

COEN 241 Assignment 2 Screenshots

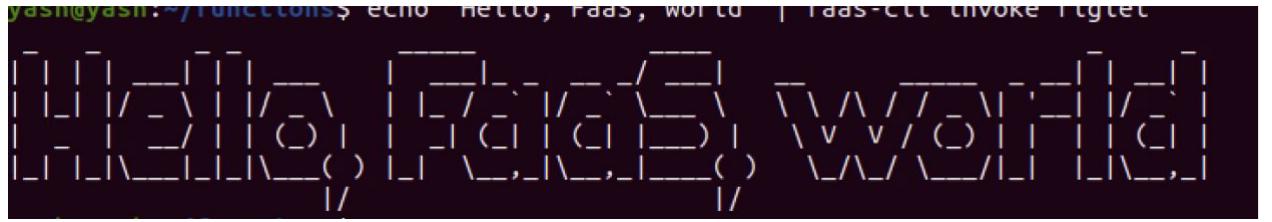
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1. Running openFaas on Kurnernetes cluster

Used KIND (kurnernetes in docker) and installed openfaas on it.

```
root@GIGA_STEVE:~/functions# kubectl get nodes -n kube-systems
NAME                 STATUS    ROLES      AGE   VERSION
kind-control-plane   Ready     control-plane   3h38m  v1.25.3
root@GIGA_STEVE:~/functions# kubectl get service -n openfaas
NAME          TYPE        CLUSTER-IP  EXTERNAL-IP    PORT(S)         AGE
alertmanager   ClusterIP  10.96.119.129 <none>        9093/TCP       3h22m
basic-auth-plugin ClusterIP  10.96.137.152 <none>        8080/TCP       3h22m
gateway        ClusterIP  10.96.241.22  <none>        8080/TCP       3h22m
gateway-external NodePort    10.96.244.249 <none>        8080:31112/TCP 3h22m
nats           ClusterIP  10.96.188.184 <none>        4222/TCP       3h22m
prometheus     ClusterIP  10.96.237.255 <none>        9090/TCP       3h22m
root@GIGA_STEVE:~/functions#
```

2. Invoking the Figlet Function



```
yash@yash:~/functions$ echo Hello, Faas, world | faas-cli invoke figlet
[  [  [  /-] ] /-] ] /-] ]
[  [  /-] ] /-] ] /-] ]
[  [  /-] ] /-] ] /-] ]
[  [  /-] ] /-] ] /-] ]
```

I deployed a function called figlet from the OpenFaas store. First, we executed the command *faas-cli store deploy figlet*.

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

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

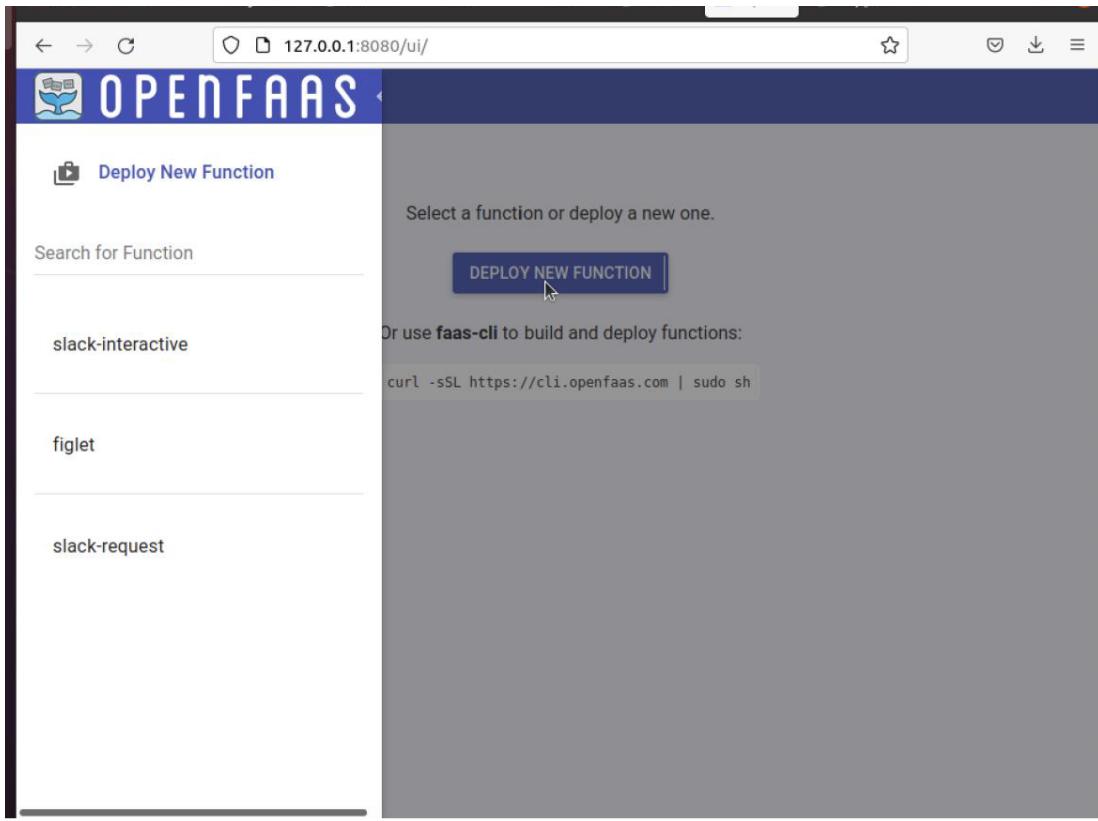
```
echo "Hello, FaaS world" | faas-cli invoke figlet
```

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

```
n 2022-05-08 20:50:43 UTC, end at Mon 2022-05-09 02:03:28 UTC. --
n faasd[4006]: 2022/05/08 21:03:59 - gateway
n faasd[4006]: 2022/05/08 21:03:59 - queue-worker
n faasd[4006]: Starting: basic-auth-plugin
n faasd[4006]: 2022/05/08 21:03:59 Created container: basic-auth-plugin
n faasd[4006]: 2022/05/08 21:03:59 basic-auth-plugin has IP: 10.62.0.2
n faasd[4006]: 2022/05/08 21:03:59 Task: basic-auth-plugin      Container: basic-a
n faasd[4006]: Starting: nats
n faasd[4006]: Creating local directory: /var/lib/faasd/nats
n faasd[4006]: 2022/05/08 21:03:59 Running nats with user: "65534"
n faasd[4006]: 2022/05/08 21:03:59 Created container: nats
n faasd[4006]: 2022/05/08 21:03:59 nats has IP: 10.62.0.3
n faasd[4006]: 2022/05/08 21:03:59 Task: nats      Container: nats
n faasd[4006]: Starting: prometheus
n faasd[4006]: Creating local directory: /var/lib/faasd/prometheus
n faasd[4006]: 2022/05/08 21:03:59 Running prometheus with user: "65534"
n faasd[4006]: 2022/05/08 21:03:59 Created container: prometheus
n faasd[4006]: 2022/05/08 21:03:59 prometheus has IP: 10.62.0.4
n faasd[4006]: 2022/05/08 21:03:59 Task: prometheus      Container: prometheus
n faasd[4006]: Starting: gateway
n faasd[4006]: 2022/05/08 21:03:59 Created container: gateway
n faasd[4006]: 2022/05/08 21:03:59 gateway has IP: 10.62.0.5
n faasd[4006]: 2022/05/08 21:03:59 Task: gateway      Container: gateway
n faasd[4006]: Starting: queue-worker
n faasd[4006]: 2022/05/08 21:03:59 Created container: queue-worker
n faasd[4006]: 2022/05/08 21:04:00 queue-worker has IP: 10.62.0.6
n faasd[4006]: 2022/05/08 21:04:00 Task: queue-worker      Container: queue-worker
n faasd[4006]: 2022/05/08 21:04:00 Supervisor init done in: 15 seconds
n faasd[4006]: 2022/05/08 21:04:00 Looking up IP for: "gateway"
n faasd[4006]: 2022/05/08 21:04:00 Looking up IP for: "prometheus"
n faasd[4006]: 2022/05/08 21:04:00 Resolver rebuilding map
n faasd[4006]: 2022/05/08 21:04:00 Resolver: "localhost"="127.0.0.1"
n faasd[4006]: 2022/05/08 21:04:00 Resolver: "faasd-provider"="10.62.0.1"
n faasd[4006]: 2022/05/08 21:04:00 Resolver: "basic-auth-plugin"="10.62.0.2"
n faasd[4006]: 2022/05/08 21:04:00 Resolver: "nats"="10.62.0.3"
n faasd[4006]: 2022/05/08 21:04:00 Resolver: "prometheus"="10.62.0.4"
n faasd[4006]: 2022/05/08 21:04:00 Resolver: "gateway"="10.62.0.5"
```

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

4. 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.

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

```
yash@yash:~/functions$ faas invoke slack-request  
adding from STDIN - hit (Control + D) to stop.  
text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "", "image_url": "https://thub.com/yash-bhargava18.png", "author_name": "Yash Bhargava", "title": "The Amazing World of Cloud Computing! COEN 241"}, {"text": "COEN 241 is the most awesome class ever!", "title": "About COEN 241"}, {"text": "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"}]}, {"back_id": "response123", "fallback": "Would you recommend COEN 241 to your friends?", "attachment_type": "default"}]}  
sh@yash:~/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://thub.com/yash-bhargava18.png", "author_name": "Yash Bhargava", "title": "The Amazing World of Cloud Computing! COEN 241"}, {"text": "COEN 241 is the most awesome class ever!", "title": "About COEN 241"}, {"text": "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"}]}, {"back_id": "response123", "fallback": "Would you recommend COEN 241 to your friends?", "attachment_type": "default"}]}
```

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

```
yash@yash:~/functions$ faas invoke slack-interactive
Reading from STDIN - hit (Control + D) to stop.
"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "http://github.com/yash-bhargava18/COEN241.git", "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-and-photography/visual-identity-toolkit/logos-and-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/yash-bhargava18.png"}]}
yash@yash:~/functions$ curl -d '{"Hello":"COEN 241"}' http://127.1.0.1:8080/function/slack-interactive
"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "http://github.com/yash-bhargava18/COEN241.git", "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-and-photography/visual-identity-toolkit/logos-and-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/yash-bhargava18.png"}]}
```

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