

COEN 241 Assignment 2 Screenshots

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1. Invoking the figlet function

```
sanfer@sanfer--laptop:~$ echo "Hello, FaaS, world" | faas-cli invoke figlet
Hello, FaaS, world
```

Function figlet deployed from the OpenFaas store.

```
$ faas-cli store deploy figlet
```

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

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

```
sanfer@sanfer--laptop:~/functions$ sudo journalctl -u faasd --lines 40
Nov 01 15:41:33 sanfer--laptop faasd[4048]: 2022/11/01 15:41:33 - gateway
Nov 01 15:41:33 sanfer--laptop faasd[4048]: 2022/11/01 15:41:33 - queue-worker
Nov 01 15:41:33 sanfer--laptop faasd[4048]: Starting: nats
Nov 01 15:41:33 sanfer--laptop faasd[4048]: Creating local directory: /var/lib/fa
Nov 01 15:41:33 sanfer--laptop faasd[4048]: 2022/11/01 15:41:33 Running nats wi
Nov 01 15:41:35 sanfer--laptop faasd[4048]: 2022/11/01 15:41:35 Created contain
Nov 01 15:41:42 sanfer--laptop faasd[4048]: 2022/11/01 15:41:42 nats has IP: 10
Nov 01 15:41:42 sanfer--laptop faasd[4048]: 2022/11/01 15:41:42 Task: nats
Nov 01 15:41:42 sanfer--laptop faasd[4048]: Starting: prometheus
Nov 01 15:41:42 sanfer--laptop faasd[4048]: Creating local directory: /var/lib/fa
Nov 01 15:41:42 sanfer--laptop faasd[4048]: 2022/11/01 15:41:42 Running prometh
Nov 01 15:41:48 sanfer--laptop faasd[4048]: 2022/11/01 15:41:48 Created contain
Nov 01 15:41:49 sanfer--laptop faasd[4048]: 2022/11/01 15:41:49 prometheus has
Nov 01 15:41:49 sanfer--laptop faasd[4048]: 2022/11/01 15:41:49 Task: prometheu
Nov 01 15:41:49 sanfer--laptop faasd[4048]: Starting: basic-auth-plugin
Nov 01 15:41:53 sanfer--laptop faasd[4048]: 2022/11/01 15:41:53 Created contain
Nov 01 15:41:55 sanfer--laptop faasd[4048]: 2022/11/01 15:41:55 basic-auth-plug
Nov 01 15:41:55 sanfer--laptop faasd[4048]: 2022/11/01 15:41:55 Task: basic-aut
Nov 01 15:41:55 sanfer--laptop faasd[4048]: Starting: gateway
Nov 01 15:41:58 sanfer--laptop faasd[4048]: 2022/11/01 15:41:58 Created contain
Nov 01 15:41:58 sanfer--laptop faasd[4048]: 2022/11/01 15:41:58 gateway has IP:
Nov 01 15:41:58 sanfer--laptop faasd[4048]: 2022/11/01 15:41:58 Task: gateway
Nov 01 15:41:58 sanfer--laptop faasd[4048]: Starting: queue-worker
lines 1-23...skipping...
Nov 01 15:41:33 sanfer--laptop faasd[4048]: 2022/11/01 15:41:33 - gateway
Nov 01 15:41:33 sanfer--laptop faasd[4048]: 2022/11/01 15:41:33 - queue-worker
Nov 01 15:41:33 sanfer--laptop faasd[4048]: Starting: nats
Nov 01 15:41:33 sanfer--laptop faasd[4048]: Creating local directory: /var/lib/fa
Nov 01 15:41:33 sanfer--laptop faasd[4048]: 2022/11/01 15:41:33 Running nats with
Nov 01 15:41:35 sanfer--laptop faasd[4048]: 2022/11/01 15:41:35 Created container
Nov 01 15:41:42 sanfer--laptop faasd[4048]: 2022/11/01 15:41:42 nats has IP: 10.6
Nov 01 15:41:42 sanfer--laptop faasd[4048]: 2022/11/01 15:41:42 Task: nats
Nov 01 15:41:42 sanfer--laptop faasd[4048]: Starting: prometheus
Nov 01 15:41:42 sanfer--laptop faasd[4048]: Creating local directory: /var/lib/fa
```

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

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

The screenshot shows the OpenFaaS Gateway interface in a web browser at localhost:8080/ui/. The left sidebar contains a 'Deploy New Function' button and a search bar. Below the search bar, three functions are listed: 'slack-interactive', 'slack-request', and 'figlet'. The 'slack-interactive' function is selected, and its details are shown on the right. The details include the function's status (Ready), replicas (1), invocation count, image (docker.io/sanfernonronha/slack-interactive:latest), URL (http://localhost:8080/function/slack-interactive), and function process (python index.py). Below the details, there is an 'Invoke function' section with an 'INVOKE' button and radio buttons for 'Text', 'JSON', and 'Download'. The 'Text' option is selected. Below the 'Invoke function' section, there is a 'Request body' field and a 'Response status' field. The 'Response status' field shows a 200 status code and a round-trip time of 0.000s.

Status	Replicas	Invocation count
Ready	1	

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

Function process
python index.py

Invoke function

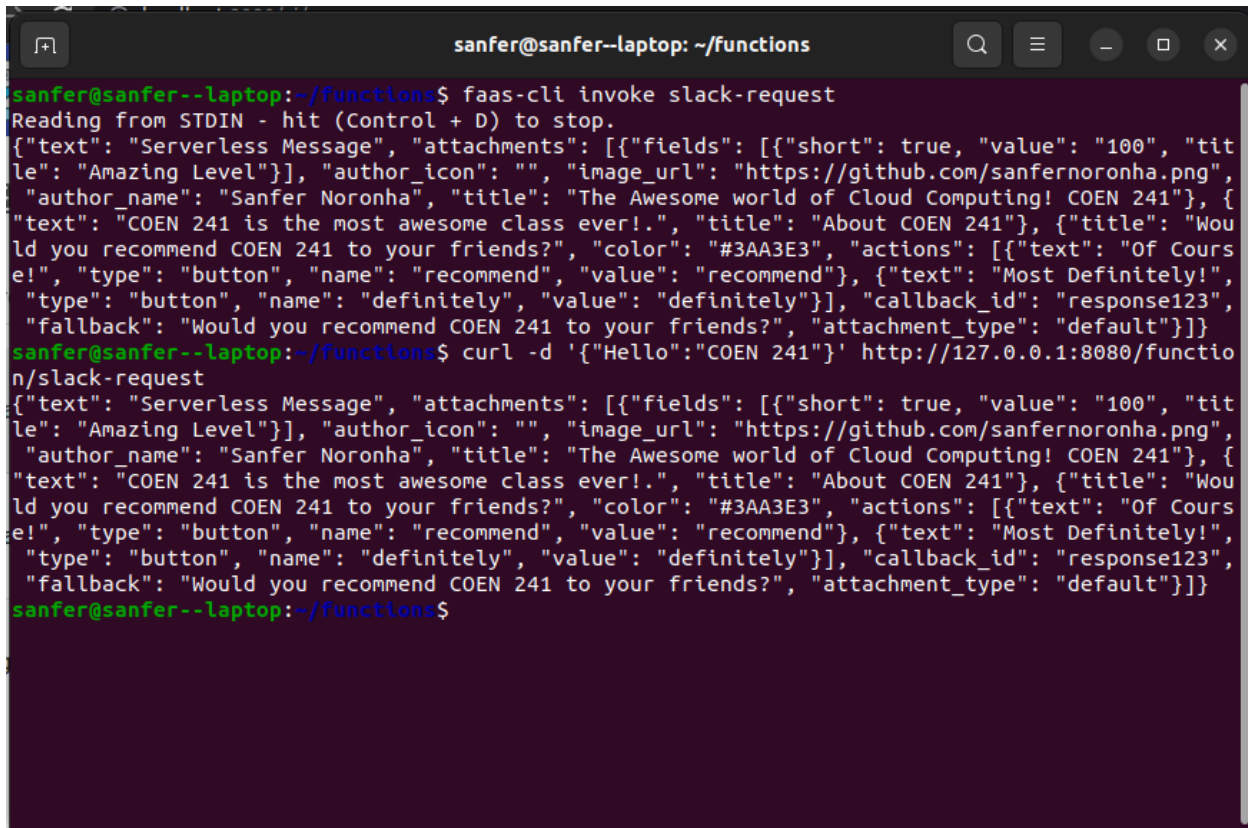
☒ Text ☐ JSON ☐ Download

Request body

Response status: 200 Round-trip (s): 0.000

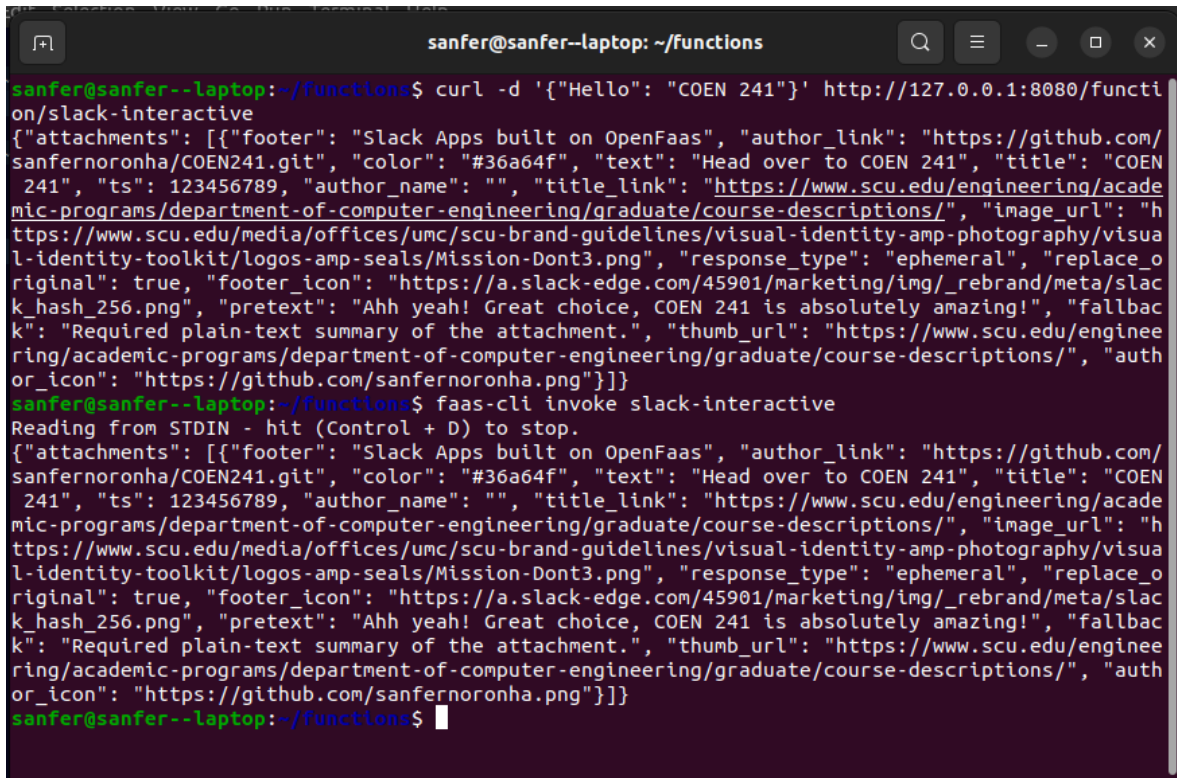
The above screenshot verifies that the three functions have been deployed in the cluster.

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



```
sanfer@sanfer--laptop: ~/functions
sanfer@sanfer--laptop:~/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/sanfernoronha.png", "author_name": "Sanfer Noronha", "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"}]}
sanfer@sanfer--laptop:~/functions$ curl -d '{"Hello":"COEN 241"}' http://127.0.0.1:8080/function/slack-request
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "", "image_url": "https://github.com/sanfernoronha.png", "author_name": "Sanfer Noronha", "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"}]}
sanfer@sanfer--laptop:~/functions$
```

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

A terminal window titled 'sanfer@sanfer--laptop: ~/functions' with standard window controls. The terminal shows two commands being executed. The first is a curl command that sends a JSON payload to 'http://127.0.0.1:8080/function/slack-interactive'. The second is a faas-cli 'invoke' command for the 'slack-interactive' function. Both commands result in the same JSON output being printed to the terminal. The JSON object contains an 'attachments' array with a single object that includes fields for footer, author link, color, text, title, timestamp, author name, title link, image URL, response type, original flag, footer icon, pretext, fallback text, thumb URL, and author icon.

```
sanfer@sanfer--laptop:~/functions$ curl -d '{"Hello": "COEN 241"}' http://127.0.0.1:8080/function/slack-interactive
{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/sanfernoronha/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-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/sanfernoronha.png"}]}
sanfer@sanfer--laptop:~/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/sanfernoronha/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-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/sanfernoronha.png"}]}
sanfer@sanfer--laptop:~/functions$
```

Here we invoke the slack-request and the slack-interactive functions via both curl and faas-cli.