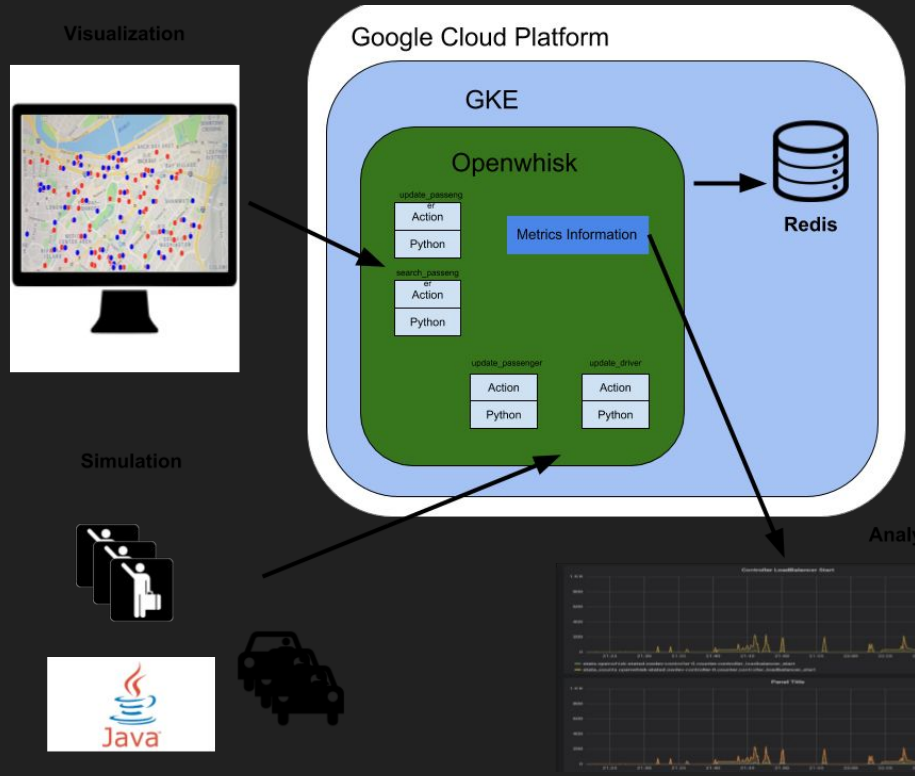
BU CLOUD FaaS

BOSTON UNIVERSITY

Function as a Service

Recap

- Finished the simulation part and corresponding OpenWhisk actions
- Deployed OpenWhisk on local environment and GCP
- Basic metric analysis of OpenWhisk and GCP



Current Work: Sprint 5

BU CLOUD FaaS

BOSTON UNIVERSITY

Invoker setup

Analyse the OpenWhisk Metrics

Latency Test

Demo

Latency data analysis

Current work: Sprint 5

BU CLOUD FaaS

BOSTON UNIVERSITY

Invoker set up:

We successfully set up two nodes in the GKE; Now OpenWhisk has two invokers.

OpenWhisk Metrics:

We measured the number of actions being executed by each invoker in a short time interval(60s); It represents current load of the invoker.

Latency Test

BU CLOUD FaaS

BOSTON UNIVERSITY

Use a simple Java program to make post request to the server

1 request per second

Record the response time

Measure an average during the last 10s

```
Latency is 218 Average is 191.49999999999997
Latency is 177 Average is 189.49999999999994
Latency is 173 Average is 189.09999999999997
Latency is 219 Average is 193.29999999999998
Latency is 172 Average is 188.29999999999998
```

Expect the high load & OpenWhisk’s load balancing will affect the simple program’s latency

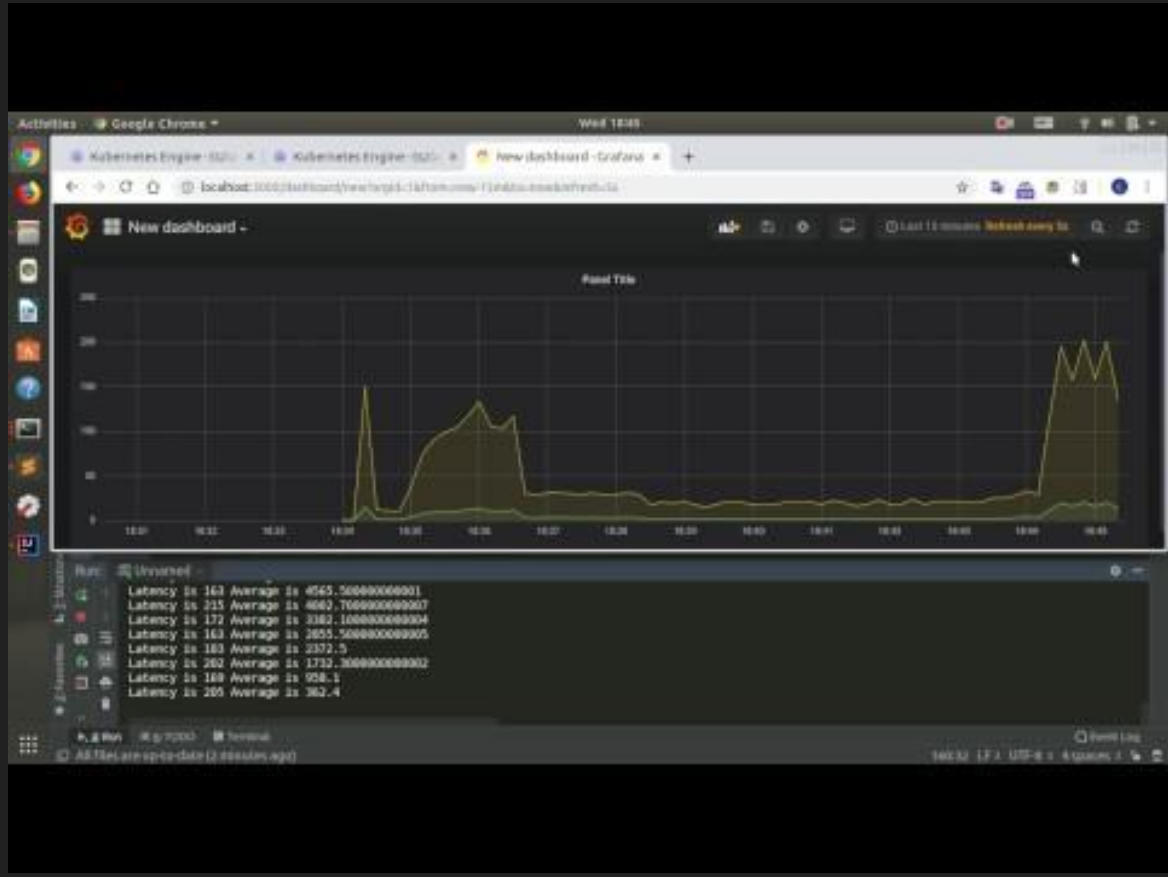
BU CLOUD FaaS

BOSTON UNIVERSITY

Demo

1 invoker case:

Pressure test on one node: make request intensively, and record latency

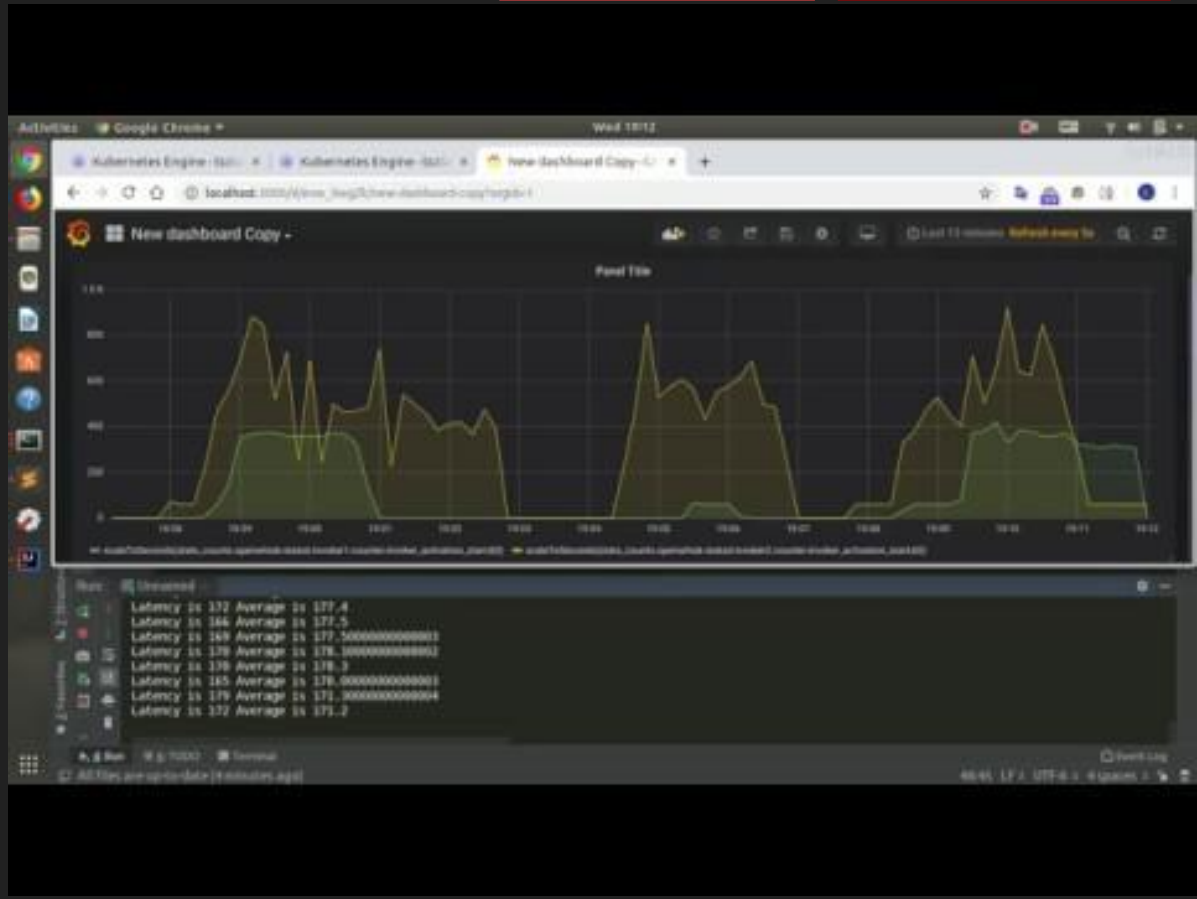


BU CLOUD FaaS

BOSTON UNIVERSITY

2 invokers case

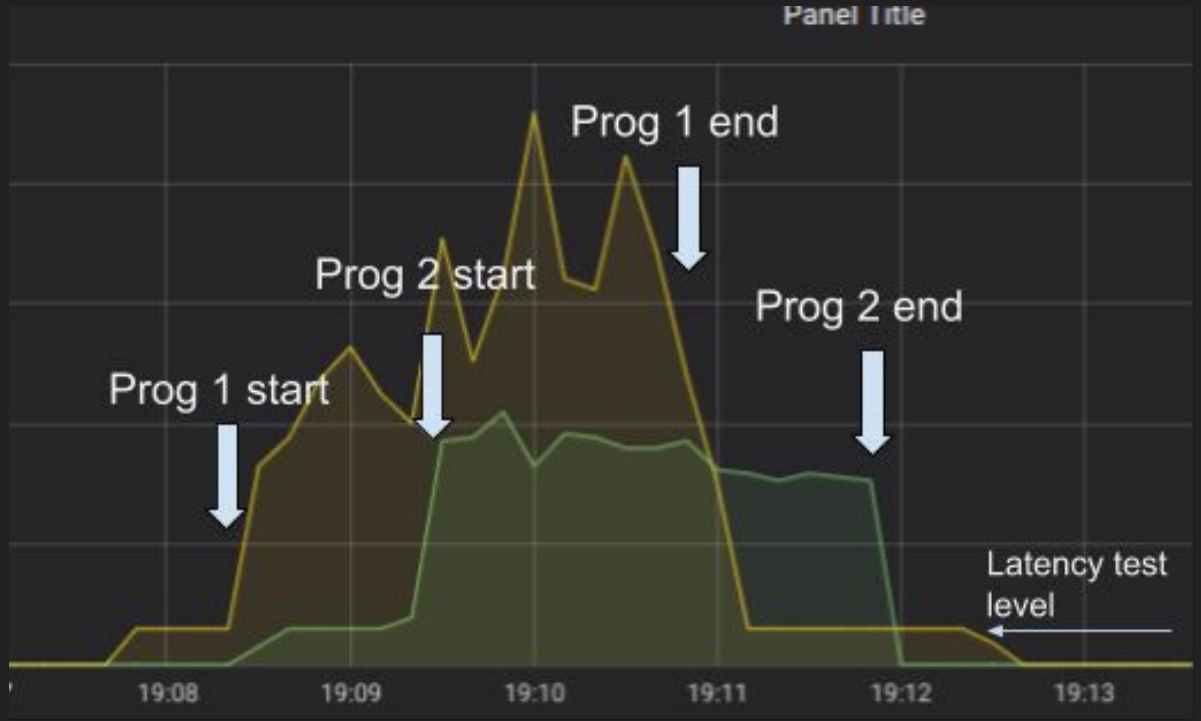
Run two jobs on 2 invokers, while record latency



Analysis

BU CLOUD FaaS

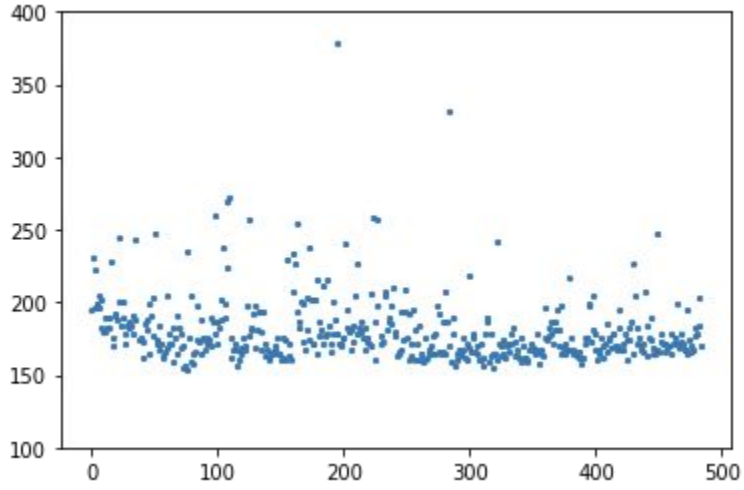
BOSTON UNIVERSITY

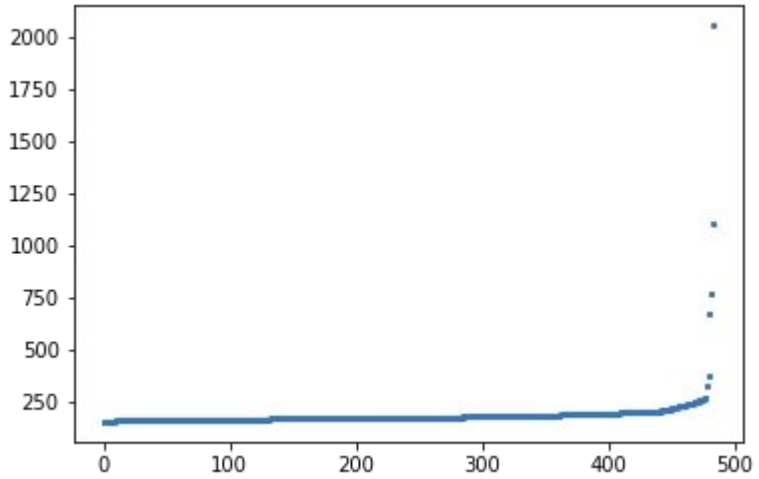


Latency

BU CLOUD FaaS

BOSTON UNIVERSITY

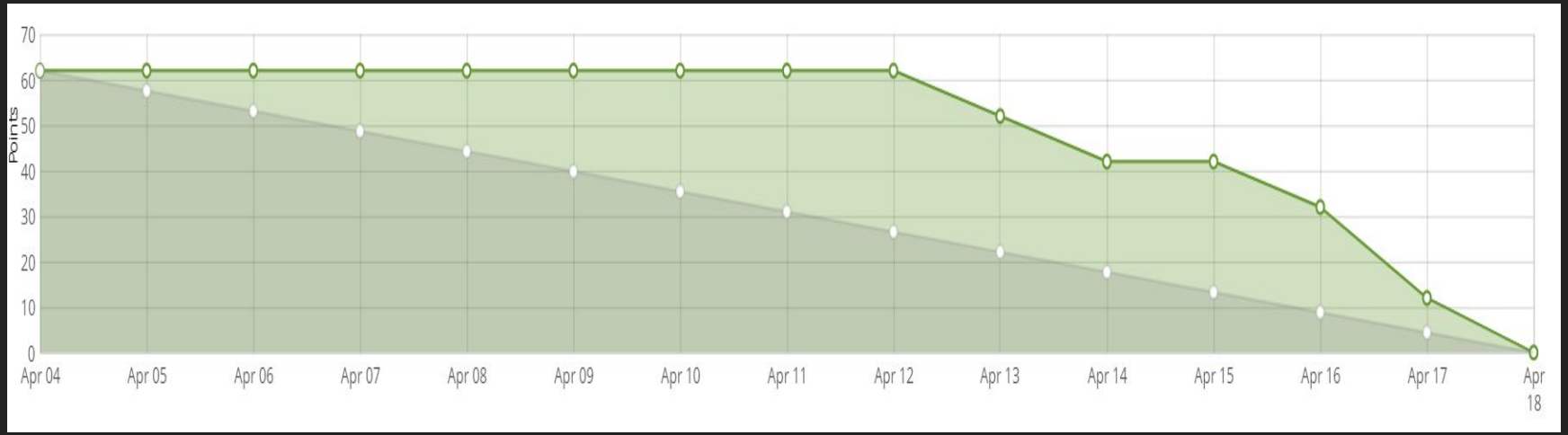




Burndown Chart

BU CLOUD FaaS

BOSTON UNIVERSITY



Questions?

BU CLOUD FaaS

BOSTON UNIVERSITY