

COEN 241 Homework 2 Explanation

Name – Preeti Kakuru

Student ID – W16302276

1. Invoking the Figlet Function

```
preeti@preeti-Inspiron-15-3511:~/faasd$ faas-cli store deploy figlet
Deployed. 200 OK.
URL: http://127.0.0.1:8080/function/figlet

preeti@preeti-Inspiron-15-3511:~/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

preeti@preeti-Inspiron-15-3511:~/faasd$ echo "Hello, FaaS, world" | faas-cli invoke figlet
Hello, FaaS, world
preeti@preeti-Inspiron-15-3511:~/faasd$
```

Figlet function is deployed from the OpenFaas store. `faas-cli store deploy figlet` is executed

Then, we find the URL for the function using `faas-cli store inspect figlet`

After that, we invoke figlet and print some ASCII characters.

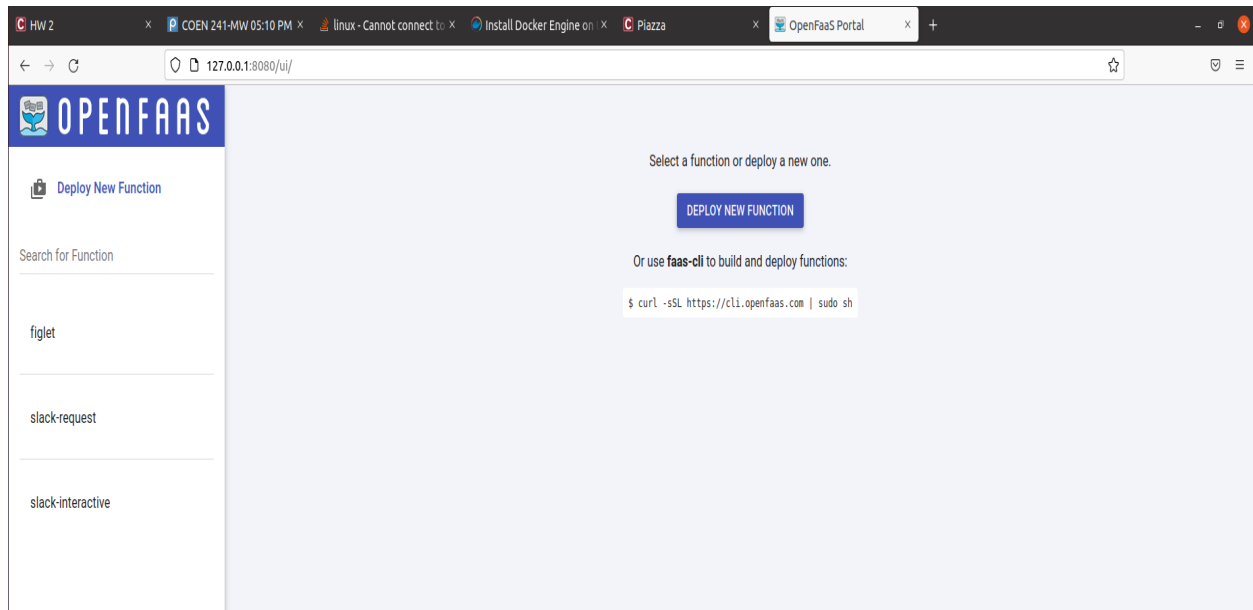
`echo "Hello, FaaS world" | faas-cli invoke figlet`

2. Running sudo journalctl -u faasd --lines 40 command

```
Logs begin at Thu 2022-04-07 22:54:00 PDT, end at Sun 2022-05-08 21:36:26 PDT. --
May 08 18:33:55 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:55 - prometheus
May 08 18:33:55 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:55 - gateway
May 08 18:33:55 preeti-Inspiron-15-3511 faasd[764]: Starting: nats
May 08 18:33:55 preeti-Inspiron-15-3511 faasd[764]: Creating local directory: /var/lib/faasd/nats
May 08 18:33:55 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:55 Running nats with user: "65534"
May 08 18:33:55 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:55 Created container: nats
May 08 18:33:55 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:55 nats has IP: 10.62.0.2
May 08 18:33:55 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:55 Task: nats Container: nats
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: Starting: queue-worker
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Created container: queue-worker
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 queue-worker has IP: 10.62.0.3
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Task: queue-worker Container: queue-worker
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: Starting: basic-auth-plugin
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Created container: basic-auth-plugin
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 basic-auth-plugin has IP: 10.62.0.4
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Task: basic-auth-plugin Container: basic-auth-plugin
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: Starting: prometheus
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: Creating local directory: /var/lib/faasd/prometheus
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Running prometheus with user: "65534"
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Created container: prometheus
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 prometheus has IP: 10.62.0.5
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Task: prometheus Container: prometheus
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: Starting: gateway
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Created container: gateway
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 gateway has IP: 10.62.0.6
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Task: gateway Container: gateway
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Supervisor init done in: 1 second
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Looking up IP for: "gateway"
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Looking up IP for: "prometheus"
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Resolver rebuilding map
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Resolver: "localhost"="127.0.0.1"
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Resolver: "faasd-provider"="10.62.0.1"
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Resolver: "nats"="10.62.0.2"
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Resolver: "queue-worker"="10.62.0.3"
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Resolver: "basic-auth-plugin"="10.62.0.4"
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Resolver: "prometheus"="10.62.0.5"
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Resolver: "gateway"="10.62.0.6"
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 faasd: waiting for SIGTERM or SIGINT
May 08 18:33:56 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:56 Proxy from: 127.0.0.1:9090, to: prometheus:9090 (10.62.0.5)
May 08 18:33:57 preeti-Inspiron-15-3511 faasd[764]: 2022/05/08 18:33:57 Proxy from: 0.0.0.0:8080, to: gateway:8080 (10.62.0.6)
```

The above command is used to print logs to check whether Faasd is running or not. We are printing 40 lines of the log.

3. OpenFaaS Gateway screenshot AFTER deploying Figlet, slack-handler and slack- interactive functions



The above screenshot verifies that the three functions have been deployed in the cluster

4. Invoking slack-request function via curl and faas-cli

```
preeti@preeti-Inspiron-15-3511:~/functions$ faas-cli invoke slack-request
Reading from STDIN - hit (Control + D) to stop.
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "", "image_url": "https://github.com/PreetiKakuru.png", "author_name": "Preeti Kakuru", "title": "The Awesome world of Cloud Computing! COEN 241"}, {"text": "COEN 241 is the most awesome class ever!.", "title": "About COEN 241"}, {"title": "Would you recommend COEN 241 to your friends?", "color": "#3AA3E3", "actions": [{"text": "Of Course!", "type": "button", "name": "recommend", "value": "recommend"}, {"text": "Most Definitely!", "type": "button", "name": "definitely", "value": "definitely"}], "callback_id": "response123", "fallback": "Would you recommend COEN 241 to your friends?", "attachment_type": "default"}]}
preeti@preeti-Inspiron-15-3511:~/functions$ curl -d '{"Hello":"COEN 241"}' http://127.1.0.1:8080/function/slack-request
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "", "image_url": "https://github.com/PreetiKakuru.png", "author_name": "Preeti Kakuru", "title": "The Awesome world of Cloud Computing! COEN 241"}, {"text": "COEN 241 is the most awesome class ever!.", "title": "About COEN 241"}, {"title": "Would you recommend COEN 241 to your friends?", "color": "#3AA3E3", "actions": [{"text": "Of Course!", "type": "button", "name": "recommend", "value": "recommend"}, {"text": "Most Definitely!", "type": "button", "name": "definitely", "value": "definitely"}], "callback_id": "response123", "fallback": "Would you recommend COEN 241 to your friends?", "attachment_type": "default"}]}
preeti@preeti-Inspiron-15-3511:~/functions$
```

5. Invoking slack-interactive using curl and faas-cli

```
preeti@preeti-Inspiron-15-3511:~/functions$ faas-cli invoke slack-interactive
Reading from STDIN - hit (Control + D) to stop.
{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/PreetiKakuru/COEN-241", "color": "#36a64f", "text": "Head over to COEN 241", "title": "COEN 241", "ts": 123456789, "author_name": "", "title_link": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "image_url": "https://www.scu.edu/media/offices/umc/scu-brand-guidelines/visual-identity-amp-photography/visual-identity-toolkit/logos-amp-seals/Mission-Dont3.png", "response_type": "ephemeral", "replace_original": true, "footer_icon": "https://a.slack-edge.com/45901/marketing/img/_rebrand/meta/slack_hash_256.png", "pretext": "Ahh yeah! Great choice, COEN 241 is absolutely amazing!", "fallback": "Required plain-text summary of the attachment.", "thumb_url": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "author_icon": "https://github.com/PreetiKakuru.png"}]}
preeti@preeti-Inspiron-15-3511:~/functions$ curl -d '{"Hello": "COEN 241"}' http://127.1.0.1:8080/function/slack-interactive
{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/PreetiKakuru/COEN-241", "color": "#36a64f", "text": "Head over to COEN 241", "title": "COEN 241", "ts": 123456789, "author_name": "", "title_link": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "image_url": "https://www.scu.edu/media/offices/umc/scu-brand-guidelines/visual-identity-amp-photography/visual-identity-toolkit/logos-amp-seals/Mission-Dont3.png", "response_type": "ephemeral", "replace_original": true, "footer_icon": "https://a.slack-edge.com/45901/marketing/img/_rebrand/meta/slack_hash_256.png", "pretext": "Ahh yeah! Great choice, COEN 241 is absolutely amazing!", "fallback": "Required plain-text summary of the attachment.", "thumb_url": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "author_icon": "https://github.com/PreetiKakuru.png"}]}
preeti@preeti-Inspiron-15-3511:~/functions$
```

Here, we invoke the slack-request and slack-interactive functions via both curl and faas- cli and get the output as shown above.