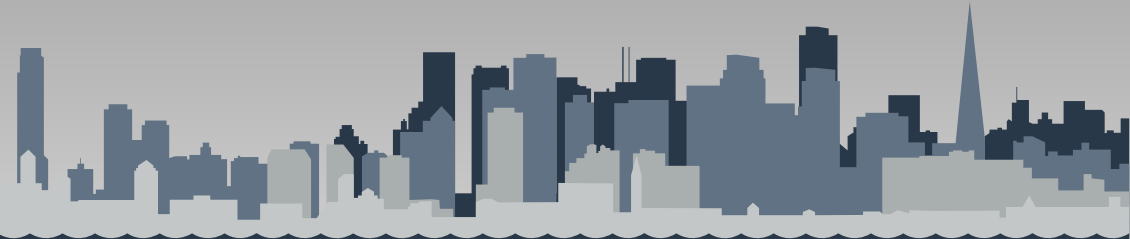


TIZEN™ DEVELOPER CONFERENCE MAY 7-9, 2012



Open Build Service: Facts, Features & Future

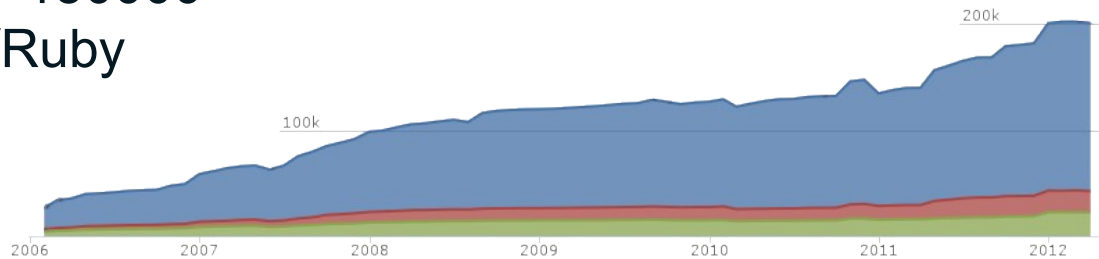
Michael Schröder <mls@suse.de>
Adrian Schröter <adrian@suse.de>

OBS History

- Created in 2005 as a rewrite of SUSE's internal *autobuild* system
 - Goals: transparency, flexibility, openness
 - First presented at FOSDEM 2006
- 2010: OBS-2.0 with workflow features for openSUSE distribution source handling
- 2011: OBS-2.1 with features for the MeeGo project
- Current Release: OBS-2.3
 - Support for maintenance updates

Development

- Licensed under GPLv2
 - <https://github.com/openSUSE/open-build-service/>
- Lines of Code: > 150000
 - Perl/Python/Ruby



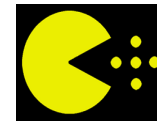
- Mostly maintained by SUSE, but many contributions from community members & other companies

Example Users

- Distribution development, Maintenance Updates



- Open Source Communities



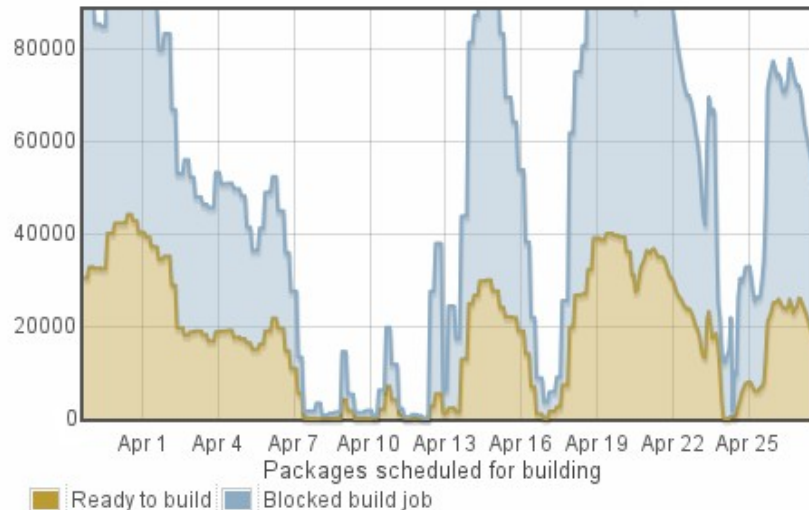
- Add-Ons: Driver Developer and ISVs



- Researchers/Universities
- Administration Teams

Numbers (from build.opensuse.org)

- Confirmed Users: >32000
- Package builds per day: > 51000
 - Build farm: 38 hosts, 310 workers
- Storage:
 - Sources: 3.3 TBytes
 - Binaries: 6.9 TBytes



Features

- Multiple distributions, multiple architectures
 - rpm, deb, archlinux, image creation
- Sand-boxed builds (kvm/xen) on a build farm
- Easy branching with automatic merges
- Continuous Integration
 - Automatic rebuilds on changes (both source and build packages), automatic ordering of builds
 - **Consistent, reproducible builds**

User Interface

- REST based API, so multiple interfaces can co-exist
- Web UI
 - Great to get an overview of a project
 - Simple package fixes
- OSC command line client
 - Works like an SCM system (svn, git)
 - Supports local builds for testing

User Interface

https://build.opensuse.org/project/show?project=devel%3Alanguages%3Aparrot

Downloads Support Community Development Watchlist Search

openSUSE Build Service > Projects > devel:languages:parrot mlschroie | Home Project | Logout

Overview Packages Repositories Monitor Requests Users Subprojects Advanced

Parrot related packages

This project contains packages related to the parrot project (www.parrot.org).

Information

- 4 packages
- 1 build error

My Actions

Edit description Delete project

Build Results	Architecture	Success	Failed	Disabled
Fedora_15	i586	succeeded: 3	failed: 1	disabled: 1
	x86_64	succeeded: 3	failed: 1	disabled: 1
openSUSE_11.4	i586	succeeded: 3	failed: 1	disabled: 1
	x86_64	succeeded: 3	failed: 1	disabled: 1
openSUSE_Factory	i586	succeeded: 2	failed: 1	disabled: 1
	x86_64	succeeded: 3	failed: 1	disabled: 1

```
544 (rudin:devel:languages:parrot)> ls
nqp parrot rakudo
545 (rudin:devel:languages:parrot)> osc results
525 (rudin:devel:languages:parrot)> osc r
nqp
| parrot
| | post-build-checks
| | | rakudo
. . . Fedora_15 i586 (published)
. . . Fedora_15 x86_64 (published)
. . . openSUSE_11.4 i586 (published)
. . . openSUSE_11.4 x86_64 (published)
F . . openSUSE_Factory i586 (published)
. . . openSUSE_Factory x86_64 (published)

Legend:
disabled
. succeeded
F failed
546 (rudin:devel:languages:parrot)>
```

Help

- Open Build Service Portal
- Building Packages
- Writing spec Files
- Reporting a Bug
- Forums

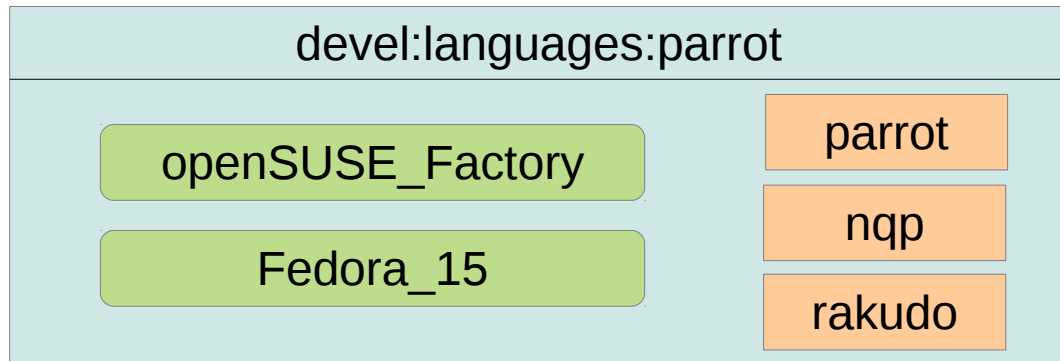
Sponsor

AMD
Smarter Choice

Open Build Service (OBS) is an openSUSE project.

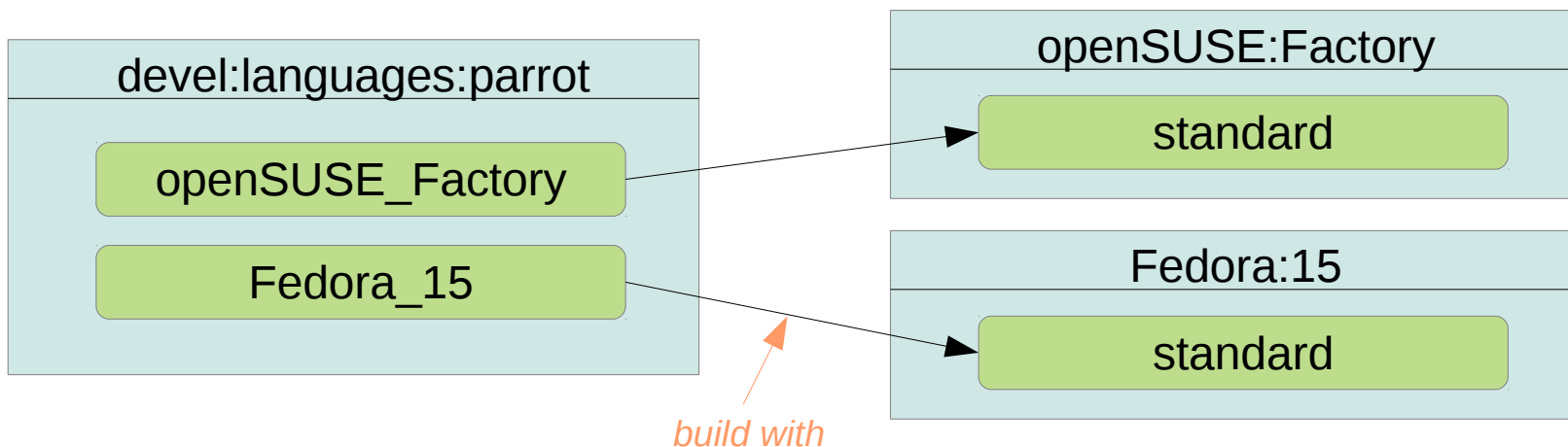
Build Service Projects

- Main organizational element: projects
 - Contains a set of packages with sources
 - Defines which repositories and architectures to build
 - Defines access control



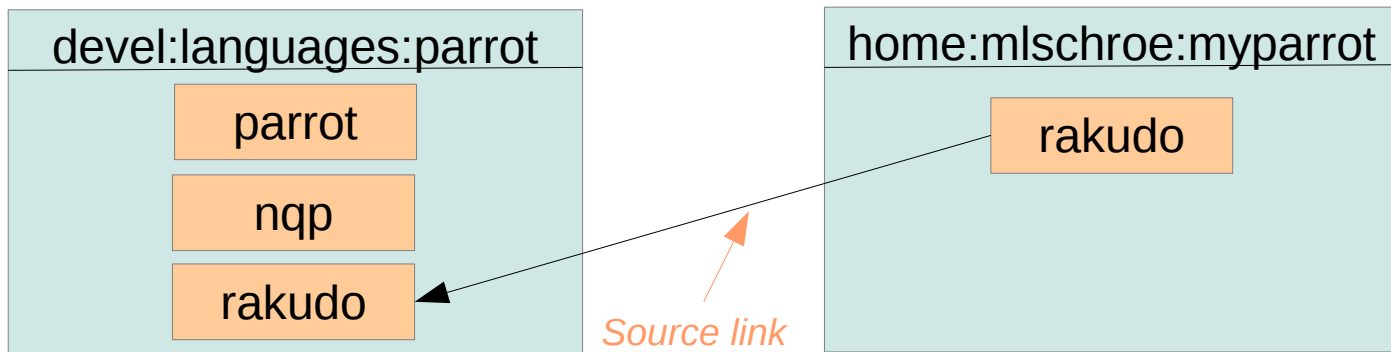
Build Service Projects

- Repositories can build on top of other projects' repositories
 - The “base” distributions are good examples



Collaboration

- Like SCM if multiple people have write access
- Otherwise, create a branch:



Collaboration

- If you're done, ask to merge your changes with a “submit request”
- Notification through mail
- osc, Web UI

The screenshot displays the openSUSE Build Service web interface for a request. At the top, the breadcrumb is "openSUSE Build Service > Requests > 115520". The user "mlschroe" has 1 request, and the project is "Home Project".

The main content area shows "Request 115520 (new)" with the description "Fixed package Requires, please accept". The status is "In state new". Below this is a "My Decision" section with a text input field containing "Please add a comment", and buttons for "Accept request", "Revoke request", and "Add a review".

A "Request History" table shows one entry: "mlschroe created request" 19 min ago.

The "Submit" section shows the request is for "home:mlschroe:myparrot / rakudo" to be merged into "devel:languages:parrot / rakudo". There is a checkbox for "Forward to developed package openSUSE:Factory / rakudo".

The "Source Diff" section shows a diff for "rakudo.changes":

```
[ - ] Changed rakudo.changes
1 @@ -1,3 +1,9 @@
2 +-----
3 +Wed Apr 25 19:30:54 CEST 2012 - mls@suse.de
4 +
5 +- fix package Requires
6 +
7 +-----
8 Sat Mar 24 06:40:00 CES 2012 - carlin@glass.org.nz
9
10 - update to 2012.03
11
```

Below the diff is a scroll bar and a "Back to top" link.

The "Build Results" and "Rpmlint Results" sections are also visible. The "Build Results" table shows:

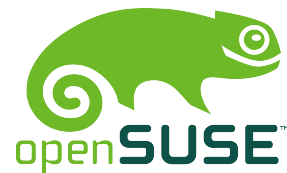
Build Results	Rpmlint Results
Fedora_15	i586 building x86_64 building
openSUSE_11.4	i586 succeeded x86_64 building
openSUSE_Factory	i586 scheduled x86_64 succeeded

Interconnect

- Access Sources and Binaries of a remote OBS instance
 - Support different architectures and distributions
 - Proprietary sources that must not leave the company
- Remote Instance is “mounted” in the project space
 - Source and binary package caching
 - Automatic merging & rebuilds also work with remote data
- build.opensuse.org: connections from 90 other instances

Support

- Community
 - `opensuse-buildservice@opensuse.org`
 - Irc: `#opensuse-buildservice` on freenode
- Professional
 - <http://www.open-build-service.org/contact/>
 - B1 Systems (L3 backing by SUSE)



Future

- 2.5 Release
 - Due end of this year
 - Product content tracking
 - Cross build (implemented by B1-Systems)
- 2.6 Release
 - Improved QA integration
 - More package formats, other operating systems

Contact

- <http://www.openbuildservice.org>
 - Appliances
 - Documentation
 - Support
 - News



TIZEN™ DEVELOPER CONFERENCE

MAY 7-9, 2012

tizen.org

TIZEN

DEVELOPER
CONFERENCE
MAY 7-9, 2012