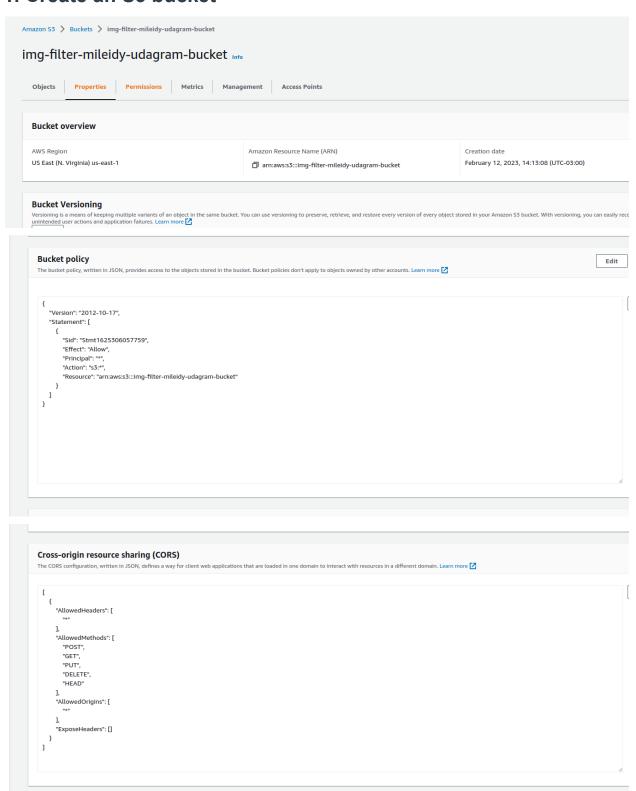
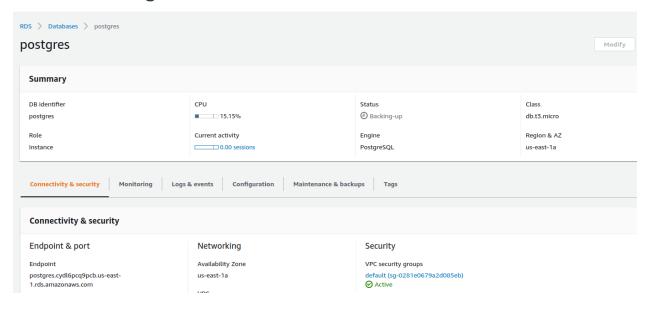
1. Create an S3 bucket



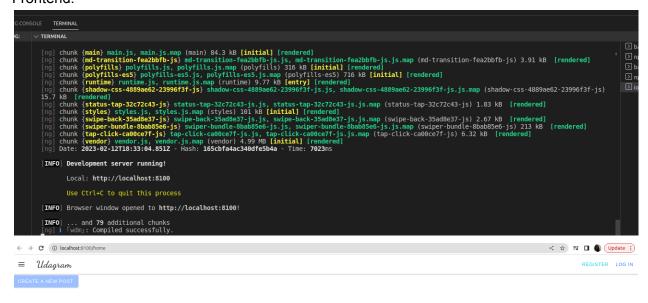
2. Create PostgreSQL database



Part 1 - Run the project locally as a Monolithic application

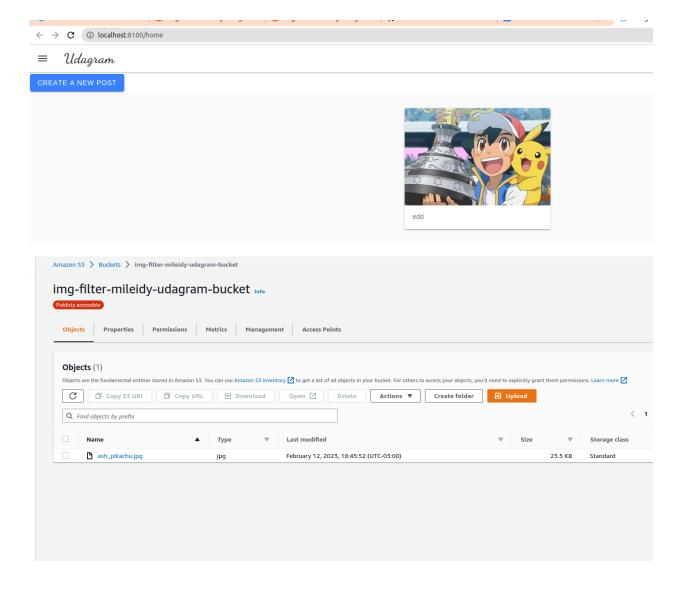
Backend:

Frontend:

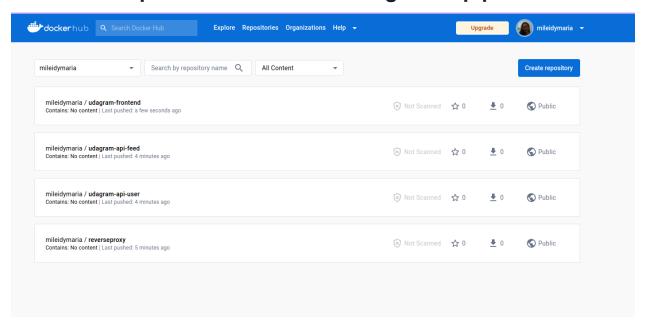


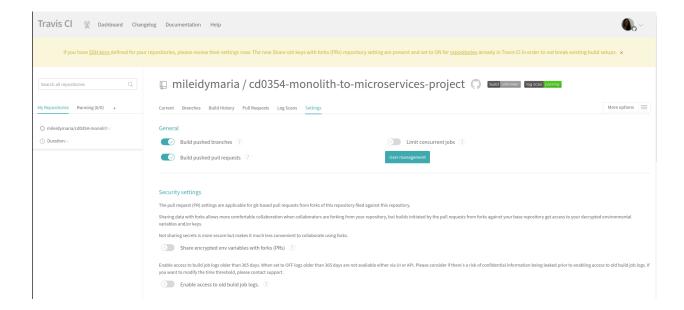
Part 2 - Run the project locally as a Microservice with docker

```
frontend 1 | 2023/02/12 21:00:35 [notice] I#1: start worker process 33 |
feverseproxy 1 | 10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf |
feverseproxy 1 | /docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh |
feverseproxy 1 | /docker-entrypoint.sh: configuration complete; ready for start up |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: using the "epoil" event method |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: using the "epoil" event method |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: using the "epoil" event method |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: using the "epoil" event method |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: using the "epoil" event method |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: using the "epoil" event method |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: start worker processes |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: start worker processes |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: start worker processes |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: start worker processes |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: start worker processes |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: start worker processes |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: start worker processes |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: start worker processes |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: start worker processes |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: start worker process |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: start worker processes |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: start worker process |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: start worker processes |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: start worker processes |
feverseproxy 1 | 2023/02/12 21:00:35 [notice] I#1: start worker processes |
feverseproxy 1 | 2023/02/12 21:0
```

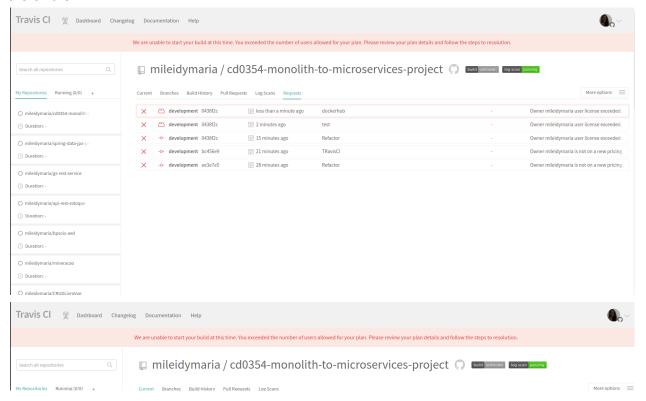


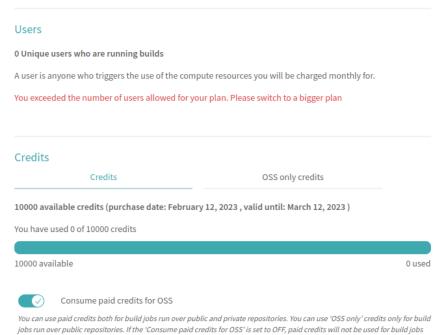
Part 3 - Set up Travis continuous integration pipeline



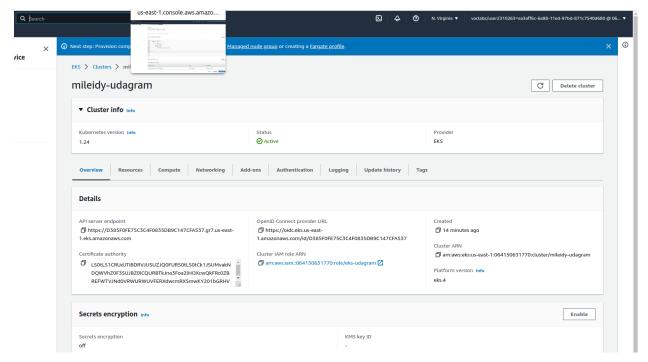


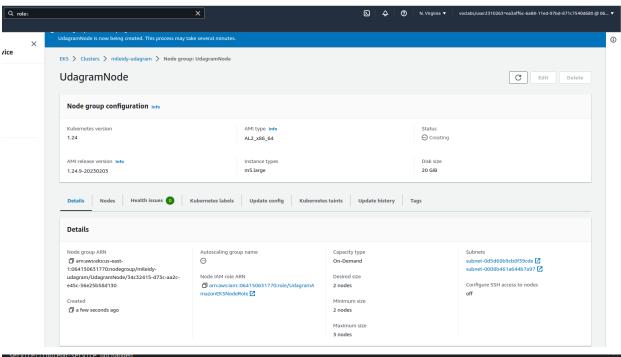
Had troubles with TravisCI: I wasn't able to trigger builds. Put some screenshots below to show the errors.





Part 4 - Container Orchestration with Kubernetes





```
Service/Interior-service unichanged
deployment.apps/reverseproxy unchanged
service/reverseproxy unchanged
service/reversepro
```

```
Name:
Namespace:
Labels:
Annotations:
Selector:
                                                                                                                                     backend-user
default
appeackend-user
                                                                                                                                   <none>
app=backend-user
ClusterIP
SingleStack
IPv4
10.100.55.218
10.100.55.218
8088 8080/TCP
8080/TCP
172.31.17.208:8080,172.31.90.108:8080
                                Type:
IP Family Policy:
IP Families:
                            Port: 8080 E
TargetPort: 8080/TC
Endpoints: 172.31
Session Affinity: None
Events: <none>
                                                                                                                                   frontend-service
default
<none>
<none>
app=frontend
ClusterIP
SingleStack
IPv4
10.100.240.235
10.100.240.235
88 80/TCP
80/TCP
172.31.19.227:80,172.31.92.126:80
None
                            Name:
Namespace:
Labels:
Annotations:
Selector:
                                Type:
IP Family Policy:
IP Families:
                            kubernetes
default
                          Namespace:
Labels:
                                                                                                                                   component=apiserver
provider=kubernetes
                         Annotations:
Selector:
                                                                                                                                  <none>
<none>
ClusterIP
SingleStack
IPv4
10.100.0.1
10.100.0.1
https 443/TCP
443/TCP
172.31.23.158:443,172.31.89.251:443
                            Type:
IP Family Policy:
IP Families:
                         Endpoints: 172.31.
Session Affinity: None
Events: <none>
                       Name:
Namespace:
Labels:
Annotations:
Selector:
                                                                                                                                                                      publicfrontend
default
app=frontend
                                                                                                                                                                      app=frontend
<none>
app=frontend
LoadBalancer
SingleStack
IPv4
10.100.62.8
10.100.62.8
a4c2a6ce111f44490843399bcc2ca517-1722375539.us-east-1.elb.amazonaws.com
<unset> 80/TCP
80/TCP
<unset> 31714/TCP
                          Type:
IP Family Policy:
IP Families:
IP:
                       | IP: | 10.100.62.8 |
| IPs: | 10.00.62.8 |
| IPs: | 10.100.62.8 |
|
                                                                                                    reverseproxy
default
<none>
<none>
app=reverseproxy
ClusterIP
SingleStack
IPv4
10.100.102.254
10.100.102.254
10.100.102.254
8080 8080/TCP
8080/TCP
172.31.19.27:8080,172.31.81.236:8080
None
  Name:
Namespace:
Labels:
Annotations:
Selector:
Selector: app=everseproxy
Type: ClusterIP
IP Family Policy: singleStack
IP Families: IPv4
IP: 10.100.102.254
IPs: 10.100.102.254
IPs: 10.100.102.254
Port: 8080 8080/TCP
Endpoints: 172.31.19.27:8080,172.31.81.236:8080
Session Affinity: 172.31.19.27:8080,172.31.81.236:8080
No resources found in default namespace.
mileidy@ideapad-mileidy:-/Documents/study/AWS/udacity-nanodegree-cloud-developer/monolith-to-misroservice/cd0354-monolith-to-microservices-project/udagram-fr
```

Part 5. Logging

```
deployment.apps/backend-user configured
service/backend-user configured
service/backend-user configured
deployment.apps/reverseproxy configured
service/reverseproxy unchanged
service/reverseproxy-footsservices-project/k8s-deploy$ kubectl g
NAME
sexport StatUs
service/cd0354-monolith-to-microservices-project/k8s-deploy$ kubectl g
NAME
backend-sec-7b65047ddbd-7b4m5
1/1 Running 0 2m25s
backend-user-54m9648dcc-ged44 1/1 Running 0 2m26s
backend-user-54m9648dcc-ged44 1/1 Running 0 2m26s
backend-user-54m9648dcc-ged44 1/1 Running 0 2m25s
frontend-65ffdd9c-ged44 1/1 Running 0 1m0
frontend-65ffdd9c-ged46 1/1 Running 0 1m0
reverseproxy-6574099665-ng5pd 1/1 Running 0 1m0
reverseproxy-6574099665-size-spg 1/1 Running 0 2m24s
```

```
reverseproxy-65/4559656-szqp9 1/1 Running 0 Zm2ls
*mileiwheideanad-mileidy:-/Documents/study/MMS/udacity-nanodegree-cloud-developer/monolith-to-misroservice/cd0354-monolith-to-microservices-project/MS-deploy$ kubectl logs backend-user-5409648cdc-kombl
      > udagram-api@2.0.0 prod /usr/src/app
> tsc && node ./www/server.is
        Initialize database connection...

Executing (default): CREAE TABLE I NOT EXISTS 'FeedItem' ('id' SERIAL , 'coption' WARCHAR(255), 'url' WARCHAR(255), 'createdAt' IDMESTAMP WITH TIDE ZDME, 'updatedAt' IDMESTAMP WITH TIDE ZDME, 'RupdatedAt' IDMESTAMP WI
```

```
**ileidygideapad-mileidy:-/Documents/study/M65/datcity-manodegree-cloud-developer/monolith-to-misroservice/cd0354-monolith-to-microservices-project/M8s-deploy$ kubectl logs frontend-865fdsf9c-nlang/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.sh: Looking /docker-entrypoint.dh: Delisten on-spo6-by-default.sh
10-listen on-spo6-by-default.sh: info: Enabled listen on IPAs in /etc/purporonf /dofathit.comf
/docker-entrypoint.sh: Launching /docker-entrypoint.dh/Dels-uncabeto-on-spolates: on-footo-entrypoint.sh: Launching /docker-entrypoint.dh/Dels-uncabeto-on-spolates: on-footo-entrypoint.sh: Launching /docker-entrypoint.dh/Dels-uncabeto-on-spolates: on-footo-entrypoint.sh: Configuration complete: ready for start up /docker-entrypoint.sh: Configuration complete: ready for start up /docker-en
```

- x.indexrelid) AS definition FROM pg_class t, pg_class i, pg_index ix, pg_attribute a WEFE t.old = ix.indrelid ANO i.old = ix.indexrelid ANO a.attrelid = t.old ANO t.relkind = 'r' and t.relname = 'Feedi i.relname, ix.indexrelid, ix.indisprimary, ix.indisprimary,
- > udagram-api@2.0.0 prod /usr/src/app > tsc && node ./www/server.js

Initialize database connection...

Executing (default): GREAT ERLE IF NOT EXISTS "FeedItem" ("id" SERIAL , "caption" VAROWR(255), "url" VAROWR(255), "createdat" IDESIMP WITH IDE ZONE, "updatedat" IDESIMP WITH IDE ZONE, "updatedat" IDESIMP WITH IDE ZONE, "updatedat" IDESIMP WITH IDE ZONE, "RIPMRY KEY ("id"); Executing (default): SERICI : refumer AS name, ix.indisprismry, ix.indi