

Setting Up Jenkins Pipeline to Deploy Docker Swarm Output

Jenkins setup

```

  _ _ _ _ _
 _ | _ _ _ | Amazon Linux 2 AMI
 _ | _ _ _ |
 _ | _ _ _ |

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-81-144 ~]$ docker version
Client:
Version:      20.10.17
API version:  1.41
Go version:   go1.18.3
Git commit:   100c701
Built:        Thu Jun 16 20:08:47 2022
OS/Arch:      linux/amd64
Context:      default
Experimental: true

Server:
Engine:
Version:      20.10.17
API version:  1.41 (minimum version 1.12)
Go version:   go1.18.3
Git commit:   a89b842
Built:        Thu Jun 16 20:09:24 2022
OS/Arch:      linux/amd64

i-0788af9b319fd63c7 (Dockerdev)
PublicIPs: 54.163.156.151 PrivateIPs: 172.31.81.144

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```

Getting Started

Unlock Jenkins

To ensure Jenkins is securely set up by the administrator, a password has been written to the log (not sure where to find it?) and this file on the server:

```
/var/jenkins_home/secrets/initialAdminPassword
```

Please copy the password from either location and paste it below.

Administrator password

Continue

Getting Started

Unlock Jenkins

To ensure Jenkins is securely set up by the administrator, a password has been written to the log ([not sure where to find it?](#)) and this file on the server:

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/var/jenkins_home/secrets/initialAdminPassword
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Please copy the password from either location and paste it below:

Administrator password

Continue

Getting Started



Customize Jenkins

Plugins extend Jenkins with additional features to support many different needs.

Install suggested plugins

Install plugins the Jenkins community finds most useful.

Select plugins to install

Select and install plugins most suitable for your needs.

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Getting Started

Getting Started

✓ Folders	✓ OWASP Markup Formatter	✓ Build Timeout	✓ Credentials Binding	Folders ** JavaBeans Activation Framework (JAF) API ** JavaMail API ** Jmxmycastle API ** Instance Identity ** Mina SSHD API :: Common ** Mina SSHD API :: Core ** SSH server
🔄 Timestampers	🔄 Workspace Cleanup	🔄 Ant	🔄 Gradle	
🔄 Pipeline	🔄 GitHub Branch Source	🔄 Pipeline: GitHub Groovy Libraries	🔄 Pipeline: Stage View	
🔄 Git	🔄 SSH Build Agents	🔄 Matrix Authorization Strategy	🔄 PAM Authentication	OWASP Markup Formatter ** Structs ** Token Macro
🔄 LDAP	🔄 Email Extension	🔄 Mailer		Build Timeout ** Credentials ** Trilind API ** SSH Credentials ** Pipeline: Step API ** Plain Credentials Credentials Binding ** SCM API ** Pipeline: API
				** - required dependency

Getting Started

Create First Admin User

Username:

Password:

Confirm password:

Full name:

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[Skip and continue as admin](#)

[Save and Continue](#)

Getting Started

Jenkins is ready!

Your Jenkins setup is complete.

[Start using Jenkins](#)

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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 ↗

}}

Enter an item name

» 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

Launch Pipeline

General Build Triggers Advanced Project Options **Pipeline**

Pipeline script from SCM

SCM ?

Git

Repositories ?

Repository URL ?

https://github.com/Nikunj-Java/SpringBootDockerApp.git

Credentials ?

- none -

+ Add

Advanced...

Save

Apply



Status

Changes

Build Now

Configure

Delete Pipeline

Full Stage View

Rename

Pipeline Syntax

Build History

trend ▾

#1

Oct 7, 2022, 7:01 AM

Atom feed for all Atom feed for failures

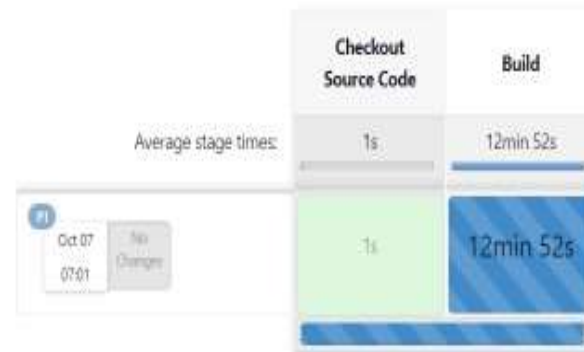
Pipeline JenkinsPipeline

Jenkins CI/CD Pipeline Project

Edit description

Disable Project

Stage View



Permalinks

Docker Swarm

```
ec2-user@ip-172-31-30-142~  
  
To add a manager to this swarm, run 'docker swarm join-token manager' and follow  
the instructions.  
  
[ec2-user@ip-172-31-30-142 ~]$ docker node ls  
ID                                HOSTNAME                        STATUS  AVAILABI  
LITY  MANAGER STATUS  ENGINE VERSION  
zcy5ecrvwesod9bolj3l9ghez        ip-172-31-22-0.ec2.internal    Ready  Active  
20.10.17  
Wbb7kp5wdravsf6lbbf3z49wc        ip-172-31-25-154.ec2.internal  Ready  Active  
20.10.17  
o9qwuvhu2ljzylr0f56dtqajb *      ip-172-31-30-142.ec2.internal  Ready  Active  
Leader 20.10.17  
[ec2-user@ip-172-31-30-142 ~]$ docker service create --name myappl --replicas 5 -p 80:80 rmeiappan/myangappimage  
hfvmacqe3cwpsezxmx7uuty8z  
overall progress: 5 out of 5 tasks  
1/5: running [=====>]  
2/5: running [=====>]  
3/5: running [=====>]  
4/5: running [=====>]  
5/5: running [=====>]  
verify: Service converged  
[ec2-user@ip-172-31-30-142 ~]$ docker service ls  
ID            NAME      MODE      REPLICAS  IMAGE                                PORTS  
hfvmacqe3cwp myappl    replicated 5/5        rmeiappan/myangappimage:latest     *:80->80/tcp  
[ec2-user@ip-172-31-30-142 ~]$ docker service ps myappl  
ID            NAME      IMAGE                                MODE      DESIRED STATE  CURRENT STATE      ERROR      PORTS  
e3r0qlavlbtcf myappl.1  rmeiappan/myangappimage:latest      ip-172-31-22-0.ec2.internal  Running          Running 59 seconds ago  
tkqcfsikyj5r   myappl.2  rmeiappan/myangappimage:latest      ip-172-31-25-154.ec2.internal  Running          Running 59 seconds ago  
intl52mb2ftp   myappl.3  rmeiappan/myangappimage:latest      ip-172-31-22-0.ec2.internal  Running          Running 59 seconds ago  
mlay80kyejzk   myappl.4  rmeiappan/myangappimage:latest      ip-172-31-30-142.ec2.internal  Running          Running 59 seconds ago  
y74m0awkxk6q   myappl.5  rmeiappan/myangappimage:latest      ip-172-31-25-154.ec2.internal  Running          Running 59 seconds ago  
[ec2-user@ip-172-31-30-142 ~]$ docker swarm join --token SWMTKN-1-56ndrlp6sfac9zivzlwmi5abzfk0xs3rfhi25582q  
5vngsp7ro-emyoj3wvabll8rhm3farsvcao 172.31.30.142:2377  
"docker swarm join" requires exactly 1 argument.  
See 'docker swarm join --help'.  
  
Usage: docker swarm join [OPTIONS] HOST:PORT  
  
Join a swarm as a node and/or manager  
[ec2-user@ip-172-31-30-142 ~]$ docker swarm join --token SWMTKN-1-56ndrlp6sfac9zivzlwmi5abzfk0xs3rfhi25582q  
5vngsp7ro-emyoj3wvabll8rhm3farsvcao 172.31.30.142:2377  
"docker swarm join" requires exactly 1 argument.  
See 'docker swarm join --help'.  
  
Usage: docker swarm join [OPTIONS] HOST:PORT  
  
Join a swarm as a node and/or manager  
[ec2-user@ip-172-31-30-142 ~]$
```

ec2-user@ip-172-31-22-0:~

Using username "ec2-user".

Authenticating with public key "Pair"

```
  _ | _ | _ |  
  _ | ( _ | /  
  _ | \ _ | _ |
```

Amazon Linux 2 AMI

<https://aws.amazon.com/amazon-linux-2/>

```
[ec2-user@ip-172-31-22-0 ~]$ docker swarm join --token SWMTKN-1-56ndrlp6sfac9ziv  
xlwmi5sbzfk0xs3rfhi25582q5vngsp7ro-emyoj3wvshl18rkm3faravcao 172.31.30.142:2377
```

This node joined a swarm as a worker.

```
[ec2-user@ip-172-31-22-0 ~]$
```

ec2-user@ip-172-31-25-154~

Using username "ec2-user".

Authenticating with public key "Pair"

```
  _   _   _  
 _/   _/   /  Amazon Linux 2 AMI  
/_/_/_/_/_/
```

<https://aws.amazon.com/amazon-linux-2/>

```
[ec2-user@ip-172-31-25-154 ~]$ docker swarm join --token SWMTKN-1-56ndr1p6sfac9z  
ivrlwmi5abrfk0xs3rfhi25582q5vngsp7ro-emyoj3wvshl18:rm3farsvcao 172.31.30.142:2377
```

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This node joined a swarm as a worker.

```
[ec2-user@ip-172-31-25-154 ~]$
```

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[Accounts](#)

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Events

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Instances New

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Launch Templates

Spot Requests

Savings Plans

Reserved Instances New

Dedicated Hosts

Scheduled Instances

Capacity Reservations

▼ Images

AMIs New

AMI Catalog

Instances (1/3) Info

Find instance by attribute or tag (case-sensitive)

< 1 >

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DN
<input type="checkbox"/>	SwarmWorker2	i-0950f4a0cfa34e06	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d	ec2-52-203-23
<input type="checkbox"/>	SwarmWorker1	i-04ac9069ef7cd46ca	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d	ec2-52-201-2
<input checked="" type="checkbox"/>	SwarmMaster	i-082d7d54ec8bb129c	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d	ec2-54-225-48

Instance: i-082d7d54ec8bb129c (SwarmMaster)

Details

Security

Networking

Storage

Status checks

Monitoring

Tags

▼ Instance summary Info

Instance ID

i-082d7d54ec8bb129c (SwarmMaster)

IPv6 address

-

Hostname type

Public IPv4 address

54.225.48.51 | [open address](#)

Instance state

Running

Private IPv4 addresses

172.31.30.142

Public IPv4 DNS

ec2-54-225-48-51.compute-1.amazonaws.com | [open address](#)

Private IP DNS name (IPv4 only)

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