Create a Cluster

This lesson focuses on creating a cluster and the necessary requirements and gists for this chapter.

WE'LL COVER THE FOLLOWING

- Pulling the code
    - Additional necessary things
- Gists and specifications

Pulling the code

We'll continue using definitions from the vfarcic/k8s-specs repository. To be on the safe side, we'll pull the latest version first.

> 🔍 All the commands from this chapter are available in the 03-monitor.sh Gist.

```
cd k8s-specs

git pull
```

Additional necessary things

In this chapter, we'll need a few things that were not requirements before, even though you have probably already used them.

We'll start using UIs so we'll need **NGINX Ingress Controller** that will route traffic from outside the cluster. We'll also need the environment variable **LB_IP** with the IP through which we can access worker nodes. We'll use it to configure a few Ingress resources.

Gists and specifications

Choose the flavor you want and run the commands from its `.sh` file to create the cluster and the required specifications needed in this chapter. Due to new requirements (Ingress and `LB_IP`), all the cluster setup **Gists** are new.

> **NOTE:** In the end, you will see a command to `DELETE` the cluster too. Don’t execute that command. Use the `DELETE` command only when you need to delete the cluster, preferably at the end of the chapter.

> ### A note to Docker for Desktop users
>
> 🔍 You'll notice `LB_IP=[...]` command at the end of the Gist. You'll have to replace `[...]` with the IP of your cluster. Probably the easiest way to find it is through the `ifconfig` command. Just remember that it cannot be `localhost`, but the IP of your laptop (e.g., `192.168.0.152`).

> ### A note to minikube and Docker for Desktop users
>
> 🔍 We have to increase memory to 3GB. Please have that in mind in case you were planning only to skim through the **Gist** that matches your Kubernetes flavor.

GKE

- gke-monitor.sh: **GKE** with 3 n1-standard-1 worker nodes, **nginx Ingress**, and cluster IP stored in environment variable **LB_IP**

EKS

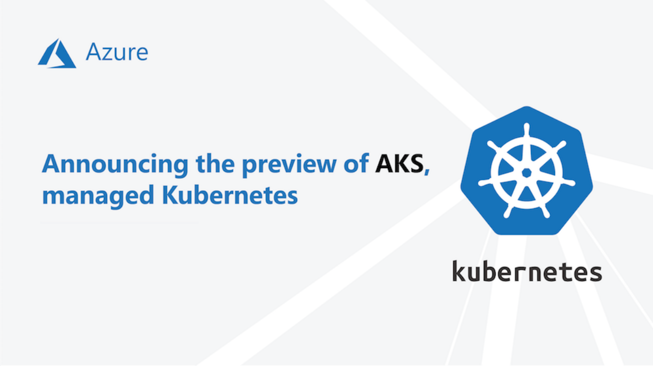
- eks-monitor.sh: **EKS** with 3 t2.small worker nodes, **nginx**

Ingress, **Metrics Server**, and

cluster IP stored in environment variable **LB_IP**

AKS

- aks-monitor.sh: **AKS** with 3 Standard_B2s worker nodes, **nginx Ingress**, and cluster IP stored in environment variable **LB_IP**



Docker for Desktop

- docker-monitor.sh: **Docker for Desktop** with **2 CPUs, 3 GB RAM**, **nginx Ingress**, **Metrics Server**, and cluster IP stored in environment variable **LB_IP**

Minikube

- minikube-monitor.sh: **minikube** with **2 CPUs, 3 GB RAM**, **ingress**, **storage-provisioner**, **default-storageclass**, and **metrics-server** addons enabled, and cluster IP stored in environment variable **LB_IP**

Now that we have a cluster, we'll choose the tools we'll use to accomplish our goals, in the next lesson.