

# CI-CD

## Project Screenshots

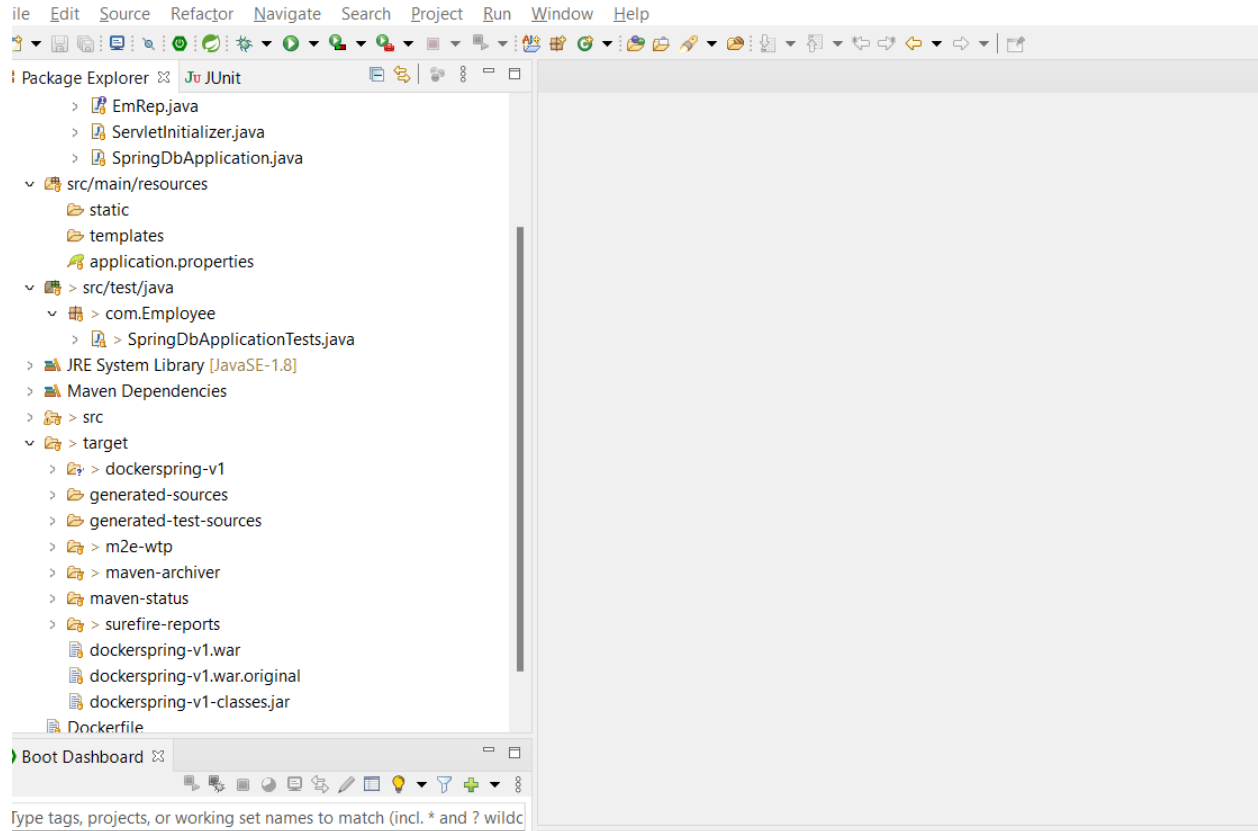
### Version History:

Author:	Balanarenthiran. A
Purpose:	Application Screenshots
Date:	26 <sup>th</sup> Mar, 2022
Version:	1.0

## Table of Content:

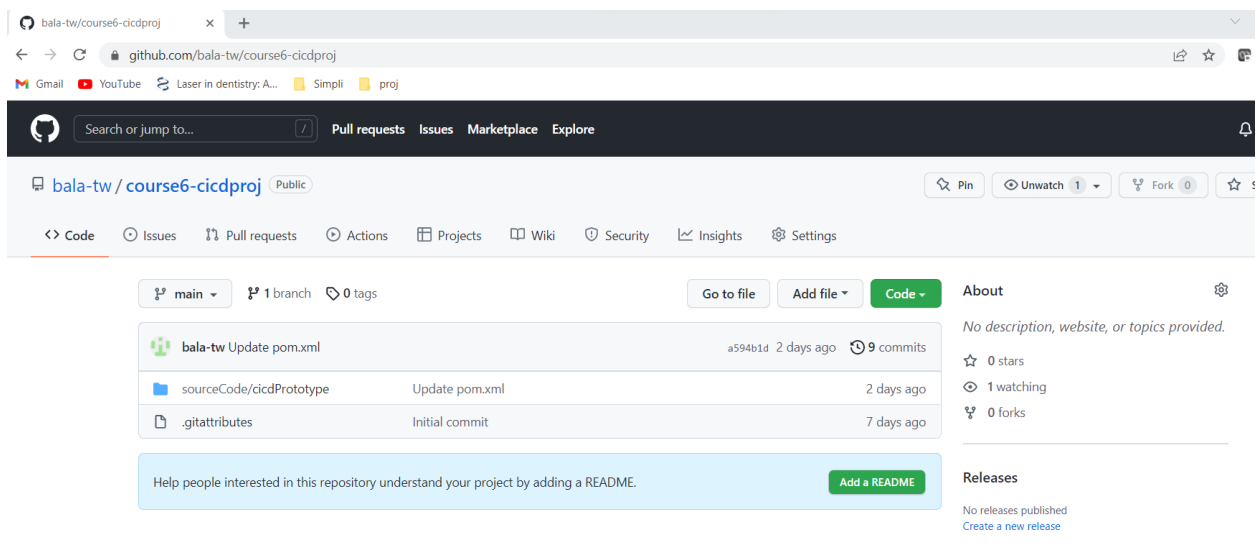
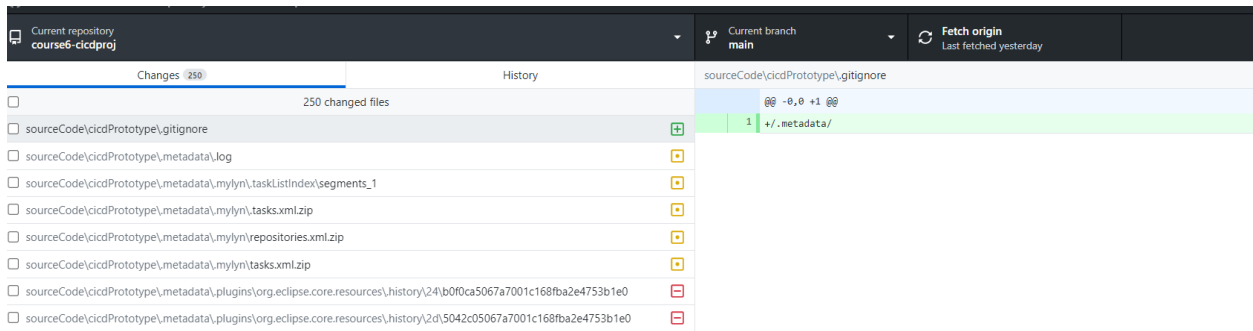
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## Eclipse .war file generation



## Github:

Code is pushed through Github desktop



## Jenkins:

Starting Jenkins,

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.22000.556]
(c) Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>net start jenkins
The requested service has already been started.

More help is available by typing NET HELPMSG 2182.

C:\WINDOWS\system32>
```

Login to Jenkins and create a new project (dockerjenkins here), click on manage Jenkins then download all the required tools from Global tool config, and plugins.

The screenshot shows the Jenkins web interface in a browser window. The address bar indicates the URL is localhost:8090. The top navigation bar includes the Jenkins logo, a search bar, and user information for 'balanarenthiran@live.in' with a 'log out' button. The left sidebar contains various navigation links, with 'Manage Jenkins' (represented by a gear icon) highlighted with a red rectangle. The main content area displays a table of build history for the 'dockerjenkins' project. The table has columns for status (S), workspace (W), name, last success, last failure, and last duration. A single build is listed with a green status icon, workspace 'bala1988/dockerspring-v1', and a duration of 16 seconds. Below the table, there are links for 'Icon legend', 'Atom feed for all', 'Atom feed for failures', and 'Atom feed for just latest builds'.

S	W	Name	Last Success	Last Failure	Last Duration
✓	bala1988/dockerspring-v1	dockerjenkins	1 min 40 sec #14	3 days 11 hr #10 bala1988/dockerspring-v1	16 sec

Configure for adding Git repositories and Docker details, then click build now for building the app

The screenshot shows the Jenkins web interface for a project named 'dockerjenkins'. The browser address bar shows 'localhost:8090/job/dockerjenkins/'. The Jenkins logo and a search bar are at the top. The left sidebar contains a 'Dashboard' menu with options: 'Back to Dashboard', 'Status', 'Changes', 'Workspace', 'Build Now' (highlighted with a red box), 'Configure' (highlighted with a red box), 'Delete Project', 'Git Polling Log', and 'Rename'. Below the sidebar is the 'Build History' section, which includes a search bar 'Filter builds...' and a list of builds. The first build, '#20 bala1988/dockerspring-v1:latest bala1988/dockerspring-v1:latest', is highlighted with a red box. The main content area is titled 'Project dockerjenkins' and includes links for 'Workspace' and 'Recent Changes'. Below this is a 'Permalinks' section with a list of build links, including 'Last build (#20 bala1988/dockerspring-v1:latest bala1988/dockerspring-v1:latest), 5 min 19 sec ago'.

After clicking on the build go to build history at bottom to check the console output log, .war file is successfully transferred to Docker as an image file.

dockerjenkins #20 Console [Jeni] x bala-tw/course6-cicdproj x +

localhost:8090/job/dockerjenkins/20/console

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Dashboard > dockerjenkins > #20

Status

Changes

Console Output

View as plain text

Edit Build Information

Git Build Data

Previous Build

### Console Output

```
Started by user bala.narenthiran@live.in
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\jenkins\workspace\dockerjenkins
The recommended git tool is: NONE
using credential 0f2a88ac-d528-4d1a-ab00-211bd744cf84
> C:\Program Files\Git\bin\git.exe rev-parse --resolve-git-dir C:\ProgramData\Jenkins\jenkins\workspace\dockerjenkins\.git # timeout=10
Fetching changes from the remote Git repository
> C:\Program Files\Git\bin\git.exe config remote.origin.url https://github.com/bala-tw/course6-cicdproj.git # timeout=10
Fetching upstream changes from https://github.com/bala-tw/course6-cicdproj.git
> C:\Program Files\Git\bin\git.exe --version # timeout=10
> git --version # 'git version 2.32.0.windows.2'
using GIT_ASKPASS to set credentials
> C:\Program Files\Git\bin\git.exe fetch --tags --force --progress -- https://github.com/bala-tw/course6-cicdproj.git +refs/heads/*:refs/remotes/origin/* #
timeout=10
> C:\Program Files\Git\bin\git.exe rev-parse "refs/remotes/origin/main^[commit]" # timeout=10
Checking out Revision a594b1dbfe9ee9c72dbac2ab7691c1ed2f4998df (refs/remotes/origin/main)
> C:\Program Files\Git\bin\git.exe config core.sparsecheckout # timeout=10
> C:\Program Files\Git\bin\git.exe checkout -f a594b1dbfe9ee9c72dbac2ab7691c1ed2f4998df # timeout=10
Commit message: "Update pom.xml"
First time build. Skipping changelog.
[dockerjenkins] $ cmd.exe /C "C:\Software\apache-maven-3.8.5\bin\mvn.cmd -f
C:\ProgramData\Jenkins\jenkins\workspace\dockerjenkins\sourceCode\cicdPrototype\cicdProj\pom.xml install && exit %ERRORLEVEL%"
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.example.dockerspring >-----
[INFO] Building spring db v1
[INFO] -----[ war ]-----
.
.
.
```

REST API Jenkins 2.332.1

ENG INTL 11:39 27-03-2022

dockerjenkins #20 Console [Jeni] x bala-tw/course6-cicdproj x +

localhost:8090/job/dockerjenkins/20/console

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Dashboard > dockerjenkins > #20

```
e019be289189: Layer already exists
27b794c285d8: Pushed
latest: digest: sha256:6395ce58a7a5ad70b8a77d0ab117f9945eae081a5e6fad44d9af8ee296301aa size: 2007
Downloading Docker client latest
Unpacking https://get.docker.com/builds/Windows/x86_64/docker-latest.tgz to
C:\ProgramData\Jenkins\jenkins\tools\org.jenkinsci.plugins.docker.common.tools.DockerTool on Jenkins
[dockerjenkins] $ docker push bala1988/dockerspring-v1:latest
WARNING: Support for the legacy ~/.dockercfg configuration file and file-format is deprecated and will be removed in an upcoming release
WARNING: Support for the legacy ~/.dockercfg configuration file and file-format is deprecated and will be removed in an upcoming release
The push refers to repository [docker.io/bala1988/dockerspring-v1]
27b794c285d8: Preparing
0607554a700f: Preparing
3add5b0a88e9: Preparing
3cdd9de99b4: Preparing
327e42081bbe: Preparing
6e632f416458: Preparing
e019be289189: Preparing
c9a63110150b: Preparing
6e632f416458: Waiting
e019be289189: Waiting
c9a63110150b: Waiting
327e42081bbe: Layer already exists
0607554a700f: Layer already exists
3cdd9de99b4: Layer already exists
27b794c285d8: Layer already exists
3add5b0a88e9: Layer already exists
6e632f416458: Layer already exists
c9a63110150b: Layer already exists
e019be289189: Layer already exists
latest: digest: sha256:6395ce58a7a5ad70b8a77d0ab117f9945eae081a5e6fad44d9af8ee296301aa size: 2007
Finished: SUCCESS
```

REST API Jenkins 2.332.1

ENG INTL 11:42 27-03-2022

## Docker

Docker image file as below,

The screenshot shows the Docker Desktop 'Images on disk' section. On the left sidebar, 'Containers / Apps' is selected, with sub-items 'Images', 'Volumes', and 'Dev Environments' (which has a 'PREVIEW' button). The main area is titled 'Images on disk' and shows '8 images' with a 'Total size: 1.28 GB'. A progress bar indicates 'IN USE' (green) and 'UNUSED' (grey). Below this, there are tabs for 'LOCAL' and 'REMOTE REPOSITORIES'. A search bar and an 'In Use only' checkbox are present. A table lists the images with columns: NAME, TAG, IMAGE ID, CREATED, and SIZE. One row, 'bala1988/dockerspring-...', is highlighted with a red rectangle. At the bottom, there are links for 'Connect to Remote', 'Store and backup your images', and 'Unlock vulnerability scanning for greater'.

NAME ↑	TAG	IMAGE ID	CREATED	SIZE
bala1988/0699d3c0a61c	latest	0699d3c0a61c	1 day ago	569.46 MB
bala1988/dockerspring-...	latest	3e55b827781a	less than a minute ago	569.46 MB
bala1988/dockerspring-...	<none>	2d50f6538ca3	4 days ago	569.46 MB
docker/getting-started	IN USE latest	bd9a9f733898	about 1 month ago	28.79 MB
hello-world	IN USE latest	feb5d9fea6a5	6 months ago	13.26 KB
mysql	IN USE latest	562c9bc24a08	9 days ago	520.73 MB

## Amazon – AWS

Creation of AWS instance, EC2-

The screenshot shows the AWS Management Console 'Connect to instance' page for an EC2 instance. The breadcrumb trail is 'EC2 > Instances > i-0d1759d316fdd7887 > Connect to instance'. The page title is 'Connect to instance' with an 'Info' link. Below the title, it says 'Connect to your instance i-0d1759d316fdd7887 using any of these options'. There are four tabs: 'EC2 Instance Connect' (selected), 'Session Manager', 'SSH client', and 'EC2 Serial Console'. Under the 'EC2 Instance Connect' tab, the 'Instance ID' is 'i-0d1759d316fdd7887'. The 'Public IP address' is '3.92.190.166'. The 'User name' is 'ec2-user'. A note states: 'Note: In most cases, the guessed user name is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI user name.' At the bottom, there are 'Cancel' and 'Connect' buttons.



```
← → ↻ us-east-1.console.aws.amazon.com/ec2/v2/connect/ec2-user/i-0d1759d316fdd7887
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  _ | ( _ | )
 _ | ( _ | /
 _ | \ _ | _ |
Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
ec2-user@ip-172-31-86-212 ~]$ yum install openjdk:8
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
You need to be root to perform this command.
ec2-user@ip-172-31-86-212 ~]$ sudo -i
bash: sudo: command not found
ec2-user@ip-172-31-86-212 ~]$ sudo -i
root@ip-172-31-86-212 ~]$ yum install openjdk:8
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
No package openjdk:8 available.
Error: Nothing to do
root@ip-172-31-86-212 ~]$ yum install mysql:latest
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
No package mysql:latest available.
Error: Nothing to do
root@ip-172-31-86-212 ~]$ yum install docker
```

Install jdk, mysql, and docker as in screenshot and login to the docker,

```
← → ↻ us-east-1.console.aws.amazon.com/ec2/v2/connect/ec2-user/i-0d1759d316fdd7887
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Downloading packages:
1/5: libcgrou-0.41-21.amzn2.x86_64.rpm | 66 kB 0
2/5: pigz-2.3.4-1.amzn2.0.1.x86_64.rpm | 81 kB 0
3/5: containerd-1.4.6-8.amzn2.x86_64.rpm | 24 MB 0
4/5: runc-1.0.0-2.amzn2.x86_64.rpm | 3.3 MB 0
5/5: docker-20.10.7-5.amzn2.x86_64.rpm | 42 MB 0
-----
total | 48 MB/s | 69 MB 0
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
Installing : runc-1.0.0-2.amzn2.x86_64
Installing : containerd-1.4.6-8.amzn2.x86_64
Installing : libcgrou-0.41-21.amzn2.x86_64
Installing : pigz-2.3.4-1.amzn2.0.1.x86_64
Installing : docker-20.10.7-5.amzn2.x86_64
Verifying : docker-20.10.7-5.amzn2.x86_64
Verifying : containerd-1.4.6-8.amzn2.x86_64
Verifying : runc-1.0.0-2.amzn2.x86_64
Verifying : pigz-2.3.4-1.amzn2.0.1.x86_64
Verifying : libcgrou-0.41-21.amzn2.x86_64

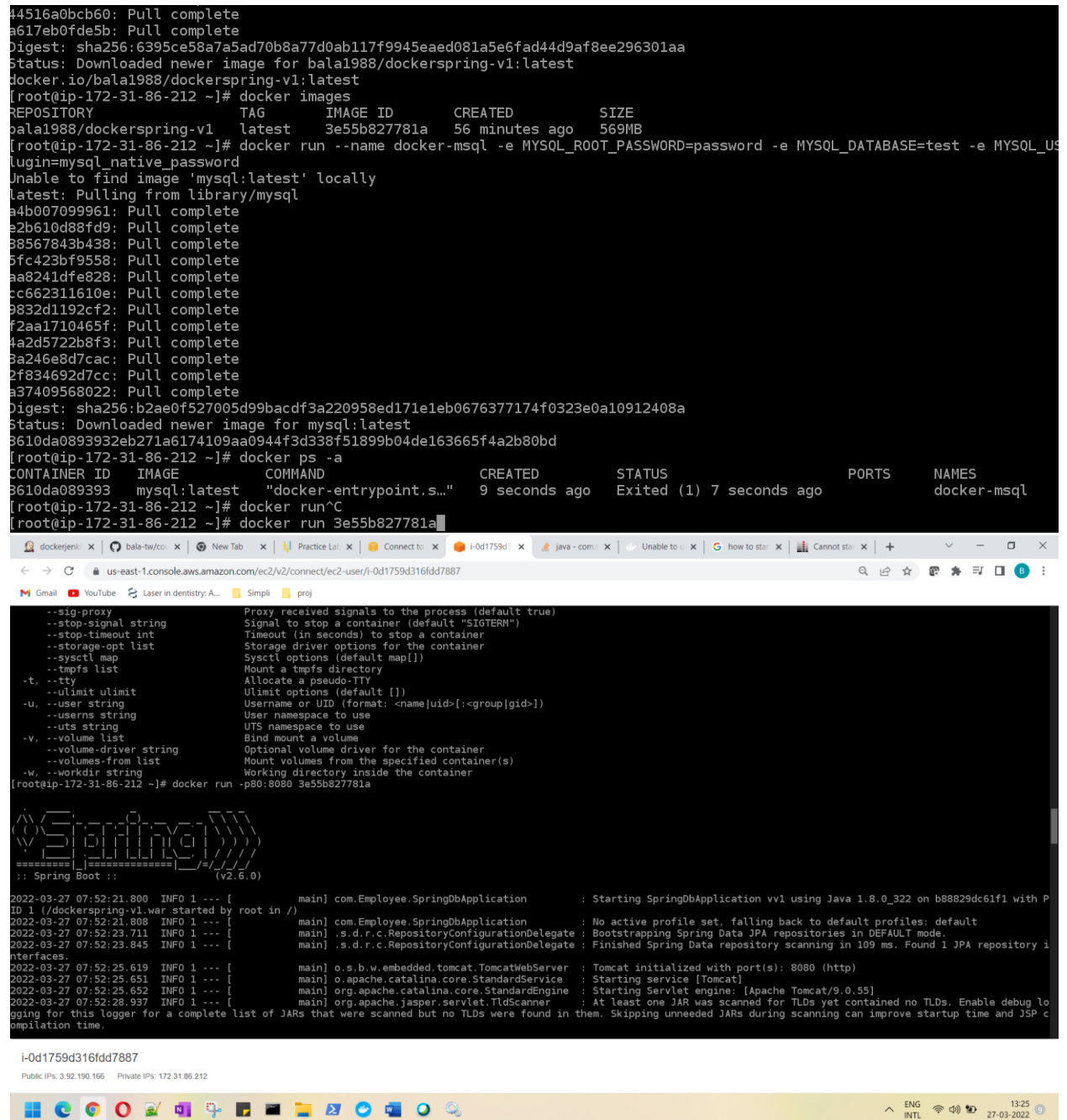
Installed:
docker.x86_64 0:20.10.7-5.amzn2

Dependency Installed:
containerd.x86_64 0:1.4.6-8.amzn2 libcgrou.x86_64 0:0.41-21.amzn2 pigz.x86_64 0:2.3.4-1.amzn2.0.1 runc.x86_64 0:1.0.0-2.amzn2

Complete!
root@ip-172-31-86-212 ~]$ service docker start
Redirecting to /bin/systemctl start docker.service
root@ip-172-31-86-212 ~]$ docker login -u="bala1988" -p="Docker@2022"
```

Running the docker image file from amazon - ec2 instance

```
44516a0bcb60: Pull complete
a617eb0fde5b: Pull complete
Digest: sha256:6395ce58a7a5ad70b8a77d0ab117f9945eae081a5e6fad44d9af8ee296301aa
Status: Downloaded newer image for bala1988/dockerspring-v1:latest
docker.io/bala1988/dockerspring-v1:latest
[root@ip-172-31-86-212 ~]# docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
bala1988/dockerspring-v1  latest             3e55b827781a       56 minutes ago     569MB
[root@ip-172-31-86-212 ~]# docker run --name docker-msql -e MYSQL_ROOT_PASSWORD=password -e MYSQL_DATABASE=test -e MYSQL_US
login=mysql_native_password
Unable to find image 'mysql:latest' locally
latest: Pulling from library/mysql
a4b007099961: Pull complete
e2b610d88fd9: Pull complete
38567843b438: Pull complete
5fc423bf9558: Pull complete
aa8241dfe828: Pull complete
cc662311610e: Pull complete
9832d1192cf2: Pull complete
f2aa1710465f: Pull complete
4a2d5722b8f3: Pull complete
3a246e8d7cac: Pull complete
2f834692d7cc: Pull complete
a37409568022: Pull complete
Digest: sha256:b2ae0f527005d99bacdf3a220958ed171e1eb0676377174f0323e0a10912408a
Status: Downloaded newer image for mysql:latest
3610da0893932eb271a6174109aa0944f3d338f51899b04de163665f4a2b80bd
[root@ip-172-31-86-212 ~]# docker ps -a
CONTAINER ID        IMAGE               COMMAND                  CREATED             STATUS              PORTS              NAMES
3610da089393        mysql:latest        "docker-entrypoint.s..." 9 seconds ago       Exited (1) 7 seconds ago              docker-msql
[root@ip-172-31-86-212 ~]# docker run ^C
[root@ip-172-31-86-212 ~]# docker run 3e55b827781a
```



```
--sig-proxy           Proxy received signals to the process (default true)
--stop-signal string   Signal to stop a container (default "SIGTERM")
--stop-timeout int     Timeout (in seconds) to stop a container
--storage-opt list     Storage driver options for the container
--sysctl map           Sysctl options (default map[])
--tmpfs list           Mount a tmpfs directory
-t, --tty              Allocate a pseudo-TTY
--ulimit ulimit        Ulimit options (default [])
-u, --user string       Username or UID (format: <name|uid>[:<group|gid>])
--userns string        User namespace to use
--uts string           UTS namespace to use
-v, --volume list      Bind mount a volume
--volume-driver string Optional volume driver for the container
--volumes-from list    Mount volumes from the specified container(s)
-w, --workdir string   Working directory inside the container
[root@ip-172-31-86-212 ~]# docker run -p80:8080 3e55b827781a

(Spring Boot)
=====
:: Spring Boot :: (v2.6.0)

2022-03-27 07:52:21.800 INFO 1 --- [ ID 1 (/dockerspring-v1.war started by root in /)
2022-03-27 07:52:21.808 INFO 1 --- [ main] com.Employee.SpringDbApplication : Starting SpringDbApplication vwl using Java 1.8.0_322 on b88829dc61f1 with P
2022-03-27 07:52:23.711 INFO 1 --- [ main] com.Employee.SpringDbApplication : No active profile set, falling back to default profiles: default
2022-03-27 07:52:23.711 INFO 1 --- [ main] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA repositories in DEFAULT mode.
2022-03-27 07:52:23.845 INFO 1 --- [ main] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning in 109 ms. Found 1 JPA repository i
nterfaces.
2022-03-27 07:52:25.619 INFO 1 --- [ main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s): 8080 (http)
2022-03-27 07:52:25.651 INFO 1 --- [ main] o.apache.catalina.core.StandardService : Starting service [Tomcat]
2022-03-27 07:52:25.652 INFO 1 --- [ main] org.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/9.0.55]
2022-03-27 07:52:28.937 INFO 1 --- [ main] org.apache.jasper.servlet.TldScanner : At least one JAR was scanned for TLDs yet contained no TLDs. Enable debug lo
gging for this logger for a complete list of JARs that were scanned but no TLDs were found in them. Skipping unneeded JARs during scanning can improve startup time and JSP c
ompilation time.
```

i-0d1759d316fdd7887

Public IPs: 3.92.190.166 Private IPs: 172.31.86.212

