Deploying Continuous Integration with XIFI
Gerrit, “Future Internet”, PPP, and KDE

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Who am I?
Trojita, a fast Qt IMAP e-mail client
In a Nutshell, Trojitá...

... has had 5,618 commits made by 59 contributors representing 72,418 lines of code

... is mostly written in C++
   with an average number of source code comments

... has a well established, mature codebase
   maintained by a large development team
   with decreasing Y-O-Y commits

... took an estimated 18 years of effort (COCOMO model)
   starting with its first commit in February, 2006
   ending with its most recent commit 23 days ago
Managing Contributions

- Number of contributors grows
- Some patches are crappy
- Shuffling them around manually takes time
- All people make mistakes
  - Let computers take care of as much stuff as possible
Code Review

- **ReviewBoard**
  - Has been used by KDE for years
  - Not integrated with CI
  - Patches not accessible through git

- **Gerrit**
  - Used by Qt, Chromium, Android, OpenStack, WikiMedia,…
  - Pushes go to `refs/for/master` instead of `master`
  - Stuff available at `refs/changes/03/3/1`
Change 3 - Abandoned

Move PartWidgetFactory to UIUtils and make it not QWidget specific

Change-Id: i3e407b3b07f6a91b6a5e0067a5b0195dc77071f

**Files**

<table>
<thead>
<tr>
<th>File Path</th>
<th>Comments</th>
<th>Size</th>
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<tbody>
<tr>
<td>CMakeLists.txt</td>
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</tr>
<tr>
<td>src/Gui/AttachmentView.h</td>
<td>3</td>
<td></td>
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<tr>
<td>src/Gui/LoadablePartWidget.cpp</td>
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<td>src/Gui/MessageView.cpp</td>
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<td>src/Gui/MessageView.h</td>
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<tr>
<td>src/Gui/PartWidget.cpp</td>
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<td>A src/UIUtils/PartLoadingOptions.h</td>
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<td>A src/UIUtils/PartVisitor.h</td>
<td>61</td>
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<tr>
<td>A src/UIUtils/PartWalker.h</td>
<td>247</td>
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**History**

<table>
<thead>
<tr>
<th>Author</th>
<th>Message</th>
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<tr>
<td>Boren Zhang</td>
<td>Uploaded patch set 1.</td>
</tr>
<tr>
<td>Jan Kundra</td>
<td>Patch Set 1: Code-Review+2</td>
</tr>
<tr>
<td>Karan Luthra</td>
<td>Patch Set 1: Code-Review+2 I approve.</td>
</tr>
<tr>
<td>Caspar Schutjieser</td>
<td>Patch Set 1: Code-Review+2 I approve.</td>
</tr>
<tr>
<td>Jan Kundra</td>
<td>Patch Set 1: Code-Review+2 Testing. Let's see if this mail makes it through.</td>
</tr>
<tr>
<td>Jan Kundra</td>
<td>Patch Set 1: Code-Review+2 This is a regular KDE user, so I can add just +1/-1. Let's see what happens when I unstick that &quot;send mail&quot; che...</td>
</tr>
<tr>
<td>Jan Kundra</td>
<td>Removed the following approvals: * Code-Review+1 by Sysadmin Testing Account <a href="mailto:null@kde.org">null@kde.org</a></td>
</tr>
<tr>
<td>Jan Kundra</td>
<td>Patch Set 1: Code-Review-2 As we're now in the phase where approvals on this Gerrit instance will get propagated to git.kde.org, let's kill t...</td>
</tr>
<tr>
<td>jan kundra</td>
<td>Abandoned</td>
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</table>

**Related Changes**

- Move PartWidgetFactory to UIUtils and make it not QWidget specific
```cpp
// so that the compiler knows that it's a QObject

#include <QMessageBox>
#include "UiUtilities.h"

namespace Gui
{

#define LoadablePartWidget::LOADABLEPARTINDEX 0
#endif

QWidget* LoadablePartWidget::create(QWidget* parent)
{
    //... (code)

    if (isPartWidgetFactory())
    {
        n_recursionDepth = n_recursionDepth + 1;

        realPart = n_factory->create(partIndex, n_recursionDepth + 1);
        n_part->loadLater();
        n_part->addWidget(realPart);
        n_part->setCurrentIndex(1);
    }
}
```
OpenStack wiki, by Sean Dague, CC BY-SA 4.0
... but that needs plenty of CPU cycles
XIFI is a project of the European Public Private Partnership on Future Internet (FI-PPP) programme.

XIFI is the project responsible for the capacity building part of the programme.

80 Million € for SMEs

Through open calls, the third phase calls for SMEs and Web entrepreneurs to develop highly innovative services and applications.

The 16 selected “accelerator projects” will publish Open Calls for the distribution of grants to SMEs and Web entrepreneurs as of September 2014. SMEs and Web entrepreneurs may submit proposals to one (or perhaps more) of these Open Calls, in accordance with the requirements defined by the projects launching the Open Calls.

KDE’s Gerrit

- Gerrit at https://gerrit.vesnicky.cesnet.cz/
  - Use KDE Identity for login
- Approved changes are pushed to KDE’s git
  - Everyone can submit a patch
  - Any KDE developer can approve anything
  - No countermeasures against self-approvals
- Use dummy.git for testing
- Ask me if you want your project in there
  - In person here at Akademy
  - jkt on #kde-sysadmin at Freenode
  - jkt@flaska.net
Future Plans

- Set up pre-merge CI
- Don’t bother reviewers until the patch at least builds
- Fancy stuff
  - IRC hooks, Bugzilla,…
- Do you want to help?
  - Write tutorials
  - Report bugs
  - Become a Gerrit admin
Do we want to limit approvals to project maintainers?

Is the current situation where everyone can commit and push everywhere a goal, or a way towards some other goal?

What is the actual goal?
Thanks for listening

Questions?