

Project Development Phase

Sprint-4

Date	19 November 2022
Team ID	PNT2022TMID47204
Project Name	Personal Expense Tracker Application

In this sprint, we created the image flask application, and containerized the flask application in docker.

Container registry is created and image is pushed into it. And Kubernetes cluster is created and image is uploaded.

Sprint -4 Screenshots:

Image building and pushing into docker hub:

```
E:\IBM_Project\Project Development Phase\Sprint 4\code>docker build -t myapp .
[+] Building 1.3s (10/10) FINISHED
=> [internal] load build definition from Dockerfile                                0.0s
=> == transferring dockerfile: 32B                                                0.0s
=> [internal] load .dockerignore                                                  0.0s
=> == transferring context: 2B                                                    0.0s
=> [internal] load metadata for docker.io/library/python:3.10.7                 1.2s
=> [1/5] FROM docker.io/library/python:3.10.7@sha256:53e577284d36223ee92aab5119449271f5eb24f99c61464efe9167ddbc 0.0s
=> [internal] load build context                                                 0.0s
=> == transferring context: 3.12kB                                                0.0s
=> CACHED [2/5] WORKDIR /app                                                      0.0s
=> CACHED [3/5] COPY requirements.txt ./                                         0.0s
=> CACHED [4/5] RUN pip install --r requirements.txt                             0.0s
=> CACHED [5/5] CMD                                                               0.0s
=> exporting to image                                                            0.0s
=> == exporting layers                                                            0.0s
=> == writing image sha256:8dd3e82a38596d55a78864877276928e62bb905f421357cb40bb046dd4e6684e 0.0s
=> == naming to docker.io/library/myapp                                          0.0s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

E:\IBM_Project\Project Development Phase\Sprint 4\code>docker tag myapp prem0046/peta-application

E:\IBM_Project\Project Development Phase\Sprint 4\code>docker push prem0046/peta-application
Using default tag: latest
The push refers to repository [docker.io/prem0046/peta-application]
ee66746181dc: Pushed
b8f8cb4b0c55: Pushed
31e1979cd832: Pushed
94b76bc8510f: Pushed
cf399be408ea: Mounted from prem0046/hello_world
793b971ccb99: Pushed
d172a9e6f9e6: Mounted from prem0046/hello_world
0c7daf9a72c8: Mounted from prem0046/hello_world
75ba02937496: Mounted from prem0046/hello_world
288cf3a46e32: Mounted from prem0046/hello_world
186da837555d: Mounted from prem0046/hello_world
955c9335e041: Mounted from prem0046/hello_world
8e979fee2186: Mounted from prem0046/hello_world
latest: digest: sha256:676d8d5e82c8b4685ff3f67dd699730044c12767da538af0bf00db04bb971612 size: 3056

E:\IBM_Project\Project Development Phase\Sprint 4\code>
```

Creating container in container registry and pushing image from docker desktop:

```
(c) Microsoft Corporation. All rights reserved.

C:\Users\nmani>ibmcloud plugin install container-registry
Looking up 'container-registry' from repository 'IBM Cloud'...
Plug-in 'container-registry[cr] 1.0.2' found in repository 'IBM Cloud'
Plug-in 'container-registry 1.0.2' was already installed. Do you want to update it with 'container-registry[cr] 1.0.2' or not? [y/N] > y
Attempting to download the binary file...
 11.90 MiB / 11.90 MiB [=====] 100.00% 0s
12476416 bytes downloaded
Installing binary...
OK
Plug-in 'container-registry 1.0.2' was successfully installed into C:\Users\nmani\.bluemix\plugins\container-registry. Use 'ibmcloud plugin show container-registry' to show its details.

C:\Users\nmani>ibmcloud login -a https://cloud.ibm.com
API endpoint: https://cloud.ibm.com

Email> sec19cs095@sairamtap.edu.in

Password>
Authenticating...
OK

Targeted account Prem Washyap Chilakamarthi's Account (c50714902c8f4427b45032b104b525a1)

Select a region (or press enter to skip):
1. au-syd
2. in-che
3. jp-osa
4. jp-tok
5. kr-seo
6. eu-de
7. eu-gb
8. ca-tor
9. us-south
10. us-east
11. br-sao
Enter a number> 4
Targeted region jp-tok

API endpoint:      https://cloud.ibm.com
Region:            jp-tok
User:              sec19cs095@sairamtap.edu.in
Account:           Prem Washyap Chilakamarthi's Account (c50714902c8f4427b45032b104b525a1)
Resource group:    No resource group targeted, use 'ibmcloud target -g RESOURCE_GROUP'
CF API endpoint:
```

```
Enter a number> 2
Targeted region in-che

API endpoint:      https://cloud.ibm.com
Region:            in-che
User:              sec19cs095@sairamtap.edu.in
Account:           Prem Washyap Chilakamarthi's Account (c50714902c8f4427b45032b104b525a1)
Resource group:    No resource group targeted, use 'ibmcloud target -g RESOURCE_GROUP'
CF API endpoint:

Org:
Space:

C:\Users\nmani>ibmcloud cr region-set global
The region is set to 'global', the registry is 'icr.io'.

OK

C:\Users\nmani>ibmcloud cr namespace-add peta_application
No resource group is targeted. Therefore, the default resource group for the account ('Default') is targeted.

Adding namespace 'peta_application' in resource group 'Default' for account Prem Washyap Chilakamarthi's Account in registry icr.io...

Successfully added namespace 'peta_application'

OK

C:\Users\nmani>ibmcloud cr login
Logging 'docker' in to 'icr.io'...
Logged in to 'icr.io'.

OK

C:\Users\nmani>docker prem0046/pull peta_application
docker: 'prem0046/pull' is not a docker command.
See 'docker --help'

C:\Users\nmani>docker pull prem0046/peta_application
Using default tag: latest
latest: Pulling from prem0046/peta_application
Digest: sha256:a2bb9f2d05c3d3e8c3868967cf414fcc4f03549dffc1eb09e8a90fe98a91eff4
Status: Image is up to date for prem0046/peta_application:latest
docker.io/prem0046/peta_application:latest

C:\Users\nmani>docker tag peta_application icr.io/peta_application/peta_application:latest

C:\Users\nmani>
```

```
OK

C:\Users\nmani>ibmcloud cr login
Logging 'docker' in to 'icr.io'...
Logged in to 'icr.io'.

OK

C:\Users\nmani>docker prem0046/pull peta_application
docker: 'pre0046/pull' is not a docker command.
See 'docker --help'

C:\Users\nmani>docker pull prem0046/peta_application
Using default tag: latest
latest: Pulling from prem0046/peta_application
Digest: sha256:a2bb9f2d05c3d3e8c3868967cf414fcc4f03549dffc1eb09e8a90fe98a91eff4
Status: Image is up to date for prem0046/peta_application:latest
docker.io/prem0046/peta_application:latest

C:\Users\nmani>docker tag peta_application icr.io/peta_application/peta_application:latest

C:\Users\nmani>docker push icr.io/peta_application/peta_application:latest
The push refers to repository [icr.io/peta_application/peta_application]
6c2bf6b12083: Pushed
b8f8cb4b0c55: Pushed
31e1979cd832: Pushed
94b76bc8510f: Mounted from create_flask/hello_world
cf399be408ea: Mounted from create_flask/hello_world
793b971ccb99: Mounted from create_flask/hello_world
d172a9e6f9e6: Mounted from create_flask/hello_world
0c7daf9a72c8: Mounted from create_flask/hello_world
75ba02937496: Mounted from create_flask/hello_world
288cf3a46e32: Mounted from create_flask/hello_world
186da837555d: Mounted from create_flask/hello_world
955c9335e041: Mounted from create_flask/hello_world
8e079fee2186: Mounted from create_flask/hello_world
latest: digest: sha256:a2bb9f2d05c3d3e8c3868967cf414fcc4f03549dffc1eb09e8a90fe98a91eff4 size: 3056

C:\Users\nmani>ibmcloud cr image-list
Listing images...

Repository          Tag      Digest          Namespace      Created      Size      Security status
icr.io/create_flask/hello_world latest    a66e001d30bf   create_flask   1 week ago   366 MB    -
icr.io/peta_application/peta_application latest    a2bb9f2d05c3   peta_application 20 minutes ago 558 MB    -

OK

C:\Users\nmani>
```

Container registry namespaces:

IBM Cloud

Container Registry

Quick start

Namespaces2

Repositories2

Images2

Trash0

Settings

Search resources and products...

CatalogManagePrem Kashyap Chilakamarthi's A...

Namespaces

LocationGlobal

Resource group: Filter...Search

Create +

Name	Resource group	Repository count	Image count	Retention policy
peta_application	Default	1	1	Retain all images
create_flask	Default	1	1	Retain all images

Items per page: 251-2 of 2 items

Repository:

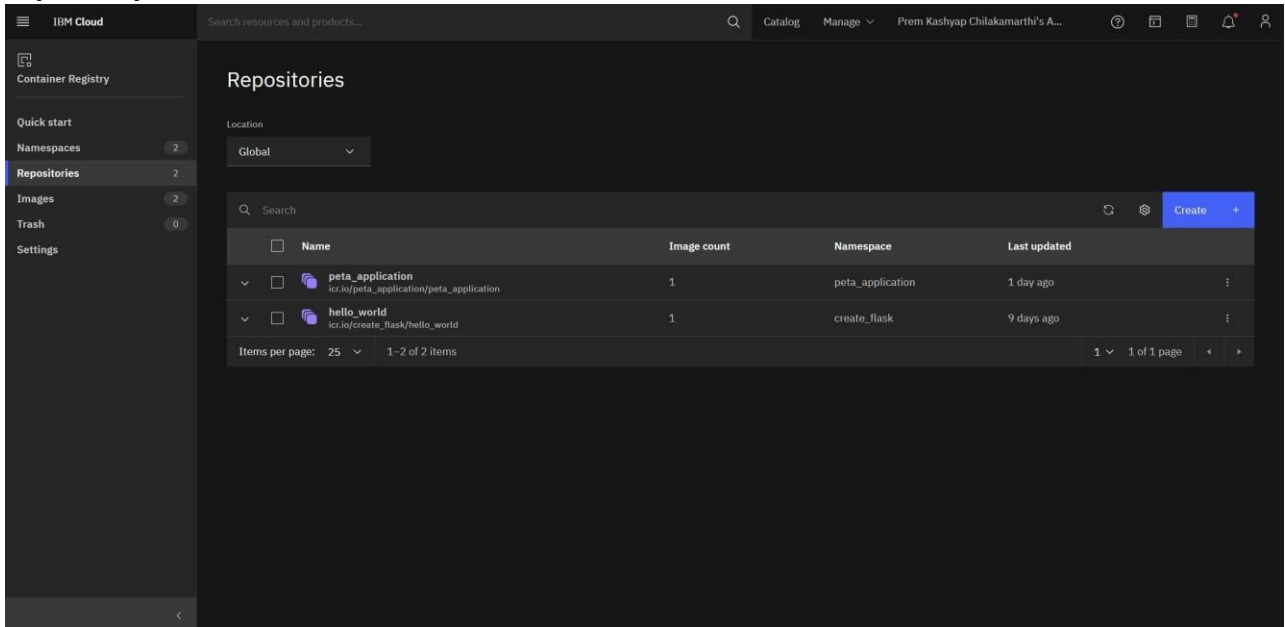
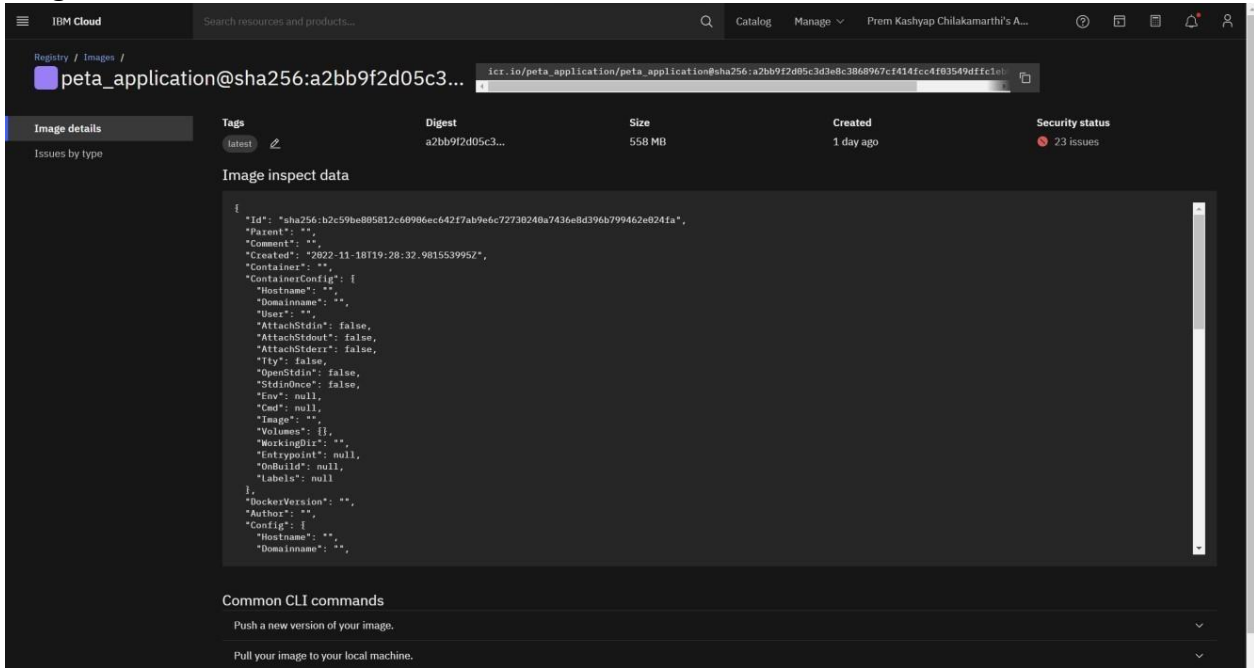


Image:



Kubernetes cluster:

IBM Cloud

Search resources and products...

Q

Catalog

Manage

Prem Kashyap Chilakamarthi's A...

Clusters /

mycluster-free

Normal

Expires in 22 days

Add tags

Help

Kubernetes dashboard

Actions...

Overview

Worker nodes

Worker pools

DevOps

New

Expires in 22 days:

Be sure to back up your data, your cluster will be deleted in 22 days. To access the full capabilities of the service, try out a standard cluster.

Node status

1 of 1

Normal

Details

Add-on status

0 of 0

Normal

Details

Master status

Normal

Docs

Ingress status

Healthy

Docs

Details

Cluster ID

cdn4j3af8dec7ch9t50

Version

1.25.4_1522

Infrastructure

Classic

Zones

Milan 01

Created

11/11/2022, 18:39

Resource group

Default

Image security enforcement

Enable

Node health

1 total nodes

Critical 0%

Warning 0%

Normal 100%

Pending 0%

Worker node details