Get started as a Yardstick developer

Introduction

Yardstick is a project dealing with performance testing. Yardstick produces its own test cases but can also be considered as a framework to support feature project testing.

Yardstick developed a test API that can be used by any OPNFV project. Therefore there are many ways to contribute to Yardstick.

You can:

- Develop new test cases
- Review codes
- Develop Yardstick API / framework
- Develop Yardstick grafana dashboards and Yardstick reporting page
- Write Yardstick documentation

This page describes how, as a developer, you may interact with the Yardstick project.

Where can I find some help to start?

This guide is made for you. You can also have a look at the project wiki page [3]. There are references on documentation, video tutorials, tips...

You can also directly contact us by mail with [Yardstick] prefix in the title at opnfv-tech-discuss@lists.opnfv.org or on the IRC chan #opnfv-yardstick.

How TOs

How Yardstick works?

The installation and configuration of the Yardstick is described in [1].

You can find notes on installing Yardstick with VM here [2].

How can I contribute to Yardstick?

If you are already a contributor of any OPNFV project, you can contribute to Yardstick.

If you are totally new to OPNFV, you must first create your Linux Foundation account, then contact us in order to declare you in the repository database.

We distinguish 2 levels of contributors:

- the standard contributor can push patch and vote +1/0/-1 on any Yardstick patch
- The commitor can vote -2/-1/0/+1/+2 and merge

Yardstick commitors are promoted by the Yardstick contributors.

Gerrit & JIRA

OPNFV uses **Gerrit** for web based code review and repository management for the Git Version Control System. You can access OPNFV Gerrit from this link.

Please note that you need to have Linux Foundation ID in order to use OPNFV Gerrit. You can get one from this link.

OPNFV uses **JIRA** for issue management. An important principle of change management is to have two-way trace-ability between issue management (i.e. JIRA) and the code repository (via Gerrit).

In this way, individual commits can be traced to JIRA issues and we also know which commits were used to resolve a JIRA issue.

If you want to contribute to Yardstick, you can pick a issue from Yardstick's JIRA dashboard or you can create you own issue and submit it to JIRA.

Submitting code to Gerrit

Installing and configuring Git and Git-Review is necessary in order to submit code to Gerrit. The **Getting to the code** page will provide you with some help for that.

Comitting the code with Git

Open a terminal window and set the project's directory to the working directory using the cd command. In this case "/home/opnfv/yardstick" is the path to the Yardstick project folder on my computer. Replace this with the path of your own project.

```
cd /home/opnfv/yardstick
```

Tell Git which files you would like to take into account for the next commit. This is called 'staging' the files, by placing them into the staging area, using the 'git add' command (or the synonym 'git stage' command).

```
git add yardstick/samples/sample.yaml
...
```

Alternatively, you can choose to stage all files that have been modified (that is the files you have worked on) since the last time you generated a commit, by using the -a argument.

```
git add -a
```

Git won't let you push (upload) any code to Gerrit if you haven't pulled the latest changes first. So the next step is to pull (download) the latest changes made to the project by other collaborators using the 'pull' command.

```
git pull
```

Now that you have the latest version of the project and you have staged the files you wish to push, it is time to actually commit your work to your local Git repository.

```
git commit --signoff -m "Title of change

Test of change that describes in high level what
was done. There is a lot of documentation in code
so you do not need to repeat it here.

JIRA: YARDSTICK-XXX"
```

The message that is required for the commit should follow a specific set of rules. This practice allows to standardize the description messages attached to the commits, and eventually navigate among the latter more easily.

This document happened to be very clear and useful to get started with that.

Verify your patch locally before submitting

Once you finish a patch, you can submit it to Gerrit for code review. A developer sends a new patch to Gerrit will trigger patch verify job on Jenkins CI.

The yardstick patch verify job includes python flake8 check, unit test and code coverage test. Before you submit your patch, it is recommended to run the patch verification in your local environment first.

run_tests.sh

This file is used to verify your patch. It is used in CI but also by the CLI.

You can run this "run_tests.sh" script to trigger patch verification locally.

Pushing the code to Gerrit for review

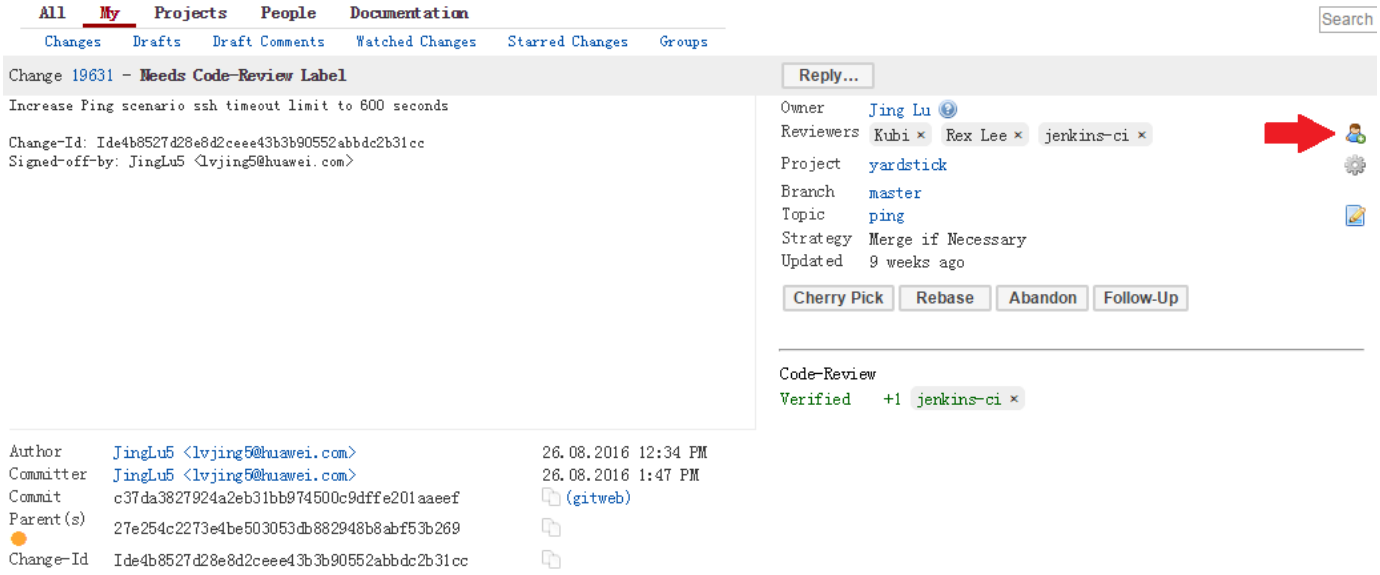
Now that the code has been comitted into your local Git repository the following step is to push it online to Gerrit for it to be reviewed. The command we will use is 'git review'.

```
git review
```

This will automatically push your local commit into Gerrit.

Code review

You can add Yardstick committers and contributors to review your codes.



You can find Yardstick people info here.

Modifying the code under review in Gerrit

At the same time the code is being reviewed in Gerrit, you may need to edit it to make some changes and then send it back for review. The following steps go through the procedure.

Once you have modified/edited your code files under your IDE, you will have to stage them. The 'status' command is very helpful at this point as it provides an overview of Git's current state.

```
git status
```

The output of the command provides us with the files that have been modified after the latest commit.

You can now stage the files that have been modified as part of the Gerrit code review edition/modification/improvement using git add command.

It is now time to commit the newly modified files, but the objective here is not to create a new commit, we simply want to inject the new changes into the previous commit. You can achieve that with the '--amend' option on the 'commit' command:

```
git commit --amend
```

If the commit was successful, the 'status' command should not return the updated files as about to be commited.

The final step consists in pushing the newly modified commit to Gerrit.

```
git review
```

References

[1]: http://artifacts.opnfv.org/yardstick/docs/userguide/index.html Yardstick user guide

[2]: https://wiki.opnfv.org/display/yardstick/Notes+on+installing+Yardstick+with+VM Notes on installing Yardstick with VM

[3]: https://wiki.opnfv.org/display/yardstick/Yardstick