Usecase-1

Problem Statement:

Build and Deploy the Java application on AWS using manual Process.

Use case Understanding:

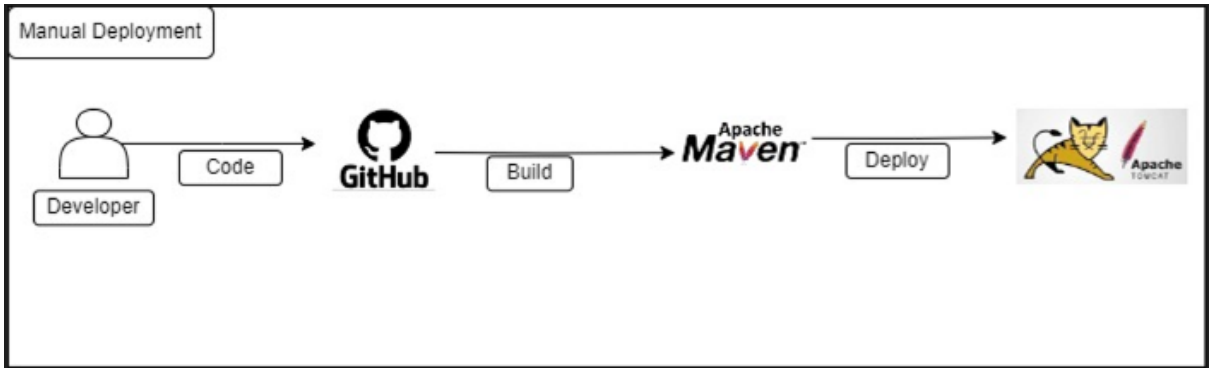
Create an EC2 instance with Proper resource tagging and in that server clone the GitHub repo and build the package file using Maven Software and once war file is created copy the war file into the Tomcat webapps directory to accept the requests form internet.

Pre-requisites:

1)AWS Account with Administrator Access

2)Git, Maven and Apache Tomcat Software's

Architecture Diagrams:



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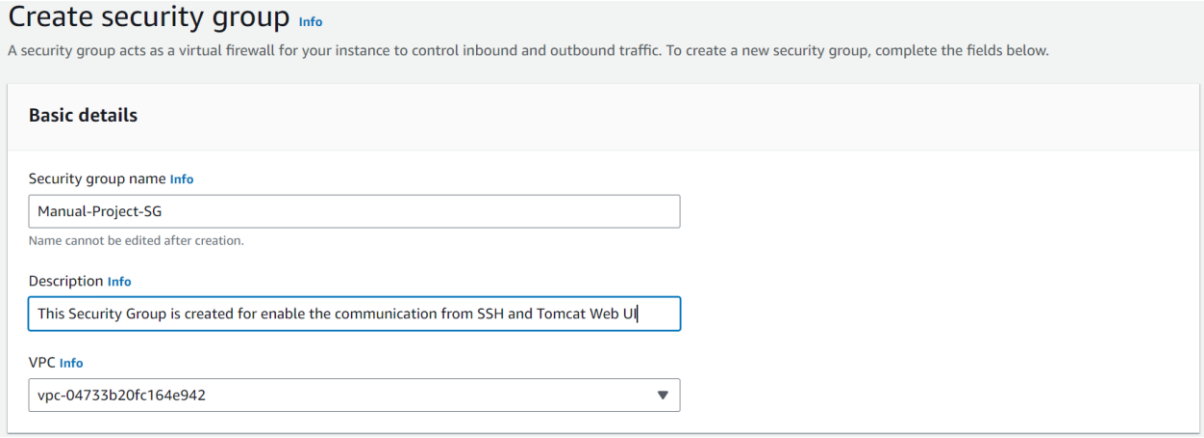
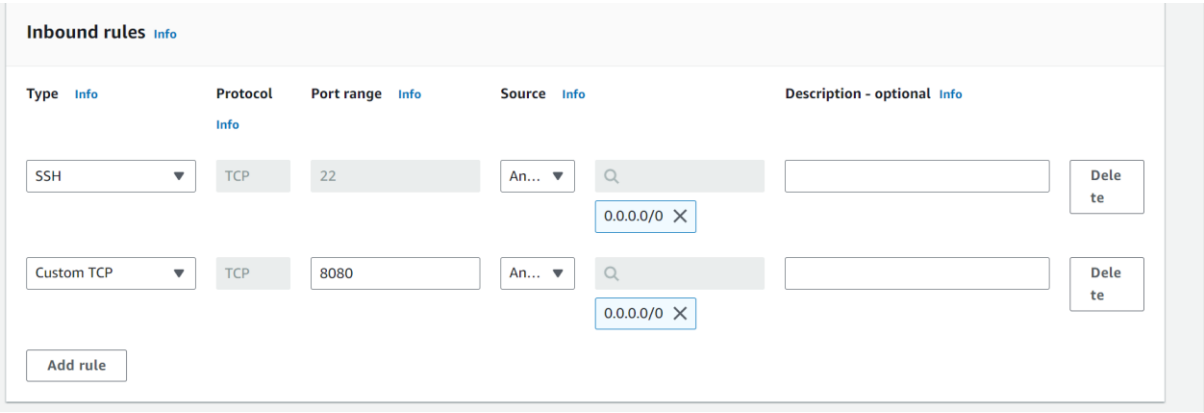
Implementation Plan:

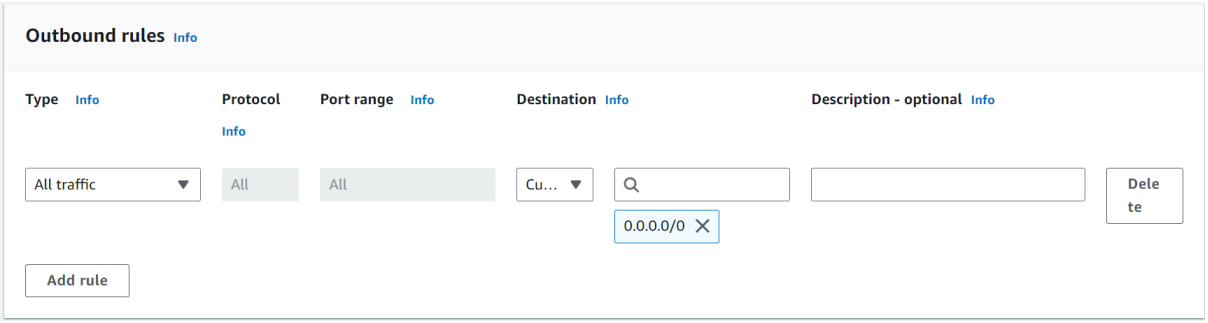
Security Group Creation:



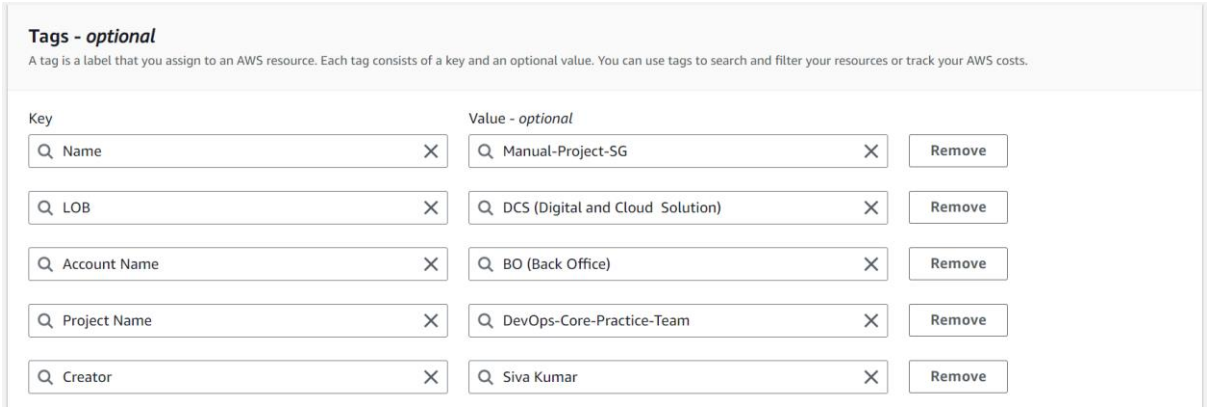
Inbound rules:



Outbound rules:

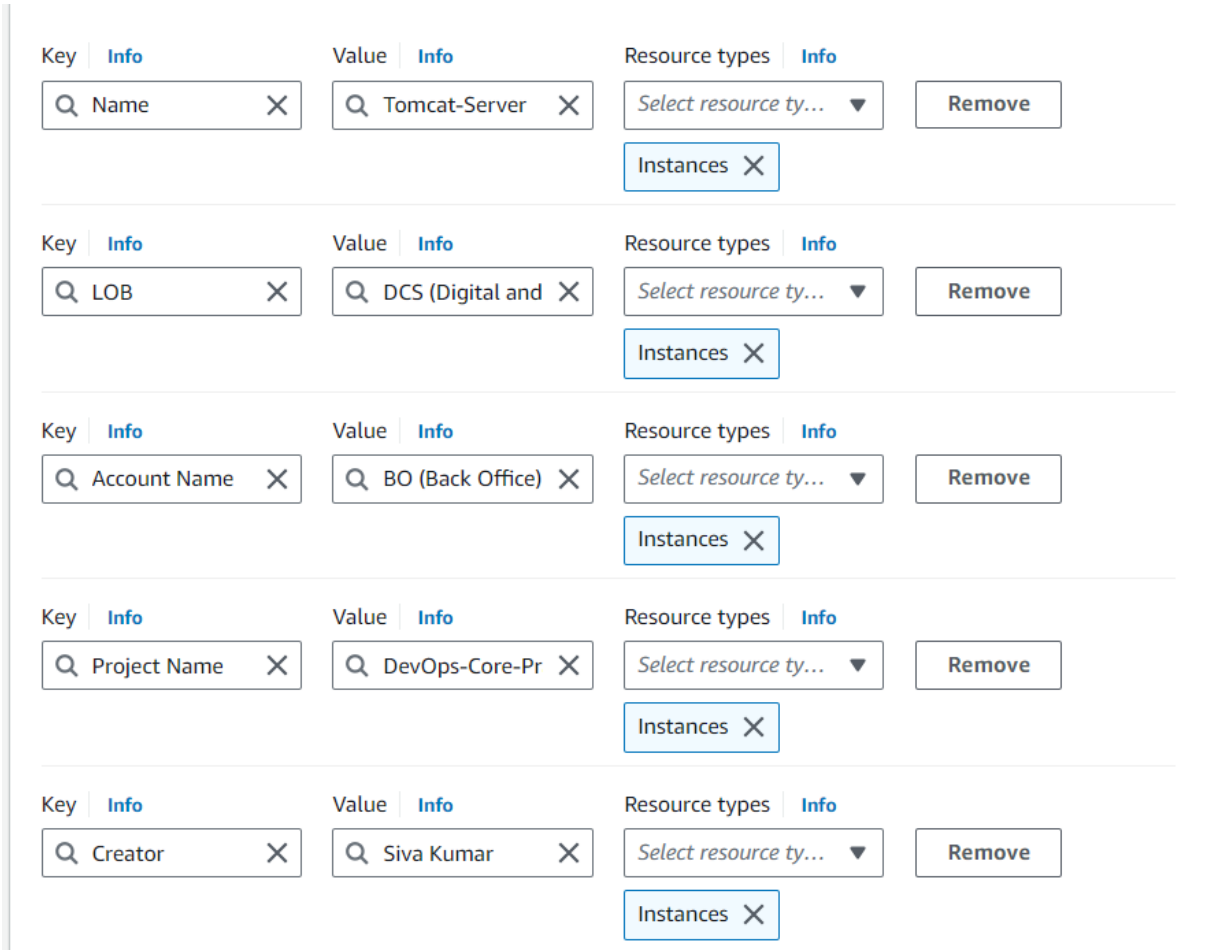


Tags:

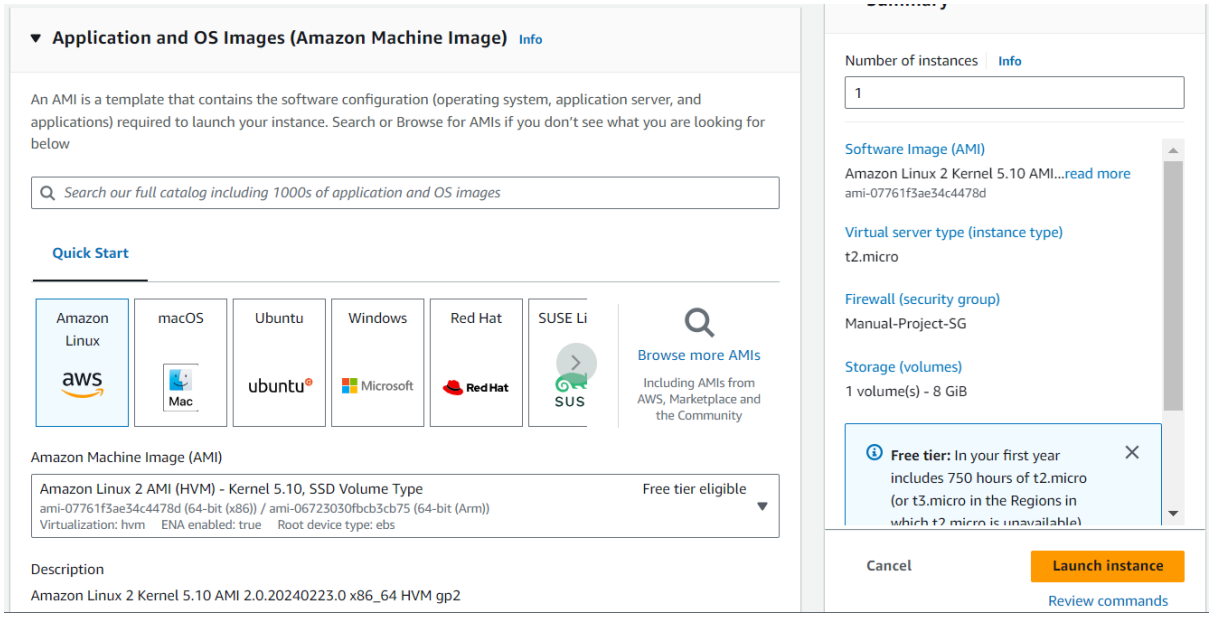


EC2 Creation:

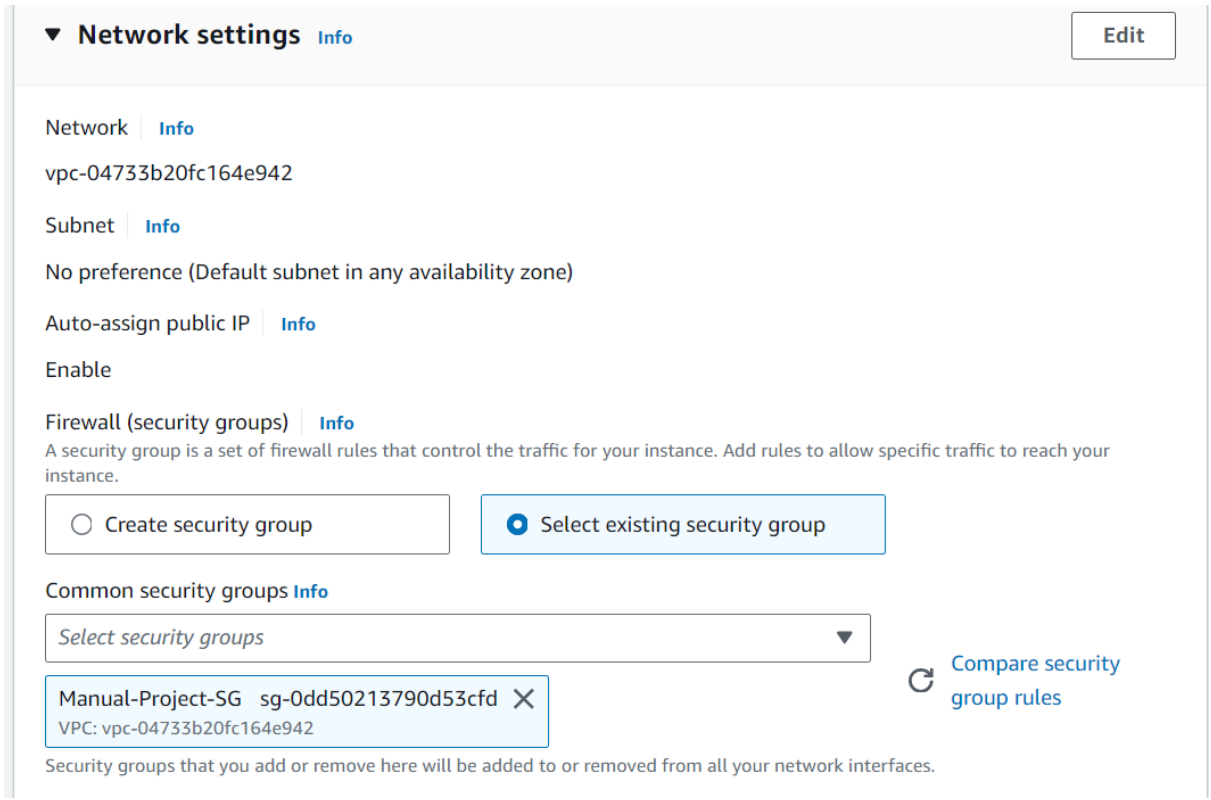
Instance Name & Tags:



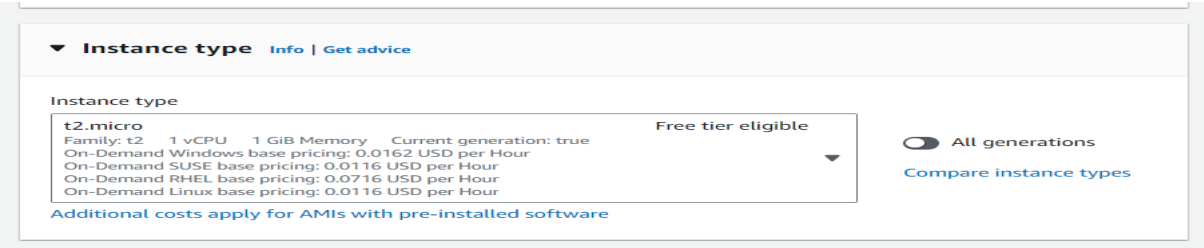
AMI:



Network Setting:

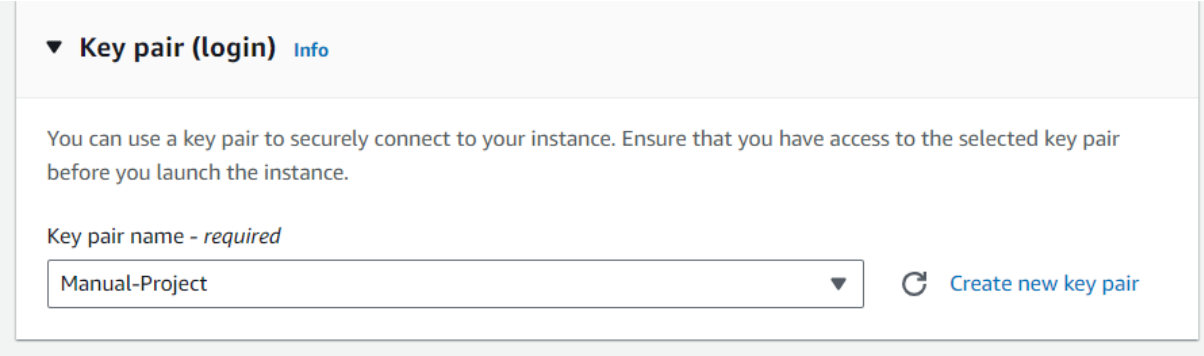


Instance Type:

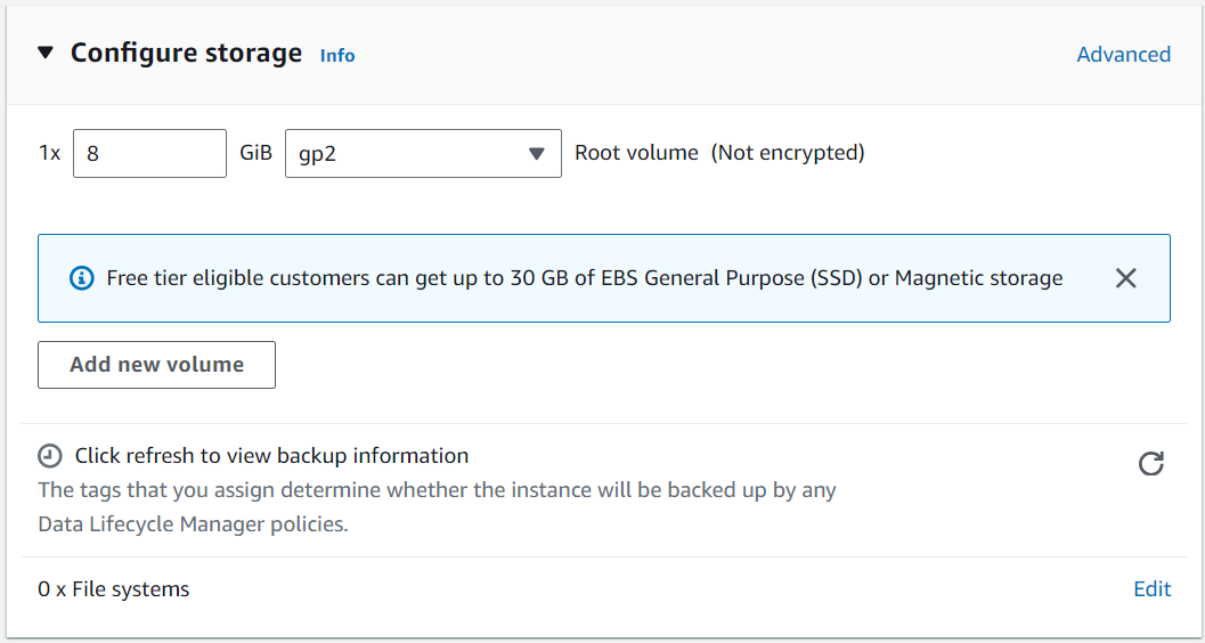


Key Pair:

Created pem key for this use case.



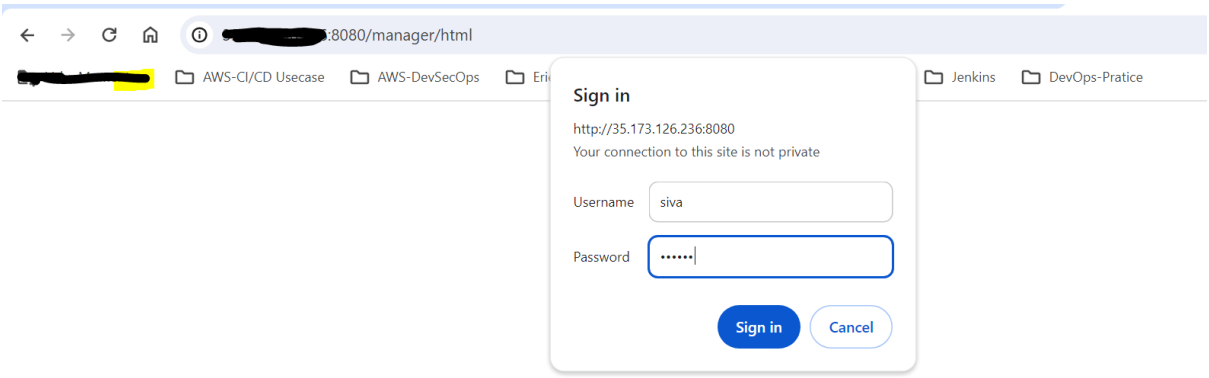
Storage:



GitHub Repo

Clone the repo from GitHub "https://github.com/sivakumar1204/myweb.git"

Tomcat User Credential's page:



Tomcat Web Application Manager

Message:	OK

Manager			
List Applications	HTML Manager Help	Manager Help	Server Status

Applications

Path	Version	Display Name	Running	Sessions	Commands
/	*None specified*	Welcome to Tomcat	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/docs	*None specified*	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/examples	*None specified*	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/host-manager	*None specified*	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/manager	*None specified*	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes

After war file copy to the tomcat destination folder

Tomcat Web Application Manager

Message:	OK

Manager			
List Applications	HTML Manager Help	Manager Help	Server Status

Applications

Path	Version	Display Name	Running	Sessions	Commands
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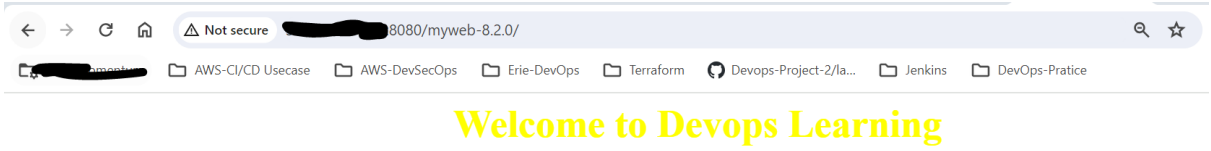
/examples	*None specified*	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/host-manager	*None specified*	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/manager	*None specified*	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/myweb-8.2.0	*None specified*	Archetype Created Web Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes

Output



Now We will modify the index file and test whether the required changes are appended in UI or not.

Index.jsp:

```
[ec2-user@ip-_            webapp]$ cat index.jsp
<html>
<body>
       <h1 style="color: yellow; font-size: 40px;" align="center">  Welcome to Devops Self Learning </h1>
       <h2 style="color: red; font-size: 40px;" align="center">  Its an Manual Deployment </h2>
       <h3 style="color: green; font-size: 40px;" align="center">  Created by Siva Kumar </h3>
</body>
</html>
[ec2-user@ip-_            webapp]$
```

After change the index.jsp file and build the war file and copied to the tomcat deployment directory out put would be like this.

Output History:

#history

sudo yum install git -y

git --version

sudo yum install -y maven

mvn --version

sudo wget https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.86/bin/apache-tomcat-9.0.86.tar.gz

tar -xvzf apache-tomcat-9.0.86.tar.gz

sudo amazon-linux-extras install java-openjdk11 -y

java --version

sudo alternatives --config java

java --version

sudo yum install -y java-1.8.0-openjdk-devel -y

sudo alternatives --config javac

javac -version

git clone https://github.com/sivakumar1204/myweb.git

cd myweb/

mvn clean install

cd target/

cp myweb-8.2.0.war /home/ec2-user/apache-tomcat-9.0.86/webapps/

cd /home/ec2-user/apache-tomcat-9.0.86/webapps

cd /home/ec2-user/apache-tomcat-9.0.86/

cd bin/

./shutdown.sh

./startup.sh

++

Modify the index.jsp file

++

cd /home/ec2-user/myweb/src/main/webapp/

cat index.jsp

```
cd /home/ec2-user/myweb/

mvn clean install

cp myweb-8.2.0.war /home/ec2-user/apache-tomcat-9.0.86/webapps/

cd /home/ec2-user/apache-tomcat-9.0.86/webapps

cd /home/ec2-user/apache-tomcat-9.0.86/

cd bin/

./shutdown.sh

./startup.sh
```