How To Use Git At Scylla Efficiently

Goals of our work

Goals of our work

- Implement features

ScyllaDB

Goals of our work

- Implement features
- Make code reviews easier to perform

ScyllaDB

Goals of our work

- Implement features
- Make code reviews easier to perform
- Keep changes understandable in the future

ScyllaDB

Clone repository

```
# create a fork on GitHub first
$ git clone git@github.com:ewienik/zpp-git.git
$ cd zpp-git
$ git status
$ git log --oneline
```

ScyllaDB

Switch branch

```
$ git switch feature
$ git status
```

ScyllaDB

Create branch

```
$ git switch -c change-docs
$ git status
```

ScyllaDB

Create commits

```
# edit files
$ git status
$ git diff
$ git add .
$ git add -p
$ tig
$ git commit
# repeat as needed
```

ScyllaDB

Push changes

```
$ git log --oneline
$ git status
$ tig
# create a new branch
$ git push --set-upstream origin change-docs
# update existing branch
$ git push --force-with-lease
```

ScyllaDB

Rebase with master

```
# two developers working in parallel
$ git fetch origin
$ git fetch --all
$ git rebase origin/feature # not git merge
# resolve conflicts if any
```

ScyllaDB

Cleanup before review

ScyllaDB

Cleanup before review

- divide commits logically

ScyllaDB

Cleanup before review

- divide commits logically
- write good commit messages

ScyllaDB

Cleanup before review

- divide commits logically
- write good commit messages
- commits should be as a story

ScyllaDB

Rearrange, squash or fix commits

```
$ git log --oneline
$ tig
$ git rebase -i origin/feature --keep-base
# rearrange commits in editor
```

ScyllaDB

Split commits

```
$ git rebase -i origin/feature --keep-base
# break or edit at some commit to split
$ git log -1
$ git reset --soft HEAD~1
# split staged/not staged changes
$ git commit -m "part 1"
$ git add .
$ git commit -m "part 2"
```

ScyllaDB

Update commits

```
$ git rebase -i origin/feature --keep-base
# break or edit at some commit to update
$ git log -1
$ git status # nothing to commit, working tree clean
$ git commit --amend # update description
# add modification
$ git add .
$ git commit --amend # update description and content
$ git log -1
```

ScyllaDB

Rebase with stacked branches

```
$ git rebase -i origin/feature --keep-base --update-refs
# move refs to the correct commits
```

https://www.codetinkerer.com/2023/10/01/stacked-branches-with-vanilla-git.html

ScyllaDB

Rework after review

Tools

https://git-scm.com/

https://jonas.github.io/tig/

https://jj-vcs.github.io/

ScyllaDB