Github Url

https://github.com/ZinnLiu233/6650Assignment/tree/main/A3

Design

For Consumer：

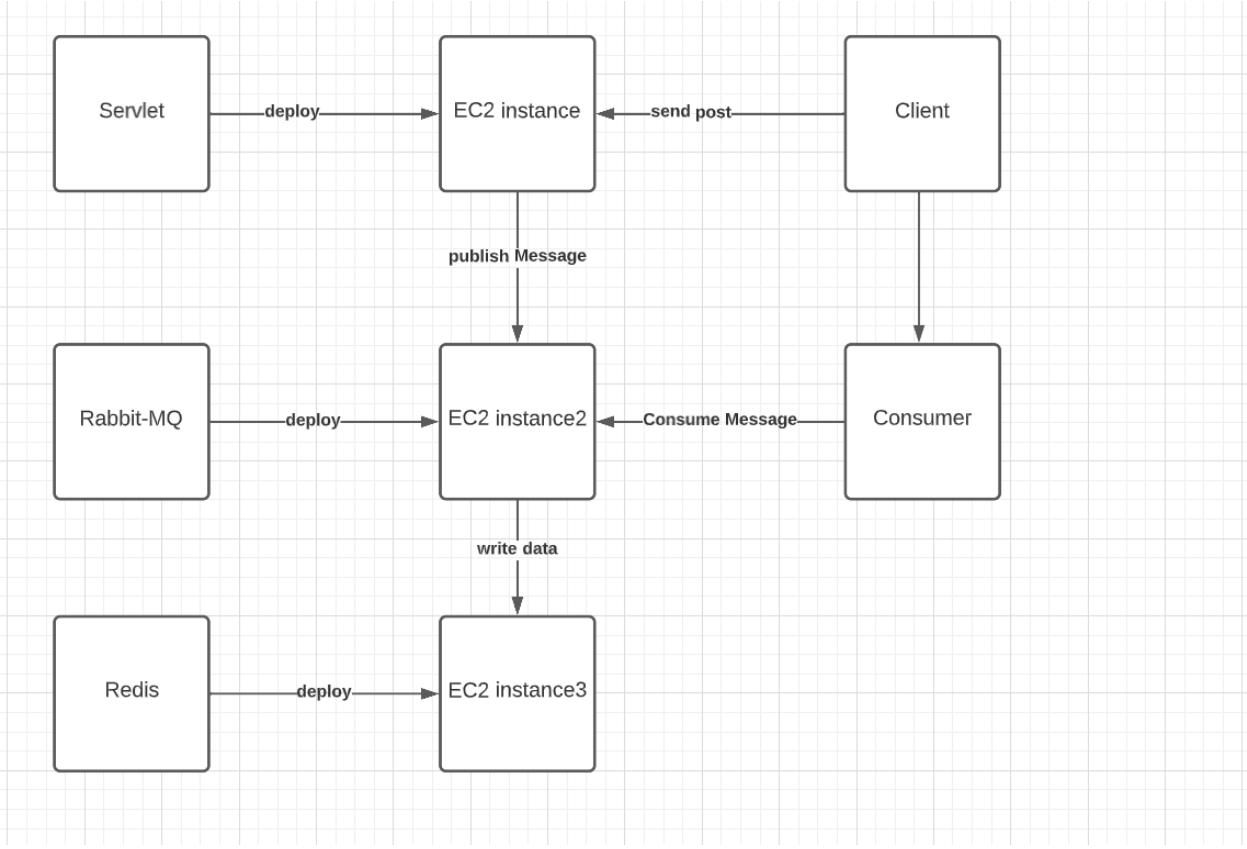
1. Init Factory:
    1. Set Host, which is the EC2 instance where rabbit-mq is.
    2. Set the Port which is 5672
    3. Set the userName and password to access the UI monitoring.
    4. Create the runnable thread to keep running consuming.
    5. Implement the Jedis for storing data in Redis which is deployed on the AWS EC2.
    6. In the thread, I design the deliverCallback function, to get the message from the queue and consume it.

For Server:

1. Almost same as the design from previous project. Here are the extra designs for the server:
    1. Create a channel pool factory to connect the message queue.
    2. In the do post function, create the JsonObject to store the LiftRide object, and put it into queue.

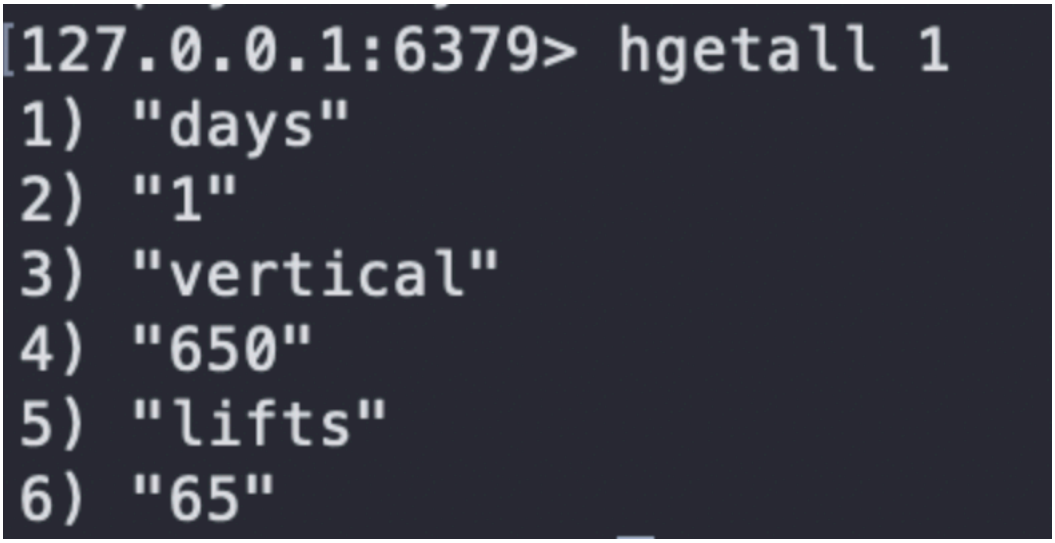
General Idea

For single servlet:



For Redis design:

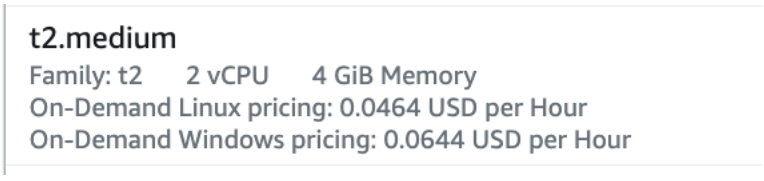
skier information:
Map<skierId : map{“days” : 1, “vertical” : +, “lifts” : “+" , resortId: “+”}>



Resort in every day:
Map<resortId : set(skierId)>

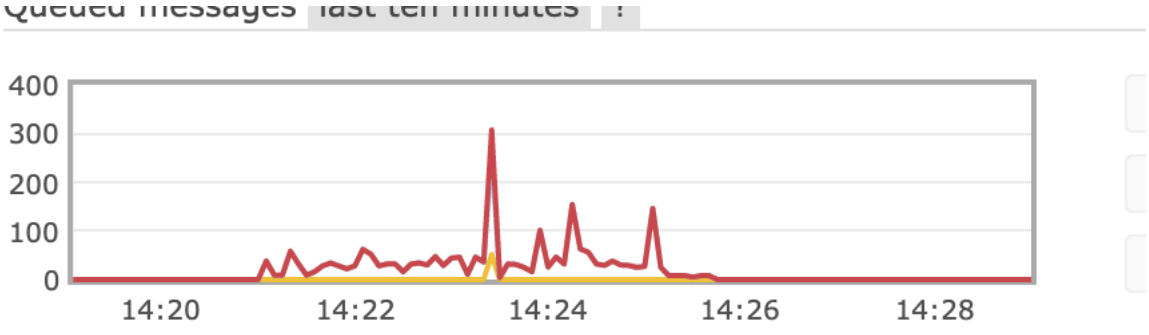
EC2 instance setting:

Change instance
From
t2.micro : 1vCPU 1GiB Memory
To:
t2.medium: 2 vCPU 4GiB Memory



Output:

```
------------------part1 info------------------
It takes the time: 283735
number of successful post: 200000
number of unsuccessful post: 0
Throughput: 704
------------------part2 info------------------
mean response time : 40ms
median response time : 36ms
throughput (requests/second) : 704
p99 response time: 103ms
min response time: 16ms
max response time: 353ms
```



Message rates last ten minutes ?