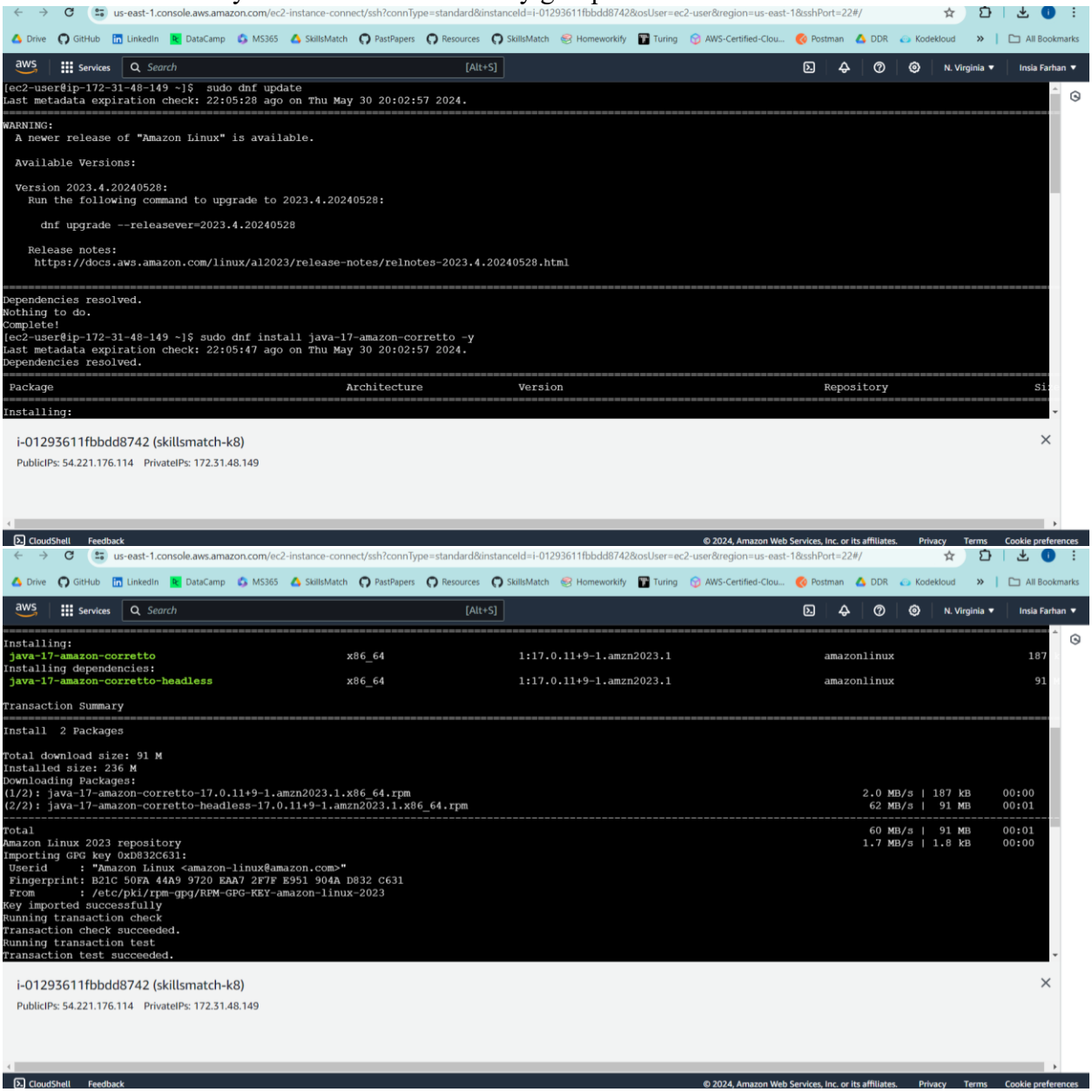
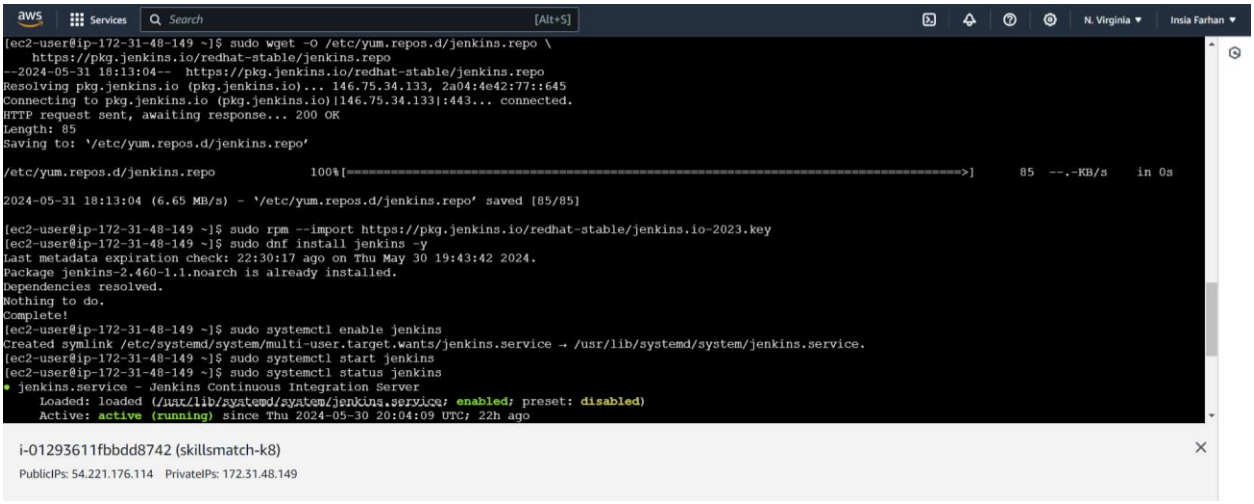
1. Add 8080 in your EC2 instance security group. Install corretto.

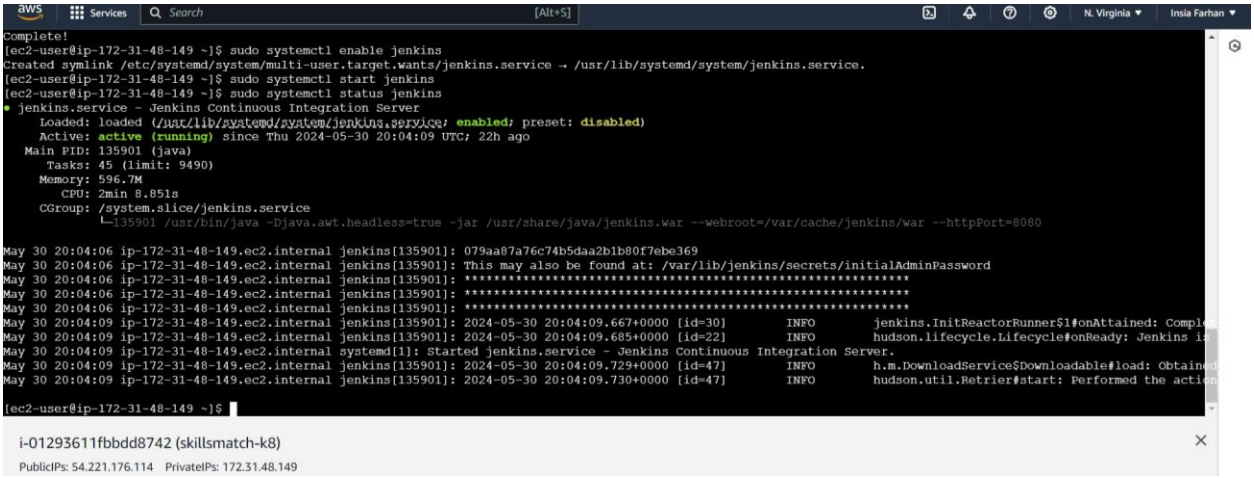


2. Check java version

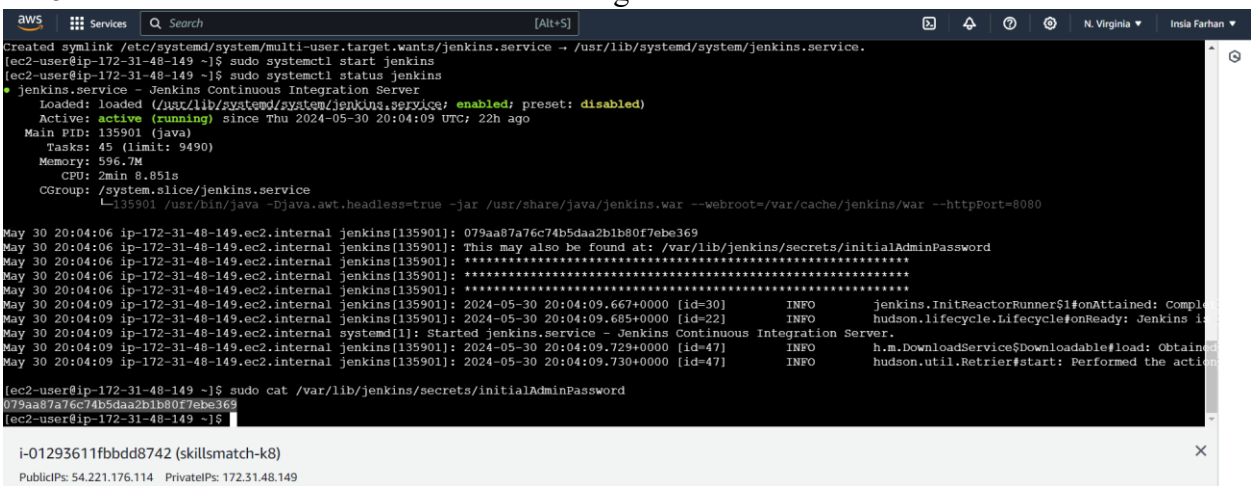
3. Install Jenkins on the AWS instance.



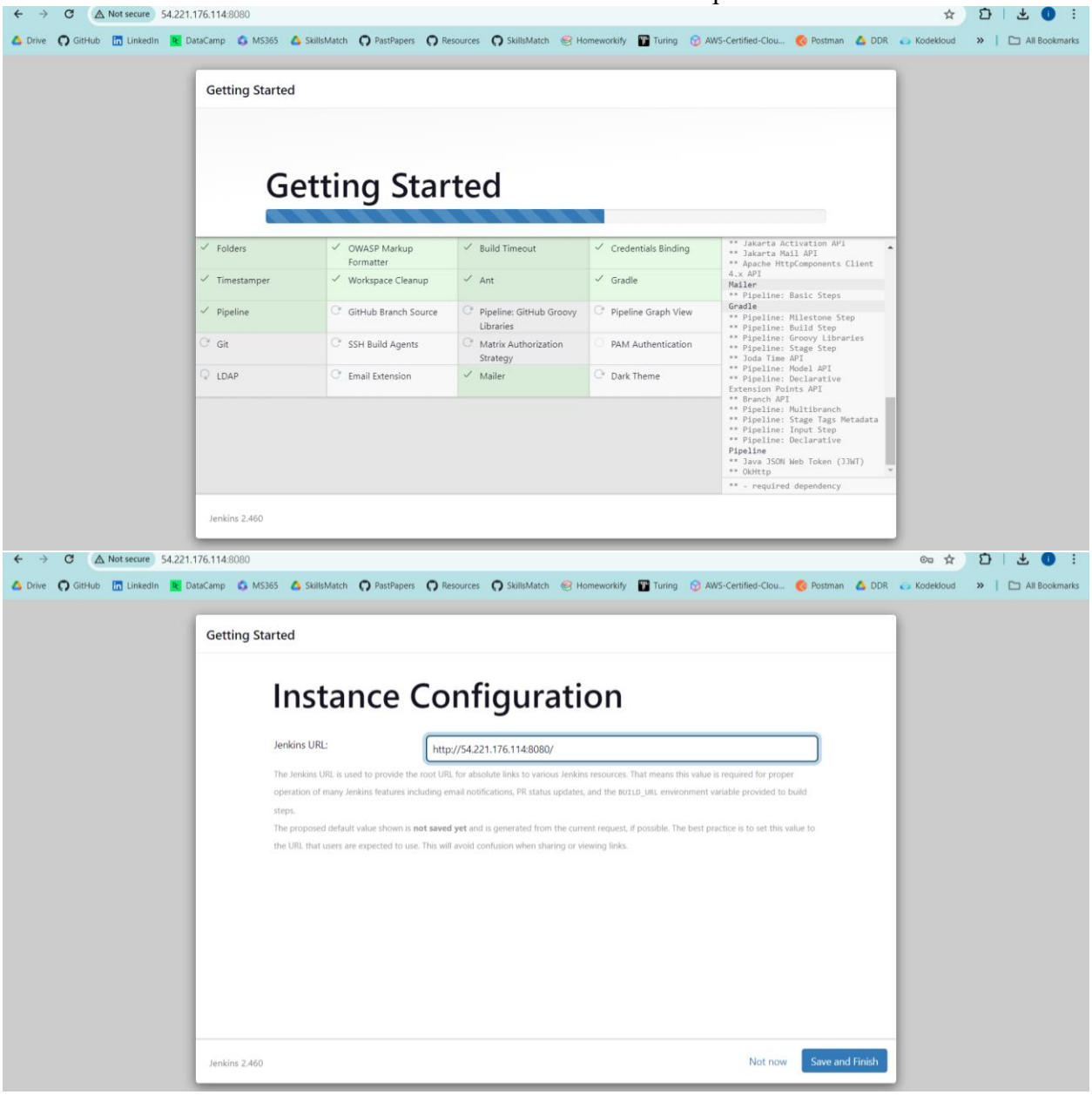
4. Start Jenkins.



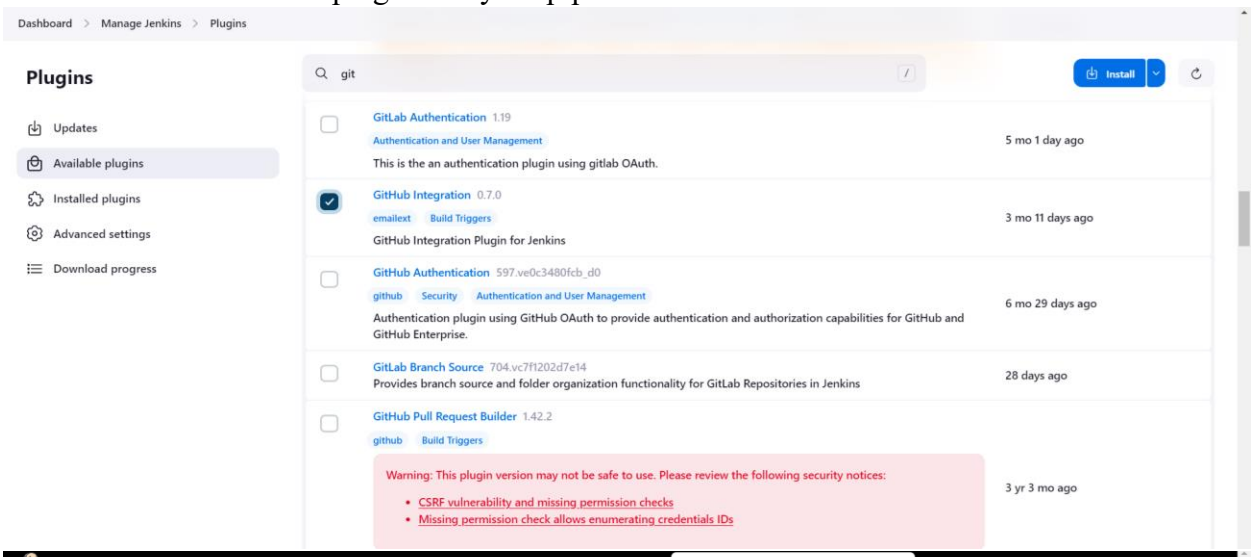
5. Get Jenkins Password from the following:

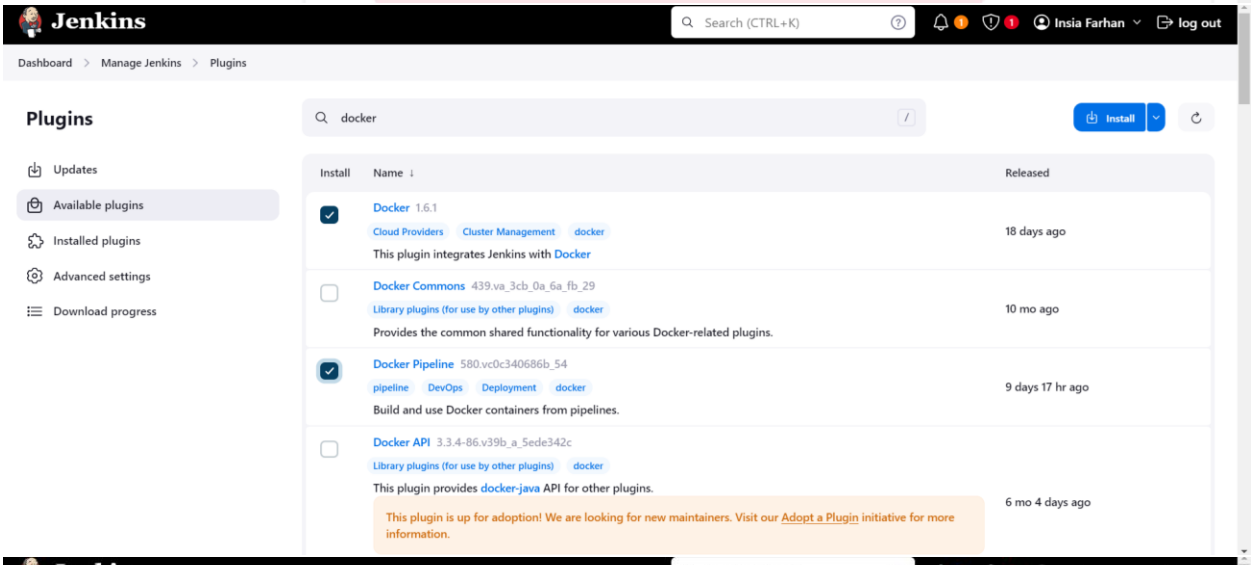


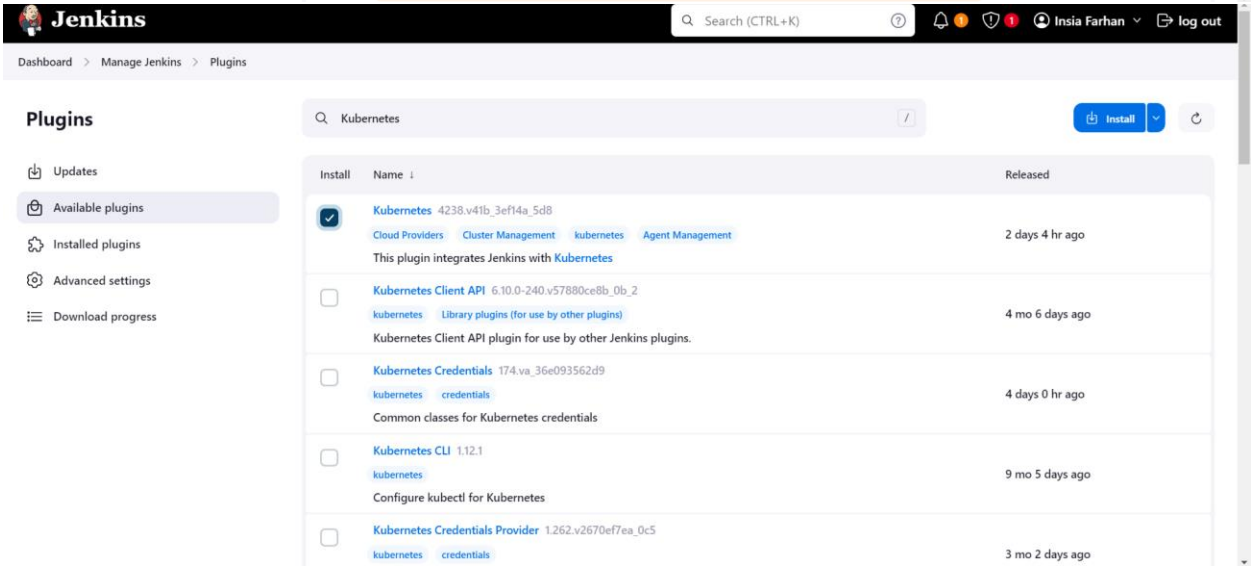
6. Use the Public IP of the EC2 instance and Jenkins 8080 port to access Jenkins.



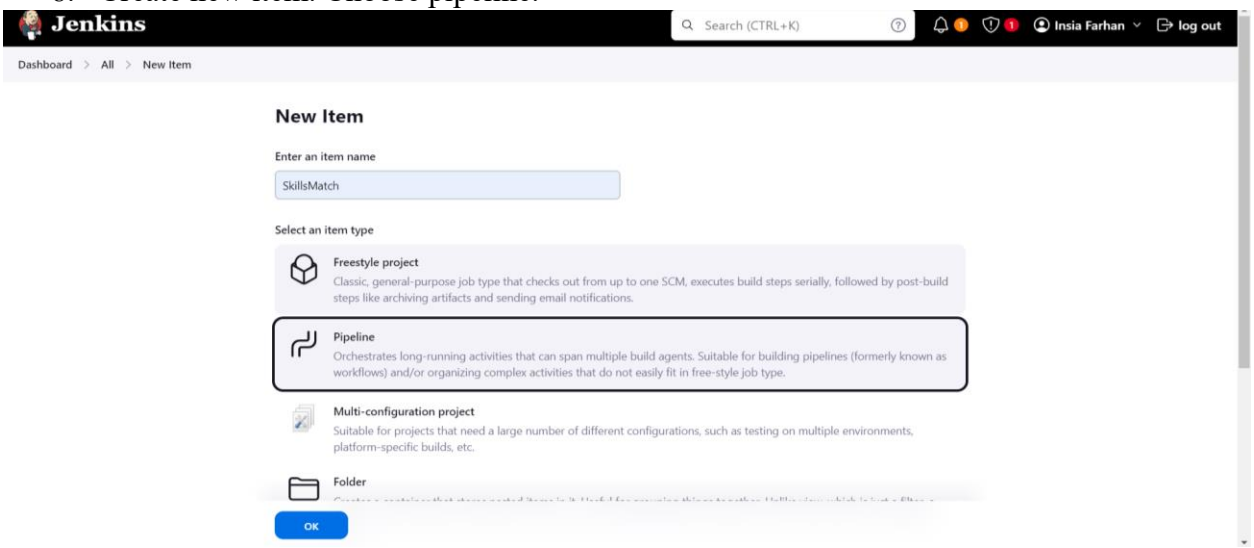
7. Install the needed plugins for your pipelines.



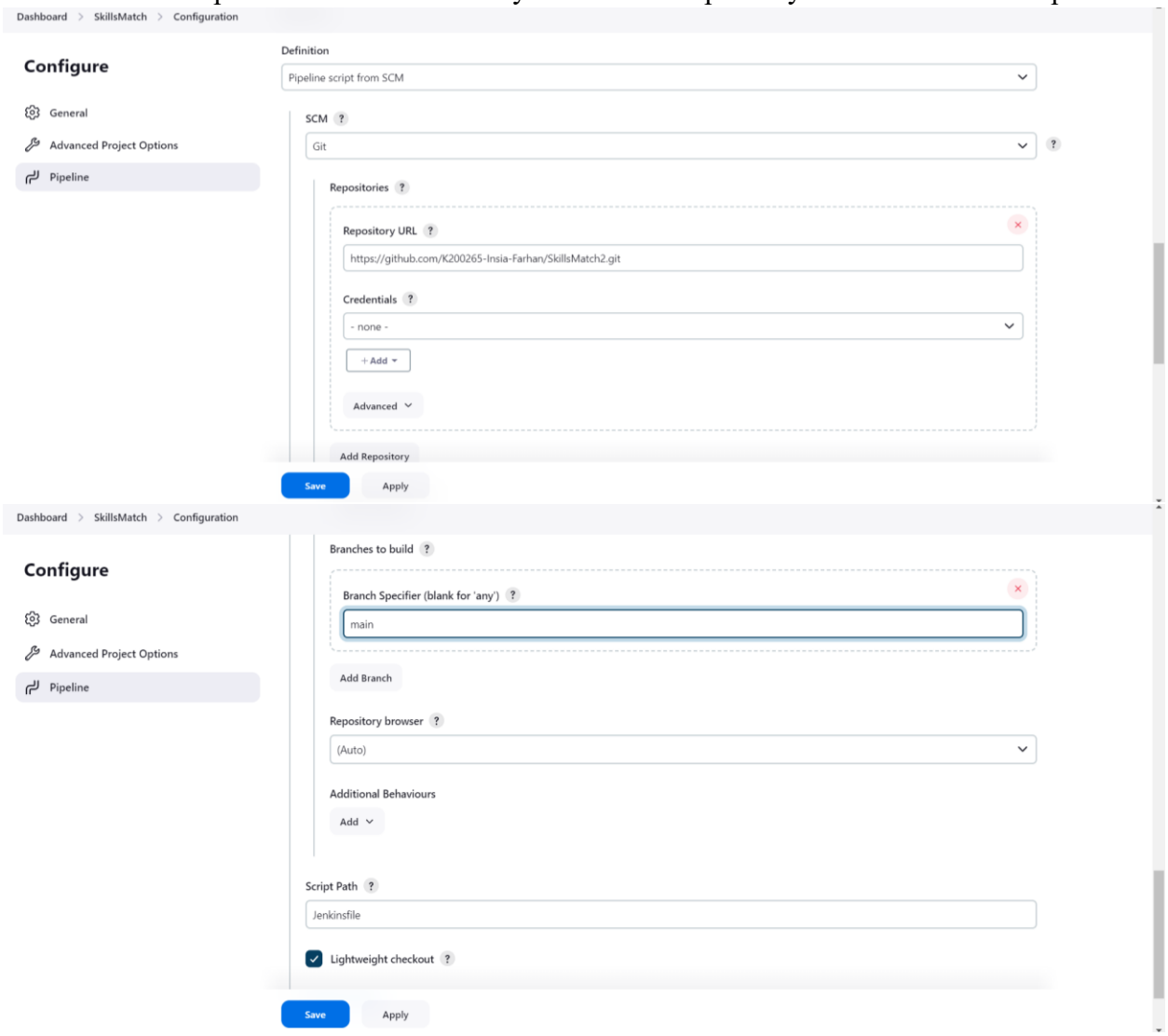




8. Create new item. Choose pipeline.



9. Choose Pipeline from SCM. Insert your GitHub Repository link and Jenkinsfile path.



10. Run the following commands on the EC2 instance.

Step 1: Ensure Jenkins User has Sudo Privileges for Docker Commands

You need to configure the sudoers file to allow the Jenkins user to execute Docker commands without a password. Here's how you can do it:

1. **Edit the Sudoers File**:

   Open the sudoers file using `visudo`:

```sh
sudo visudo
```

2. **Add the Following Line**:

```sh
jenkins ALL=(ALL) NOPASSWD: /usr/bin/docker
```

   This allows the `jenkins` user to run Docker commands without being prompted for a password.

1. **Test Sudo Configuration**:

   - Switch to the Jenkins user or a similar non-interactive session:

```sh
sudo su - jenkins
```

   - Test a Docker command with sudo to ensure it doesn't prompt for a password:

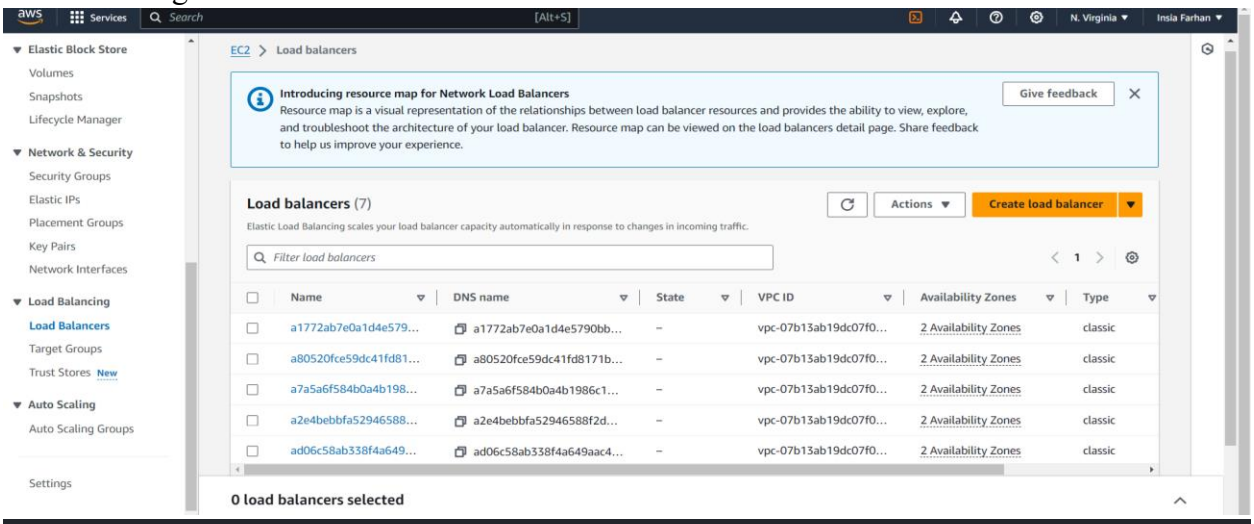
```sh
sudo docker ps
```

Step 4: Restart Services

Restart the necessary services to ensure the changes take effect:

```sh
sudo systemctl restart jenkins
sudo systemctl restart docker
```

11. Configure Load Balancer for EC2 for Kubernetes.

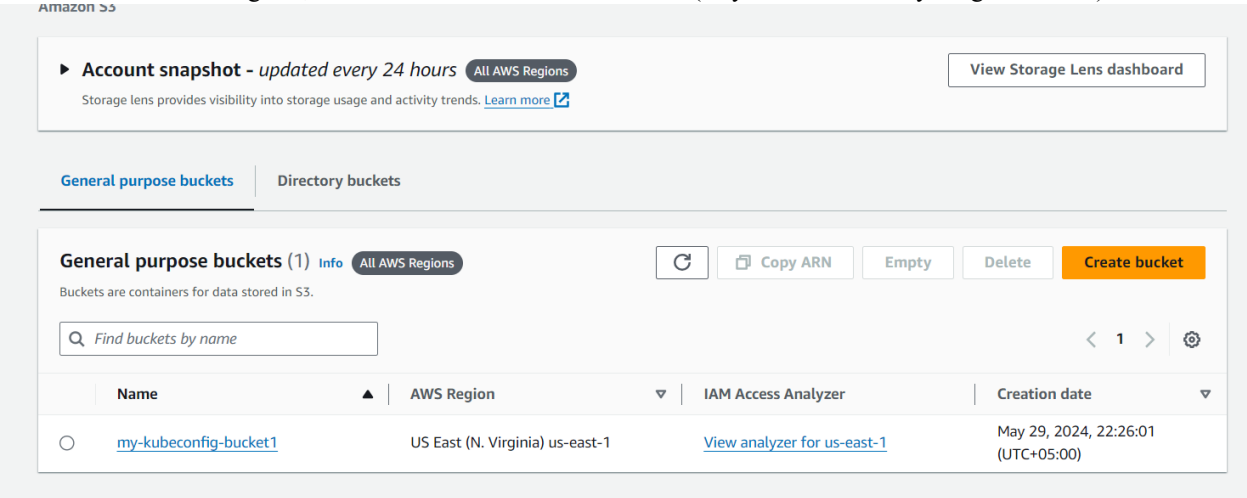


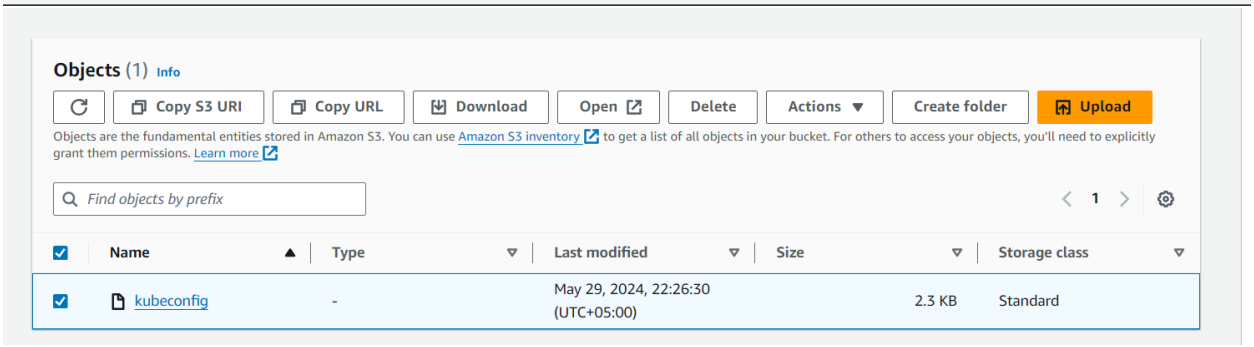

```
[cloudshell-user@ip-10-140-110-81 ~]$ aws eks update-kubeconfig --name skillsmatchfinal --region us-east-1

Added new context arn:aws:eks:us-east-1:211125493694:cluster/skillsmatchfinal to /home/cloudshell-user/.kube/config
[cloudshell-user@ip-10-140-110-81 ~]$
[cloudshell-user@ip-10-140-110-81 ~]$ aws s3 mb s3://my-kubeconfig-bucket
make_bucket failed: s3://my-kubeconfig-bucket An error occurred (BucketAlreadyExists) when calling the CreateBucket operation: The requested bucket name is not available. The bucket namespace is shared by all users of the
system. Please select a different name and try again.
[cloudshell-user@ip-10-140-110-81 ~]$ aws s3 mb s3://my-kubeconfig-bucket1
make_bucket: my-kubeconfig-bucket1
[cloudshell-user@ip-10-140-110-81 ~]$ aws s3 cp /home/cloudshell-user/.kube/config s3://my-kubeconfig-bucket1/kubeconfig
upload: .kube/config to s3://my-kubeconfig-bucket1/kubeconfig
[cloudshell-user@ip-10-140-110-81 ~]$
```

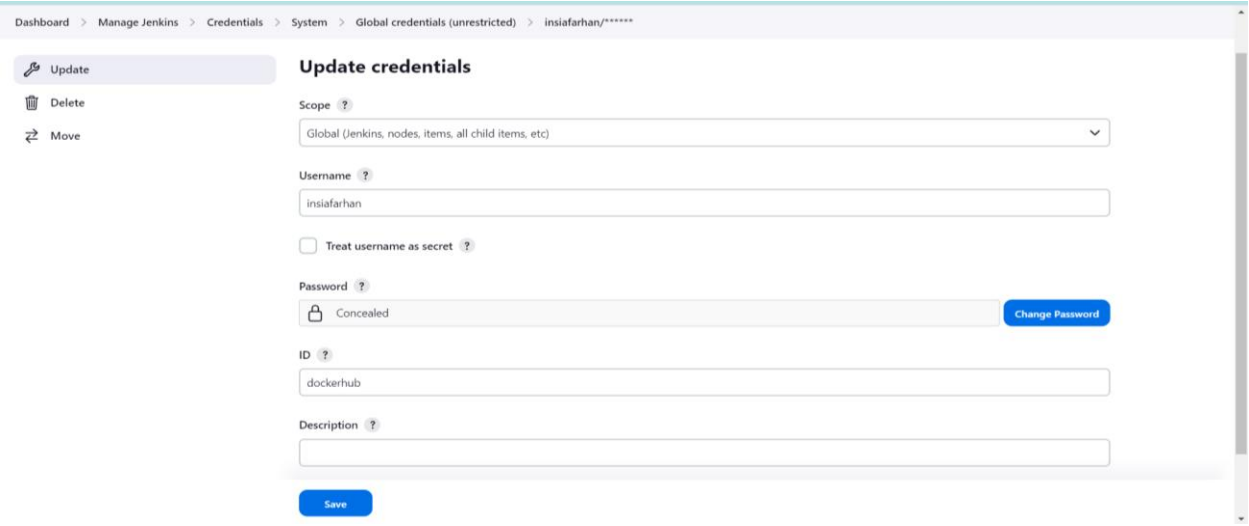
aws eks update-kubeconfig --name skillsmatchfinal --region us-east-1
aws s3 mb s3://my-kubeconfig-bucket1
aws s3 cp /home/cloudshell-user/.kube/config s3://my-kubeconfig-bucket1/kubeconfig

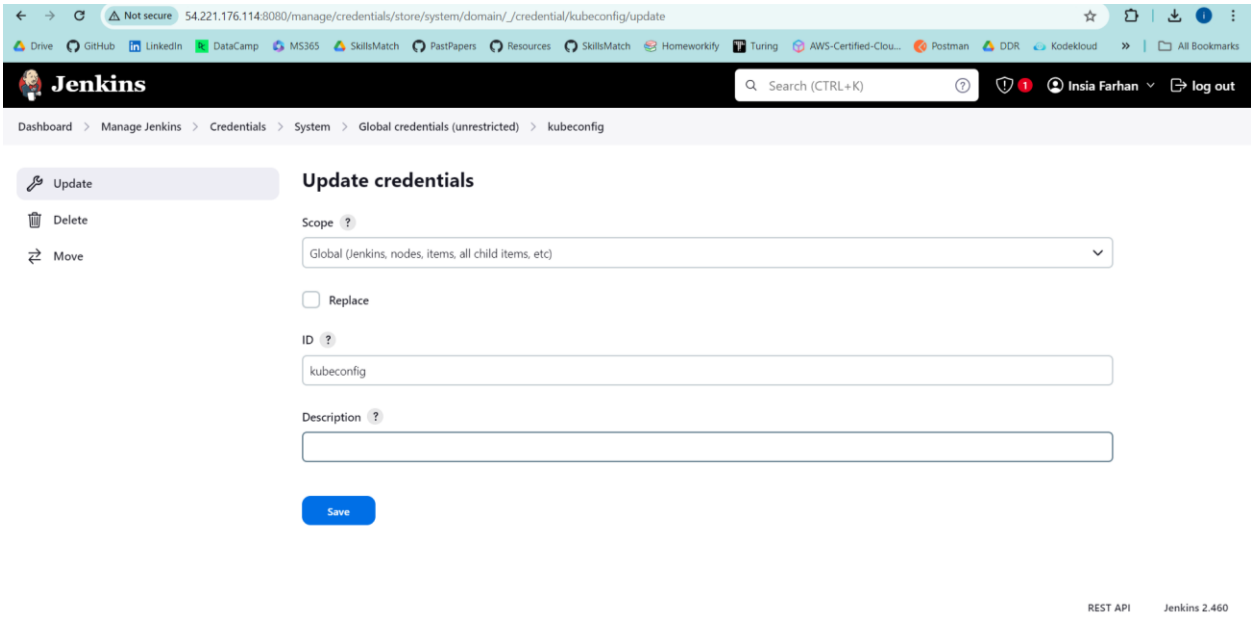
12. Get kubeconfig file, save it in S3 and then download it. (way to download anything from EC2)



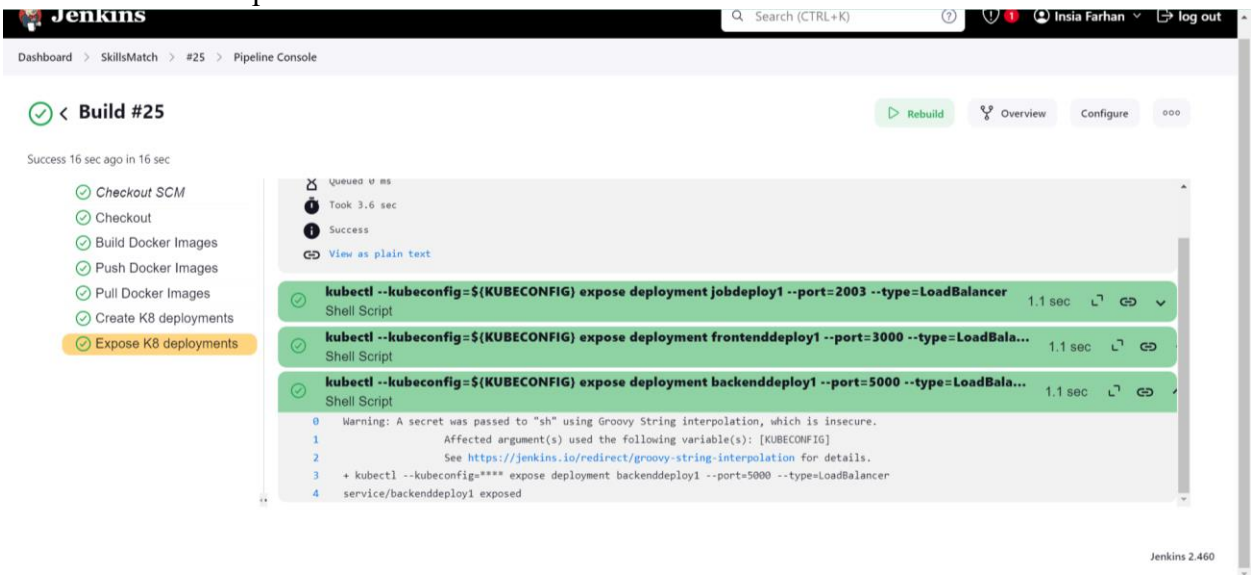


13. Save necessary credentials on Jenkins.





14. Build the Pipeline on Jenkins.



Side Notes:

Command to check logs: nubectl logs -f “pod id”
Winscp another solution for transfer of files from pc to ec2 instance, uses putty way and has drag drop feature.

Reference link:

https://medium.com/@belek.bagishbekov/how-to-install-and-configure-jenkins-on-amazon-linux-2023-a8d7463a0404