



gerrit  
Gerrit Code Review



**Blit**  
*Plugin*

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# Who's that guy ?

## IDENTITY CARD

### **Luca Milanesio**

co-founder GerritForge LLP

- Jenkins contributor and founder of JenkinsMobi.com
- **Git adopter since 2009 in large enterprises**
- **Gerrit contributor since 2011**



# Why a different Git front-end ?

Large enterprises = different people !

- Gerrit "gurus" ? ... likes rare GWT UI
- Git early adopters ? ... used to GitWeb
- Like it new and small ? ... gitiles is for you ?
- Like shiny and simple UX ? **GitBlit** 😊



# Why GitBlit and not others ?

**just democratic election I guess 😊**

+1, that's a great idea, I'd like to use that.  
Would be great if this would integrate GitBlit in a way so that Gerrit permission settings are respected also by GitBlit.

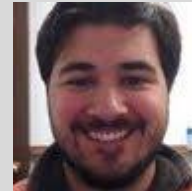


Hi all,  
as Gerrit 2.5 is coming to the RC phase (and Plugins will soon be a reality), what do you think of integrating GitBlit as plug-in ?

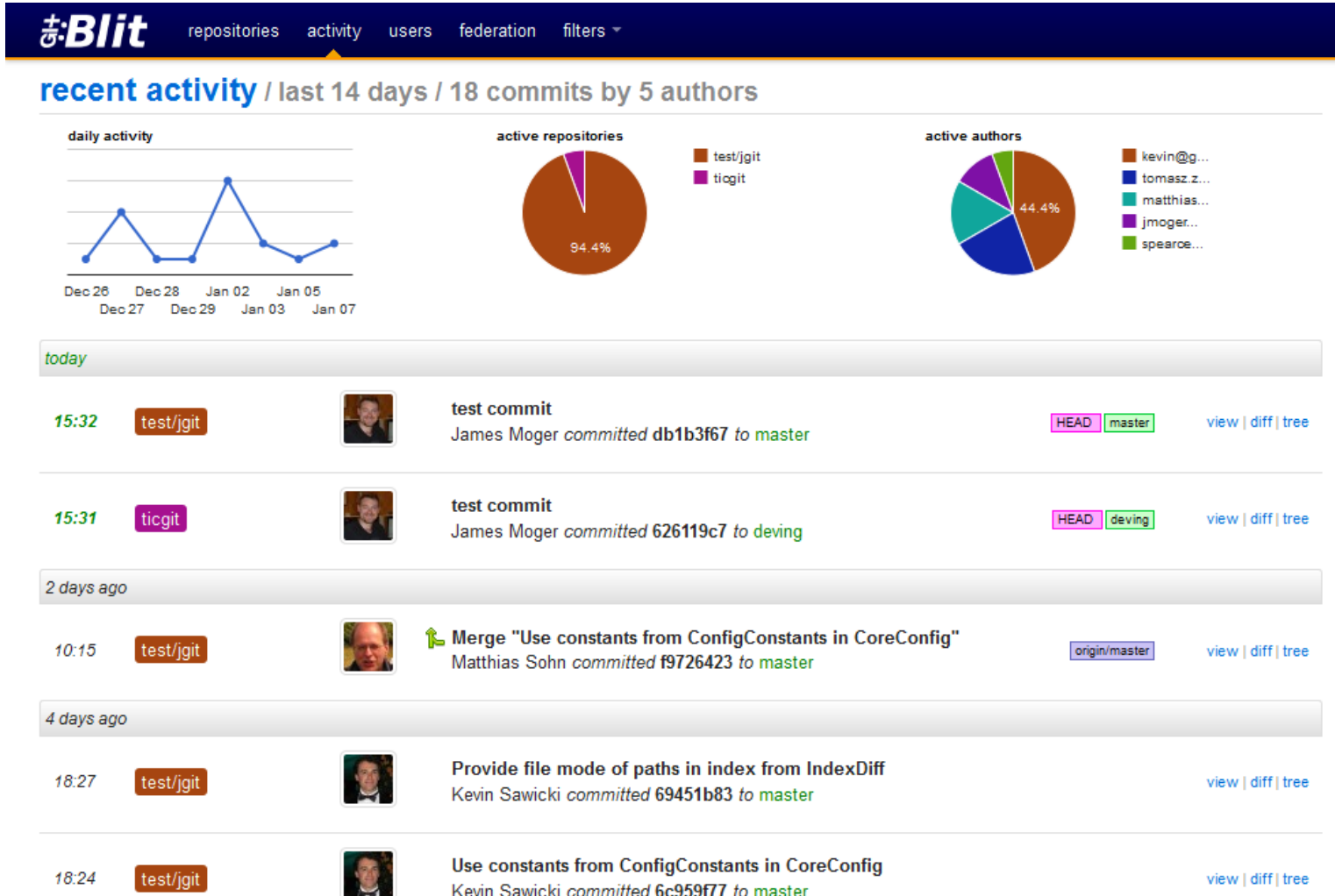
*@James: would you accept contribution to GitBlit to make this plug-in possible ?*



Of course. Sounds great!



+1, it would be awesome to have a built-in viewer option that respected all the Gerrit perms



1. Twitter Bootstrap CSS  
+
  2. Wicket Web-Framework  
+
  3. Google Charts  
+
  4. JQuery Front-end  
=
- COOL UX !**

# GitBlit + Gerrit challenge

GitBlit			Gerrit
UX	Bootstrap / JQuery	✓	GWT CSS
Front-end	Wicket	✗	GWT
Git Back-end	JGit	✓	JGit
DB	none	✓	H2/MySQL/Postgres
Injection	none	✗	Guice
License	Apache 2.0	✓	Apache 2.0

## Wicket and Rome Class loader

- Session-based fully featured Web-App

- Classes are loaded using the current thread class loader:

wicket/src/main/java/org/apache/wicket/application/**DefaultClassResolver.java**

wicket/src/main/java/org/apache/wicket/protocol/http/**ContextParamWebApplicationFactory.java**

wicket/src/main/java/org/apache/wicket/util/resource/locator/**ResourceStreamLocator.java**

wicket/src/main/java/org/apache/wicket/protocol/http/portlet/**WicketPortlet.java**

```
ClassLoader loader = Thread.currentThread().getContextClassLoader();
if (loader == null)
{
    loader = DefaultClassResolver.class.getClassLoader();
}
```



## Gerrit plug-in loader

- Sessionless Servlet container
- Plug-in = unique shaded jar
- URLClassLoader (child of Gerrit ClassLoader)

## GitBlit configuration

- Configuration based (reference.properties)
- Classes instantiated directly

wicket/src/com/gitblit/GitBlit.java

```
String realm = settings.getString(Keys.realm.userService, "users.properties");
IUserService loginService = null;
try {
    // check to see if this "file" is a login service class
    Class<?> realmClass = Class.forName(realm);
    loginService = (IUserService) realmClass.newInstance();
} catch (Throwable t) {
    loginService = new GitblitUserService();
}
```



## Gerrit plug-in module

- Plug-in loaded and configured through Guice Module
- Class instantiated through child Guice Injectors

## ▪ **Wicket and Rome**

### ➤ Option-1: patch-set

[github.com/lucamilanesio/wicket/commit/4a3f2c1dccf064008f223bb554c90e12c1c3b55d](https://github.com/lucamilanesio/wicket/commit/4a3f2c1dccf064008f223bb554c90e12c1c3b55d)

[github.com/lucamilanesio/rome/commit/f13a20ae1e1f5df6a5bf4b83e8fb8fae6dda7a13](https://github.com/lucamilanesio/rome/commit/f13a20ae1e1f5df6a5bf4b83e8fb8fae6dda7a13)

### ➤ Options-2: drop wicket and rome wars into

`$GERRIT_SITE/libs`

## ▪ **GitBlit**

### ➤ Patch provided and merged to GitBlit master

[github.com/gitblit/gitblit/commit/85f639aa3eee0b4e02eba20e6a5197b684941544](https://github.com/gitblit/gitblit/commit/85f639aa3eee0b4e02eba20e6a5197b684941544)

## ▪ **Gerrit**

### ➤ Jetty session manager introduced in Gerrit 2.5

[gerrit-review.googlesource.com/#/c/37790/](https://gerrit-review.googlesource.com/#/c/37790/)

# GitBlit plugin: clone + build + deploy

```
$ git clone https://gerrit-review.googlesource.com/plugins/gitblit
Cloning into 'gitblit'...
remote: Counting objects: 37, done
remote: Total 37 (delta 5), reused 37 (delta 5)
Unpacking objects: 100% (37/37), done.

$ cd gitblit && mvn package && \
cp target/gitblit*.jar $GERRIT_SITE/plugins/gitblit.jar
[INFO] -----
[INFO] Building Gerrit - GitBlit Plugin 1.0-SNAPSHOT
[INFO] -----
[... Some Maven rubbish ...]
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
```

# GitBlit in action 😊

localhost:8888/plugins/gitblit/

## Welcome to Gitblit

A quick and easy way to host or view your own [Git](#) repositories.

repository	last change
<b>main</b>	
All-Projects	6 days ago
Confidential-Projects	6 days ago
Internal-Projects	6 days ago
Public-Projects	6 days ago
gerrit	10 days ago
gerritsummit	10 hours ago
<b>sample</b>	
internal-project-sandbox	6 days ago
public-project-sandbox	6 days ago

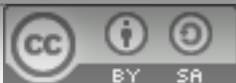
administrator: [logout](#) v1.2.0-SNAPSHOT

localhost:8888/#/admin/plugins/

## Plugins

Plugin Name	Version	Status
<a href="#">gitblit</a>	1.0-SNAPSHOT	installed

Press '?' to view keyboard shortcuts  
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# GitBlit as GitWeb replacement

## From Gerrit 2.6, GitBlit provides an automatic Gerrit init-step

```
$ $ java -jar gerrit.war init -d $GERRIT_SITE
[...normal Gerrit init process ...]
*** GitBlit Integration
***
Do you want to use GitBlit as your GitWeb viewer ? [Y/n]? y
Link name          [GitBlit]:

$ cat $GERRIT_SITE/etc/gerrit.config
[...normal Gerrit config ...]
[gitweb]
    type = custom
    url = plugins/
    project = gitblit/summary/${project}
    revision = gitblit/commit/${project}/${commit}
    branch = gitblit/log/${project}/${branch}
    filehistory = gitblit/history/${project}/${branch}/${file}
    linkname = GitBlit
```

# GitBlit as repo browser in Gerrit

Project gerrit | localhost Cod x

localhost:8888/#/admin/projects/gerrit,branches

GerritForge™ All My Projects Groups Plugins  
Changes Drafts Watched Changes Starred Ch

### Project gerrit

General  
Branches  
Access  
Graph

Branch Name	Revision	
HEAD	master	(GitBlit)
master	d19be975e29d2b870913567d4c2bb7b8e155784a	(GitBlit)
<input type="checkbox"/> stable	dc225268721fec39010c9faeeb5980805b5e9bb7	(GitBlit)
<input type="checkbox"/> stable-2.3	eb9554f785565553daf63a8b58d612db4789f187	(GitBlit)
<input type="checkbox"/> stable-2.4	d2cacd17384526d2cb5b509ca03681144292f186	(GitBlit)
<input type="checkbox"/> stable-2.5	b465b6d753559781bcc44adf1077b09d820d09a5	(GitBlit)

Delete

Branch Name:

Initial Revision:

Create Branch

Press '?' to view keyboard shortcuts  
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localhost - gerrit

localhost:8888/plugins/gitblit/log/gerrit/refs%2Fheads%2Fs...

## GitBlit

main / gerrit

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refs/heads/stable-2.5

- 10 days ago Update versions of included core plugins for Gerrit 2.5 stable-2.5 v2.5  
r...
- 10 days ago Finalize release notes for Gerrit 2.5
- 10 days ago Revert "Perform change update on multiple threads"
- 2012-10-30 Documentation: Add prolog submit-rule example Submit by Author
- 2012-10-30 Merge "Documentation: Add prolog submit-rule example 'Master and Apprentice'...."
- 2012-10-30 Documentation: Add prolog submit-rule example 'Master and Apprentice'.
- 2012-10-25 NPE when strategy is cherry-pick and changeMerge.test enabled
- 2012-10-25 Fix owner column to link to same status
- 2012-10-25 Merge "Sort groups on the group list screen" into stable-2.5
- 2012-10-25 Sort groups on the group list screen
- 2012-10-25 Merge "Do not log RepositoryNotFoundException if non-existing project is acce..."
- 2012-10-25 Documentation: Add link to test-submit-rule from the prolog cookbook.

- **GitBlit Groovy scripts**

- Gerrit stream events available as "plug-in hooks"
- GitBlit Groovy scripts executed within Gerrit

- **GitBlit simple access control**

- Control Gerrit security through GitBlit
- Provide Gerrit visibility of GitBlit groups via plug-in

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