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ASSIGNMENT NO : 4.5

Import os , redis and add environment

```
app.py > ...
You, 4 hours ago | 2 authors (Usama Ejaz and others)
1 import time
2 import os
3 import redis
4 from flask import Flask
5
6 app = Flask(__name__)
7 service=os.environ.get('SERVICE_DISCOVERY')
8 cache = redis.Redis(host=service, port=6379)
9
10
11 def get_and_increase_hit_count():
12     retries = 5
13     while True:
14         try:
15             return cache.incr("hits")
16         except redis.exceptions.ConnectionError as exc:
17             if retries == 0:
18                 raise exc
19             retries -= 1
20             time.sleep(0.5)
21
22
23 @app.route("/")
24 def hello():
25     count = get_and_increase_hit_count()
26     return "Hello World! I have been seen {} times.\n".format(count)
27
```

Add env to the docker file

```
Dockerfile > ...
You, 4 hours ago | 2 authors (Usama Ejaz and others)
1 FROM python:3.7-alpine
2
3 WORKDIR /code
4
5 ENV FLASK_APP=app.py
6 ENV FLASK_RUN_HOST=0.0.0.0
7 ENV SERVICE_DISCOVERY='redis'
8
9 RUN apk add --no-cache gcc musl-dev linux-headers
10 COPY requirements.txt requirements.txt Usama Ejaz, last week • Added day 1 and 2 for Microservices
11
12 RUN pip install -r requirements.txt
13
14 EXPOSE 5000
15
16 COPY . .
17
18 CMD ["flask", "run"]
```

```

● mavialamkhan@all-MS-7D35:~$ cd ~/.docker
● mavialamkhan@all-MS-7D35:~/.docker$ ls
buildx contexts daemon.json desktop devenvironments scan scout
● mavialamkhan@all-MS-7D35:~/.docker$ cd ~/.docker/credentials
bash: cd: /home/mavialamkhan/.docker/credentials: No such file or directory
● mavialamkhan@all-MS-7D35:~/.docker$ cd ~/.aws
● mavialamkhan@all-MS-7D35:~/.aws$ ls
config credentials
● mavialamkhan@all-MS-7D35:~/.aws$ rm config
● mavialamkhan@all-MS-7D35:~/.aws$ ls
credentials

Default region name [None]: eu-north-1
Default output format [None]:
● mavialamkhan@all-MS-7D35:~$ aws ecr get-login-password --region eu-north-1 | docker login --username AWS --password-stdin 017696188619.dkr.ecr.eu-north-1.amazonaws.com
WARNING! Your password will be stored unencrypted in /home/mavialamkhan/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded

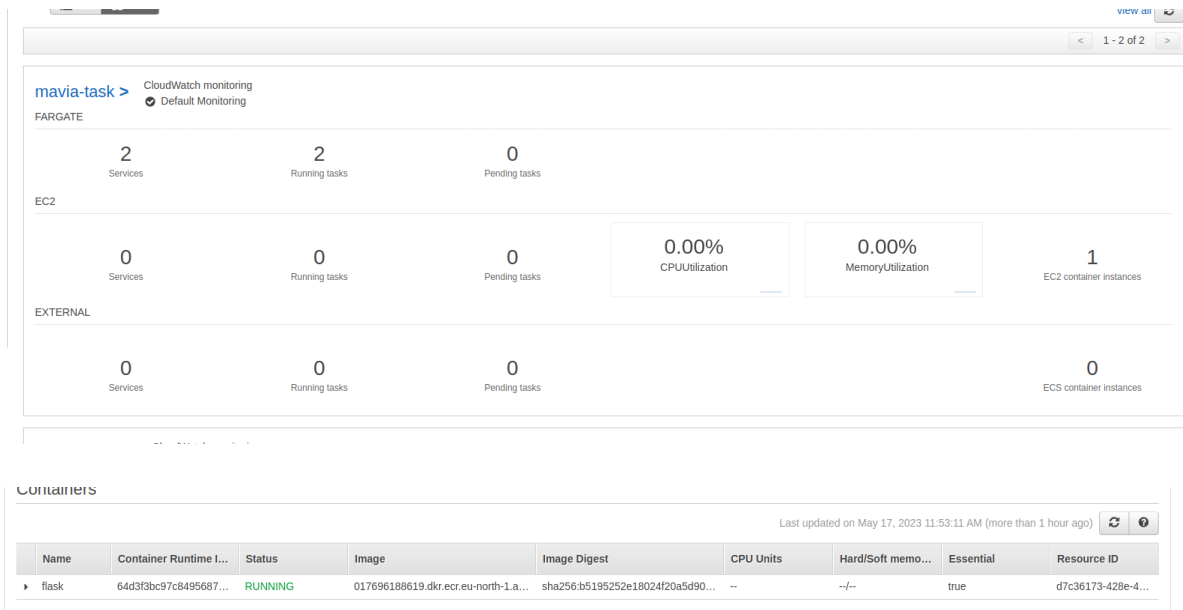
● mavialamkhan@all-MS-7D35:~/Documents/usama_git_repo/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_1_microservices/integrating_flask_redis$ docker build -t flask .
[+] Building 33.4s (11/11) FINISHED
=> [internal] load build definition from Dockerfile                                0.0s
=> => transferring dockerfile: 327B                                              0.0s
=> [internal] load .dockerignore                                                  0.0s
=> => transferring context: 2B                                                    0.0s
=> [internal] load metadata for docker.io/library/python:3.7-alpine             2.5s
=> [1/6] FROM docker.io/library/python:3.7-alpine@sha256:f48c5f6a8a22a73558ea93eb26d2c7928d23f2acb2bb9270be9a08adc2bfa63d 3.1s
=> resolve docker.io/library/python:3.7-alpine@sha256:f48c5f6a8a22a73558ea93eb26d2c7928d23f2acb2bb9270be9a08adc2bfa63d 0.0s
=> sha256:f48c5f6a8a22a73558ea93eb26d2c7928d23f2acb2bb9270be9a08adc2bfa63d 1.65kB / 1.65kB 0.0s
=> sha256:d237f759e7c72d085625f9c8344d230ee9e9765b43c1414b2438589e07c6689 1.37kB / 1.37kB 0.0s
=> sha256:e4fbc12a05a91da694251a0f361d2f03cc0436652f8fcc0baa3787d14dd641c3 6.87kB / 6.87kB 0.0s
=> sha256:8a49fdb3b6a5ff2bd8ec6a86c05b2922a0f7454579ecc07637e94dfd1d0639b6 3.40kB / 3.40kB 1.3s
=> sha256:0357922e53aa8071e175f50460f0245908047b81ee6370f634063785f60c70e 622.30kB / 622.30kB 0.7s
=> sha256:db547a433dc2b277de2f9a4808b524fe5b0e2cd6b36f08e2dc78a79c50601 11.01kB / 11.01kB 2.5s
=> sha256:62dd399032632898094cf3f49425eb9365e91802b723b2a684f1c013c985f55 2408 / 2408 1.2s
=> extracting sha256:8a49fdb3b6a5ff2bd8ec6a86c05b2922a0f7454579ecc07637e94dfd1d0639b6 0.1s
=> sha256:eb20fb0b291e18a7b1d0b6f38e1ac1218731a9856f3565f8ca683e062936aee 2.91MB / 2.91MB 1.8s
=> extracting sha256:0357922e53aa8071e175f50460f0245908047b81ee6370f634063785f60c70e 0.2s
=> extracting sha256:db547a433dc2b277de2f9a4808b524fe5b0e2cd6b36f08e2dc78a79c50601 0.4s
=> extracting sha256:62dd399032632898094cf3f49425eb9365e91802b723b2a684f1c013c985f55 0.0s
=> extracting sha256:eb20fb0b291e18a7b1d0b6f38e1ac1218731a9856f3565f8ca683e062936aee 0.7s
=> naming to docker.io/library/flask                                           0.0s
● mavialamkhan@all-MS-7D35:~/Documents/usama_git_repo/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_1_microservices/integrating_flask_redis$ docker tag flask:latest 017696188619.dkr.ecr.eu-north-1.amazonaws.com/flask:latest
● mavialamkhan@all-MS-7D35:~/Documents/usama_git_repo/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_1_microservices/integrating_flask_redis$ docker push 017696188619.dkr.ecr.eu-north-1.amazonaws.com/flask:latest
The push refers to repository [017696188619.dkr.ecr.eu-north-1.amazonaws.com/flask]
79ebc0940e7f: Pushing [=====] 224.9MB/252.9MB
79ebc0940e7f: Pushed
61d78af048a8: Pushed
301767af0403: Pushed
aa109a997fe9: Pushed
dc6a6a6fc818: Pushed
faf320a0bd0c: Pushed
37a117b410e: Pushed
288977ac81d7: Pushed
bb01bd7e32b5: Pushed

latest: digest: sha256:b5195252e18024f205d90e2181eb7e4161cf6d08c2913eb7aac077494bffa size: 2417
● mavialamkhan@all-MS-7D35:~/Documents/usama_git_repo/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_1_microservices/integrating_flask_redis$
● mavialamkhan@all-MS-7D35:~/Documents/usama_git_repo/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_1_microservices/integrating_flask_redis$ aws ecr get-login-password --region eu-north-1 | docker login --username AWS --password-stdin 017696188619.dkr.ecr.eu-north-1.amazonaws.com
WARNING! Your password will be stored unencrypted in /home/mavialamkhan/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

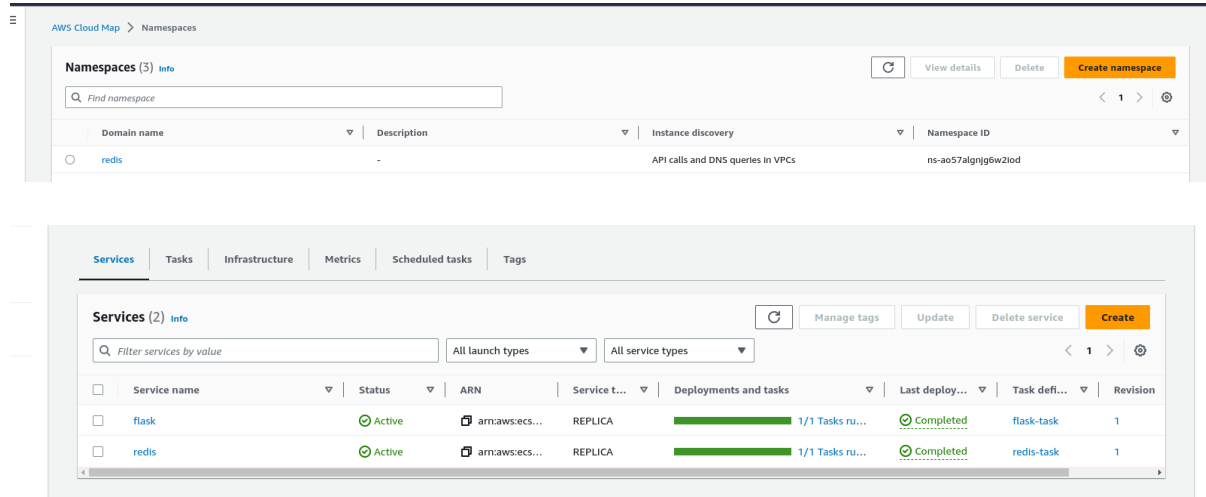
Login Succeeded

● mavialamkhan@all-MS-7D35:~/Documents/usama_git_repo/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_1_microservices/integrating_flask_redis$ docker pull redis
Login Succeeded
● mavialamkhan@all-MS-7D35:~/Documents/usama_git_repo/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_1_microservices/integrating_flask_redis$ docker pull redis
Using default tag: latest
latest: Pulling from library/redis
9e3ea8720c6d: Pull complete
70b0a593ef8e: Pull complete
1563ab40b027: Pull complete
e71aa54519a0: Pull complete
e43bffb29bdf: Pull complete
a8fb0ae3ba1b: Pull complete
Digest: sha256:ea30be6fa1424032295b0db20a869fc8db763310915437a80175cede7d887
Status: Downloaded newer image for redis:latest
docker.io/library/redis:latest
● mavialamkhan@all-MS-7D35:~/Documents/usama_git_repo/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_1_microservices/integrating_flask_redis$ docker tag redis:latest 017696188619.dkr.ecr.eu-north-1.amazonaws.com/redis:latest
● mavialamkhan@all-MS-7D35:~/Documents/usama_git_repo/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_1_microservices/integrating_flask_redis$ docker push 017696188619.dkr.ecr.eu-north-1.amazonaws.com/redis:latest
The push refers to repository [017696188619.dkr.ecr.eu-north-1.amazonaws.com/redis]
47990e30469: Pushed
c4ara995e3ec: Pushed
df132c87dbb2: Pushed
bee68ae43a83: Pushed
a29f3c080730: Pushed
8553801947d0: Pushed
latest: digest: sha256:9ca9747b233106676a48cc7806131586213fa5dab86dd1972d6a8732e3a84a4d size: 1573
● mavialamkhan@all-MS-7D35:~/Documents/usama_git_repo/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_1_microservices/integrating_flask_redis$

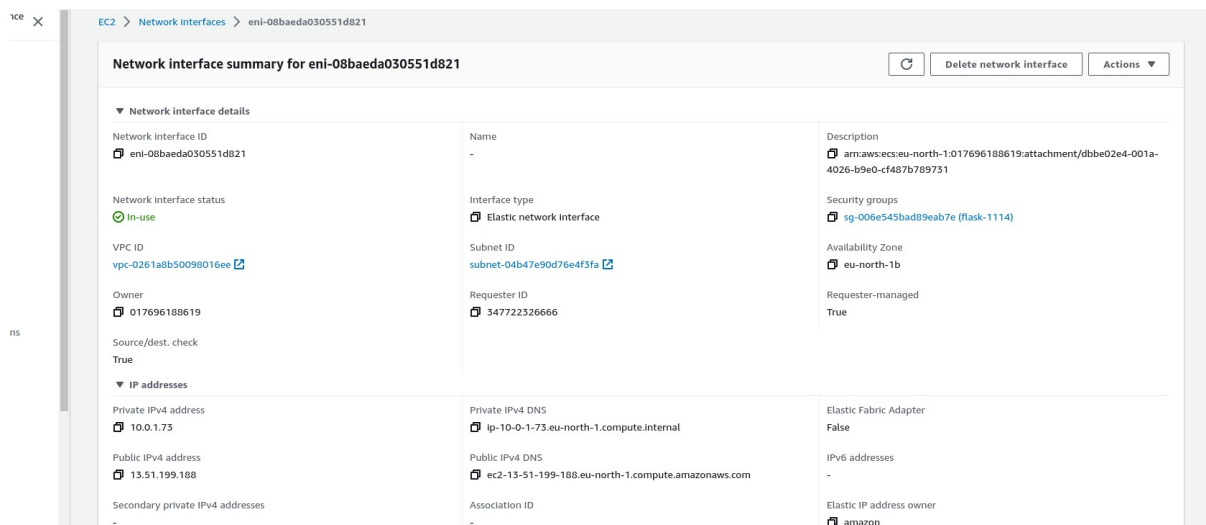
```



Creating namespace and services



Copying the public ip



Service instances (1)

Find instance

View details

Deregister

Register service instance

< 1 >

ID	Health
1b6e6f6db273497bbc63fde28c219f91	Unknown

Pushing flask and redis images

Elastic Container Registry

istry
stry
es

rted
ation
ry

Amazon ECR > Repositories

PrivatePublic

Private repositories (2)

Find repositories

View push commands

Delete

Actions

Create repository

< 1 >

<input type="checkbox"/>	Repository name	URI	Created at	Tag immutability	Scan frequency	Encryption type	Pull through cache
<input type="checkbox"/>	flask	017696188619.dkr.ecr.eu-north-1.amazonaws.com/flask	May 17, 2023, 09:14:31 (UTC+05)	Disabled	Manual	AES-256	Inactive
<input type="checkbox"/>	redis	017696188619.dkr.ecr.eu-north-1.amazonaws.com/redis	May 17, 2023, 09:25:27 (UTC+05)	Disabled	Manual	AES-256	Inactive

flask

View push commands

Edit

Images (1)

Search artifacts

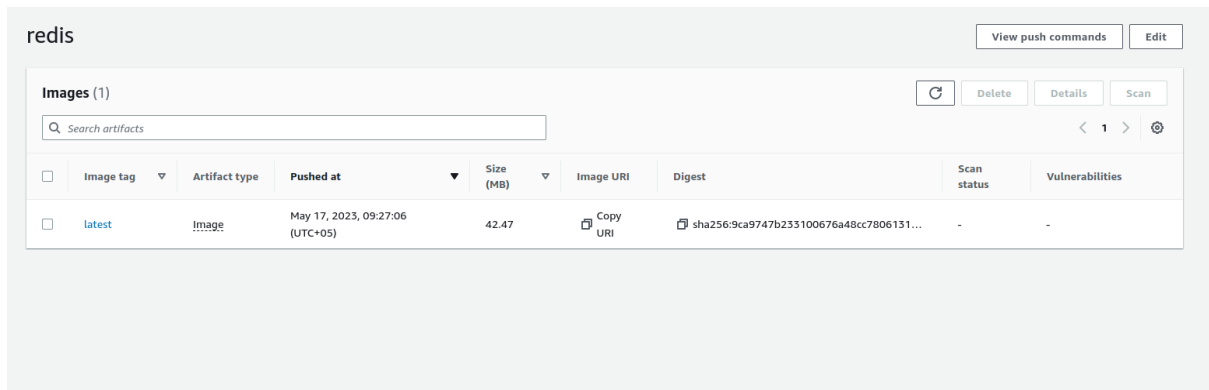
Delete

Details

Scan

< 1 >

<input type="checkbox"/>	Image tag	Artifact type	Pushed at	Size (MB)	Image URI	Digest	Scan status	Vulnerabilities
<input type="checkbox"/>	latest	Image	May 17, 2023, 09:24:30 (UTC+05)	191.45	<div>Copy URI</div>	sha256:b5195252e18024f20a5d90a2181ea...	-	-



Output the result and checking deployment of 5000 port number

