**Setting Up Jenkins Pipeline to Deploy Docker Swarm.**

DESCRIPTION

**Project objective:**

You have to develop an environment for Docker networking.

**Background of the problem statement:**

As you have worked on Docker containers previously, your manager has asked you to perform container scheduling over multiple hosts using Docker CLI and connect multiple hosts with Docker containers.

**You must use the following:**

● Jenkins: To create a pipeline to deploy Docker Swarm  
● Docker Swarm: To implement container networking  
● Git: To connect and push files from the local system to GitHub   
● GitHub: To store the Angular application

**{Code}**

**//Docker-compose.yml**

version: '3'

services:

mongo:

container\_name: mongo

image: mongo

restart: always

ports:

- "27017:27017"

volumes:

- "./data:/data/db"

- ./mongod.conf:/etc/mongod.conf

nodejs:

build: .

container\_name: dockerised-nodejs

environment:

- DB\_HOST=mongodb://mongo:27017/posts

links:

- mongo

ports:

- "3000:3000"

#command: node seeds/seed.js

**//Dockerfile**

# Selecting the base image to build our own customised node.js application microservice

FROM node:latest

# Working directory inside the container

WORKDIR /usr/src/app

# Copying dependencies

COPY package\*.json ./

# Installing node package manager

RUN npm install

# Copying everything from current location to default location inside the container

COPY . .

# Second stage of our build for production

#FROM node:alpine

# copy only essential things to this layer

# this line will compress the size and provides full functionality

#COPY --from=app /usr/src/app /usr/src/app

# Define the work directory in the second stage

#WORKDIR /usr/src/app

# Expose the port

EXPOSE 3000

# Starting the app with CMD -

CMD ["node", "app.js"]

**//Jenkinesfile**

pipeline {

environment {

registry = "naistangz/docker\_automation"

registryCredential = "dockerhub"

dockerImage = ''

PATH = "$PATH:/usr/local/bin"

}

agent {

'docker'}

stages {

stage('Cloning our Git') {

steps {

git 'https://github.com/naistangz/Docker\_Jenkins\_Pipeline.git'

}

}

stage('Building Docker Image') {

steps {

script {

dockerImage = docker.build registry + ":$BUILD\_NUMBER"

}

}

}

stage('Deploying Docker Image to Dockerhub') {

steps {

script {

docker.withRegistry('', registryCredential) {

dockerImage.push()

}

}

}

}

stage('Cleaning Up') {

steps{

sh "docker rmi $registry:$BUILD\_NUMBER"

}

}

}

}