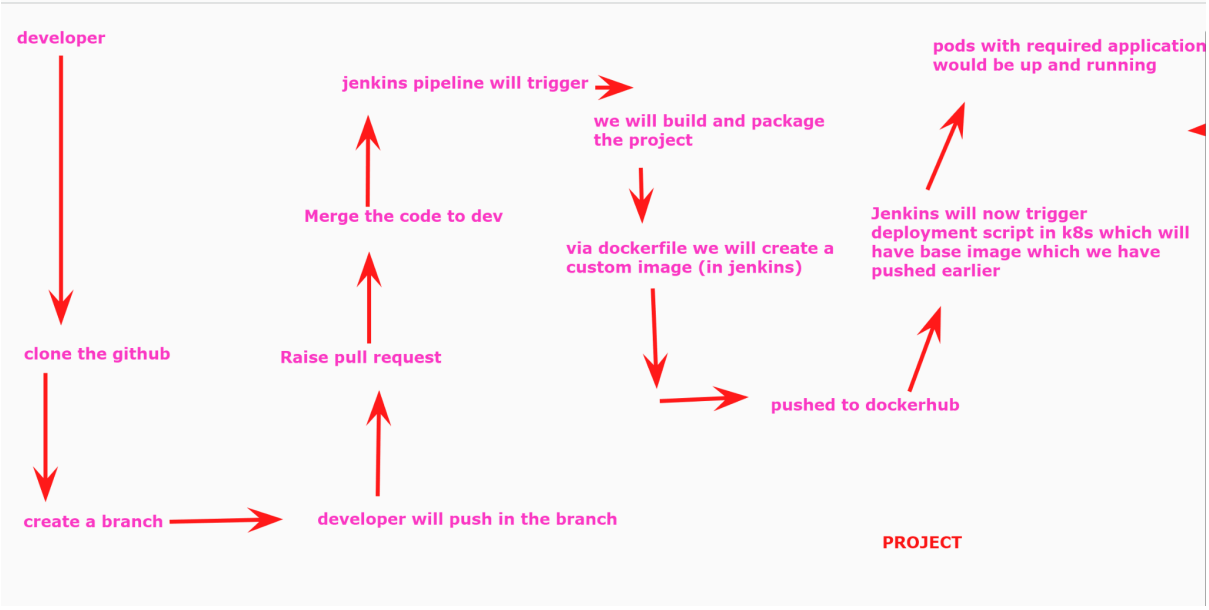
PROJECT

FLOW 👍



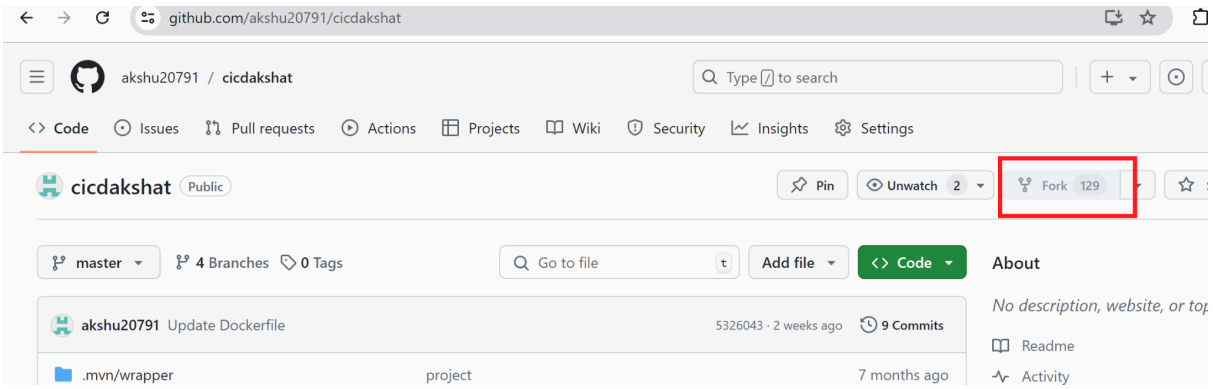
We will launch 3 aws ubuntu machines with all traffic enabled in the security group

1st machine : jenkins , docker , k8s (master machine)
2nd and 3rd machines: k8s nodes
Use this document to install kubernetes
https://github.com/akshu20791/Deployment-script/blob/main/readme-k8s

We will install jenkins in the master machine as well:
wget https://raw.githubusercontent.com/akshu20791/Deployment-script/main/jenkins.sh
 ls
 chmod +x jenkins.sh
 ./jenkins.sh

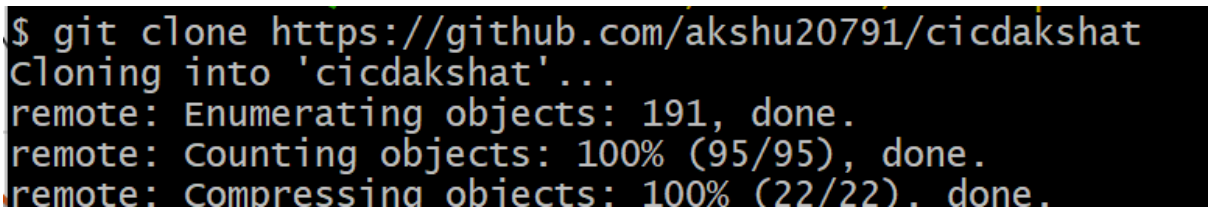
NOW WILL GO TO THE PROJECT REPO : https://github.com/akshu20791/cicdakshat/

Fork the project



After this you can use the repo by yourself and make the changes as well

Create a new folder
Open git bash
And clone the repo



cd cicdakshat

gir branch devops1

git checkout devops1

Create a file …..start tracking thee file …commit

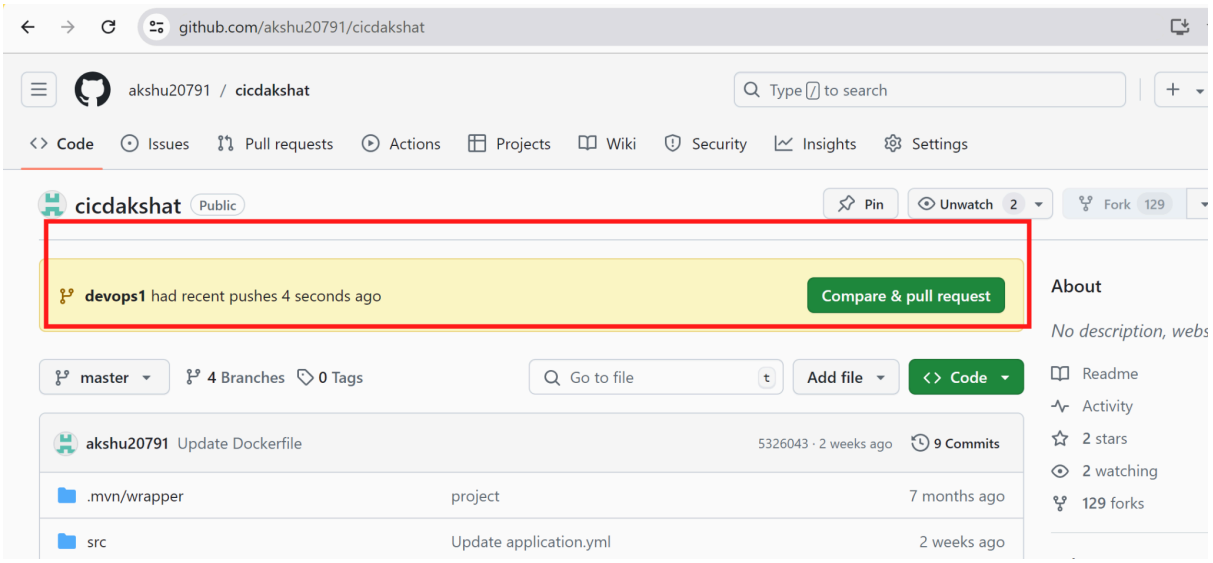
```
aksha@LAPTOP-SQEMF6TV MINGW64 ~/OneDrive/Desktop/c
$ git checkout devops1
Switched to branch 'devops1'

aksha@LAPTOP-SQEMF6TV MINGW64 ~/OneDrive/Desktop/c
$ touch file1

aksha@LAPTOP-SQEMF6TV MINGW64 ~/OneDrive/Desktop/c
$ git add .

aksha@LAPTOP-SQEMF6TV MINGW64 ~/OneDrive/Desktop/c
$ git commit -m"c1"
[devops1 1676ae0] c1
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file1
```

git push -u origin devops1

(in the pop up appeared put the Personal access token for the token keys)

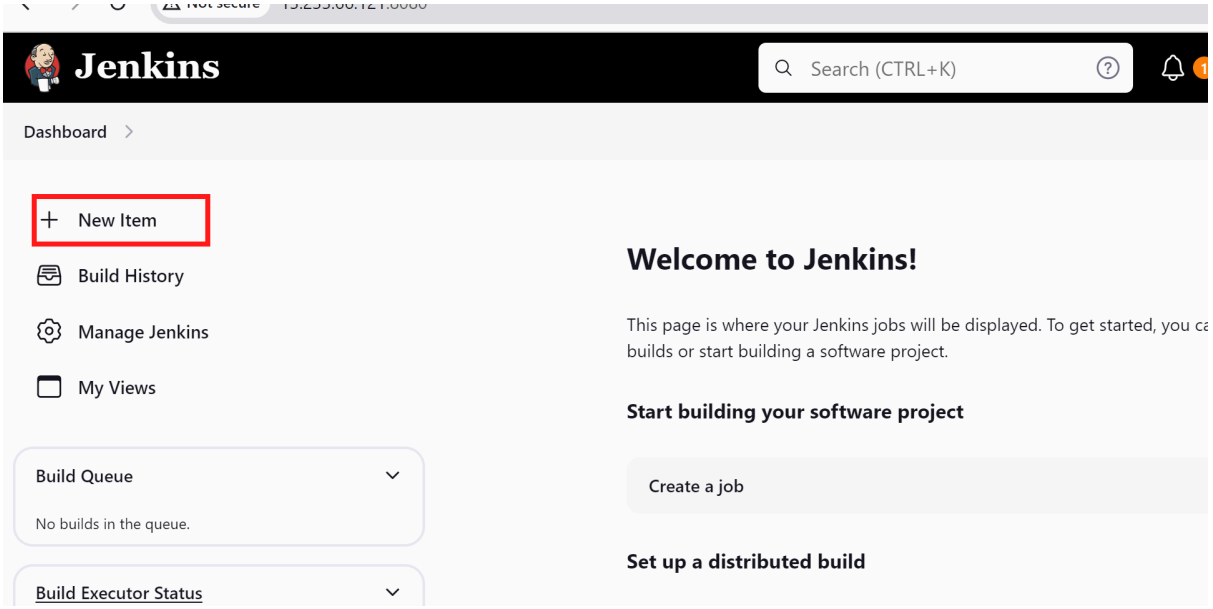
##########################

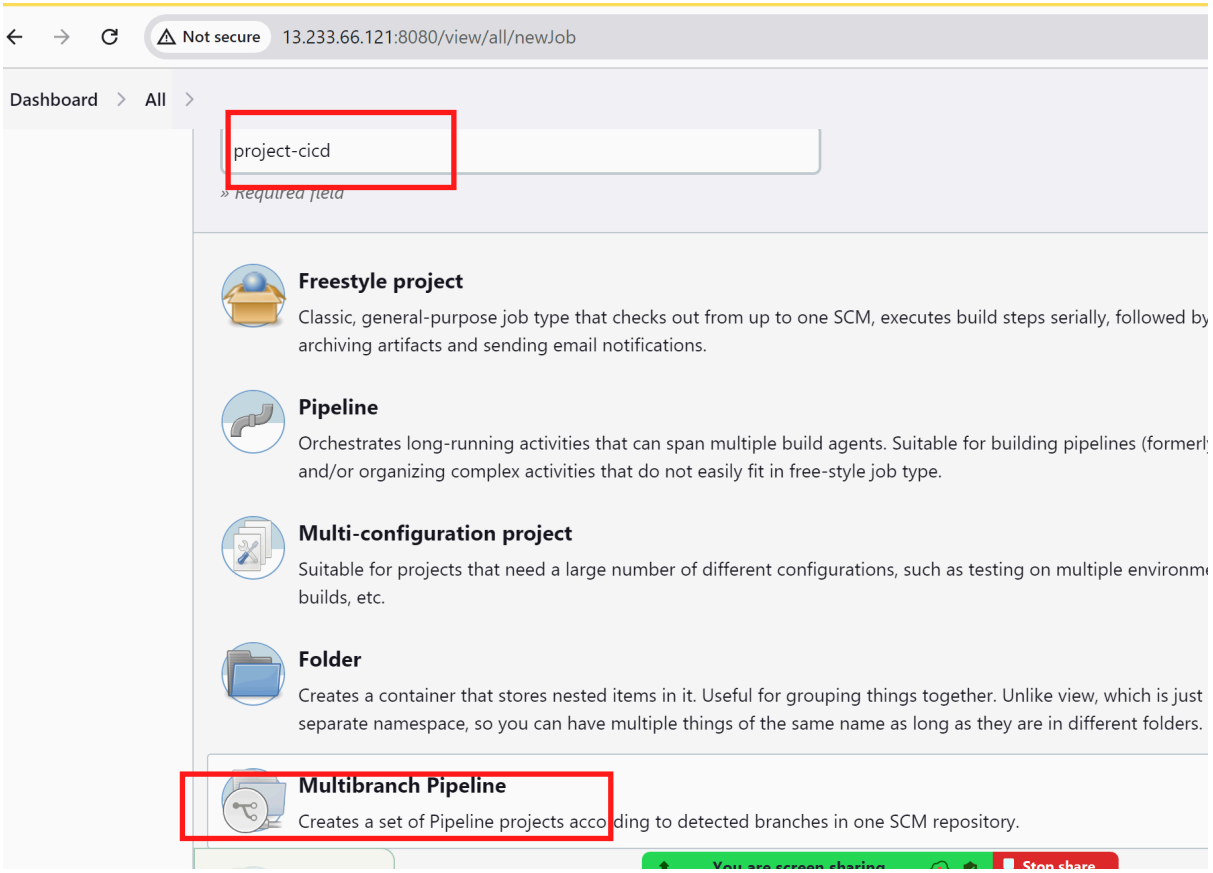
You will go to the github repo

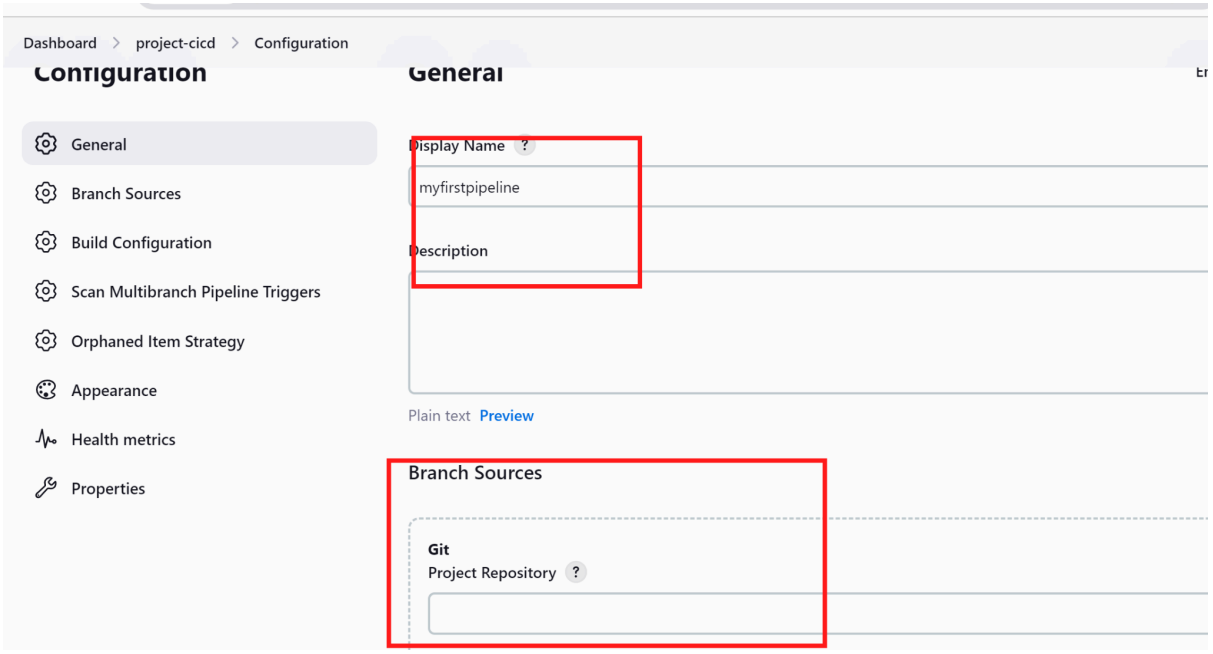


For now we will not raise the pull request…first lets create pipeline

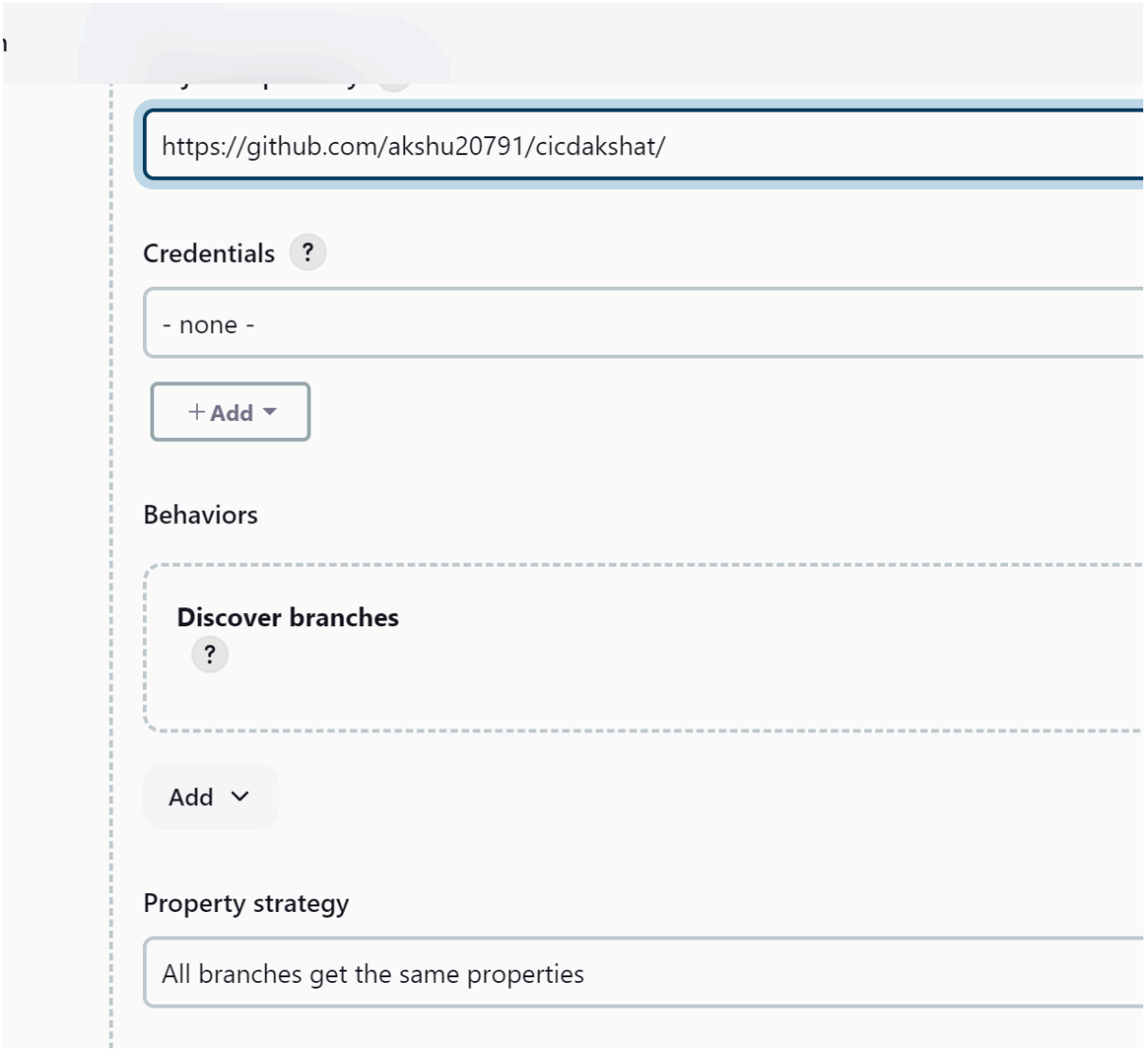
We will open jenkins which we installed in the master



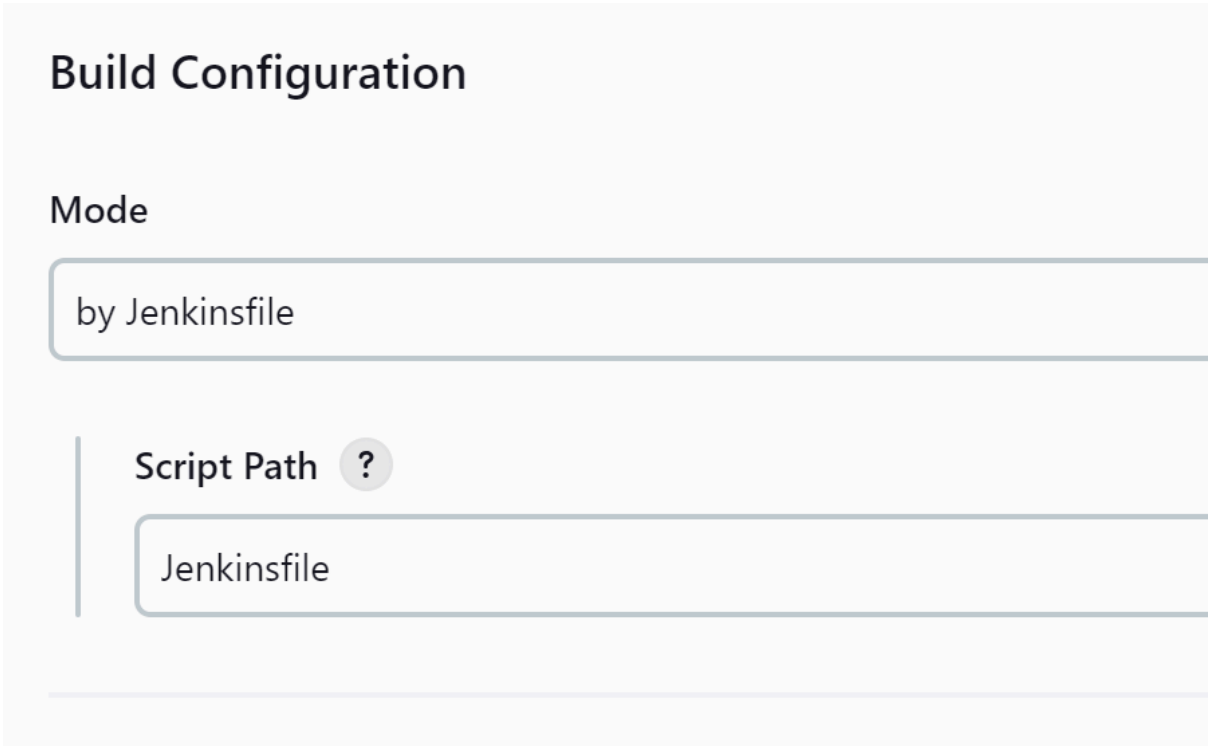


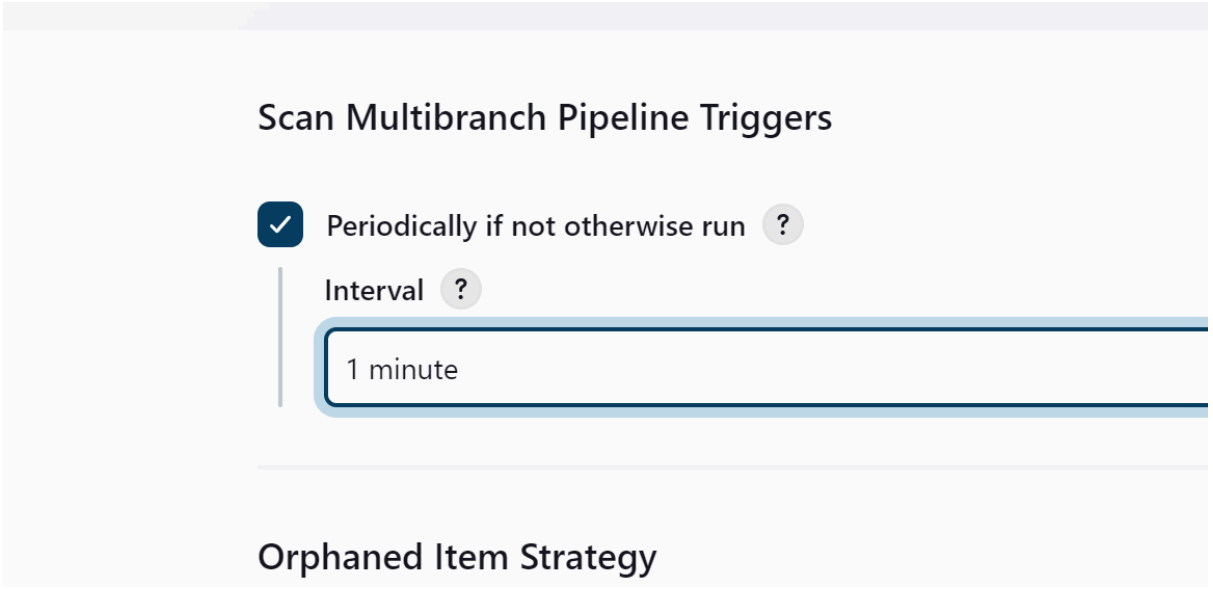


Use source as git

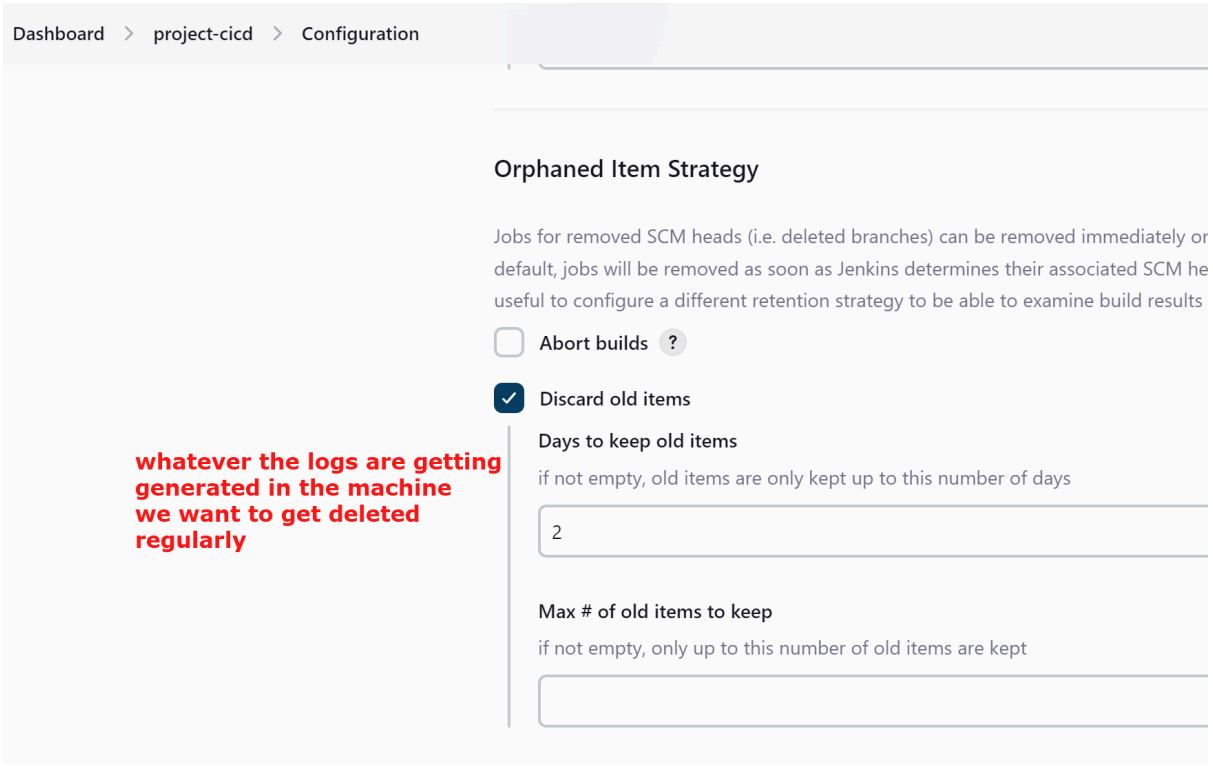


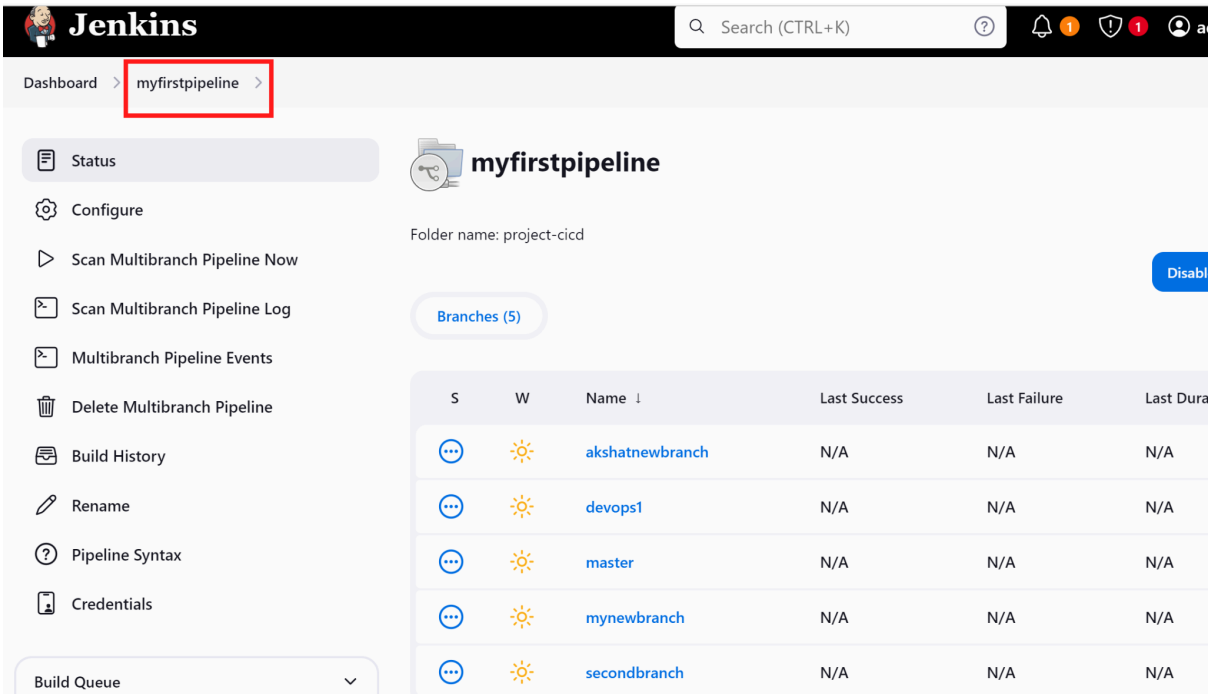
(you can put your forked branch)





It will periodically check for every 1 min and if there is any update on github then it will build the project

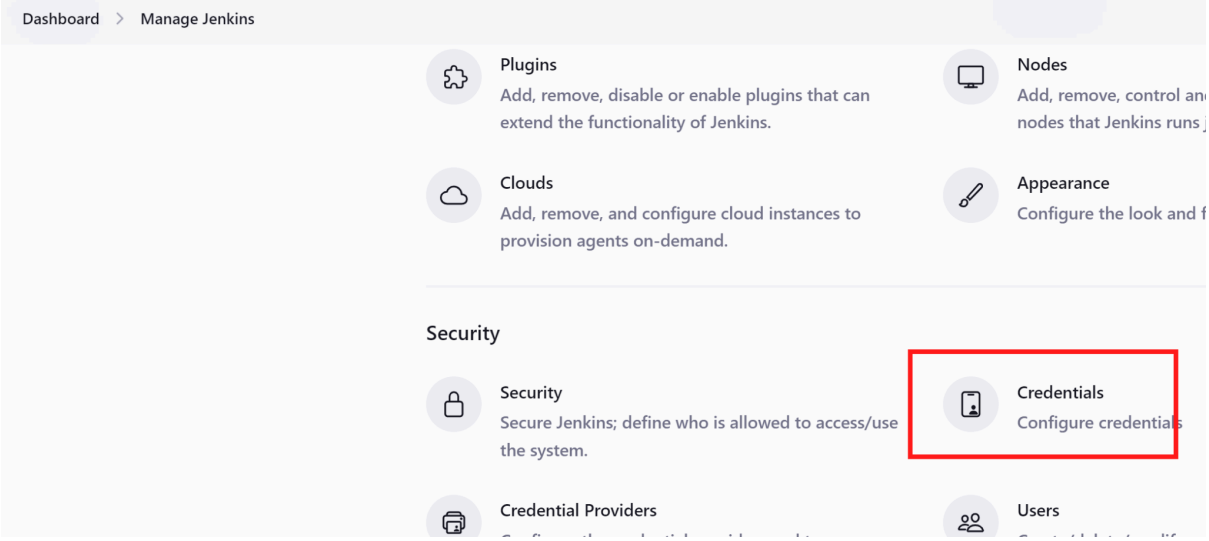


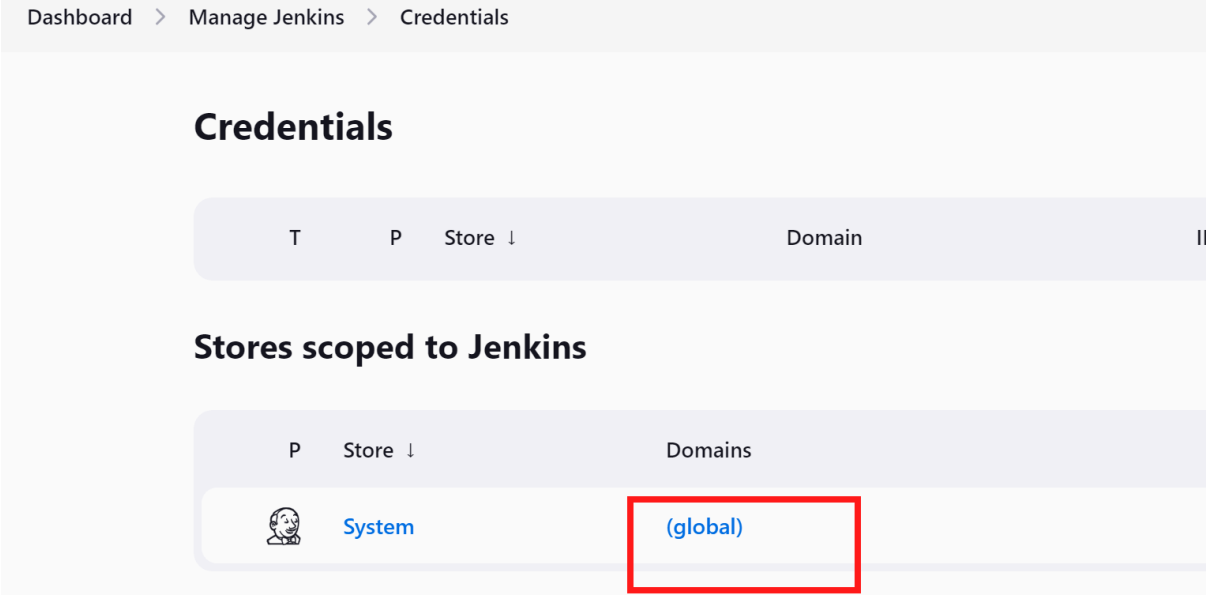


(if builds failed we are fine because we have not configured alot of things as of now)

Go to jenkins dashboard

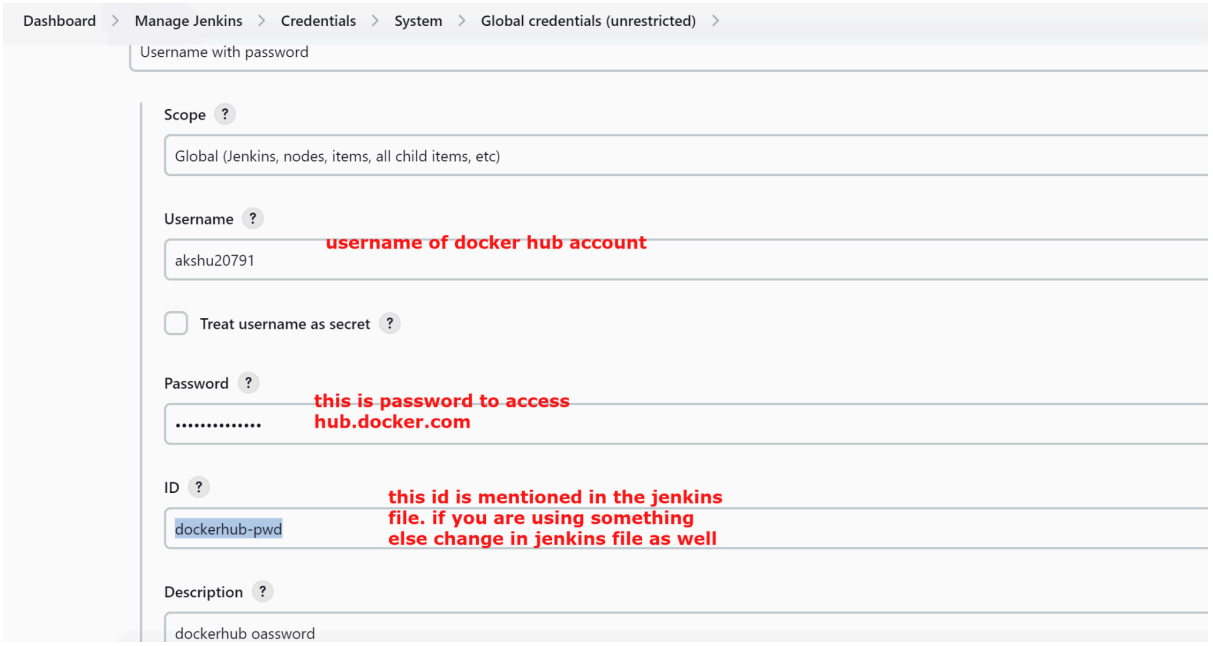
Go to manage jenkins





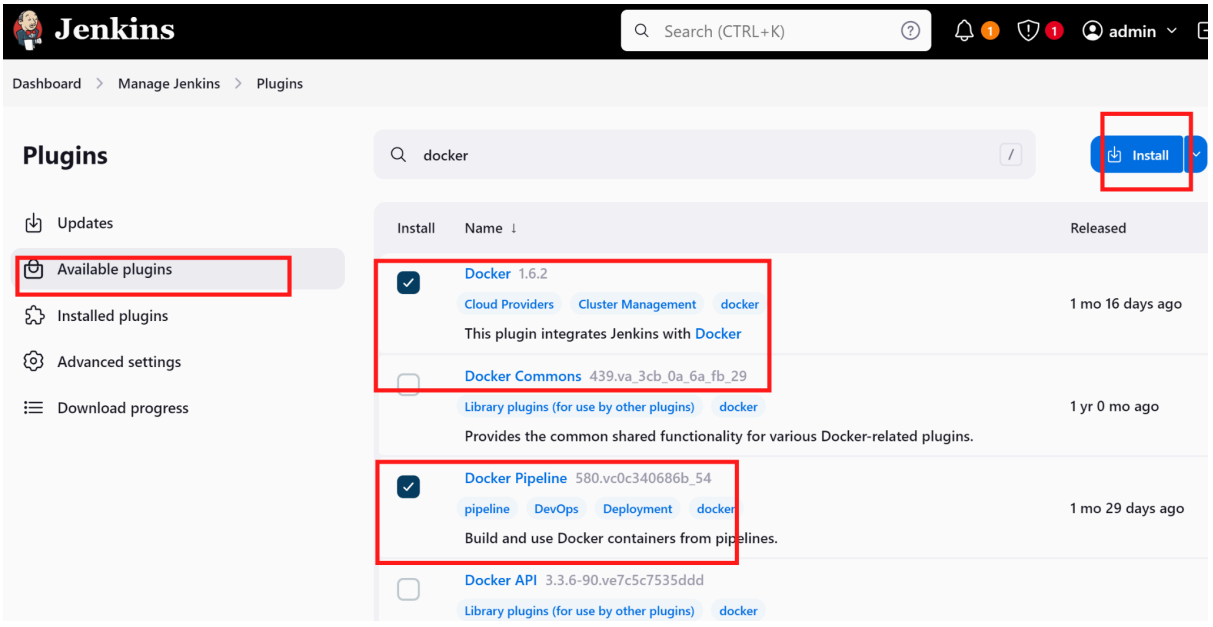
+ Add credential

Here i will be create dockerhub credentials so that my code can be pushed to dockerhub



We will now install some plugins

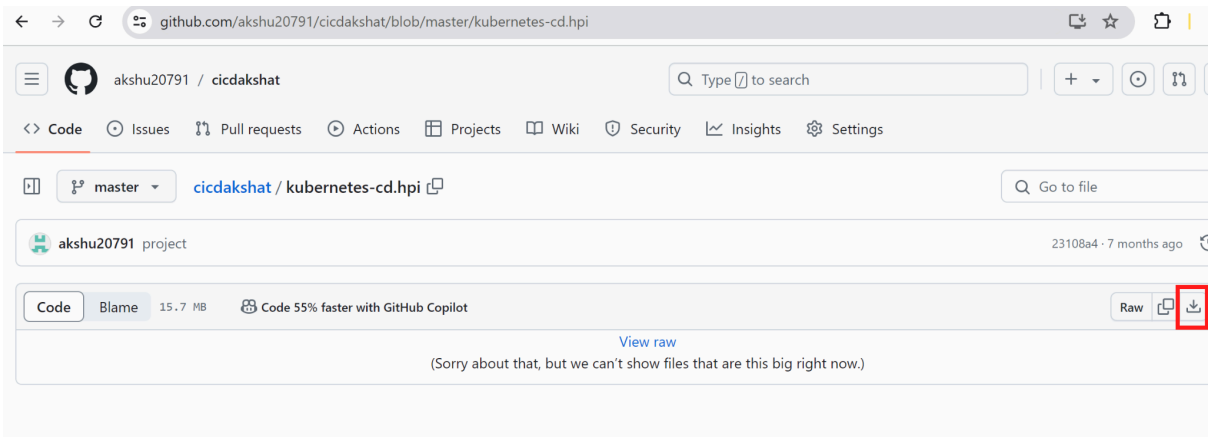
Go to manage jenkins
We will install docker plugins

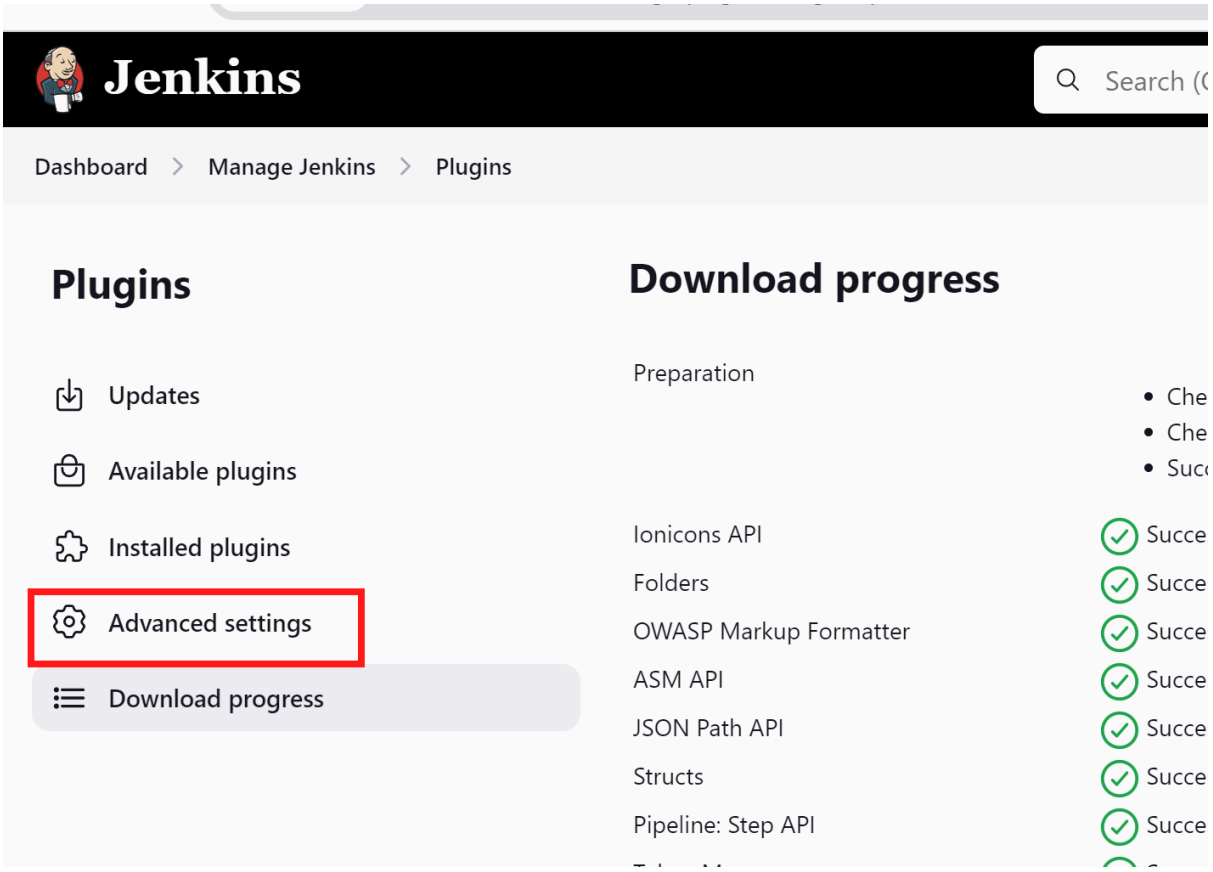


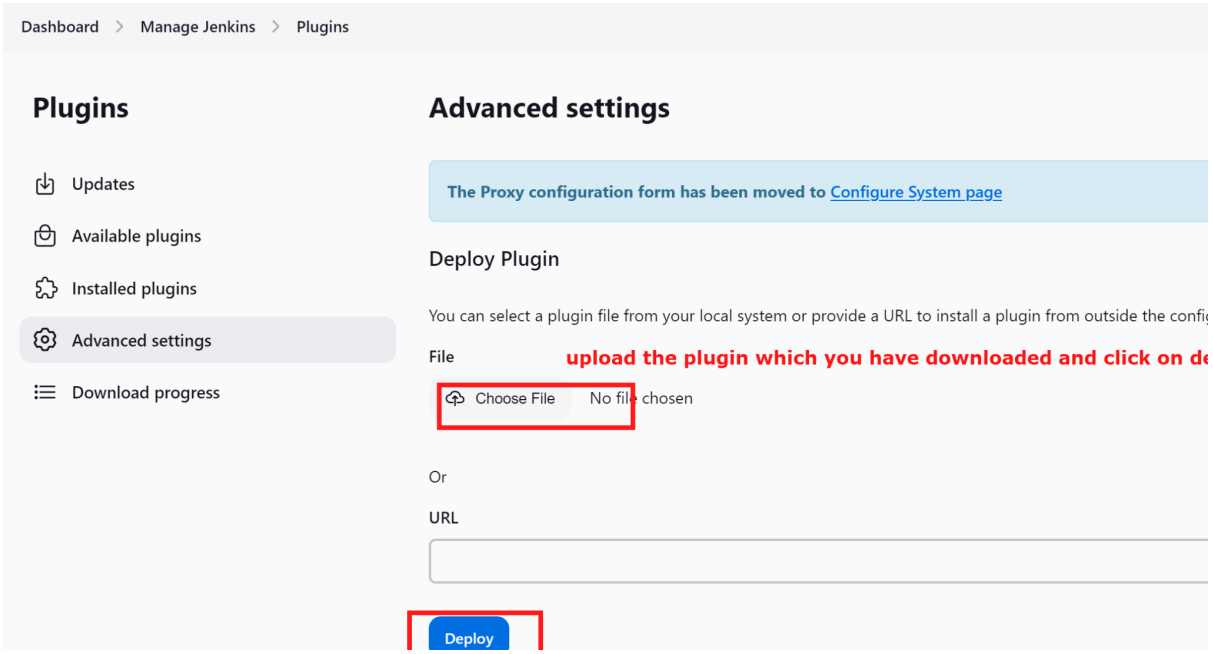
We will also install kubenetes plugin

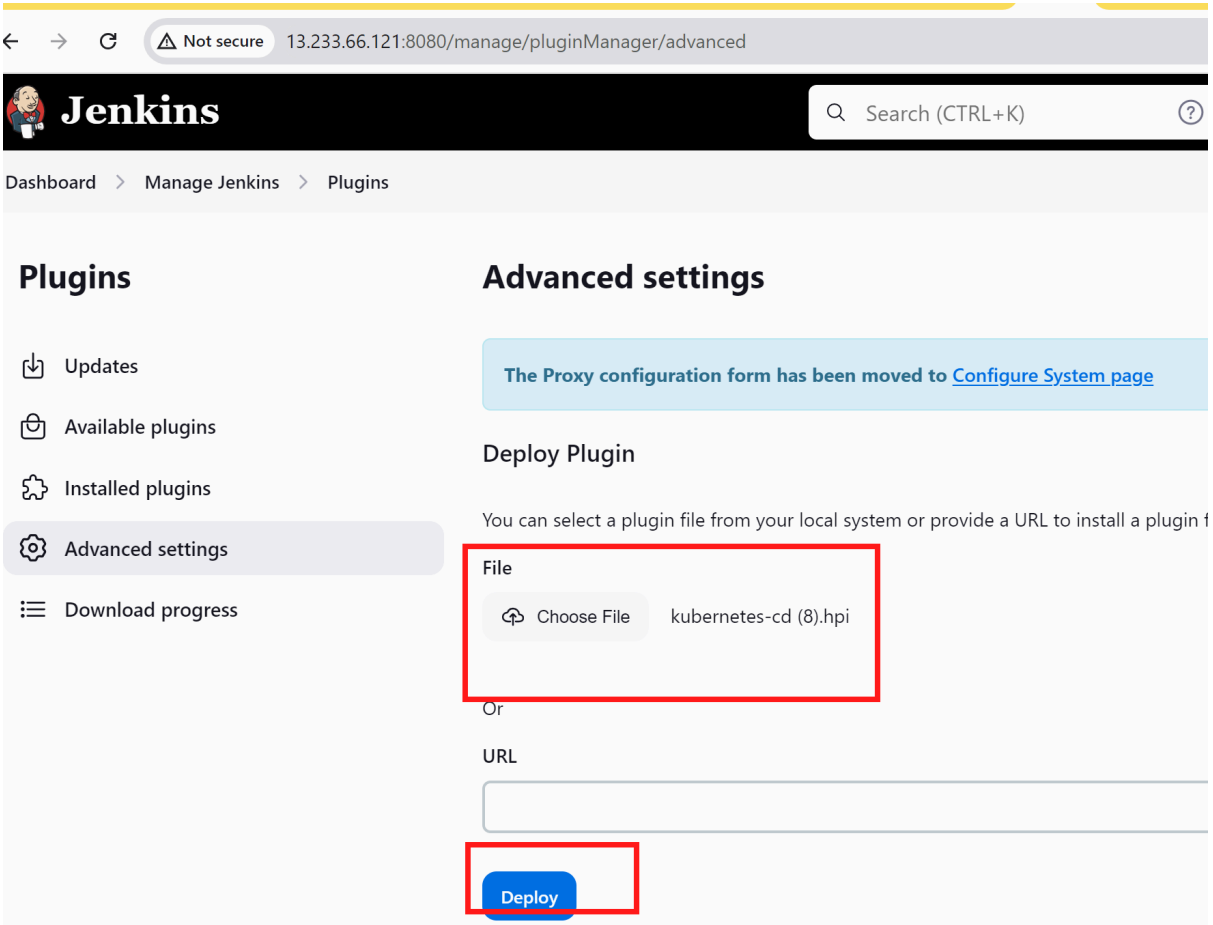
To install kubernetes plugin 👍 -> we will download a plugin locally from github and upload it on jenkins

Go to https://github.com/akshu20791/cicdakshat/blob/master/kubernetes-cd.hpi






Dashboard > Manage Jenkins > Plugins
Plugins
Updates
Available plugins
Installed plugins
Advanced settings
Download progress
Advanced settings
The Proxy configuration form has been moved to Configure System page
Deploy Plugin
You can select a plugin file from your local system or provide a URL to install a plugin from outside the confi
File
upload the plugin which you have downloaded and click on de
Choose File
No file chosen
Or
URL
Deploy


Not secure
13.233.66.121:8080/manage/pluginManager/advanced
Jenkins
Search (CTRL+K)
Dashboard > Manage Jenkins > Plugins
Plugins
Updates
Available plugins
Installed plugins
Advanced settings
Download progress
Advanced settings
The Proxy configuration form has been moved to Configure System page
Deploy Plugin
You can select a plugin file from your local system or provide a URL to install a plugin f
File
Choose File
kubernetes-cd (8).hpi
Or
URL
Deploy

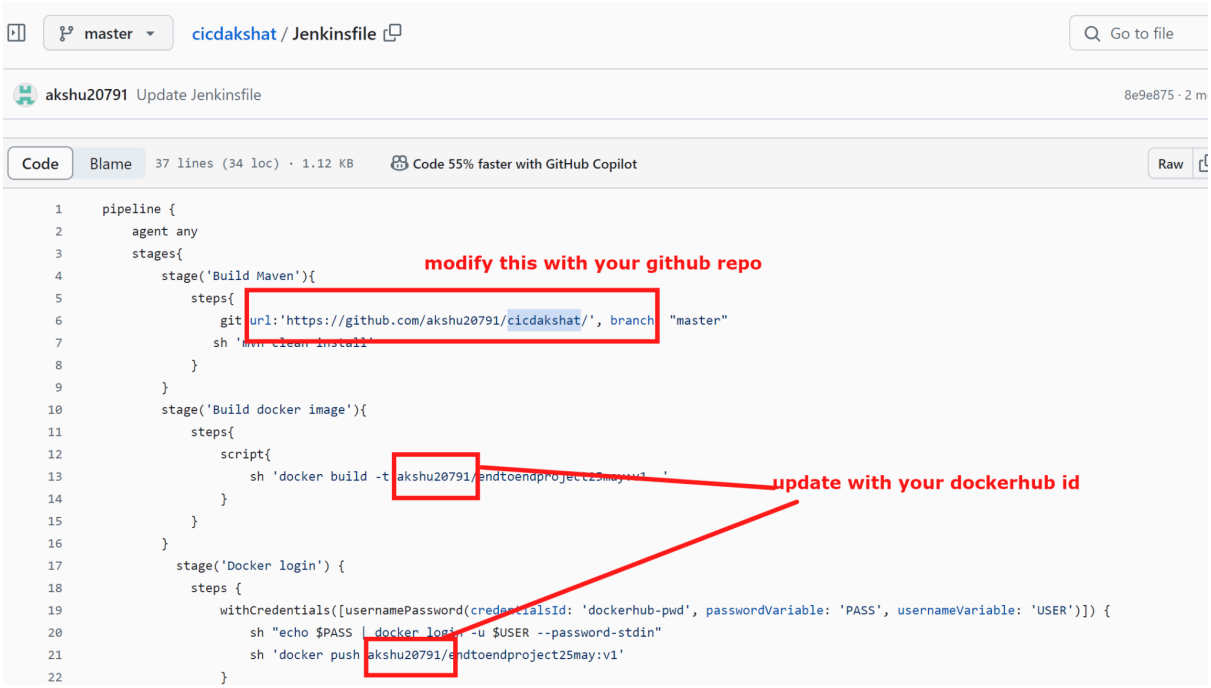
go to master machine

```
-2-198:/home/ubuntu# sudo usermod -aG docker jenkins
-2-198:/home/ubuntu#
```

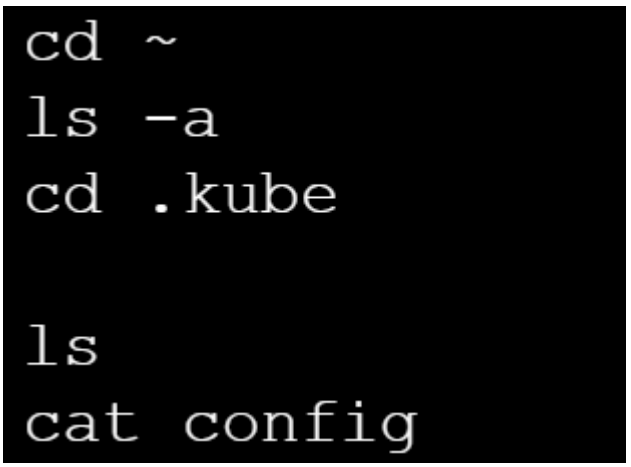
service jenkins restart

```
/ubuntu# service jenkins restart
/ubuntu#
```

Now lets once check the jenkinsfile

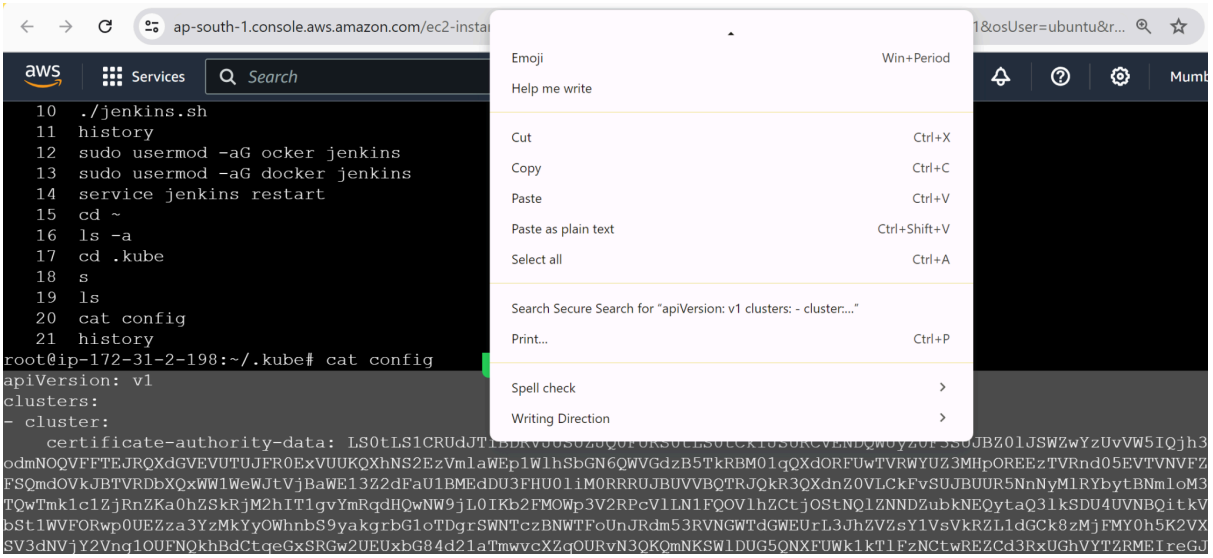


After updating it…we will generate the kubeconfigid

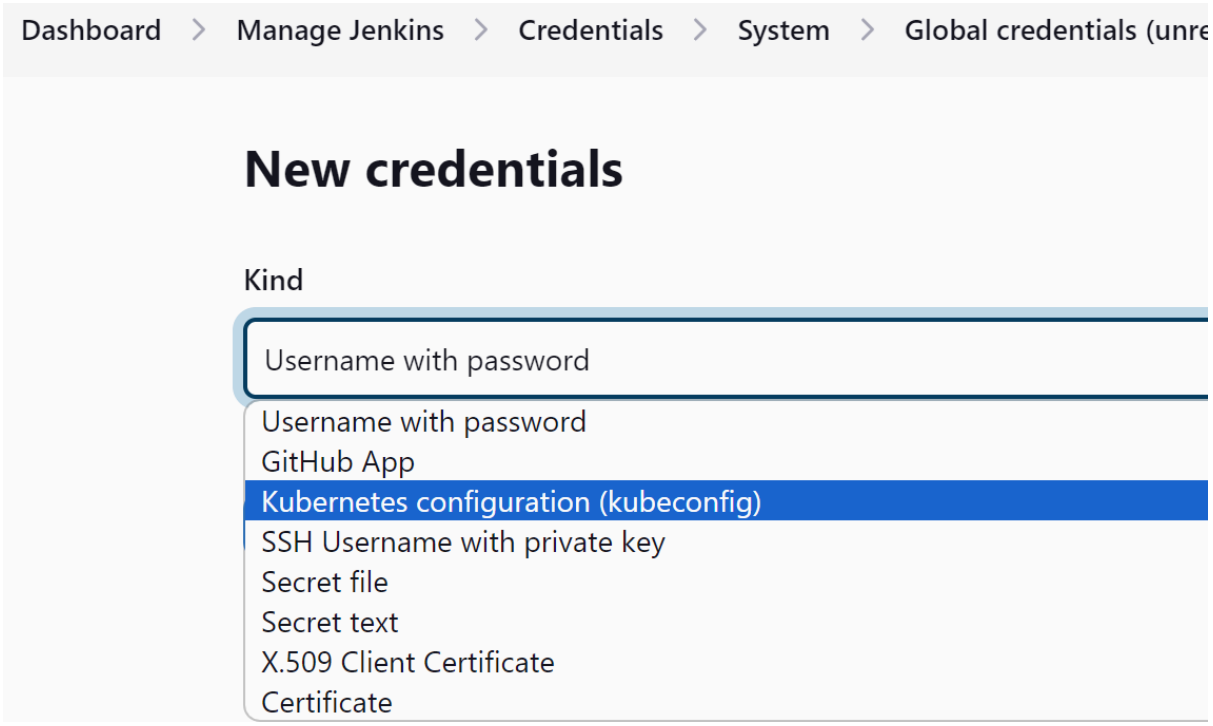


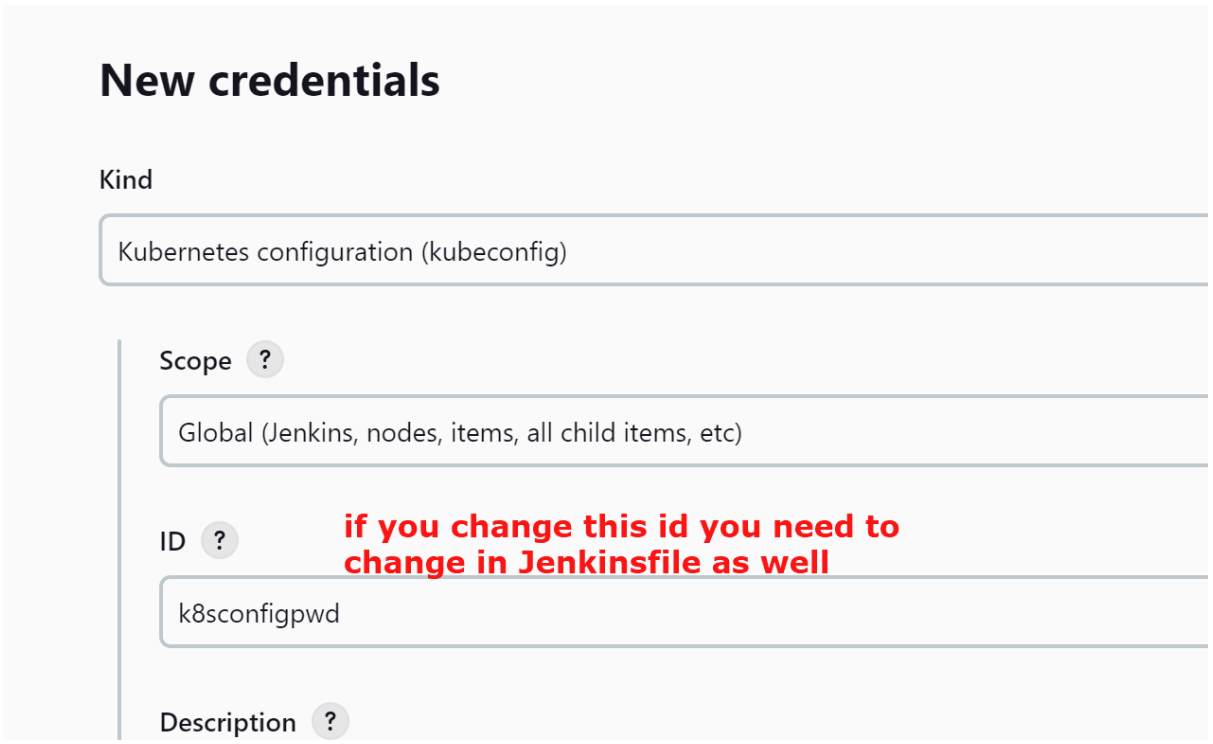
cd ~
ls -a
cd .kube
ls
cat config

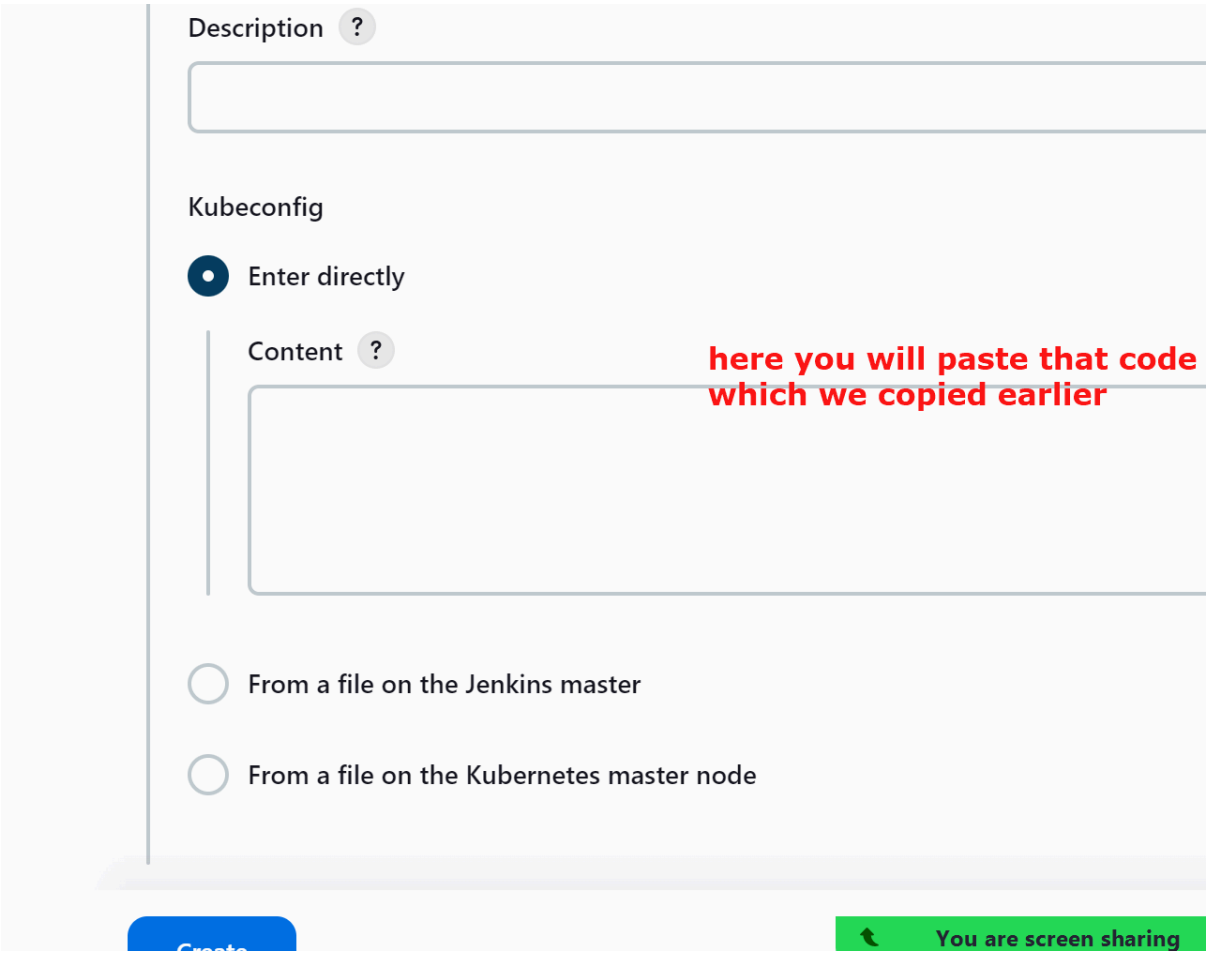
Copy the whole content which came up



Go to jenkins - manage jenkins - credentials - global
Add credentials

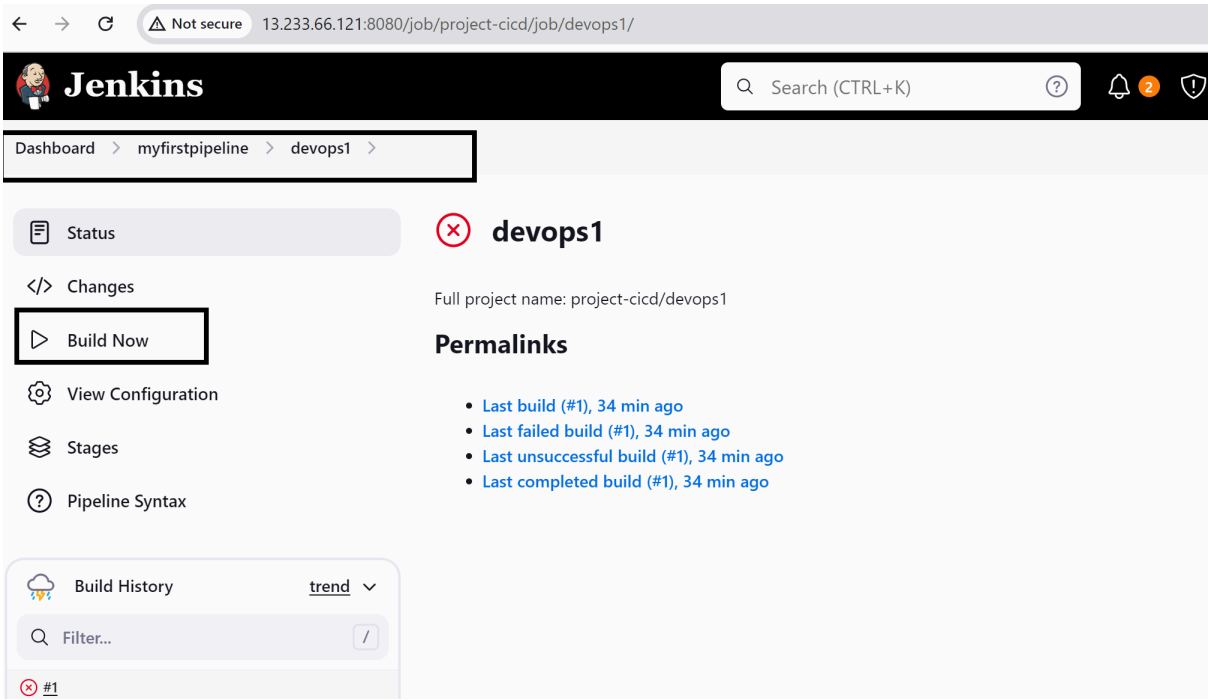

Dashboard > Manage Jenkins > Credentials > System > Global credentials (unre
New credentials
Kind
Username with password
Username with password
GitHub App
Kubernetes configuration (kubeconfig)
SSH Username with private key
Secret file
Secret text
X.509 Client Certificate
Certificate

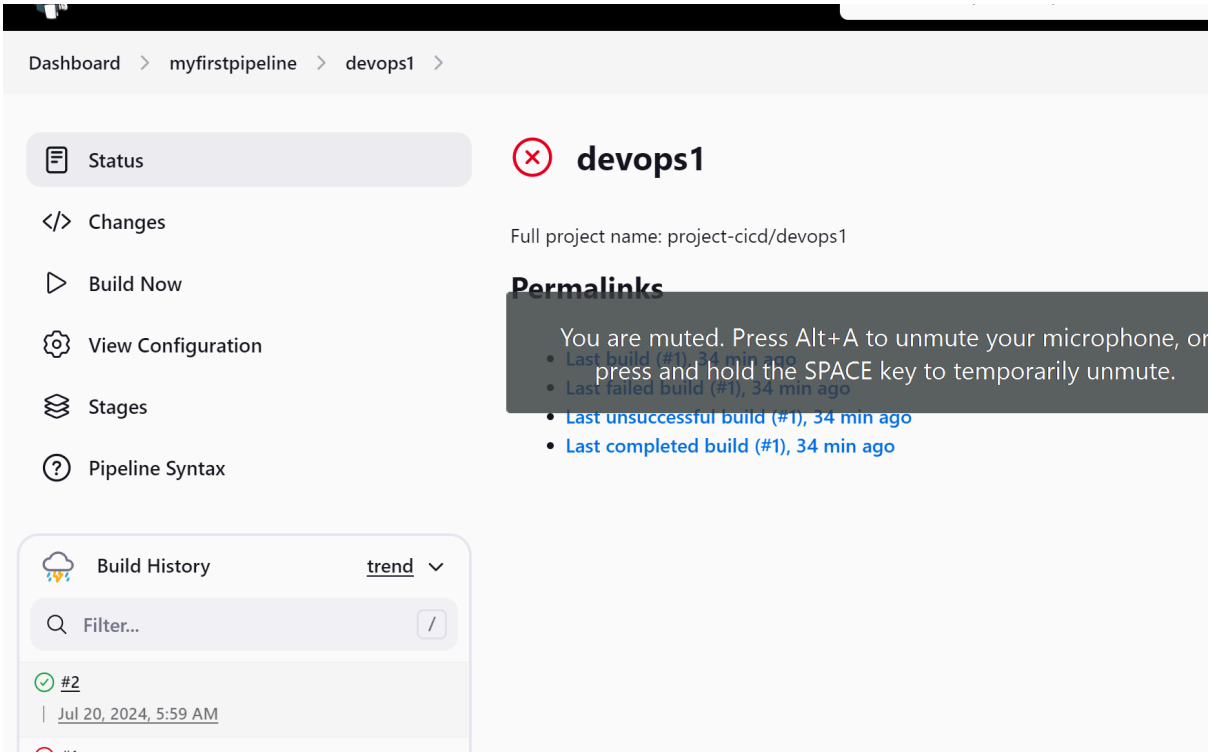

New credentials
Kind
Kubernetes configuration (kubeconfig)
Scope ?
Global (Jenkins, nodes, items, all child items, etc)
ID ?
if you change this id you need to change in Jenkinsfile as well
k8sconfigpwd
Description ?



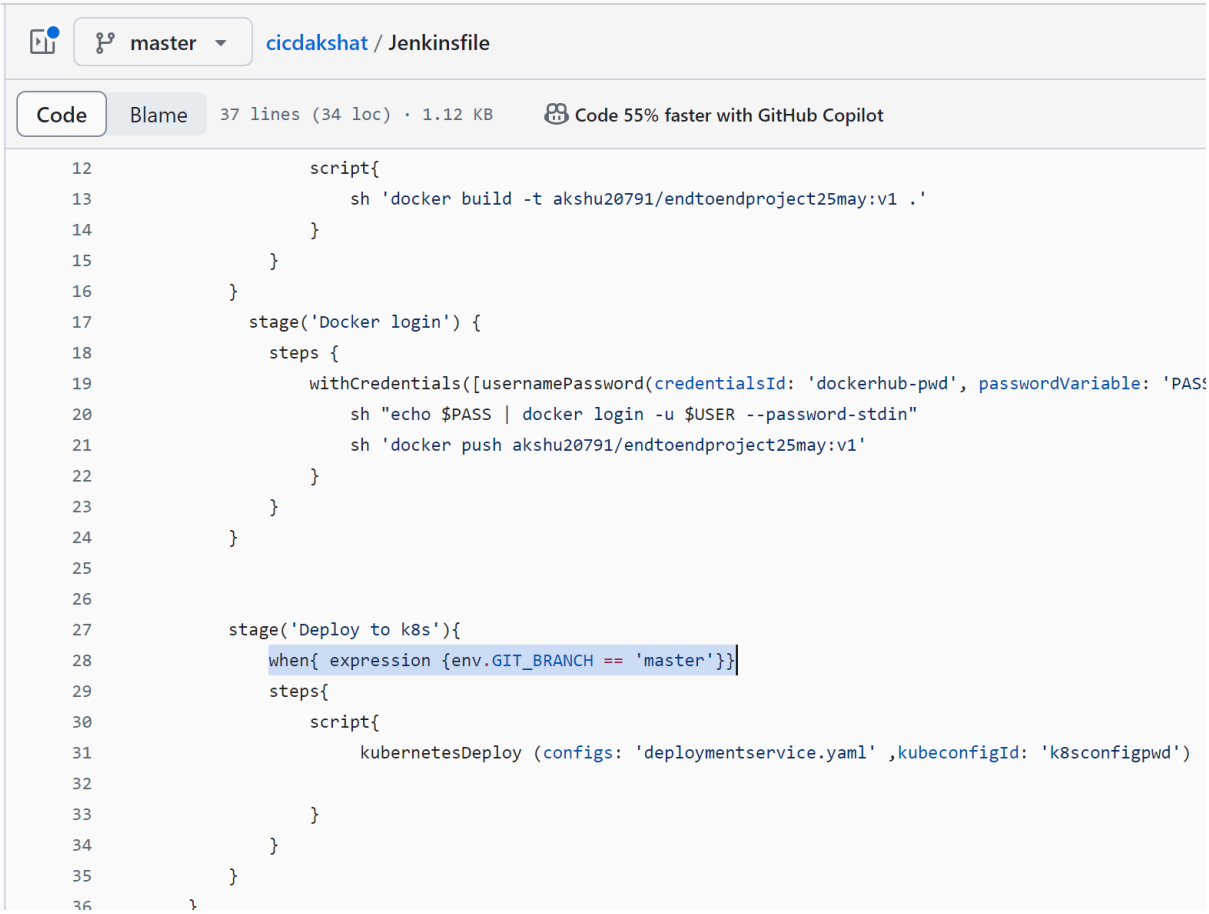
Create

Lets execute the pipeline





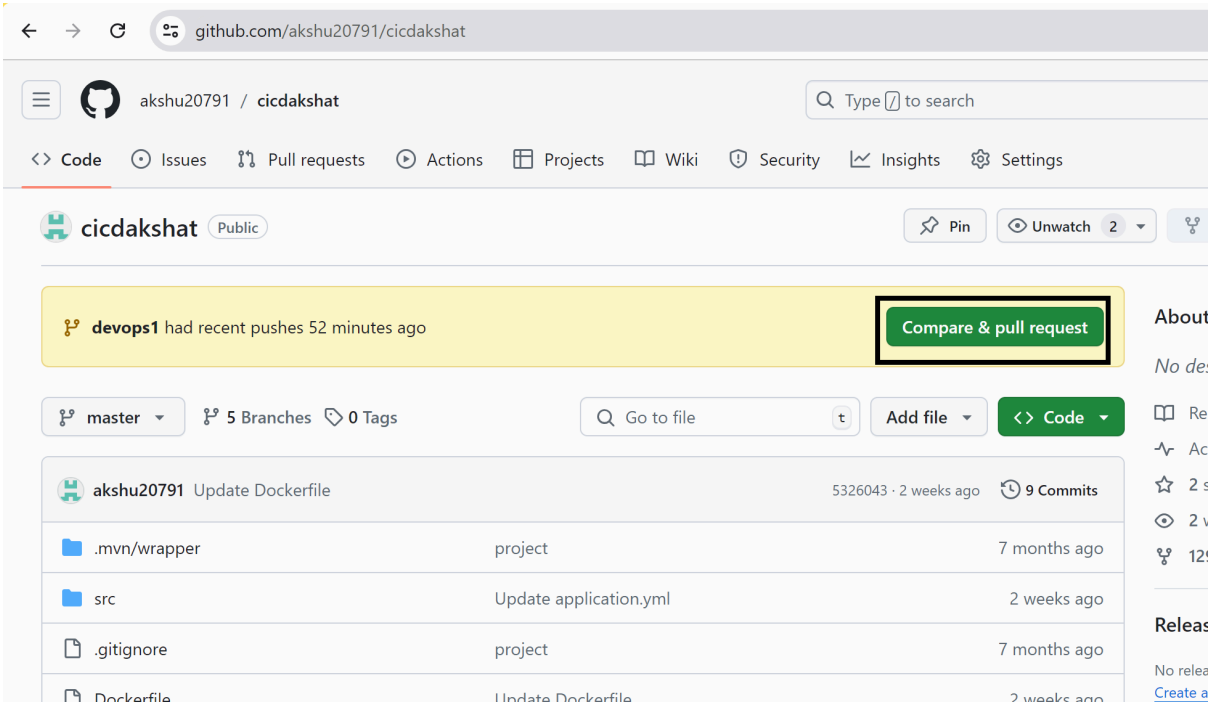
The deployment is not happening in the branch as we have put the condition in the jenkinsfile that if the branch is master then only the deployment will happen

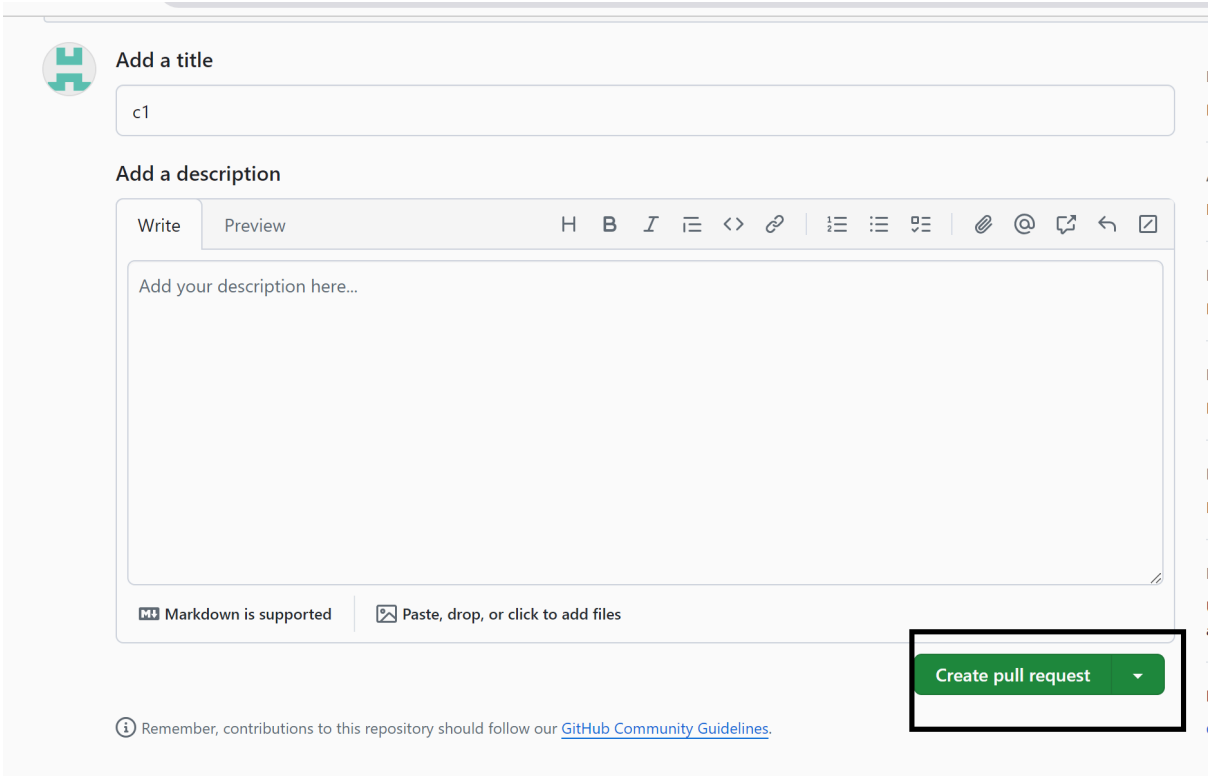


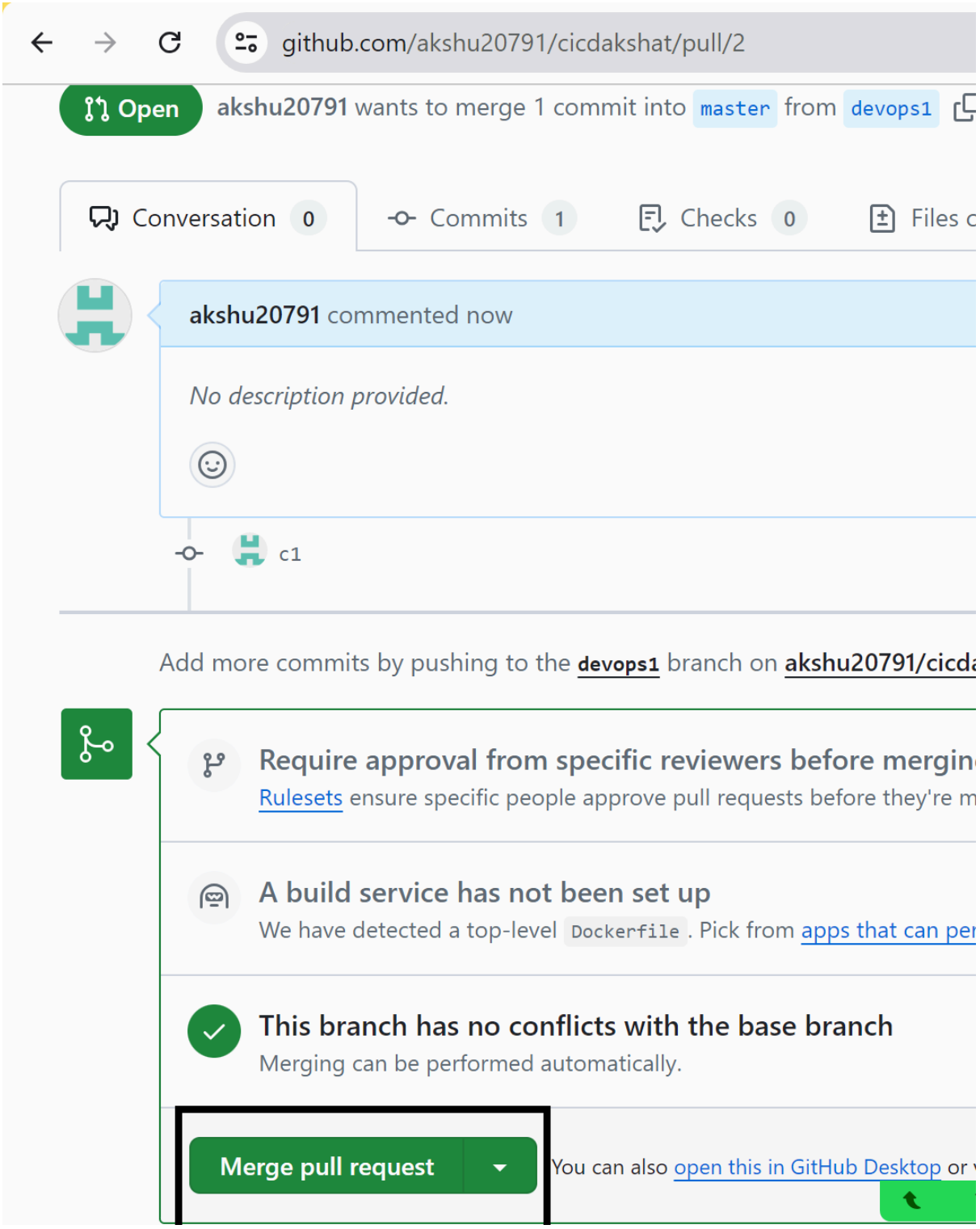

```
12                  script{
13                      sh 'docker build -t akshu20791/endtoendproject25may:v1 .'
14                  }
15              }
16          }
17            stage('Docker login') {
18              steps {
19                  withCredentials([usernamePassword(credentialsId: 'dockerhub-pwd', passwordVariable: 'PASS
20                      sh "echo $PASS | docker login -u $USER --password-stdin"
21                      sh 'docker push akshu20791/endtoendproject25may:v1'
22                  }
23              }
24          }
25
26
27          stage('Deploy to k8s'){
28              when{ expression {env.GIT_BRANCH == 'master'}}
29              steps{
30                  script{
31                       kubernetesDeploy (configs: 'deploymentservice.yaml' ,kubeconfigId: 'k8sconfigpwd')
32
33                  }
34              }
35          }
36      }
```

Now developer and manager is confirmed and they wanted to deploy the project…so the developer will not raise the pull request to the manager

Either you can click on pull request rab and raise pull request or

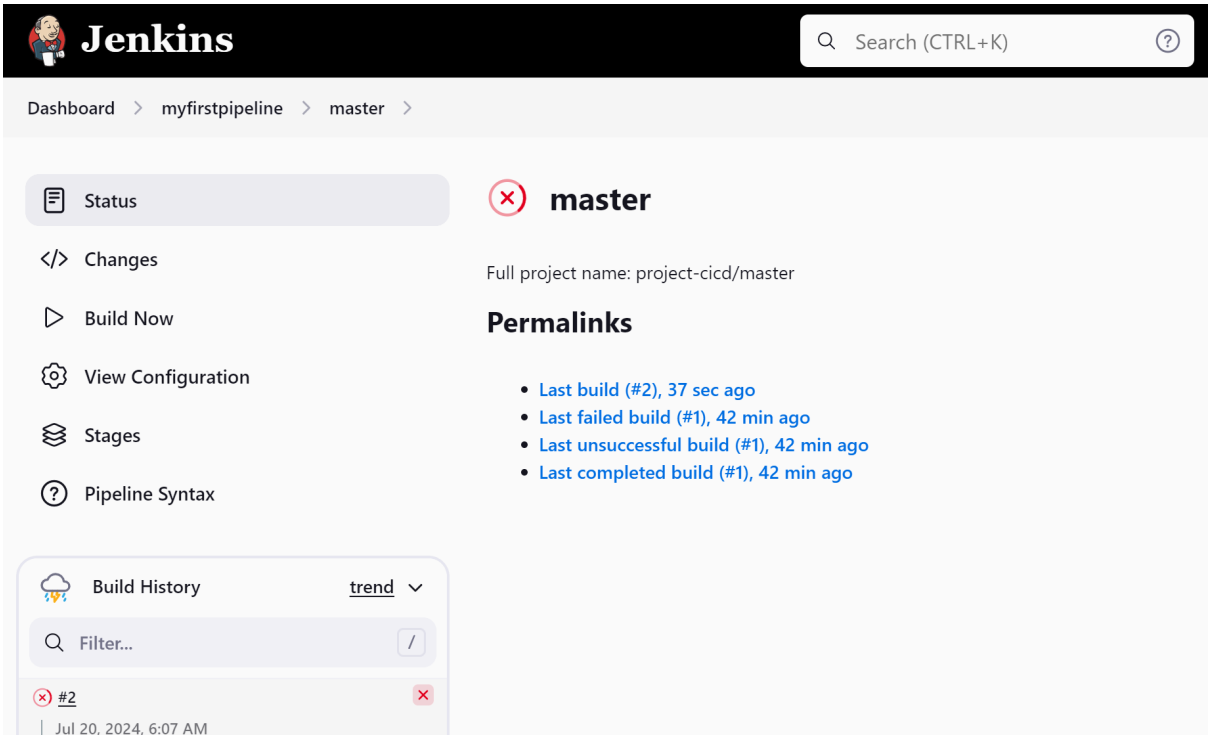

github.com/akshu20791/cicdakshat
akshu20791 / cicdakshat
Type / to search
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
cicdakshat
Public
Pin
Unwatch 2
devops1 had recent pushes 52 minutes ago
Compare & pull request
About
master
5 Branches
0 Tags
Go to file
t
Add file
Code
akshu20791 Update Dockerfile
5326043 · 2 weeks ago
9 Commits
.mvn/wrapper
project
7 months ago
src
Update application.yml
2 weeks ago
.gitignore
project
7 months ago
Dockerfile
Update Dockerfile
2 weeks ago

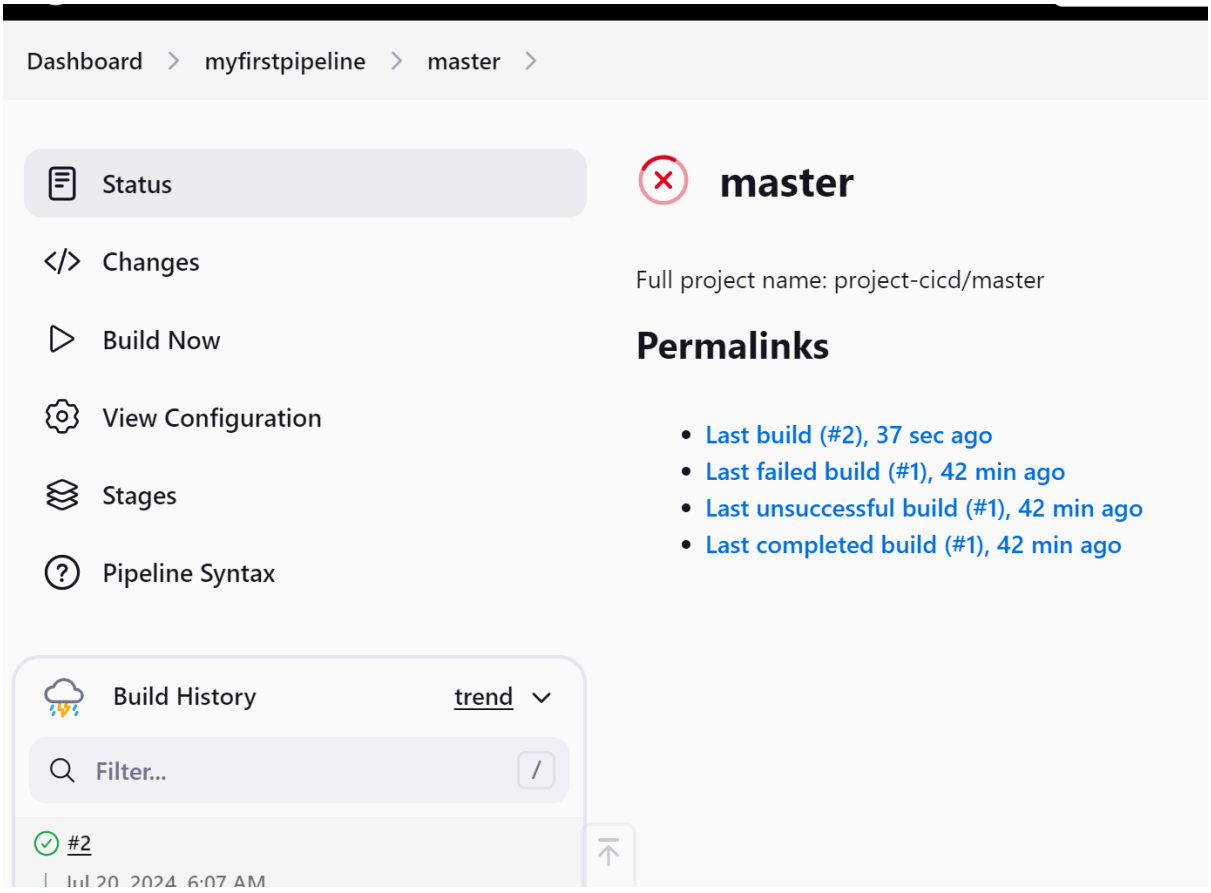

Add a title
c1
Add a description
Write
Preview
Add your description here...
Markdown is supported
Paste, drop, or click to add files
Create pull request
Remember, contributions to this repository should follow our GitHub Community Guidelines.



My jenkins pipeline should trigger

My master branch is triggered automatically


Jenkins
Search (CTRL+K)
Dashboard
myfirstpipeline
master
Status
Changes
Build Now
View Configuration
Stages
Pipeline Syntax
master
Full project name: project-cicd/master
Permalinks
Last build (#2), 37 sec ago
Last failed build (#1), 42 min ago
Last unsuccessful build (#1), 42 min ago
Last completed build (#1), 42 min ago
Build History
trend
Filter...
#2
Jul 20, 2024, 6:07 AM


Dashboard
myfirstpipeline
master
Status
Changes
Build Now
View Configuration
Stages
Pipeline Syntax
master
Full project name: project-cicd/master
Permalinks
Last build (#2), 37 sec ago
Last failed build (#1), 42 min ago
Last unsuccessful build (#1), 42 min ago
Last completed build (#1), 42 min ago
Build History
trend
Filter...
#2
Jul 20, 2024, 6:07 AM

Now lets see how we can access the project

Go to master

```
root@ip-172-31-2-198:~/.kube# kubectl get services
NAME                TYPE        CLUSTER-IP     EXTERNAL-IP   PORT(S)          AGE
kubernetes          ClusterIP   10.96.0.1      <none>        443/TCP          72m
springboot-k8ssvc   NodePort    10.99.63.64    <none>        8080:30322/TCP   42s
root@ip-172-31-2-198:~/.kube#
```

Copy the publi ip of any node :30322