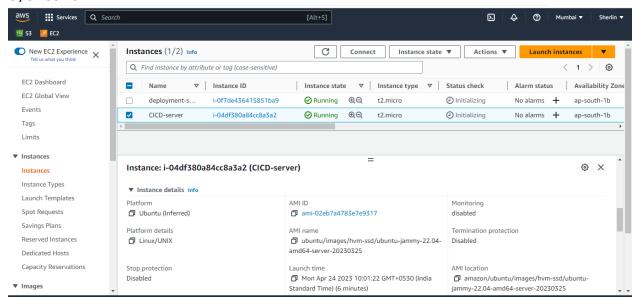
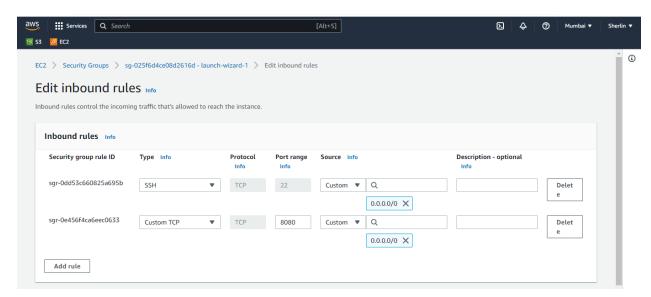
Pipeline Job to build and deploy docker image

1. CI/CD Server





In CI/CD server

A] Update package Manager sudo apt update

```
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
ubuntu@ip-172-31-9-123:~$ sudo apt update
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:3 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:4 http://ap-south-l.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [108 kB]
Get:5 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]
Get:6 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [764 kB]
Get:7 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [151 kB]
Get:8 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [9028 B]
Get:9 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [773 kB]
Get:10 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [121 kB]
Get:ll http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [604 B]
Get:12 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [718 kB]
Get:13 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [119 kB]
Get:14 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [14.2 kB]
Get:15 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [19.4 kB]
Get:16 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [4068 B]
Get:17 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [252 B]
Get:18 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get:19 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f Metadata [286 kB]
Get:20 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [217 kB]
Get:21 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse Translation-en [112 kB]
Get:22 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n-f Metadata [8372 B]
Get:23 http://ap-south-l.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1031 kB]
Get:24 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [216 kB]
Get:25 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [14.1 kB]
Get:26 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [816 kB]
Get:27 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [128 kB]
Get:28 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [604 B]
Get:29 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [902 kB]
Get:30 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [181 kB]
Get:31 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [18.6 kB]
Get:32 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [24.1 kB]
Get:33 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [6312 B]
 C,
                                                                                               w
          Type here to search
```

b] Install Java

sudo apt install openjdk-11-jdk -y

```
whuntu8ip-172-31-0-128:-0 sudo apt install openjdk-ll-jdk -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
    openjdk-ll-jdk-headless openjdk-ll-jre-openjdk-ll-jre-headless
Suggested packages:
    openjdk-ll-demo openjdk-ll-source visualvm libnss-mdns fonts-ipafont-gothic fonts-ipafont-mincho fonts-wqy-microhei | fonts-wqy-zenhei fonts-indic
The following NEW packages will be installed:
    openjdk-ll-jdk openjdk-ll-jdk-headless openjdk-ll-jre openjdk-ll-jre-headless
    oupgraded, 4 nevly installed, 0 to remove and 27 not upgraded, 4 nevly installed, 0 to remove and 27 not upgraded, 4 nevly installed, 0 to remove and 27 not upgraded, 8 nevly installed, 0 to remove and 27 not upgraded, 4 nevly installed, 0 to remove and 27 not upgraded, 8 nevly installed, 0 to remove and 27 not upgraded, 8 nevly installed, 0 to remove and 27 not upgraded, 8 nevly installed, 0 to remove and 27 not upgraded, 10 nevly installed, 0 nevly installed, 0 to remove and 27 not upgraded, 10 nevly installed, 0 newly installed, 0 ne
```

```
update-alternatives: using /usr/lib/ymm/java-8-openjdk-amd64/bin/wsimport to provide /usr/bin/wsimport (wsimport) in auto mode update-alternatives: using /usr/lib/ymm/java-8-openjdk-amd64/bin/wsimport to provide /usr/bin/wsimport (wsimport) in auto mode setting up libptkil-0-0-iamd64 (2.24.3-2-openjdk-amd64/bin/xjc to provide /usr/bin/xjc (xjc) in auto mode setting up openjdk-3-resamd64 (8082-yga-Oubuntur)2.04) ...

Setting up libptkil-0-0-iamd64 (8.24.33-2-obubntu2) ...

Setting up libptkil-0-oiamd64 (2.24.33-2-obubntu2) ...

Setting up libptillosamd64 (2.24.3-0bubntu2) ...

Setting up libptillosamd64 (2.24.3-obubntu2) ...

Setting up libptillos
```

c] Install Jenkins

sudo wget -q -O - https://pkg.jenkins.io/debian/jenkins.io.key | sudo apt-key add -

sudo sh -c 'echo deb https://pkg.jenkins.io/debian-stable-binary/ >

/etc/apt/sources.list.d/Jenkins.list'

```
Setting up opengidk-11-jdk:amd64 (11.0.18+10-oubuntul-20.08.1) ...

update-alternatives: using /usr/lib/jwm/java-11-openjdk-amd64/bin/jconsole to provide /usr/bin/jconsole (jconsole) in auto mode

Processing triggers for hicolor-icon-theme (0.17-2) ...

Processing triggers for mime-support (3.64ubuntul) ...

ubuntu8jp-172-31-0-128:-% java --version

openjdk 11.0.18 2023-01-17

OpenDRK Runtime Environment (build 11.0.18+10-post-Ubuntu-Oubuntu120.04.1)

OpenDRK G-Batt Server WK (build 11.0.18+10-post-Ubuntu-Oubuntu120.04.1)

OpenDRK G-Batt Server WK (build 11.0.18+10-post-Ubuntu-Oubuntu120.04.1, mixed mode, sharing)

ubuntu8jp-172-31-0-128:-% sudo wget -q -O - https://pkg.jenkins.io/debian/jenkins.io.key | sudo apt-key add -

OK

ubuntu8jp-172-31-0-128:-% sudo sh -c 'echo deb http://pkg.jenkins.io/debian-stable binary/ > /etc/apt/sources.list.d/jenkins.list'

ubuntu8jp-172-31-0-128:-% sudo apt update
```

sudo apt update

sudo apt install Jenkins

```
Ubuntualp-172-31-1-181-4 sudo and -c 'echo deb http://pkg.jenkins.10/debian-stable binary/ > /etc/apt/sources.iist.d/jenkins.iist'
ubuntualp-172-31-0-1281-5 sudo apt update
[gri: https://pkg.jenkins.io/debian-stable binary/ InRelease
[Get: https://pkg.jenkins.io/debian-stable binary/ Release.gg [833 8]
[Get: https://pkg.jenkins.io/debian-stable binary/ Release.gg [833 8]
[Hi: 4 http://ap-south-i.ecl.archive.ubuntu.com/ubuntu focal InRelease
[Hi: 5 http://ap-south-i.ecl.archive.ubuntu.com/ubuntu focal-updates InRelease
[Get: 6 https://pkg.jenkins.io/debian-stable binary/ Packages [24.6 kB]
[Hi: 7 http://ap-south-i.ecl.archive.ubuntu.com/ubuntu focal-backports InRelease
[Get: 6 https://pkg.jenkins.io/debian-stable binary/ Packages [24.6 kB]
[Hi: 7 http://ap-south-i.ecl.archive.ubuntu.com/ubuntu focal-backports InRelease
[Fetched 27.4 kB in 18 [33.8 kB/s]
[Fetched 27.4 kB in 18 [30.8 kB/s]
[Fetched 27.5 kB in 18 [30
```

d] Install Docker

sudo apt install docker.io -y

```
ubuntu@ip-172-31-0-128:~$ sudo apt install docker.io -y

Reading package lists... Done

Building dependency tree

Reading state information... Done

docker.io is already the newest version (20.10.21-0ubuntul~20.04.1).

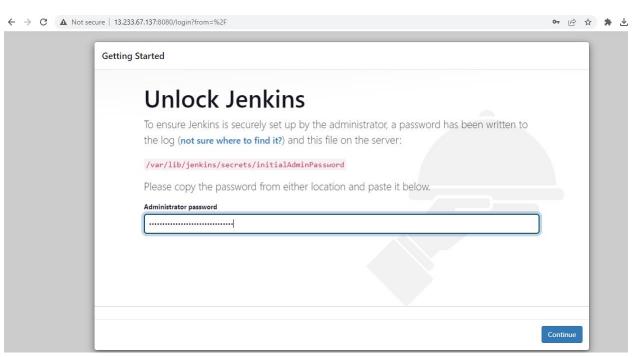
0 upgraded, 0 newly installed, 0 to remove and 27 not upgraded.
```

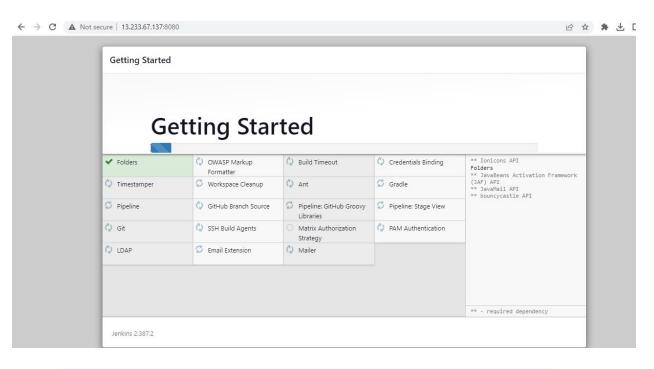
- e] Add Jenkins user to docker sudo usermod -aG docker jenkins
- f] Restart Jenkins sudo systemctl restart jenkins

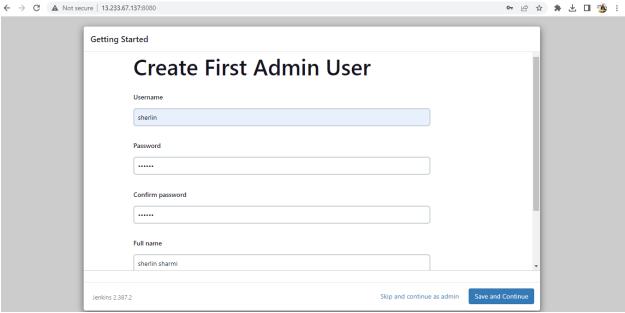
```
usermod: user 'Jenkins' does not exist
ubuntu@ip-172-31-0-128:~$ sudo usermod -aG docker jenkins
ubuntu@ip-172-31-0-128:~$ sudo systemctl restart jenkins
ubuntu@ip-172-31-0-128:~$
```

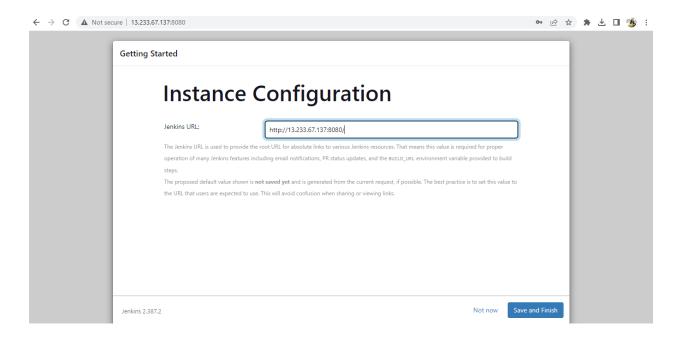


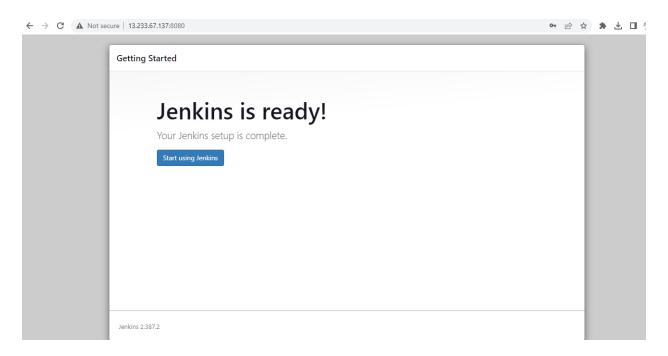


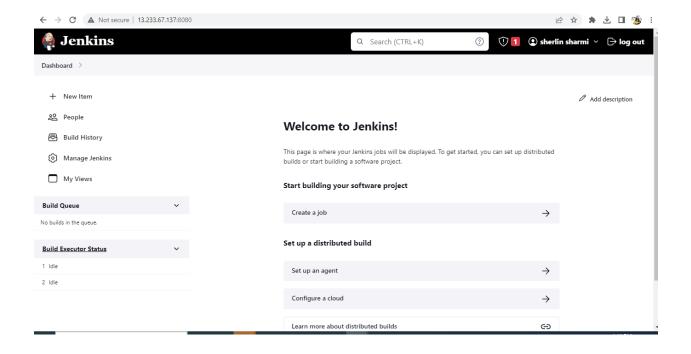










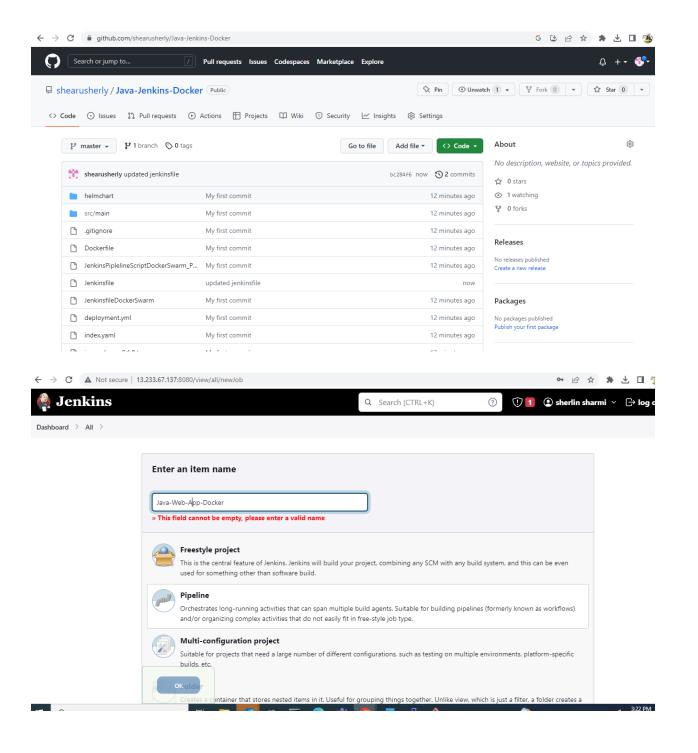


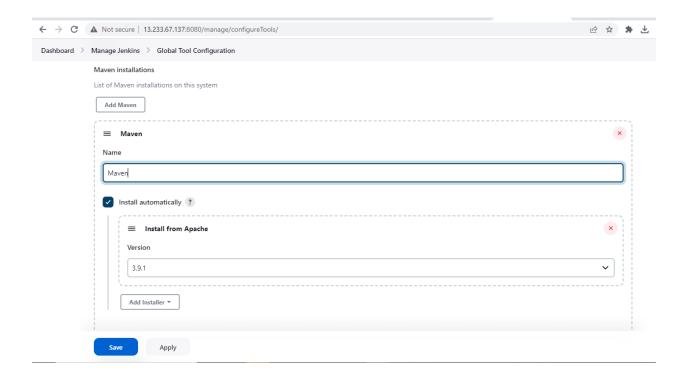


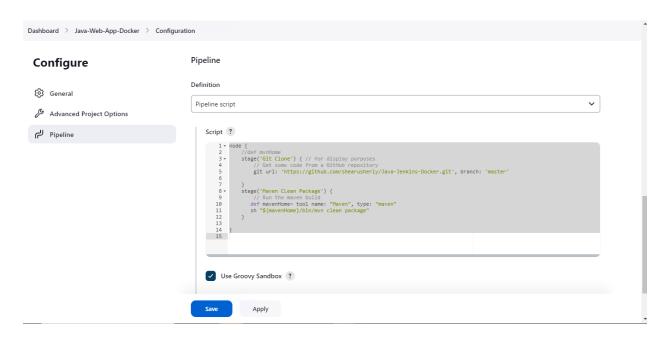
o→ 🖻 ☆ 🛊 🕹

Github

← → C ▲ Not secure | 13.233.67.137:8080/login?from=%2Fview%2Fall%2FnewJob







```
node {
  //def mvnHome
  stage('Git Clone') { // for display purposes
  // Get some code from a GitHub repository
    git url: 'https://github.com/shearusherly/Java-Jenkins-Docker.git', branch: 'master'
}
```

```
stage('Maven CLean Package') {
     // Run the maven build
     def mavenHome= tool name: "Maven", type: "maven"
     sh "${mavenHome}/bin/mvn clean package"
  }
            ▲ Not secure | 13.233.67.137:8080/job/Java-Web-App-Docker/
                                                                                                                                         🖻 🌣 🛊 😃 🛚 🦠
     Jenkins
                                                                                                                         🕦 🚺 💽 sherlin sharmi 🔻 🕞 log out
                                                                                    Q Search (CTRL+K)
Dashboard > Java-Web-App-Docker >

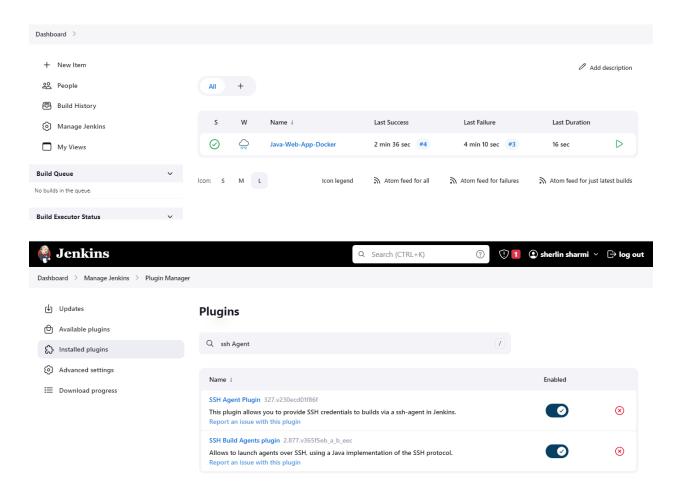
■ Status

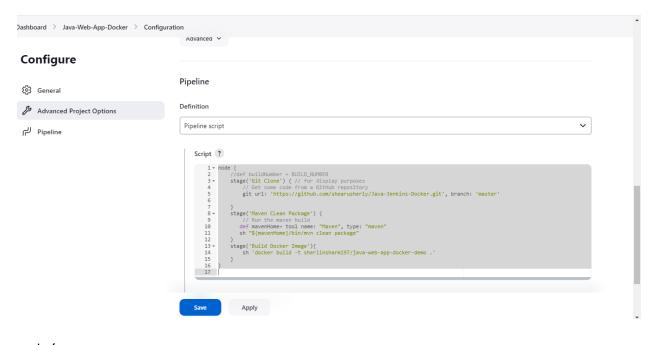
                                            Pipeline Java-Web-App-Docker
  </>
</>
Changes
                                                                                                                                               Add description
  Disable Project
  (i) Configure
                                            Stage View
   Delete Pipeline
  Q Full Stage View
                                                                                            Maven CLean
                                                                             Git Clone
                                                                                             Package
   Rename
                                                       Average stage times:
                                                                                1s
                                                                                                4s
  ? Pipeline Syntax
                                                 (Average <u>full</u> run time: ~16s)
                                             #4
 Build History
                                                                                               15s
                                                15:39
Q Filter builds...
                                                                              499ms
139ms
                                                15:37
Apr 24, 2023, 10:09 AM
 🧌 Jenkins
                                                                                                                       ① 1 ② sherlin sharmi ∨ → log out
                                                                                  Q Search (CTRL+K)
Dashboard > Java-Web-App-Docker > #4

■ Status

                                                 Console Output
  </>
Changes
                                           Skipping 59 KB.. Full Log
  Console Output
                                             Downloading from central: https://repo.maven.apache.org/maven2/javax/servlet/jstl/1.2/jstl-1.2.jar
                                             Progress (4): 1.4/1.5 MB | 1.2/1.3 MB | 0.2/1.1 MB | 180/280 kB
  View as plain text
                                             Progress (4): 1.4/1.5 MB | 1.2/1.3 MB | 0.2/1.1 MB | 180/280 kB
                                             Progress (4): 1.4/1.5 MB | 1.3/1.3 MB | 0.2/1.1 MB | 180/280 kB
  [ Edit Build Information
                                             Progress (4): 1.4/1.5 MB | 1.3 MB | 0.2/1.1 MB | 180/280 kB
                                             Progress (4): 1.4/1.5 MB | 1.3 MB | 0.2/1.1 MB | 180/280 kB
   Delete build '#4'
                                             Progress (4): 1.5/1.5 MB | 1.3 MB | 0.2/1.1 MB | 180/280 kB
  Git Build Data
                                             Progress (4): 1.5/1.5 MB | 1.3 MB | 0.2/1.1 MB | 180/280 kB
                                             Progress (4): 1.5/1.5 MB | 1.3 MB | 0.2/1.1 MB | 180/280 kB
                                             Progress (4): 1.5 MB | 1.3 MB | 0.2/1.1 MB | 180/280 kB
  Downloaded from central: https://repo.maven.apache.org/maven2/org/mockito/mockito-core/1.9.5/mockito-core-1.9.5.jar (1.5 MB
  Pipeline Steps
                                             at 2.4 MB/s)
                                             Downloaded from central: https://repo.maven.apache.org/maven2/org/springframework/spring-web/5.0.7.RELEASE/spring-web
  Workspaces
                                             5.0.7.RELEASE.jar (1.3 MB at 2.0 MB/s)
                                             Progress (3): 0.2/1.1 MB | 180/280 kB | 16/414 kB
   ← Previous Build
                                             Progress (3): 0.2/1.1 MB | 180/280 kB | 33/414 kB
                                             Progress (3): 0.2/1.1 MB | 180/280 kB | 49/414 kB
```







```
node {
    //def buildNumber = BUILD_NUMBER
    stage('Git Clone') { // for display purposes
        // Get some code from a GitHub repository
        git url: 'https://github.com/shearusherly/Java-Jenkins-Docker.git', branch: 'master'
}
stage('Maven CLean Package') {
        // Run the maven build
        def mavenHome= tool name: "Maven", type: "maven"
        sh "${mavenHome}/bin/mvn clean package"
}
stage('Build Docker Image'){
        sh 'docker build -t sherlinsharmi97/java-web-app-docker-demo .'
}
```

```
Dashboard > Java-Web-App-Docker > #10

■ Status

                                             Console Output
 </>
Changes
 Console Output
                                               Started by user sherlin sharmi
                                               [Pipeline] Start of Pipeline
    View as plain text
                                               Running on Jenkins in /var/lib/jenkins/workspace/Java-Web-App-Docker@2

☑ Edit Build Information

                                               [Pipeline] {
                                               [Pipeline] stage
  Delete build '#10'
                                               [Pipeline] git
                                               The recommended git tool is: NONE
 Git Build Data
                                              No credentials specified
                                                > git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/Java-Web-App-Docker@2/.git # timeout=10
  Fetching changes from the remote Git repository
 Pipeline Steps
                                                > git config remote.origin.url https://github.com/shearusherly/Java-Jenkins-Docker.git # timeout=10
                                               Fetching upstream changes from https://github.com/shearusherly/Java-Jenkins-Docker.git
                                               > git --version # timeout=10
 Workspaces
                                               > git --version # 'git version 2.25.1'
                                               > git fetch --tags --force --progress -- https://github.com/shearusherly/Java-Jenkins-Docker.git
  ← Previous Build
                                               +refs/heads/*:refs/remotes/origin/* # timeout=10
                                               > git rev-parse refs/remotes/origin/master^{commit} # timeout=10
                                               Checking out Revision bc284f63a742b56bd579d5744d6b5fce6230e7c3 (refs/remotes/origin/master)
                                                > git config core.sparsecheckout # timeout=10
                                                > git checkout -f bc284f63a742b56bd579d5744d6b5fce6230e7c3 # timeout=10
Dashboard > Java-Web-App-Docker > #10
                                                > git rev-list --no-walk bc284f63a742b56bd579d5744d6b5fce6230e7c3 # timeout=10
                                               [Pipeline] }
                                               [Pipeline] // stage
                                                [Pipeline] stage
                                                [Pipeline] { (Maven CLean Package)
                                                [Pipeline] tool
                                               [Pipeline] sh
                                                + /var/lib/jenkins/tools/hudson.tasks.Maven_MavenInstallation/Maven/bin/mvn clean package
                                               [INFO] Scanning for projects...
                                               [INFO]
                                               [INFO] ------ com.mt:java-web-app >-----
                                                [INFO] Building Maven Web Application 1.0
                                                [INFO] from pom.xml
                                               [INFO]
                                               [INFO] --- clean:3.2.0:clean (default-clean) @ java-web-app ---
                                               [INFO] Deleting /var/lib/jenkins/workspace/Java-Web-App-Docker@2/target
                                                [INFO] --- resources:3.3.0:resources (default-resources) @ java-web-app ---
                                                [INFO] Copying 1 resource
                                                [INFO]
                                               [INFO] --- compiler:2.5.1:compile (default-compile) @ java-web-app ---
                                               [INFO] Compiling 2 source files to /var/lib/jenkins/workspace/Java-Web-App-Docker@2/target/classes
                                               [INFO]
                                               [INFO] --- resources:3.3.0:testResources (default-testResources) @ java-web-app ---
                                                [INFO] skip non existing resourceDirectory /var/lib/jenkins/workspace/Java-Web-App-Docker@2/src/test/resources
                                               [INFO]
```

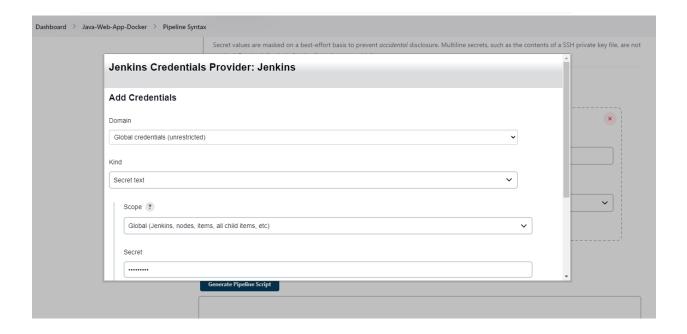
```
Dashboard > Java-Web-App-Docker > #10
                                            [IMFO] --- compiler:2.5.1:cesccompile (deradit-testcompile) @ Java-web-app ---
                                            [INFO] No sources to compile
                                            [INFO]
                                            [INFO] --- surefire:3.0.0:test (default-test) @ java-web-app ---
                                            [INFO] No tests to run.
                                            [INFO]
                                            [INFO] --- war:3.3.2:war (default-war) @ java-web-app ---
                                            [INFO] Packaging webapp
                                             [INFO] Assembling webapp [java-web-app] in [/var/lib/jenkins/workspace/Java-Web-App-Docker@2/target/java-web-app-1.0]
                                            [INFO] Processing war project
                                            [INFO] \ \ Copying \ \ we bapp \ \ resources \ \ [/var/lib/jenkins/workspace/Java-Web-App-Docker@2/src/main/webapp]
                                            [INFO] Building war: /var/lib/jenkins/workspace/Java-Web-App-Docker@2/target/java-web-app-1.0.war
                                            [INFO] -----
                                            [INFO] BUILD SUCCESS
                                            [INFO] Total time: 5.868 s
                                             [INFO] Finished at: 2023-04-24T11:25:23Z
                                            [INFO] -----
                                            [Pipeline] // stage
                                            [Pipeline] stage
                                            [Pipeline] { (Build Docker Image)
                                             + docker build -t sherlinsharmi97/java-web-app-docker-demo .
                                            Sending build context to Docker daemon 13.71MB
                                            Step 1/2 : FROM tomcat:8.0.20-ire8
                                            8.0.20-jre8: Pulling from library/tomcat
```

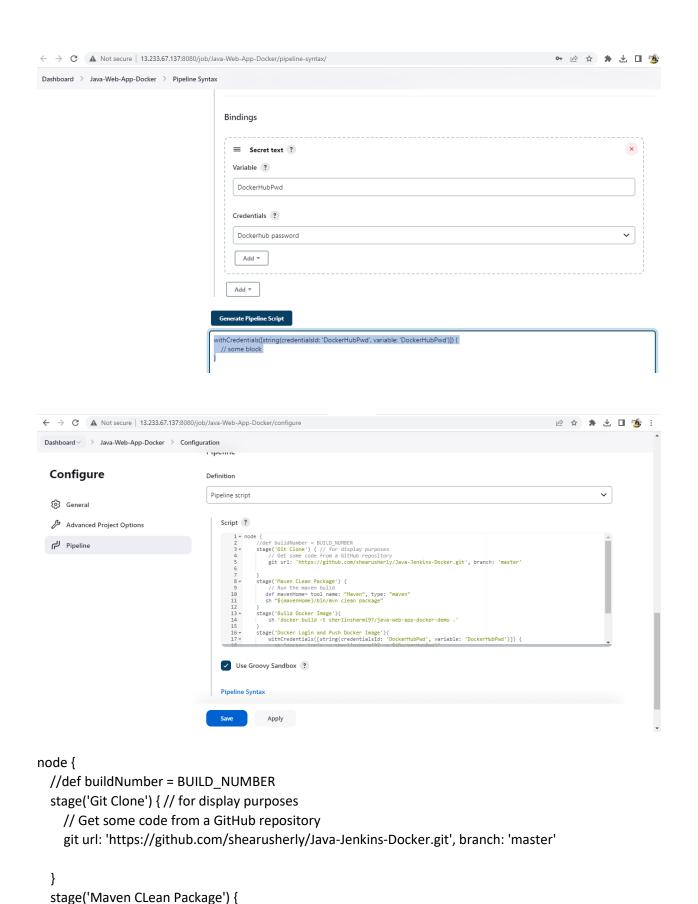
Dashboard > Java-Web-App-Docker > #10

```
[Pipeline] { (Build Docker Image)
+ docker build -t sherlinsharmi97/java-web-app-docker-demo .
Sending build context to Docker daemon 13.71MB
Step 1/2 : FROM tomcat:8.0.20-jre8
8.0.20-jre8: Pulling from library/tomcat
Image docker.io/library/tomcat:8.0.20-jre8 uses outdated schemal manifest format. Please upgrade to a schema2 image for
better future compatibility. More information at https://docs.docker.com/registry/spec/deprecated-schema-v1/
a3ed95caeb02: Pulling fs layer
c06482b548c8: Pulling fs layer
954f07d4dc14: Pulling fs layer
0bd71cf3b59f: Pulling fs layer
12d3f8630eca: Pulling fs layer
d6e16c3ae29a: Pulling fs layer
ea9df2460d2a: Pulling fs layer
66a4ea6d102d: Pulling fs layer
2b6aeca0d35e: Pulling fs layer
0bd71cf3b59f: Waiting
12d3f8630eca: Waiting
d6e16c3ae29a: Waiting
ea9df2460d2a: Waiting
66a4ea6d102d: Waiting
2b6aeca0d35e: Waiting
a3ed95caeb02: Verifying Checksum
```

```
Dashboard > Java-Web-App-Docker > #10
                                                 2b6aeca0d35e: Download complete
                                                 12d3f8630eca: Verifying Checksum
                                                 12d3f8630eca: Download complete
                                                 c06482b548c8: Pull complete
                                                 954f07d4dc14: Pull complete
                                                 0bd71cf3b59f: Pull complete
                                                 12d3f8630eca: Pull complete
                                                 d6e16c3ae29a: Pull complete
                                                 ea9df2460d2a: Pull complete
                                                 66a4ea6d102d: Pull complete
                                                 2b6aeca0d35e: Pull complete
                                                 Digest: sha256:579e042fb31e6975062276489cbdb3d9c942661a1d489f122d29ce2249e2ed34
                                                 Status: Downloaded newer image for tomcat:8.0.20-jre8
                                                  ---> e88a065848be
                                                 Step 2/2 : COPY target/java-web-app*.war /usr/local/tomcat/webapps/java-web-app.war
                                                  ---> e8945a004679
                                                 Successfully built e8945a004679
                                                 Successfully tagged sherlinsharmi97/java-web-app-docker-demo:latest
                                                 [Pipeline]
                                                 [Pipeline] // stage
                                                 [Pipeline] }
                                                 [Pipeline] // node
                                                 [Pipeline] End of Pipeline
                                                 Finished: SUCCESS
```

```
bbuntu@ip-172-31-0-128:~$ docker --version
Docker version 20.10.21, build 20.10.21-0ubuntu1~20.04.1
bbuntu@ip-172-31-0-128:~$ docker images
Sot permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Get "http://$2Fvar$2Frun$2Fdocker.sock/v1.24
/images/json": dial unix /var/run/docker.sock: connect: permission denied
ubuntu@ip-172-31-0-128:~$ sudo docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
ubuntu@ip-172-31-0-128:~$ sudo docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
ubuntu@ip-172-31-0-128:~$ sudo docker images
REPOSITORY
**TAG IMAGE ID CREATED SIZE
sherlinsharmi97/java-web-app-docker-demo latest e3945a004679 43 seconds ago 499MB
tommat
8.0.20-jre8 e88a065848be 8 years ago 493MB
ubuntu@ip-172-31-0-128:~$
```





```
// Run the maven build
     def mavenHome= tool name: "Maven", type: "maven"
     sh "${mavenHome}/bin/mvn clean package"
  }
   stage('Build Docker Image'){
      sh 'docker build -t sherlinsharmi97/java-web-app-docker-demo .'
  }
  stage('Docker Login and Push Docker Image'){
      withCredentials([string(credentialsId: 'DockerHubPwd', variable: 'DockerHubPwd')]) {
       sh "docker login -u sherlinsharmi97 -p ${DockerHubPwd}"
     sh 'docker push sherlinsharmi97/java-web-app-docker-demo'
   }
Dashboard > Java-Web-App-Docker >

■ Status

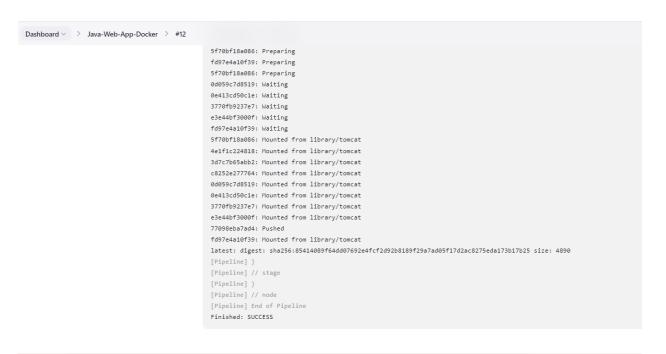
                                        Pipeline Java-Web-App-Docker
 </>
Changes
                                                                                                                                    Add description

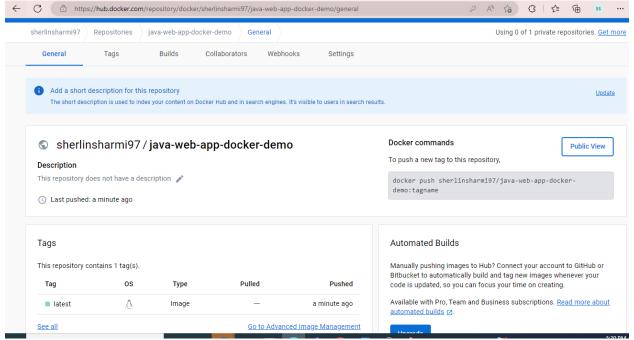
    Build Now

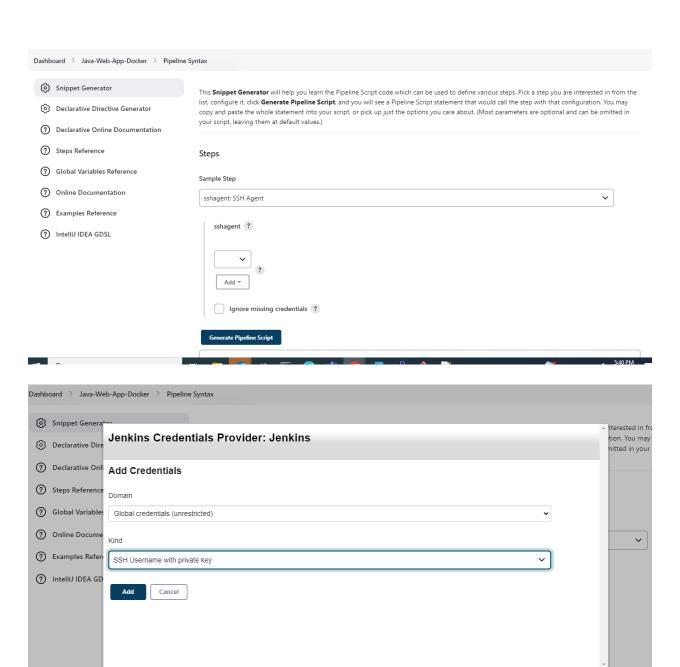
                                                                                                                                       Disable Project
 (c) Configure
                                        Stage View
 Delete Pipeline
 Q Full Stage View
                                                                                                                 Docker Login
                                                                                                   Build Docker
                                                                      Git Clone
                                                                                                                   and Push
 Rename
                                                                                     Package
                                                                                                     Image
                                                                                                                 Docker Image
 Pipeline Syntax
                                                  Average stage times:
                                                                        758ms
                                                                                                                     10s
                                             (Average <u>full</u> run time: ~26s)
Build History
                                            Apr 24
                                                                                                                     18s
                                            17:28
Q Filter builds..
Dashboard V > Java-Web-App-Docker > #12
                                            [Pipeline] sh
                                            Warning: A secret was passed to "sh" using Groovy String interpolation, which is insecure.
                                                          \label{prop:local_affected} \textbf{Affected argument(s) used the following variable(s): [DockerHubPwd]}
                                                          See \verb|https://jenkins.io/redirect/groovy-string-interpolation| for details.
                                            + docker login -u sherlinsharmi97 -p ****
                                            WARNING! Using --password via the CLI is insecure. Use --password-stdin.
                                            WARNING! Your password will be stored unencrypted in /var/lib/jenkins/.docker/config.json.
                                            Configure a credential helper to remove this warning. See
                                            https://docs.docker.com/engine/reference/commandline/login/#credentials-store
                                            Login Succeeded
                                            [Pipeline] }
                                            [Pipeline] // withCredentials
                                            [Pipeline] sh
                                            + docker push sherlinsharmi97/java-web-app-docker-demo
                                            Using default tag: latest
                                            The push refers to repository [docker.io/sherlinsharmi97/java-web-app-docker-demo]
                                            77098eba7ad4: Preparing
                                            5f70bf18a086: Preparing
                                            5f70bf18a086: Preparing
                                            3d7c7b65abb2: Preparing
                                           5f70bf18a086: Preparing
                                           5f70bf18a086: Preparing
```

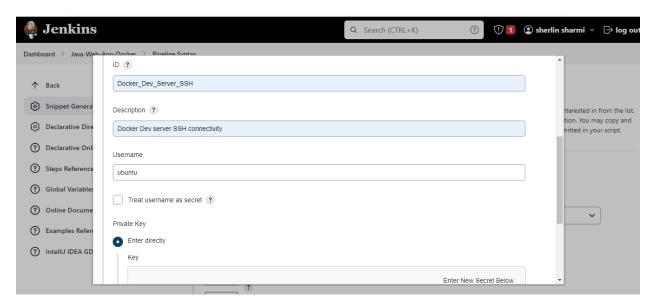
5f70bf18a086: Preparing c8252e277764: Preparing

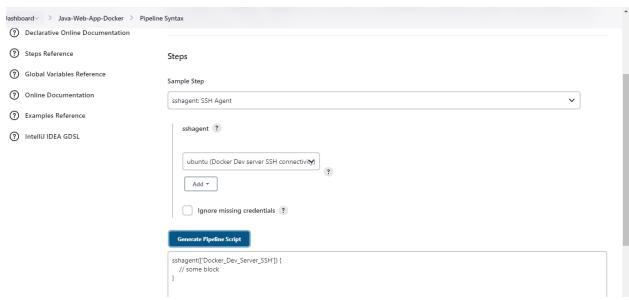
}













```
}
   stage('Deploy Application as Docker Container in docker deployment server'){
      sshagent(['Docker Dev Server SSH U']) {
          sh 'ssh -o StrictHostKeyChecking=no ubuntu@172.31.14.121 docker rm -f
javawebappcontainer || true'
          sh "ssh -o StrictHostKeyChecking=no ubuntu@172.31.14.121 docker run -d -p 8080:8080 -
-name javawebappcontainer sherlinsharmi97/java-web-app-docker-demo"
   }
    Jenkins
                                                                                Q Search (CTRL+K)
                                                                                                                    ① 1 ② sherlin sharmi ∨ 🕞 log ou
Dashboard > Java-Web-App-Docker > #14

■ Status

                                               Console Output
 </>
Changes
 Console Output
                                          Started by user sherlin sharmi
                                          [Pipeline] Start of Pipeline
   View as plain text
                                           Running on Jenkins in /var/lib/jenkins/workspace/Java-Web-App-Docker@2
 [1 Edit Build Information
                                          [Pipeline] stage
                                          [Pipeline] { (Git Clone)
 Delete build '#14'
                                          [Pipeline] git
                                          The recommended git tool is: NONE
 Git Build Data
                                          No credentials specified
                                           > git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/Java-Web-App-Docker@2/.git # timeout=10
 Replay
                                          Fetching changes from the remote Git repository
                                           > git config remote.origin.url https://github.com/shearusherly/Java-Jenkins-Docker.git # timeout=10
 Pipeline Steps
                                          Fetching upstream changes from https://github.com/shearusherly/Java-Jenkins-Docker.git
                                           > git --version # timeout=10
 Workspaces
                                           > git --version # 'git version 2.25.1'
                                           > git fetch --tags --force --progress -- https://github.com/shearusherly/Java-Jenkins-Docker.git
 ← Previous Build
                                           +refs/heads/*:refs/remotes/origin/* # timeout=10
Dashboard > Java-Web-App-Docker > #14
                                            [Pipeline] sh
                                             + /var/lib/jenkins/tools/hudson.tasks.Maven_MavenInstallation/Maven/bin/mvn clean package
                                             [INFO] Scanning for projects...
                                             [INFO] ----- com.mt:java-web-app >-----
                                             [INFO] Building Maven Web Application 1.0
                                             [INFO] from pom.xml
                                             [INFO] --- clean:3.2.0:clean (default-clean) @ java-web-app ---
                                             [INFO] Deleting /var/lib/jenkins/workspace/Java-Web-App-Docker@2/target
                                             [INFO] --- resources:3.3.0:resources (default-resources) @ java-web-app ---
                                             [INFO] Copying 1 resource
                                             [INFO]
                                             [INFO] --- compiler:2.5.1:compile (default-compile) @ java-web-app ---
                                             [INFO] Compiling 2 source files to /var/lib/jenkins/workspace/Java-Web-App-Docker@2/target/classes
                                             [INFO] --- resources:3.3.0:testResources (default-testResources) @ java-web-app ---
                                             [INFO] skip non existing resourceDirectory /var/lib/jenkins/workspace/Java-Web-App-Docker@2/src/test/resources
                                             [INFO] --- compiler:2.5.1:testCompile (default-testCompile) @ java-web-app ---
                                             [INFO] No sources to compile
                                             [INFO] --- surefire:3.0.0:test (default-test) @ java-web-app ---
                                            [INFO] No tests to run.
```

```
Dashboard > Java-Web-App-Docker > #14
                                            [INFO] No tests to run.
                                            [INFO]
                                             [INFO] --- war:3.3.2:war (default-war) @ java-web-app ---
                                             [INFO] Packaging webapp
                                             [INFO] Assembling webapp [java-web-app] in [/var/lib/jenkins/workspace/Java-Web-App-Docker@2/target/java-web-app-1.0]
                                            [INFO] Processing war project
                                             [INFO] Copying webapp resources [/var/lib/jenkins/workspace/Java-Web-App-Docker@2/src/main/webapp]
                                             [INFO] Building war: /var/lib/jenkins/workspace/Java-Web-App-Docker@2/target/java-web-app-1.0.war
                                             [INFO] -----
                                             [INFO] BUILD SUCCESS
                                             [INFO] -----
                                             [INFO] Total time: 6.399 s
                                             [INFO] Finished at: 2023-04-24T12:36:50Z
                                             [INFO] -----
                                             [Pipeline] }
                                             [Pipeline] // stage
                                             [Pipeline] stage
                                             [Pipeline] { (Build Docker Image)
                                            [Pipeline] sh
                                             + docker build -t sherlinsharmi97/java-web-app-docker-demo .
                                             Sending build context to Docker daemon 13.71MB
                                             Step 1/2 : FROM tomcat:8.0.20-jre8
                                               --> e88a065848be
                                             {\tt Step~2/2~:~COPY~target/java-web-app*.war~/usr/local/tomcat/webapps/java-web-app.war}
                                              ---> fd102de6f582
                                             Successfully built fd102de6f582
Dashboard > Java-Web-App-Docker > #14
                                            Step 1/2 : FROM tomcat:8.0.20-jre8
                                             ---> e88a065848be
                                            Step 2/2 : COPY target/java-web-app*.war /usr/local/tomcat/webapps/java-web-app.war
                                             ---> fd102de6f582
                                            Successfully built fd102de6f582
```

```
Successfully tagged sherlinsharmi97/java-web-app-docker-demo:latest
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Docker Login and Push Docker Image)
[Pipeline] withCredentials
Masking supported pattern matches of $DockerHubPwd
[Pipeline] sh
Warning: A secret was passed to "sh" using Groovy String interpolation, which is insecure.
                \label{prop:linear_prop_prop} \mbox{Affected argument(s) used the following variable(s): [DockerHubPwd]}
                See https://jenkins.io/redirect/groovy-string-interpolation for details.
+ docker login -u sherlinsharmi97 -p ****
WARNING! Using --password via the CLI is insecure. Use --password-stdin.
WARNING! Your password will be stored unencrypted in /var/lib/jenkins/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store
[Pipeline] }
[Pipeline] // withCredentials
[Pipeline] sh
```

```
Dashboard > Java-Web-App-Docker > #14
```

```
Login Succeeded
[Pipeline] }
[Pipeline] // withCredentials
[Pipeline] sh
+ docker push sherlinsharmi97/java-web-app-docker-demo
Using default tag: latest
The push refers to repository [docker.io/sherlinsharmi97/java-web-app-docker-demo]
432553a07fcd: Preparing
5f70bf18a086: Preparing
5f70bf18a086: Preparing
3d7c7b65abb2: Preparing
5f70bf18a086: Preparing
5f70bf18a086: Preparing
5f70bf18a086: Preparing
c8252e277764: Preparing
5f70bf18a086: Preparing
4e1f1c224818: Preparing
5f70bf18a086: Preparing
5f70bf18a086: Preparing
0d059c7d8519: Preparing
0e413cd50c1e: Preparing
5f70bf18a086: Preparing
5f70bf18a086: Preparing
5f70bf18a086: Preparing
```

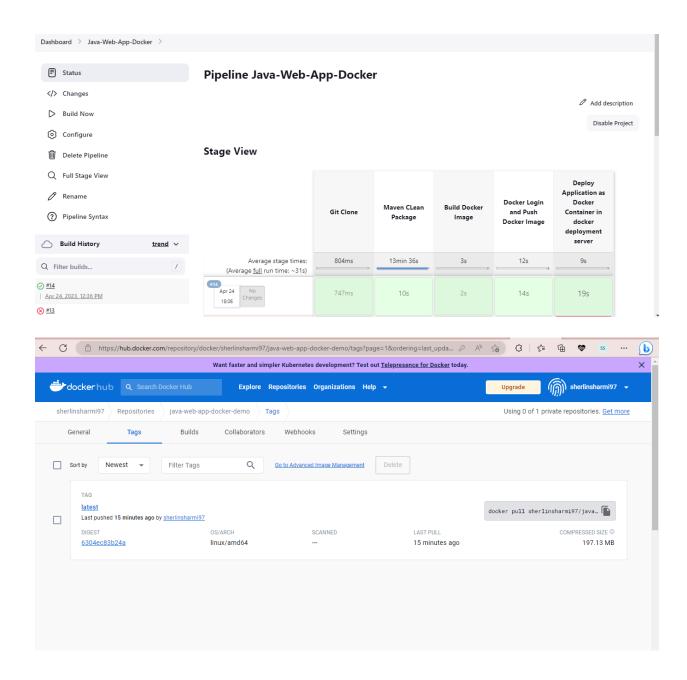
Dashboard > Java-Web-App-Docker > #14

```
J//VID32J/E/. Layer already exists
fd97e4a10f39: Layer already exists
432553a07fcd: Pushed
latest: digest: sha256:6304ec83b24a1fc9a04f4feedb5cecb10b5620d8a441333b1ad681289d2a1c49 size: 4890
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Deploy Application as Docker Container in docker deployment server)
[Pipeline] sshagen
[ssh-agent] Using credentials ubuntu (Docker Deployment)
[ssh-agent] Looking for ssh-agent implementation..
[ssh-agent] Exec ssh-agent (binary ssh-agent on a remote machine)
$ ssh-agent
SSH_AUTH_SOCK=/tmp/ssh-aYkfIyNer4cF/agent.25401
SSH_AGENT_PID=25404
Running ssh-add (command line suppressed)
Identity added: /var/lib/jenkins/workspace/Java-Web-App-Docker@2@tmp/private_key_14878318187587012407.key
(/var/lib/jenkins/workspace/Java-Web-App-Docker@2@tmp/private\_key\_14878318187587012407.key)
[ssh-agent] Started.
[Pipeline] {
[Pipeline] sh
+ ssh -o StrictHostKeyChecking=no ubuntu@172.31.14.121 docker rm -f javawebappcontainer
Warning: Permanently added '172.31.14.121' (ECDSA) to the list of known hosts.
Error: No such container: javawebappcontainer
[Pipeline] sh
+ ssh -o StrictHostKeyChecking=no ubuntu@172.31.14.121 docker run -d -p 8080:8080 --name javawebappcontainer
sherlinsharmi97/java-web-app-docker-demo
```

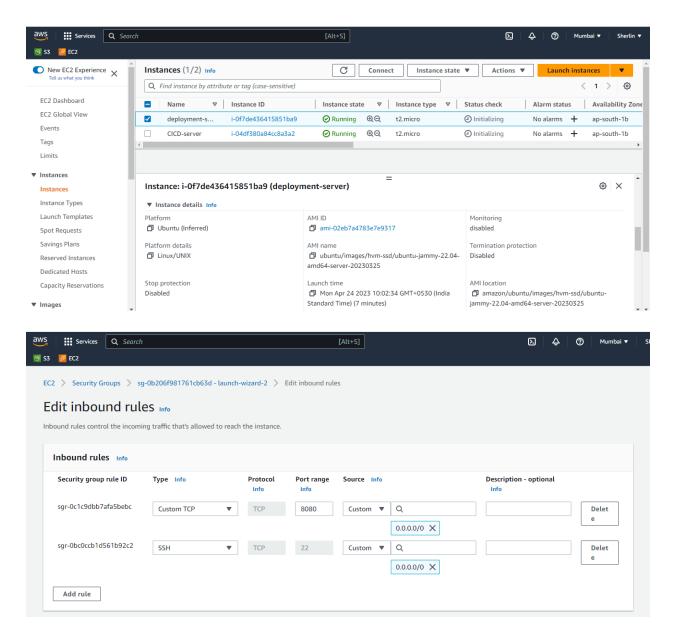
```
[Pipeline] {
+ ssh -o StrictHostKeyChecking=no ubuntu@172.31.14.121 docker rm -f javawebappcontainer
Warning: Permanently added '172.31.14.121' (ECDSA) to the list of known hosts.
Error: No such container: javawebappcontainer
+ ssh -o StrictHostKeyChecking=no ubuntu@172.31.14.121 docker run -d -p 8080:8080 --name javawebappcontainer
sherlinsharmi97/java-web-app-docker-demo
Unable to find image 'sherlinsharmi97/java-web-app-docker-demo:latest' locally
latest: Pulling from sherlinsharmi97/java-web-app-docker-demo
a3ed95caeb02: Pulling fs layer
c06482b548c8: Pulling fs layer
954f07d4dc14: Pulling fs layer
0bd71cf3b59f: Pulling fs layer
12d3f8630eca: Pulling fs layer
d6e16c3ae29a: Pulling fs layer
ea9df2460d2a: Pulling fs layer
66a4ea6d102d: Pulling fs layer
2b6aeca0d35e: Pulling fs layer
9421b1302772: Pulling fs layer
0bd71cf3b59f: Waiting
12d3f8630eca: Waiting
d6e16c3ae29a: Waiting
ea9df2460d2a: Waiting
66a4ea6d102d: Waiting
2b6aeca0d35e: Waiting
9421b1302772: Waiting
```

Dashboard J Java-Web-App-Docker > #14

```
9421b1302//2: Veritying Checksum
9421b1302772: Download complete
c06482b548c8: Pull complete
954f07d4dc14: Pull complete
0bd71cf3b59f: Pull complete
12d3f8630eca: Pull complete
d6e16c3ae29a: Pull complete
ea9df2460d2a: Pull complete
66a4ea6d102d: Pull complete
2b6aeca0d35e: Pull complete
9421b1302772: Pull complete
Digest: sha256:6304ec83b24a1fc9a04f4feedb5cecb10b5620d8a441333b1ad681289d2a1c49
Status: Downloaded newer image for sherlinsharmi97/java-web-app-docker-demo:latest
eb602707398cdc014fd21675dbb84ce33b85bbeb08a4b2f9ca92f325c95d79ad
[Pipeline] }
$ ssh-agent -k
unset SSH_AUTH_SOCK;
unset SSH_AGENT_PID;
echo Agent pid 25404 killed;
[ssh-agent] Stopped.
[Pipeline] // sshagent
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```



2. Deployment server



A] Update Package Manager sudo apt update

B] Install docker

sudo apt install docker.io -y

C] Add ubuntu user to docker sudo usermod -aG docker ubuntu

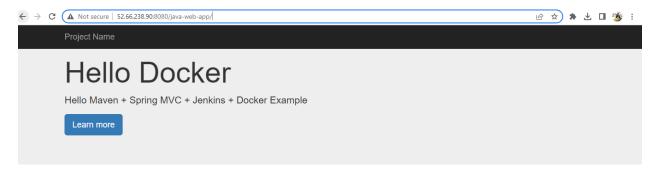
```
ubuntu@ip-172-31-14-121:~$ sudo usermod -aG docker ubuntu
ubuntu@ip-172-31-14-121:~$
```

```
thuntu8ip-172-31-14-121:-$ sudo usermod -aG docker ubuntu
thuntu8ip-172-31-14-121:-$ docker info

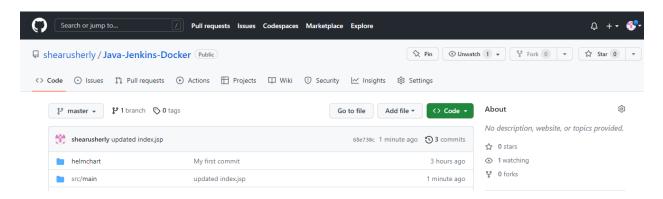
lient:
Context: default
Debug Mode: false

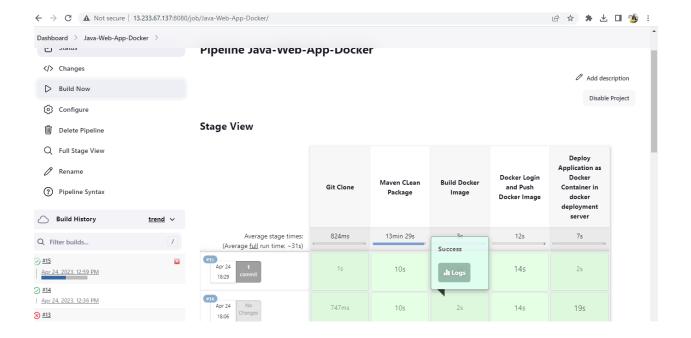
derver:

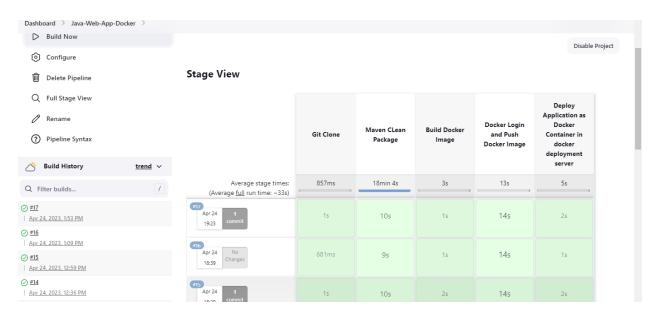
IROR: Got permission denied while trying to connect to the Docker daemon socket at unix://var/run/docker.sock: Get "http://%2Fvar%2Frun%2Fdocker.sock/v1.24/info": dia
. unix /var/run/docker.sock: Get "http://%2Fvar%2Frun%2Fdocker.sock.get"
. unix /var/run/docker.sock: Get "http://%2Fvar%2Frun%2Fdocker.sock.get"
. unix /var/run/docker.sock: Get "http://%2Fvar%2Frun
```



After Commit







Push Docker image to ECR

```
node {
   //def buildNumber = BUILD_NUMBER
   stage('Git Clone') { // for display purposes
   // Get some code from a GitHub repository
   git url: 'https://github.com/shearusherly/Java-Jenkins-Docker.git', branch: 'master'
```

```
}
  stage('Maven CLean Package') {
    // Run the maven build
   def mavenHome= tool name: "Maven", type: "maven"
   sh "${mavenHome}/bin/mvn clean package"
  stage('Maven Test')
    def mvnHome= tool name: "Maven", type: "maven"
   sh "${mvnHome}/bin/mvn test"
}
  stage('Build Docker Image'){
    sh 'docker build -t sherlinsharmi97/java_web_app_docker_demo .'
  }
  stage('Docker Login and Push Docker Image'){
    withCredentials([string(credentialsId: 'DockerHubPwd', variable: 'DockerHubPwd')]) {
    sh "docker login -u sherlinsharmi97 -p ${DockerHubPwd}"
    sh 'docker push sherlinsharmi97/java_web_app_docker_demo'
  }
  stage('Pushing to ECR') {
    sh 'aws ecr get-login-password --region ap-south-1 | docker login --username AWS --
password-stdin 487838928633.dkr.ecr.ap-south-1.amazonaws.com'
    sh 'docker build -t java_web_app_docker_demo .'
    sh 'docker tag java_web_app_docker_demo:latest 487838928633.dkr.ecr.ap-south-
1.amazonaws.com/java_web_app_docker_demo:latest'
  sh 'docker push 487838928633.dkr.ecr.ap-south-
1.amazonaws.com/java_web_app_docker_demo:latest'
}
  stage('Deploy Application as Docker Container in docker deployment server'){
    sshagent(['Docker Dev Server SSH U']) {
      sh 'ssh -o StrictHostKeyChecking=no ubuntu@172.31.39.131 docker rm -f
javawebappcontainer | | true'
      sh "ssh -o StrictHostKeyChecking=no ubuntu@172.31.39.131 docker run -d -p 8080:8080 -
-name javawebappcontainer sherlinsharmi97/java web app docker demo"
    }
  }
}
```

