**CI/CD Pipeline**

Step 1 – Create an EC2 instance on aws console. API should be for **UBUNTU and download pem file for private key**

Step 2 – Create a repository on github and push your project on it. Ex

Git init

Git add.

Git commit –m “My Commit”

git remote add origin ORIGIN NAME

git Branch -M main

git push –u origin main

**I.ve created this on my Hotmail id on github**

**STEP 3 – Click on Actions on github console and select NodeJS under Continuous Section. This will take you to node.js.yml file.**

**Step 4 – Under the file we have to configure following settings.**

**EX – 1 Delete trigger (pull action) from (on event)**

**2 runs-on: self-hosted**

**3 node-version: [18.x]**

**4 delete runs npm test if there is any test**

**5 Commit Changes**

**Step 5 – On AWS Console go to security groups**

**Select your security groups**

**Click on inbound rules**

**Click on edit inbound rules buttons**

**Add rules for http and IPv4 setting for 80 port**

Step 6- Convert pem file to ppk file using puttygen.

Step 7 now using putty connect to ec2 instance by following steps

In EC2 cilck on connect option and get username and IP

In putty pass the user and IP in sessions field

Under SSH select AUTH and input the converted ppk file and click open button. Accept from the prompt and you will be connected. This will open a linux console.

**Step 8 Go to github and follow the steps as**

**ACTIONS/RUNNERS/Create new Runners Choose LINUX option there**  and follow the steps given there. (**It will generate \_work folder where all the code lies)**

**Step 9 - Follow following commands to** - install nodejs and nginx

sudo apt update

curl -fsSL [https://deb.nodesource.com/setup\_lts.x](https://www.youtube.com/redirect?event=video_description&redir_token=QUFFLUhqbXE1bFhGSGd4VFFaSHhscFVLQkhmbGtIOWlJZ3xBQ3Jtc0tsTXJMWWg0NzM2bHhHa3VtLXpvUnV5eWtxZTd4M3FJYTc0dVU5RXQyQktIbUliWS1tQTJRM19zb2lkT00zOE1rczhlaVphUlRnVmdPV191d0Q4N0gwNThwRGJDdWFQSGFkN2RHdUJNZHBSbVN3WDZ3cw&q=https%3A%2F%2Fdeb.nodesource.com%2Fsetup_lts.x&v=3jXtTSnA8zw) | sudo -E bash –

sudo apt-get install nodejs

sudo apt-get install nginx

sudo ./svc.sh install

sudo ./svc.sh start OR

sudo systemctl start actions.runner.alksh001-mongoPracticeWithCICD.ip-172-31-34-52.service

OR

sudo systemctl enable actions.runner.alksh001-mongoPracticeWithCICD.ip-172-31-34-52.service

**This will put the self-hosted runner in active state**

install pm2 and run backend in background

npm i pm2 -g

Step 10. Navigate to \_work folder and then to your project folder

Step 11 pm2 start /path/to/backend/app.js --name "backend" **to start your server**

**Step 12 –** add this line to your YML file in githubto automatically restart your server on every commit changes

**run : pm2 restart ./backend/app.js**

**Step 13: Setup Enginex by following commands**

Navigate to enginxe folder by **cd /etc/engine**

**cd sites-available**

**sudo nano default** to open an editor on sites-available folder to do changes

Add the following code before **locations** available on the opened file

location /api/ {

proxy\_pass <http://localhost:8000/>;

proxy\_set\_header Host $host;

proxy\_set\_header X-Real-IP $remote\_addr;

proxy\_set\_header X-Forwarded-For $proxy\_add\_x\_forwarded\_for;

}

and CTRL + S to save and CTRL + X to exit

**sudo systemctl restart nginx** to restart nginex

Now change and commit anything on github it will directly show on public address