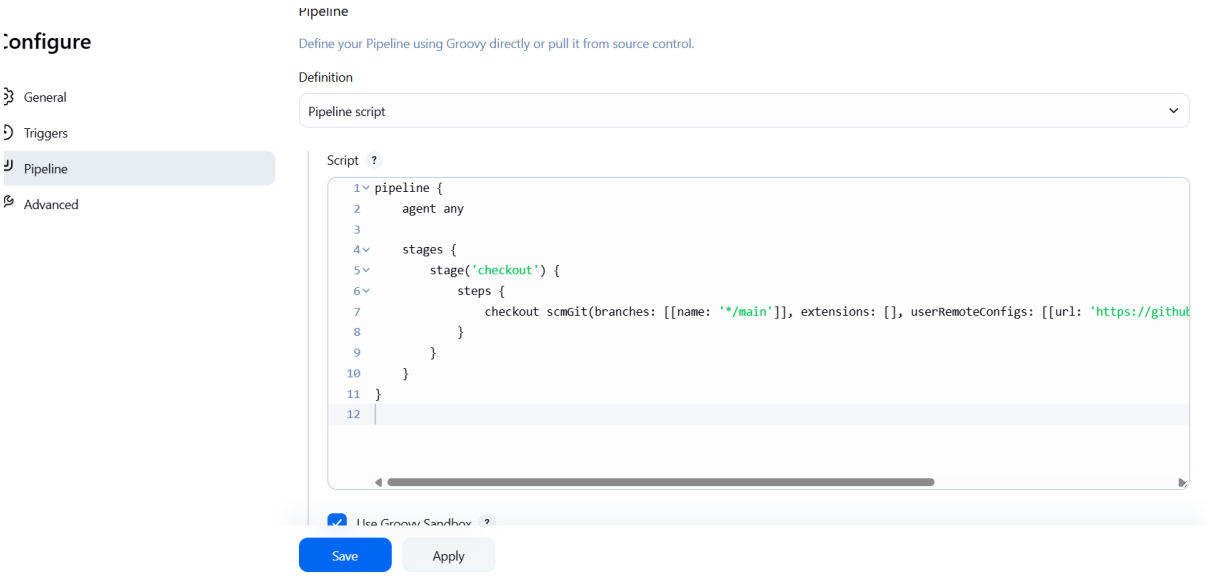
This is all about chekout to the github repo build docker image create contianer out of it and push docker image to the AWS ECR.

```
ubuntu@ip-172-31-3-0:~$ java -version
openjdk version "17.0.14" 2025-01-21
OpenJDK Runtime Environment (build 17.0.14+7-Ubuntu-124.04)
OpenJDK 64-Bit Server VM (build 17.0.14+7-Ubuntu-124.04, mixed mode, sharing)
ubuntu@ip-172-31-3-0:~$
```

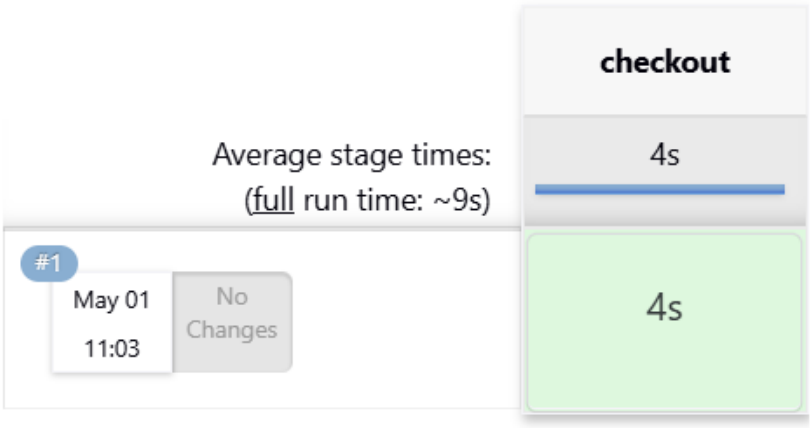
```
No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-0:~# systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
     Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: enabled)
     Active: active (running) since Thu 2025-05-01 05:19:19 UTC; 18s ago
   Main PID: 4029 (java)
      Tasks: 42 (limit: 1129)
     Memory: 308.0M (peak: 389.8M)
        CPU: 16.291s
     CGroup: /system.slice/jenkins.service
             └─4029 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

May 01 05:19:11 ip-172-31-3-0 jenkins[4029]: ba1f0c37a17f4090b011ef41b328b19e
May 01 05:19:11 ip-172-31-3-0 jenkins[4029]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
May 01 05:19:11 ip-172-31-3-0 jenkins[4029]: ************************************************************
May 01 05:19:11 ip-172-31-3-0 jenkins[4029]: ************************************************************
May 01 05:19:11 ip-172-31-3-0 jenkins[4029]: ************************************************************
May 01 05:19:19 ip-172-31-3-0 jenkins[4029]: 2025-05-01 05:19:19.231+0000 [id=30]       INFO       jenkins.InitReactorRunner$1#onAttained: Completed initialization
May 01 05:19:19 ip-172-31-3-0 jenkins[4029]: 2025-05-01 05:19:19.253+0000 [id=23]       INFO       hudson.lifecycle.Lifecycle#onReady: Jenkins is fully up and running
May 01 05:19:19 ip-172-31-3-0 systemd[1]: Started jenkins.service - Jenkins Continuous Integration Server.
May 01 05:19:20 ip-172-31-3-0 jenkins[4029]: 2025-05-01 05:19:20.930+0000 [id=47]       INFO       h.m.DownloadService$Downloadable#load: Obtained the updated data file for hudson.tas
May 01 05:19:20 ip-172-31-3-0 jenkins[4029]: 2025-05-01 05:19:20.931+0000 [id=47]       INFO       hudson.util.Retrier#start: Performed the action check updates server successfully at
```



python_pro

Stage View



Permalinks

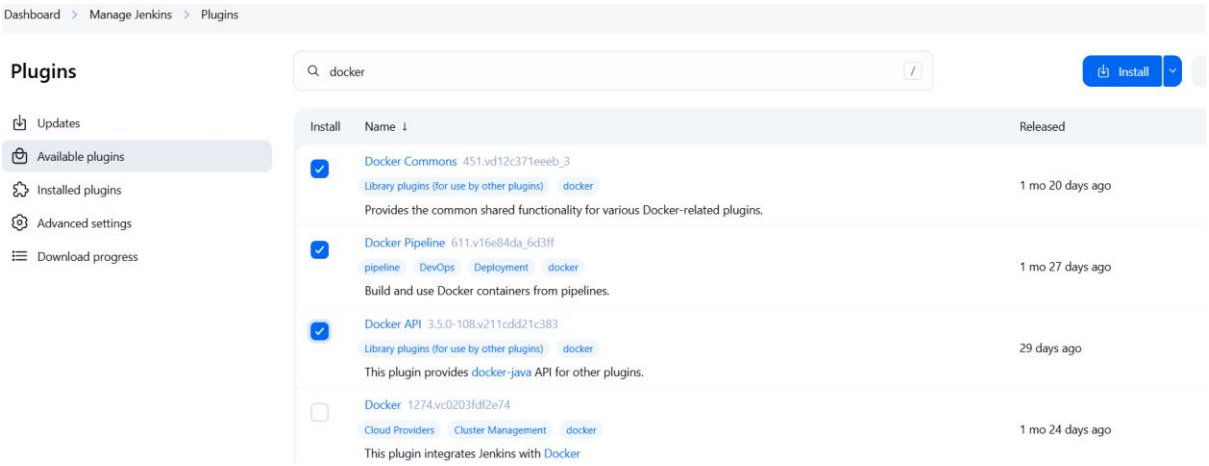
- Last build (#1), 1 min 32 sec ago
- Last stable build (#1), 1 min 32 sec ago

```
ubuntu@ip-172-31-3-0:~$ docker --version
Docker version 28.1.1, build 4eba377
ubuntu@ip-172-31-3-0:~$ sudo usermod -aG docker jenkins
ubuntu@ip-172-31-3-0:~$ sytemctl status docket=r
Command 'sytemctl' not found, did you mean:
  command 'systemctl' from deb systemd (255.4-1ubuntu8.6)
  command 'systemctl' from deb systemctl (1.4.4181-1.1)
Try: sudo apt install <deb name>
ubuntu@ip-172-31-3-0:~$ sytemctl status docker
Command 'sytemctl' not found, did you mean:
  command 'systemctl' from deb systemd (255.4-1ubuntu8.6)
  command 'systemctl' from deb systemctl (1.4.4181-1.1)
Try: sudo apt install <deb name>
ubuntu@ip-172-31-3-0:~$ systemctl status docker
● docker.service - Docker Application Container Engine
     Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; preset: enabled)
     Active: active (running) since Thu 2025-05-01 05:36:39 UTC; 3min 31s ago
TriggeredBy: ● docker.socket
       Docs: https://docs.docker.com
   Main PID: 5611 (dockerd)
      Tasks: 8
     Memory: 28.9M (peak: 94.5M)
        CPU: 345ms
     CGroup: /system.slice/docker.service
             └─5611 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

May 01 05:36:38 ip-172-31-3-0 dockerd[5611]: time="2025-05-01T05:36:38.286973038Z" level=info msg="detected 127.0.0.53 nameserver,
May 01 05:36:38 ip-172-31-3-0 dockerd[5611]: time="2025-05-01T05:36:38.446100164Z" level=info msg="Creating a containerd client" ad
May 01 05:36:38 ip-172-31-3-0 dockerd[5611]: time="2025-05-01T05:36:38.508280123Z" level=info msg="Loading containers: start."
May 01 05:36:38 ip-172-31-3-0 dockerd[5611]: time="2025-05-01T05:36:38.922444231Z" level=info msg="Loading containers: done."
May 01 05:36:39 ip-172-31-3-0 dockerd[5611]: time="2025-05-01T05:36:39.000676149Z" level=info msg="Docker daemon" commit=01f442b co
May 01 05:36:39 ip-172-31-3-0 dockerd[5611]: time="2025-05-01T05:36:39.000978191Z" level=info msg="Initializing buildkit"
May 01 05:36:39 ip-172-31-3-0 dockerd[5611]: time="2025-05-01T05:36:39.130124970Z" level=info msg="Completed buildkit initializatio
May 01 05:36:39 ip-172-31-3-0 dockerd[5611]: time="2025-05-01T05:36:39.151893181Z" level=info msg="Daemon has completed initializat
May 01 05:36:39 ip-172-31-3-0 dockerd[5611]: time="2025-05-01T05:36:39.152105845Z" level=info msg="API listen on /run/docker.sock"
May 01 05:36:39 ip-172-31-3-0 systemd[1]: Started docker.service - Docker Application Container Engine.
lines 1-22/22 (END)
^C
ubuntu@ip-172-31-3-0:~$ sudo chmod 666 /var/run/docker.socket
chmod: cannot access '/var/run/docker.socket': No such file or directory
ubuntu@ip-172-31-3-0:~$ sudo su -
root@ip-172-31-3-0:~# chmod 666 /var/run/docker.socket
chmod: cannot access '/var/run/docker.socket': No such file or directory
root@ip-172-31-3-0:~# sudo chmod 666 /var/run/docker.socket
chmod: cannot access '/var/run/docker.socket': No such file or directory
root@ip-172-31-3-0:~# sudo chmod 666 /var/run/docker.sock
root@ip-172-31-3-0:~#
```

```
ubuntu@ip-172-31-3-0:~$ sudo chmod 666 /var/run/docker.socket
chmod: cannot access '/var/run/docker.socket': No such file or directory
ubuntu@ip-172-31-3-0:~$ sudo su -
root@ip-172-31-3-0:~# chmod 666 /var/run/docker.socket
chmod: cannot access '/var/run/docker.socket': No such file or directory
root@ip-172-31-3-0:~# sudo chmod 666 /var/run/docker.socket
chmod: cannot access '/var/run/docker.socket': No such file or directory
root@ip-172-31-3-0:~# sudo chmod 666 /var/run/docker.sock
root@ip-172-31-3-0:~# systemctl stop docker
Stopping 'docker.service', but its triggering units are still active:
docker.socket
root@ip-172-31-3-0:~# systemctl start docker
root@ip-172-31-3-0:~# systemctl status docker
● docker.service - Docker Application Container Engine
     Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; preset: enabled)
     Active: active (running) since Thu 2025-05-01 05:44:27 UTC; 17s ago
TriggeredBy: ● docker.socket
       Docs: https://docs.docker.com
   Main PID: 5987 (dockerd)
      Tasks: 8
     Memory: 86.8M (peak: 86.9M)
        CPU: 339ms
     CGroup: /system.slice/docker.service
             └─5987 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

May 01 05:44:27 ip-172-31-3-0 dockerd[5987]: time="2025-05-01T05:44:27.450796695Z" level=info msg="[graphdriver] using prior stor
May 01 05:44:27 ip-172-31-3-0 dockerd[5987]: time="2025-05-01T05:44:27.456374545Z" level=info msg="Loading containers: start."
May 01 05:44:27 ip-172-31-3-0 dockerd[5987]: time="2025-05-01T05:44:27.782365176Z" level=warning msg="Error (Unable to complete a
May 01 05:44:27 ip-172-31-3-0 dockerd[5987]: time="2025-05-01T05:44:27.824639356Z" level=info msg="Loading containers: done."
May 01 05:44:27 ip-172-31-3-0 dockerd[5987]: time="2025-05-01T05:44:27.851001051Z" level=info msg="Docker daemon" commit=01f442b
May 01 05:44:27 ip-172-31-3-0 dockerd[5987]: time="2025-05-01T05:44:27.851653227Z" level=info msg="Initializing buildkit"
May 01 05:44:27 ip-172-31-3-0 dockerd[5987]: time="2025-05-01T05:44:27.926397375Z" level=info msg="Completed buildkit initializat
May 01 05:44:27 ip-172-31-3-0 dockerd[5987]: time="2025-05-01T05:44:27.938172145Z" level=info msg="Daemon has completed initializ
May 01 05:44:27 ip-172-31-3-0 dockerd[5987]: time="2025-05-01T05:44:27.938211317Z" level=info msg="API listen on /run/docker.sock
May 01 05:44:27 ip-172-31-3-0 systemd[1]: Started docker.service - Docker Application Container Engine.
lines 1-22/22 (END)
^C
root@ip-172-31-3-0:~#
```



Script ?

```
2     agent any
3
4     stages {
5         stage('checkout') {
6             steps {
7                 checkout scmGit(branches: [[name: '*/main']], extensions: [], userRemoteConfigs: [[url: 'https://gitH
8             }
9         }
10        stage('Build') {
11            steps {
12                sh 'docker build -t image_docker:latest .'
13            }
14        }
15    }
16 }
```

python_pro

Stage View

	checkout	Build
Average stage times: (full run time: ~13s)	3s	14s
#4 May 01 11:25 No Changes	1s	14s

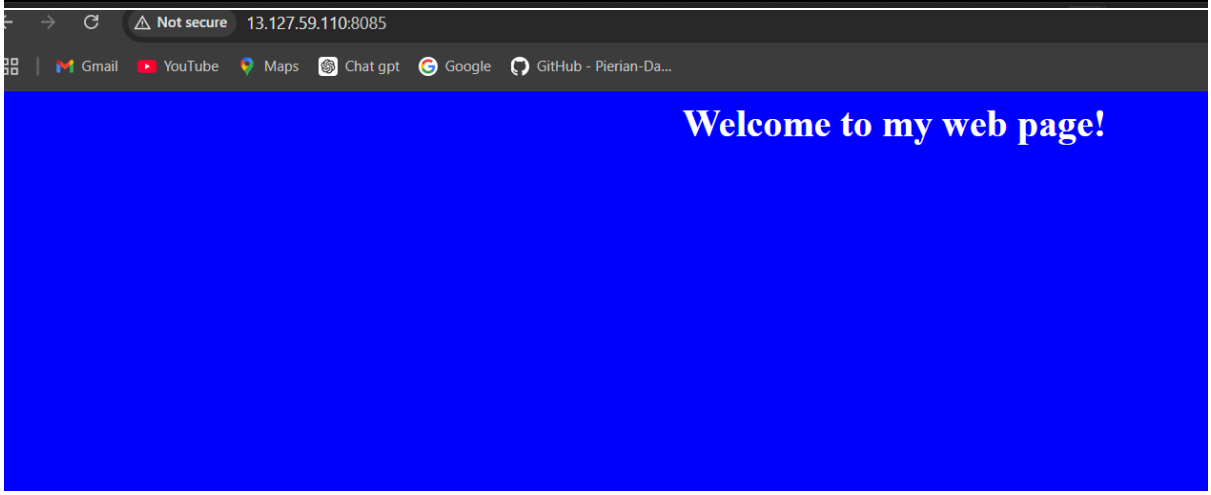
```
ubuntu@ip-172-31-3-0:~$ docker image ls
REPOSITORY      TAG       IMAGE ID       CREATED          SIZE
image_docker    latest    649134e1c9ef   2 minutes ago    137MB
ubuntu@ip-172-31-3-0:~$ docker ps
CONTAINER ID   IMAGE      COMMAND   CREATED   STATUS    PORTS     NAMES
ubuntu@ip-172-31-3-0:~$
```

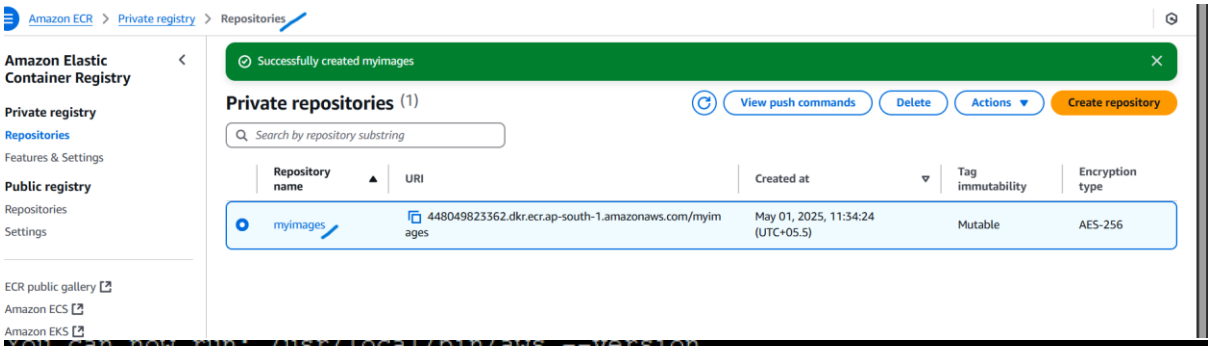
Script ?

```
        }
        stage('Build') {
            steps {
                sh 'docker build -t image_docker:latest .'
            }
        }
        stage('Run Container') {
             steps {
                sh 'docker run -d --name my_container -p 8085:8085 image_docker'
              }
        }
    }
}
```

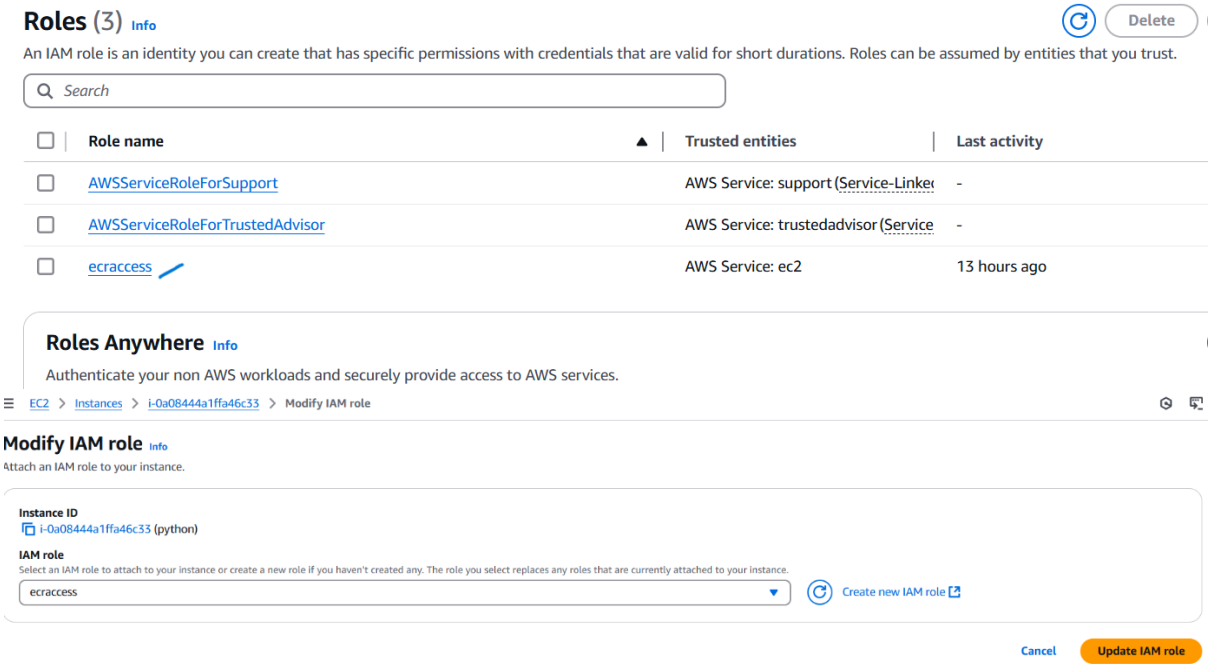
	checkout	Build	Run Container
Average stage times: (full run time: ~11s)	2s	8s	1s
#5 May 01 11:31 — 1 commit	1s	3s	1s
#4 May 01 11:25 — No Changes	1s	14s	

```
ubuntu@ip-172-31-3-0:~$ docker ps
CONTAINER ID   IMAGE          COMMAND           CREATED              STATUS              PORTS                                                  NAMES
735fc1b674c4   image_docker   "python app.py"   About a minute ago   Up About a minute   0.0.0.0:8085->8085/tcp, [::]:8085->8085/tcp   my_container
ubuntu@ip-172-31-3-0:~$
```






```
You can now run: /usr/local/bin/aws --version
root@ip-172-31-3-0:~# aws --version
aws-cli/2.27.5 Python/3.13.2 Linux/6.8.0-1024-aws exe/x86_64.ubuntu.24
root@ip-172-31-3-0:~#
```



macOS / Linux | Windows

lake sure that you have the latest version of the AWS CLI and Docker installed. For more information, see Getting tarted with Amazon ECR.

lse the following steps to authenticate and push an image to your repository. For additional registry authentication ıethods, including the Amazon ECR credential helper, see Registry Authentication.

1. Retrieve an authentication token and authenticate your Docker client to your registry. Use the AWS CLI:

```
aws ecr get-login-password --region ap-south-1 | docker login --username AWS --password-stdin 448049823362.dkr.ecr.ap-south-1.amazonaws.com
```

Note: If you receive an error using the AWS CLI, make sure that you have the latest version of the AWS CLI and Docker installed.

2. Build your Docker image using the following command. For information on building a Docker file from scratch see the instructions here. You can skip this step if your image is already built:

```
docker build -t myimages .
```

3. After the build completes, tag your image so you can push the image to this repository:

```
docker tag myimages:latest 448049823362.dkr.ecr.ap-south-1.amazonaws.com/myimages:latest
```

Code copied

ommand to push this image to your newly created AWS repository:

```
docker push 448049823362.dkr.ecr.ap-south-1.amazonaws.com/myimages:latest
```

```
pipeline {
    stages {
        stage('Build') {
            steps {
                sh 'docker build -t myimages:latest .'
            }
        }
        stage('Run Container') {
            steps {
                sh 'docker run -d --name my_container -p 8085:8085 myimages:latest'
            }
        }
        stage('Push to ECR') {
    steps {
        sh 'aws ecr get-login-password --region ap-south-1 | docker login --username AWS --password-stdin 448049823362.dkr.ecr.ap-sou
        sh 'docker tag myimages:latest 448049823362.dkr.ecr.ap-south-1.amazonaws.com/myimages:latest'
        sh 'docker push 448049823362.dkr.ecr.ap-south-1.amazonaws.com/myimages:latest'
    }
}
    }
}
```

Stage View

	checkout	Build	Run Container	Push to ECR
Average stage times: (full run time: ~15s)	1s	5s	1s	5s
#9 May 01 11:52 No Changes	1s	2s	1s	23s

Images (1)

Delete | Details | Scan | View push commands

Search artifacts

1

Image tag	Artifact type	Pushed at	Size (MB)	Image URI	Digest	Last recorded pull time
latest	Image	May 01, 2025, 11:52:32 (UTC+05.5)	52.32	Copy URI	sha256:8f7979f76a51ec9...	-