Setting Up Jenkins Pipeline to Deploy Docker Swarm.

```
    _|  _|_  )
    _|  (     /   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
```

```
  Built:            Thu Jun 16 20:09:24 2022
  OS/Arch:          linux/amd64
  Experimental:     false
 containerd:
  Version:          1.6.6
  GitCommit:        10c12954828e7c7c9b6e0ea9b0c02b01407d3ae1
 runc:
  Version:          1.1.3
  GitCommit:        1e7bb5b773162b57333d57f612fd72e3f8612d94
 docker-init:
  Version:          0.19.0
  GitCommit:        de40ad0
[ec2-user@ip-172-31-81-144 ~]$ docker ps -a
CONTAINER ID   IMAGE      COMMAND     CREATED    STATUS      PORTS       NAMES
[ec2-user@ip-172-31-81-144 ~]$ docker container run -d --name myjenkins -p 8080:8080 jenkins/jenkins
Unable to find image 'jenkins/jenkins:latest' locally
latest: Pulling from jenkins/jenkins
23858da423a6: Pull complete
ff349a6febe2: Pull complete
64004340f826: Pull complete
a70f23798ae6: Pull complete
1f2e37d56b73: Pull complete
ebbf451fcb96: Pull complete
5349d5de66b2: Pull complete
993adbb38763: Pull complete
```

```
993adbb38763: Pull complete
0861e8332798: Pull complete
ef2cbaf40633: Pull complete
967adcb2ec33: Pull complete
f5b11b571411: Pull complete
a1704a032ac5: Pull complete
520366f4ebf2: Pull complete
Digest: sha256:02097ebc75a0f586228a49acc48bde36087a9d3de7d676e86c2e563c0e99ed12
Status: Downloaded newer image for jenkins/jenkins:latest
13fe201aa13719ab22bf4a752fdd498fcd2e5b2f67c23be018fcc6d59b2eca6b
[ec2-user@ip-172-31-81-144 ~]$ docker logs myjenkins
Running from: /usr/share/jenkins/jenkins.war
webroot: EnvVars.masterEnvVars.get("JENKINS_HOME")
2022-10-08 13:30:59.050+0000 [id=1]     INFO    winstone.Logger#logInternal: Beginning extraction from war file
2022-10-08 13:31:00.740+0000 [id=1]     WARNING o.e.j.s.handler.ContextHandler#setContextPath: Empty contextPath
2022-10-08 13:31:00.920+0000 [id=1]     INFO    org.eclipse.jetty.server.Server#doStart: jetty-10.0.12; built: 2022-09-14T01:54:40.076z; git: 408d0139887e27a57b54ed52e2d92
36731a7e88; jvm 11.0.16.1+1
2022-10-08 13:31:01.717+0000 [id=1]     INFO    o.e.j.w.StandardDescriptorProcessor#visitServlet: NO JSP Support for /, did not find org.eclipse.jetty.jsp.JettyJspServlet
2022-10-08 13:31:01.880+0000 [id=1]     INFO    o.e.j.s.s.DefaultSessionIdManager#doStart: Session workerName=node0
2022-10-08 13:31:02.999+0000 [id=1]     INFO    hudson.WebAppMain#contextInitialized: Jenkins home directory: /var/jenkins_home found at: EnvVars.masterEnvVars.get("JENKIN
S_HOME")
2022-10-08 13:31:03.376+0000 [id=1]     INFO    o.e.j.s.handler.ContextHandler#doStart: Started w.@8a2a6a{Jenkins v2.372,/,file:///var/jenkins_home/war/,AVAILABLE}{/var/je
nkins_home/war}
2022-10-08 13:31:03.414+0000 [id=1]     INFO    o.e.j.server.AbstractConnector#doStart: Started ServerConnector@349c1daf{HTTP/1.1, (http/1.1)}{0.0.0.0:8080}
2022-10-08 13:31:03.458+0000 [id=1]     INFO    org.eclipse.jetty.server.Server#doStart: Started Server@31e4bb20{STARTING}[10.0.12,sto=0] @5728ms
```

```
_HOME")
2022-10-08 13:31:03.376+0000 [id=1]      INFO    o.e.j.s.handler.ContextHandler#doStart: Started w.@8a2a6a{Jenkins v2.372,/,file:///var/jenkins_home/war/,AVAILABLE}{/var/jen
kins_home/war)
2022-10-08 13:31:03.414+0000 [id=1]      INFO    o.e.j.server.AbstractConnector#doStart: Started ServerConnector@349c1daf{HTTP/1.1, (http/1.1)}{0.0.0.0:8080}
2022-10-08 13:31:03.458+0000 [id=1]      INFO    org.eclipse.jetty.server.Server#doStart: Started Server@31e4bb20(STARTING)[10.0.12,sto=0] @5728ms
2022-10-08 13:31:03.474+0000 [id=23]     INFO    winstone.Logger#logInternal: Winstone Servlet Engine running: controlPort=disabled
2022-10-08 13:31:04.049+0000 [id=28]     INFO    jenkins.InitReactorRunner$1#onAttained: Started initialization
2022-10-08 13:31:04.097+0000 [id=29]     INFO    jenkins.InitReactorRunner$1#onAttained: Listed all plugins
2022-10-08 13:31:06.125+0000 [id=28]     INFO    jenkins.InitReactorRunner$1#onAttained: Prepared all plugins
2022-10-08 13:31:06.131+0000 [id=28]     INFO    jenkins.InitReactorRunner$1#onAttained: Started all plugins
2022-10-08 13:31:06.170+0000 [id=28]     INFO    jenkins.InitReactorRunner$1#onAttained: Augmented all extensions
2022-10-08 13:31:06.663+0000 [id=28]     INFO    jenkins.InitReactorRunner$1#onAttained: System config loaded
2022-10-08 13:31:06.663+0000 [id=28]     INFO    jenkins.InitReactorRunner$1#onAttained: System config adapted
2022-10-08 13:31:06.664+0000 [id=28]     INFO    jenkins.InitReactorRunner$1#onAttained: Loaded all jobs
2022-10-08 13:31:06.668+0000 [id=28]     INFO    jenkins.InitReactorRunner$1#onAttained: Configuration for all jobs updated
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.codehaus.groovy.vmplugin.v7.Java7$1 (file:/var/jenkins_home/war/WEB-INF/lib/groovy-all-2.4.21.jar) to constructor java.lang.invoke
.MethodHandles$Lookup(java.lang.Class,int)
WARNING: Please consider reporting this to the maintainers of org.codehaus.groovy.vmplugin.v7.Java7$1
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
2022-10-08 13:31:07.421+0000 [id=42]     INFO    hudson.model.AsyncPeriodicWork#lambda$doRun$0: Started Download metadata
2022-10-08 13:31:07.444+0000 [id=42]     INFO    hudson.util.Retrier#start: Attempt #1 to do the action check updates server
2022-10-08 13:31:08.271+0000 [id=29]     INFO    jenkins.install.SetupWizard#init:
```

```
2022-10-08 13:31:07.444+0000 [id=42]     INFO    hudson.util.Retrier#start: Attempt #1 to do the action check updates server
2022-10-08 13:31:08.271+0000 [id=29]     INFO    jenkins.install.SetupWizard#init:

*************************************************************
*************************************************************
*************************************************************

Jenkins initial setup is required. An admin user has been created and a password generated.
Please use the following password to proceed to installation:

6949eccaf4c34c95a986edded32f284d

This may also be found at: /var/jenkins_home/secrets/initialAdminPassword

*************************************************************
*************************************************************
*************************************************************

2022-10-08 13:31:39.802+0000 [id=28]     INFO    jenkins.InitReactorRunner$1#onAttained: Completed initialization
2022-10-08 13:31:39.842+0000 [id=22]     INFO    hudson.lifecycle.Lifecycle#onReady: Jenkins is fully up and running
2022-10-08 13:31:39.944+0000 [id=42]     INFO    h.m.DownloadService$Downloadable#load: Obtained the updated data file for hudson.tasks.Maven.MavenInstaller
2022-10-08 13:31:39.945+0000 [id=42]     INFO    hudson.util.Retrier#start: Performed the action check updates server successfully at the attempt #1
2022-10-08 13:31:39.948+0000 [id=42]     INFO    hudson.model.AsyncPeriodicWork#lambda$doRun$0: Finished Download metadata. 32,525 ms
[ec2-user@ip-172-31-81-144 ~]$ sudo chmod 777 /var/run/docker.sock
[ec2-user@ip-172-31-81-144 ~]$
```