Discovering Pod Resource Usage with Kubernetes Metrics

You are working for BeeBox, a company that provides regular shipments of bees to customers. The company is in the process of building a Kubernetes-based infrastructure for some of their software.

It looks like a pod in the cluster may be using more CPU than expected. Search the beebox-mobile namespace for pods with the label app=auth, and determine which of these pods is using the most CPU. Save the name of that pod to a file for future reference.

The cluster does not have Metrics Server installed, so you will need to install it in order to perform this task.

Install Kubernetes Metrics Server

The lab environment I am in is setup with kubeadm and the default componenets.yaml for metric server requires a couple tweaks.

1. Install the Kubernetes metric server

```
kubectl apply -f https://raw.githubusercontent.com/ACloudGuru-Resources/content-cka-resources/master/metrics-server-components.yaml
```

The link provided above is from the instructor. This is all the components that we need for the Kubernetes metric server.

It will take a while for the metric server to get fully up and running and start collection metrics about the pod.

2. We can now query the metric server API directly just to make sure it is up and running.

```
kubectl get --raw /apis/metrics.k8s.io/
```

It gave us a response but not the response we wanted. Still will take some time for this to complete.

3. See the pods memory/CPU usage under the beebox-mobile namespace

```
kubectl top pod -n beebox-mobile --sort-by cpu --selector app=auth
```

Figure 1-1

```
cloud_user@k8s-control:~$ kubectl top pod -n beebox-mobile --sort-by cpu --selector app=auth
NAME           CPU(cores)   MEMORY(bytes)
auth-proc      100m         6Mi
beebox-auth1   0m           0Mi
beebox-auth2   0m           0Mi
cloud_user@k8s-control:~$
```

^ Now you can see data coming in under that namespace

Locate the CPU-Using Pod and Write Its Name to a File

4. In the beebox-mobile namespace, determine which pod with the label app=auth is using the most CPU

```
kubectl top pod -n beebox-mobile --sort-by cpu --selector app=auth
```

5. So once we find what we are looking for which is the “auth-proc” pod, we have to write the name of that pod to a file

```
echo auth-proc > /home/cloud_user/cpu-pod-name.txt
```

So we installed Kubernetes Metrics Server and located the CPU-Using Pod and Write its name to a file.