# The Gnome Build Brigade

Continuous integration and QA for Gnome

# Main topics

- The birth of the Gnome Build Brigade.

- Main targets.

- Gnome Buildbot presentation.

# The birth of the Gnome Build Brigade (I)

- The problem: mail to gnome-love in March 2006 (Jaap Haitsma):
  - 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 modules that do not build successfully.
  - What's the build problem in this module?

# The birth of the Gnome Build Brigade (II)

- ## 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:

  - Integration problems are detected and fixed continuously.

  - Early warning of incompatible/broken code.

  - Immediate testing of changes.

  - Availability of current build for testing, demo or release.

# The birth of the Gnome Build Brigade (III)

- 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.

# The birth of the Gnome Build Brigade (IV)

- So, what's the Build Brigade?

  - 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.

# 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 presentation (I)

- JhAutobuild.
  - Diversity of sources, environments, architectures.
  - Sticked to jhbuild steps: not flexible.

- Tinderbox (perl).
  - Widely used, supported by Mozilla. Igalia experience.
  - Difficult to extend/maintain.

- Buildbot (python).
  - Widely used, active community. Fluendo experience.
  - Flexible design, easy to customize and extend.

# Gnome Buildbot presentation (II)

- **The Gnome Buildbot.**
  - Builds all Gnome modules using jhbuild:
    - List of modules and build order.
    - Build environment.
  - A set of fixed (?) build stages for each module:
    - Checkout/update.
    - Build: make all, make install.
    - Test: make check.
    - Reports (coverage, …).

# Gnome Buildbot presentation (III)

- ## The Gnome Buildbot (cont).

  - Easy to add new build stages or link module-specific information.

# Gnome Buildbot presentation (IV)

-Demonstration-

# Gnome Buildbot presentation (V)

- Future work plans:

  - Support for testing python modules.

  - Project specific contents and stages.

  - Publish installed software and configuration.

  - Comments about recent build issues.

  - Web makeup.

  - Check-in integration.

  - Build error notifications (email, RSS).

# Contact and resources

- TWiki:
http://live.gnome.org/BuildBrigade

- Mailing list:
build-brigade-list@gnome.org

- IRC:
#build-brigade at GimpNet.

- The Gnome Buildbot:
http://buildbot-gnome.igalia.com

# Questions

Any questions?

# Interesting links

- Buildbot:
  http://buildbot.sourceforge.net

- JhAutobuild:
  http://jhbuild.bxlug.be

- Tinderbox:
  http://www.mozilla.org/tinderbox.html

- Articles:
  http://en.wikipedia.org/wiki/Continuous_Integration