

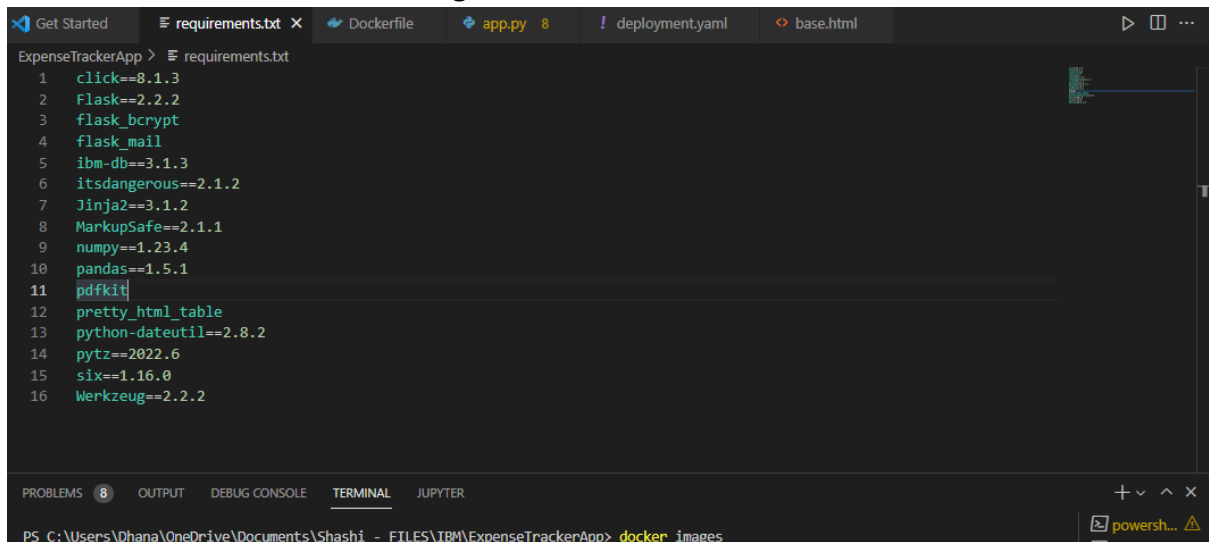
PROJECT DEVELOPMENT PHASE

SPRINT - 4

TEAM ID	PNT2022TMID35287
PROJECT NAME	Personal Expense Tracker Application

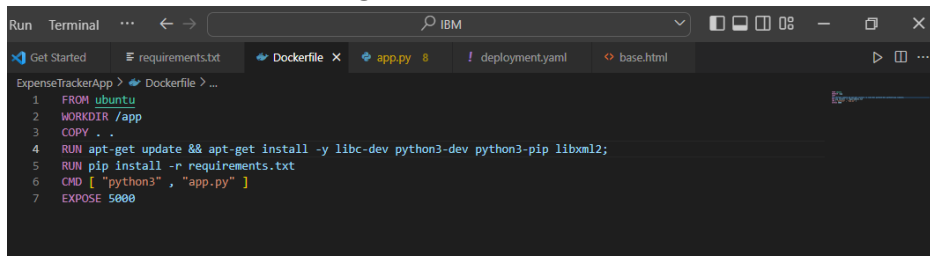
BUILDING DOCKER CONTAINER IMAGE

REQUIREMENT File to build image



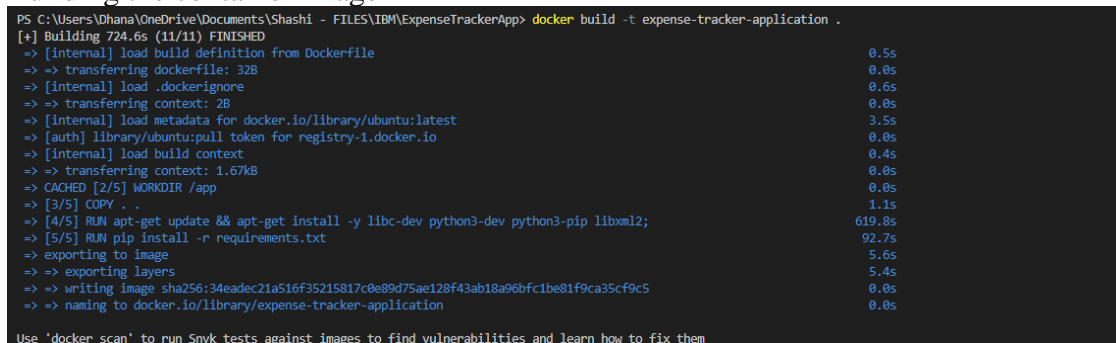
```
ExpenseTrackerApp > requirements.txt
1 click==8.1.3
2 Flask==2.2.2
3 flask_bcrypt
4 flask_mail
5 ibm-db==3.1.3
6 itsdangerous==2.1.2
7 Jinja2==3.1.2
8 MarkupSafe==2.1.1
9 numpy==1.23.4
10 pandas==1.5.1
11 pdfkit
12 pretty_html_table
13 python-dateutil==2.8.2
14 pytz==2022.6
15 six==1.16.0
16 Werkzeug==2.2.2
```

DOCKER File to build image



```
ExpenseTrackerApp > Dockerfile > ...
1 FROM ubuntu
2 WORKDIR /app
3 COPY . .
4 RUN apt-get update && apt-get install -y libc-dev python3-dev python3-pip libxml2;
5 RUN pip install -r requirements.txt
6 CMD [ "python3", "app.py" ]
7 EXPOSE 5000
```

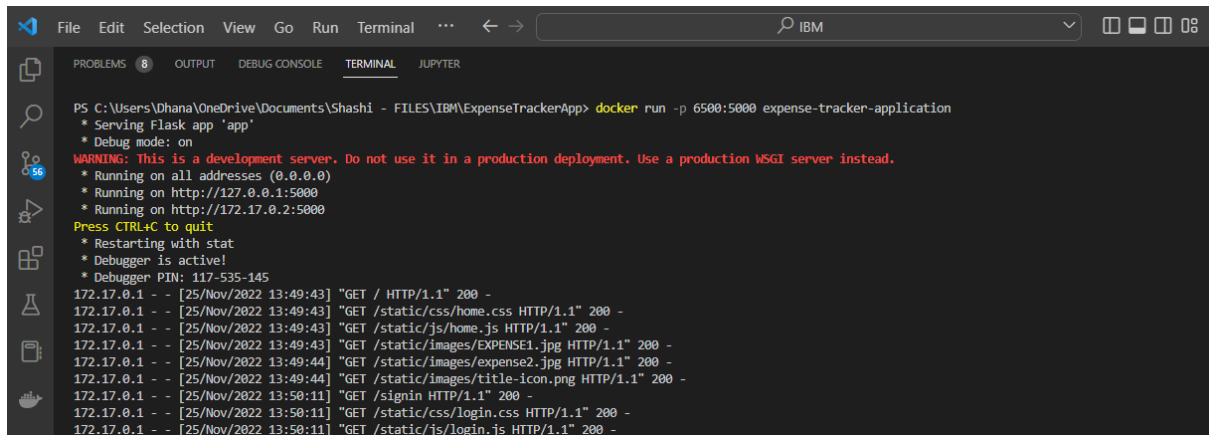
Building the container image



```
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp> docker build -t expense-tracker-application .
[+] Building 724.6s (11/11) FINISHED
=> [internal] load build definition from Dockerfile 0.5s
=> => transferring dockerfile: 32B 0.0s
=> [internal] load .dockerignore 0.6s
=> => transferring context: 2B 0.0s
=> [internal] load metadata for docker.io/library/ubuntu:latest 3.5s
=> [auth] library/ubuntu:pull token for registry-1.docker.io 0.0s
=> [internal] load build context 0.4s
=> => transferring context: 1.67kB 0.0s
=> CACHED [2/5] WORKDIR /app 0.0s
=> [3/5] COPY . . 1.1s
=> [4/5] RUN apt-get update && apt-get install -y libc-dev python3-dev python3-pip libxml2; 619.8s
=> [5/5] RUN pip install -r requirements.txt 92.7s
=> exporting to image 5.6s
=> => exporting layers 5.4s
=> => writing image sha256:34eadec21a516f35215817c0e89d75ae128f43ab18a96bfc1be81f9ca35cf9c5 0.0s
=> => naming to docker.io/library/expense-tracker-application 0.0s

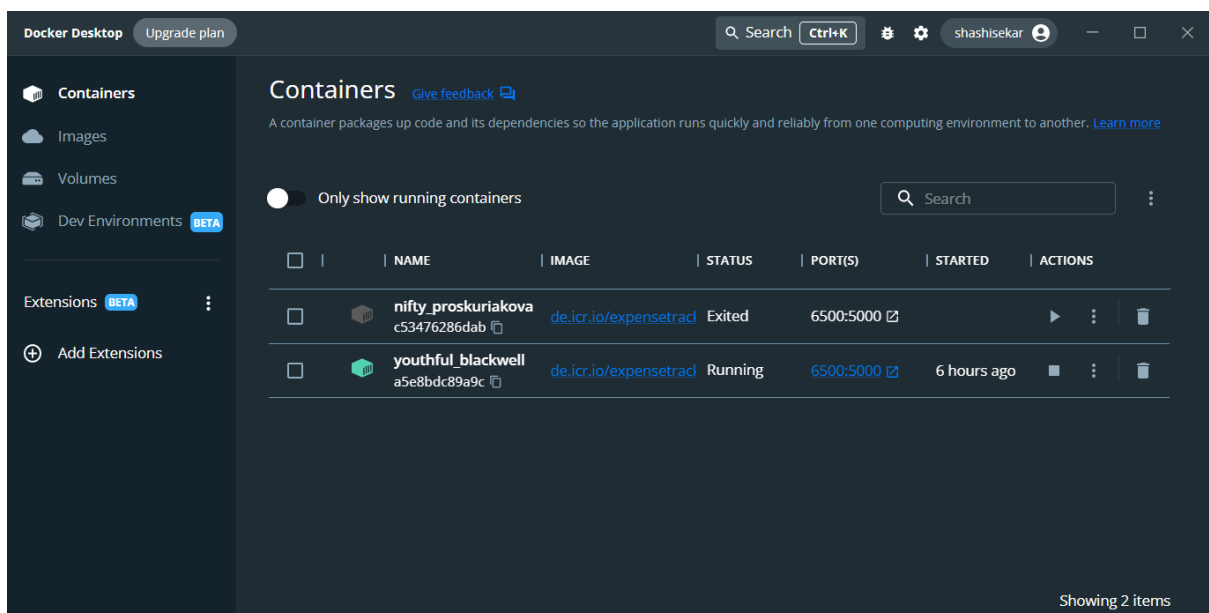
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
```

Running the container

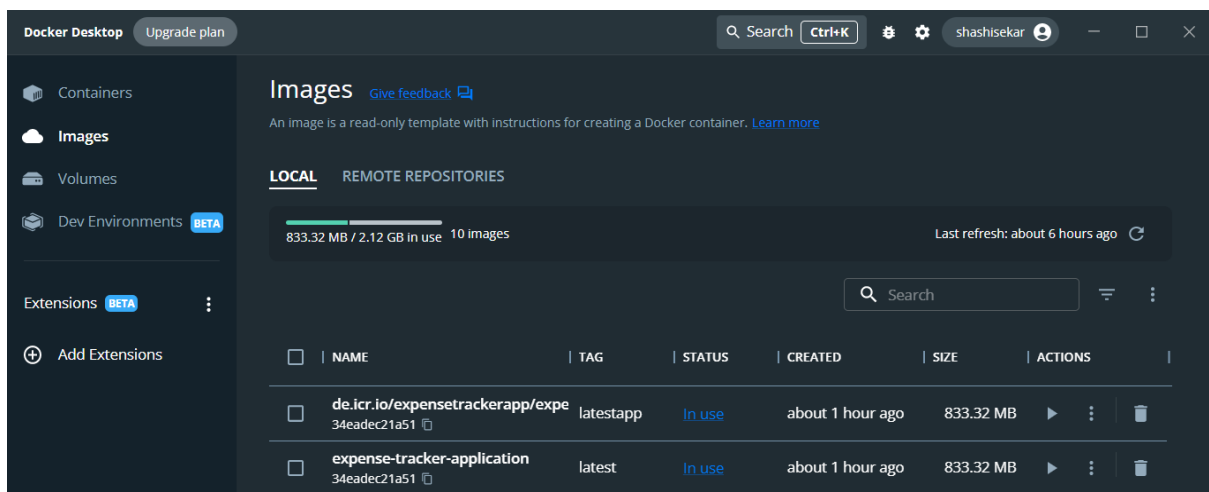


```
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp> docker run -p 6500:5000 expense-tracker-application
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:5000
* Running on http://172.17.0.2:5000
Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 117-535-145
172.17.0.1 - - [25/Nov/2022 13:49:43] "GET / HTTP/1.1" 200 -
172.17.0.1 - - [25/Nov/2022 13:49:43] "GET /static/css/home.css HTTP/1.1" 200 -
172.17.0.1 - - [25/Nov/2022 13:49:43] "GET /static/js/home.js HTTP/1.1" 200 -
172.17.0.1 - - [25/Nov/2022 13:49:43] "GET /static/images/EXPENSE1.jpg HTTP/1.1" 200 -
172.17.0.1 - - [25/Nov/2022 13:49:44] "GET /static/images/expense2.jpg HTTP/1.1" 200 -
172.17.0.1 - - [25/Nov/2022 13:49:44] "GET /static/images/title-icon.png HTTP/1.1" 200 -
172.17.0.1 - - [25/Nov/2022 13:50:11] "GET /signin HTTP/1.1" 200 -
172.17.0.1 - - [25/Nov/2022 13:50:11] "GET /static/css/login.css HTTP/1.1" 200 -
172.17.0.1 - - [25/Nov/2022 13:50:11] "GET /static/js/login.js HTTP/1.1" 200 -
```

List of CONTAINERS



List of IMAGES



```
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp> docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
expense-tracker-application	latest	34eade21a51	55 minutes ago	833MB
shashisekar/assignment	latest	47154170ef43	2 days ago	951MB
assignment	latest	47154170ef43	2 days ago	951MB
k8s.gcr.io/kube-apiserver	v1.25.2	97801f839498	2 months ago	128MB
k8s.gcr.io/kube-scheduler	v1.25.2	ca8ea1ee3cfd	2 months ago	58.6MB
k8s.gcr.io/kube-controller-manager	v1.25.2	dbfceb93c69b	2 months ago	117MB
k8s.gcr.io/pause	3.8	4873874c08ef	5 months ago	711kB

PUSHING THE IMAGE INTO DOCKER HUB

```
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp> docker login
Authenticating with existing credentials...
Login Succeeded

Logging in with your password grants your terminal complete access to your account.
For better security, log in with a limited-privilege personal access token. Learn more at https://docs.docker.com/go/access-tokens/
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp> docker tag expense-tracker-app shashisekar/expense-tracker-app
Error response from daemon: No such image: expense-tracker-app:latest
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp> docker tag expense-tracker-application shashisekar/expense-tracker-application
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp> docker push shashisekar/expense-tracker-application
Using default tag: latest
The push refers to repository [docker.io/shashisekar/expense-tracker-application]
19881f8aeb8: Pushed
0d1da3c7d59: Pushed
ac4aa1ca7e09: Pushed
93201392decd: Mounted from shashisekar/personal-expense-tracker-app
f4a670ac65b6: Mounted from shashisekar/personal-expense-tracker-app
```

Image on DOCKER HUB

shashisekar / expense-tracker-application

Description

This repository does not have a description

Last pushed: 2 minutes ago

Tags and scans

This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
latest		Image	---	2 minutes ago

[See all](#) [Go to Advanced Image Management](#)

Automated Builds

Manually pushing images to Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new images whenever your code is updated, so you can focus your time on creating.

Available with Pro, Team and Business subscriptions.

[Upgrade](#) [Learn more](#)

README

Repository description is empty. Click [here](#) to edit.

Docker commands

[Public View](#)

```
docker push shashisekar/expense-tracker-application:tagname
```

IBM CLOUD CONTAINER REGISTRY

IBM Cloud Login

```
Targeted account Shashi D's Account (3dd395deaa66432a8f1a01f81faa00c6)

API endpoint: https://cloud.ibm.com
Region: eu-de
User: 2019103609@smartinternz.com
Account: Shashi D's Account (3dd395deaa66432a8f1a01f81faa00c6)
Resource group: No resource group targeted, use 'C:\Program Files\IBM\Cloud\bin\ibmcloud.exe target -g RESOURCE_GROUP'
CF API endpoint:
Org:
Space:
```

Adding Namespace

```
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp> ibmcloud cr namespace-add expensetrackerapp
No resource group is targeted. Therefore, the default resource group for the account ('Default') is targeted.

Adding namespace 'expensetrackerapp' in resource group 'Default' for account Shashi D's Account in registry de.icr.io...

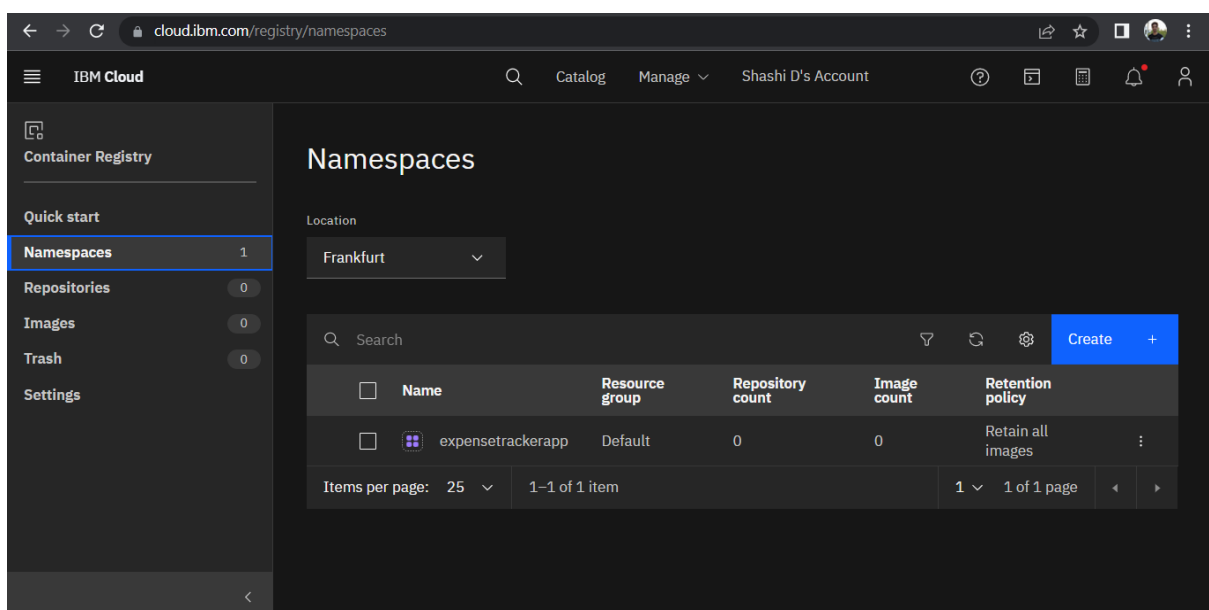
Successfully added namespace 'expensetrackerapp'

OK
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp> ibmcloud cr namespace-list -v
Listing namespaces for account 'Shashi D's Account' in registry 'de.icr.io'...

Namespace      Resource Group  Created
expensetrackerapp  Default        22 seconds ago

OK
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp>
```

Namespace on the Container Registry



Pushing the image into the repository

```
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp> docker tag shashisekar/expense-tracker-app de.icr.io/expensetrackerapp/expensetrackerrepo:latestapp
Error response from daemon: No such image: shashisekar/expense-tracker-app:latest
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp> docker tag shashisekar/expense-tracker-application de.icr.io/expensetrackerapp/expensetrackerrepo:latestapp
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp> ibmcloud cr login --client docker
Logging 'docker' in to 'de.icr.io'...
Logged in to 'de.icr.io'.

OK
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp> docker push de.icr.io/expensetrackerapp/expensetrackerrepo:latestapp
The push refers to repository [de.icr.io/expensetrackerapp/expensetrackerrepo]
19881f1ea0a8: Pushed
0d1dac8c7d50: Pushed
ac4ae1ca7e09: Pushed
93201392decd: Pushed
f4a670ac65b6: Pushed
latestapp: digest: sha256:cdc97a24c439a04e13fab59db0d30773c3381761f00d2f07238e951a4dc20aed size: 1373
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp> ibmcloud cr image-list
Listing images...

Repository      Tag      Digest      Namespace      Created      Size      Security status
de.icr.io/expensetrackerapp/expensetrackerrepo  latestapp  cdc97a24c439  expensetrackerapp  1 hour ago  359 MB  -

OK
PS C:\Users\Dhana\OneDrive\Documents\Shashi - FILES\IBM\ExpenseTrackerApp>
```

Repositories on the Registry

cloud.ibm.com/registry/repos

IBM Cloud

Container Registry

Quick start

- Namespaces 1
- Repositories 1**
- Images 1
- Trash 0
- Settings

Repositories

Location: Frankfurt

Search

Name	Image count	Namespace	Last updated
expensetrackerrepo de.icr.io/expensetrackerapp/expensetrackerrepo	1	expensetrackerapp	1 hour ago

Items per page: 25 1-1 of 1 item

Create +

Images on the Registry

cloud.ibm.com/registry/images

IBM Cloud

Container Registry

Quick start

- Namespaces 1
- Repositories 1
- Images 1**
- Trash 0
- Settings

Images

Location: Frankfurt

Search

Repository@digest	Tags	Manifest type	Create
expensetrackerapp/expensetrackerrepo@sha256:cdc97a24c439...	latestapp	Docker	1 hour ago

Items per page: 25 1-1 of 1 item

Create +

KUBERNETES CLUSTERS

Cluster

The screenshot shows the IBM Cloud Kubernetes Clusters page for a cluster named 'mycluster-free'. The cluster is in a 'Normal' state and expires in 27 days. The page displays a table of worker nodes with the following data:

Name	Status	Worker pool	Zone	Private IP	Public IP	Version
000000d3	Normal	default	Milan 01	10.144.222.48	169.51.206.125	1.24.8_1545

The page also includes a sidebar with navigation options like 'Overview', 'Worker nodes', 'Worker pools', and 'DevOps'. There are buttons for 'Add tags', 'Kubernetes dashboard', and 'Actions...'.

The screenshot shows the IBM Cloud Kubernetes Clusters overview page for a cluster named 'mycluster-free'. The page displays the following sections:

- Node health:** 1 total nodes. A bar chart shows 100% Normal, 0% Critical, 0% Warning, and 0% Pending.
- Networking:** Service endpoint URL. Public enabled (checked) and Private disabled (unchecked). Buttons for 'Copy link' are provided for both.
- Integrations:** Logging, Monitoring, and Key management service. Each has a 'Connect' or 'Enable' button.

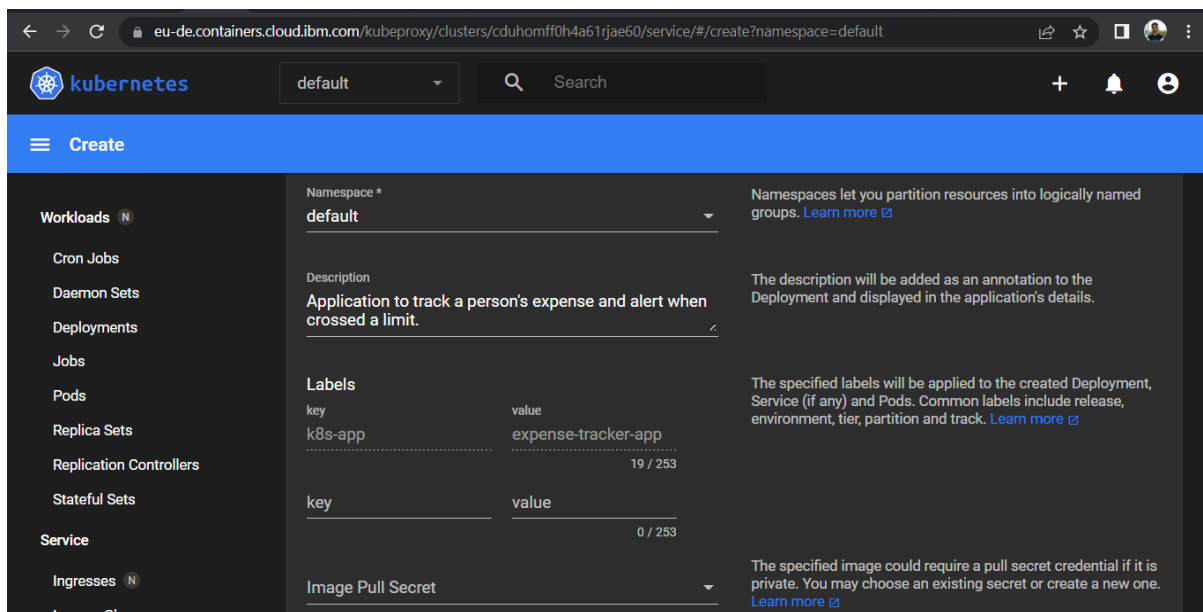
The page also includes a sidebar with navigation options like 'Overview', 'Worker nodes', 'Worker pools', and 'DevOps'.

Creating using Form

The screenshot shows the IBM Cloud Kubernetes Clusters 'Create from form' page. The page displays the following form fields:

- App name ***: expense-tracker-app
- Container image ***: de.icr.io/expensetrackerapp/expensetrackerrepo:latest
- Number of pods ***: 1
- Service ***: External
- Port ***: (empty)
- Target port ***: (empty)
- Protocol ***: (empty)

The page also includes a sidebar with navigation options like 'Workloads', 'Service', and 'Ingresses'. There are buttons for 'Create from input', 'Create from file', and 'Create from form'.



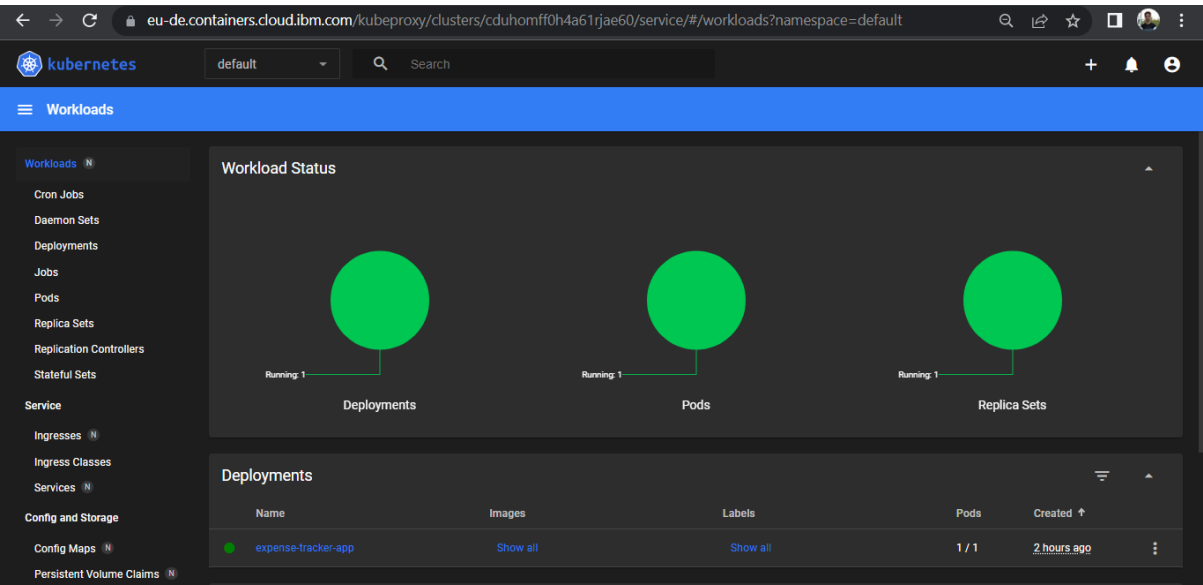
YAML File

```

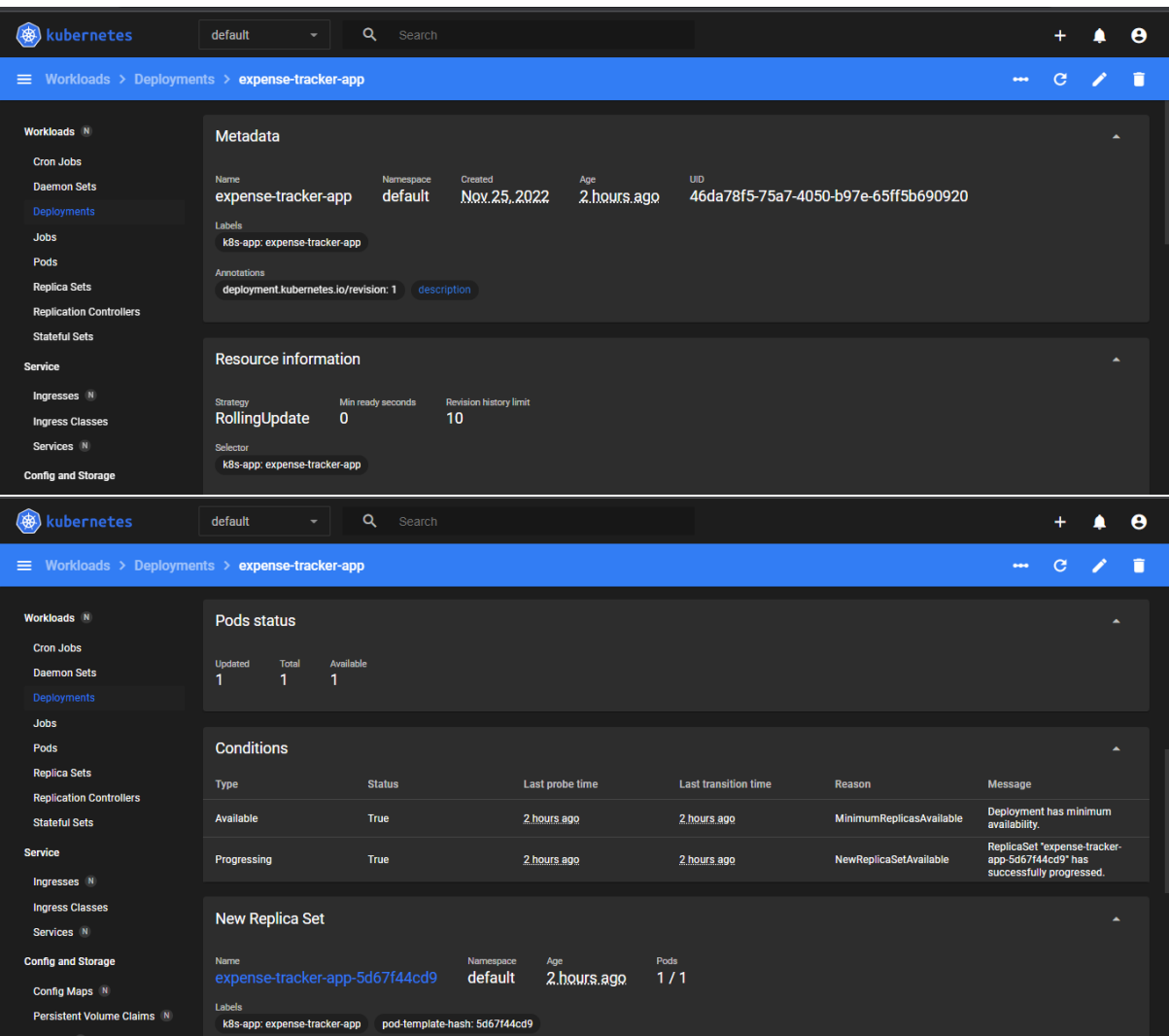
apiVersion: apps/v1
kind: Deployment
metadata:
  name: expense-tracker-app
  namespace: default
  labels:
    k8s-app: expense-tracker-app
annotations:
  description: Application to track a person's expense and alert when crossed a limit.
spec:
  replicas: 1
  selector:
    matchLabels:
      k8s-app: expense-tracker-app
  template:
    metadata:
      name: expense-tracker-app
      labels:
        k8s-app: expense-tracker-app
    annotations:
      description: Application to track a person's expense and alert when crossed a limit.
    spec:
      containers:
        - name: expense-tracker-app
          image: de.icr.io/expensetrackerapp/expensetrackerrepo:latestapp
          securityContext:
            privileged: false

```

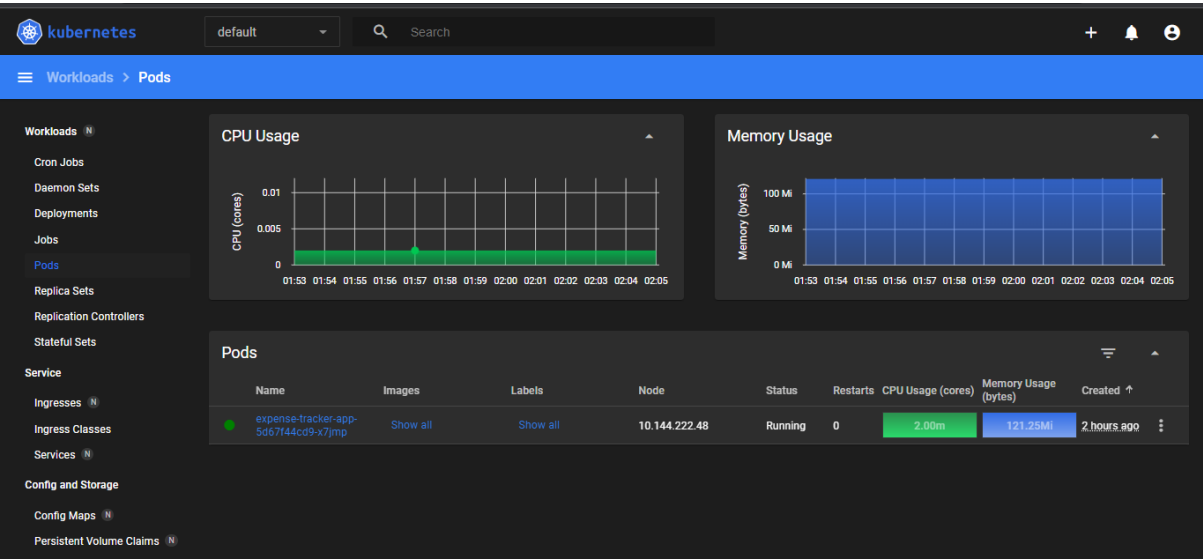
Workload

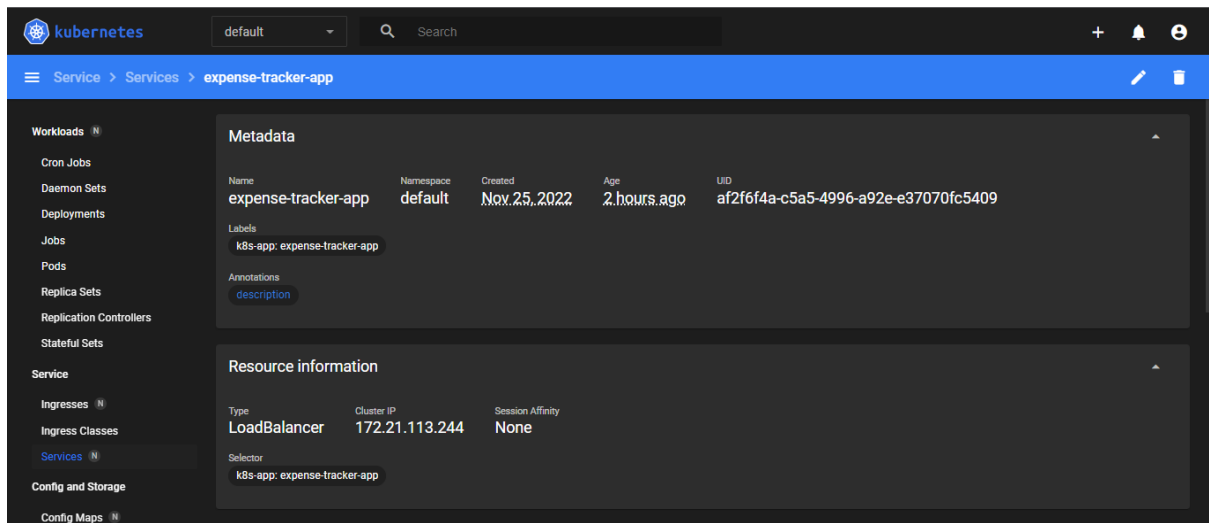


Deployments

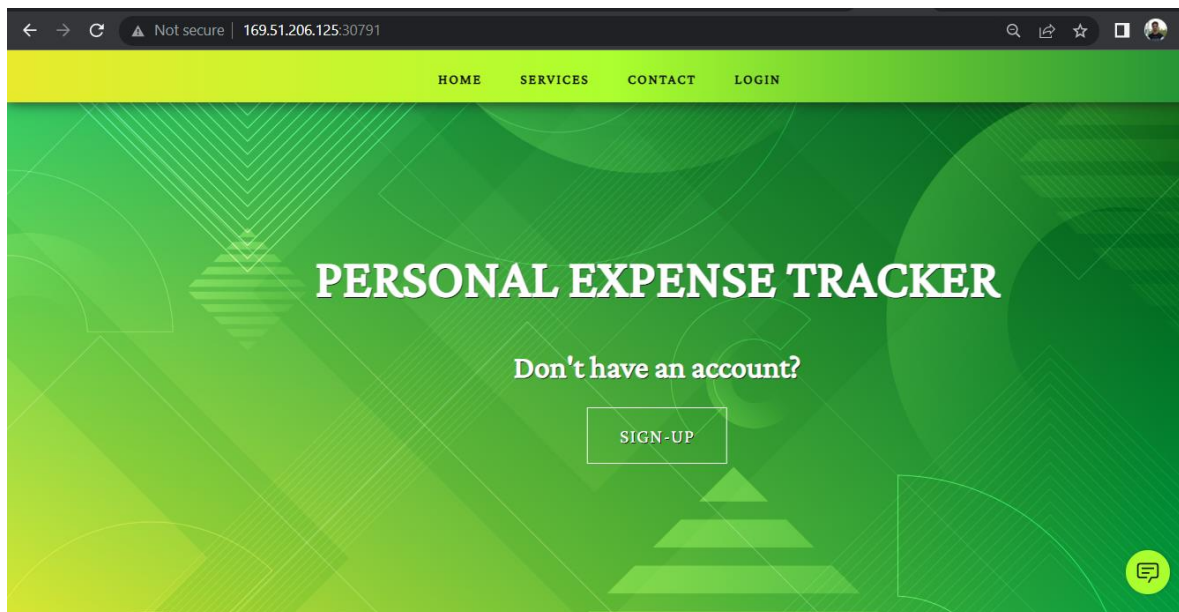


PODS





OUTPUT – <http://169.51.206.125:30791>



← → ↻ ⚠ Not secure | 169.51.206.125:30791/display 🔍 📄 ☆ 🏠 👤 ⋮

ADD EXPENSEHISTORYENTER BUDGETREPORT ▾

UserLogout

EXPENSES

2022-11-25 16:05:57

Laptop

₹ 50000

debitcard

other

Edit

Delete

2022-11-09 01:52:57

Auto

₹ 300

cash

banknote

Edit

Delete

✕ Close

Hi! I'm a virtual assistant.
How can I help you today?