Techinical Quiz

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Installing Kong Manager

Using below docker compose file from Github gist to install Kong Enterprise Edition

Github gist link for `docker-compose.yaml` :
https://gist.github.com/khaikong/5e44b80364f62f6048f2cfbc47d5fe2e

When running `docker-compos up` make sure you have a env var for the license;

```
export KONG_LICENSE_DATA=`cat /tmp/license.json`;
```

Problem 1

Kong Manager access is via http://localhost:8002 (http ports are used to avoid problems with self-signed SSL certificates)
When logging in, you will see a problem. There are configuration fixes needed to allow the logon.

Hints

https://docs.konghq.com/enterprise/2.3.x/kong-manager/authentication/sessions/#example-configurations
https://docs.konghq.com/enterprise/2.3.x/kong-manager/authentication/super-admin/

Activity 1

Objective: Create an Upstream with two targets and ensure requests are going to both targets. Manually mark one target as unhealthy and check requests are now only routed to the healthy target

1. In Kong Manager, create an Upstream with two targets (use the name `httpbin-upstream` for the Upstream) that have the following hosts;
    - httpbin.org:80
    - localhost:80
2. Create a Service pointing to the Upstream (use `httpbin-upstream` for the Host in the Service) and `/anything` for the path
3. Create a Route pointing to the Service with `/echo` as the path
4. Using curl, send requests to the API hosted in Kong which should echo back the headers/body etc.

```
curl http://localhost:8000/echo
```

5. Using the Admin API, mark one of the Targets unhealthy
   https://docs.konghq.com/enterprise/2.3.x/admin-api/#target-object
6. Send more requests to the API and note which target in now used
7. Using the Admin API, mark the other Target unhealthy
8. Send more requests to the API, and observe what happens.
9. Using the Admin API, mark the original Target healthy

Activity 2

Objective: Enabling key authentication and rate limiting for API endpoint.

1. Add key authentication to the `Echo` service.
2. Create two consumers and add a different rate limit for each consumer
3. Send requests to the API with the apikey and validate the two consumers are allowed different numbers of requests

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Activity 3 (Bonus point)

Objective: Setting up Kong Developer Portal
Bonus points for getting the Dev Portal working (with authentication). This will require (at a minimum) setting a similar session cookie parameter similar to what was created for Kong Manager in Problem 1

Activity 4 (Bonus Point)

Objective: Setting up Kong with Kong Ingress controller(KIC) with working ingress with `echo` backend.

Bonus point to get setup Kong with Ingress controller in Minikube

Hints :

https://docs.konghq.com/kubernetes-ingress-controller/1.2.x/deployment/minikube/#setup-minikube

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Reference Material

You will likely need to refer to the documentation for help. Most of the answers are in Kong Documentation below :

https://docs.konghq.com/enterprise/
https://docs.konghq.com/hub/