Git-Gerrit

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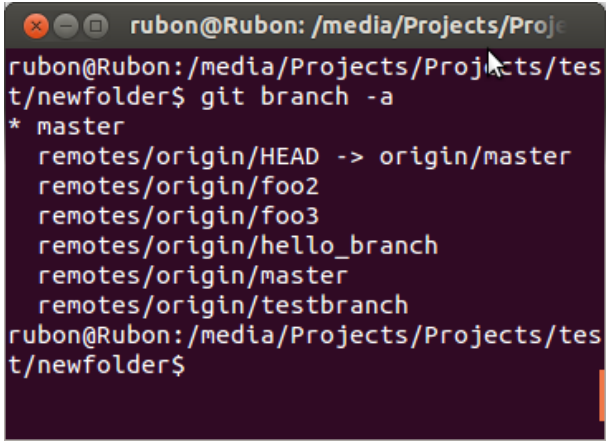
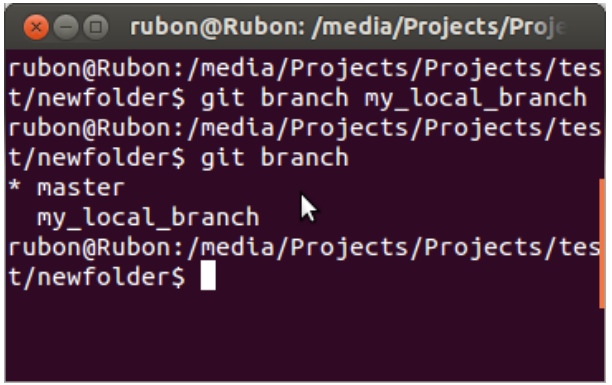
Git Branching - Create, Delete, Checkout (1/2)

- Check the existing branch list.
  - git branch // This will show all the local branches.
  - git branch –r // This will show all the remote branches.
  - git branch –a // This will show all the local and remote branches.
- Note the asterisk (*) on master branch. This means you are currently in master branch.
- Create a local branch
  - git branch <branch_name>
    - Example:
  - git branch my_local_branch
- Now you can check the branch list again.
- Please note that you are still on your previous branch.
- To switch to your new branch you need to checkout to that branch.
  - git checkout my_local_branch





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Git Branching - Create, Delete, Checkout (2/2)

- To create new branch and checkout to that branch in a single command
  `git checkout -b my_local_branch`
- Delete the created local branch
  `git branch -d my_local_branch`
- Note that you cannot delete the branch that you are currently in.
- You may not able to delete a branch if it has any changes that is not committed yet. If you still want to delete that branch, use the following command.
  `git branch -D my_local_branch`

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Git Ignore

- Specifies files that you don’t want Git to track under version control.
- Commonly used for compiled files, binaries, large asset files (e.g. images).
- Can use wildcards (e.g. *.dat, *.png, images/*, temp/*, etc.)
- Create .gitignore file and specify files and folders

```
$ touch .gitignore
```


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Git Re-Installation to compatible with Gerrit for Windows User

- In order to connect with remote repository - Gerrit, we have to re-install Git with specific version only Windows User. You need to download the compatible version of Git from the following link and install it again.

- https://github.com/git-for-windows/git/releases/download/v2.8.1.windows.1/Git-2.8.1-64-bit.exe

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Create SSH Key and Add SSH Key to review server

- Creating SSH key
  - Now from the GIT Bash command prompt or Windows default command prompt, type the following command.
    ssh-keygen -t rsa
  - It will say “Enter file in which to save...” , don't type anything, press Enter
  - It will again ask for Passphrase, don't type anything, press Enter
  - It will again ask for confirmation on Passphrase, don't type anything, press Enter
    - Note: You may input passphrase / password during key file generation. But this will ask you for passphrase every time you clone, pull or push.
  - After completing aforementioned steps public key will be saved in a file under .ssh folder, for example “C:\Users\Rubon\.ssh\id_rsa.pub” file
- Adding SSH Key to review server
  - Go to review server from your browser, https://review2.bjitgroup.com:8443/
  - Sign in by using your LDAP credentials
  - Click on 'Settings‘ icon,
  - Now from the left pane, click on “SSH Keys”,
  - Open 'id_rsa.pub' file in a text editor which you created earlier under the .ssh folder located at user
  - Copy the file content and paste on the New SSH Key text field on your browser.
  - Now press ‘ADD NEW SSH KEY' button, SSH key will be added.

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Git Clone from Remote Repository – Gerrit (1/2)

- Git Clone means download remote repository in your local drive.
- Clone command
  git clone ssh://<user.name>@review2.bjitgroup.com:29418/<project_name>
- Example:
  git clone ssh://sajidul.huq@review2.bjitgroup.com:29418/example
  git clone ssh://sajidul.huq@review2.bjitgroup.com:29418/p0962_newns
- The above command will download the repository on your current directory.
- If you want to download in a different directory, just mention the directory name or path in the command
  git clone ssh://<user.name>@review2.bjitgroup.com:29418/project_name <local_path>
- Example:
  git clone ssh://sajidul.huq@review2.bjitgroup.com:29418/test NewFolder
  git clone ssh://sajidul.huq@review2.bjitgroup.com:29418/test /home/rubon/workspace/NewNS/Source
- If you want to work in Remote branch after downloading the remote repository to your local repository, you need to checkout that branch.
  $ git checkout origin/remote-branch-name

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Git Clone from Remote Repository – Gerrit (2/2)

- Clone remote repository with commit-msg hook.
- This will automatically add the change-id in your commit message.
- Go to review server and select Browse->Repositories from top menu.
- This will show the project list that you have access. From this project list select your project.
- Now you will have the download/clone options as below picture.
- Out of the two command options, copy the command from Clone with commit-msg hook.
- FYI, we have one repository “example” with full access for all. You can do git training and experiment here.

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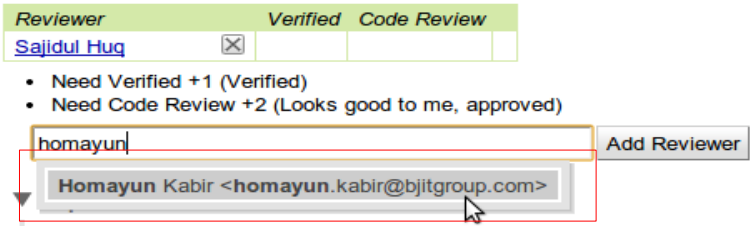
Git Push to Remote Repository - Gerrit

- Please understand that commit is stored in your local system. Your changes still in your PC only.
- Now you need to upload your changes for review to the review server.
  git push origin HEAD:refs/for/<remote_branch_name>
  git push origin HEAD:refs/for/master
  git push origin HEAD:refs/for/phase2
- After push, go to the review server, https://review2.bjitgroup.com:8443, check your changes there.
- If you think your commit is okay and the reviewer can review now, please add reviewer from the review server.
- Suppose Homayun Kabir is the TL/PM of your project and you want him to review your code. Then add him as reviewer if you feel that your commit is ready for review.



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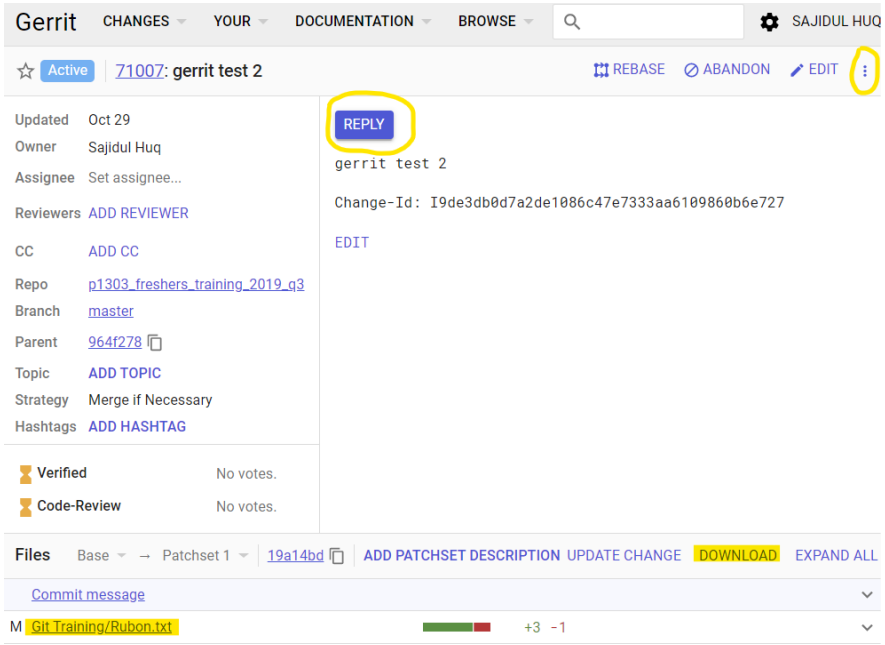
Gerrit Review

- For Gerrit Code review, go to the commit from home page
  - Reviewer can find in the incoming reviews section
  - Self reviewer can find in the outgoing reviewer section.
- Click on the file(s) for side by side diff view and review your code from there.



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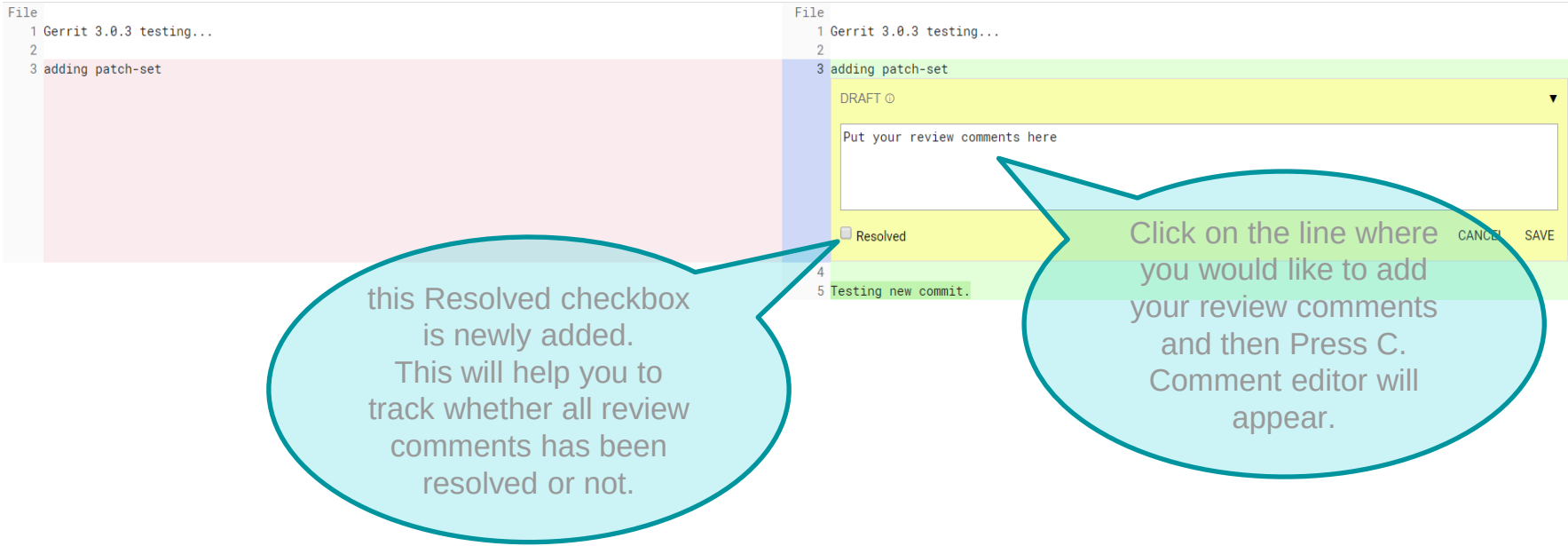
GERRIT REVIEW – ADD REVIEW COMMENTS



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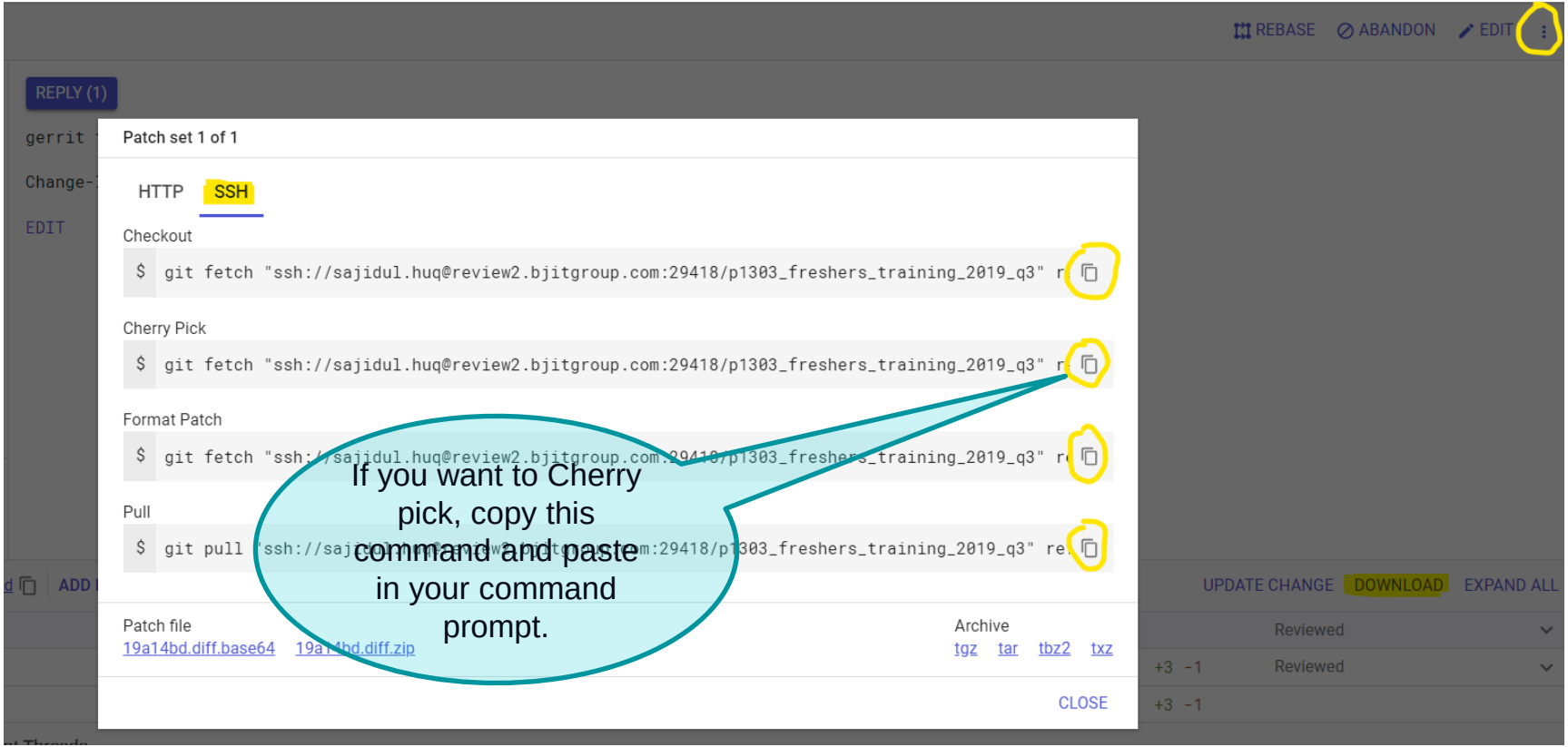
GERRIT REVIEW – DOWNLOAD



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GERRIT REVIEW – SUBMIT FOR MERGE (1/2)

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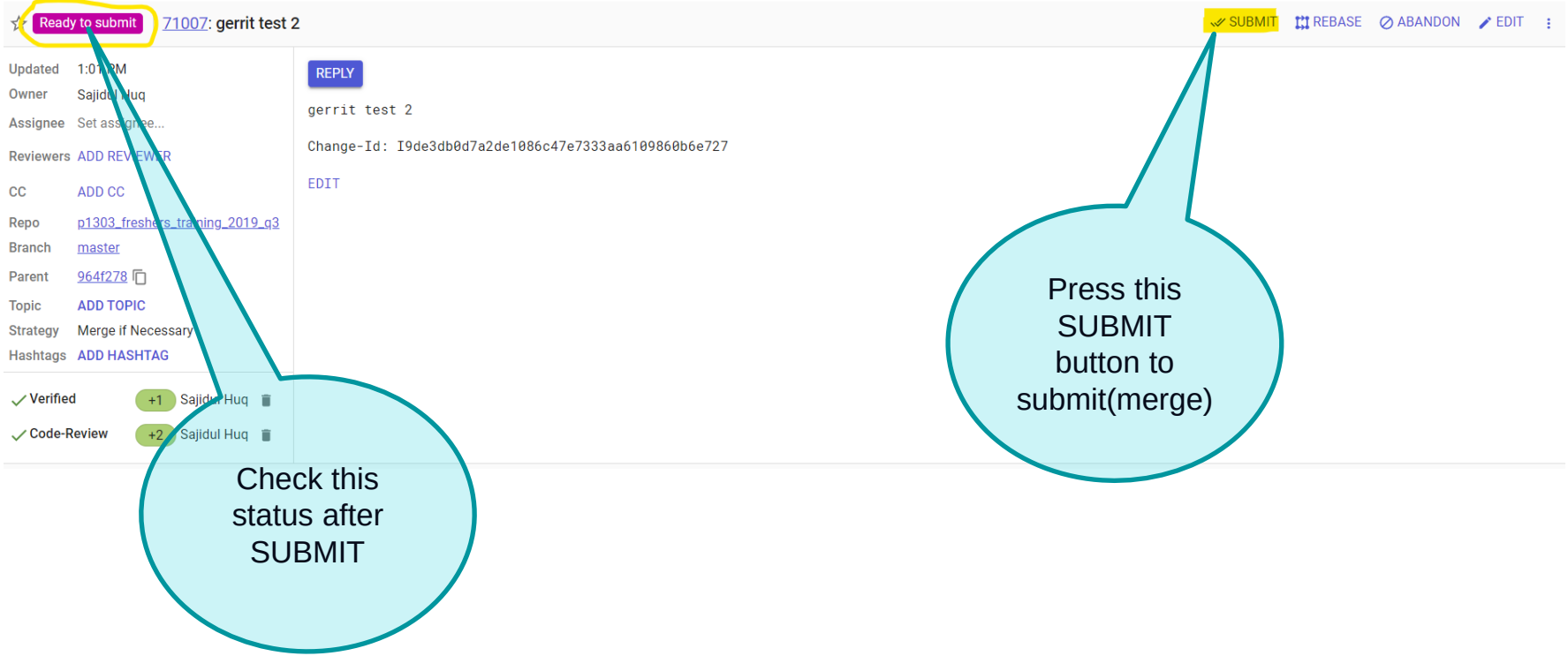
GERRIT REVIEW – SUBMIT FOR MERGE (2/2)



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Git Help

If you are having trouble remembering commands or options for commands, you can use Git help.

- To see all the available options for the specific command

```
$ git command -help
```

- To see all possible commands

```
$ git help --all
```


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Thank you for watching

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