lab2

1)creating jenkins image having docker client installed and mount the docker daemon path to my daemon path on my machine to execute the commands using my deamon but i used the casc file i created yesterday to create the image with my configurations

```
File: Dockerfile

FROM jenkins/jenkins:latest
USER root
ENV JAVA_OPTS -Djenkins.install.runSetupWizard=false
ENV CASC_JENKINS_CONFIG /var/jenkins_home/casc.yaml
COPY plugins.txt /usr/share/jenkins/ref/plugins.txt
RUN jenkins-plugin-cli -f /usr/share/jenkins/ref/plugins.txt
RUN apt-get -y update
RUN apt-get -y install \
    ca-certificates \
    curl \
    gnupg \
    lsb-release
RUN mkdir -p /etc/apt/keyrings
RUN  curl -fsSL https://download.docker.com/linux/debian/gpg | gpg --de
armor -o /etc/apt/keyrings/docker.gpg
RUN echo "deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/key
rings/docker.gpg] https://download.docker.com/linux/debian \
    $(lsb_release -cs) stable" | tee /etc/apt/sources.list.d/docker.lis
t > /dev/null
RUN apt-get -y update
```
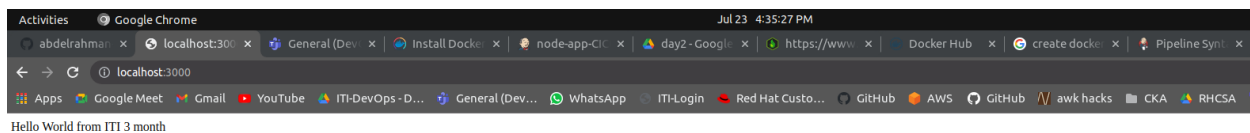
- after creating the image i ran the container using volume mount tag

```
docker run -v /var/run/docker/sock:/var/run/docker.sock -p 8080:8080 image-name
```

2)creating pipleline for your ripo to build your code then push the image to my dockerhub ripo then run it using my docker daemon

```
jenkinsfile ×
lab2 > jenkins_nodejs_example > jenkinsfile
    1    #!groovy
    2    pipeline {
    3        agent any
    4        stages {
    5            stage('Docker Build') {
    6                steps {
    7                    sh 'docker build -t abdelrahman1111/start-with-docker:nodeapp -f dockerfile .'}
    8                }
    9            stage('Docker push') {
   10                steps {
   11                    withCredentials([usernamePassword(credentialsId: 'hamada', passwordVariable: 'dockerHubPassword', usernameVariable: 'dockerHub
   12                        sh "docker login -u ${env.dockerHubUser} -p ${env.dockerHubPassword}"
   13                        sh 'docker push abdelrahman1111/start-with-docker:nodeapp'    }
   14                }
   15            }
   16            stage('Docker run') {
   17                steps {
   18                    sh 'docker run -p 3000:3000 abdelrahman1111/start-with-docker:nodeapp' }
   19                }
   20            }
   21        }
   22
```

- but i needed to created a token first from my dockerhub account then assign it to create a credentials on my jenkins

```
Activities    Google Chrome                                                      Jul 23  4:35:27 PM
  abdelrahman  ×   localhost:300 ×   General (Dev ×   Install Docke ×   node-app-CIC ×   day2 - Google ×   https://www ×   Docker Hub  ×   create docke ×   Pipeline Synt ×
  ←  →  C    ① localhost:3000
  ⠿ Apps   Google Meet   Gmail   YouTube   ITI-DevOps - D...   General (Dev...   WhatsApp   ITI-Login   Red Hat Custo...   GitHub   AWS   GitHub   awk hacks   CKA   RHCSA
Hello World from ITI 3 month
```

```
bod@machine-x:~/jenkins-labs$ docker ps
CONTAINER ID   IMAGE                                        COMMAND                CREATED        STATUS         PORTS
                                                                                                 NAMES
390fd03a9d17   abdelrahman1111/start-with-docker:nodeapp    "docker-entrypoint.s…" 9 minutes ago  Up 9 minutes   0.0.0.0:3000->3000/tcp, :::3000->3000/tcp
                                                                                                 friendly_montalcini
16d546f0b07d   docker_jenkins_casc                          "/usr/bin/tini -- /u…" 2 hours ago    Up 2 hours     0.0.0.0:8080->8080/tcp, :::8080->8080/tcp,
50000/tcp                                                                                         eager_einstein
```

3) From jenkins master node i created another slave node using this Dockerfile

```
FROM ubuntu:latest

USER root
# install openssh-server openjdk8
```

```
RUN apt-get update -y && apt-get install -y openjdk-8-jdk openssh-server

RUN useradd -m -s /bin/bash jenkins
COPY key.pub /home/jenkins/.ssh/authorized_keys
RUN chown -R jenkins:jenkins /home/jenkins/.ssh
RUN chmod 700 /home/jenkins/.ssh
RUN chmod 644 /home/jenkins/.ssh/authorized_keys

USER jenkins
RUN mkdir /home/jenkins/jenkins_home
WORKDIR /home/jenkins/jenkins_home
# RUN chmod 644 /home/jenkins/.ssh/authorized_keys
USER root
ENTRYPOINT service ssh restart && bash
```

After that i generated my keys using

```
ssh-keygen
```

then i built the image

```
docker build -t slave -f Dockerfile .
```

then i ran a container in interactive and deattach mode

```
docker run -itd slave
```

```
bob@machine-x:~$ docker ps
CONTAINER ID   IMAGE          COMMAND                CREATED          STATUS          PORTS
ad270d587a47   slave          "/bin/sh -c 'service…"  38 minutes ago   Up 38 minutes
```

4) Now i will create a slave node on my jenkins GUI using the following configuration

Name ?

final-slave

Description ?

Number of executors ?

1

Remote root directory ?

/home/jenkins/jenkins_home

Labels ?

slave

Usage ?

Only build jobs with label expressions matching this node ⌄

Launch method ?

Launch agents via SSH ⌄

Host ?

172.17.0.2

Credentials ?

jenkins

Labels ?

slave

Usage ?

Only build jobs with label expressions matching this node ⌄

Launch method ?

Launch agents via SSH ⌄

Host ?

172.17.0.2

Credentials ?

jenkins ⌄

+ Add

Host Key Verification Strategy ?

Non verifying Verification Strategy ⌄ ?

Advanced...

Availability ?

Keep this agent online as much as possible ⌄ ?

Node Properties

- and in this configuration i created a new credentials to be able to ssh my container

Update credentials

Scope ?

Global (Jenkins, nodes, items, all child items, etc)   ⌄

ID ?

final-ssh

Description ?

Username

jenkins

☐ Treat username as secret ?

Private Key

● Enter directly

> Key
>
> | 🔒   Concealed for Confidentiality | **Replace** |
> | --- | --- |

Passphrase

Save

- and now i have a new slave node that i can build on it a pipelines

Manage nodes and clouds

Refresh status

S	Name ↓	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time	
🖥	Built-In Node	Linux (amd64)	In sync	158.91 GB	7.46 GB	158.91 GB	0ms	⚙
🖥	final-slave	Linux (amd64)	In sync	158.91 GB	7.46 GB	158.91 GB	294ms	⚙
	Data obtained	**37 min**	**37 min**	**37 min**	**37 min**	**37 min**	**37 min**	

4) integrates slack with my jenkins account

- first i created a workspace and a channel then added the jenkins as app integration and enable it wa generate the secret

- then i installed the slack notifr plugin on my jenkins and generate a new credentials (secret text) to configure the connection

Default user e-mail suffix ?

Advanced...

☐ Test configuration by sending test e-mail

Slack

Workspace ?

iti-jenkins

Credential ?

slack-secret ▼

＋ Add

Default channel / member id ?

☐ Custom slack app bot user ?

Advanced...

Test Connection

- i tested the connection and now am gonna create a simple pipeline to let the slack notify me on my channel

🧩 **Jenkins**

↑ Back to Dashboard

📄 Status

</> Changes

📁 Workspace

▷ Build Now

⚙ Configure

🗑 Delete Project

✏ Rename

🔅 **Build History**   trend ⌄

🔍 Filter builds...

✓ #2   Jul 24, 2022, 1:52 AM
✓ #1   Jul 24, 2022, 1:07 AM

🔊 Atom feed for all 🔊 Atom feed for failures

Project test-audit

✎ Ad

Dis

📁 **Workspace**

</> **Recent Changes**

Permalinks

- Last build (#1), 44 min ago
- Last stable build (#1), 44 min ago
- Last successful build (#1), 44 min ago
- Last completed build (#1), 44 min ago

5) now install audit log

Log session start time 2022-07-24T01:06:48.853Z

Time	Thread	Level	Logger	Message
2022-07-24T01:06:50.05Z	Handling POST /view/all/createItem from 172.17.0.1 : Jetty (winstone)-12	OFF	AuditLogger	Audit [createItem itemName="test-audit" itemUri="job/test-audit/" timestamp="2022-07-24T01:06:50.037Z" userId="admin"]
MDC: {requestUri=/view/all/createItem, userId=admin, requestId=f5b255d2-eb2f-4ee7-b2d9-98bdbbffb233, requestMethod=POST}				
2022-07-24T01:07:25.197Z	Handling POST /job/test-audit/configSubmit from 172.17.0.1 : Jetty (winstone)-128	OFF	AuditLogger	Audit [updateItem itemName="test-audit" itemUri="job/test-audit/" timestamp="2022-07-24T01:07:25.196Z" userId="admin"]
MDC: {requestUri=/job/test-audit/configSubmit, userId=admin, requestId=5fae2238-ad0d-4582-8a70-4321eeb05941, requestMethod=POST}				
2022-07-24T01:07:29.993Z	Executor #1 for Built-In Node : executing test-audit #1	OFF	AuditLogger	Audit [buildStart buildNumber="1" cause="[Started by user admin]" projectName="test-audit" timestamp="2022-07-24T01:07:29.952Z"]
2022-07-24T01:07:30.33Z	Executor #1 for Built-In Node : executing test-audit #1	OFF	AuditLogger	Audit [buildFinish buildNumber="1" cause="[Started by user admin]" projectName="test-audit" timestamp="2022-07-24T01:07:30.327Z"]
2022-07-24T01:52:29.277Z	Handling POST /job/test-audit/configSubmit from 172.17.0.1 : Jetty (winstone)-15	OFF	AuditLogger	Audit [updateItem itemName="test-audit" itemUri="job/test-audit/" timestamp="2022-07-24T01:52:29.276Z" userId="admin"]
MDC: {requestUri=/job/test-audit/configSubmit, userId=admin, requestId=98c66c8f-53af-4011-b5c8-2dc2f7f0b3bb, requestMethod=POST}				
2022-07-24T01:52:32.804Z	Executor #1 for Built-In Node : executing test-audit #2	OFF	AuditLogger	Audit [buildStart buildNumber="2" cause="[Started by user admin]" projectName="test-audit" timestamp="2022-07-24T01:52:32.8Z"]
2022-07-24T01:52:32.836Z	Executor #1 for Built-In Node : executing test-audit #2	OFF	AuditLogger	Audit [buildFinish buildNumber="2" cause="[Started by user admin]" projectName="test-audit" timestamp="2022-07-24T01:52:32.832Z"]