-Shed_Skin.spec:

```
2  1    --- python-Shed_Skin.spec (revision 2)
   2    +++ python-Shed_Skin.spec (revision 2)
   3    @@ -22,7 +22,7 @@
   4     Release:      1
   5     Url:          http://shedskin.googlecode.com
   6     Summary:      An Optimizing (restricted) Python-to-C++ Compiler
   7    -License:      GPL3
   8    +License:      GPL-3.0+
   9     Group:        Development/Languages/Python
   10    Source:       http://shedskin.googlecode.com/files/shedskin-0.8.tgz
   11    Source99:     shedskin-rpmlintrc
```

Piles of packages - "My Work"

My Work

This page summarizes all requests where immediate action is required from you. You can also use your complete list of requests.

Open Reviews

No requests.

New Requests

Modified ▲	Source	Target	Requester	Type	State	Actions
3 weeks ago	server:dns / sshfp	openSUSE:Factory	jengelh	chgdev	new	🔍 ⓘ
2 weeks ago	devel:openSUSE:Factory / pciutils-ids	openSUSE:Factory	autobuild	submit	new	🔍 ⓘ
2 weeks ago	home:openttdcoop:server / rubygem-unicorn	devel:languages:ruby:extensions	ammler	submit	new	🔍 ⓘ
2 weeks ago	zypp:Code11_2-Branch / zypper	SUSE:SLE-11:SP1	mlandres	submit	new	🔍 ⓘ
6 days ago	devel:ope...E:Factory / arpwatch-ethercodes	openSUSE:Factory	autobuild	submit	new	🔍 ⓘ
2 days ago	security:netfilter / shorewall	openSUSE:Factory	toganm	submit	new	🔍 ⓘ
1 day ago	filesystems / cloop			submit	new	ⓘ
1 day ago	filesystems / ntfs-3g_ntfsprogs		prusnak	submit	new	ⓘ
12 hours ago	multimedia:libs / fftw3		elvigia	submit	new	ⓘ
5 hours ago	mozilla:Factory / npapi-sdk		wrosen	submit	new	ⓘ
5 hours ago	Archiving:Backup / backintime			submit	new	ⓘ
4 hours ago	server:proxy / tinyproxy		jengelh	submit	new	ⓘ
4 hours ago	devel:tools:scm:svn / fsvs		dirkmueller	submit	new	ⓘ
4 hours ago	security / intel-SINIT		coolo	submit	new	ⓘ
4 hours ago	home:gabi2 / yast2-fcoe-client		gabi2	submit	new	🔍 ⓘ
3 hours ago	Java:openjdk6:Factory / java-1_6_0-openjdk	openSUSE:Factory	mvyskocil	submit	new	🔍 ⓘ

Build results of security:netfilter / shorewall

Kernel_HEAD	x86_64	succeeded
Kernel_HEAD	i586	succeeded
Kernel_stable	x86_64	succeeded
Kernel_stable	i586	succeeded
openSUSE_11.3	x86_64	succeeded
openSUSE_11.3	i586	succeeded
openSUSE_11.4	x86_64	succeeded
openSUSE_11.4	i586	succeeded
openSUSE_Factory	x86_64	succeeded
openSUSE_Factory	i586	succeeded

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KDE and Gnome in the OBS

openSUSE Build Service > Projects > KDE > Subprojects

Overview | Packages | Repositories | Requests | Users | Subprojects | Advanced

Subprojects of KDE

- Active *(Plasma Active development)*
- Apps *(KDE Apps maintained by their upstream)*
- Apps:KMyMoney *(KMyMoney)*
- Distro:Factory *(KDE 4.7.x Packages)*
- Distro:Stable *(KDE 4.6.0 packages)*
- Extra *(Additional packages maintained by the KDE team)*
- KDE3 *(Official KDE 3.5.10 release and associated software)*
- KDE3:NonFree
- Medias *(KDE Based Medias)*
- Netbook *(Plasma Netbook Reference)*
- Qt *(Current Qt 4.x packages)*
- Qt45 *(Qt 4.5.x development snapshots)*
- Qt46 *(Qt 4.6.x development snapshots)*
- Qt47 *(Qt 4.7.x development snapshots)*
- Qt48 *(Qt 4.8.x development snapshots)*
- Qt50 *(Qt 5.x packages)*
- Qt:STABLE *(This project provides the latest stable Qt 4.6.x release)*
- Release:45 *(KDE Release 4.5 Stable Repository)*
- Release:46 *(KDE 4.6 Releases)*
- Release:46:kdepim46 *(KDE 4.6.x for KDE:Release:46)*
- Release:47 *(KDE 4.7 Release Packages)*
- Unstable *(KDE unstable repositories)*
- Unstable:Playground *(Unstable KDE Applications)*
- Unstable:SC *(KDE SC 4.8 development snapshots)*
- Unstable:SC:kdepim46 *(Unstable KDE PIM Packages)*
- UpdatedApps *(Backports of latest application releases to stable openSUSE r...)*

openSUSE Build Service > Projects > GNOME > Subprojects

Overview | Packages | Repositories | Requests | Users | Subprojects | Advanced

Subprojects of GNOME

- Apps *(GNOME Applications)*
- Apps:F-Spot
- Apps:F-Spot:Unstable
- Apps:Tasque
- Apps:Tomboy
- Apps:Tomboy:Unstable *(Tomboy Development Releases)*
- Apps:pidgin-sipe
- Ayatana *(Packages for the Ayatana project)*
- Ayatana:11.4 *(GNOME:Ayatana for openSUSE 11.4)*
- Backports *(GNOME:Backports contains packages required to build new versio...)*
- Backports:2.24 *(Packages needed to run GNOME 2.24 on openSUSE 11.1)*
- Backports:2.26 *(Packages needed to run GNOME 2.26 on openSUSE 11.1)*
- Backports:2.28 *(Packages needed to run GNOME 2.28 on openSUSE 11.1)*
- Backports:2.30 *(Packages needed to run GNOME 2.30 on openSUSE 11.2)*
- Backports:2.32 *(Packages needed to run GNOME 2.32 on openSUSE 11.3)*
- Backports:Factory *(Bleeding-edge packages from other projects (ie, not in oS...)*
- Community *(Open repository for GNOME related packages)*
- Contrib *(The development branch of GNOME packages living in Contrib.)*
- Evolution
- Evolution:Backports *(some backports for building the latest evolution)*
- Evolution:mapi *(Evolution mapi plugin)*
- Evolution:snapshot-2-32 *(Evolution stable 2.32)*
- Evolution:snapshot-3.0 *(snapshot for evolution 3.0)*
- Evolution:snapshot-master *(Provides latest evolution)*
- Evolution:snapshots *(nightly builds)*
- Evolution:snapshots:evolution-3.0 *(evolution-3.0)*
- Factory *(Development branch of GNOME)*
- GNOME1 *(GNOME1/GTK+1 Libraries and Applications)*
- Medias *(GNOME Based Medias)*
- Next *(Next version of GNOME (this is not for end-users!))*
- STABLE *(Stable branch of GNOME)*
- STABLE:2.24 *(Stable branch of GNOME 2.24)*
- STABLE:2.26 *(GNOME 2.26 (openSUSE_11.1))*
- STABLE:2.28 *(GNOME 2.28)*
- STABLE:2.30 *(GNOME 2.30)*
- STABLE:2.32 *(GNOME 2.32)*
- STABLE:3.0 *(GNOME 3.0)*

Coming up next...

- OBS 2.3 (beta2)
  - Maintenance
  - Groups
  - Reviews
  - Security improvements
  - (Issue tracker integration)
- (Hot) Summer of Code
  - Arch Linux support
  - More (browser) testing!
  - Android client
  - New CLI

Want more?

- build.opensuse.org

  - The most prominent Build Service instance. Also contains links to documentation and source code

- en.opensuse.org/Build_Service

  - OBS wiki portal

- features.opensuse.org

  - Feature tracker

- opensuse-buildservice@opensuse.de

  - The mailing list for discussing the Build Service.

- #opensuse-buildservice on Freenode

  - Our IRC channel