LKS TINGKAT PROVINSI JAWA BARAT 2021

IT Network Systems Administration

Modul C Network Development Operations (NetDevOps)

Introduction to Test Project

Introduction

A small group of programmers is starting to adopt Docker to containerize their services. Their network infrastructure is usually configured by calling the APIs from a programming language. Recently their netdevops engineer has gotten a long paid leave, you need to take over his responsibility.

Credentials :
Username   : user
Password   : Skills39

Before you start configuration, I suggest you running the command
sudo netplan apply
For get a new ip address to the internet

Before you start, configure hostname and ip address according to the appendix table

Python

You can access docs.python.com for reference
- Install python version 3
- Create virtual environment on "/home/user/myweb"
- Create web apps use flask framework "/home/user/myweb"
  - Use myenv virtual environment for isolated site directories
  - Create file main.py

```
from flask import Flask
from flask import request
from flask import render_template


sample = Flask(__name__)


@sample.route("/")
def main():
  return render_template("index.html")


if __name__ == "__main__":
  sample.run(host="0.0.0.0", port=8080)
```

  - Create templates/index.html

```
<html>
<head>
    <title>Sample app</title>
</head>
<body>
    <h1>You are calling me from {{request.remote_addr}}</h1>
</body>
</html>
```

Docker

You can access docs.docker.com for reference
- Docker engine is already installed in **srv** and **registry**
- Deploy registry server in **registry**
  - Name registry
  - Use image registry:2
  - Volume /mnt/registry to /var/lib/registry
- Add registry to insecure registry on **srv** in /etc/docker/daemon.json
- Make web apps myweb dockerize and create Dockerfile "/home/user/myweb/Dockerfile"
  - User image python:3.8-slim for myweb
  - Use Workdir /myweb
  - Name container use **webprod**
  - User port 80
  - Rename tag image to myweb:1.0
  - Push image to insecure registry server with tag name webprod:latest

Topology
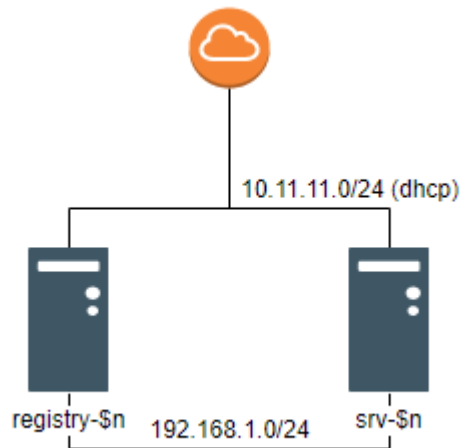
Appendix

Hostname	Network	Ip address
srv	10.11.11.0/24 or 172.30.33.0/24	DHCP
	192.168.1.0/24	192.168.1.20/24
registry	10.11.11.0/24 or 172.30.33.0/24	DHCP
	192.168.1.0/24	192.168.1.10/24