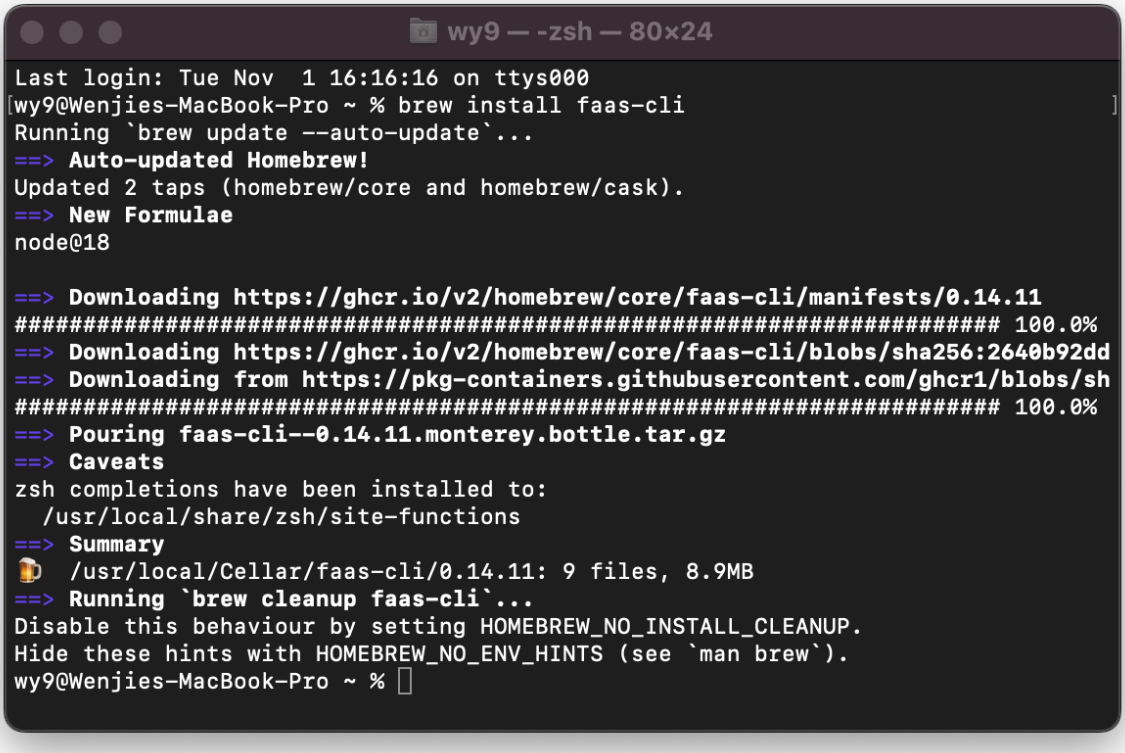
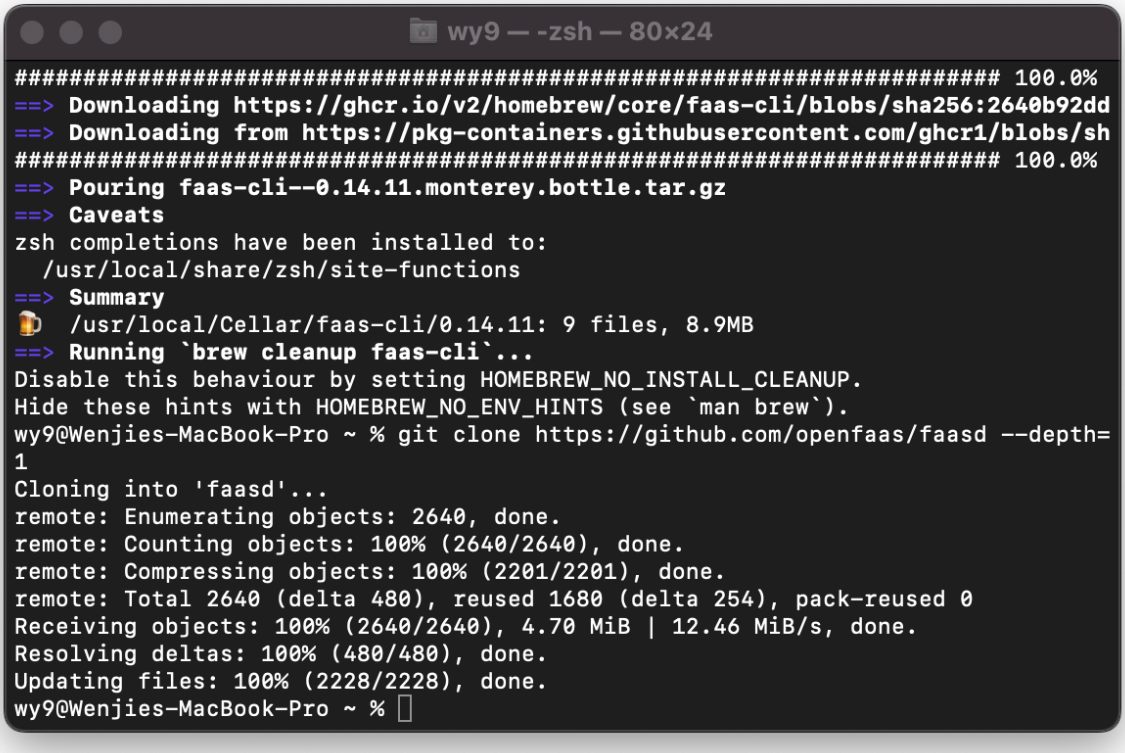
HW2

Installing OpenFaas CLI
Brew install faas-cli

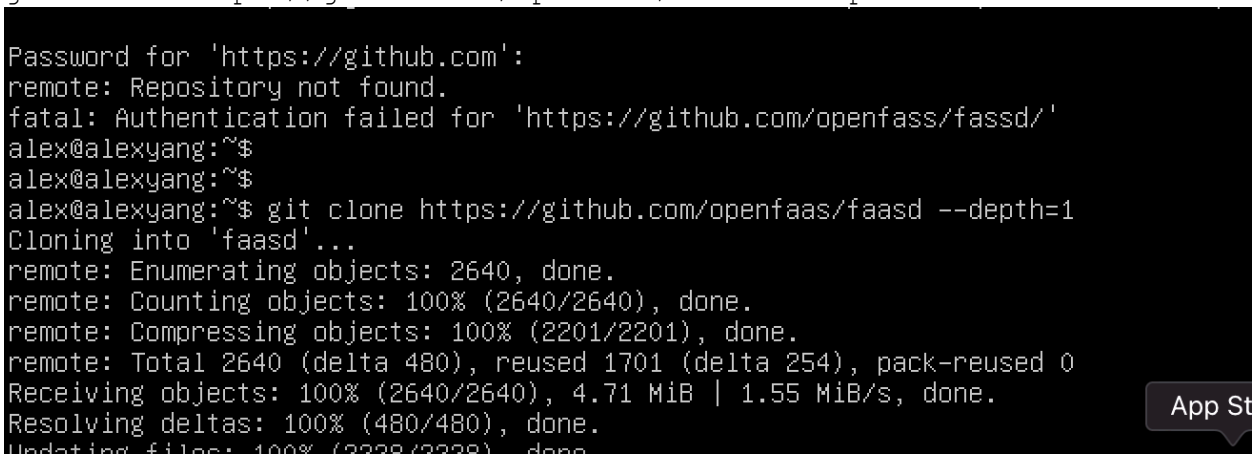


Deploy OpenFaas:

HW2




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



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@alexyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-password
L4bsjtxAW4q8xLqXTSO5HyPTXXf9WOko1j8joGNzb7X9ECzPOKxavhQsRpcQWmPalex@alexyang:~
alex@alexyang:~/faasd$
```

```
alex@alexyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-password
9PaWYwV6Eu4CH4Zyr3bajycKAQSEPMQHiUm6rxohk4nSSj5DAGuK7TN2pNHZoXIalex@alexyang:~/faasd$
```

Username:

```
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$
```

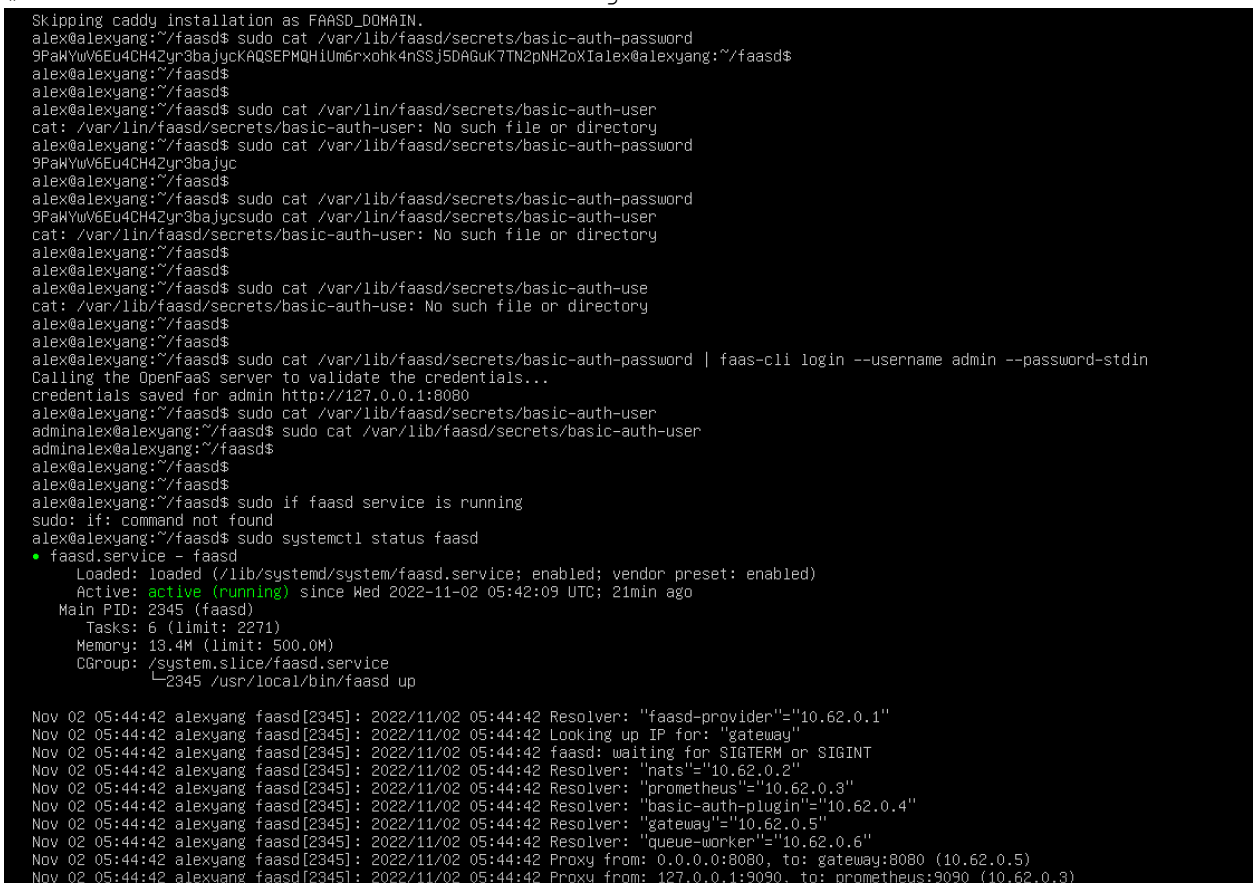
You can use this information to log in to the OpenFaaS UI or pass the information to the faas-cli by running the following command.

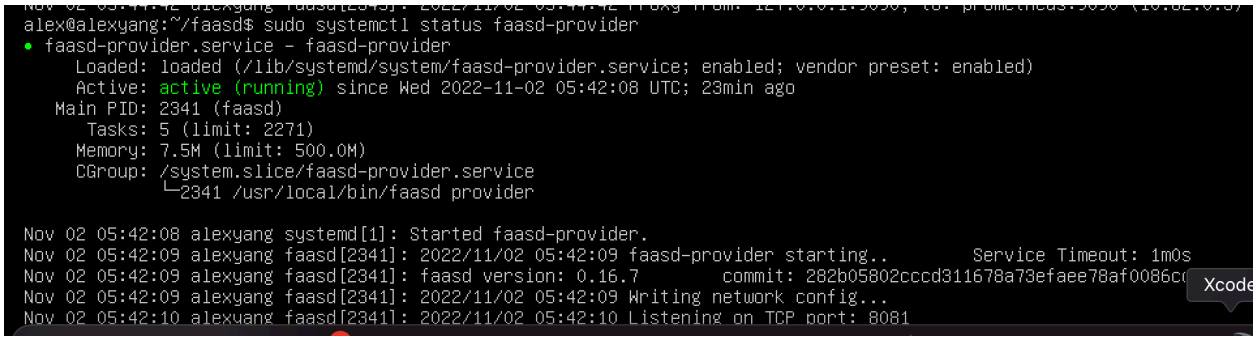
```
alex@alexyang:~/faasd$ sudo cat /var/lib/faasd/secrets/basic-auth-password | faas-cli login --username admin --password-stdin
Calling the OpenFaaS server to validate the credentials...
credentials saved for admin http://127.0.0.1:8080
```

HW2

Verify OpenFaas Installation

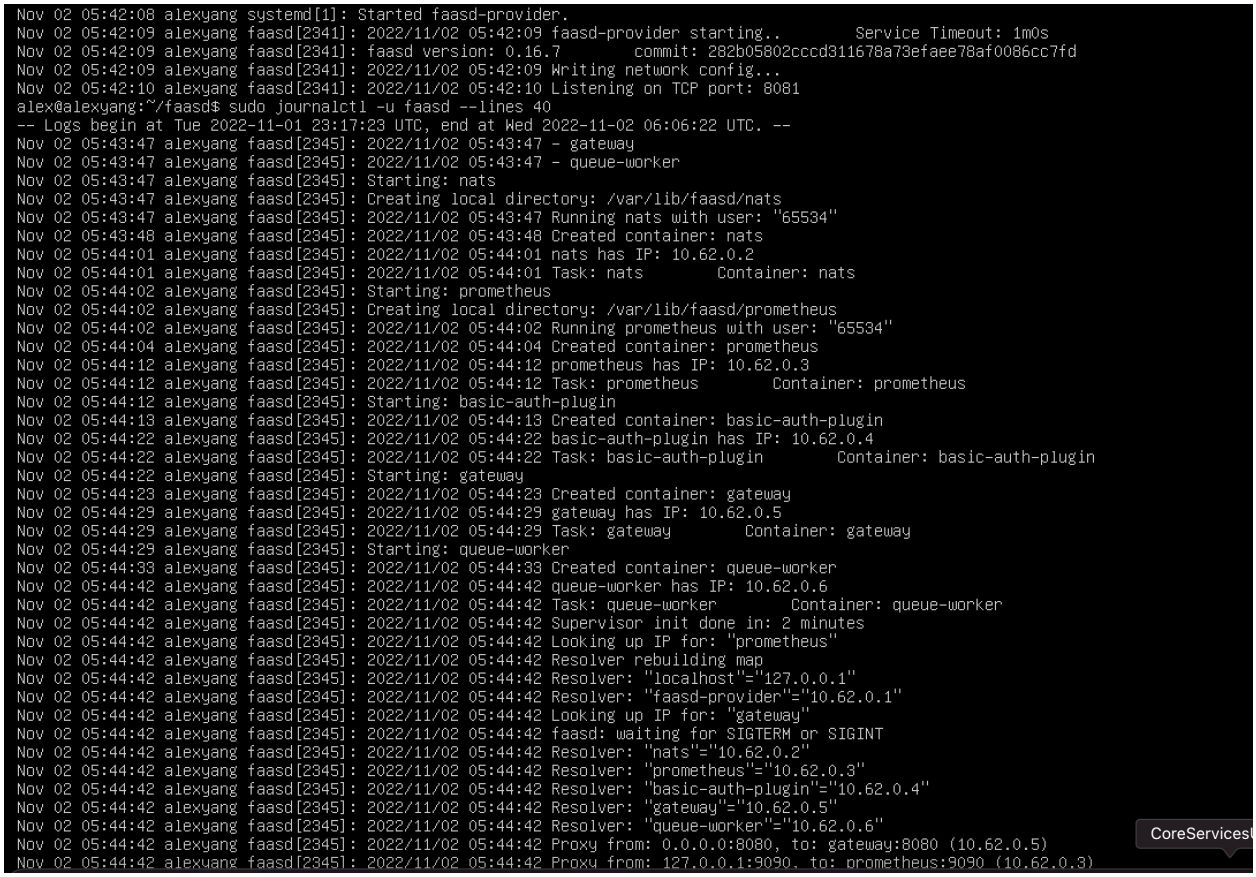
```
# Check if faasd service is running
```





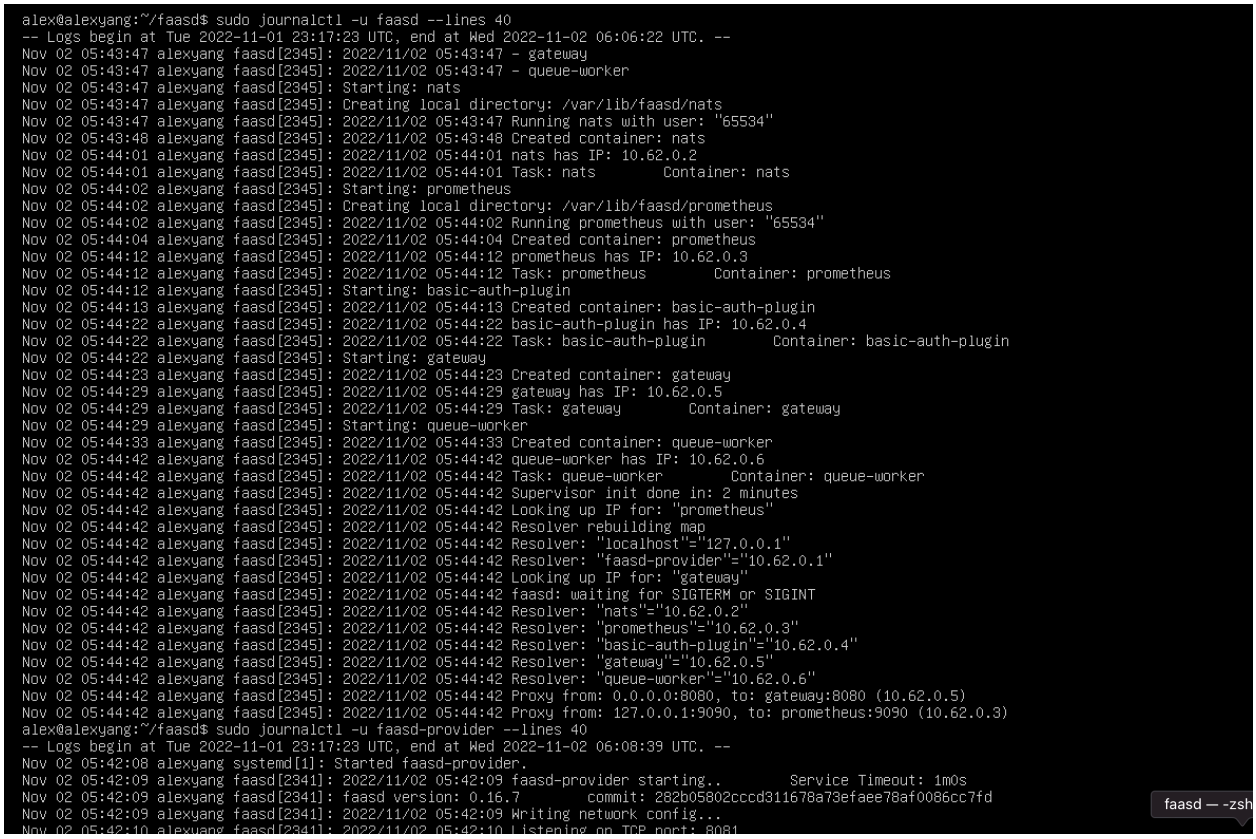

```
# Logs for faasd
sudo journalctl -u faasd --lines 40 d
```

HW2

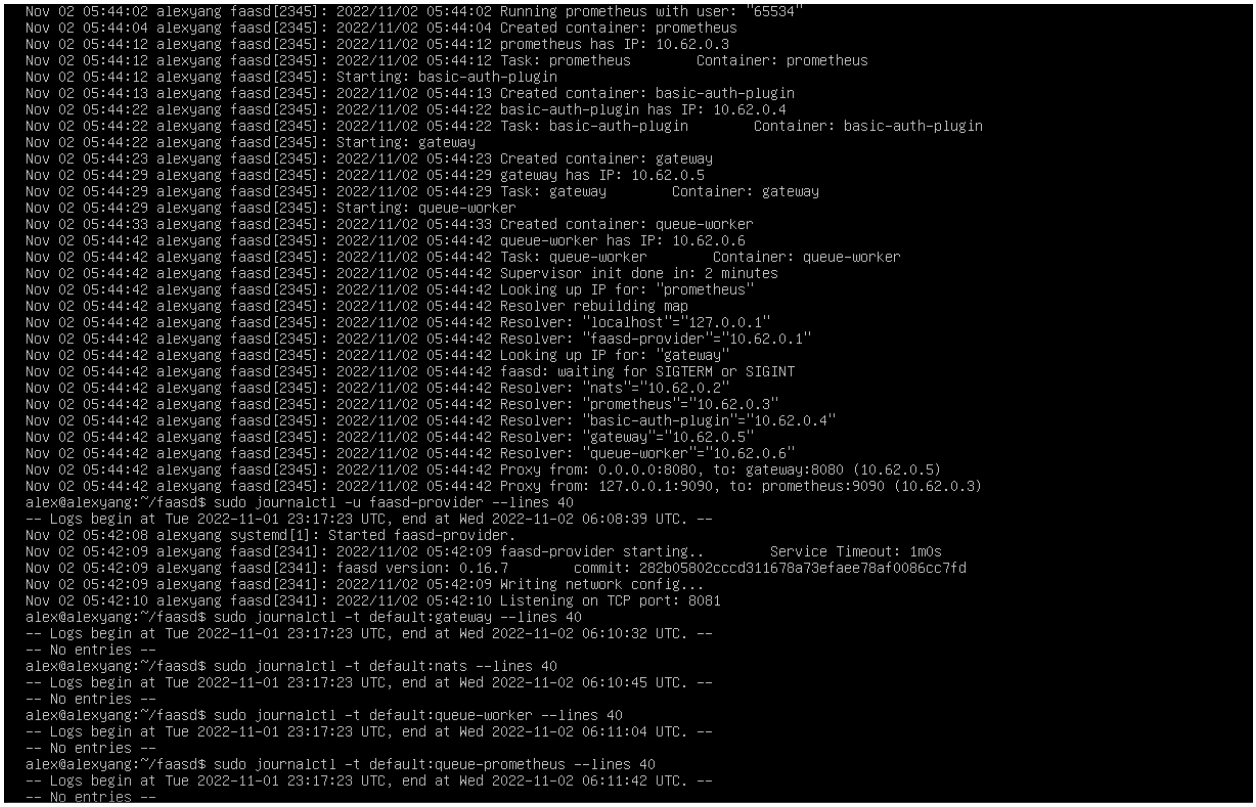


sudo journalctl -u faasd-provider --lines 40

HW2



Logs for OpenFaaS services



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

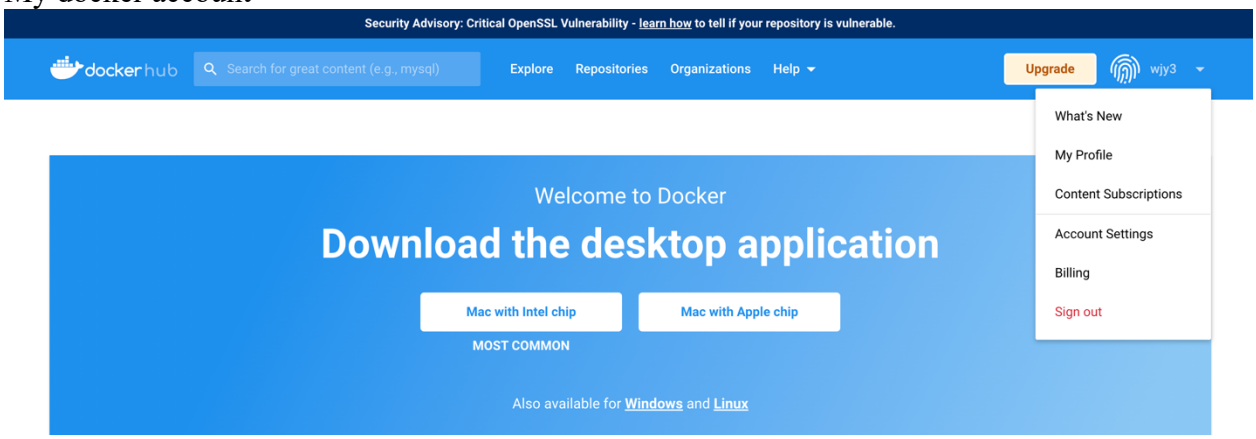
```
alex@alexyang:~/faasd$ faas-cli store inspect figlet
Info for: Figlet

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
```

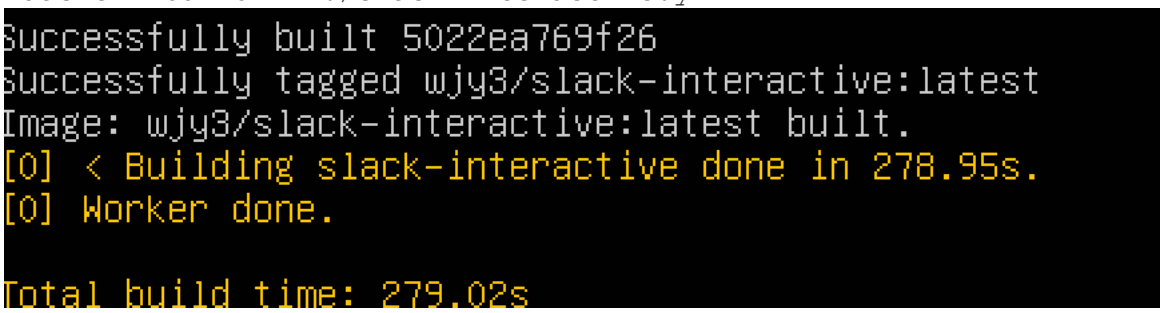
```
alex@alexyang:~/faasd$ mkdir -p ~/functions && cd ~/functions
alex@alexyang:~/functions$ faas-cli new --lang python slack-request
2022/11/02 07:52:01 No templates found in current directory.
2022/11/02 07:52:01 Attempting to expand templates from https://github.com/openfaas/templates.git
2022/11/02 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
```

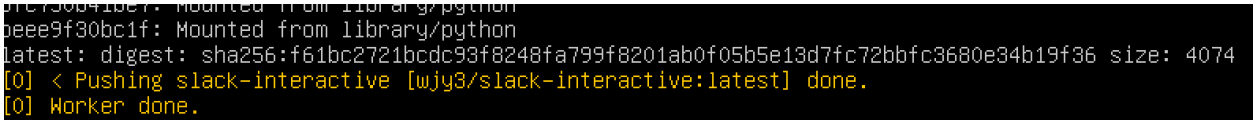
```
alex@alexyang:~/functions$ faas-cli new --lang python slack-interactive
Folder: slack-interactive created.


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

HW2

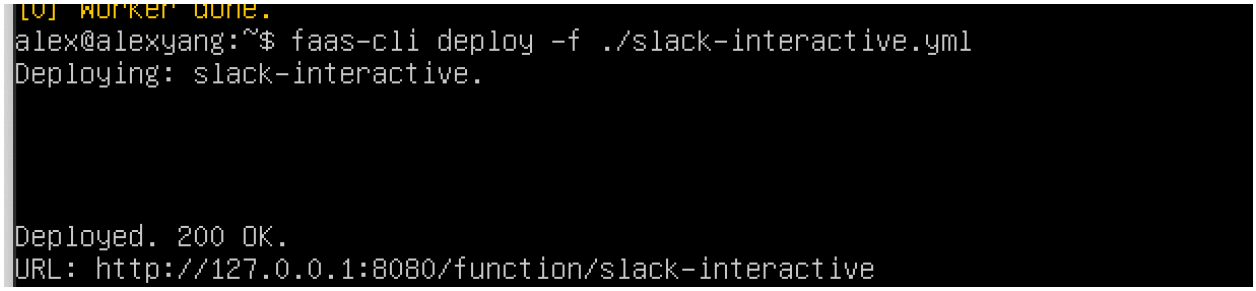
faas-cli build -f ./slack-interactive.yml



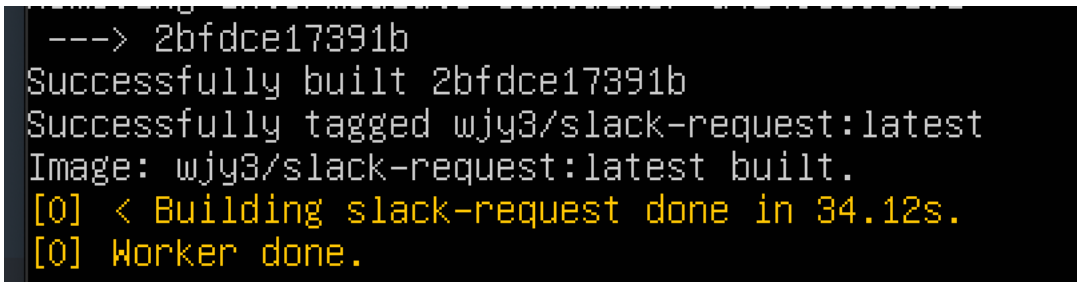
faas-cli push -f ./slack-interactive.yml



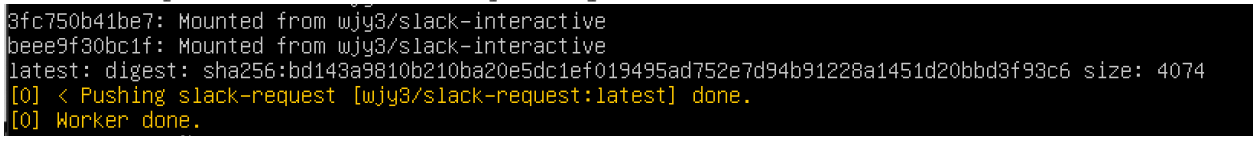
faas-cli deploy -f ./slack-interactive.yml



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



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

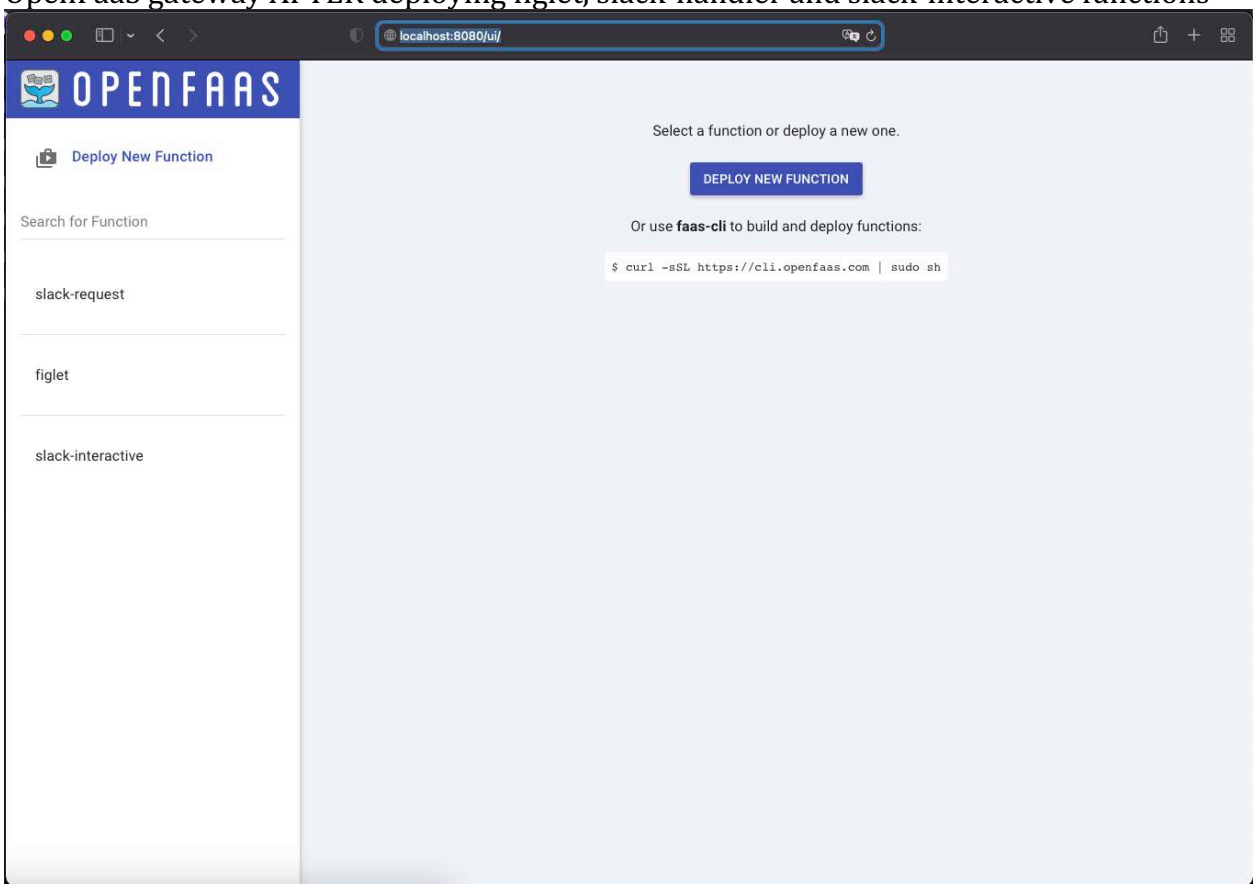


faas-cli deploy -f ./slack-request.yml

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

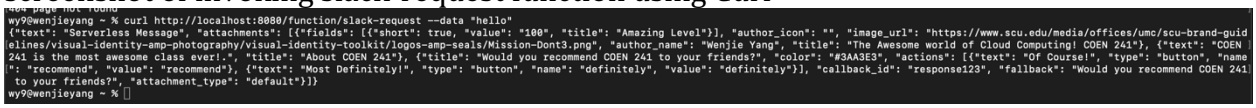
```
alex@alexyang:~$ echo 'hello' | faas-cli invoke slack-request
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "", "image_url": "https://
www.scu.edu/media/offices/umc/scu-brand-guidelines/visual-identity-amp-photography/visual-identity-toolkit/logos-amp-seals/Mission-Dont3.png", "author_name": "W
enjie Yang", "title": "The Awesome world of Cloud Computing! COEN 241"}, {"text": "COEN 241 is the most awesome class ever!.", "title": "About COEN 241"}, {"tit
le": "Would you recommend COEN 241 to your friends?", "color": "#3AA3E3", "actions": [{"text": "Of Course!", "type": "button", "name": "recommend", "value": "re
commend"}, {"text": "Most Definitely!", "type": "button", "name": "definitely", "value": "definitely"}], "callback_id": "response123", "fallback": "Would you re
commend COEN 241 to your friends?", "attachment_type": "default"}]}
```

screenshot of invoking slack-interactive function using FaaS CLI

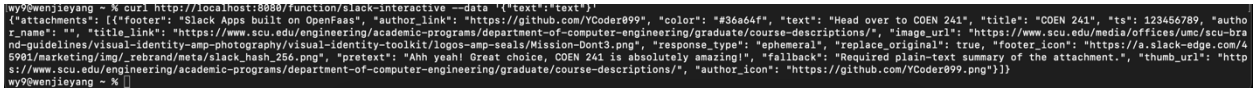
```
alex@alexyang:~$ echo '{"text","text"}' | faas-cli invoke slack-interactive
{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/YCoder099", "color": "#36a64f", "text": "Head over to COEN 241",
"title": "COEN 241", "ts": 123456789, "author_name": "", "title_link": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/gra
duate/course-descriptions/", "image_url": "https://www.scu.edu/media/offices/umc/scu-brand-guidelines/visual-identity-amp-photography/visual-identity-toolkit/lo
gos-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.", "t
humb_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



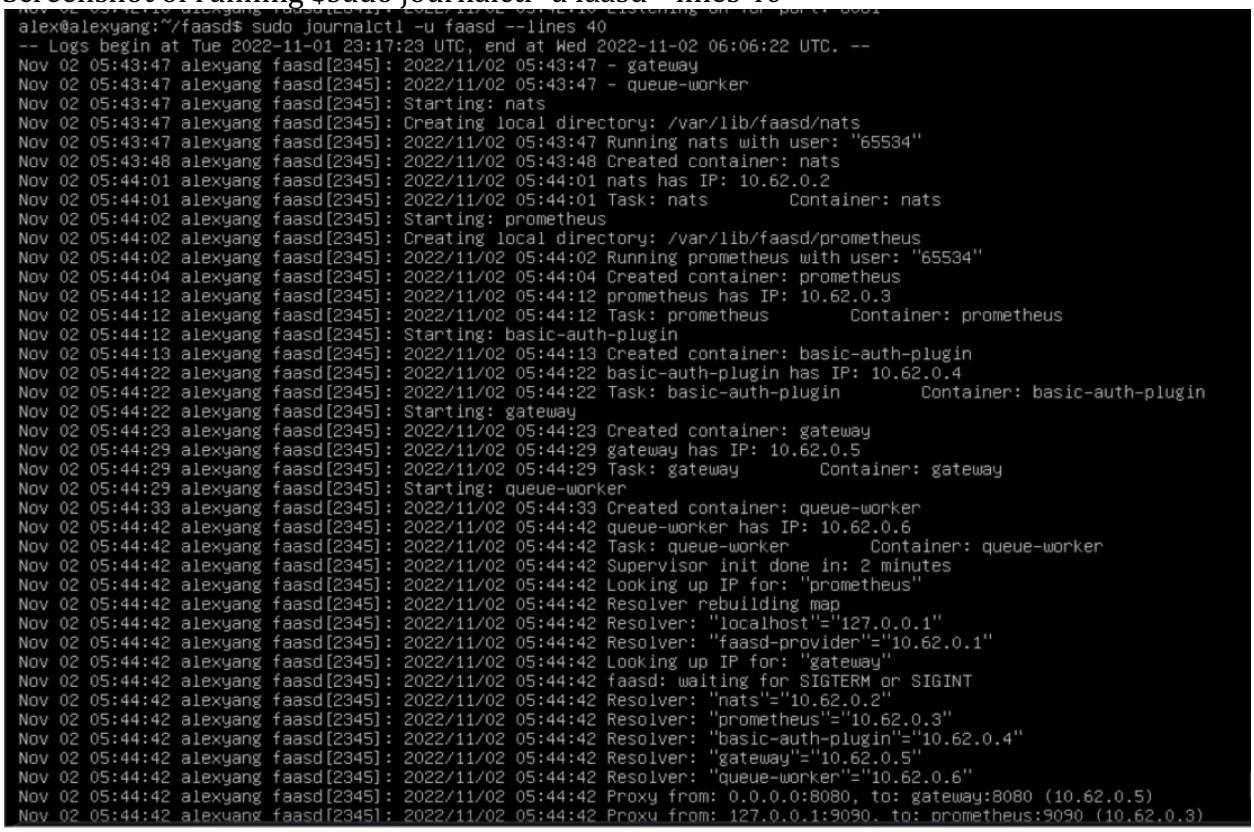
screenshot of invoking slack-interactive function using Curl



Task:

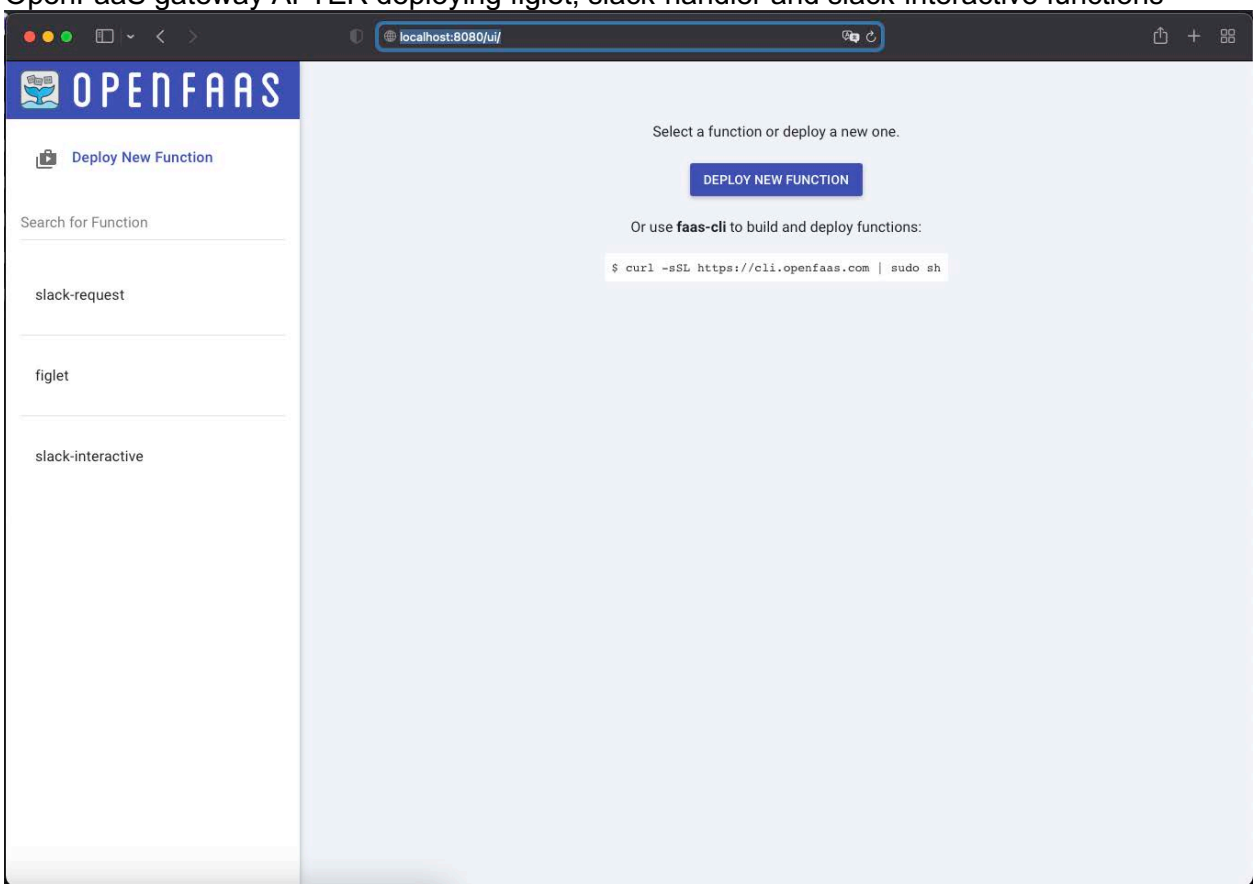
Provide a screenshot of invoking the figlet function

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

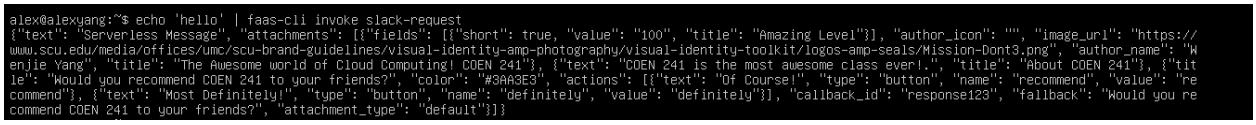


HW2

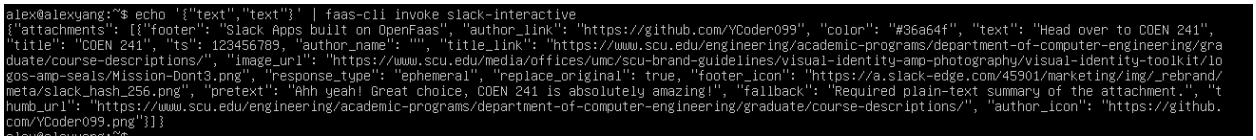
OpenFaaS gateway AFTER deploying figlet, slack-handler and slack-interactive functions



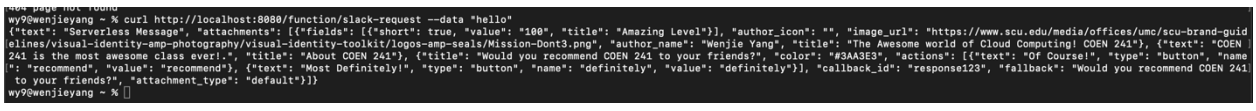
screenshot of invoking slack-request function using FaaS CLI

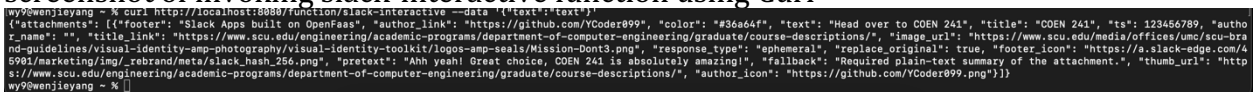


screenshot of invoking slack-interactive function using FaaS CLI



screenshot of invoking slack-request function using Curl



HW2

screenshot of invoking slack-interactive function using Curl