

Sprint-4

Project Development Phase

Date	19 November 2022
Team ID	PNT2022TMID15222
Project Name	Project - Personal Expense Tracker

Sprint 3 details:

- Created the docker image for frontend and backend
- Uploaded the image to the docker hub
- Created kubernetes cluster in IBM Cloud
- Created the pods from the image
- Created service for the pod
- Image Links:
 - Frontend:
<https://hub.docker.com/repository/docker/bloodbrother/spency>
 - Backend:
<https://hub.docker.com/repository/docker/bloodbrother/spency-api/general>
 -

Dockerfile:

Backend:

```
FROM python:3.8-slim-buster

WORKDIR /app

COPY . .

RUN apt-get update && apt-get install -y gcc libxml2 libxslt-dev
```

```
RUN apt-get install -y vim
```

```
RUN python -m pip install --upgrade pip
```

```
RUN pip3 install -r requirements.txt
```

```
CMD ["python3", "-m", "gunicorn", "-w", "4", "--thread", "2", "-b",  
"0.0.0.0:5000", "wsgi:app"]
```

Frontend:

```
# syntax=docker/dockerfile:1
```

```
FROM node:16
```

```
WORKDIR /usr/src/app
```

```
COPY package*.json ./
```

```
RUN npm ci --only=production
```

```
COPY . .
```

```
CMD [ "npm", "start" ]
```

Kubernetes yaml:

```
apiVersion: apps/v1
```

```
kind: Deployment

metadata:

  name: spency-api-deployment

  labels:

    app: spency-api

spec:

  replicas: 1

  selector:

    matchLabels:

      app: spency-api

  template:

    metadata:

      labels:

        app: spency-api

    spec:

      containers:

        - name: spency-api

          image: bloodbrother/spency-api:stable-1.0.0

          imagePullPolicy: Always

          ports:

            - containerPort: 5000

              protocol: TCP
```

```
apiVersion: apps/v1

kind: Deployment

metadata:

  name: spency-frontend-deployment
```

```
  labels:
    app: spency-frontend
spec:
  replicas: 1
  selector:
    matchLabels:
      app: spency-frontend
  template:
    metadata:
      labels:
        app: spency-frontend
    spec:
      containers:
        - name: spency-frontend
          image: bloodbrother/spency:stable-1.0.0
          imagePullPolicy: Always
          ports:
            - containerPort: 3000
              protocol: TCP
---
apiVersion: v1
kind: Service
metadata:
  name: spency-api-service
  labels:
    app: spency-api-service
spec:
```

```
ports:
  - port: 5000
    protocol: TCP
    targetPort: 5000
  selector:
    app: spency-api
  type: NodePort
---
apiVersion: v1
kind: Service
metadata:
  name: spency-frontend-service
  labels:
    app: spency-frontend-service
spec:
  ports:
    - port: 3000
      protocol: TCP
      targetPort: 3000
  selector:
    app: spency-frontend
  type: NodePort
```

Screenshot

The screenshot displays the IBM Cloud Kubernetes dashboard for a cluster named "spency-kube". The interface is in a dark theme. At the top, the IBM Cloud logo and a search bar are visible. The cluster name "spency-kube" is shown with a green status indicator and a warning that it "Expires in 28 days". A left sidebar contains navigation links for "Overview", "Worker nodes", "Worker pools", and "DevOps". The main content area features a top warning banner about the 28-day expiration. Below this, four summary cards show "Node status" (1 of 1 Normal), "Add-on status" (0 of 0 Normal), "Master status" (Normal), and "Ingress status" (Healthy). A "Details" section provides metadata: Cluster ID "cdq6ucf099jntsvhted", Version "1.24.8_1544", Infrastructure "Classic", Zones "Milan 01", Created "17/11/2022, 14:10", Resource group "Default", and an "Image security enforcement" toggle set to "Enable". The "Node health" section shows a green bar for "1 total nodes" with a legend for Critical (0%), Warning (0%), Normal (100%), and Pending (0%). The "Networking" section at the bottom shows "Service endpoint URL" with "Public enabled" and "Private disabled" toggle options and "Copy link" buttons.

IBM Cloud

Search resources and products...

Clusters /

spency-kube Normal Expires in 28 days Add tags

Help Kubernetes dashboard Actions...

Overview

Worker nodes

Worker pools

DevOps New

Expires in 28 days: Be sure to back up your data, your cluster will be deleted in 28 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 cdq6ucf099jntsvhted

Version 1.24.8_1544

Infrastructure Classic

Zones Milan 01

Created 17/11/2022, 14:10

Resource group Default

Image security enforcement Enable

Node health 1 total nodes

Worker node details

Critical 0% Warning 0% Normal 100% Pending 0%

Networking

Service endpoint URL

Public enabled Copy link

Private disabled Copy link

kubernetes

default

Search

Workloads

Workloads

Cron Jobs

Daemon Sets

Deployments

Jobs

Pods

Replica Sets

Replication Controllers

Stateful Sets

Service

Ingresses

Ingress Classes

Services

Config and Storage

Config Maps

Persistent Volume Claims

Secrets

Storage Classes

Cluster

Cluster Role Bindings

Cluster Roles

Events

Namespaces

Network Policies

Workload Status

Running 2

Deployments

Running 2

Pods

Running 2

Replica Sets

Deployments

Name	Images	Labels	Pods	Created ↑
spency-api-deployment	Show all	Show all	1 / 1	19 hours ago
spency-frontend-deployment	Show all	Show all	1 / 1	19 hours ago

Pods

Name	Images	Labels	Node	Status	Restarts	CPU Usage (cores)	Memory Usage (bytes)	Created ↑
spency-api-deployment-ccb44f45c-9smjg	Show all	Show all	10.144.183.117	Running	0	2.00m	126.63Mi	19 hours ago
spency-frontend-deployment-f4b1954b-wgdp	Show all	Show all	10.144.183.117	Running	0	0.00m	57.58Mi	19 hours ago

dockerhub

Search Docker Hub

ExploreRepositoriesOrganizationsHelp

Upgrade

bloodbrother

bloodbrotherRepositoriesspency

Using 0 of 1 private repositories. Get more

GeneralTagsBuildsCollaboratorsWebhooksSettings

bloodbrother / spency

Description

Docker image for frontend

Last pushed: 20 hours ago

Docker commands

To push a new tag to this repository.

docker push bloodbrother/spency:tagname

Tags and scans

This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
stable-1.0.0		Image	—	20 hours ago

See allGo to Advanced Image Management

VULNERABILITY SCANNING - DISABLED

Enable

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.

UpgradeLearn more

README

Repository description is empty. Click here to edit.

hub.docker.com/repository/docker/bloodbrother/spency-api/tags?page=1&ordering=last_updated

docker hub

Search Docker Hub

ExploreRepositoriesOrganizationsHelp

Upgrade

bloodbrother

bloodbrother

Repositories

spency-api

Using 0 of 1 private repositories. [Get more](#)

General

Tags

Builds

Collaborators

Webhooks

Settings

☐

Sort by

Newest

[Go to Advanced Image Management](#)

Delete

TAG

[stable-1.0.0](#)

Last pushed 20 hours ago by [bloodbrother](#)

DIGEST

[a9ec75bb6034](#)

OS/ARCH

linux/amd64

LAST PULL

20 hours ago

COMPRESSED SIZE

243.02 MB

docker pull bloodbrother/spency-api:stable-1.0.0