Edureka Project

Devops Certification Training

Name : Gadhi Sreenivasa Reddy

Requirements Needed

Created Two Ubuntu VM Instances using Google Cloud Platform(GCP).

Master Node

Python3
GIT
Php
Java
JDk
JRE
Ansible
Jenkins
Maven
Docker Swarm

Slave Node

Python
GIT

Installed Requirements

```
root@proj-master:~# whereis java
java: /usr/bin/java /usr/share/java /usr/share/man/man1/java.1.gz
root@proj-master:~# whereis mvn
mvn: /usr/bin/mvn /usr/share/man/man1/mvn.1.gz
root@proj-master:~# whereis git
git: /usr/bin/git /usr/share/man/man1/git.1.gz
root@proj-master:~# whereis ant
ant: /usr/bin/ant /usr/share/ant /usr/share/man/man1/ant.1.gz
root@proj-master:~# whereis python3
python3: /usr/bin/python3.6m /usr/bin/python3.6 /usr/bin/python3 /usr/lib/python3.6 /usr/lib/python3 /usr/lib/python3.7 /usr/lib/python3.8 /etc/pyt
n3.6 /etc/python3 /usr/local/lib/python3.6 /usr/share/python3 /usr/share/man/man1/python3.1.gz
root@proj-master:~# whereis php
php: /usr/bin/php /usr/bin/php7.2 /usr/lib/php /etc/php /usr/share/php7.2-json /usr/share/php7.2-pgsql /usr/share/php7.2-common /usr/share/php7.2-c
ache /usr/share/php7.2-mysql /usr/share/php7.2-readline /usr/share/man/man1/php.1.gz
root@proj-master:~# whereis docker
docker: /usr/bin/docker /etc/docker /usr/libexec/docker /usr/share/man/man1/docker.1.gz
root@proj-master:~# whereis ansible
ansible: /usr/bin/ansible /etc/ansible /usr/share/man/man1/ansible.1.gz
root@proj-master:~# whereis jenkins
jenkins: /usr/share/jenkins
root@proj-master:~#
```

Adding Home path to Jenkins

Git

Name

Default

Path to Git executable ❓

/usr/bin/git

☐ Install automatically ❓

Docker

Docker installations

Add Docker

Docker

Name

Docker path

Installation root

/usr/libexec/docker

☐ **Install automatically**

Ant

Ant installations

Add Ant

Ant

Name

ANT home

ANT_HOME

/usr/share/ant

☐ Install automatically

Maven

Maven installations

Add Maven

Maven

Name

Maven

MAVEN_HOME

/usr/share/maven

☐ Install automatically

PHP
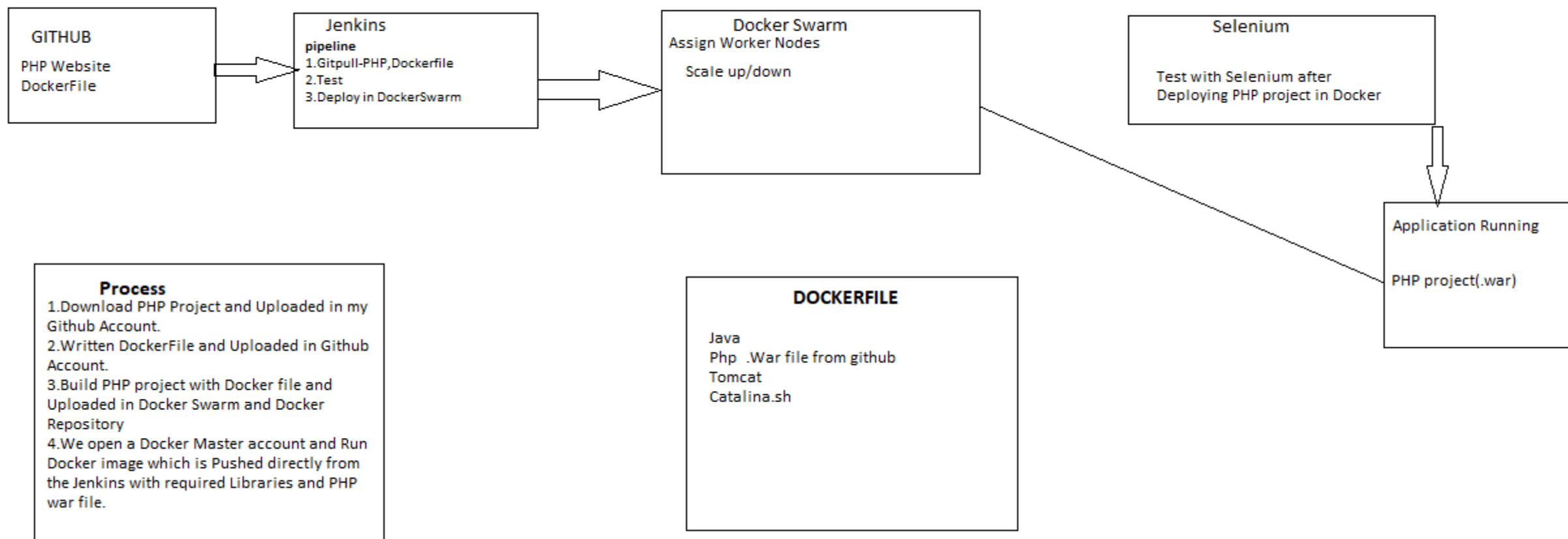
PHP installations

Add PHP

PHP

Name

php home

Installation directory

/usr/bin/php7.2

☐ Install automatically

PROCESS

GITHUB

PHP Website
DockerFile

Jenkins

pipeline
1.Gitpull-PHP,Dockerfile
2.Test
3.Deploy in DockerSwarm

Docker Swarm
Assign Worker Nodes

Scale up/down

Selenium

Test with Selenium after
Deploying PHP project in Docker

Application Running

PHP project(.war)

Process
1.Download PHP Project and Uploaded in my
Github Account.
2.Written DockerFile and Uploaded in Github
Account.
3.Build PHP project with Docker file and
Uploaded in Docker Swarm and Docker
Repository
4.We open a Docker Master account and Run
Docker image which is Pushed directly from
the Jenkins with required Libraries and PHP
war file.

DOCKERFILE

Java
Php .War file from github
Tomcat
Catalina.sh

Uploaded PHP project in my Account

main ▾   **Edu_Project** / **Project** / **PHP-Website** /   Go to file   Add file ▾   ⋯

Sreenivasa9593 Project Downloaded from Edureka github ...   0e9d6bb 4 minutes ago   🕑 History

..

📁 content	Project Downloaded from Edureka github	4 minutes ago
📁 template	Project Downloaded from Edureka github	4 minutes ago
📄 config.php	Project Downloaded from Edureka github	4 minutes ago
📄 functions.php	Project Downloaded from Edureka github	4 minutes ago
📄 index.php	Project Downloaded from Edureka github	4 minutes ago
📄 readme.md	Project Downloaded from Edureka github	4 minutes ago

Git path and credentials

Build Environment

☑ With Ant

Ant Version

ANT home

JDK

java

🔵 Console Output

Started by user **srinu**
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/php git pull
The recommended git tool is: NONE
using credential 15f28d06-1e01-4e6a-b3f2-922dd908a139
 > /usr/bin/git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/php git pull/.git # timeout=10
Fetching changes from the remote Git repository
 > /usr/bin/git config remote.origin.url **https://github.com/Sreenivasa9593/Edu_Project.git** # timeout=10
Fetching upstream changes from **https://github.com/Sreenivasa9593/Edu_Project.git**
 > /usr/bin/git --version # timeout=10
 > git --version # 'git version 2.17.1'
using GIT_ASKPASS to set credentials MY Github Credentials
 > /usr/bin/git fetch --tags --progress -- **https://github.com/Sreenivasa9593/Edu_Project.git** +refs/heads/*:refs/remotes/origin/* #
timeout=10
 > /usr/bin/git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision 0e9d6bbd350e7d8b7faa61dc24cc29b92a45d7c9 (refs/remotes/origin/main)
 > /usr/bin/git config core.sparsecheckout # timeout=10
 > /usr/bin/git checkout -f 0e9d6bbd350e7d8b7faa61dc24cc29b92a45d7c9 # timeout=10
Commit message: "Project Downloaded from Edureka github"
 > /usr/bin/git rev-list --no-walk 0e9d6bbd350e7d8b7faa61dc24cc29b92a45d7c9 # timeout=10
Finished: SUCCESS

DockerFile creation and uploaded in my github account

```
10 lines (10 sloc) | 271 Bytes

1    FROM ubuntu
2    RUN apt-get update -y
3    ENV DEBIAN_FRONTEND=noninteractive
4    RUN apt-get install -y php libapache2-mod-php
5    RUN apt-get install -y apache2
6    RUN apt-get install -y git
7    RUN apt-get update -y
8    EXPOSE 80
9    WORKDIR /usr/sbin
10   CMD ["apachectl", "-D", "FOREGROUND"]
```

Sreenivasa9593 Sample PHP Project   27a6666 19 minutes ago   🕐 4 commits

📁 content	Sample PHP Project	19 minutes ago
📁 template	Sample PHP Project	19 minutes ago
📄 Dockerfile	Sample PHP Project	19 minutes ago
📄 README.md	Initial commit	yesterday
📄 config.php	Sample PHP Project	19 minutes ago
📄 functions.php	Sample PHP Project	19 minutes ago
📄 index.php	Sample PHP Project	19 minutes ago
📄 readme.md	Sample PHP Project	19 minutes ago

Jenkins Pipeline Script(groovy)

Pipeline script

Script

```
1  pipeline {
2      agent any
3      stages{
4          stage('------GIT CLONE------'){
5              steps{
6                  git url : 'https://github.com/Sreenivasa9593/Edu_Project.git',branch : 'main'
7
8              }
9          }
10         stage('-------Docker Image------'){
11             steps{
12                 sh 'docker build -t srinu/phpproj:v1 .'
13                 sh 'docker image ls -a '
14             }
15         }
16         stage('---Running Docker Container----'){
17             steps{
18                 sh 'docker run -d -P srinu/phpproj:v1 '
19                 sh 'docker conatiner ls -a'
20             }
21         }
22     }
23 }
```

```
Removing intermediate container 282b119143bd
 ---> 827d3c39a30d
Step 8/10 : EXPOSE 80
 ---> Running in f5e2fb5325ae
Removing intermediate container f5e2fb5325ae
 ---> d7208a5fa569
Step 9/10 : WORKDIR /usr/sbin
 ---> Running in 633db1936e45
Removing intermediate container 633db1936e45
 ---> 5174853fbd2d
Step 10/10 : CMD ["apachectl", "-D", "FOREGROUND"]
 ---> Running in af46af3afc9d
Removing intermediate container af46af3afc9d
 ---> c8a3eee16704
Successfully built c8a3eee16704
Successfully tagged srinu/phpproj:v1
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

Docker Image is build in Vm Instance

```
root@proj-master:~# docker image ls
REPOSITORY       TAG       IMAGE ID       CREATED          SIZE
srinu/phpproj    v1        c8a3eee16704   18 seconds ago   276MB
ubuntu           latest    7e0aa2d69a15   2 weeks ago      72.7MB
root@proj-master:~#
```

Running Docker image to form docker container

COMMANDS Used to Run Docker Image

docker image ls
docker run –d –P srinu/phpproj:v1
docker container ls

```
root@proj-master:~# docker container ls
CONTAINER ID   IMAGE             COMMAND                  CREATED          STATUS          PORTS                                         NAMES
1587da3f55ca   srinu/phpproj:v1  "apachectl -D FOREGR…"   29 minutes ago   Up 29 minutes   0.0.0.0:49154->80/tcp, :::49154->80/tcp       tender_lehmann
```

ports--**49154** number opened in Browser

Simple PHP Website

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Home

This is **home** Welcome to test project -- this content is in file -- content/home.php Feel free to edit it and check in git to test the CI/CD flow

It is a long established fact that no one reads this and I may add anything and reader will be distracted by the readable content of a page when looking at its layout. The point of using Lorem Ipsum is that it has a more-or-less normal distribution of letters, as opposed to using 'Content here, content here', making it look like readable English. Many desktop publishing packages and web page editors now use Lorem Ipsum as their default model text, and a search for 'lorem ipsum' will uncover many web sites still in their infancy. Various versions have evolved over the years, sometimes by accident, sometimes on purpose (injected humour and the like).

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v2.0

Thank you