Overview

We have created 3 EC2 instances namely, k8, rancher and jenkins. On Jenkins EC2 we have hosted, we installed jenkins, docker and rancher cli. On k8 EC2 we have installed docker and rancher agent while one rancher EC2, we have installed docker and created a contianer of rancher stable version.

Setting up the docker things

1. Installed docker container runtime
2. created Dockerfile using nginx and copy
3. docker build -t
4. docker run --name surveyformc -d -p 8080:80 surveyform
5. docker login hemu1999
6. docker tag surveyform hemu1999/surveyform

Setting up the jenkins on EC2

- Create t2.micro on AWS, allowing HTTPs and saving the key
- https://www.jenkins.io/doc/tutorials/tutorial-for-installing-jenkins-on-AWS/
- Our jenkins is available at http://23.22.80.96:8080/

Github

- Create an ssh key pair locally
- add the public key to the github sshkey in the repo settings
- add the private key as the credentials on jenkins
- create a webhook with the payload http://23.22.80.96:8080/web-hook/
- create it

Jenkins Setup

- Create a job
- Select free style project
- Give a description
- choose github project
- add the github url
- choose git as SCM
- add repo url
- choose credentials
- make branch to blank
- choose github hook trigger
- add build steps
  adding..

To install docker on jenkins node: https://docs.aws.amazon.com/serverless-application-model/latest/developerguide/install-docker.html
sudo yum update -y
sudo yum install -y yum-utils device-mapper-persistent-data lvm2
sudo yum-config-manager --add-repo https://download.docker.com/linux/amazon/docker-ce.repo
sudo yum install -y docker-ce
sudo systemctl start docker
sudo systemctl enable docker
giving jenkins user permissions using: sudo usermod -aG docker $USER
sudo usermod -aG docker jenkins

- Install rancher cli on the node
- get token from the rancher
- use the following script to connect, remove old pods and create new one

Installing rancher

- create a t2.medium instance with 24gb of ebs allowing HTTP & HTTPS with AMI LINUX 2
- `yum update -y` to update the existing packages
- `yum install docker -y` to install docker
- `systemctl enable docker` to enable the system link with docker
- `systemctl start docker` to start the docker service in backend
- `docker run -d --restart=unless-stopped -p 80:80 -p 443:443 --privileged rancher/rancher:stable` use this command to start a rancher container.
- Then go to `ec2-ipaddress:80` to see the rancher dashboard
- run the `docker logs container-id 2>&1 | grep "Bootstrap Password:"` gives the current password
- use that to create your own new password.
- In the dashboard, click `create`.
- Scroll down and choose `custom` and then click on `create`.
- Then choose the curl command presented on screen, enable the insecure flag.
- copy this command to paste it in the `k8 ec2 machine` to make the cluster on `ec2` manageable with rancher.

Setting up the k8 ec2

- create a t2.medium instance with 24gb of ebs allowing HTTP & HTTPS with ubuntu
- `sudo apt-get update -y` to update current packages
- `sudo apt-get install docker.io -y` to install docker service, it should automatically create system link, if not follow above systemcl commands to start docker service in the backend.
- paste the rancher agent curl command and click enter. this will make the cluster accessible via rancher.
- Now go to rancher dashboard and start deploying your yaml files.