



30 minutes to fix bugs in Eclipse

Eclipse Con Europe 2015

November 3 2015

Fixing bugs



Welcome / Agenda

- general issues on contribution
- a few words about the hackathon
- introduction to requirements (how to install, ...) and tooling
- some words about Gerrit
- explanation of our recipe document
- live bug fixing (Wayne & Olivier)

Who are we ?

Olivier Prouvost :

- OPCoach (www.opcoach.com), Eclipse trainer and consultant
- Committer on e4 tools and platform UI

Wayne Beaton :

- Eclipse Foundation
- Committer on packaging, dash
- Project mentor on IOT, LocationTech, PolarSys,

How to contribute ?

Contributing to Eclipse is not only fixing bugs.

You can also :

- fill bugs on bugzilla : <http://bugs.eclipse.org>
- contribute to the wiki : https://wiki.eclipse.org/Main_Page

- ask or answer questions in the forums : <http://www.eclipse.org/forums/>
- listen to the mailing lists : <http://www.eclipse.org/mail>

In this talk, we will focus on how to fix bugs.

Hackathon

- An Hackathon is organized during the conference
- Every day in the main lobby downstairs
- Meet the committers and fix your bugs

Development resources

You will probably have to navigate on these web sites :

- Eclipse bugzilla : <http://bugs.eclipse.org>
- Explore Eclipse projects : <http://projects.eclipse.org>
- Download the code from git : <http://git.eclipse.org>
- Manage reviews from gerrit : <http://gerrit.eclipse.org>

Administrative prerequisites

There are some registration that should be done to fix bugs :

- you should have an account on www.eclipse.org¹ -> on the top of the page
- be sure to have signed the CLA. To sign it go on this page : <https://projects.eclipse.org> and click on CLA on the top of the page
- that would be fine to have a public ssh key installed on your computer (search for 'generated public keys' on google).

Tooling prerequisites

To fix bug you must :

- install the latest Eclipse IDE version for committers (Neon M2)
- have a git command in a shell (nice to have) from : <https://git-scm.com/download>
- download the latest target platform from :

1 - www.eclipse.org



The Eclipse Project Downloads

On this page you can find the latest builds produced by the **Eclipse Project**. To get started, run the program and go through the user and developer documentation provided in the help system or see the **web-based help system**. If you have problems installing or getting the workbench to run, **check out the Eclipse Project FAQ**, or try posting a question to the **forum**.

See the **main Eclipse Foundation download site** for convenient all-in-one packages. The **archive site** contains older releases (including the last 3.x version, **3.8.2**). For reference, see also **the p2 repositories provided, meaning of kinds of builds** (P,M,N,I,S, and R), and the **build schedule**.

Latest Downloads		
Build Name	Build Status	Build Date
4.5.1	Jv (3 of 3 platforms)	Fri, 4 Sep 2015 -- 00:15 (-0400)
4.6M2	Jv (3 of 3 platforms)	Wed, 16 Sep 2015 -- 20:00 (-0400)
I20151028-2000	Jv (3 of 3 platforms) ← Download the latest target platform	
M20151028-1000	Jv (3 of 3 platforms)	Wed, 28 Oct 2015 -- 10:00 (-0400)
N20151024-1500	Jv (2 of 3 platforms)	Sat, 24 Oct 2015 -- 15:00 (-0400)

Target platform

Set this delivery as the main target platform :

Edit Target Definition

Target Content
Edit the name, description, and plug-ins contained in a target.

Name:

Locations Content Environment Arguments Implicit Dependencies

The following list of locations will be used to collect plug-ins for this target definition.

📁 /Users/olivier/Documents/OPCoach/temp/TargetNeonM2/Eclipse.app/Contents/Eclipse 466 plug-ins available

Show location content

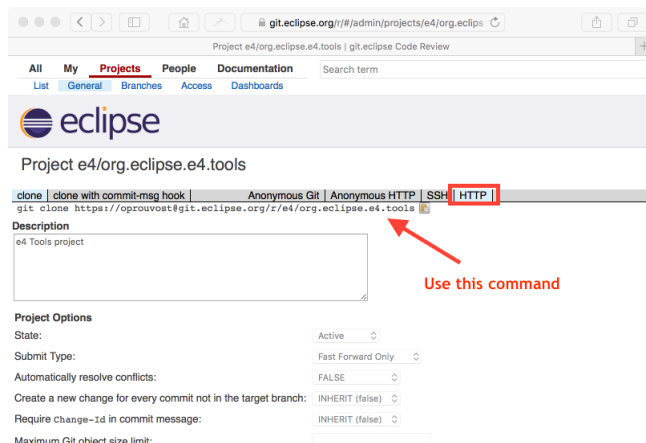
?

You can add also other tools that concern your bugs (cdt, ...)

Code clone Prerequisites

Of course you must clone the project git repository :

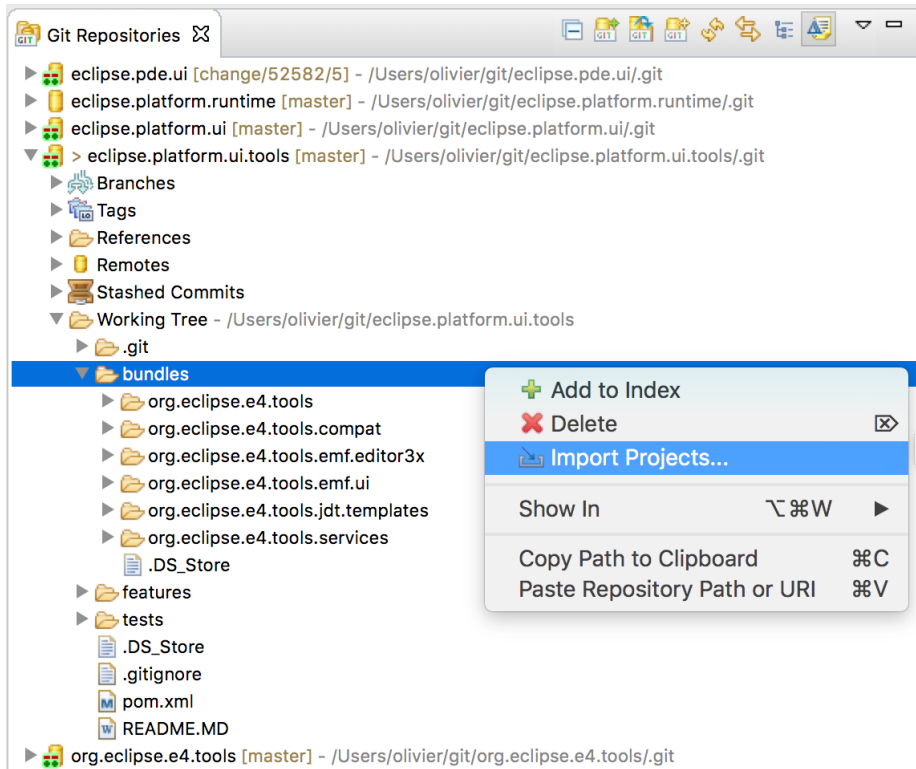
- go on `http://gerrit2`
- log in on gerrit web site
- click on the project tab
- search for the project you want to work with
- at the top you will find the ssh git clone commands



Clone from gerrit

Code installation prerequisites

- Install the repository in the git repository view :
 - add local repository
 - or copy the git repository URL in the view
- Import the projects in the workspace



Gerrit : the code review process

- Gerrit is used to review the code
- It is an intermediate location where the code is pushed before the merge in the master branch
- For a new commit, a review is created and reviewer can comment (-2,-1,0,+1,+2)
- The first review is an automatic review done by hudson !
- When all reviewers are Ok the code is merged in the master branch
- Information on gerrit : <https://wiki.eclipse.org/Gerrit>

- A sample list of reviews (on e4.tools) :

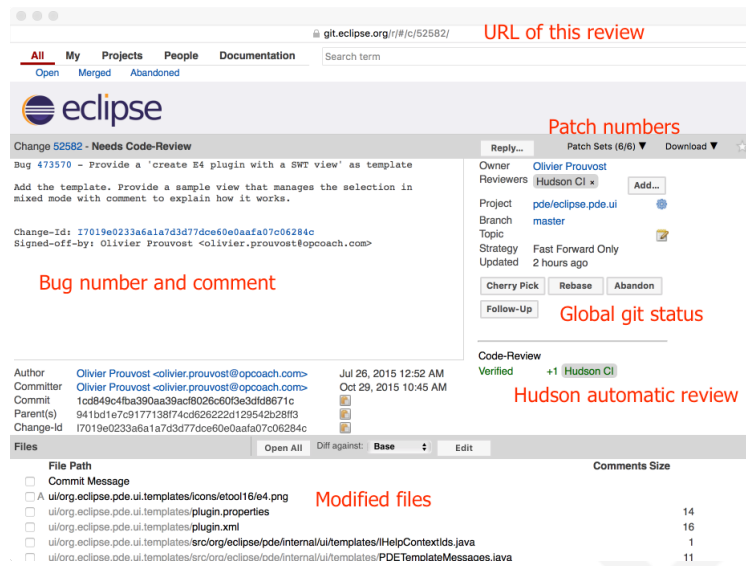
Search for e4.tools

Subject	Status	Owner	Project	Branch	Updated	CR	V
Bug 437469 - [model editor] add autocomplete combo box to FindParentReference...	Merged	Steven Spungin	e4/org.eclipse.e4.tools	master	6:09 PM	✓	✓
Bug 437543 - [model editor] Live editor has injection error creating XmI tab	Merged	Steven Spungin	e4/org.eclipse.e4.tools	master	5:41 PM	✓	✓
Bug 395283 - Store and restore window size and location of subdialogs while ...	Merged	Andrej ten Brummelhuis	e4/org.eclipse.e4.tools	master	3:35 PM	✓	✓
Bug 437504 - Add new Wizard description	Merged	Marco Descher	e4/org.eclipse.e4.tools	master	9:40 AM	✓	✓
Bug 436889 - [model editor] Save/restore the list tab columns upon editor ...	Merged	Steven Spungin	e4/org.eclipse.e4.tools	master	Jun 13	✓	✓
Bug 437372 - [model editor] [list tab] add ability to sort by clicking on column	Merged	Steven Spungin	e4/org.eclipse.e4.tools	master	Jun 13	✓	✓
Bug 437368 - [target platform search] Finish button does not activate for ...	Merged	Steven Spungin	e4/org.eclipse.e4.tools	master	Jun 13	✓	✓
Bug 437321 - [target platform search] Deadlock occurs if progress monitor ...	Merged	Steven Spungin	e4/org.eclipse.e4.tools	master	Jun 13	✓	✓
Bug 436889 - [model editor] Save/restore the list tab columns upon editor ...	Merged	Steven Spungin	e4/org.eclipse.e4.tools	master	Jun 12	✓	✓
Bug 391089 - Add possibility to search and replace in Application Model ...	Merged	Steven Spungin	e4/org.eclipse.e4.tools	master	Jun 12	✓	✓
Bug 436847 - [nonreferenced resource dialog] null pointer used when ...	Merged	Steven Spungin	e4/org.eclipse.e4.tools	master	Jun 10	✓	✓
Bug 436299 - NonReferencedResourceDialog layout changes	Merged	Wim Jongman	e4/org.eclipse.e4.tools	master	Jun 5	✓	✓
Bug 436283 - [target platform search] The job window should have "run in ...	Merged	Steven Spungin	e4/org.eclipse.e4.tools	master	Jun 5	✓	✓
Bug 436132 - [target platform search] Clicking the Target platform radio ...	Merged	Steven Spungin	e4/org.eclipse.e4.tools	master	May 31	✓	✓
Bug 428903 - Having a common 'debug' window for all spies	Merged	Olivier Prouvost	e4/org.eclipse.e4.tools	master	May 29	✓	✓
Bug 428903 - Having a common 'debug' window for all spies	Merged	Olivier Prouvost	e4/org.eclipse.e4.tools	master	May 28	✓	✓
Bug 428903 - Having a common 'debug' window for all spies	Merged	Olivier Prouvost	e4/org.eclipse.e4.tools	master	May 27	✓	✓
Bug 435625 - [target platform search] Do search in background thread	Merged	Steven Spungin	e4/org.eclipse.e4.tools	master	May 27	✓	✓
Bug 395283 - Store and restore window size and location of subdialogs while ...	Abandoned	Andrej ten Brummelhuis	e4/org.eclipse.e4.tools	master	May 18	-1	✓
Bug: 402384 Add CONTRIBUTING file		Denis Roy	e4/org.eclipse.e4.tools	master	May 15	✓	✓
Bug 434450 - Cannot install tools and live editor anymore	Merged	Wim Jongman	e4/org.eclipse.e4.tools	master	May 12	✓	✓
Bug 434450 - Cannot install tools and live editor anymore	Merged	Wim Jongman	e4/org.eclipse.e4.tools	master	May 8	✓	✓
Bug 434450 - Cannot install tools and live editor anymore	Merged	Wim Jongman	e4/org.eclipse.e4.tools	master	May 8	✓	✓
Bug 434450 - Cannot install tools and live editor anymore	Merged	Wim Jongman	e4/org.eclipse.e4.tools	master	May 8	✓	✓
Bug 434450 - Cannot install tools and live editor anymore	Abandoned	Lars Vogel	e4/org.eclipse.e4.tools	master	May 8		✓

List of gerrit reviews

Review contents

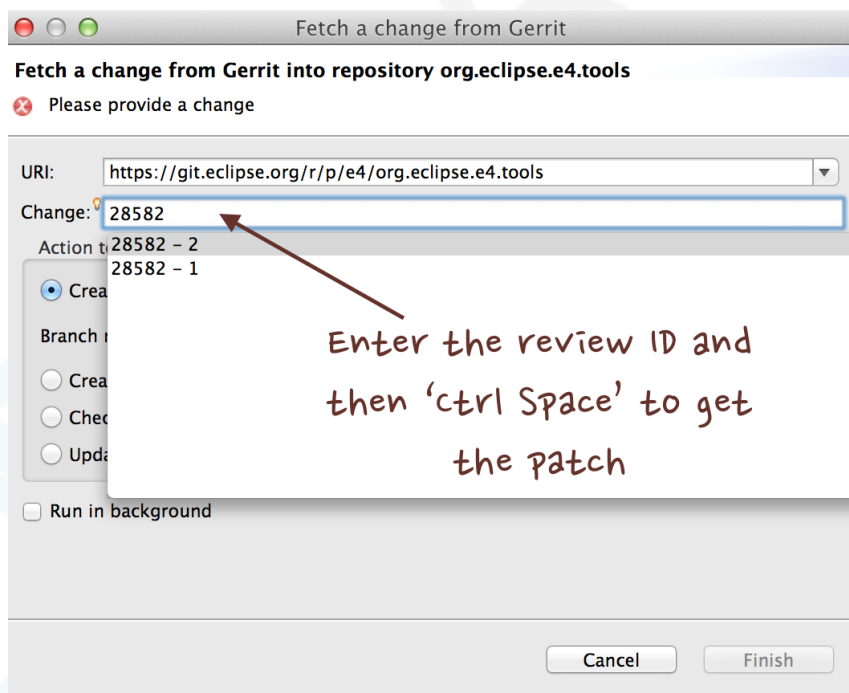
- A review contains comments and patches
- The ID of the review is used to get the code in your repository



Review

Fetch from Gerrit

- It is possible to import any review in your eclipse
- Use the Team->Remote->Fetch From Gerrit command



Fetch

- It is also possible to create a query with Mylyn with the gerrit connector

Recipes

- Fixing bugs can put the developers in tricky situations
- To help you to face these problems we prepared a recipe notebook
- You can download it here (on the page of this talk) :

<https://www.eclipsecon.org/europe2015/sites/default/files/slides/HackathonUseCasesECE2015.pdf>

Live fix

- We will show how to fix a bug from the code to the gerrit review
- We plan to fix this bug :
 - bug 481211¹
- Remember of the magic shortcuts :
 - **Alt Shift F1** to find the UI code where the bug stands !

Evaluate

Don't forget to evaluate this talk !



Evaluate Session

1 https://bugs.eclipse.org/bugs/show_bug.cgi?id=481211