

The Gnome Build Brigade

Continuous integration and QA for Gnome

Guadec 2007
Birmingham, UK

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Main topics.

- Why? Main targets.
- Gnome Buildbot.
- Future work. Contributing.

Why? Because Gnome is not easy to build.

- The problem:
 - Building Gnome is very difficult for newcomers.
 - Even advanced users waste a lot of time.
- A (partial) solution: continuous build of Gnome.
 - A reference for the Gnome community.
 - List of modules that do not build successfully.
 - Shows the build problem for each failed module.
 - Detect problems in several OS/archs.

Continuous Integration.

- Continuous integration (CI), what is this about?
 - CI is a software engineering term describing a process that completely rebuilds and tests an application frequently.
- *Possible* advantages of using a CI tool:
 - Early warning of incompatible/broken code.
 - Integration problems are detected and fixed continuously.
 - Immediate testing of changes.
 - Availability of current build for testing, demo or release.
- CI is a philosophy of work and requires commitment for it to work well.

The birth of the Gnome Build Brigade.

- People got interested and some efforts begun:
 - Frederic Peters, jhautobuild.
 - Igalia, Tinderbox.
- BOF at GUADEC 2006 about CI for Gnome.
 - Presentation of jhautobuild, Tinderbox and Buildbot.
 - Debate about the needs and goals.
 - Posterior meeting to define a group to work on this and decide a tool to use.
 - Birth of the Gnome Build Brigade.

Present and future

- So, what's the Build Brigade now?
 - Mainly, a group of people interested in providing CI support to Gnome.
 - More generally, a group of people interested in quality around the Gnome project.
- What can it also be in the future?
 - A helpful partner for the releasing team.
 - A provider of packages for developers and testers.

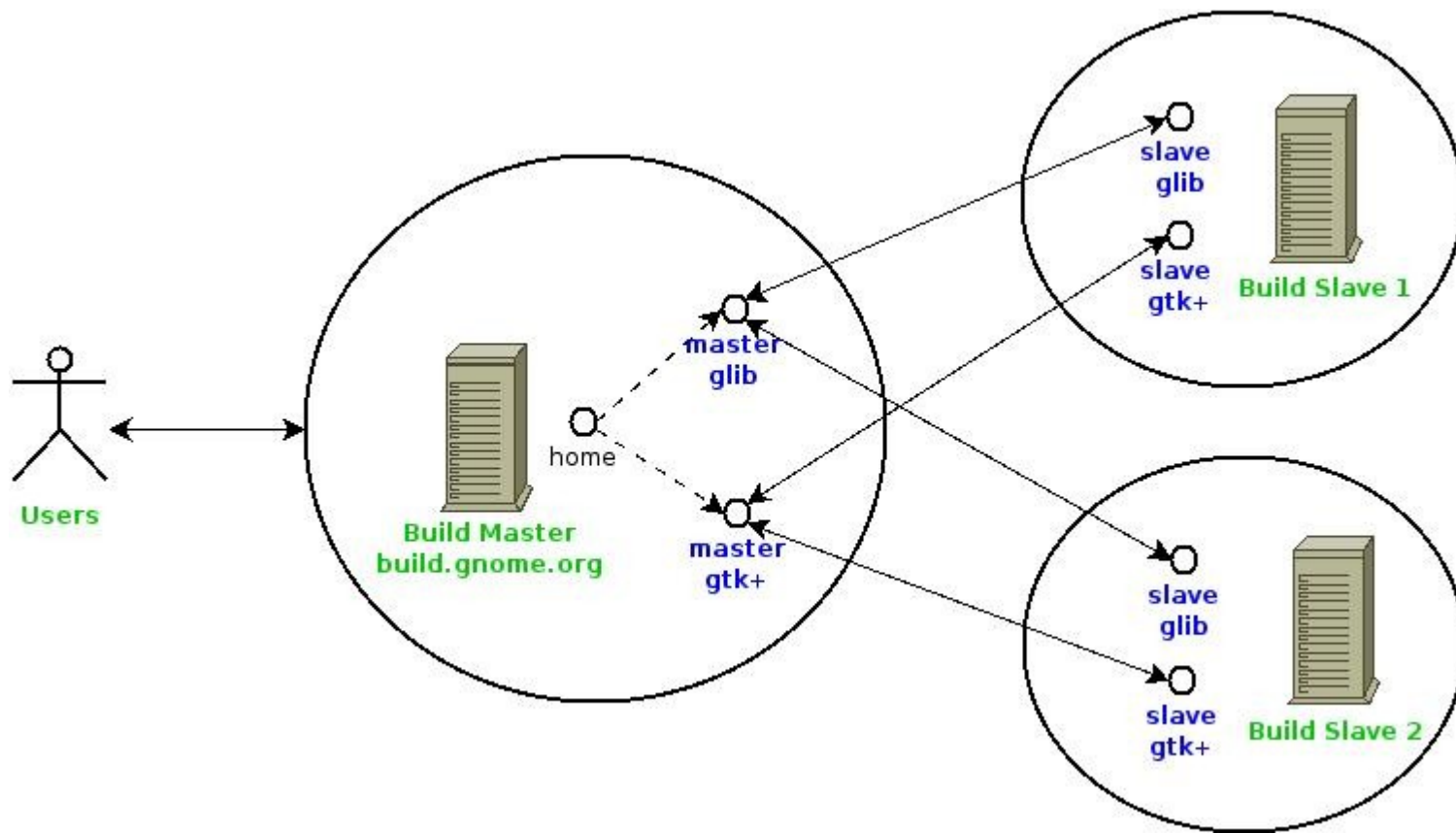
Main targets.

- Targets.
 - Set up a CI platform for Gnome based on Buildbot.
 - Encourage and help people to add tests to their projects.
 - Provide feedback to ease the build of Gnome.

Gnome Buildbot. Main ideas.

- The Gnome Buildbot.
 - Use Jhbuild and Gnome modulesets: repositories, dependencies, environment, etc...
 - Control the build process: checkout, build&install, test, report, clean.
 - Be a real reference for the community, which means it must be reliable and this means we need feedback from maintainers.
 - Build in several distros, archs, configurations.
 - Provide integration with tests.

Gnome Buildbot. Architecture.



Gnome Buildbot. Demo.

<http://build.gnome.org>

Gnome Buildbot. How to use it.

- Maintainers and core developers should subscribe and react to build errors.
 - Check the problem and fix it or provide feedback to properly build it (build flags, required software or configuration, etc).
- Check build options and provide feedback if not appropriate.
- Use the code coverage reports to guide the testing effort.
- Provide test suites and check the test results regularly.

Future work.

- Future ideas:
 - Support testing of python modules.
 - Project specific contents and stages.
 - Publish installed software and configuration.
 - Comments about recent build issues.
 - Web makeup.
 - Check-in integration.
 - Notification of build error by email.
 - Gnome mobile Buildbot.

Joining the Build Brigade.

- Help to fix build problems.
- Warn maintainers and developers about build problems.
- Offer a server to setup a new build slave.
- Provide tests for Gnome projects.
- Help us with improving/maintaining the Gnome buildbot.

Contact and resources

- Wiki:
<http://live.gnome.org/BuildBrigade>
- Mailing list:
build-brigade-list@gnome.org
- IRC:
#build-brigade at GimpNet.
- The Gnome Buildbot:
<http://build.gnome.org>

QUESTIONS?