

CI/CD Deployment for Springboot Application.

Project 1

DESCRIPTION

As a Full Stack Developer, you have to build a CI/CD pipeline to demonstrate continuous deployment and host the application on AWS EC2 instance.

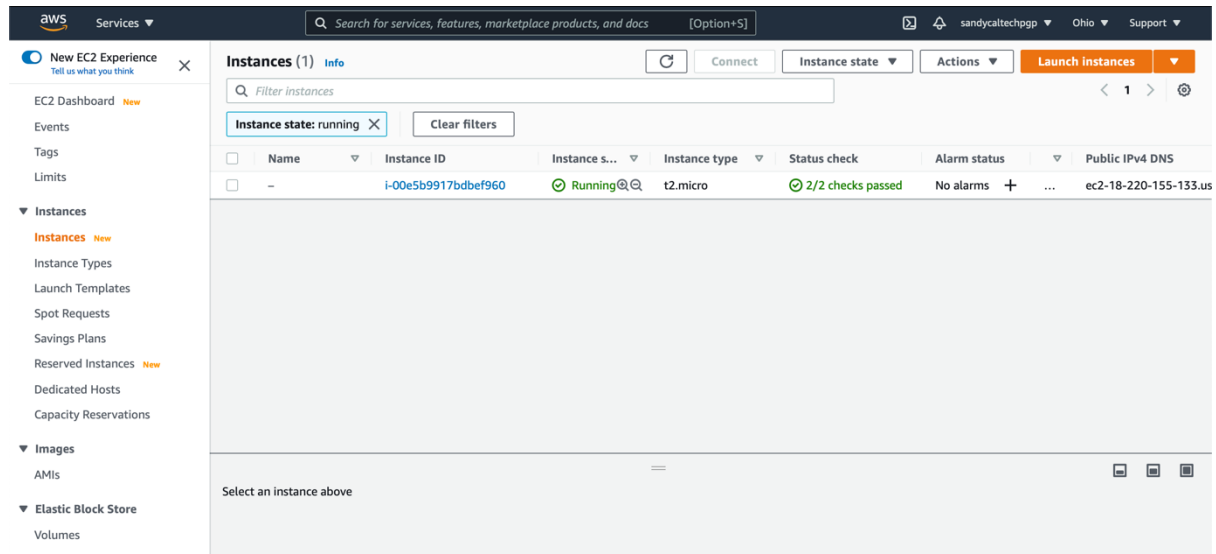
Background of the problem statement:

As the project is in the final stage, management has asked you to automate the integration and deployment of the web application. You are required to set up an environment where the application will be hosted and accessed by users. The source code is supposed to be fetched from a GitHub repository.

You must use the following:

- Eclipse
- GitHub
- Jenkins
- AWS EC2/ Virtual machine

Launch a EC2 machine in AWS:



Instance summary for i-00e5b9917bdf960 Info

Updated less than a minute ago

| | | |
|--|--|---|
| Instance ID i-00e5b9917bdf960 | Public IPv4 address 18.220.155.133 open address | Private IPv4 addresses 172.31.42.178 |
| Instance state Running | Public IPv4 DNS ec2-18-220-155-133.us-east-2.compute.amazonaws.com open address | Private IPv4 DNS ip-172-31-42-178.us-east-2.compute.internal |
| Instance type t2.micro | Elastic IP addresses - | VPC ID vpc-d70982bc |
| AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more | IAM Role - | Subnet ID subnet-916b3bdd |

Details | Security | Networking | Storage | Status checks | Monitoring | Tags

▼ Instance details Info

ENABLE PORTS IN EC2 for access from outside.

Security groups

IAM Role
-

Owner ID
459034134413

Launch time
Wed Apr 14 2021 19:07:53 GMT+0530 (IST)

Security groups
sg-08314aded414b5306 (launch-wizard-3)

▼ Inbound rules

| Port range | Protocol | Source | Security groups |
|------------|----------|-----------|-----------------|
| 8080 | TCP | 0.0.0.0/0 | launch-wizard-3 |
| 8080 | TCP | :::0 | launch-wizard-3 |
| 22 | TCP | 0.0.0.0/0 | launch-wizard-3 |
| 8081 | TCP | 0.0.0.0/0 | launch-wizard-3 |
| 8081 | TCP | :::0 | launch-wizard-3 |

▼ Outbound rules

| Port range | Protocol | Destination | Security groups |
|------------|----------|-------------|-----------------|
|------------|----------|-------------|-----------------|

SSH into the EC2 machine

```
sandeep@Sandeeps-MBP ~ % ssh -i "awtest.pem" ec2-user@ec2-18-220-155-133.us-east-2.compute.amazonaws.com
Last login: Wed Apr 14 15:26:06 2021 from 49.206.34.212

 _ _ _ _ _
| | | | |
|_|_|_|_|_| Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
No packages needed for security; 2 packages available
Run "sudo yum update" to apply all updates.
-bash: warning: setlocale: LC_CTYPE: cannot change locale (UTF-8): No such file or directory
[ec2-user@ip-172-31-42-178 ~]$ ls
apache-tomcat-10.0.5  apache-tomcat-10.0.5.tar.gz
[ec2-user@ip-172-31-42-178 ~]$
[ec2-user@ip-172-31-42-178 ~]$
[ec2-user@ip-172-31-42-178 ~]$
[ec2-user@ip-172-31-42-178 ~]$
```

INSTALL JDK : \$ sudo yum install java-1.8.0

INSTALL JENKINS:

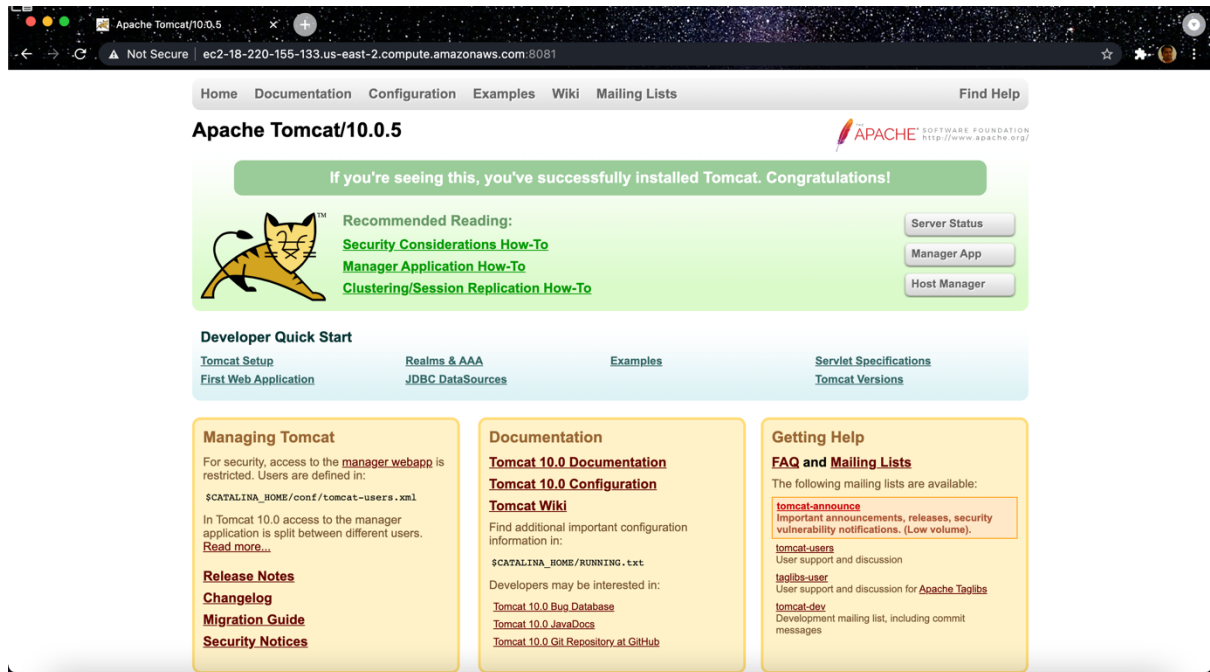
<https://www.jenkins.io/doc/book/installing/linux/#red-hat-centos>

DOWNLOAD TOMCAT :

\$ wget <https://mirrors.estointernet.in/apache/tomcat/tomcat-10/v10.0.5/bin/apache-tomcat-10.0.5.tar.gz>

UNZIP AND START TOMCAT:

/opt/tomcat/bin \$\$. ./startup.sh

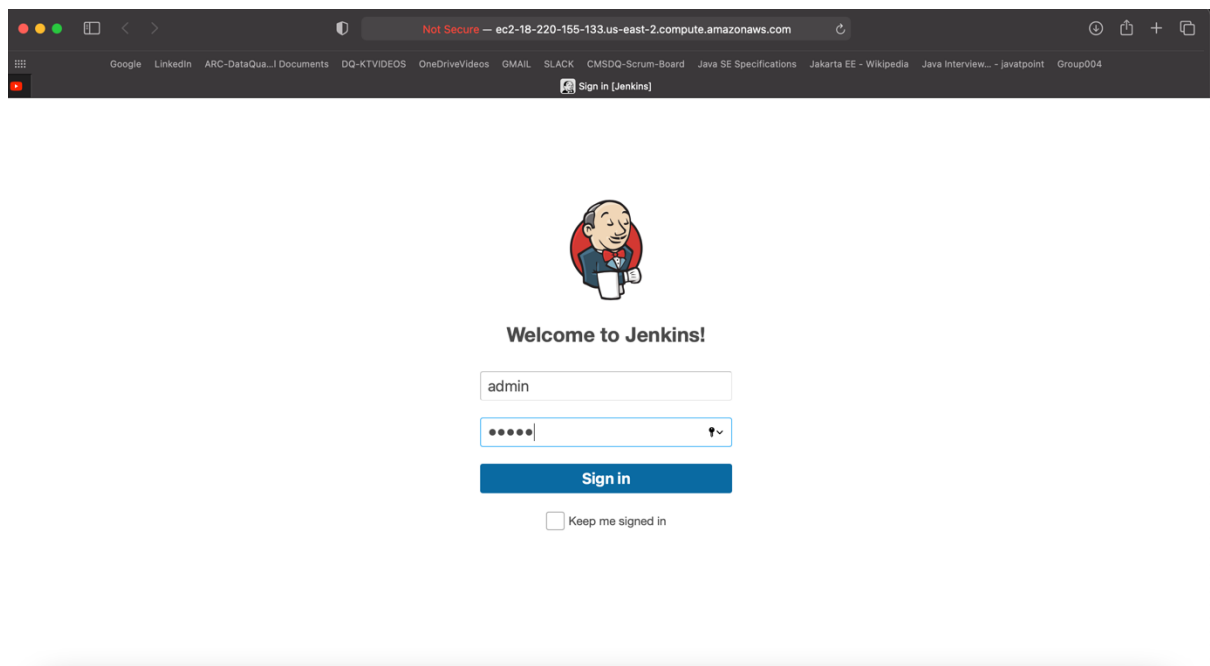


<http://ec2-18-220-155-133.us-east-2.compute.amazonaws.com:8081/>

JENKINS CONSOLE:

<http://ec2-18-220-155-133.us-east-2.compute.amazonaws.com:8080/>

LOGIN : admin/admin



Google

Linkedin

ARC-DataQua...I Documents

DQ-KTVIDEOS

OneDriveVideos

GMAIL

SLACK

CMSDQ-Scrum-Board

Java SE Specifications

Jakarta EE - Wikipedia

Java Interview... - javatpoint

Group004

Dashboard [Jenkins]

Jenkins

search

Admin

log out

Dashboard

New Item

People

Build History

Project Relationship

Check File Fingerprint

Manage Jenkins

My Views

Lockable Resources

New View

Build Queue

No builds in the queue.

Build Executor Status

1 idle

All

S

W

Name ↓

Last Success

Last Failure

Last Duration

phase5project

20 hr - #12

20 hr - #10

7.6 sec

Icon: S M L

Legend

Atom feed for all

Atom feed for failures

Atom feed for just latest builds

add description

Disable Project

Back to Dashboard

Status

Changes

Workspace

Build Now

Configure

Delete Project

Rename

Build History

find

#12 Apr 14, 2021 3:33 PM

#11 Apr 14, 2021 3:32 PM

#10 Apr 14, 2021 3:30 PM

#9 Apr 14, 2021 3:12 PM

Project phase5project

add description

Disable Project

Workspace

Recent Changes

Permalinks

Last build (#12), 20 hr ago

Last stable build (#12), 20 hr ago

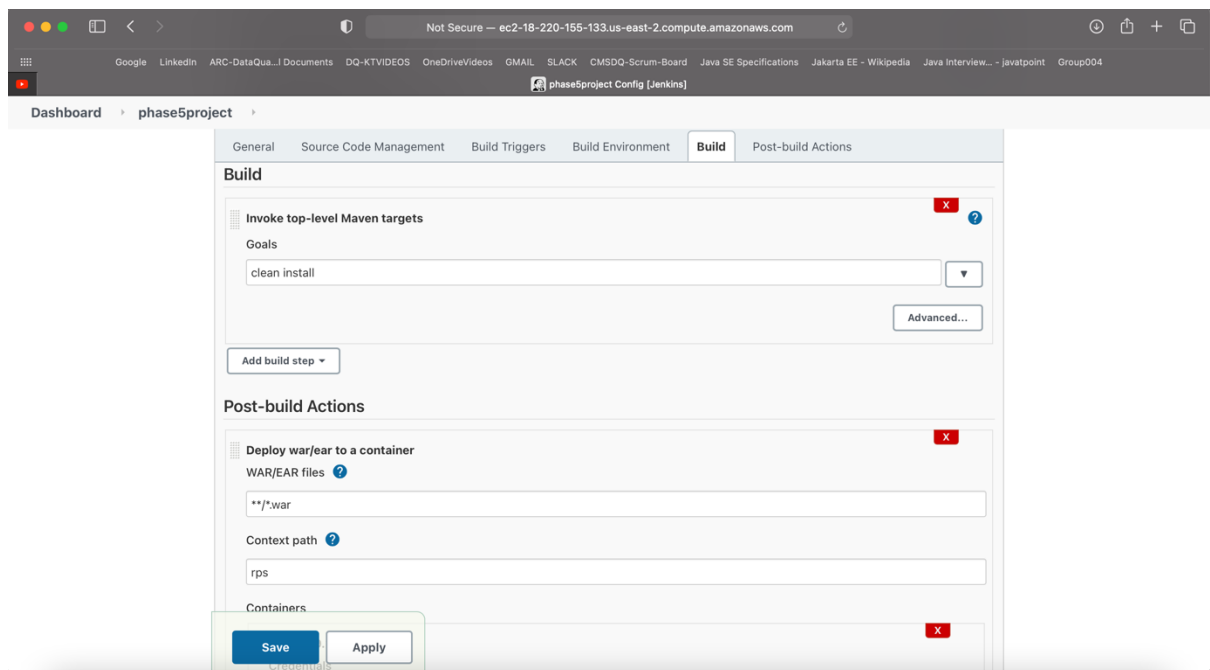
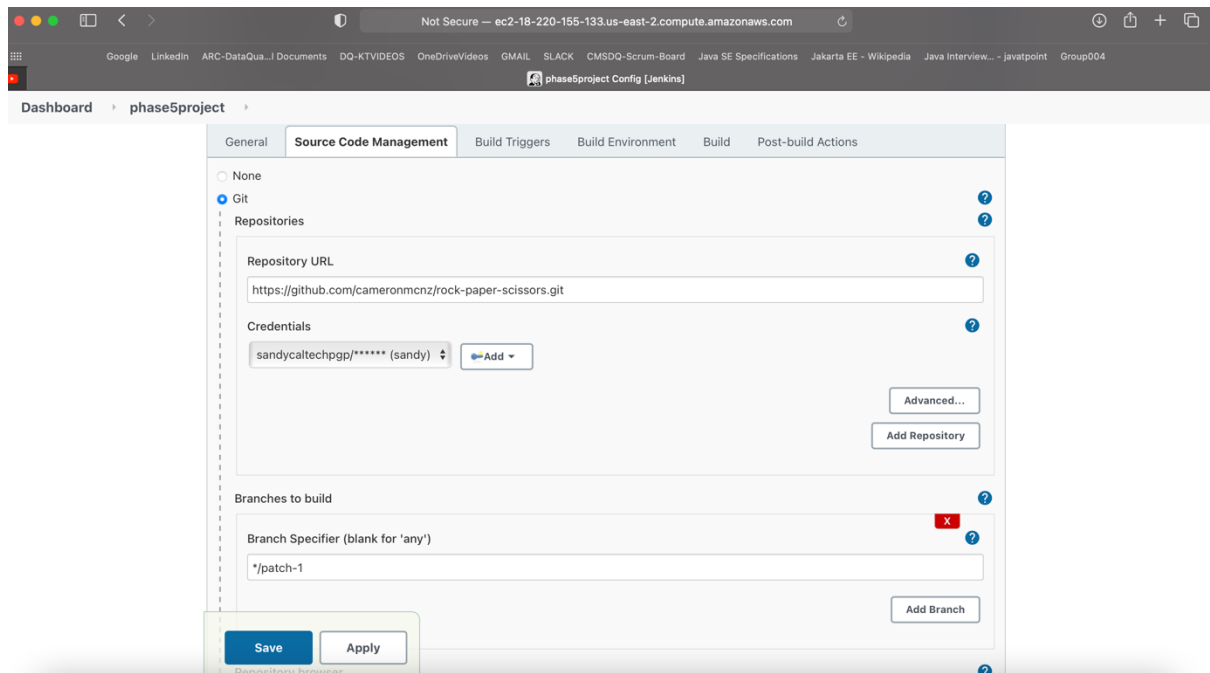
Last successful build (#12), 20 hr ago

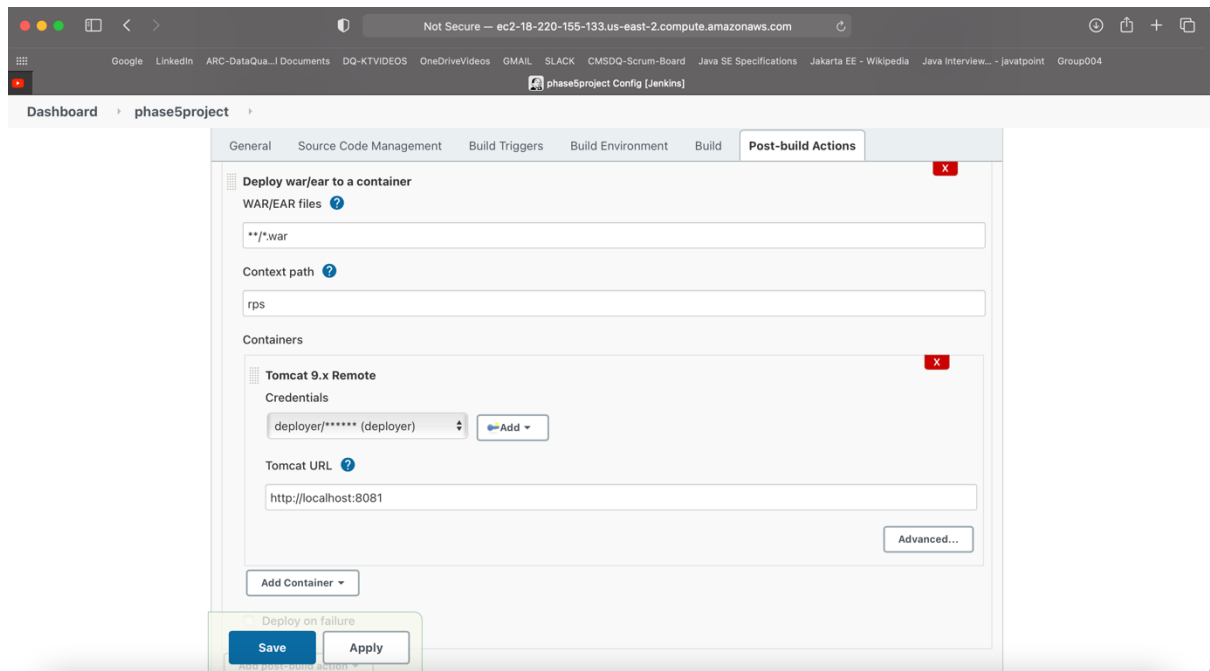
Last failed build (#10), 20 hr ago

Last unsuccessful build (#10), 20 hr ago

Last completed build (#12), 20 hr ago

GIT HUB PROJECT TO BE DEPLOYED in TOMCAT

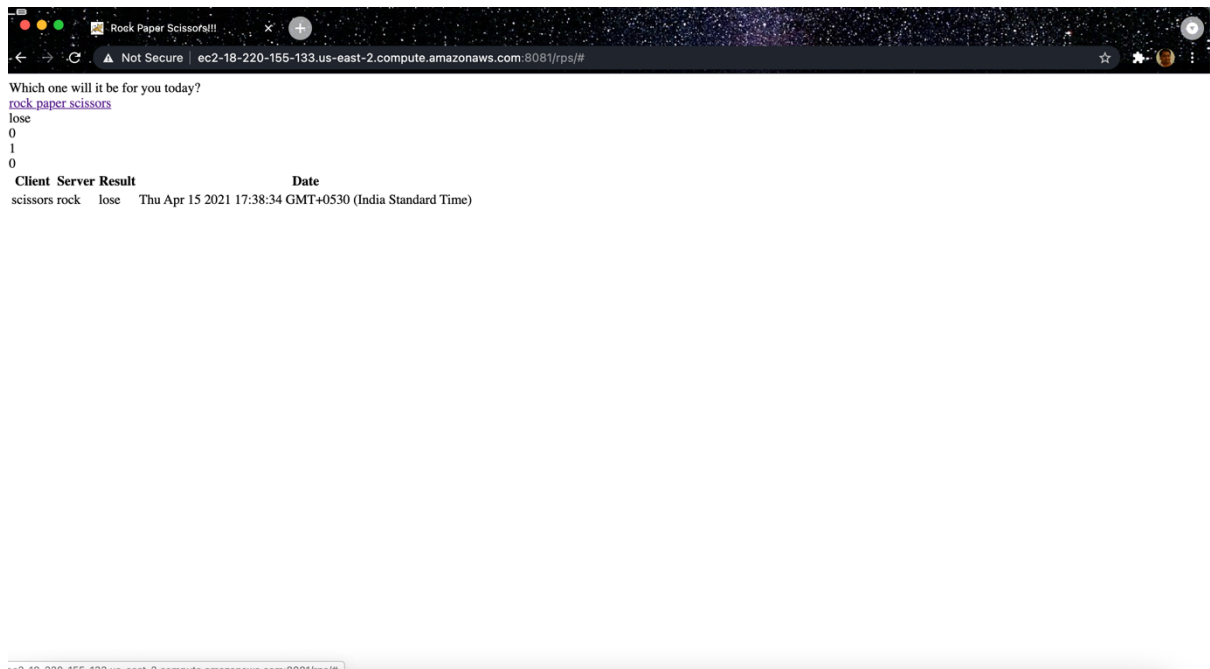




BUILD THE PROJECT IN JENKINS

SEE THE APP DEPLOYED IN TOMCAT

<http://ec2-18-220-155-133.us-east-2.compute.amazonaws.com:8081/rps/>



We successfully build a project from GITHUB and deploy on to the EC2 Machine.
THE END