Jenkins Infra Provisoining

Created Jenkins Server.
after provisoing of jenkins server > we will launch two new server one for Redis and second one for Postgres DB.

Once Redis Server we will provision like this :-

Install Redis on Ec2 Server -

sudo apt update
sudo apt install redis-server -y
sudo systemctl enable redis
sudo systemctl start redis

Edit Redis config: sudo vi /etc/redis/redis.conf set the following - bind 0.0.0.0

Then restart Redis: sudo systemctl restart redis

Ref link - https://www.digitalocean.com/community/tutorials/how-to-install-and-secure-redis-on-ubuntu-22-04

Install Postgres on Ec2 Server -

sudo apt update
sudo apt install postgresql postgresql-contrib -y
sudo systemctl enable postgresql
sudo systemctl start postgresql

Create PostgreSQL User and Database

Imp - why we created user name and password and db name same because in code this has hard coded, but for the best practice is devloper can write these passwords on applicaion.properties or .env file, and we must use the same to communicate the db otherwise the communication will fall.

sudo -i -u postgres
psql

Inside psql, run:

CREATE USER postgres WITH PASSWORD 'postgres';
CREATE DATABASE postgre OWNER postgres;

Allow Remote Access

Edit postgresql.conf: sudo nano /etc/postgresql/*/main/postgresql.conf

Set: listen_addresses = '*'

Then edit pg_hba.conf: sudo nano /etc/postgresql/*/main/pg_hba.conf

Add the following line:

host   all   all   0.0.0.0/0   md5

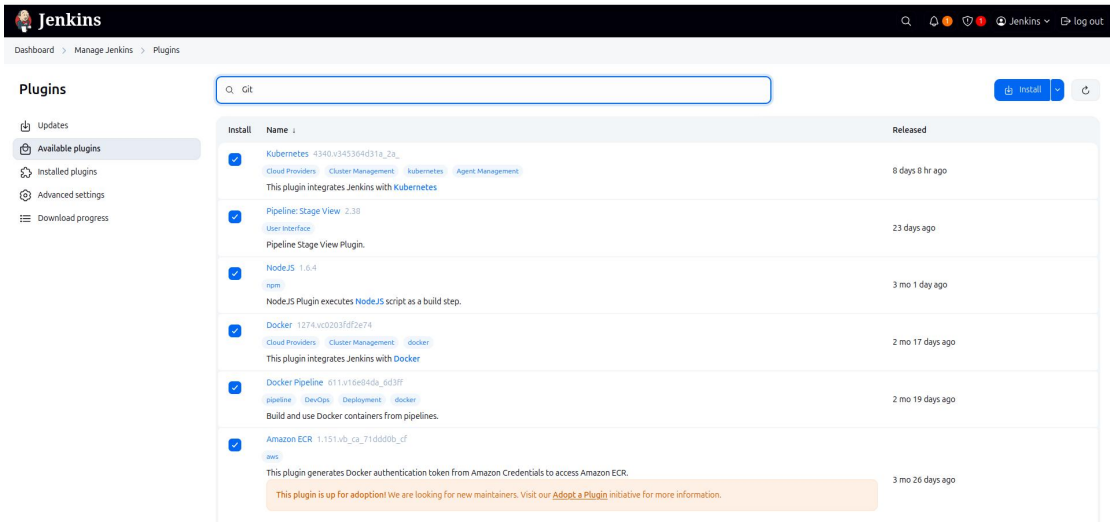
Restart PostgreSQL: sudo systemctl restart postgresql

TEST NETWORK CONNECTIVITY (From Jenkins)

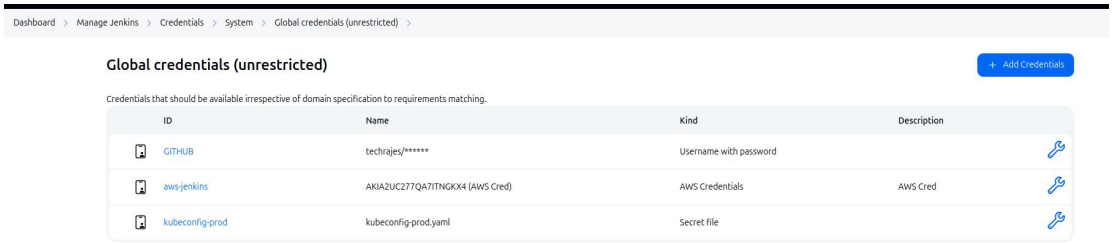
telnet <redis-private-ip> 6379
telnet <postgres-private-ip> 5432

After all these setup now, we will provison the Jenkins Server Setup and a vpn to access the private jenkins server.

We will install these required plugins -



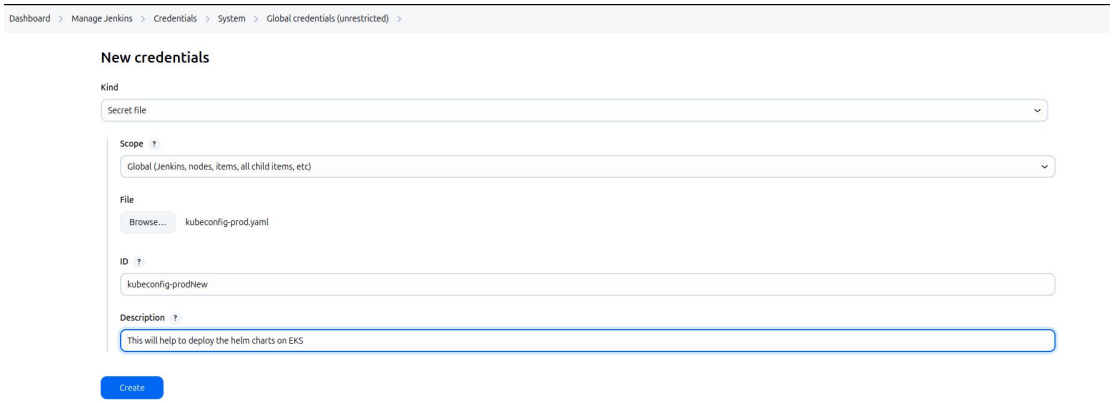
Then these Credentials required :-



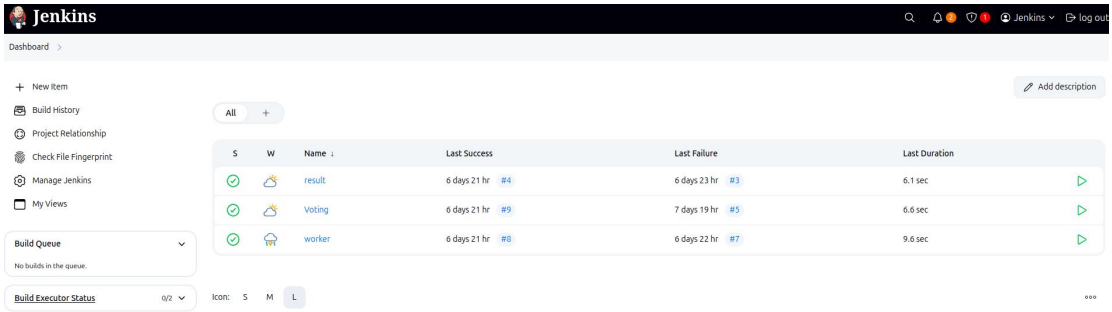
As per our Jenkins pipeline code, this pipeline does -

1. Clones source code from GitHub.
2. Logs into AWS ECR.
3. Builds a Docker image.
4. Pushes it to ECR.
5. Deploys the image to an EKS cluster using Helm.

Get the kubeconfig from EKS - This writes the kubeconfig to ~/.kube/config inside the Jenkins agent and copy the data and save a file on your local and use this file on jenkis credentials secreat.



After creating all these setups, create three repos like this.



and in Github all these three pipeline codes are there, we will pull these codes and apply the pipline.

Ingress we will create manually.