



**AOS-Note Project-3**

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**Project: [CodeBuild-tf-docker]**

Project: **Build & Push Docker Image to Docker hub thru Code Build using Terraform & Shell Scripts**  
[CodeBuild + Terraform + Shell Scripts (.sh) + Docker]

Reference Video: [https://youtube.com/playlist?list=PL184oVW5ERMAF2sUrMB\\_ZfVNI4bLlrmyH](https://youtube.com/playlist?list=PL184oVW5ERMAF2sUrMB_ZfVNI4bLlrmyH)

- Step 1: Create Public Repo in Docker Hub
- Step 2: pre-set up in Github to clone Pvt Repos with SSH (thru powershell/cmd)
- Step 3: Create and Clone Github Repo and add needed Terraform (.tf) files
- Step 4: Create Dockerfile
- Step 5: Create Shell Script (.sh) files
- Step 6: Create Environment Variable
- Step 7: Create buildspec.yml file
- Step 8: Create Personal Access Token to access Github repos into CodeBuild
- Step 9: Create CodeBuild Project
- Step 10: Build Docker Image and push to Docker Hub
- Step 11: Clean Up all infra by run Terraform Destroy in CodeBuild Project

**Task: Thru Terraform**      [all files are in naren-techmax folder only]

### 1. Dockerfile:

```
FROM amazonlinux:latest

# Install dependencies
RUN yum update -y && \
    yum install -y httpd && \
    yum search wget && \
    yum install wget -y && \
    yum install unzip -y

# change directory
RUN cd /var/www/html

# download webfiles
RUN wget https://github.com/azeezsalu/techmax/archive/refs/heads/main.zip

# unzip folder
RUN unzip main.zip

# copy files into html directory
RUN cp -r techmax-main/* /var/www/html/

# remove unwanted folder
RUN rm -rf techmax-main main.zip

# exposes port 80 on the container
EXPOSE 80

# set the default application that will start when the container start
ENTRYPOINT ["/usr/sbin/httpd", "-D", "FOREGROUND"]
```

### 2. build-image.sh:

```
#!/bin/bash
set -eu      [# fail on any error]
# build the docker image
docker build -f $IMAGE_TAG/Dockerfile -t $IMAGE_TAG .
```

### 3. push-image.sh:

```
#!/bin/bash
set -eu          [# fail on any error]
# login to your docker hub account
docker login --username $DOCKER_HUB_USERNAME --password $DOCKER_HUB_PASSWORD

# use the docker tag command to give the image a new name
docker tag $IMAGE_TAG $DOCKER_HUB_USERNAME/$DOCKER_HUB_REPO_NAME

# push the image to your docker hub repository
docker push $DOCKER_HUB_USERNAME/$DOCKER_HUB_REPO_NAME
```

### 4. buildspec.yml:

```
phases:
  install:
    runtime-versions:
      java: corretto8
      python: 3.x
  pre_build:
    commands:
      - chmod +x build-image.sh push-image.sh
      - ./build-image.sh

  build:
    commands:
      - ./push-image.sh
```