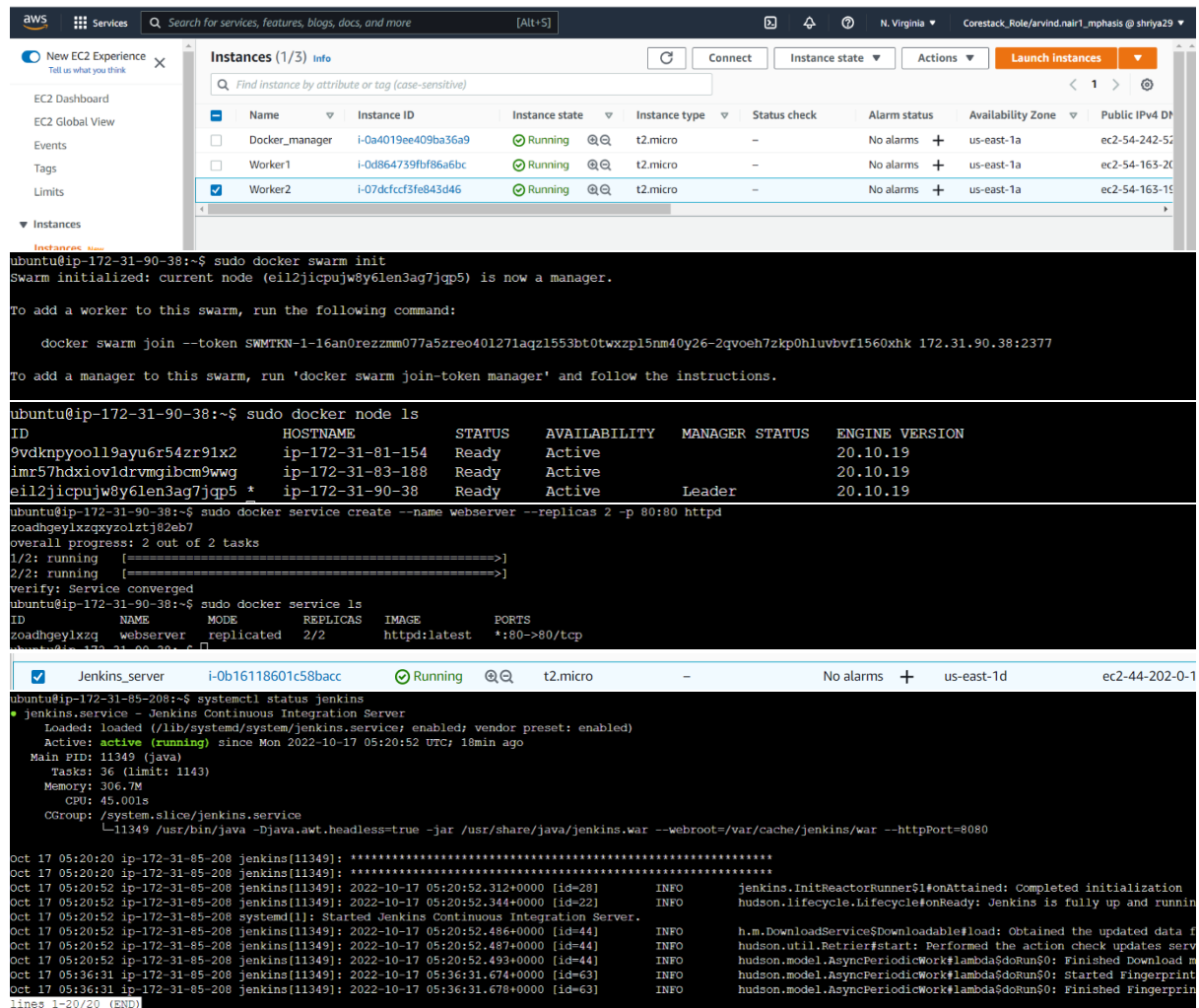


Setting Up Jenkins Pipeline to Deploy Docker Swarm.

DESCRIPTION

Project objective:

You have to develop an environment for Docker networking.



The screenshot displays the AWS Management Console interface. The top navigation bar shows the user is logged in as 'Corestack_Role/arvind.nair1_mphasis @ shrya29' in the 'N. Virginia' region. The left sidebar contains navigation links for 'New EC2 Experience', 'EC2 Dashboard', 'EC2 Global View', 'Events', 'Tags', and 'Limits'. The main content area is titled 'Instances (1/3) info' and shows a table of EC2 instances. The table has columns for Name, Instance ID, Instance state, Instance type, Status check, Alarm status, Availability Zone, and Public IPv4 D. The instances listed are 'Docker_manager' (i-0a4019ee409ba36a9), 'Worker1' (i-0d864739f8f86a6bc), and 'Worker2' (i-07dcfcf3fe843d46). All instances are in the 'Running' state. Below the table, there is a terminal window showing the commands and output for setting up Docker Swarm and Jenkins. The terminal output includes the command 'sudo docker swarm init', the output 'Swarm initialized: current node (e1l2jicpujw8y6len3ag7jqp5) is now a manager.', the command 'docker swarm join --token SWMTKN-1-16an0rezmm077a52reo401271aqz1553bt0twxzl5nm40y26-2qvoeh7zkp0hluvbvf1560xhk 172.31.90.38:2377', the command 'sudo docker node ls', the output of 'docker node ls' showing three nodes (one leader, two ready), the command 'sudo docker service create --name webserver --replicas 2 -p 80:80 httpd', the output of 'docker service create' showing the service is running, the command 'sudo docker service ls', the output of 'docker service ls' showing the 'webserver' service, and the command 'systemctl status jenkins', the output of 'systemctl status jenkins' showing the service is active (running), and the command 'journalctl -u jenkins', the output of 'journalctl -u jenkins' showing the logs for the Jenkins service.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 D
Docker_manager	i-0a4019ee409ba36a9	Running	t2.micro	-	No alarms	us-east-1a	ec2-54-242-5...
Worker1	i-0d864739f8f86a6bc	Running	t2.micro	-	No alarms	us-east-1a	ec2-54-163-20...
Worker2	i-07dcfcf3fe843d46	Running	t2.micro	-	No alarms	us-east-1a	ec2-54-163-15...

```
ubuntu@ip-172-31-90-38:~$ sudo docker swarm init
Swarm initialized: current node (e1l2jicpujw8y6len3ag7jqp5) is now a manager.

To add a worker to this swarm, run the following command:

    docker swarm join --token SWMTKN-1-16an0rezmm077a52reo401271aqz1553bt0twxzl5nm40y26-2qvoeh7zkp0hluvbvf1560xhk 172.31.90.38:2377

To add a manager to this swarm, run 'docker swarm join-token manager' and follow the instructions.

ubuntu@ip-172-31-90-38:~$ sudo docker node ls
ID                HOSTNAME          STATUS    AVAILABILITY  MANAGER STATUS  ENGINE VERSION
9vdknpyoo1l9ayu6r54zr91x2    ip-172-31-81-154    Ready     Active              20.10.19
imr57hdxiovlrvmgibcm9wwg     ip-172-31-83-188    Ready     Active              20.10.19
e1l2jicpujw8y6len3ag7jqp5 *  ip-172-31-90-38     Ready     Active              Leader           20.10.19

ubuntu@ip-172-31-90-38:~$ sudo docker service create --name webserver --replicas 2 -p 80:80 httpd
overall progress: 2 out of 2 tasks
1/2: running [=====>]
2/2: running [=====>]
verify: Service converged
ubuntu@ip-172-31-90-38:~$ sudo docker service ls
ID                NAME              MODE               REPLICAS  IMAGE          PORTS
zoadhgeylxzq     webserver         replicated         2/2        httpd:latest   *:80->80/tcp

ubuntu@ip-172-31-90-38:~$ systemctl status jenkins
jenkins.service - Jenkins Continuous Integration Server
Loaded: loaded (/lib/systemd/system/jenkins.service; enabled; vendor preset: enabled)
Active: active (running) since Mon 2022-10-17 05:20:52 UTC; 18min ago
Main PID: 11349 (java)
Tasks: 36 (limit: 1143)
Memory: 306.7M
CPU: 45.000s
CGroup: /system.slice/jenkins.service
└─11349 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

Oct 17 05:20:20 ip-172-31-85-208 jenkins[11349]: *****
Oct 17 05:20:20 ip-172-31-85-208 jenkins[11349]: *****
Oct 17 05:20:52 ip-172-31-85-208 jenkins[11349]: 2022-10-17 05:20:52.312+0000 [id=20] INFO jenkins.InitReactorRunner$1#onAttained: Completed initialization
Oct 17 05:20:52 ip-172-31-85-208 jenkins[11349]: 2022-10-17 05:20:52.344+0000 [id=22] INFO hudson.lifecycle.Lifecycle#onReady: Jenkins is fully up and running
Oct 17 05:20:52 ip-172-31-85-208 systemd[1]: Started Jenkins Continuous Integration Server.
Oct 17 05:20:52 ip-172-31-85-208 jenkins[11349]: 2022-10-17 05:20:52.486+0000 [id=44] INFO h.m.DownloadService$Downloadable#load: Obtained the updated data f
Oct 17 05:20:52 ip-172-31-85-208 jenkins[11349]: 2022-10-17 05:20:52.487+0000 [id=44] INFO hudson.util.Retrier#start: Performed the action check updates serv
Oct 17 05:20:52 ip-172-31-85-208 jenkins[11349]: 2022-10-17 05:20:52.493+0000 [id=44] INFO hudson.model.AsyncPeriodicWork#lambda$doRun$0: Finished Download m
Oct 17 05:36:31 ip-172-31-85-208 jenkins[11349]: 2022-10-17 05:36:31.674+0000 [id=63] INFO hudson.model.AsyncPeriodicWork#lambda$doRun$0: Started Fingerprint
Oct 17 05:36:31 ip-172-31-85-208 jenkins[11349]: 2022-10-17 05:36:31.678+0000 [id=63] INFO hudson.model.AsyncPeriodicWork#lambda$doRun$0: Finished Fingerprint
lines 1-20/20 (END)
```

← → ↻ 🔍 Not secure 44.202.0.108:9080

🔖 ⭐ ⚙️ 📄 🔄 Update

Jenkins

🔍 Search (CTRL+K) 🔗 🔒 1 Arvind 🚪 log out

Dashboard >

+ New Item

👤 People

📅 Build History

⚙️ Manage Jenkins

📌 My Views

Build Queue ▾

No builds in the queue.

Build Executor Status ▾

1 idle

2 idle

✎ Add description

Welcome to Jenkins!

This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.

Start building your software project

Create a job →

Set up a distributed build

Set up an agent →

Configure a cloud →

Learn more about distributed builds ↗

Configuration

⚙️ General

🔗 Advanced Project Options

📄 Pipeline

Definition

Pipeline script ▾

Script ?

```
1  >
2  def mavencomer_tool_name= 'maven-3.8.0', type: maven
3  def mavenCMD="$mavenhome/bin/mvn"
4  sh "$mavenCMD" clean package
5  }
6  stage("Build Docker Image"){
7    sh "docker build -t arvin2906/docker-jenkins:$buildNumber ."
8  }
9  stage("Push Docker Image"){
10   sh "docker login -u arvin2906 -p Catchemall128031"
11   sh "docker push arvin2906/docker-jenkins:$buildNumber"
12 }
13 stage("Deploy Docker service in docker swarm cluster"){
14   sshagent(["Swarm_manager"]) {
15     // some block
16     sh "ssh -o StrictHostKeyChecking=no ubuntu@172.31.90.38 sudo docker service rm dockerjenkins || true"
17     sh "ssh -o StrictHostKeyChecking=no ubuntu@172.31.90.38 sudo docker service create --name dockerjenkins --replicas 2 -p 80:80 httpd"
18   }
19 }
20 }
21 }
```

⚙️ Configure

🗑️ Delete Pipeline

🔍 Full Stage View

🔄 Rename

🔍 Pipeline Syntax

Build History trend ▾

🔍 Filter builds... /

🟢 #6 17-Oct-2022-09:00

🔴 #5 17-Oct-2022-08:58

🔴 #4 17-Oct-2022-08:51

Stage View

Average stage times:
(Average full run time ~28s)

	Git Clone	Maven clean package	Build Docker Image	Push Docker Image	Deploy Docker service in docker swarm cluster
#6	643ms	8s	2s	4s	13s
#5	928ms	9s	2s	3s	1s failed

🔍 arvin2906 / docker-jenkins

Description

This repository does not have a description ✎

🕒 Last pushed: a minute ago

Docker commands

To push a new tag to this repository,

docker push arvin2906/docker-jenkins:tagname

Public View

Tags and scans

This repository contains 5 tag(s).

VULNERABILITY SCANNING - DISABLED

Enable

Tag	OS	Pulled	Pushed
6	🐳	---	a minute ago

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.

```
ubuntu@ip-172-31-90-38:~$ sudo docker service ls
ID            NAME          MODE          REPLICAS  IMAGE          PORTS
ubuntu@ip-172-31-90-38:~$ sudo docker service ls
ID            NAME          MODE          REPLICAS  IMAGE          PORTS
un57hmlj7sp  dockerjenkins replicated    2/2         httpd:latest   *:80->80/tcp
```

Dashboard > docker-swarm-jenkins > #6

```
SSH_AGENT_PID=22098
Running ssh-add (command line suppressed)
Identity added: /var/lib/jenkins/workspace/docker-swarm-jenkins@tmp/private_key_10904422216005453943.key (/var/lib/jenkins/workspace/docker-swarm-jenkins@tmp/private_key_10904422216005453943.key)
[ssh-agent] Started.
[Pipeline] {
[Pipeline] sh
+ ssh -o StrictHostKeyChecking=no ubuntu@172.31.90.38 sudo docker service rm dockerjenkins
Error: No such service: dockerjenkins
+ true
[Pipeline] sh
+ ssh -o StrictHostKeyChecking=no ubuntu@172.31.90.38 sudo docker service create --name dockerjenkins --replicas 2 -p 80:80 httpd
un57hmlj7sp:63mvsdgy
overall progress: 0 out of 2 tasks
1/2:
```