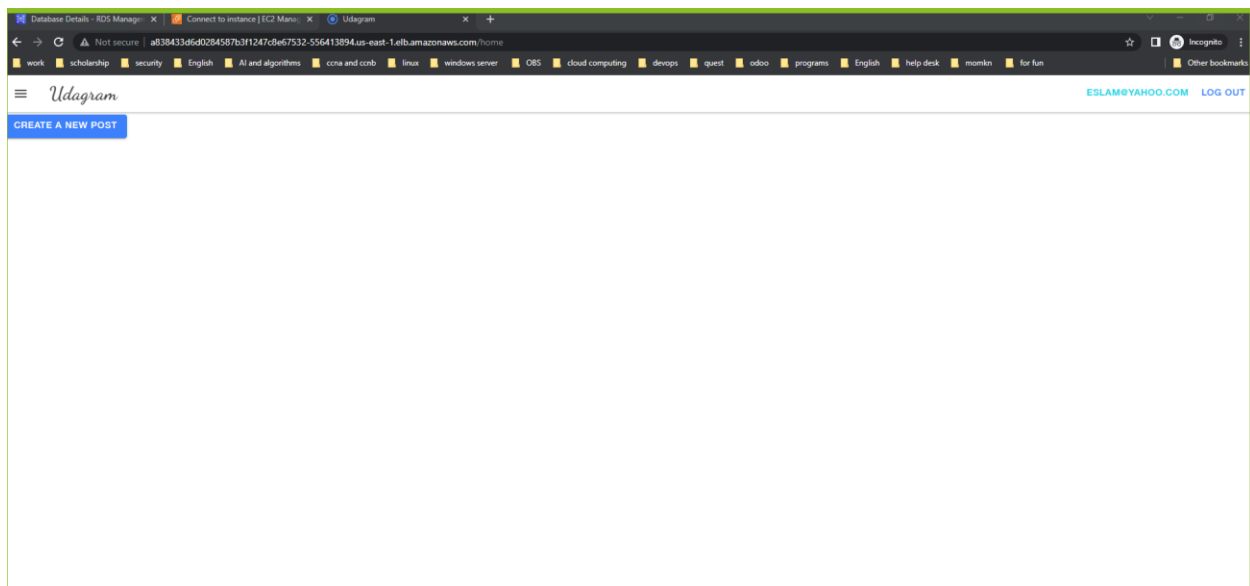


```
cloud$eslam-grafana-freeipa:~$ sudo su
root@eslam-grafana-freeipa:/home/cloud# kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
udagram-api-feed-97f964584-8tlwx    1/1     Running   0           16m
udagram-api-feed-97f964584-dtk4t    1/1     Running   0           16m
udagram-api-feed-97f964584-qlpdu    1/1     Running   0           16m
udagram-api-user-7c84647bc5-6v59t   1/1     Running   0           17m
udagram-api-user-7c84647bc5-lrmb9    1/1     Running   0           17m
udagram-frontend-fcbbcc8c-6ljys     1/1     Running   0           2m11s
udagram-frontend-fcbbcc8c-lhdv4     1/1     Running   0           2m11s
udagram-reverseproxy-55967dd98-dmp2t 1/1     Running   0           13m
udagram-reverseproxy-55967dd98-x6d4s 1/1     Running   0           13m
root@eslam-grafana-freeipa:/home/cloud# kubectl logs -f udagram-frontend-fcbbcc8c-lhdv4
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2023/04/15 13:45:41 [notice] i#1: using the "epoll" event method
2023/04/15 13:45:41 [notice] i#1: nginx/1.23.4
2023/04/15 13:45:41 [notice] i#1: built by gcc 12.2.1 20220924 (Alpine 12.2.1_git20220924-r4)
2023/04/15 13:45:41 [notice] i#1: OS: Linux 5.10.173-154.642.amzn2.x86_64
2023/04/15 13:45:41 [notice] i#1: getrlimit(RLIMIT_Nofile): 1048576:1048576
2023/04/15 13:45:41 [notice] i#1: start worker processes
2023/04/15 13:45:41 [notice] i#1: start worker process 30
2023/04/15 13:45:41 [notice] i#1: start worker process 31
^C
root@eslam-grafana-freeipa:/home/cloud# kubectl logs -f udagram-api-user-7c84647bc5-lrmb9
^C
> udagram-ap@02.0.0 prod /usr/src/app
> tsc && node ./www/server.js

Initialize database connection...
Executing (default): CREATE TABLE IF NOT EXISTS "User" ("email" VARCHAR(255) , "passwordHash" VARCHAR(255), "createdAt" TIMESTAMPT WITH TIME ZONE, "updatedAt" TIMESTAMPT WITH TIME ZONE, PRIMARY KEY ("email"));
Executing (default): SELECT i.relname AS name, ix.indisprimary AS primary, ix.indisunique AS unique, ix.indkey AS indkey, array_agg(a.attname) AS column_indexes, array_agg(a.attname) AS column_names, pg_get_indexdef(ix.indexrelid) AS definition FROM pg_class t, pg_class i, pg_index ix, pg_attribute a WHERE t.oid = ix.indexrelid AND a.attrelid = t.oid AND t.relkind = 'r' and t.relname = 'User' GROUP BY i.relname, ix.indexrelid, ix.indisprimary, ix.indisunique, ix.indkey ORDER BY i.relname;
server running http://localhost:8100
press CTRL+C to stop server
Executing (default): SELECT "email", "passwordHash", "createdAt", "updatedAt" FROM "User" AS "User" WHERE "User"."email" = 'eslam@yahoo.com';
Executing (default): INSERT INTO "User" ("email","passwordHash","createdAt","updatedAt") VALUES ($1,$2,$3,$4) RETURNING *;
```



```
root@eslam-grafana-freeipa:/home/cloud# kubectl get pods
NAME                                READY    STATUS    RESTARTS   AGE
udagram-api-feed-97f964584-8tlwx    1/1      Running   0           23m
udagram-api-feed-97f964584-dtk4t    1/1      Running   0           23m
udagram-api-feed-97f964584-qlpdv    1/1      Running   0           23m
udagram-api-user-7c84647bc5-6v59t   1/1      Running   0           23m
udagram-api-user-7c84647bc5-lrmb9    1/1      Running   0           23m
udagram-frontend-6cbbcccd8c-6ljrs   1/1      Running   0           8m46s
udagram-frontend-6cbbcccd8c-lhdv4    1/1      Running   0           8m46s
udagram-reverseproxy-55967dd98-dep2t 1/1      Running   0           20m
udagram-reverseproxy-55967dd98-x6d4s 1/1      Running   0           20m

root@eslam-grafana-freeipa:/home/cloud# ^C
root@eslam-grafana-freeipa:/home/cloud# kubectl get hpa
error: the server doesn't have a resource type "hpa"
root@eslam-grafana-freeipa:/home/cloud# kubectl get hpa
NAME                                REFERENCE    TARGETS    MINPODS    MAXPODS    REPLICAS    AGE
udagram-frontend                    Deployment/udagram-frontend  0%/70%      2          5          2          32s
root@eslam-grafana-freeipa:/home/cloud# kubectl describe hpa
Name:                                udagram-frontend
Namespace:                           default
Labels:                               <none>
Annotations:                           <none>
CreationTimestamp:                    Sat, 15 Apr 2023 13:55:21 +0000
Reference:                            Deployment/udagram-frontend
Metrics:                               ( current / target )
  resource cpu on pods  (as a percentage of request):
    Min replicas:                  2
    Max replicas:                  5
Deployment pods:                      2 current / 2 desired
Conditions:
  Type                               Status  Reason
  ----                               -
AbleToScale                          True    ScaleDownStabilized
ScalingActive                         True    the HPA was able to successfully calculate a replica count from cpu resource utilization (percentage of request)
ScalingLimited                        False   the desired count is within the acceptable range
Events:                               <none>
root@eslam-grafana-freeipa:/home/cloud#
```

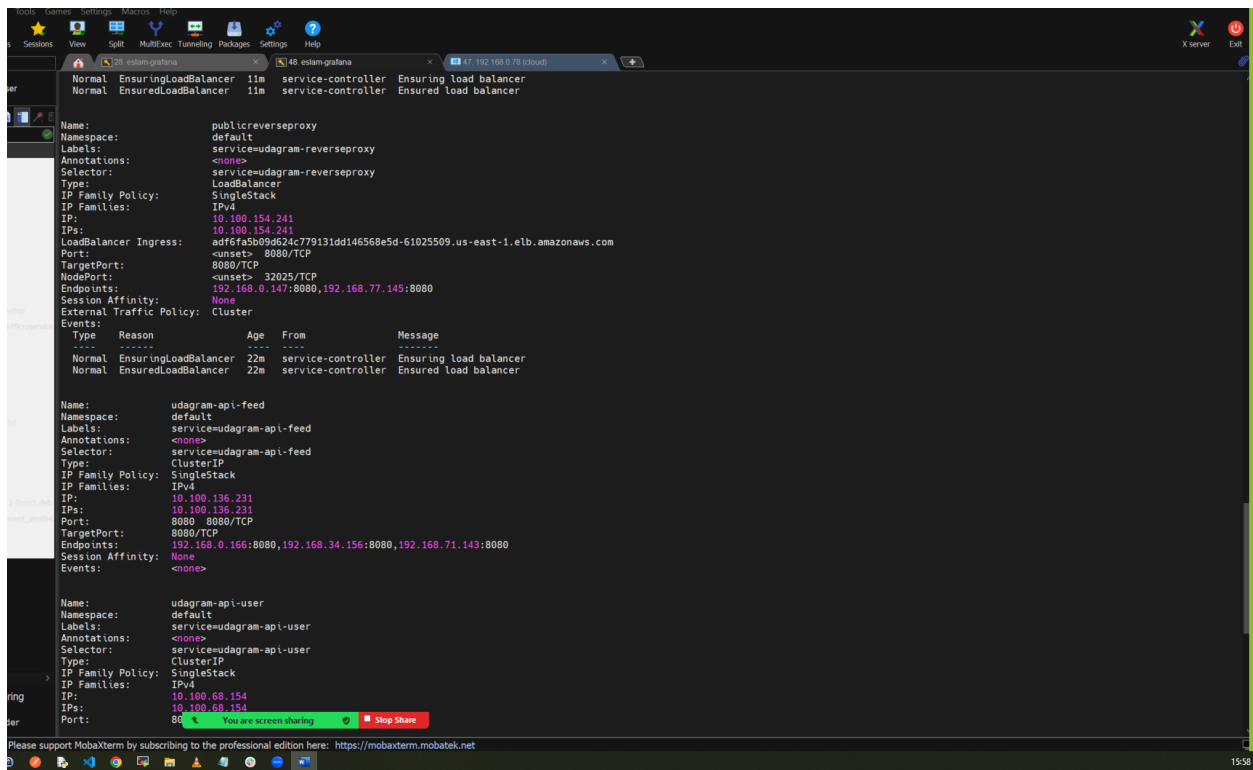
```
root@eslam-grafana-freeipa:/home/cloud# kubectl get svc
NAME                                TYPE        CLUSTER-IP    EXTERNAL-IP    PORT(S)    AGE
publicfrontend                     LoadBalancer  10.100.0.1     <none>          443/TCP    123m
publicreverseproxy                  LoadBalancer  10.100.7.109  a838433d6d0284587b3f1247c8e67532-556413894.us-east-1.elb.amazonaws.com  80:31814/TCP  11m
udagram-api-feed                    ClusterIP     10.100.136.231 <none>          8080/TCP   26m
udagram-api-user                    ClusterIP     10.100.68.154  <none>          8080/TCP   26m
udagram-frontend                    ClusterIP     10.100.214.153 <none>          8100/TCP   11m
udagram-reverseproxy                 ClusterIP     10.100.229.161 <none>          8080/TCP   23m

root@eslam-grafana-freeipa:/home/cloud# kubectl describe svc
Name:                                publicfrontend
Namespace:                           default
Labels:                               component=apiserver
Annotations:                           provider=kubernetes
Selector:                              <none>
Type:                                  ClusterIP
IP Family Policy:                      SingleStack
IP Families:                           IPv4
IP:                                    10.100.0.1
IPs:                                   10.100.0.1
Port:                                  https 443/TCP
TargetPort:                            443/TCP
Endpoints:                             192.168.109.199:443,192.168.158.60:443
Session Affinity:                      None
Events:                                <none>

Name:                                publicreverseproxy
Namespace:                           default
Labels:                               service=udagram-reverseproxy
Annotations:                           <none>
Selector:                              service=udagram-reverseproxy
Type:                                  LoadBalancer
IP Family Policy:                      SingleStack
IP Families:                           IPv4
IP:                                    10.100.7.109
IPs:                                   10.100.7.109
LoadBalancer Ingress:                  a838433d6d0284587b3f1247c8e67532-556413894.us-east-1.elb.amazonaws.com
Port:                                  <unset> 80/TCP
TargetPort:                            80/TCP
NodePort:                              <unset> 31814/TCP
Endpoints:                             192.168.55.167:80,192.168.6.194:80
Session Affinity:                      None
External Traffic Policy:               Cluster
Events:
  Type    Reason              Age    From          Message
  ----    -
Normal   EnsuringLoadBalancer  11m    service-controller   Ensuring load balancer
Normal   EnsuredLoadBalancer  11m    service-controller   Ensured load balancer

Name:                                publicreverseproxy
Namespace:                           default
Labels:                               service=udagram-reverseproxy
Annotations:                           <none>
root@eslam-grafana-freeipa:/home/cloud#
```

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The screenshot displays a MobaXterm terminal window with a dark theme. The terminal shows the output of a command to describe Kubernetes services. Three services are listed: `udagram-api-user`, `udagram-frontent`, and `udagram-reverseproxy`. Each service entry includes details such as Name, Namespace, Labels, Annotations, Selector, Type, IP Family Policy, IP Families, IP, IPs, Ports, TargetPort, Endpoints, Session Affinity, and Events. The `udagram-api-user` service has endpoints `192.168.0.156:8080, 192.168.34.156:8080, 192.168.71.143:8080`. The `udagram-frontent` service has endpoints `192.168.55.187:80, 192.168.6.194:80`. The `udagram-reverseproxy` service has endpoints `192.168.0.147:8080, 192.168.77.145:8080`. Below the terminal window, a web browser shows the Travis CI build page for the repository `eslammohamedhelmy-git / Refactor-Monolith-to-Microservices`. The build status is `build passing` and the log scan status is `log scan passing`. The build log shows the following steps: `worker information`, `Build system information`, `sudo systemctl start docker`, `git clone --depth=50 --branch=main https://github.com/[secure]-git/Refactor-Monolith-to-Microservices.git`, and `Setting environment variables from repository settings`.

APP URL: <http://a838433d6d0284587b3f1247c8e67532-556413894.us-east-1.elb.amazonaws.com/>