

1. Installed OpenFaas

```
vboxuser@CloudComputing: ~  
vboxuser@CloudComputing:~$ bash  
vboxuser@CloudComputing:~$ curl -sSL https://cli.openfaas.com | sudo sh  
[sudo] password for vboxuser:  
Finding latest version from GitHub  
0.15.9  
Downloading package https://github.com/openfaas/faas-cli/releases/download/0.15.9/faas-cli as /tmp/faas-cli  
Download complete.  
  
Running with sufficient permissions to attempt to move faas-cli to /usr/local/bin  
New version of faas-cli installed to /usr/local/bin  
Creating alias 'faas' for 'faas-cli'.  
  
OpenFaas  
  
CLI:  
commit: 45c1d906b77709adde47c35bed868026266389e8  
version: 0.15.9
```

2. Deploy and invoked the figlet function:

Deployed a function called figlet from the OpenFaas store. First, I executed the command `faas-cli store deploy figlet`.

After this, I invoked figlet and print some ASCII characters.

`echo "Hello, FaaS world" | faas-cli invoke figlet`

```
vboxuser@CloudComputing:~/faasd$ faas-cli store deploy figlet  
Deployed. 200 OK.  
URL: http://127.0.0.1:8080/function/figlet  
  
vboxuser@CloudComputing:~/faasd$ faas-cli store inspect figlet  
Info for: Figlet  
  
Name      figlet  
Description Generate ASCII logos with the figlet CLI  
Image     ghcr.io/openfaas/figlet:latest  
Process   figlet  
Repo URL  https://github.com/openfaas/store-functions  
  
vboxuser@CloudComputing:~/faasd$ echo "Hello, FaaS, world" | faas-cli invoke figlet  
  
Hello, FaaS, world  
  
vboxuser@CloudComputing:~/faasd$
```

3. Screenshot of running the command: `sudo journalctl -u faasd --lines 40`

The above command is used to print logs to check whether Faasd is running or not. Here using this command we print 40 lines of the log.

```
Feb 17 15:37:53 CloudComputing faasd[676]: 2023/02/17 15:37:53 - prometheus
Feb 17 15:37:53 CloudComputing faasd[676]: 2023/02/17 15:37:53 - gateway
Feb 17 15:37:53 CloudComputing faasd[676]: Starting: nats
Feb 17 15:37:53 CloudComputing faasd[676]: Creating local directory: /var/lib/faasd/nats
Feb 17 15:37:53 CloudComputing faasd[676]: 2023/02/17 15:37:53 Running nats with user: "65534"
Feb 17 15:37:53 CloudComputing faasd[676]: 2023/02/17 15:37:53 Created container: nats
Feb 17 15:37:55 CloudComputing faasd[676]: 2023/02/17 15:37:55 nats has IP: 10.62.0.2
Feb 17 15:37:55 CloudComputing faasd[676]: 2023/02/17 15:37:55 Task: nats Container: nats
Feb 17 15:37:55 CloudComputing faasd[676]: Starting: queue-worker
Feb 17 15:37:55 CloudComputing faasd[676]: 2023/02/17 15:37:55 Created container: queue-worker
Feb 17 15:37:55 CloudComputing faasd[676]: 2023/02/17 15:37:55 queue-worker has IP: 10.62.0.3
Feb 17 15:37:55 CloudComputing faasd[676]: 2023/02/17 15:37:55 Task: queue-worker Container: queue-worker
Feb 17 15:37:55 CloudComputing faasd[676]: Starting: basic-auth-plugin
Feb 17 15:37:55 CloudComputing faasd[676]: 2023/02/17 15:37:55 Created container: basic-auth-plugin
Feb 17 15:37:56 CloudComputing faasd[676]: 2023/02/17 15:37:56 basic-auth-plugin has IP: 10.62.0.4
Feb 17 15:37:56 CloudComputing faasd[676]: 2023/02/17 15:37:56 Task: basic-auth-plugin Container: basic-auth-p
Feb 17 15:37:56 CloudComputing faasd[676]: Starting: prometheus
Feb 17 15:37:56 CloudComputing faasd[676]: Creating local directory: /var/lib/faasd/prometheus
Feb 17 15:37:56 CloudComputing faasd[676]: 2023/02/17 15:37:56 Running prometheus with user: "65534"
Feb 17 15:37:56 CloudComputing faasd[676]: 2023/02/17 15:37:56 Created container: prometheus
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 prometheus has IP: 10.62.0.5
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 Task: prometheus Container: prometheus
Feb 17 15:37:57 CloudComputing faasd[676]: Starting: gateway
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 Created container: gateway
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 gateway has IP: 10.62.0.6
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 Task: gateway Container: gateway
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 Supervisor init done in: 4 seconds
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 Looking up IP for: "gateway"
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 Looking up IP for: "prometheus"
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 Resolver rebuilding map
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 Resolver: "localhost"="127.0.0.1"
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 Resolver: "faasd-provider"="10.62.0.1"
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 Resolver: "nats"="10.62.0.2"
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 Resolver: "queue-worker"="10.62.0.3"
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 Resolver: "basic-auth-plugin"="10.62.0.4"
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 Resolver: "prometheus"="10.62.0.5"
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 Resolver: "gateway"="10.62.0.6"
Feb 17 15:37:57 CloudComputing faasd[676]: 2023/02/17 15:37:57 faasd: waiting for SIGTERM or SIGINT
Feb 17 15:37:58 CloudComputing faasd[676]: 2023/02/17 15:37:58 Proxy from: 127.0.0.1:9090, to: prometheus:9090 (10.62
lines 1-39
```


4. Screenshot of your OpenFaaS gateway AFTER deploying figlet, slack-handler and slack-interactive functions.

The below screenshots verifies that the three functions have been deployed in the cluster.

COEN 241 HV jmkhael/f notepad.p How to Re OpenFa x

localhost:8080/ui/ 70%

OPENFAAS

 **Deploy New Function**

Search for Function

- slack-interactive
- slack-request
- figlet

slack-interactive

Status	Replicas	Invocation count
Ready	1	

Image	URL
docker.io/dsavlal/slack-interactive:latest	http://localhost:8080/function/slack-interac

Function process
python index.py

Invoke function

INVOKE

☒ Text ☐ JSON ☐ Download

Request body


Response status Round-trip (s)

Response body

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OPENFAAS

 **Deploy New Function**

Search for Function

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slack-request

Status	Replicas	Invocation count
Ready	1	

Image	URL
docker.io/dsavlal/slack-request:latest	http://localhost:8080/function/slack-request

Function process
python index.py

Invoke function

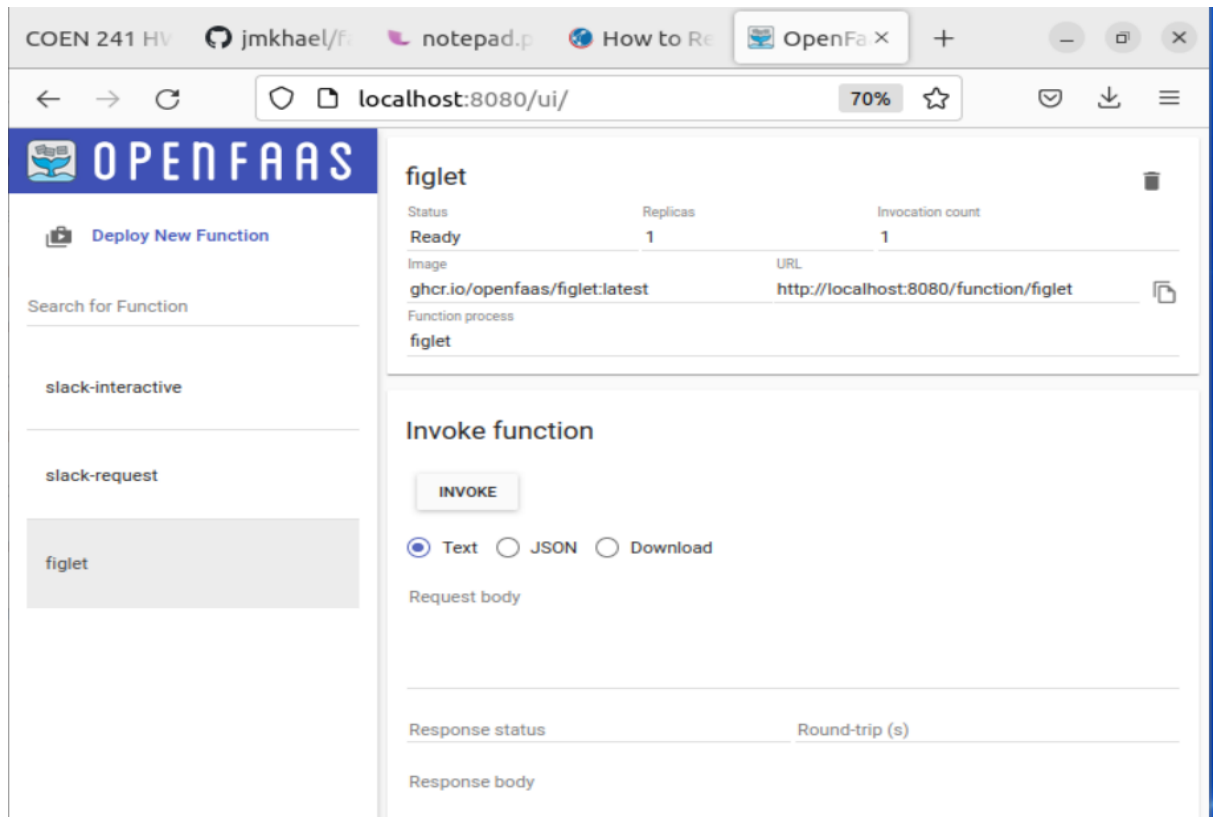
INVOKE

☒ Text ☐ JSON ☐ Download

Request body

Response status Round-trip (s)

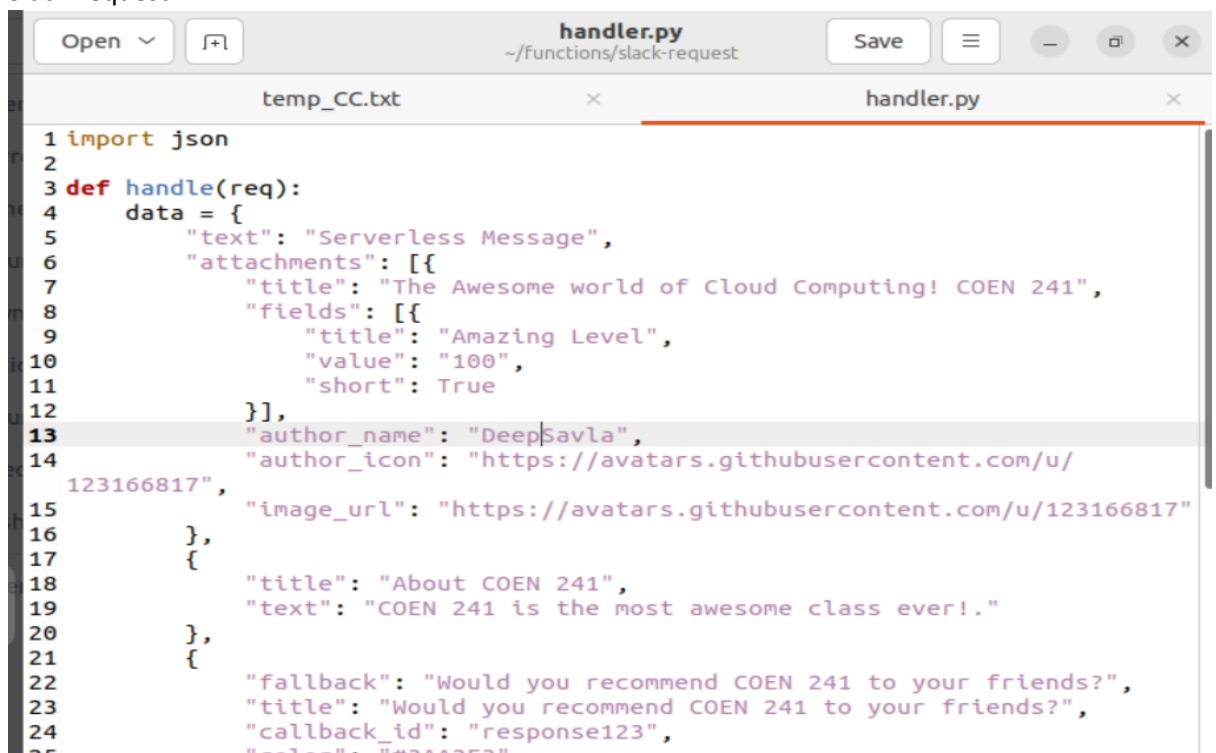
Response body



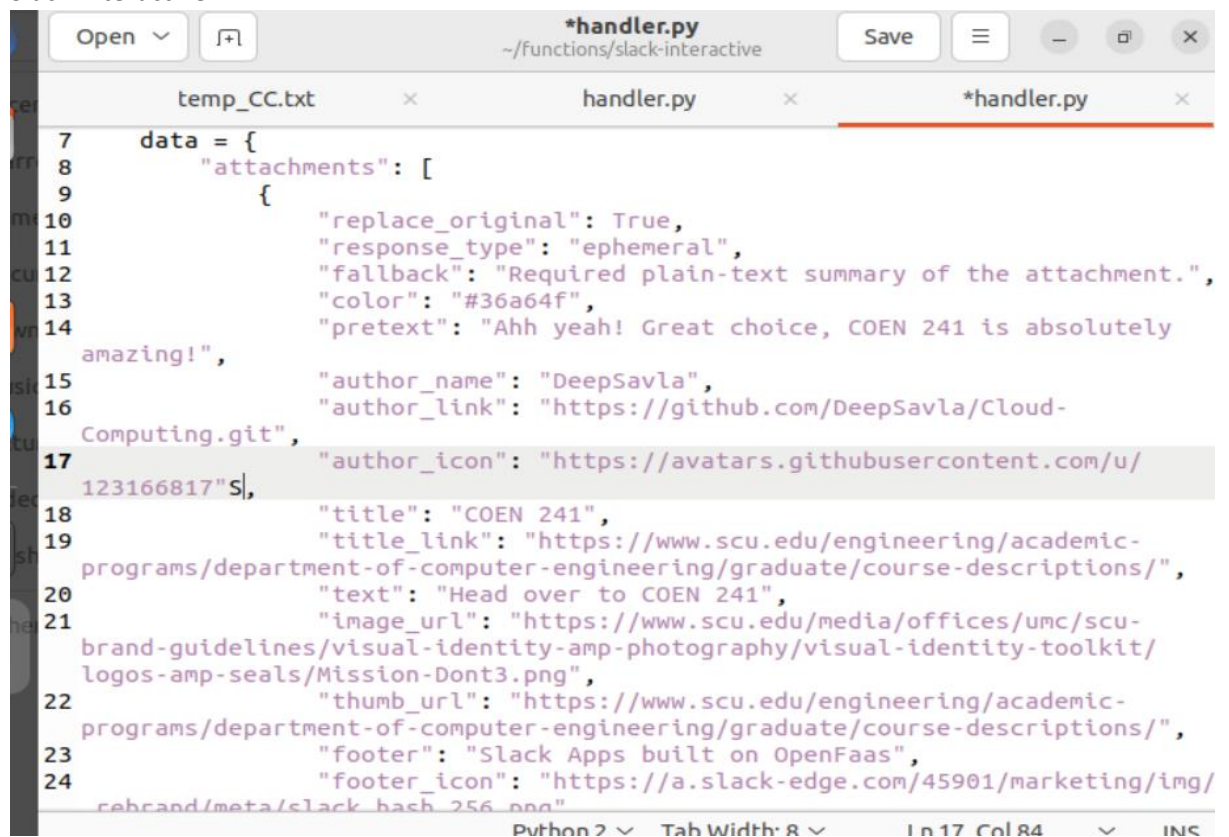
5. Screenshot of invoking slack-request and slack-interactive functions

Here, I invoked the slack-request and slack-interactive functions via both curl and faas-cli and get the output as shown below.

Slack-request:



Slack-interactive:



The image shows a code editor window with the title bar indicating the file is `*handler.py` located at `~/functions/slack-interactive`. The editor has tabs for `temp_CC.txt`, `handler.py`, and `*handler.py`. The `*handler.py` tab is active, showing a Python script that constructs a Slack message with attachments. The script is as follows:

```
7 data = {
8     "attachments": [
9         {
10             "replace_original": True,
11             "response_type": "ephemeral",
12             "fallback": "Required plain-text summary of the attachment.",
13             "color": "#36a64f",
14             "pretext": "Ahh yeah! Great choice, COEN 241 is absolutely
15 amazing!",
16             "author_name": "DeepSavla",
17             "author_link": "https://github.com/DeepSavla/Cloud-
18 Computing.git",
19             "author_icon": "https://avatars.githubusercontent.com/u/
20 123166817?s=
21             "title": "COEN 241",
22             "title_link": "https://www.scu.edu/engineering/academic-
23 programs/department-of-computer-engineering/graduate/course-descriptions/",
24             "text": "Head over to COEN 241",
25             "image_url": "https://www.scu.edu/media/offices/umc/scu-
26 brand-guidelines/visual-identity-amp-photography/visual-identity-toolkit/
27 logos-amp-seals/Mission-Dont3.png",
28             "thumb_url": "https://www.scu.edu/engineering/academic-
29 programs/department-of-computer-engineering/graduate/course-descriptions/",
30             "footer": "Slack Apps built on OpenFaas",
31             "footer_icon": "https://a.slack-edge.com/45901/marketing/img/
32 rebrand/meta/slack_bash_256.png"
```

The status bar at the bottom indicates the editor is using Python 2, has a tab width of 8, and the cursor is at line 17, column 84.