Using Crontab & Bash Scripts to do Automated Git Push Daily

Hillary Wando
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The Problem

So in this scenario, we don’t have a DevOps pipeline setup. However, we make constant changes to th code on the server such that the web app we are working on always has the latest. This is such that w can develop web apps quite quickly and have them deployed almost as soon as the development process starts. The problem we currently have is the lack of code backups since there is no use of Git and GitHub in our development process. Hence the need to setup Git on the server and make use of t Crontab service and a bash script to commit code and push it to GitHub at a given time every day. Thi such that we will always have version control and a backup of the server code on GitHub.

As a prerequisite before we begin, we need to have setup SSH push access to our repository on GitHu so that our bash script does not keep asking us for our username and password.

Solution Step 1

The first step is to come up with the bash script for handling the git commits and pushing to GitHub. T bash script is presented below.

The script gets the current date and uses it to create a commit message. It then changes the current directory to the folder where we have our code. In this case we are using a dummy folder so that will l the ‘gitBashScript’ folder. Inside this folder, the scripts runs the ‘git add’ and ‘git commit’ commands while appending the generated commit message to the ‘git commit’ command. The script then gets th output of the

```
git status -b --porcelain
```

command and checks it against a given string. This check is to make sure we don’t do a git push when there are no new commits in the working tree. If the working tree is clean the script simply prints the text ‘IT IS CLEAN’ to a text file, otherwise it goes ahead and commits our code to GitHub.

Solution Step 2

The next step is to make our script executable and then add it to the Linux crontab list so that it can b executed automatically. To make the script executable we can run the following command while in the script’s parent directory.

```
chmod +x script.sh
```

After this we can also use the following commands to copy the script into a directory that our system expects to contain executable scripts and code.

```
sudo cp git-push.sh /usr/bin/git-push.sh
sudo cp git-push.sh /usr/local/bin
```

Before we add our script to the crontab list we can run the following command to make sure the cron service is running on Linux.

```
sudo service cron status
```

This should give you the following output if the service is up and running.

```
 * cron is running
```

If the service is not running you can start it up using the following command

```
sudo service cron start
```

Finally, we can add our script to the crontab list using the following command.

```
crontab -e
```

This should open up the crontab list for you to edit. If the command gives you back a list of editors instead just select the first one on the list by entering 1 to edit the crontab list using the Nano editor. Once we have access to the crontab list we can enter the following line into it to add our script.

```
0 2 * * * bash ~/gitBashScript/script.sh
```

This should set it to run the script at 2 am every day. And with that we should now have everything setup to backup our server code on GitHub every day.

Conclusion

This concludes this small tutorial on how to setup automated daily git push to GitHub from the server. an additional step for tracking purposes, you can also add email notifications to your GitHub repositor such that an email is sent to your email address every time the script pushes to the repo.

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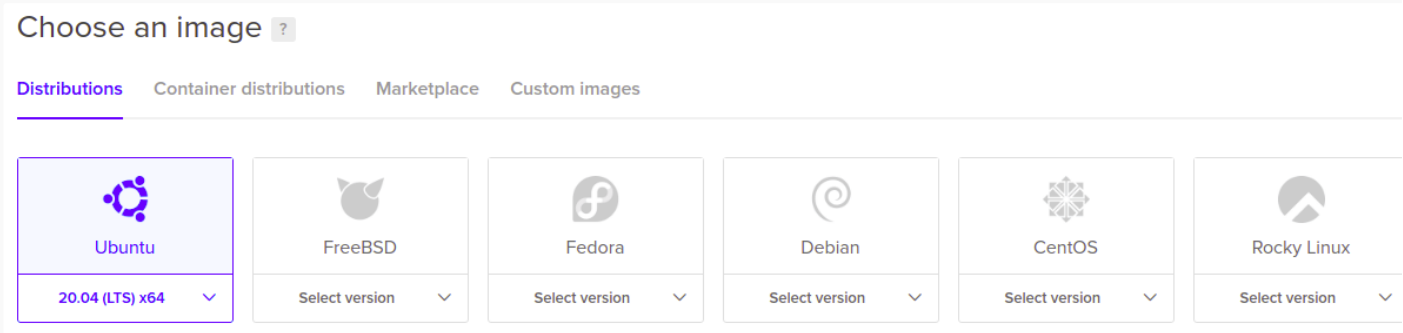

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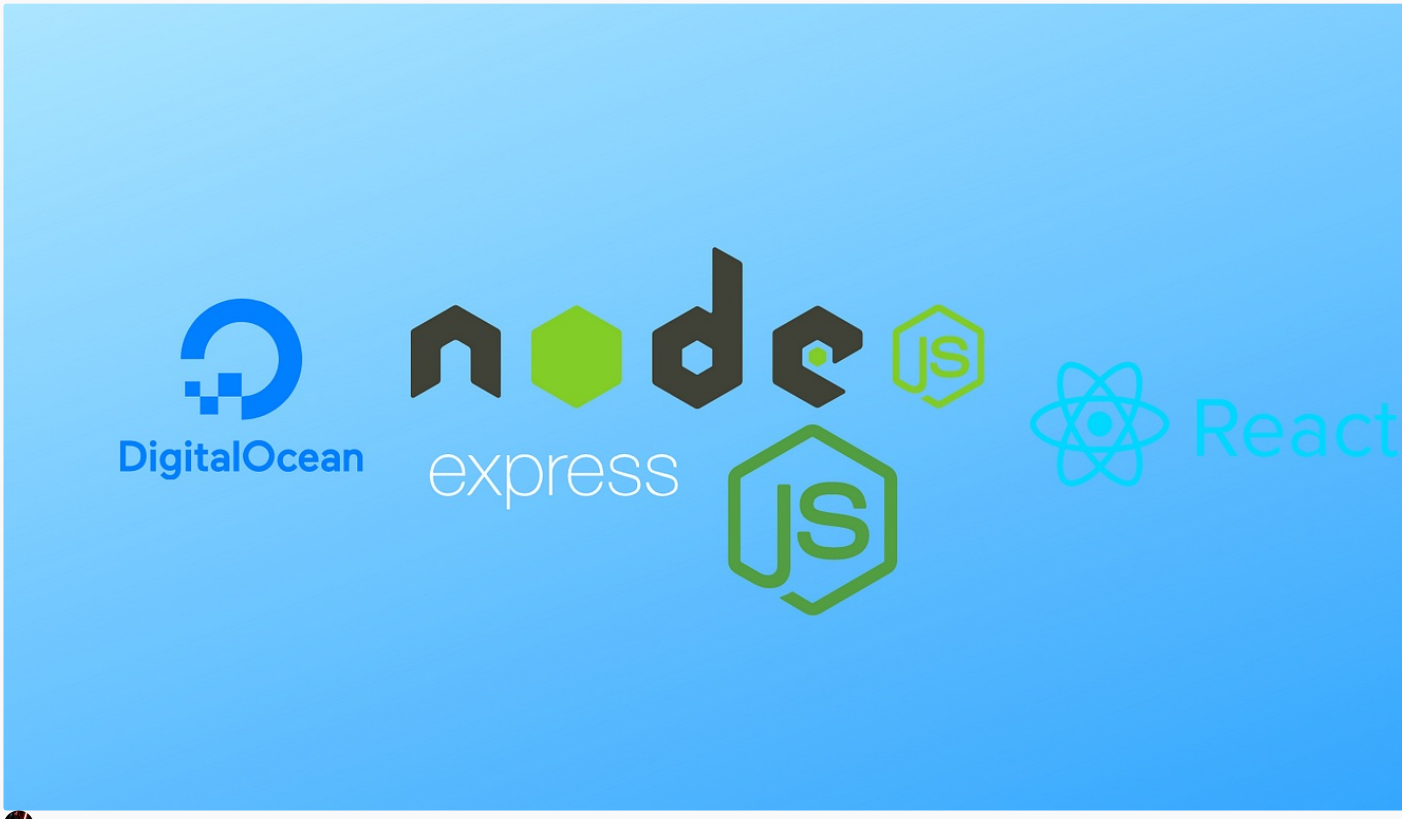

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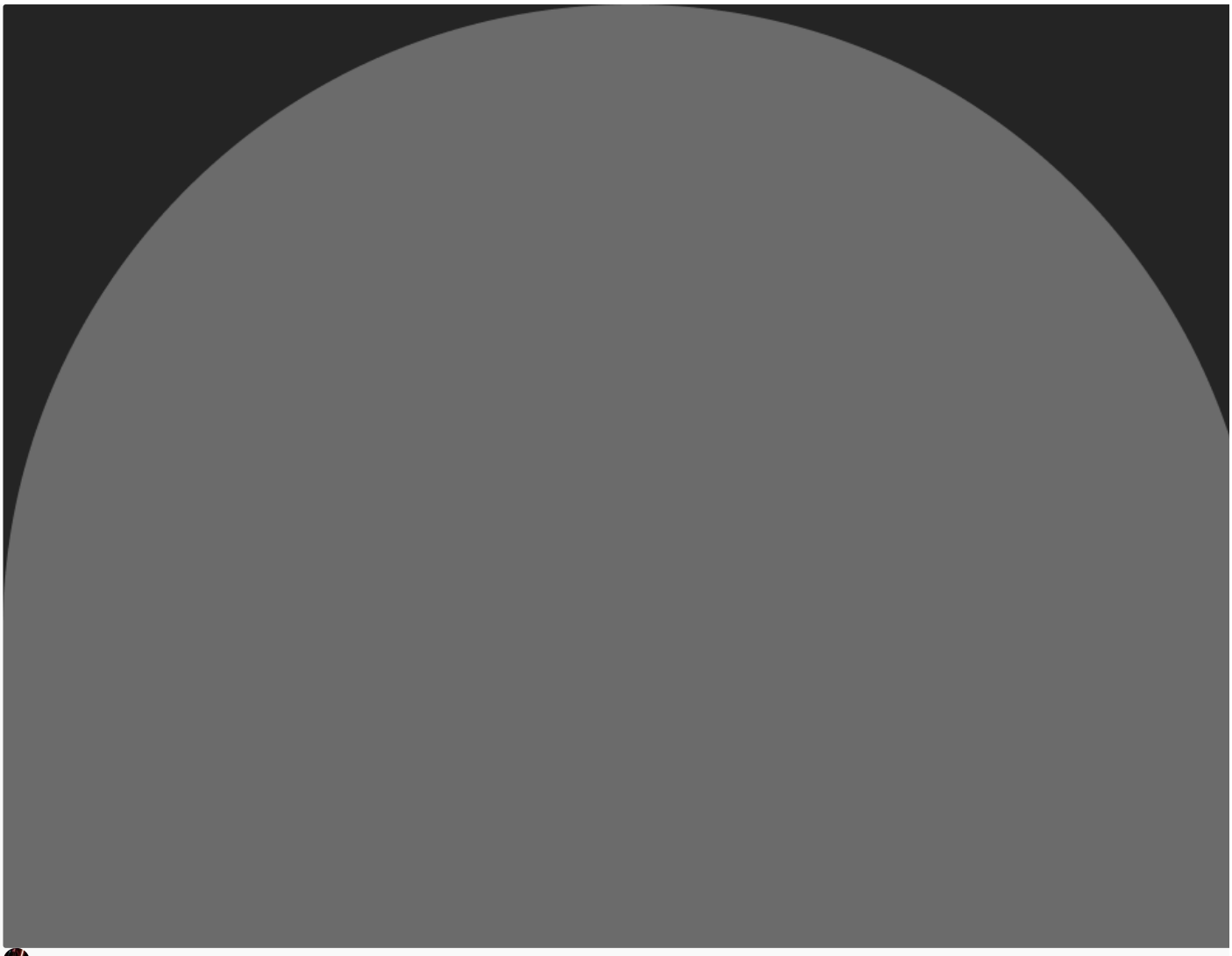

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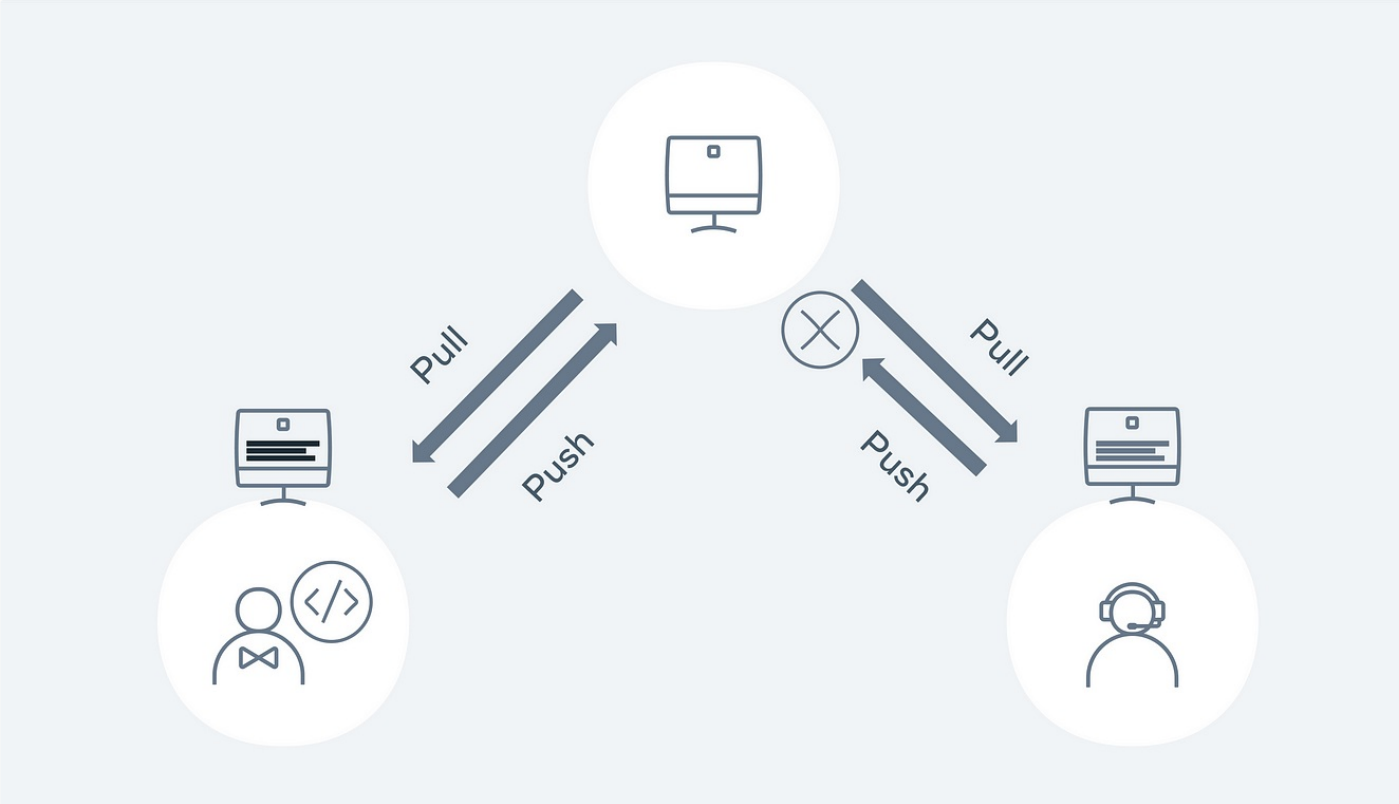

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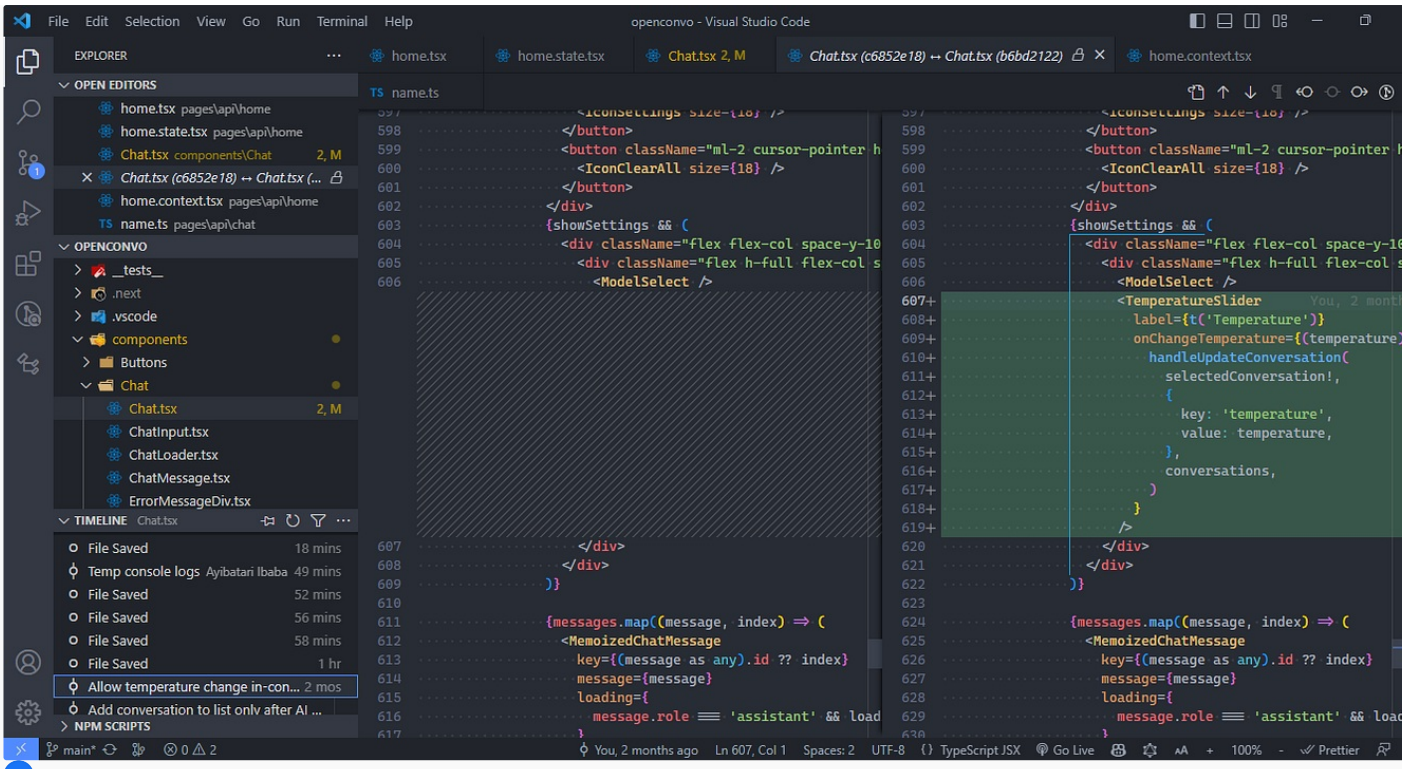

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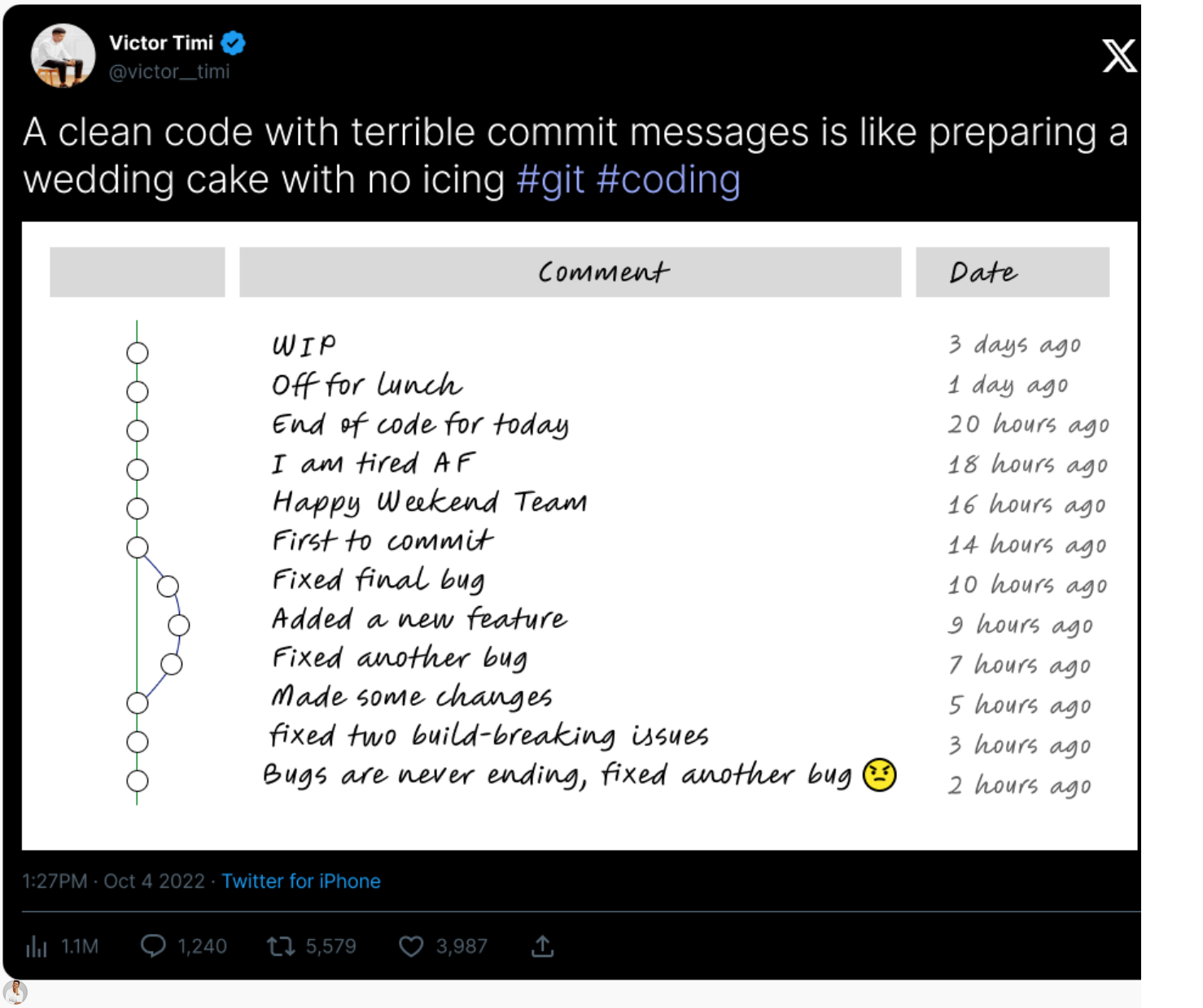

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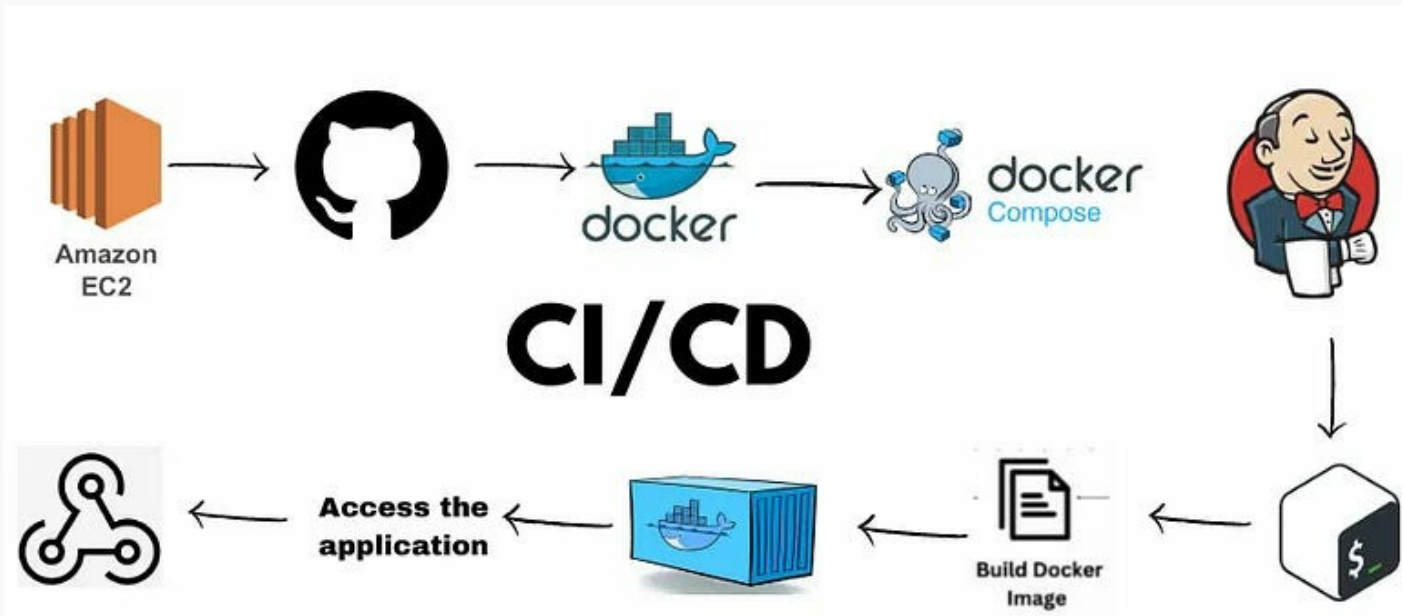

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```
→  gpush git:(demo) gpush
[?] What type of commit is this?: feat
   fix
 > feat
   docs
   ci

[?] Does the commit include breaking changes?: Yes
 > Yes
   No

[?] What's your commit message: Example commit message
```

tjtharrison

Git conventional commits

Here’s a description of conventional commits by Google’s Bard, in the style of a Slipknot song:

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