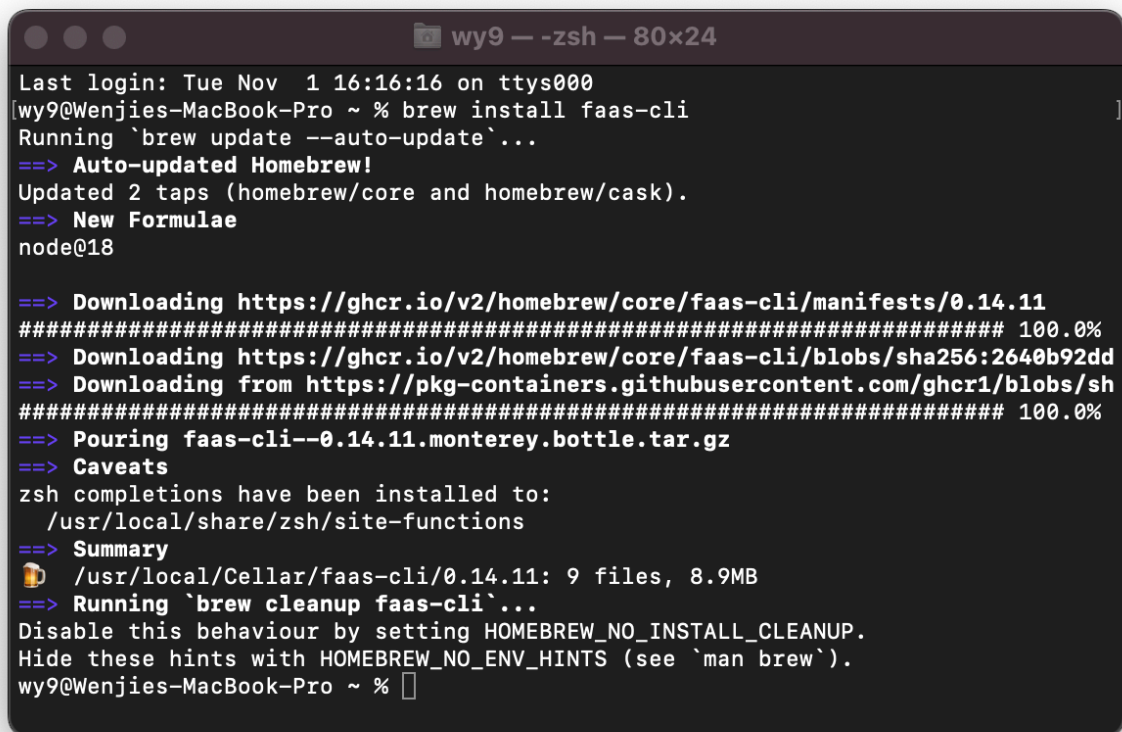


HW2

Installing OpenFaas CLI

Brew install faas-cli



```
wy9 — -zsh — 80x24
Last login: Tue Nov  1 16:16:16 on ttys000
[wy9@Wenjies-MacBook-Pro ~ % brew install faas-cli
Running `brew update --auto-update`...
==> Auto-updated Homebrew!
Updated 2 taps (homebrew/core and homebrew/cask).
==> New Formulae
node@18

==> Downloading https://ghcr.io/v2/homebrew/core/faas-cli/manifests/0.14.11
##### 100.0%
==> Downloading https://ghcr.io/v2/homebrew/core/faas-cli/blobs/sha256:2640b92dd
==> Downloading from https://pkg-containers.githubusercontent.com/ghcr1/blobs/sh
##### 100.0%
==> Pouring faas-cli--0.14.11.monterey.bottle.tar.gz
==> Caveats
zsh completions have been installed to:
  /usr/local/share/zsh/site-functions
==> Summary
📦 /usr/local/Cellar/faas-cli/0.14.11: 9 files, 8.9MB
==> Running `brew cleanup faas-cli`...
Disable this behaviour by setting HOMEBREW_NO_INSTALL_CLEANUP.
Hide these hints with HOMEBREW_NO_ENV_HINTS (see `man brew`).
wy9@Wenjies-MacBook-Pro ~ %
```

Deploy OpenFaas:

HW2

```
wy9 — -zsh — 80x24

##### 100.0%
==> Downloading https://ghcr.io/v2/homebrew/core/faas-cli/blobs/sha256:2640b92dd
==> Downloading from https://pkg-containers.githubusercontent.com/ghcr1/blobs/sh
##### 100.0%
==> Pouring faas-cli--0.14.11.monterey.bottle.tar.gz
==> Caveats
zsh completions have been installed to:
  /usr/local/share/zsh/site-functions
==> Summary
📦 /usr/local/Cellar/faas-cli/0.14.11: 9 files, 8.9MB
==> Running `brew cleanup faas-cli`...
Disable this behaviour by setting HOMEBREW_NO_INSTALL_CLEANUP.
Hide these hints with HOMEBREW_NO_ENV_HINTS (see `man brew`).
wy9@Wenjies-MacBook-Pro ~ % git clone https://github.com/openfaas/faasd --depth=
1
Cloning into 'faasd'...
remote: Enumerating objects: 2640, done.
remote: Counting objects: 100% (2640/2640), done.
remote: Compressing objects: 100% (2201/2201), done.
remote: Total 2640 (delta 480), reused 1680 (delta 254), pack-reused 0
Receiving objects: 100% (2640/2640), 4.70 MiB | 12.46 MiB/s, done.
Resolving deltas: 100% (480/480), done.
Updating files: 100% (2228/2228), done.
wy9@Wenjies-MacBook-Pro ~ %
```

```
git clone https://github.com/openfaas/faasd --depth=1
```

```
Password for 'https://github.com':
remote: Repository not found.
fatal: Authentication failed for 'https://github.com/openfass/fassd/'
alex@alexyang:~$
alex@alexyang:~$
alex@alexyang:~$ git clone https://github.com/openfaas/faasd --depth=1
Cloning into 'faasd'...
remote: Enumerating objects: 2640, done.
remote: Counting objects: 100% (2640/2640), done.
remote: Compressing objects: 100% (2201/2201), done.
remote: Total 2640 (delta 480), reused 1701 (delta 254), pack-reused 0
Receiving objects: 100% (2640/2640), 4.71 MiB | 1.55 MiB/s, done.
Resolving deltas: 100% (480/480), done.
Updating files: 100% (2228/2228), done.
```

App St

HW2

```
# Install faasd
$ ./hack/install.sh
```

```
2022/11/02 05:41:29 Found: 0.14.11
Downloading: https://github.com/openfaas/faas-cli/releases/download/0.14.11/faas-cli
/tmp/faas-cli written.
2022/11/02 05:41:32 Looking up version for faas-cli
2022/11/02 05:41:32 Found: 0.14.11
2022/11/02 05:41:32 Copying /tmp/faas-cli to /home/alex/.arkade/bin/faas-cli

Wrote: /home/alex/.arkade/bin/faas-cli (8,282MB)

# Add arkade binary directory to your PATH variable
export PATH=$PATH:$HOME/.arkade/bin/

# Test the binary:
/home/alex/.arkade/bin/faas-cli

# Or install with:
sudo mv /home/alex/.arkade/bin/faas-cli /usr/local/bin/

♦ arkade needs your support: https://github.com/sponsors/alexellis
+ sudo install -m 755 /home/alex/.arkade/bin/faas-cli /usr/local/bin/
+ install_faasd
++ uname -m
+ arch=x86_64
+ case $arch in
+ suffix=
+ sudo curl -fSLs https://github.com/openfaas/faasd/releases/download/0.16.7/faasd --output /usr/local/bin/faasd
+ sudo chmod a+x /usr/local/bin/faasd
+ mkdir -p /tmp/faasd-0.16.7-installation/hack
+ cd /tmp/faasd-0.16.7-installation
+ sudo curl -fSLs https://raw.githubusercontent.com/openfaas/faasd/0.16.7/docker-compose.yaml --output docker-compose.yaml
+ sudo curl -fSLs https://raw.githubusercontent.com/openfaas/faasd/0.16.7/prometheus.yml --output prometheus.yml
+ sudo curl -fSLs https://raw.githubusercontent.com/openfaas/faasd/0.16.7/resolv.conf --output resolv.conf
+ sudo curl -fSLs https://raw.githubusercontent.com/openfaas/faasd/0.16.7/hack/faasd-provider.service --output hack/faasd-provider.service
+ sudo curl -fSLs https://raw.githubusercontent.com/openfaas/faasd/0.16.7/hack/faasd.service --output hack/faasd.service
+ sudo /usr/local/bin/faasd install
2022/11/02 05:41:44 Writing to: "/var/lib/faasd/secrets/basic-auth-password"
2022/11/02 05:41:44 Writing to: "/var/lib/faasd/secrets/basic-auth-user"
[ 954.260550] blk_update_request: I/O error, dev fd0, sector 0 op 0x0:(READ) flags 0x0 phys_seg 1 prio class 0
[ 962.418117] blk_update_request: I/O error, dev fd0, sector 0 op 0x0:(READ) flags 0x0 phys_seg 1 prio class 0
[ 970.601367] blk_update_request: I/O error, dev fd0, sector 0 op 0x0:(READ) flags 0x0 phys_seg 1 prio class 0
Check status with:
  sudo journalctl -u faasd --lines 100 -f

Login with:
  sudo cat /var/lib/faasd/secrets/basic-auth-password | faas-cli login -s
+ install_caddy
+ '[' '' -z '' ']'
+ echo 'Skipping caddy installation as FAASD_DOMAIN.'
Skipping caddy installation as FAASD_DOMAIN.
```

After the installation, you must obtain your username and password by running

Password:

```
alex@alexxyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-password
L4bsjtxAW4q8xLqXTS05HyPTXXf9W0ko1j8joGNzb7X9ECzP0KxavhQsRpcQWmPaalex@alexxyang:~/faasd$
alex@alexxyang:~/faasd$
```

```
alex@alexxyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-password
9PaYwV6Eu4CH4Zyr3bajycKAQSEPMQHUm6rxohk4nSSj5DAGuK7TN2pNHZoXIalex@alexxyang:~/faasd$
```

Username:

```
alex@alexxyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-user
adminalex@alexxyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-user
adminalex@alexxyang:~/faasd$
```

You can use this information to log in to the OpenFaaS UI or pass the information to the faas-cli by running the following command.

```
alex@alexxyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-password | faas-cli login --username admin --password-stdin
Calling the OpenFaaS server to validate the credentials...
credentials saved for admin http://127.0.0.1:8080
```

HW2

Verify OpenFaas Installation

Check if faasd service is running

```
Skipping caddy installation as FAASD_DOMAIN.
alex@alexyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-password
9PaKYwV6Eu4CH42yr3bajyckAQSEPMQH1Um6rxohk4nSSJ5DAGuK7TN2pNHZoXIalex@alexyang:~/faasd$
alex@alexyang:~/faasd$
alex@alexyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-user
cat: /var/lib/faasd/secrets/basic-auth-user: No such file or directory
alex@alexyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-password
9PaKYwV6Eu4CH42yr3bajyck
alex@alexyang:~/faasd$
alex@alexyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-password
9PaKYwV6Eu4CH42yr3bajyck
alex@alexyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-user
cat: /var/lib/faasd/secrets/basic-auth-user: No such file or directory
alex@alexyang:~/faasd$
alex@alexyang:~/faasd$
alex@alexyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-user
cat: /var/lib/faasd/secrets/basic-auth-user: No such file or directory
alex@alexyang:~/faasd$
alex@alexyang:~/faasd$
alex@alexyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-password | faas-cli login --username admin --password-stdin
Calling the OpenFaas server to validate the credentials...
credentials saved for admin http://127.0.0.1:8080
alex@alexyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-user
adminalex@alexyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-user
adminalex@alexyang:~/faasd$
alex@alexyang:~/faasd$
alex@alexyang:~/faasd$
alex@alexyang:~/faasd$ sudo if faasd service is running
sudo: if: command not found
alex@alexyang:~/faasd$ sudo systemctl status faasd
• faasd.service - faasd
   Loaded: loaded (/lib/systemd/system/faasd.service; enabled; vendor preset: enabled)
   Active: active (running) since Wed 2022-11-02 05:42:09 UTC; 21min ago
   Main PID: 2345 (faasd)
   Tasks: 6 (limit: 2271)
   Memory: 13.4M (limit: 500.0M)
   CGroup: /system.slice/faasd.service
           └─2345 /usr/local/bin/faasd up

Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "faasd-provider"="10.62.0.1"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Looking up IP for: "gateway"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 faasd: waiting for SIGTERM or SIGINT
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "nats"="10.62.0.2"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "prometheus"="10.62.0.3"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "basic-auth-plugin"="10.62.0.4"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "gateway"="10.62.0.5"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "queue-worker"="10.62.0.6"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Proxy from: 0.0.0.0:8080, to: gateway:8080 (10.62.0.5)
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Proxy from: 127.0.0.1:9090, to: prometheus:9090 (10.62.0.3)
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Proxy from: 127.0.0.1:9090, to: prometheus:9090 (10.62.0.3)
alex@alexyang:~/faasd$ sudo systemctl status faasd-provider
• faasd-provider.service - faasd-provider
   Loaded: loaded (/lib/systemd/system/faasd-provider.service; enabled; vendor preset: enabled)
   Active: active (running) since Wed 2022-11-02 05:42:08 UTC; 23min ago
   Main PID: 2341 (faasd)
   Tasks: 5 (limit: 2271)
   Memory: 7.5M (limit: 500.0M)
   CGroup: /system.slice/faasd-provider.service
           └─2341 /usr/local/bin/faasd provider

Nov 02 05:42:08 alexyang systemd[1]: Started faasd-provider.
Nov 02 05:42:09 alexyang faasd[2341]: 2022/11/02 05:42:09 faasd-provider starting.. Service Timeout: 1m0s
Nov 02 05:42:09 alexyang faasd[2341]: faasd version: 0.16.7 commit: 282b05802cccd311678a73efae78af0086c
Nov 02 05:42:09 alexyang faasd[2341]: 2022/11/02 05:42:09 Writing network config...
Nov 02 05:42:10 alexyang faasd[2341]: 2022/11/02 05:42:10 Listening on TCP port: 8081
```

Logs for faasd

sudo journalctl -u faasd --lines 40 d

HW2

```
Nov 02 05:42:08 alexyang systemd[1]: Started faasd-provider.
Nov 02 05:42:09 alexyang faasd[2341]: 2022/11/02 05:42:09 faasd-provider starting..      Service Timeout: 1m0s
Nov 02 05:42:09 alexyang faasd[2341]: faasd version: 0.16.7      commit: 282b05802cccd311678a73efaae78af0086cc7fd
Nov 02 05:42:09 alexyang faasd[2341]: 2022/11/02 05:42:09 Writing network config...
Nov 02 05:42:10 alexyang faasd[2341]: 2022/11/02 05:42:10 Listening on TCP port: 8081
alex@alexyang:~/faasd$ sudo journalctl -u faasd --lines 40
-- Logs begin at Tue 2022-11-01 23:17:23 UTC, end at Wed 2022-11-02 06:06:22 UTC. --
Nov 02 05:43:47 alexyang faasd[2345]: 2022/11/02 05:43:47 - gateway
Nov 02 05:43:47 alexyang faasd[2345]: 2022/11/02 05:43:47 - queue-worker
Nov 02 05:43:47 alexyang faasd[2345]: Starting: nats
Nov 02 05:43:47 alexyang faasd[2345]: Creating local directory: /var/lib/faasd/nats
Nov 02 05:43:47 alexyang faasd[2345]: 2022/11/02 05:43:47 Running nats with user: "65534"
Nov 02 05:43:48 alexyang faasd[2345]: 2022/11/02 05:43:48 Created container: nats
Nov 02 05:44:01 alexyang faasd[2345]: 2022/11/02 05:44:01 nats has IP: 10.62.0.2
Nov 02 05:44:01 alexyang faasd[2345]: 2022/11/02 05:44:01 Task: nats      Container: nats
Nov 02 05:44:02 alexyang faasd[2345]: Starting: prometheus
Nov 02 05:44:02 alexyang faasd[2345]: Creating local directory: /var/lib/faasd/prometheus
Nov 02 05:44:02 alexyang faasd[2345]: 2022/11/02 05:44:02 Running prometheus with user: "65534"
Nov 02 05:44:04 alexyang faasd[2345]: 2022/11/02 05:44:04 Created container: prometheus
Nov 02 05:44:12 alexyang faasd[2345]: 2022/11/02 05:44:12 prometheus has IP: 10.62.0.3
Nov 02 05:44:12 alexyang faasd[2345]: 2022/11/02 05:44:12 Task: prometheus      Container: prometheus
Nov 02 05:44:12 alexyang faasd[2345]: Starting: basic-auth-plugin
Nov 02 05:44:13 alexyang faasd[2345]: 2022/11/02 05:44:13 Created container: basic-auth-plugin
Nov 02 05:44:22 alexyang faasd[2345]: 2022/11/02 05:44:22 basic-auth-plugin has IP: 10.62.0.4
Nov 02 05:44:22 alexyang faasd[2345]: 2022/11/02 05:44:22 Task: basic-auth-plugin      Container: basic-auth-plugin
Nov 02 05:44:22 alexyang faasd[2345]: Starting: gateway
Nov 02 05:44:23 alexyang faasd[2345]: 2022/11/02 05:44:23 Created container: gateway
Nov 02 05:44:29 alexyang faasd[2345]: 2022/11/02 05:44:29 gateway has IP: 10.62.0.5
Nov 02 05:44:29 alexyang faasd[2345]: 2022/11/02 05:44:29 Task: gateway      Container: gateway
Nov 02 05:44:29 alexyang faasd[2345]: Starting: queue-worker
Nov 02 05:44:33 alexyang faasd[2345]: 2022/11/02 05:44:33 Created container: queue-worker
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 queue-worker has IP: 10.62.0.6
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Task: queue-worker      Container: queue-worker
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Supervisor init done in: 2 minutes
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Looking up IP for: "prometheus"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver rebuilding map
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "localhost"="127.0.0.1"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "faasd-provider"="10.62.0.1"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Looking up IP for: "gateway"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 faasd: waiting for SIGTERM or SIGINT
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "nats"="10.62.0.2"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "prometheus"="10.62.0.3"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "basic-auth-plugin"="10.62.0.4"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "gateway"="10.62.0.5"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "queue-worker"="10.62.0.6"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Proxy from: 0.0.0.0:8080, to: gateway:8080 (10.62.0.5)
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Proxy from: 127.0.0.1:9090, to: prometheus:9090 (10.62.0.3)
```

CoreServices

sudo journalctl -u faasd-provider --lines 40

HW2

```
alex@alexyang:~/faasd$ sudo journalctl -u faasd --lines 40
-- Logs begin at Tue 2022-11-01 23:17:23 UTC, end at Wed 2022-11-02 06:06:22 UTC. --
Nov 02 05:43:47 alexyang faasd[2345]: 2022/11/02 05:43:47 - gateway
Nov 02 05:43:47 alexyang faasd[2345]: 2022/11/02 05:43:47 - queue-worker
Nov 02 05:43:47 alexyang faasd[2345]: Starting: nats
Nov 02 05:43:47 alexyang faasd[2345]: Creating local directory: /var/lib/faasd/nats
Nov 02 05:43:47 alexyang faasd[2345]: 2022/11/02 05:43:47 Running nats with user: "65534"
Nov 02 05:43:48 alexyang faasd[2345]: 2022/11/02 05:43:48 Created container: nats
Nov 02 05:44:01 alexyang faasd[2345]: 2022/11/02 05:44:01 nats has IP: 10.62.0.2
Nov 02 05:44:01 alexyang faasd[2345]: 2022/11/02 05:44:01 Task: nats Container: nats
Nov 02 05:44:02 alexyang faasd[2345]: Starting: prometheus
Nov 02 05:44:02 alexyang faasd[2345]: Creating local directory: /var/lib/faasd/prometheus
Nov 02 05:44:02 alexyang faasd[2345]: 2022/11/02 05:44:02 Running prometheus with user: "65534"
Nov 02 05:44:04 alexyang faasd[2345]: 2022/11/02 05:44:04 Created container: prometheus
Nov 02 05:44:12 alexyang faasd[2345]: 2022/11/02 05:44:12 prometheus has IP: 10.62.0.3
Nov 02 05:44:12 alexyang faasd[2345]: 2022/11/02 05:44:12 Task: prometheus Container: prometheus
Nov 02 05:44:12 alexyang faasd[2345]: Starting: basic-auth-plugin
Nov 02 05:44:13 alexyang faasd[2345]: 2022/11/02 05:44:13 Created container: basic-auth-plugin
Nov 02 05:44:22 alexyang faasd[2345]: 2022/11/02 05:44:22 basic-auth-plugin has IP: 10.62.0.4
Nov 02 05:44:22 alexyang faasd[2345]: 2022/11/02 05:44:22 Task: basic-auth-plugin Container: basic-auth-plugin
Nov 02 05:44:22 alexyang faasd[2345]: Starting: gateway
Nov 02 05:44:23 alexyang faasd[2345]: 2022/11/02 05:44:23 Created container: gateway
Nov 02 05:44:29 alexyang faasd[2345]: 2022/11/02 05:44:29 gateway has IP: 10.62.0.5
Nov 02 05:44:29 alexyang faasd[2345]: 2022/11/02 05:44:29 Task: gateway Container: gateway
Nov 02 05:44:29 alexyang faasd[2345]: Starting: queue-worker
Nov 02 05:44:33 alexyang faasd[2345]: 2022/11/02 05:44:33 Created container: queue-worker
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 queue-worker has IP: 10.62.0.6
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Task: queue-worker Container: queue-worker
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Supervisor init done in: 2 minutes
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Looking up IP for: "prometheus"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver rebuilding map
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "localhost"="127.0.0.1"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "faasd-provider"="10.62.0.1"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Looking up IP for: "gateway"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 faasd: waiting for SIGTERM or SIGINT
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "nats"="10.62.0.2"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "prometheus"="10.62.0.3"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "basic-auth-plugin"="10.62.0.4"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "gateway"="10.62.0.5"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "queue-worker"="10.62.0.6"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Proxy from: 0.0.0.0:8080, to: gateway:8080 (10.62.0.5)
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Proxy from: 127.0.0.1:9090, to: prometheus:9090 (10.62.0.3)
alex@alexyang:~/faasd$ sudo journalctl -u faasd-provider --lines 40
-- Logs begin at Tue 2022-11-01 23:17:23 UTC, end at Wed 2022-11-02 06:08:39 UTC. --
Nov 02 05:42:08 alexyang systemd[1]: Started faasd-provider.
Nov 02 05:42:09 alexyang faasd[2341]: 2022/11/02 05:42:09 faasd-provider starting.. Service Timeout: 1m0s
Nov 02 05:42:09 alexyang faasd[2341]: faasd version: 0.16.7 commit: 282b05802cccd311678a73efaae78af0086cc7fd
Nov 02 05:42:09 alexyang faasd[2341]: 2022/11/02 05:42:09 Writing network config...
Nov 02 05:42:10 alexyang faasd[2341]: 2022/11/02 05:42:10 Listening on TCP port: 8081
```

faasd — zsh

Logs for OpenFaaS services

HW2

```
Nov 02 05:44:02 alexyang faasd[2345]: 2022/11/02 05:44:02 Running prometheus with user: "65534"
Nov 02 05:44:04 alexyang faasd[2345]: 2022/11/02 05:44:04 Created container: prometheus
Nov 02 05:44:12 alexyang faasd[2345]: 2022/11/02 05:44:12 prometheus has IP: 10.62.0.3
Nov 02 05:44:12 alexyang faasd[2345]: 2022/11/02 05:44:12 Task: prometheus Container: prometheus
Nov 02 05:44:12 alexyang faasd[2345]: Starting: basic-auth-plugin
Nov 02 05:44:13 alexyang faasd[2345]: 2022/11/02 05:44:13 Created container: basic-auth-plugin
Nov 02 05:44:22 alexyang faasd[2345]: 2022/11/02 05:44:22 basic-auth-plugin has IP: 10.62.0.4
Nov 02 05:44:22 alexyang faasd[2345]: 2022/11/02 05:44:22 Task: basic-auth-plugin Container: basic-auth-plugin
Nov 02 05:44:22 alexyang faasd[2345]: Starting: gateway
Nov 02 05:44:23 alexyang faasd[2345]: 2022/11/02 05:44:23 Created container: gateway
Nov 02 05:44:29 alexyang faasd[2345]: 2022/11/02 05:44:29 gateway has IP: 10.62.0.5
Nov 02 05:44:29 alexyang faasd[2345]: 2022/11/02 05:44:29 Task: gateway Container: gateway
Nov 02 05:44:29 alexyang faasd[2345]: Starting: queue-worker
Nov 02 05:44:33 alexyang faasd[2345]: 2022/11/02 05:44:33 Created container: queue-worker
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 queue-worker has IP: 10.62.0.6
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Task: queue-worker Container: queue-worker
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Supervisor init done in: 2 minutes
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Looking up IP for: "prometheus"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver rebuilding map
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "localhost"="127.0.0.1"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "faasd-provider"="10.62.0.1"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Looking up IP for: "gateway"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 faasd: waiting for SIGTERM or SIGINT
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "nats"="10.62.0.2"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "prometheus"="10.62.0.3"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "basic-auth-plugin"="10.62.0.4"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "gateway"="10.62.0.5"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "queue-worker"="10.62.0.6"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Proxy from: 0.0.0.0:8080, to: gateway:8080 (10.62.0.5)
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Proxy from: 127.0.0.1:9090, to: prometheus:9090 (10.62.0.3)
alex@alexyang:~/faasd$ sudo journalctl -u faasd-provider --lines 40
-- Logs begin at Tue 2022-11-01 23:17:23 UTC, end at Wed 2022-11-02 06:08:39 UTC. --
Nov 02 05:42:08 alexyang systemd[1]: Started faasd-provider.
Nov 02 05:42:09 alexyang faasd[2341]: 2022/11/02 05:42:09 faasd-provider starting.. Service Timeout: 1m0s
Nov 02 05:42:09 alexyang faasd[2341]: faasd version: 0.16.7 commit: 282b05802cccd311678a73efaae78af0086cc7fd
Nov 02 05:42:09 alexyang faasd[2341]: 2022/11/02 05:42:09 Writing network config...
Nov 02 05:42:10 alexyang faasd[2341]: 2022/11/02 05:42:10 Listening on TCP port: 8081
alex@alexyang:~/faasd$ sudo journalctl -t default:gateway --lines 40
-- Logs begin at Tue 2022-11-01 23:17:23 UTC, end at Wed 2022-11-02 06:10:32 UTC. --
-- No entries --
alex@alexyang:~/faasd$ sudo journalctl -t default:nats --lines 40
-- Logs begin at Tue 2022-11-01 23:17:23 UTC, end at Wed 2022-11-02 06:10:45 UTC. --
-- No entries --
alex@alexyang:~/faasd$ sudo journalctl -t default:queue-worker --lines 40
-- Logs begin at Tue 2022-11-01 23:17:23 UTC, end at Wed 2022-11-02 06:11:04 UTC. --
-- No entries --
alex@alexyang:~/faasd$ sudo journalctl -t default:queue-prometheus --lines 40
-- Logs begin at Tue 2022-11-01 23:17:23 UTC, end at Wed 2022-11-02 06:11:42 UTC. --
-- No entries --
```

Step 4: Trying out a Function from the Store

```
$ faas-cli store list
```

HW2

```
alex@alexyang:~/faasd$ sudo journalctl -t default:gateway --lines 40
-- Logs begin at Tue 2022-11-01 23:17:23 UTC, end at Wed 2022-11-02 06:10:32 UTC. --
-- No entries --
alex@alexyang:~/faasd$ sudo journalctl -t default:nats --lines 40
-- Logs begin at Tue 2022-11-01 23:17:23 UTC, end at Wed 2022-11-02 06:10:45 UTC. --
-- No entries --
alex@alexyang:~/faasd$ sudo journalctl -t default:queue-worker --lines 40
-- Logs begin at Tue 2022-11-01 23:17:23 UTC, end at Wed 2022-11-02 06:11:04 UTC. --
-- No entries --
alex@alexyang:~/faasd$ sudo journalctl -t default:queue-prometheus --lines 40
-- Logs begin at Tue 2022-11-01 23:17:23 UTC, end at Wed 2022-11-02 06:11:42 UTC. --
-- No entries --
alex@alexyang:~/faasd$ faas-cli store list
```

FUNCTION	DESCRIPTION
NodeInfo	Get info about the machine that you'r...
alpine	An Alpine Linux shell, set the "fproc...
env	Print the environment variables prese...
sleep	Simulate a 2s duration or pass an X-S...
shasum	Generate a shasum for the given input
Figlet	Generate ASCII logos with the figlet CLI
curl	Use curl for network diagnostics, pas...
SentimentAnalysis	Python function provides a rating on ...
hey	HTTP load generator, ApacheBench (ab)...
nslookup	Query the nameserver for the IP addre...
SSL/TLS cert info	Returns SSL/TLS certificate informati...
Colorization	Turn black and white photos to color ...
Inception	This is a forked version of the work ...
Have I Been Pwned	The Have I Been Pwned function lets y...
Face Detection with Pigo	Detect faces in images using the Pigo...
Tesseract OCR	This function brings OCR - Optical Ch...
Dockerhub Stats	Golang function gives the count of re...
QR Code Generator - Go	QR Code generator using Go
Nmap Security Scanner	Tool for network discovery and securi...
ASCII Cows	Generate a random ASCII cow
YouTube Video Downloader	Download YouTube videos as a function
OpenFaaS Text-to-Speech	Generate an MP3 of text using Google'...
Docker Image Manifest Query	Query an image on the Docker Hub for ...
face-detect with OpenCV	Detect faces in images. Send a URL as...
Face blur by Endre Simo	Blur out faces detected in JPEGs. Inv...
Left-Pad	left-pad on OpenFaaS
normalisecolor	Automatically fix white-balance in ph...
mememachine	Turn any image into a meme.
Business Strategy Generator	Generates a Business Strategy (using ...
Line Drawing Generator from a photograph	Automatically generates a sketch like...
Image EXIF Reader	Reads EXIF information from an URL or...
Open NSFW Model	Score images for NSFW (nudity) content.
Identicon Generator	Create an identicon from a provided s...

Deploy figlet

HW2

```
-- No entries --
alex@alexyang:~/faasd$ faas-cli store list

FUNCTION                                DESCRIPTION
NodeInfo                               Get info about the machine that you'r...
alpine                                 An Alpine Linux shell, set the "fproc...
env                                    Print the environment variables prese...
sleep                                  Simulate a 2s duration or pass an X-S...
shasum                                  Generate a shasum for the given input
Figlet                                  Generate ASCII logos with the figlet CLI
curl                                   Use curl for network diagnostics, pas...
SentimentAnalysis                      Python function provides a rating on ...
hey                                    HTTP load generator, ApacheBench (ab)...
nslookup                               Query the nameserver for the IP addre...
SSL/TLS cert info                      Returns SSL/TLS certificate informati...
Colorization                           Turn black and white photos to color ...
Inception                              This is a forked version of the work ...
Have I Been Pwned                      The Have I Been Pwned function lets y...
Face Detection with Pigo               Detect faces in images using the Pigo...
Tesseract OCR                         This function brings OCR - Optical Ch...
Dockerhub Stats                       Golang function gives the count of re...
QR Code Generator - Go                QR Code generator using Go
Nmap Security Scanner                 Tool for network discovery and securi...
ASCII Cows                             Generate a random ASCII cow
YouTube Video Downloader              Download YouTube videos as a function
OpenFaaS Text-to-Speech               Generate an MP3 of text using Google'...
Docker Image Manifest Query           Query an image on the Docker Hub for ...
face-detect with OpenCV               Detect faces in images. Send a URL as...
Face blur by Endre Simo               Blur out faces detected in JPEGs. Inv...
Left-Pad                              left-pad on OpenFaaS
normalisecolor                        Automatically fix white-balance in ph...
mememachine                           Turn any image into a meme.
Business Strategy Generator           Generates a Business Strategy (using ...
Line Drawing Generator from a photograph Automatically generates a sketch like...
Image EXIF Reader                     Reads EXIF information from an URL or...
Open NSFW Model                       Score images for NSFW (nudity) content.
Identicon Generator                   Create an identicon from a provided s...
```

```
alex@alexyang:~/faasd$ faas-cli store deploy figlet

Deployed. 200 OK.
URL: http://127.0.0.1:8080/function/figlet
```

Find the URLs for the function

```
Function 'figlet' not found for platform 'x86_64'
alex@alexyang:~/faasd$ faas-cli store inspect figlet
Info for: Figlet

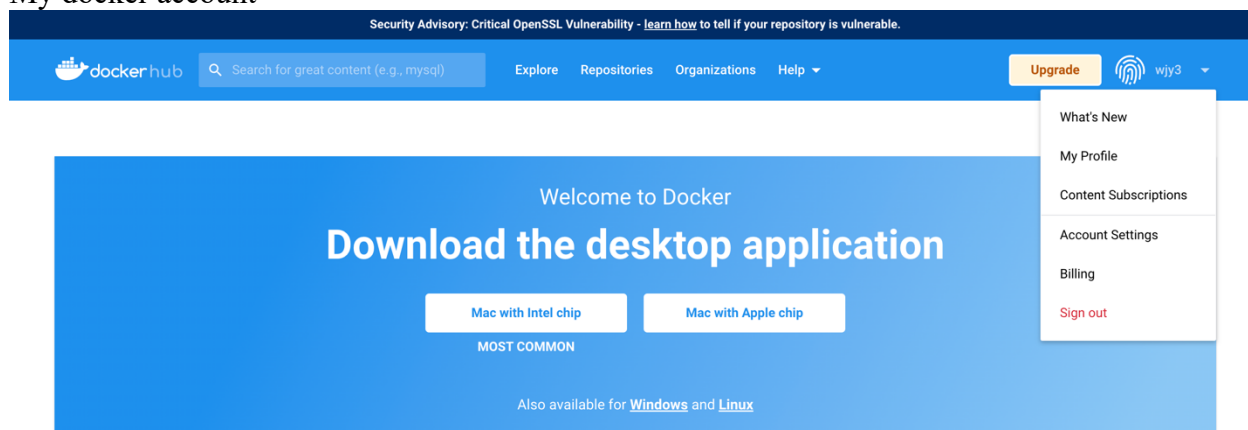
Name          figlet
Description   Generate ASCII logos with the figlet CLI
Image         ghcr.io/openfaas/figlet:latest
Process       figlet
Repo URL      https://github.com/openfaas/store-functions
```

Create some ASCII

HW2

```
alex@alexyang:~/faasd$ echo "Hello, Faas, World" | faas-cli invoke figlet
```

My docker account



```
mkdir -p ~/functions && cd ~/functions
faas-cli new --lang python slack-request
```

```
alex@alexxyang:~/faas$ mkdir -p ~/functions && cd ~/functions
alex@alexxyang:~/functions$ faas-cli new --lang python slack-request
2022/11/02 07:52:01 No templates found in current directory.
2022/11/02 07:52:01 Attempting to expand templates from https://github.com/openfaas/templates.git
2022/11/02 07:52:21 Fetched 17 template(s): [csharp dockerfile go java11 java11-vert-x node node12 node12-debian node14 node16 node17 php7 php8 python python3
python3-debian ruby] from https://github.com/openfaas/templates.git
Folder: slack-request created.
```

```
Function created in folder: slack-request
Stack file written: slack-request.yml
```

```
faas-cli new --lang python slack-interactive
```

```
alex@alexyang:~/functions$ faas-cli new --lang python slack-interactive
Folder: slack-interactive created.
```

```
Function created in folder: slack-interactive
Stack file written: slack-interactive.uml
```

HW2

```
faas-cli build -f ./slack-interactive.yml
```

```
Successfully built 5022ea769f26
Successfully tagged wjy3/slack-interactive:latest
Image: wjy3/slack-interactive:latest built.
[0] < Building slack-interactive done in 278.95s.
[0] Worker done.

Total build time: 279.02s
```

```
faas-cli push -f ./slack-interactive.yml
```

```
3fc750b41be7: Mounted from library/python
beee9f30bc1f: Mounted from library/python
latest: digest: sha256:f61bc2721bcd93f8248fa799f8201ab0f05b5e13d7fc72bbfc3680e34b19f36 size: 4074
[0] < Pushing slack-interactive [wjy3/slack-interactive:latest] done.
[0] Worker done.
```

```
faas-cli deploy -f ./slack-interactive.yml
```

```
[0] Worker done.
alex@alexyang:~$ faas-cli deploy -f ./slack-interactive.yml
Deploying: slack-interactive.

Deployed. 200 OK.
URL: http://127.0.0.1:8080/function/slack-interactive
```

```
faas-cli build -f ./slack-request.yml
```

```
---> 2bfdce17391b
Successfully built 2bfdce17391b
Successfully tagged wjy3/slack-request:latest
Image: wjy3/slack-request:latest built.
[0] < Building slack-request done in 34.12s.
[0] Worker done.
```

```
faas-cli push -f ./slack-request.yml
```

```
3fc750b41be7: Mounted from wjy3/slack-interactive
beee9f30bc1f: Mounted from wjy3/slack-interactive
latest: digest: sha256:bd143a9810b210ba20e5dc1ef019495ad752e7d94b91228a1451d20bbd3f93c6 size: 4074
[0] < Pushing slack-request [wjy3/slack-request:latest] done.
[0] Worker done.
```

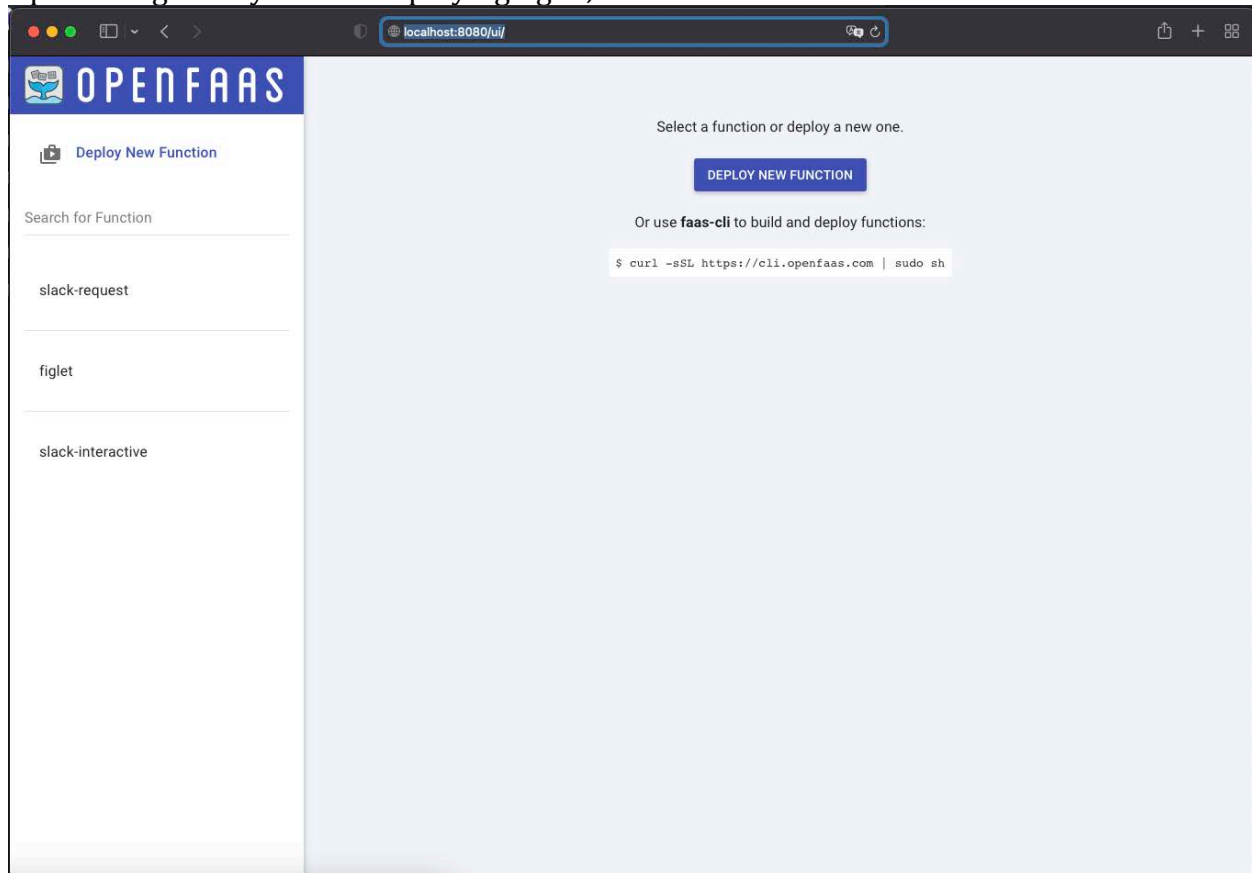
```
faas-cli deploy -f ./slack-request.yml
```

HW2

```
[0] < Pushing slack-request [wjy3/slack-request:latest] done.
[0] Worker done.
alex@alexyang:~$ faas-cli deploy -f ./slack-request.yml
Deploying: slack-request.

Deployed. 200 OK.
URL: http://127.0.0.1:8080/function/slack-request
```

OpenFaaS gateway AFTER deploying figlet, slack-handler and slack-interactive functions



screenshot of invoking slack-request function using FaaS CLI

```
alex@alexyang:~$ echo 'hello' | faas-cli invoke slack-request
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "", "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", "author_name": "Wenjie Yang", "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": "#9AA3E3", "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"}]}
```

screenshot of invoking slack-interactive function using FaaS CLI

```
alex@alexyang:~$ echo '{"text": "text"}' | faas-cli invoke slack-interactive
{"attachments": [{"footer": "Slack Apps built on OpenFaaS", "author_link": "https://github.com/YCoder099", "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/YCoder099.png"}]}
```

HW2

screenshot of invoking slack-request function using Curl

```
new page not found
wy9wenjieyang ~ % curl http://localhost:8080/function/slack-request --data '{"text": "hello", "text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "", "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", "author_name": "Wenjie Yang", "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"}]}'
wy9wenjieyang ~ %
```

screenshot of invoking slack-interactive function using Curl

```
wy9wenjieyang ~ % curl http://localhost:8080/function/slack-interactive --data '{"text": "Hello, Faas, World", "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/4590/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": "http://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "author_icon": "https://github.com/YCoder899.png"}'
wy9wenjieyang ~ %
```

Task:

Provide a screenshot of invoking the figlet function

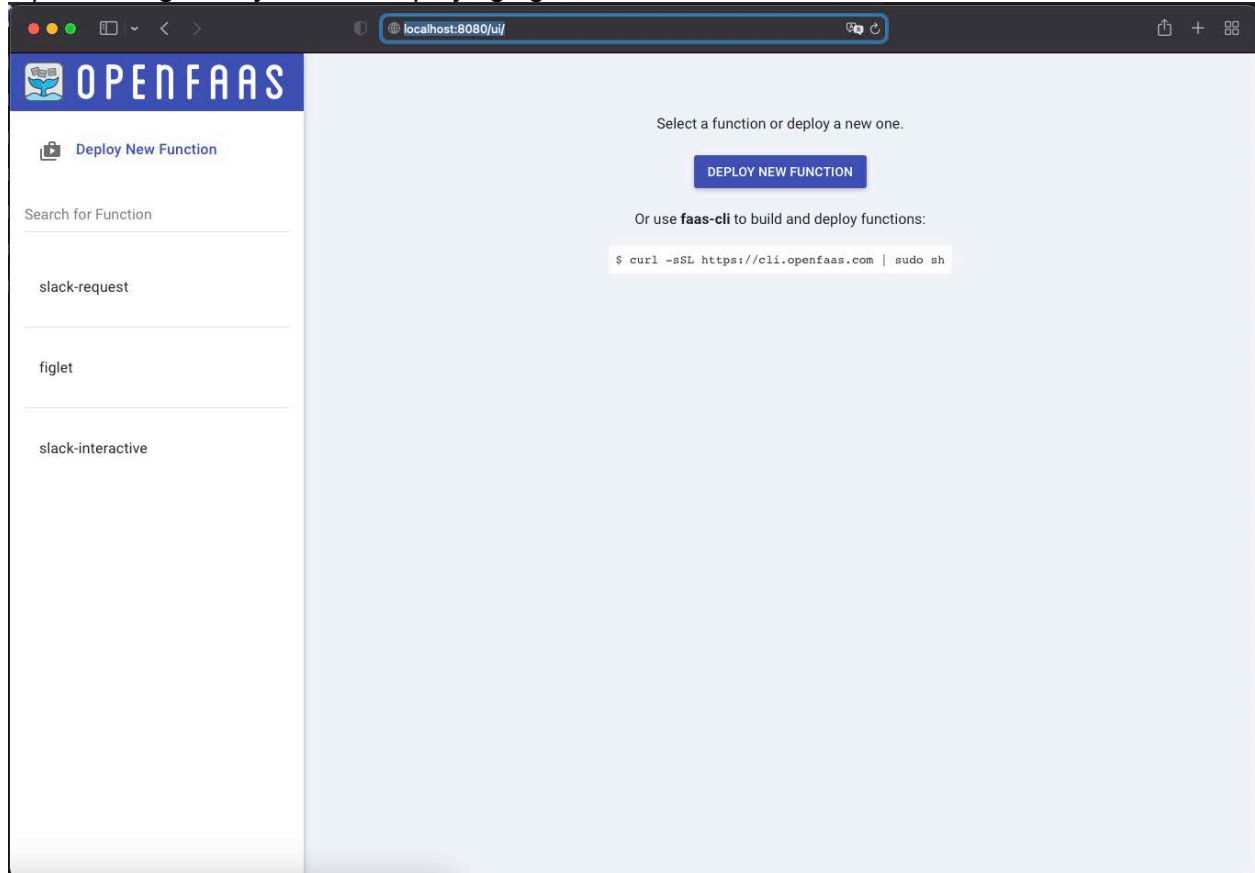
```
alex@alexyang:~/faasd$ echo "Hello, Faas, World" | faas-cli invoke figlet
Hello Faas World
```

Screenshot of running \$sudo journalctl -u faasd --lines 40

```
alex@alexyang:~/faasd$ sudo journalctl -u faasd --lines 40
-- Logs begin at Tue 2022-11-01 23:17:23 UTC, end at Wed 2022-11-02 06:06:22 UTC. --
Nov 02 05:43:47 alexyang faasd[2345]: 2022/11/02 05:43:47 - gateway
Nov 02 05:43:47 alexyang faasd[2345]: 2022/11/02 05:43:47 - queue-worker
Nov 02 05:43:47 alexyang faasd[2345]: Starting: nats
Nov 02 05:43:47 alexyang faasd[2345]: Creating local directory: /var/lib/faasd/nats
Nov 02 05:43:47 alexyang faasd[2345]: 2022/11/02 05:43:47 Running nats with user: "65534"
Nov 02 05:43:48 alexyang faasd[2345]: 2022/11/02 05:43:48 Created container: nats
Nov 02 05:44:01 alexyang faasd[2345]: 2022/11/02 05:44:01 nats has IP: 10.62.0.2
Nov 02 05:44:01 alexyang faasd[2345]: 2022/11/02 05:44:01 Task: nats Container: nats
Nov 02 05:44:02 alexyang faasd[2345]: Starting: prometheus
Nov 02 05:44:02 alexyang faasd[2345]: Creating local directory: /var/lib/faasd/prometheus
Nov 02 05:44:02 alexyang faasd[2345]: 2022/11/02 05:44:02 Running prometheus with user: "65534"
Nov 02 05:44:04 alexyang faasd[2345]: 2022/11/02 05:44:04 Created container: prometheus
Nov 02 05:44:12 alexyang faasd[2345]: 2022/11/02 05:44:12 prometheus has IP: 10.62.0.3
Nov 02 05:44:12 alexyang faasd[2345]: 2022/11/02 05:44:12 Task: prometheus Container: prometheus
Nov 02 05:44:12 alexyang faasd[2345]: Starting: basic-auth-plugin
Nov 02 05:44:13 alexyang faasd[2345]: 2022/11/02 05:44:13 Created container: basic-auth-plugin
Nov 02 05:44:22 alexyang faasd[2345]: 2022/11/02 05:44:22 basic-auth-plugin has IP: 10.62.0.4
Nov 02 05:44:22 alexyang faasd[2345]: 2022/11/02 05:44:22 Task: basic-auth-plugin Container: basic-auth-plugin
Nov 02 05:44:22 alexyang faasd[2345]: Starting: gateway
Nov 02 05:44:23 alexyang faasd[2345]: 2022/11/02 05:44:23 Created container: gateway
Nov 02 05:44:29 alexyang faasd[2345]: 2022/11/02 05:44:29 gateway has IP: 10.62.0.5
Nov 02 05:44:29 alexyang faasd[2345]: 2022/11/02 05:44:29 Task: gateway Container: gateway
Nov 02 05:44:29 alexyang faasd[2345]: Starting: queue-worker
Nov 02 05:44:33 alexyang faasd[2345]: 2022/11/02 05:44:33 Created container: queue-worker
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 queue-worker has IP: 10.62.0.6
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Task: queue-worker Container: queue-worker
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Supervisor init done in: 2 minutes
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Looking up IP for: "prometheus"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver rebuilding map
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "localhost"="127.0.0.1"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "faasd-provider"="10.62.0.1"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Looking up IP for: "gateway"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 faasd: waiting for SIGTERM or SIGINT
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "nats"="10.62.0.2"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "prometheus"="10.62.0.3"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "basic-auth-plugin"="10.62.0.4"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "gateway"="10.62.0.5"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Resolver: "queue-worker"="10.62.0.6"
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Proxy from: 0.0.0.0:8080, to: gateway:8080 (10.62.0.5)
Nov 02 05:44:42 alexyang faasd[2345]: 2022/11/02 05:44:42 Proxy from: 127.0.0.1:9090, to: prometheus:9090 (10.62.0.3)
```

HW2

OpenFaaS gateway AFTER deploying figlet, slack-handler and slack-interactive functions



screenshot of invoking slack-request function using FaaS CLI

```
alex@alexuyang:~$ echo 'hello' | faas-cli invoke slack-request
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "", "image_url": "https://www.scu.edu/media/offices/umc/scu-brand-guidelines/visual-identity-amg-photography/visual-identity-toolkit/logos-amg-seals/Mission-Dont3.png", "author_name": "Wenjie Yang", "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"}]}
```

screenshot of invoking slack-interactive function using FaaS CLI

```
alex@alexuyang:~$ echo '{"text": "text"}' | faas-cli invoke slack-interactive
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "", "image_url": "https://www.scu.edu/media/offices/umc/scu-brand-guidelines/visual-identity-amg-photography/visual-identity-toolkit/logos-amg-seals/Mission-Dont3.png", "author_name": "Wenjie Yang", "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"}]}
```

screenshot of invoking slack-request function using Curl

```
wy9Wenjieyang ~ % curl http://localhost:8080/function/slack-request --data 'hello'
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "", "image_url": "https://www.scu.edu/media/offices/umc/scu-brand-guidelines/visual-identity-amg-photography/visual-identity-toolkit/logos-amg-seals/Mission-Dont3.png", "author_name": "Wenjie Yang", "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"}]}
```

HW2

screenshot of invoking slack-interactive function using Curl

```
wy9@wenjieyang ~ % curl http://localhost:8080/function/slack-interactive -d '{"text":"test"}'
{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/YCoder899", "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/49081/marketing/img/rebrand/meta/slack_hash_296.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/YCoder899.png"}]}
wy9@wenjieyang ~ %
```