

*Lab 09c - Implement Azure Kubernetes Service***Task 4: Scale containerized workloads in the Azure Kubernetes service cluster**

Scaling horizontally the number of pods and then number of cluster nodes.

```

Bash
elizabeth [ ~ ]$ RESOURCE_GROUP='az104-09c-rg1'

AKS_CLUSTER='az104-9c-aks1'

az aks get-credentials --resource-group $RESOURCE_GROUP --name $AKS_CLUSTER
Merged "az104-9c-aks1" as current context in /home/elizabeth/.kube/config
elizabeth [ ~ ]$ kubectl get nodes
NAME                                STATUS    ROLES    AGE    VERSION
aks-agentpool-38023619-vmss000000  Ready    agent    4m46s  v1.24.10
elizabeth [ ~ ]$ kubectl create deployment nginx-deployment --image=nginx
deployment.apps/nginx-deployment created
elizabeth [ ~ ]$ kubectl get pods
NAME                                READY    STATUS    RESTARTS    AGE
nginx-deployment-85c6d5f6dd-hdw9x  1/1      Running   0            12s
elizabeth [ ~ ]$ kubectl get deployment
NAME    READY    UP-TO-DATE    AVAILABLE    AGE
nginx-deployment  1/1      1              1            34s
elizabeth [ ~ ]$ kubectl expose deployment nginx-deployment --port=80 --type=LoadBalancer
service/nginx-deployment exposed
elizabeth [ ~ ]$ kubectl get service
NAME                TYPE        CLUSTER-IP    EXTERNAL-IP    PORT(S)          AGE
kubernetes          ClusterIP   10.0.0.1      <none>         443/TCP          7m6s
nginx-deployment    LoadBalancer 10.0.235.162  20.246.157.100 80:30274/TCP     18s
elizabeth [ ~ ]$ kubectl scale --replicas=2 deployment/nginx-deployment
deployment.apps/nginx-deployment scaled
elizabeth [ ~ ]$ kubectl get pods
NAME                                READY    STATUS    RESTARTS    AGE
nginx-deployment-85c6d5f6dd-9lm8d  1/1      Running   0            31s
nginx-deployment-85c6d5f6dd-hdw9x  1/1      Running   0            3m43s
elizabeth [ ~ ]$ RESOURCE_GROUP='az104-09c-rg1'

AKS_CLUSTER='az104-9c-aks1'

az aks scale --resource-group $RESOURCE_GROUP --name $AKS_CLUSTER --node-count 2
/ Running ..
[ ]- Running ..

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I re-ran the az aks scale command because it was taking way too long – that’s why it appears twice

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NAME                                READY   STATUS    RESTARTS   AGE
nginx-deployment-85c6d5f6dd-9lm8d  1/1    Running   0           31s
nginx-deployment-85c6d5f6dd-hdw9x  1/1    Running   0           3m43s
elizabeth [ ~ ]$ RESOURCE_GROUP='az104-09c-rg1'

AKS_CLUSTER='az104-9c-aks1'

az aks scale --resource-group $RESOURCE_GROUP --name $AKS_CLUSTER --node-count 2
/ Running ..
az aks scale --resource-group $RESOURCE_GROUP --name $AKS_CLUSTER --node-count 2 - Runni
- Running ..
{
  "aadProfile": null,
  "addonProfiles": {
    "azureKeyvaultSecretsProvider": {
      "config": null,
      "enabled": false,
      "identity": null
    },
    "azurepolicy": {
      "config": null,
      "enabled": false,
      "identity": null
    }
  },
  "agentPoolProfiles": [
    {
      "availabilityZones": null,
      "count": 2,
      "creationData": null,
      "currentOrchestratorVersion": "1.24.10",
      "enableAutoScaling": false,
      "enableEncryptionAtHost": null,
      "enableFips": false,
      "enableNodePublicIp": false,
      "enableUltraSsd": null,
      "gpuInstanceProfile": null,
```

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"publicNetworkAccess": null,
"resourceGroup": "az104-09c-rg1",
"securityProfile": {
  "azureKeyVaultKms": null,
  "defender": null,
  "imageCleaner": null,
  "workloadIdentity": null
},
"servicePrincipalProfile": {
  "clientId": "msi",
  "secret": null
},
"sku": {
  "name": "Base",
  "tier": "Free"
},
"storageProfile": {
  "blobCsiDriver": null,
  "diskCsiDriver": {
    "enabled": true
  },
  "fileCsiDriver": {
    "enabled": true
  },
  "snapshotController": {
    "enabled": true
  }
},
"systemData": null,
"tags": null,
"type": "Microsoft.ContainerService/ManagedClusters",
"windowsProfile": null,
"workloadAutoScalerProfile": {
  "keda": null
}
}
elizabet [ ~ ]$
```

Terminal container button

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    "keda": null
  }
}
elizabet [ ~ ]$ kubectl get nodes
NAME                                STATUS    ROLES    AGE      VERSION
aks-agentpool-38023619-vmss000000 Ready     agent    18m      v1.24.10
aks-agentpool-38023619-vmss000001 Ready     agent    5m27s    v1.24.10
elizabet [ ~ ]$ kubectl scale --replicas=10 deployment/nginx-deployment
deployment.apps/nginx-deployment scaled
elizabet [ ~ ]$ kubectl get pods
NAME                                READY    STATUS    RESTARTS   AGE
nginx-deployment-85c6d5f6dd-4xnvx   1/1      Running   0           9s
nginx-deployment-85c6d5f6dd-6887q   1/1      Running   0           9s
nginx-deployment-85c6d5f6dd-7r464   1/1      Running   0           9s
nginx-deployment-85c6d5f6dd-95r8q   1/1      Running   0           9s
nginx-deployment-85c6d5f6dd-9lm8d   1/1      Running   0          10m
nginx-deployment-85c6d5f6dd-gjmdd   1/1      Running   0           9s
nginx-deployment-85c6d5f6dd-hdw9x   1/1      Running   0          13m
nginx-deployment-85c6d5f6dd-l4bpb   1/1      Running   0           9s
nginx-deployment-85c6d5f6dd-vb79h   1/1      Running   0           9s
nginx-deployment-85c6d5f6dd-whb9m   1/1      Running   0           9s
elizabet [ ~ ]$ kubectl get pod -o=custom-columns=NODE:.spec.nodeName,POD:.metadata.name
NODE                                POD
aks-agentpool-38023619-vmss000001 nginx-deployment-85c6d5f6dd-4xnvx
aks-agentpool-38023619-vmss000000 nginx-deployment-85c6d5f6dd-6887q
aks-agentpool-38023619-vmss000001 nginx-deployment-85c6d5f6dd-7r464
aks-agentpool-38023619-vmss000001 nginx-deployment-85c6d5f6dd-95r8q
aks-agentpool-38023619-vmss000000 nginx-deployment-85c6d5f6dd-9lm8d
aks-agentpool-38023619-vmss000000 nginx-deployment-85c6d5f6dd-gjmdd
aks-agentpool-38023619-vmss000000 nginx-deployment-85c6d5f6dd-hdw9x
aks-agentpool-38023619-vmss000001 nginx-deployment-85c6d5f6dd-l4bpb
aks-agentpool-38023619-vmss000001 nginx-deployment-85c6d5f6dd-vb79h
aks-agentpool-38023619-vmss000000 nginx-deployment-85c6d5f6dd-whb9m
elizabet [ ~ ]$ kubectl delete deployment nginx-deployment
deployment.apps "nginx-deployment" deleted
elizabet [ ~ ]$

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