

A PROJECT REPORT ON
PUSHING OF DOCKER IMAGE TO DOCKER HUB
USING JENKINS PIPELINE
COURSE
DEVOPS WITH AWS

Submitted By

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Under The Guidance Of

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Greatcoder Training institute in Madhapur Hyderabad

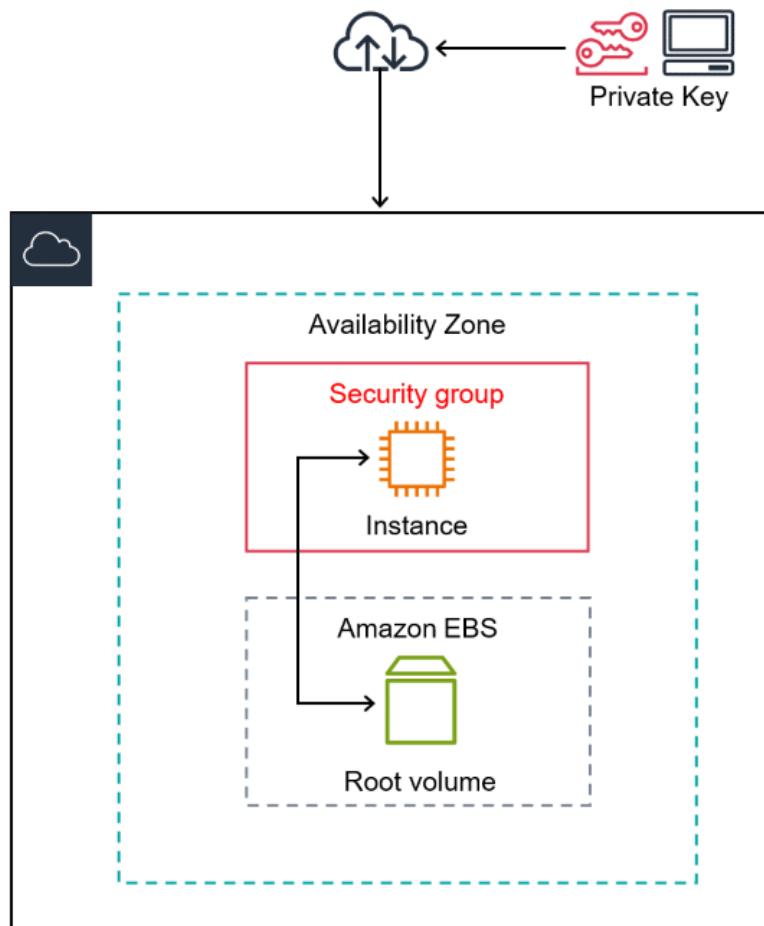
#201,2nd floor,Above Ageless Building,Beside Indian Bank Madhapur,Hyderabad-500081
Land Mark:Beside Karachi Bakery, lane, Hyderabad, Telangana 500081.

Overview:

The instance launched in this tutorial is an Amazon EC2 select an Availability Zone for you.

Availability Zones are multiple, isolated locations within each Region. You can think of an Availability Zone as an isolated data center.

When you launch your instance, you secure it by specifying a key pair (to prove your identity) and a security group (which acts as a virtual firewall to control ingoing and outgoing traffic). When you connect to your instance, you must provide the private key of the key pair that you specified when you launched your instance.



To launch an instance:

- Open the Amazon EC2 console at <https://console.aws.amazon.com/ec2/>.
- From the EC2 console dashboard, in the **Launch instance** box, choose **Launch instance**, and then choose **Launch instance** from the options that appear.
- Under **Name and tags**, for **Name**:Project-1A.

- Under **Application and OS Images (Amazon Machine Image)**, do the following:
 - Choose Amazon Linux. This is the operating system (OS) for your instance.
 - From **Amazon Machine Image (AMI)**, select an Amazon Linux 2. Notice that these AMIs are marked **Free tier eligible**.
- Under **Instance type**, from the **Instance type** list, you can select the hardware configuration for your instance. Choose the `t2.micro` instance type, which is selected by default. The `t2.micro` instance type is eligible for the free tier.
- Under **Key pair (login)**, for **Project-1A**, choose the key pair that you created when getting set up.
- Warning.
 - Keep the default selections for the other configuration settings for your instance.
 - A confirmation page lets you know that your instance is launching. Choose **View all instances** to close the confirmation page and return to the console.
 - On the **Instances** screen, you can view the status of the launch. It takes a short time for an instance to launch. When you launch an instance, its initial state is `pending`. After the instance starts, its state changes to `running`.
 - It can take a few minutes for the instance to be ready for you to connect.

The screenshot shows the AWS EC2 Instances page. The left sidebar is collapsed. The main content area displays the 'Instances (1/2)' table. Two instances are listed: 'terraform' (stopped, t2.micro) and 'project-1A' (stopped, t2.micro). The 'project-1A' row is highlighted with a blue selection bar. Below the table, a modal window titled 'Instance: i-Offf2f6506f0d7f3e4 (project-1A)' is open, showing the 'Inbound rules' section. It lists two security group rule entries:

Name	Security group rule ID	Port range	Protocol	Source	Security groups
-	sgr-074ebfc0ed0e48618	22	TCP	0.0.0.0/0	launch-wizard-24
-	sgr-06d40246eec33f150	8080	TCP	0.0.0.0/0	launch-wizard-24

(1733) How to Push docker ima x | Ashokrekha/How-to-Push-dock x | Connect to instance | EC2 ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#ConnectToInstance:instanceId=i-0ff2f6506f0d7f3e4

aws Services Search [Alt+S] Mumbai Ashok

Connect to instance Info

Connect to your instance i-0ff2f6506f0d7f3e4 (project-1A) using any of these options

EC2 Instance Connect Session Manager SSH client EC2 serial console

Instance ID
i-0ff2f6506f0d7f3e4 (project-1A)

Connection Type
 Connect using EC2 Instance Connect
Connect using the EC2 Instance Connect browser-based client, with a public IPv4 address.
 Connect using EC2 Instance Connect Endpoint
Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

Public IP address
3.111.245.25

Username
root
Use "root"

Note: In most cases, the default username, ec2-user, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel Connect

https://ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-south-1&connType=standard&instanceId=i-0ff2f6506f0d7f3e4&osUser=root&sshPort=22 © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences ENG IN 11:20 AM 1/27/2024

Instances | EC2 | ap-south-1 x | EC2 Instance Connect | ap-south-1 x | (1733) How to Push docker ima x | Ashokrekha/How-to-Push-dock x | +

ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0ff2f6506f0d7f3e4&osUser=root®ion=ap-south-1&sshPort=22#

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```
Last login: Thu Jan 4 17:30:32 2024 from ec2-13-233-177-5.ap-south-1.compute.amazonaws.com
,#
~\### Amazon Linux 2
~~\### AL2 End of Life is 2025-06-30.
~~ \#/
~~ \~'-->
~~ / A newer version of Amazon Linux is available!
~~ . / Amazon Linux 2023, GA and supported until 2028-03-15.
~/m/ / https://aws.amazon.com/linux/amazon-linux-2023/
```

[root@ip-172-31-34-36 ~]#

i-0ff2f6506f0d7f3e4 (project-1A)

PublicIPs: 3.111.245.25 PrivateIPs: 172.31.34.36

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Jenkins installation and configure:

- I have installed Jenkins through yum on Red Hat Enterprise Linux, Alma Linux, Rocky Linux, Oracle Linux, and other Red Hat based distributions.
 - Long Term Support release:

```
sudo wget -O /etc/yum.repos.d/jenkins.repo \
https://pkg.jenkins.io/redhat-stable/jenkins.repo
sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
sudo yum upgrade
# Add required dependencies for the jenkins package
sudo yum install fontconfig java-17-openjdk
sudo yum install jenkins
sudo systemctl daemon-reload
```
 - You can enable the Jenkins service to start at boot with the command: `sudo systemctl enable jenkins`
 - You can start the Jenkins service with the command: `sudo systemctl start jenkins`
 - You can check the status of the Jenkins service using the command: `sudo systemctl status jenkins`
- Browse to <http://localhost:8080> and wait until the **Unlock Jenkins** page appears.
- From the Jenkins console log output, copy the automatically-generated alphanumeric password.
- On the **Unlock Jenkins** page, paste this password into the **Administrator password** field and click **Continue**.
- After [unlocking Jenkins](#), the **Customize Jenkins** page appears. Here you can install any number of useful plugins as part of your initial setup.
 - **Install suggested plugins** - to install the recommended set of plugins, which are based on most common use cases.
- When the **Create First Admin User** page appears, specify the details for your administrator user in the respective fields and click **Save and Finish**.
- When the **Jenkins is ready** page appears, click **Start using Jenkins**.

Instances | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1 | (1733) How to Push docker image | Ashokrekha/How-to-Push-docker | Linux

jenkins.io/doc/book/installing/linux/#red-hat-centos

Jenkins cd

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> User Documentation Home

User Handbook

- [User Handbook Overview](#)
- **Installing Jenkins**
 - Docker
 - Kubernetes
 - **Linux**
 - macOS
 - Windows
 - Other Systems
 - WAR file
 - Other Servlet Containers
 - Offline Installations
 - Initial Settings
- [Platform Information](#)
- [Using Jenkins](#)
- [Pipeline](#)
- [Blue Ocean](#)
- [Managing Jenkins](#)
- [Securing Jenkins](#)
- [System Administration](#)
- [Scaling Jenkins](#)
- [Troubleshooting Jenkins](#)
- [Glossary](#)

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BASH | [Copy to clipboard](#)

Long Term Support release

A [LTS \(Long-Term Support\) release](#) is chosen every 12 weeks from the stream of regular releases as the stable release for that time period. It can be installed from the [redhat-stable](#) yum repository.

```
sudo wget -O /etc/yum.repos.d/jenkins.repo \
    https://pkg.jenkins.io/redhat-stable/jenkins.repo
sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
sudo yum upgrade
# Add required dependencies for the jenkins package
sudo yum install fontconfig java-17-openjdk
sudo yum install jenkins
sudo systemctl daemon-reload
```

Weekly release

A new release is produced weekly to deliver bug fixes and features to users and plugin developers. It can be installed from the [redhat](#) yum repository.

```
sudo wget -O /etc/yum.repos.d/jenkins.repo \
    https://pkg.jenkins.io/redhat/jenkins.repo
sudo rpm --import https://pkg.jenkins.io/redhat/jenkins.io-2023.key
sudo yum upgrade
# Add required dependencies for the jenkins package
sudo yum install fontconfig java-17-openjdk
sudo yum install jenkins
```

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Instances | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1 | (1733) How to Push docker image | Ashokrekha/How-to-Push-docker | Linux

ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-Offf2f6506f0d7f3e4&osUser=root®ion=ap-south-1&sshPort=22/#

Services Search [Alt+S]

Mumbai | Ashok

```
[root@ip-172-31-34-36 ~]# sudo wget -O /etc/yum.repos.d/jenkins.repo \
>     https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2024-01-27 05:59:09-- https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.154.133, 2a04:4e42:24::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)|151.101.154.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 85
Saving to: '/etc/yum.repos.d/jenkins.repo'

100%[=====] 85      --.-K/s   in 0s

2024-01-27 05:58:09 (5.61 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [85/85]

[root@ip-172-31-34-36 ~]# sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
[root@ip-172-31-34-36 ~]# sudo yum upgrade
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
--> Package PyYAML.x86_64 0:3.10-11.amzn2.0.2 will be updated
--> Package PyYAML.x86_64 0:3.10-11.amzn2.0.3 will be an update
--> Package binutils.x86_64 0:2.29.1-31.amzn2 will be updated
--> Package binutils.x86_64 0:2.29.1-31.amzn2.0.1 will be an update
--> Package curl.x86_64 0:8.3.0-1.amzn2.0.4 will be updated
--> Package curl.x86_64 0:8.3.0-1.amzn2.0.5 will be an update
--> Package dbus.x86_64 1:1.10.24-7.amzn2.0.3 will be updated
--> Package dbus.x86_64 1:1.10.24-7.amzn2.0.4 will be an update
--> Package dbus-libs.x86_64 1:1.10.24-7.amzn2.0.3 will be updated
--> Package dbus-libs.x86_64 1:1.10.24-7.amzn2.0.4 will be an update

i-Offf2f6506f0d7f3e4 (project-1A)
PublicIPs: 3.111.245.25 PrivateIPs: 172.31.34.36
```

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Instances | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1 | (1733) How to Push docker image | Ashokrekha/How-to-Push-docker | Linux

```

aws Services Search [Alt+S] Mumbai Ashok
Verifying : curl-0.3.0-1.amzn2.0.4.x86_64 67/69
Verifying : 2:vim-filesystem-9.0.2120-1.amzn2.0.1.noarch 68/69
Verifying : 2:vim-data-9.0.2120-1.amzn2.0.1.noarch 69/69

Installed:
kernel.x86_64 0:5.10.205-195.807.amzn2

Updated:
PyYAML.x86_64 0:3.10-11.amzn2.0.3
curl.x86_64 0:8.3.0-1.amzn2.0.5
dbus-libs.x86_64 1:1.10.24-7.amzn2.0.4
freetype.x86_64 0:2.8-14.amzn2.1.2
java-17-amazon-corretto-devel.x86_64 1:17.0.10+7-1.amzn2.1
kernel-tools.x86_64 0:5.10.205-195.807.amzn2
libseccomp.x86_64 0:2.5.2-1.amzn2.0.1
ncurses-base.noarch 0:6.0-8.20170212.amzn2.1.7
nss-softokn.x86_64 0:3.90.0-6.amzn2.0.1
postfix.x86_64 2:2.10.1-6.amzn2.0.4
python-devel.x86_64 0:2.7.18-1.amzn2.0.8
python-lxml.x86_64 0:3.2.1-4.amzn2.0.5
python-urllib3.noarch 0:1.25.9-1.amzn2.0.3
traceroute.x86_64 3:2.0.22-2.amzn2.0.2
vim-common.x86_64 2:9.0.2153-1.amzn2.0.1
vim-enhanced.x86_64 2:9.0.2153-1.amzn2.0.1
vim-minimal.x86_64 2:9.0.2153-1.amzn2.0.1

binutils.x86_64 0:2.29.1-31.amzn2.0.1
dbus.x86_64 1:1.10.24-7.amzn2.0.4
dmidecode.x86_64 1:3.2-5.amzn2.1.1
java-17-amazon-corretto.x86_64 1:17.0.10+7-1.amzn2.1
java-17-amazon-corretto-headless.x86_64 1:17.0.10+7-1.amzn2.1
libcurl.x86_64 0:8.3.0-1.amzn2.0.5
ncurses.x86_64 0:6.0-8.20170212.amzn2.1.7
ncurses-libs.x86_64 0:6.0-8.20170212.amzn2.1.7
nss-softokn-freebl.x86_64 0:3.90.0-6.amzn2.0.1
python.x86_64 0:2.7.18-1.amzn2.0.8
python-libs.x86_64 0:2.7.18-1.amzn2.0.8
python-pillow.x86_64 0:2.0.0-23.gidic6db8.amzn2.0.9
tar.x86_64 2:1.26-35.amzn2.0.3
tzdata.noarch 0:2023d-1.amzn2.0.1
vim-data.noarch 2:9.0.2153-1.amzn2.0.1
vim-filesystem.noarch 2:9.0.2153-1.amzn2.0.1
xxd.x86_64 2:9.0.2153-1.amzn2.0.1

Complete!
[root@ip-172-31-34-36 ~]# i-Offf2f6506f0d7f3e4 (project-1A)
Public IPs: 3.111.245.25 Private IPs: 172.31.34.36

```

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- yum install java -y

Instances | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1 | (1733) How to Push docker image | Ashokrekha/How-to-Push-docker | Linux

```

aws Services Search [Alt+S] Mumbai Ashok
[root@ip-172-31-34-36 ~]# yum install java -y
Loaded plugins: extras suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
--> Package java-17-amazon-corretto.x86_64 1:17.0.10+7-1.amzn2.1 will be installed
--> Processing Dependency: java-17-amazon-corretto-headless(x86-64) = 1:17.0.10+7-1.amzn2.1 for package: 1:java-17-amazon-corretto-17.0.10+7-1.amzn2.1.x86_64
--> Running transaction check
--> Package java-17-amazon-corretto-headless.x86_64 1:17.0.10+7-1.amzn2.1 will be installed
--> Processing Dependency: jpackage-utils for package: 1:java-17-amazon-corretto-headless-17.0.10+7-1.amzn2.1.x86_64
--> Running transaction check
--> Package javapackages-tools.noarch 0:3.4.1-11.amzn2 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package           Arch      Version          Repository      Size
=====
Installing:
java-17-amazon-corretto   x86_64    1:17.0.10+7-1.amzn2.1      amzn2-core   175 k
Installing for dependencies:
java-17-amazon-corretto-headless   x86_64    1:17.0.10+7-1.amzn2.1      amzn2-core   94 M
javapackages-tools        noarch   3.4.1-11.amzn2            amzn2-core   73 k

Transaction Summary
=====
Install 1 Package (+2 Dependent packages)

i-Offf2f6506f0d7f3e4 (project-1A)
Public IPs: 3.111.245.25 Private IPs: 172.31.34.36

```

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Instances | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1 | (1733) How to Push docker image | Ashokrekhya/How-to-Push-docker-image | Linux

```
Total download size: 94 M
Installed size: 238 M
Downloading packages:
(1/3): java-17-amazon-corretto-17.0.10+7-1.amzn2.1.x86_64.rpm | 175 KB 00:00:00
(2/3): javapackages-tools-3.4.1-11.amzn2.noarch.rpm | 73 KB 00:00:00
(3/3): java-17-amazon-corretto-headless-17.0.10+7-1.amzn2.1.x86_64.rpm | 94 MB 00:00:01

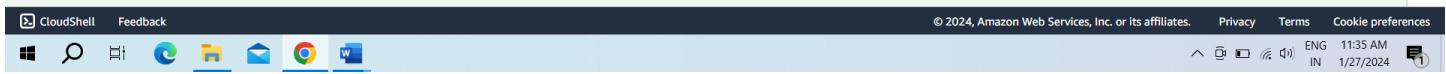
Total 66 MB/s | 94 MB 00:00:01
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : javapackages-tools-3.4.1-11.amzn2.noarch 1/3
  Installing : i:java-17-amazon-corretto-headless-17.0.10+7-1.amzn2.1.x86_64 2/3
  Installing : i:java-17-amazon-corretto-17.0.10+7-1.amzn2.1.x86_64 3/3
  Verifying : i:java-17-amazon-corretto-headless-17.0.10+7-1.amzn2.1.x86_64 1/3
  Verifying : i:java-17-amazon-corretto-17.0.10+7-1.amzn2.1.x86_64 2/3
  Verifying : javapackages-tools-3.4.1-11.amzn2.noarch 3/3

Installed:
  java-17-amazon-corretto.x86_64 1:17.0.10+7-1.amzn2.1

Dependency Installed:
  java-17-amazon-corretto-headless.x86_64 1:17.0.10+7-1.amzn2.1           javapackages-tools.noarch 0:3.4.1-11.amzn2

Complete!
[root@ip-172-31-34-36 ~]#
```

i-Offf2f6506f0d7f3e4 (project-1A)
Public IPs: 3.111.245.25 Private IPs: 172.31.34.36



- **systemctl enable --now Jenkins.**
- **systemctl start Jenkins.**
- **systemctl status Jenkins.**

Instances | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1 | (1733) How to Push docker image | Ashokrekhya/How-to-Push-docker-image | Linux

```
[root@ip-172-31-34-36 ~]# systemctl enable --now jenkins
Created symlink from /etc/systemd/system/multi-user.target.wants/jenkins.service to /usr/lib/systemd/system/jenkins.service.
[root@ip-172-31-34-36 ~]# systemctl start jenkins
[root@ip-172-31-34-36 ~]# systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; vendor preset: disabled)
   Active: active (running) since Sat 2024-01-27 06:09:07 UTC; 1min 13s ago
     Main PID: 16063 (java)
        CGroup: /system.slice/jenkins.service
                  └─16063 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=%C/jenkins/war --httpPort=8080

Jan 27 06:09:05 ip-172-31-34-36.ap-south-1.compute.internal jenkins[16063]: 2024-01-27 06:09:05.437+0000 [id=32]      INFO      h.p.b.g.GlobalTimeOutConf...ot set
Jan 27 06:09:06 ip-172-31-34-36.ap-south-1.compute.internal jenkins[16063]: 2024-01-27 06:09:06.655+0000 [id=32]      INFO      jenkins.InitReactorRunner...nsions
Jan 27 06:09:07 ip-172-31-34-36.ap-south-1.compute.internal jenkins[16063]: 2024-01-27 06:09:07.195+0000 [id=32]      INFO      jenkins.InitReactorRunner...loaded
Jan 27 06:09:07 ip-172-31-34-36.ap-south-1.compute.internal jenkins[16063]: 2024-01-27 06:09:07.196+0000 [id=32]      INFO      jenkins.InitReactorRunner...adapted
Jan 27 06:09:07 ip-172-31-34-36.ap-south-1.compute.internal jenkins[16063]: 2024-01-27 06:09:07.233+0000 [id=32]      INFO      jenkins.InitReactorRunner...l jobs
Jan 27 06:09:07 ip-172-31-34-36.ap-south-1.compute.internal jenkins[16063]: 2024-01-27 06:09:07.238+0000 [id=31]      INFO      jenkins.InitReactorRunner...dated
Jan 27 06:09:07 ip-172-31-34-36.ap-south-1.compute.internal jenkins[16063]: 2024-01-27 06:09:07.445+0000 [id=32]      INFO      j.install.InstallState$Op...avior
Jan 27 06:09:07 ip-172-31-34-36.ap-south-1.compute.internal jenkins[16063]: 2024-01-27 06:09:07.453+0000 [id=32]      INFO      jenkins.InitReactorRunner...zation
Jan 27 06:09:07 ip-172-31-34-36.ap-south-1.compute.internal jenkins[16063]: 2024-01-27 06:09:07.541+0000 [id=25]      INFO      hudson.lifecycle.Lifecycl...unning
Jan 27 06:09:07 ip-172-31-34-36.ap-south-1.compute.internal systemd[1]: Started Jenkins Continuous Integration Server.
Hint: Some lines were ellipsized, use -l to show in full.
[root@ip-172-31-34-36 ~]# cd /var/lib/
[root@ip-172-31-34-36 lib]# ls
alternatives  authconfig  cloud  dhclient  gssproxy  initramfs  logrotate  misc  nfs  plymouth  rpcbind  rpm-state  stateless  update-motd  yum
amazon        chrony    dbus  games  hibinit-agent  jenkins  machines  mlocate  os-prober  postfix  rpm  rsyslog  systemd  xfsdump
[root@ip-172-31-34-36 lib]#
```

i-Offf2f6506f0d7f3e4 (project-1A)
Public IPs: 3.111.245.25 Private IPs: 172.31.34.36



- yum install docker -y

```
[root@ip-172-31-34-36 ~]# yum install docker -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
Resolving Dependencies
--> Running transaction check
--> Package docker.x86_64 0:20.10.25-1.amzn2.0.4 will be installed
--> Processing Dependency: containerd >= 1.3.2 for package: docker-20.10.25-1.amzn2.0.4.x86_64
--> Processing Dependency: libcgroup >= 0.40.rc1-5.15 for package: docker-20.10.25-1.amzn2.0.4.x86_64
--> Processing Dependency: runc >= 1.0.0 for package: docker-20.10.25-1.amzn2.0.4.x86_64
--> Processing Dependency: pigz for package: docker-20.10.25-1.amzn2.0.4.x86_64
--> Running transaction check
--> Package containerd.x86_64 0:1.7.2-1.amzn2.0.1 will be installed
--> Package libcgroup.x86_64 0:0.41-21.amzn2 will be installed
--> Package pigz.x86_64 0:2.3.4-1.amzn2.0.1 will be installed
--> Package runc.x86_64 0:1.1.7-4.amzn2 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package           Arch      Version            Repository      Size
=====
Installing:
docker           x86_64   20.10.25-1.amzn2.0.4    amzn2extra-docker  43 M
Installing for dependencies:
containerd        x86_64   1.7.2-1.amzn2.0.1      amzn2extra-docker  30 M
libcgroup         x86_64   0.41-21.amzn2          amzn2-core          66 k
pigz              x86_64   2.3.4-1.amzn2.0.1      amzn2-core          81 k

i-Offf2f6506f0d7f3e4 (project-1A)
PublicIPs: 3.111.245.25 PrivateIPs: 172.31.34.36
```

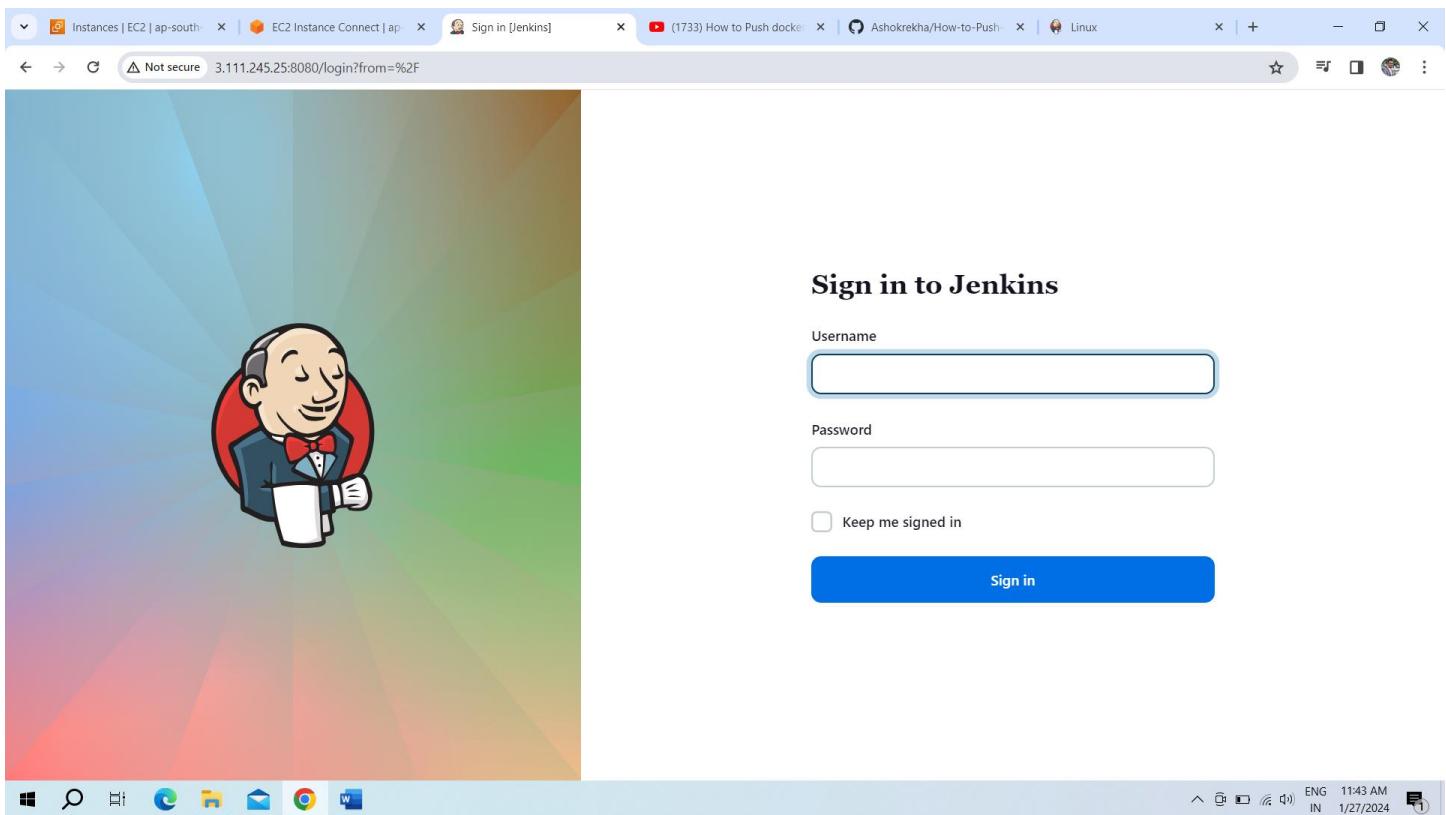
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- docker -v (To check docker version).

```
[root@ip-172-31-34-36 ~]# docker -v
Docker version 20.10.25, build b82b9f3
[root@ip-172-31-34-36 ~]#
```

i-Offf2f6506f0d7f3e4 (project-1A)
PublicIPs: 3.111.245.25 PrivateIPs: 172.31.34.36

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- Jenkins Dashboard

A screenshot of the Jenkins dashboard. The header includes the Jenkins logo, a search bar, and user information for 'Ashok'. The main area has a dark header with 'Welcome to Jenkins!' and a sub-header 'Start building your software project'. It features a 'Create a job' button and sections for 'Set up a distributed build' (with links for 'Set up an agent', 'Configure a cloud', and 'Learn more about distributed builds'). On the left, there are navigation links like 'New Item', 'People', 'Build History', etc., and sections for 'Build Queue' (empty) and 'Build Executor Status' (1 Idle, 2 Idle). The footer shows the Jenkins version 'Jenkins 2.426.3' and the date '1/27/2024 11:45 AM'.

- Jenkins job with pipeline

Enter an item name

Project-1A
» Required field

Freestyle project
This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.

Pipeline
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

Multi-configuration project
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.

Folder
Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.

OK **Branch Pipeline**
Create a set of Pipeline projects according to detected branches in one SCM repository.

- Access Token for Dockerhub to integrate with Jenkins.

ashok223

User Joined September 20, 2023

General **Security**

Access Tokens

Description	Source	Scope	Last Used	Created
jenkins	MANUAL	Read, Write, Delete	Jan 28, 2024 17:29:41	Jan 28, 2024 17:17:10

Two-Factor Authentication

Two-factor authentication is not enabled yet.
Two-factor authentication adds an extra layer of security to your account by requiring more than just a password to sign in. [Learn more](#)

- Credentials for Dockerhub.

The screenshot shows the Jenkins web interface at 43.205.143.13:8080/manage/credentials/. The page title is "Jenkins > Credentials". The main section is titled "Credentials" and lists one item:

T	P	Store ↓	Domain	ID	Name
		System	(global)	dockerhub	ashok223/******** (dockerhub)

Below this, there's a section titled "Stores scoped to Jenkins" which lists:

P	Store ↓	Domains
	System	(global)

At the bottom, there are icons for S, M, and L, and status information: REST API Jenkins 2.426.3, ENG IN 5:45 PM 1/28/2024.

Jenkins Pipeline: Jenkins Pipeline is a suite of plugins that allows to define and manage continuous delivery pipelines as code in Jenkins. A pipeline is a set of automated processes that allows to model, orchestrate, and visualize the steps involved in building, testing, and deploying your software. The idea behind Jenkins Pipeline is to enable the creation of complex, multi-step workflows in a more structured and maintainable way.

Jenkins Pipeline is a powerful tool for implementing continuous integration and continuous delivery (CI/CD) practices, helping teams automate and streamline their software delivery processes.

Access Token: Docker Hub uses access tokens for authentication and authorization purposes. Access tokens are required to interact with the Docker Hub API and perform actions such as pulling or pushing Docker images.

Credentials: In Jenkins, we can manage Docker Hub credentials to securely authenticate and interact with Docker Hub as part of our CI/CD pipeline. This is typically done by configuring Docker Hub credentials in Jenkins so that Jenkins can use them when building, pushing, or pulling Docker images.

- Jenkins pipeline script.

The screenshot shows the Jenkins Pipeline configuration page for a project named "Project-1A". The "Pipeline" tab is selected in the sidebar. The main area displays a Groovy script for defining a pipeline:

```

1 * pipeline{
2     agent any
3     environment {
4         DOCKERHUB_CREDENTIALS=credentials('dockerhub')
5     }
6     stages {
7         stage('gitclone') {
8             steps {
9                 git branch: 'main', url: 'https://github.com/Ashokrekha/live01.git'
10            }
11        }
12    }
13 }
14
15
16
17

```

Below the script, there is a checkbox labeled "Use Groovy Sandbox" which is checked. At the bottom of the page are "Save" and "Apply" buttons.

- Pipeline Syntax.

The screenshot shows the Jenkins Pipeline Syntax configuration page for a project named "Project-1A #2". The "Pipeline Syntax" tab is selected in the sidebar. On the left, there is a sidebar with links: "Global Variables Reference", "Online Documentation", "Examples Reference", and "IntelliJ IDEA GDSL". The main area is titled "Sample Step" and shows a "git: Git" step configuration. The configuration fields are:

- Repository URL: <https://github.com/Ashokrekha/live01.git>
- Branch: main
- Credentials: - none -
- Include in polling? (checkbox checked)
- Include in changelog? (checkbox checked)

At the bottom, there is a "Generate Pipeline Script" button, and the resulting Groovy script is displayed in a code editor:

```
git branch: 'main', url: 'https://github.com/Ashokrekha/live01.git'
```

- Copying of code from Github for Pipeline syntax

The screenshot shows a Microsoft Edge browser window with multiple tabs open. The active tab is 'github.com/Ashokrekha/live01'. The page displays the 'live01' repository, which is a fork of 'vamsibyramala/live01'. The 'Code' tab is selected. A context menu is open over the 'Clone' button, showing options for 'HTTPS', 'SSH', and 'GitHub CLI'. The 'HTTPS' option is highlighted, and its URL is copied to the clipboard. The repository's structure is visible on the left, and various sections like 'About', 'Releases', 'Packages', and 'Languages' are on the right.

- Dockerfile in live01 Repository.

The screenshot shows a Microsoft Edge browser window with multiple tabs open. The active tab is 'github.com/Ashokrekha/live01/blob/main/Dockerfile'. The page displays the 'Dockerfile' file within the 'live01' repository. The 'Files' sidebar on the left shows other files like 'src', 'Dockerfile', 'Jenkinsfile', 'README.md', and 'pom.xml'. The main pane shows the Dockerfile code:

```

1 FROM tomcat:9
2 COPY target/*.war /usr/local/tomcat/webapps/ROOT.war

```

- **Pipeline Script:**

```
pipeline{

    agent any

    environment {

        DOCKERHUB_CREDENTIALS=credentials('dockerhub')

    }

    stages {

        stage('gitclone') {

            steps {

                git branch: 'main', url: 'https://github.com/Ashokrekha/live01.git'

            }

        }

        stage('Build') {

            steps {

                sh 'docker build -t ashok223/project-1a .'

            }

        }

        stage('Login') {

            steps {

                sh 'echo $DOCKERHUB_CREDENTIALS_PSW | docker login -u
$DOCKERHUB_CREDENTIALS_USR --password-stdin'

            }

        }

        stage('Push') {

            steps {

                sh 'docker push ashok223/project-1a'

            }

        }

        stage('deploy') {

            steps {

                sh 'docker run -d -p 8081:8080 --name project-1a ashok223/project-1a'

            }

        }

    }

}
```

```
        }
```

```
    }
```

```
}
```

```
post {
```

```
    always {
```

```
        sh 'docker logout'
```

```
    }
```

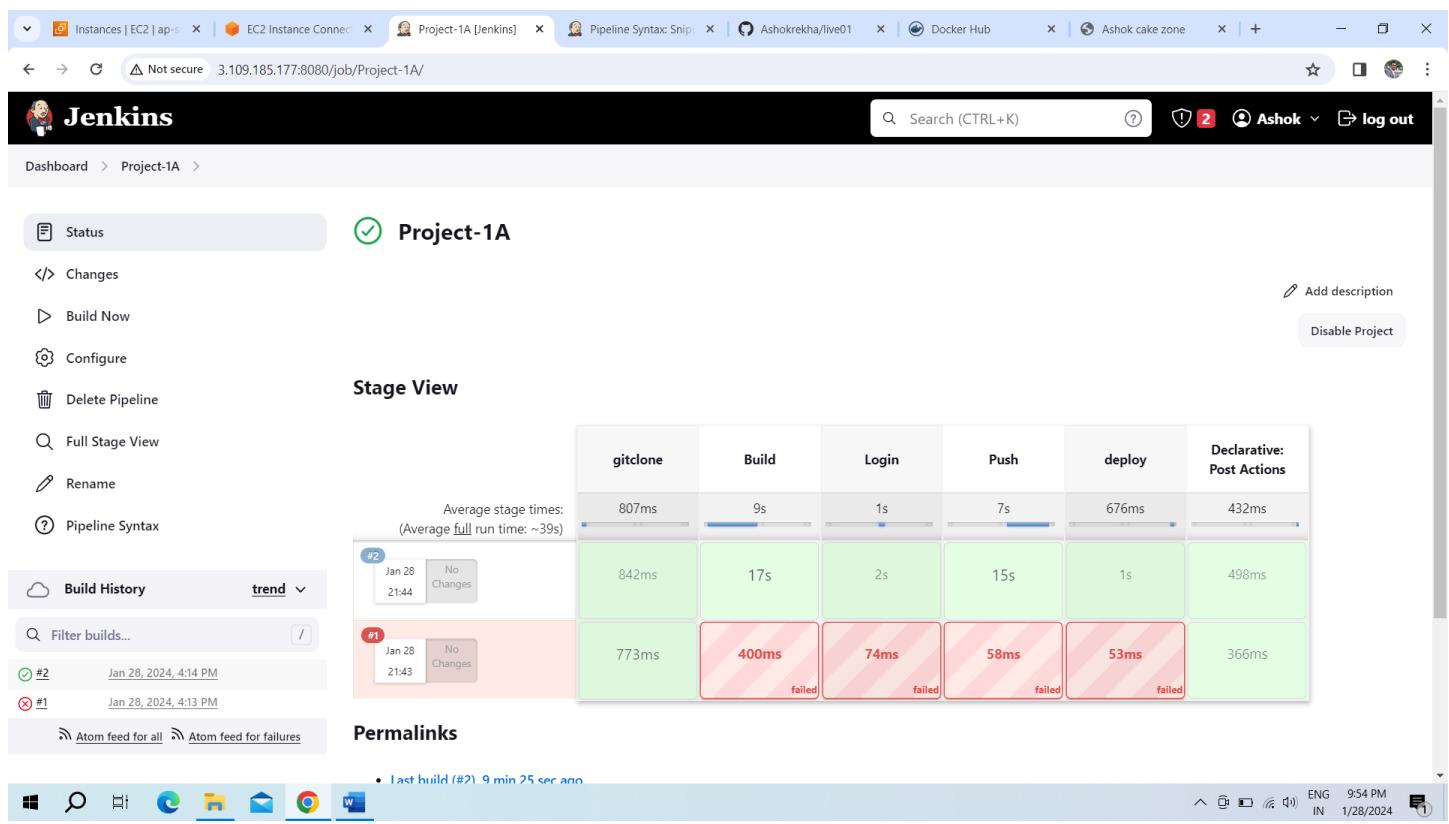
```
}
```

```
}
```

- **Dockerfile:**

```
FROM tomcat:9  
COPY target/*.war /usr/local/tomcat/webapps/ROOT.war
```

- Build status of project-1A.



- Console output.

- Pushed image to Dockerhub (ashok223/project-1a).

Instances | EC2 | ap-s | EC2 Instance Connect | Project-1A #2 Console | Pipeline Syntax: Snip | Ashokrekha/live01 | ashok223/project-1a | Ashok cake zone

hub.docker.com/repository/docker/ashok223/project-1a/general

dockerhub Explore **Repositories** Organizations **ctrl+K** ? A

ashok223 / [Repositories](#) / [project-1a](#) / [General](#)

Using 0 of 1 private repositories. [Get more](#)

General Tags Builds Collaborators Webhooks Settings

Info Add a short description for this repository [Update](#)

The short description is used to index your content on Docker Hub and in search engines. It's visible to users in search results.

ashok223 / project-1a

Description
This repository does not have a description
Last pushed: 10 minutes ago

Docker commands
To push a new tag to this repository: [Public View](#)

```
docker push ashok223/project-1a:tagname
```

Tags
This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
latest		Image	--	10 minutes ago

[See all](#)

Automated Builds
Manually pushing images to Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new images whenever your code is updated, so you can focus your time on creating.
Available with Pro, Team and Business subscriptions. [Read more about automated builds](#).

Upgrade

Windows Taskbar icons: File Explorer, Edge, Mail, Google Chrome, File Manager, Task View, Start button, Search icon, Network icon, Battery icon, ENG IN, 9:55 PM, 1/28/2024, 1

- Created docker images (ashok223/project-1a, tomcat) and Container (project-1a).

```
[root@ip-172-31-34-36 ~]# docker images
REPOSITORY      TAG      IMAGE ID      CREATED      SIZE
ashok223/project-1a  latest   563160e3e822  58 seconds ago  481MB
tomcat          9       2601bdcf2b42  2 days ago    463MB
node            latest   97daf4a7c830  11 days ago   1.1GB
[root@ip-172-31-34-36 ~]# docker ps
CONTAINER ID   IMAGE      COMMAND      CREATED      STATUS      PORTS      NAMES
c228b0047074  ashok223/project-1a  "catalina.sh run"  48 seconds ago  Up 47 seconds  0.0.0.0:8081->8080/tcp, :::8081->8080/tcp  project-1a
[root@ip-172-31-34-36 ~]# 
```

i-Offf2f6506f0d7f3e4 (project-1A)
PublicIPs: 3.109.185.177 PrivateIPs: 172.31.34.36

Docker Image: Docker images are a fundamental component in the Docker ecosystem, a platform for developing, shipping, and running applications in containers. Containers provide a lightweight and consistent environment for applications to run, allowing them to be easily deployed across different environments.

Dockerfile: The Dockerfile is a script that contains instructions for building a Docker image. It specifies the base image, sets up the environment, copies files, installs dependencies, and defines other configurations needed for the application.

Base Image: The base image is the starting point for a Docker image. It could be a minimal Linux distribution or a specialized image with certain tools pre-installed. Images are often built on top of other images, forming a hierarchy.

Docker Container: A Docker container is an instance of a Docker image. It is a runnable, isolated process that encapsulates an application and its dependencies. Containers are created from images and can be started, stopped, moved, and deleted independently of one another.

Docker Hub: Docker Hub is a public registry that allows users to share and distribute Docker images. It hosts a vast collection of pre-built images that can be used as base images for various applications.

- Prot number 8081 for project-1a container.

Screenshot of the AWS CloudShell interface showing the 'Edit inbound rules' section for a security group. The table lists three existing rules:

Security group rule ID	Type	Protocol	Port range	Source	Description - optional
sgr-070b947b30479fd00	Custom TCP	TCP	8081	Custom	0.0.0.0/0 X
sgr-074ebfc0ed0e48618	SSH	TCP	22	Custom	0.0.0.0/0 X
sgr-06d40246eec33f150	Custom TCP	TCP	8080	Custom	0.0.0.0/0 X

Add rule

⚠ Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

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- Instance public ip:8081 (CAKEZONE Application).

Screenshot of a web browser displaying the CAKEZONE website. The page features a large image of a chocolate cake with cherries and white frosting. The navigation menu includes HOME, ABOUT US, MENU & PRICING, MASTER CHEFS, PAGES, and CONTACT US.

EMAIL US ashokrekha223@gmail.com

CALL US +012 345 6789

Super Crispy

CAKEZONE

THE BEST CAKE IN LONDON

Read More

Play Video

Not secure 3.109.185.177:8081

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