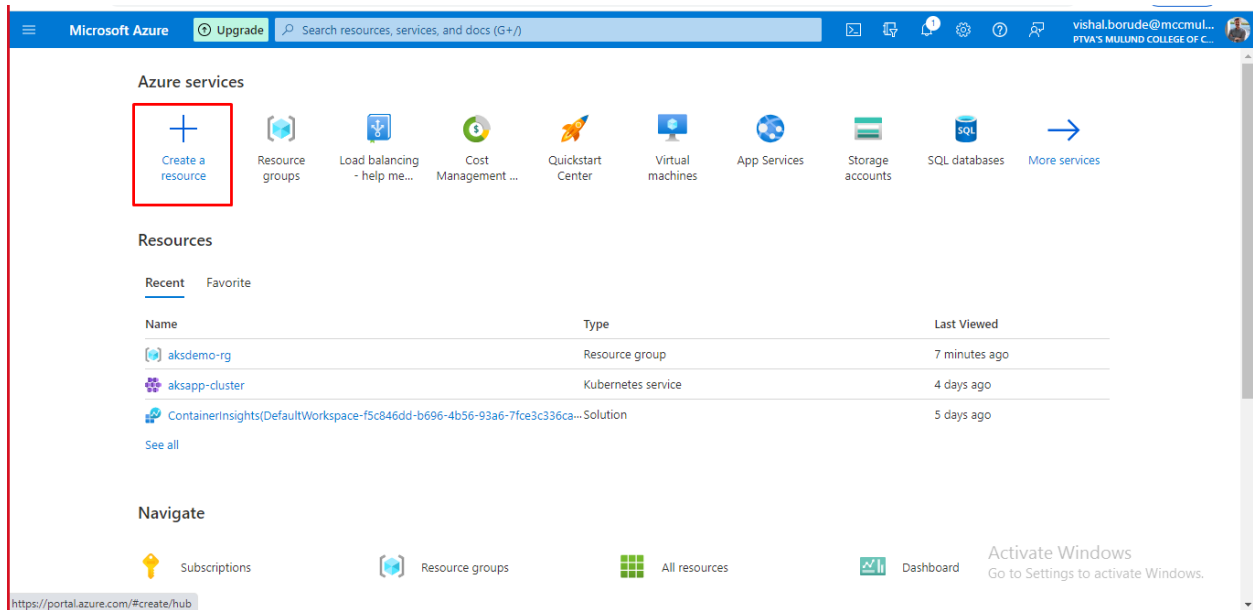
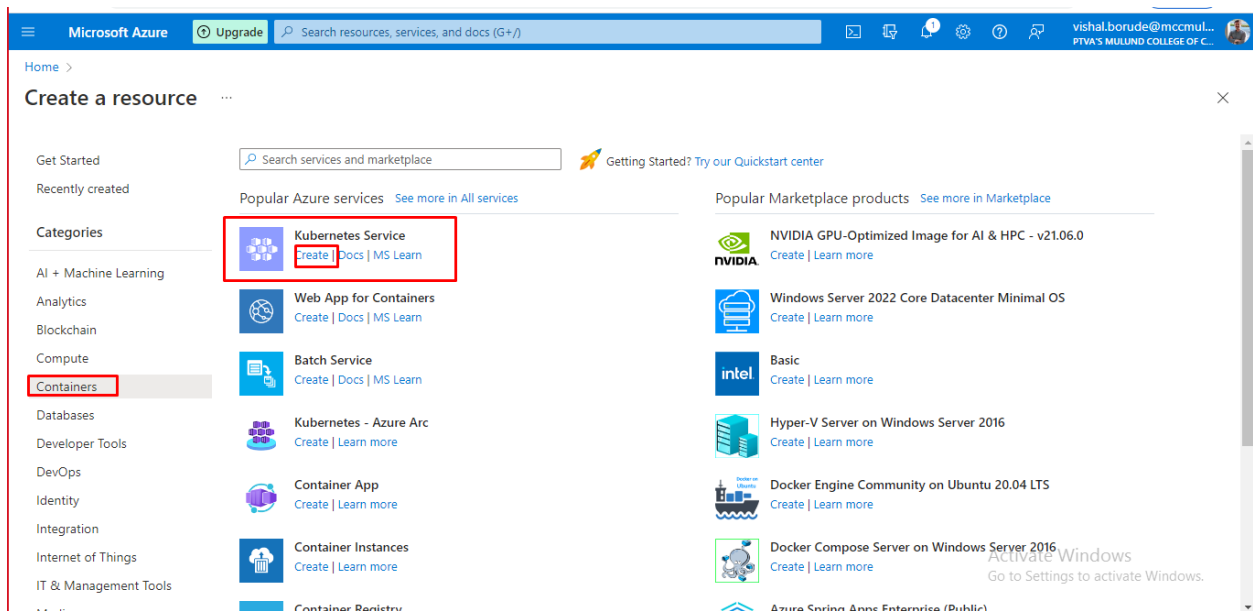


Creating AKS Cluster

1.



2.



3.

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Home > Create a resource >

Create Kubernetes cluster

Basics Node pools Access Networking Integrations Advanced Tags Review + create

Azure Kubernetes Service (AKS) manages your hosted Kubernetes environment, making it quick and easy to deploy and manage containerized applications without container orchestration expertise. It also eliminates the burden of ongoing operations and maintenance by provisioning, upgrading, and scaling resources on demand, without taking your applications offline.
[Learn more about Azure Kubernetes Service](#)

Project details

Select a subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * (i) Free Trial (v)

Resource group * (i) (New) aksdemo-rg (v)
[Create new](#)

Cluster details

Cluster preset configuration Standard (\$\$) (v)

To quickly customize your Kubernetes cluster, choose one of the preset configurations above. You can modify these configurations at any time.
[Learn more and compare presets](#)

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4.

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Home > Create a resource >

Create Kubernetes cluster

To quickly customize your Kubernetes cluster, choose one of the preset configurations above. You can modify these configurations at any time.
[Learn more and compare presets](#)

Kubernetes cluster name * (i) aksapp-cluster (v)

Region * (i) (Asia Pacific) South India (v)

Availability zones (i) None (v)

(i) No availability zones are available for the location you have selected.
[View locations that support availability zones](#)

Kubernetes version * (i) 1.23.12 (default) (v)

API server availability (i)

☒ 99.9%
Optimize for availability. 99.95% is available when at least one availability zone is selected.

☐ 99.5%
Optimize for cost.

(i) 99.95% API server availability is recommended for standard configuration, which is available when at least one availability zone is selected.

Primary node pool

[Review + create](#) < Previous Next : Node pools >

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5.

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Home > Create a resource >

Create Kubernetes cluster

Optimize for cost.

99.95% API server availability is recommended for standard configuration, which is available when at least one availability zone is selected.

Primary node pool

The number and size of nodes in the primary node pool in your cluster. For production workloads, at least 3 nodes are recommended for resiliency. For development or test workloads, only one node is required. If you would like to add additional node pools or to see additional configuration options for this node pool, go to the 'Node pools' tab above. You will be able to add additional node pools after creating your cluster. [Learn more about node pools in Azure Kubernetes Service](#)

Node size * ⓘ **Standard DS2 v2**
Standard DS2_v2 is recommended for standard configuration. [Change size](#)

Scale method * ⓘ ☐ Manual ☒ **Autoscale**
Autoscaling is recommended for standard configuration.

Node count range * ⓘ 1 1

[Review + create](#) < Previous Next: Node pools >

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6.

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Home > Create a resource >

Create Kubernetes cluster

Basics Node pools Access **Networking** Integrations Advanced Tags Review + create

You can change networking settings for your cluster, including enabling HTTP application routing and configuring your network using either the 'Kubenet' or 'Azure CNI' options:

- The **kubenet** networking plug-in creates a new VNet for your cluster using default values.
- The **Azure CNI** networking plug-in allows clusters to use a new or existing VNet with customizable addresses. Application pods are connected directly to the VNet, which allows for native integration with VNet features.

[Learn more about networking in Azure Kubernetes Service](#)

Network configuration ⓘ ☐ Kubenet ☒ **Azure CNI**
The Azure CNI plugin requires an IP address from the subnet below for each pod on a node, which can more quickly exhaust available IP addresses if a high value is set for pods per node. Consider modifying the default values for pods per node for each node pool on the "Node pools" tab. [Learn more](#)

Virtual network * ⓘ (New) aksdemo-rg-vnet
[Create new](#)

Cluster subnet * ⓘ (new) default (10.240.0.0/16)

[Review + create](#) < Previous **Next: Integrations >**

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7.

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Home > Create a resource >

Create Kubernetes cluster

Validation passed

Basics Node pools Access Networking Integrations Advanced Tags **Review + create**

Basics

Subscription	Free Trial
Resource group	(new) aksdemo-rg
Region	South India
Kubernetes cluster name	aksapp-cluster
Kubernetes version	1.23.12
Enable automatic upgrades	False

Node pools

Node pools	1
Enable virtual nodes	Disabled

Create < Previous Next > Download a template for automation

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8.

Microsoft Azure Upgrade Search resources, services, and docs (G+)

Home >

microsoft.aks-20221022075047 | Overview

Deployment

Search << Delete Cancel Redeploy Download Refresh

Overview Inputs Outputs Template

Your deployment is complete

Deployment name: microsoft.aks-20221022075047 Start time: 10/22/2022, 8:06:40 AM
Subscription: Free Trial Correlation ID: a1d884f7-ec7f-4a90-9417-579e1b16617f
Resource group: aksdemo-rg

Deployment details

Next steps

- Create a quick start application Recommended
- Create a Kubernetes deployment Recommended
- Integrate automatic deployments within your cluster Recommended
- Connect to cluster Recommended

Go to resource Connect to cluster

Give feedback
Tell us about your experience with deployment

Cost Management
Get notified to stay within your budget and prevent unexpected charges on your bill.
Set up cost alerts >

Container Insights
Comprehensive health and performance data in addition to the default cluster metrics
Go to Azure Monitor insights

Free Microsoft tutorials
Introduction to Docker containers
Build and store container images with Azure Container Registry
Go to Settings to activate Windows.
Introduction to Azure Kubernetes Service

9.

Microsoft Azure | Upgrade | Search resources, services, and docs (G+/)

Home > microsoft.aks-20221022075047 | Overview >

aksapp-cluster | Kubernetes service

Search < > + Create > **Connect** > Start > Stop > Delete > Refresh > Give feedback

Overview

- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Microsoft Defender for Cloud

Kubernetes resources

- Namespaces
- Workloads
- Services and ingress
- Storage
- Configuration

Settings

- Node pools

Essentials

Resource group : [aksdemo-rg](#)

Status : Succeeded (Running)

Location : South India

Subscription : [Free Trial](#)

Subscription ID : f5c846dd-b696-4b56-93a6-7fce3c336ca6

Tags ([edit](#)) : [Click here to add tags](#)

Kubernetes version : [1.23.12](#)

API server address : aksapp-cluster-dns-0b68a719.hcp.southindia.azmk8s.io

Network type (plugin) : [Azure CNI](#)

Node pools : [1 node pool](#)

Get started > **Properties** > Monitoring > Capabilities (3) > Recommendations > Tutorials

Kubernetes services

Encryption type	Encryption at-rest with a platform-managed key
Virtual node pools	Not enabled

Node pools

Node pools	1 node pool
Kubernetes versions	1.23.12
Node sizes	Standard_DS2_v2

Networking

API server address	aksapp-cluster-dns-0b68a719.hcp.southindia.azmk8s.io
Network type (plugin)	Azure CNI
Pod CIDR	-
Service CIDR	10.0.0.0/16
DNS service IP	10.0.0.10
Docker bridge CIDR	172.17.0.1/16

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10.

Microsoft Azure | Upgrade | Search resources, services, and docs (G+/)

Home > microsoft.aks-20221022075047 | Overview >

aksapp-cluster | Kubernetes service

Search < > + Create > **Connect** > Start > Stop > Delete > Refresh > Give feedback

Overview

- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Microsoft Defender for Cloud

Kubernetes resources

- Namespaces
- Workloads
- Services and ingress
- Storage
- Configuration

Settings

- Node pools

Essentials

Resource group : [aksdemo-rg](#)

Status : Succeeded (Running)

Location : South India

Subscription : [Free Trial](#)

Subscription ID : f5c846dd-b696-4b56-93a6-7fce3c336ca6

Tags ([edit](#)) : [Click here to add tags](#)

Get started > **Properties** > Monitoring > Capabilities (3) > Recommendations > Tutorials

Kubernetes services

Encryption type	Encryption at-rest with a platform-managed key
Virtual node pools	Not enabled

Node pools

Node pools	1 node pool
Kubernetes versions	1.23.12
Node sizes	Standard_DS2_v2

Connect to aksapp-cluster

Connect to your cluster using command line tooling to interact directly with cluster using kubectl, the command line tool for Kubernetes. Kubectl is available within the Azure Cloud Shell by default and can also be installed locally. [Learn more](#)

1. **Open Cloud Shell or the Azure CLI**

2. Run the following commands

```
az account set --subscription f5c846dd-b696-4b56-93a6-7fce3c336ca6
```

```
az aks get-credentials --resource-group aksdemo-rg --name aksapp-cluster
```

Sample commands

Once you have run the command above to connect to the cluster, you can run any kubectl commands. Here are a few examples of useful commands you can try.

```
# List all deployments in all namespaces
kubectl get deployments --all-namespaces=true
```

```
# List all deployments in a specific namespace
# Format : kubectl get deployments --namespace <namespace-name>
kubectl get deployments --namespace kube-system
```

```
# List details about a specific deployment
# Format : kubectl describe deployment <deployment-name> --namespace <namespace-name>
kubectl describe deployment my-dep --namespace kube-system
```

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11.

Microsoft Azure | Upgrade | Search resources, services, and docs (G+)

Home > microsoftaks-20221022075047 | Overview >

aksapp-cluster

Kubernetes service

Search

- Overview
- Activity log
- Access control (IAM)
- Tags

Essentials

Resource group : aksdemo-rg

Status : Succeeded (Running)

Location : South India

Subscription : Free Trial

Connect to aksapp-cluster

az aks get-credentials --resource-group aksdemo-rg --name aksapp-cluster

Sample commands

Once you have run the command above to connect to the cluster, you can run any kubectl commands. Here are a few examples of useful commands you can try.

- # List all deployments in all namespaces
kubectl get deployments --all-namespaces=true
- # List all deployments in a specific namespace
Format : kubectl get deployments --namespace <namespace-name>
kubectl get deployments --namespace kube-system

Bash

Requesting a Cloud Shell. Succeeded.
Connecting terminal...

Welcome to Azure Cloud Shell

Type "az" to use Azure CLI
Type "help" to learn about Cloud Shell

```
vishal_borude [ ~ ]$ az account set --subscription f5c846dd-b696-4b56-93a6-7fce3c336ca6
vishal_borude [ ~ ]$ az aks get-credentials --resource-group aksdemo-rg --name aksapp-cluster
Merged "aksapp-cluster" as current context in /home/vishal_borude/.kube/config
vishal_borude [ ~ ]$ kubectl create deployment aksdemo --image mcr.microsoft.com/azuredocs/aci-helloworld:latest --replicas=1
deployment.apps/aksdemo created
vishal_borude [ ~ ]$
```

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12.

Microsoft Azure | Upgrade | Search resources, services, and docs (G+)

Home > microsoftaks-20221022075047 | Overview >

aksapp-cluster

Kubernetes service

Search

- Overview
- Activity log
- Access control (IAM)
- Tags

Essentials

Resource group : aksdemo-rg

Status : Succeeded (Running)

Location : South India

Subscription : Free Trial

Connect to aksapp-cluster

az aks get-credentials --resource-group aksdemo-rg --name aksapp-cluster

Sample commands

Once you have run the command above to connect to the cluster, you can run any kubectl commands. Here are a few examples of useful commands you can try.

- # List all deployments in all namespaces
kubectl get deployments --all-namespaces=true
- # List all deployments in a specific namespace
Format : kubectl get deployments --namespace <namespace-name>
kubectl get deployments --namespace kube-system

Bash

Type "az" to use Azure CLI
Type "help" to learn about Cloud Shell

```
vishal_borude [ ~ ]$ az account set --subscription f5c846dd-b696-4b56-93a6-7fce3c336ca6
vishal_borude [ ~ ]$ az aks get-credentials --resource-group aksdemo-rg --name aksapp-cluster
Merged "aksapp-cluster" as current context in /home/vishal_borude/.kube/config
vishal_borude [ ~ ]$ kubectl create deployment aksdemo --image mcr.microsoft.com/azuredocs/aci-helloworld:latest --replicas=1
deployment.apps/aksdemo created
vishal_borude [ ~ ]$ kubectl get deployment
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
aksdemo   1/1     1            1           5m59s
vishal_borude [ ~ ]$ kubectl get deployments
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
aksdemo   1/1     1            1           6m
vishal_borude [ ~ ]$
```

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13.

```
Microsoft Azure | Upgrade | Search resources, services, and docs (G+)
```

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Kubernetes service

Search

Overview

Activity log

Access control (IAM)

Tags

Essentials

Resource group: aksdemo-rg

Status: Succeeded (Running)

Location: South India

Subscription: Free Trial

Connect to aksapp-cluster

az aks get-credentials --resource-group aksdemo-rg --name aksapp-cluster

Sample commands

Once you have run the command above to connect to the cluster, you can run any kubectl commands. Here are a few examples of useful commands you can try.

List all deployments in all namespaces
kubectl get deployments --all-namespaces=true

List all deployments in a specific namespace
Format: kubectl get deployments --namespace <namespace-name>
kubectl get deployments --namespace kube-system

Bash

```
vishal_borude [ ~ ]$ az account set --subscription f5c846dd-b696-4b56-93a6-7fce3c336ca6
vishal_borude [ ~ ]$ az aks get-credentials --resource-group aksdemo-rg --name aksapp-cluster
Merged "aksapp-cluster" as current context in /home/vishal_borude/.kube/config
vishal_borude [ ~ ]$ kubectl create deployment aksdemo --image mcr.microsoft.com/azuredocs/aci-helloworld:latest --replicas=1
deployment.apps/aksdemo created
vishal_borude [ ~ ]$ kubectl get deployment
NAME READY UP-TO-DATE AVAILABLE AGE
aksdemo 1/1 1 1 5m59s
vishal_borude [ ~ ]$ kubectl get deployments
NAME READY UP-TO-DATE AVAILABLE AGE
aksdemo 1/1 1 1 6m29s
vishal_borude [ ~ ]$ kubectl get pods
NAME READY STATUS RESTARTS AGE
aksdemo-74664df974-njw6c 1/1 Running 0 8m23s
vishal_borude [ ~ ]$
```

14.

```
Microsoft Azure | Upgrade | Search resources, services, and docs (G+)
```

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aksapp-cluster

Kubernetes service

Search

Overview

Activity log

Essentials

Resource group: aksdemo-rg

Connect to aksapp-cluster

az aks get-credentials --resource-group aksdemo-rg --name aksapp-cluster

Sample commands

Once you have run the command above to connect to the cluster, you can run any kubectl commands. Here are a few examples of useful commands you can try.

List all deployments in all namespaces
kubectl get deployments --all-namespaces=true

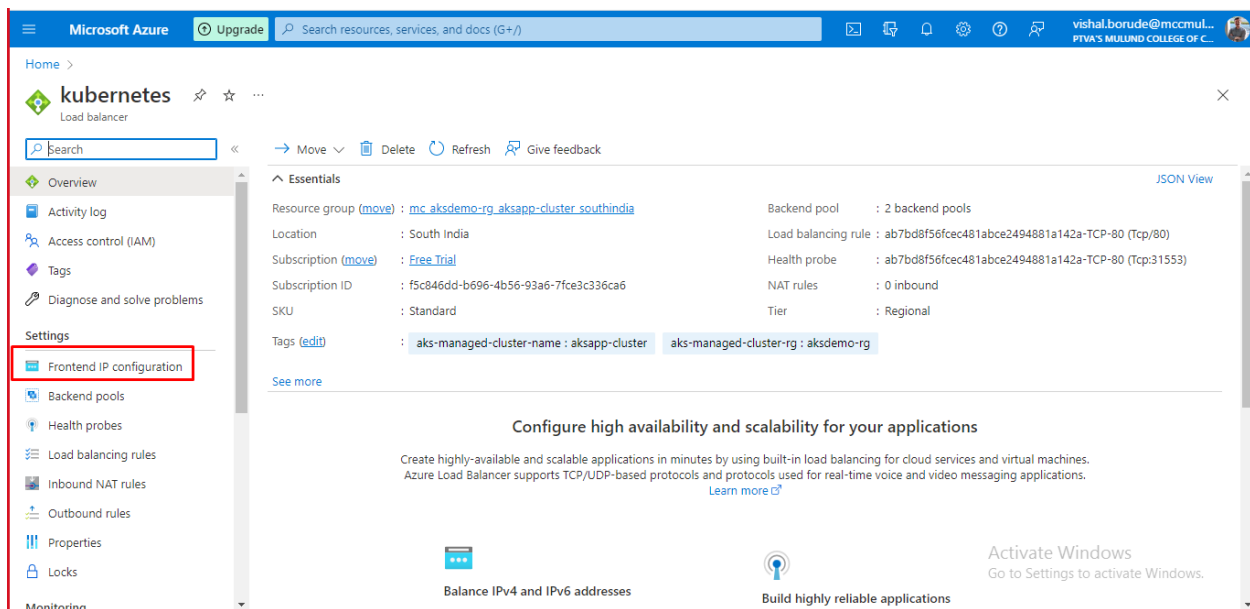
Bash

```
Type "help" to learn about Cloud Shell

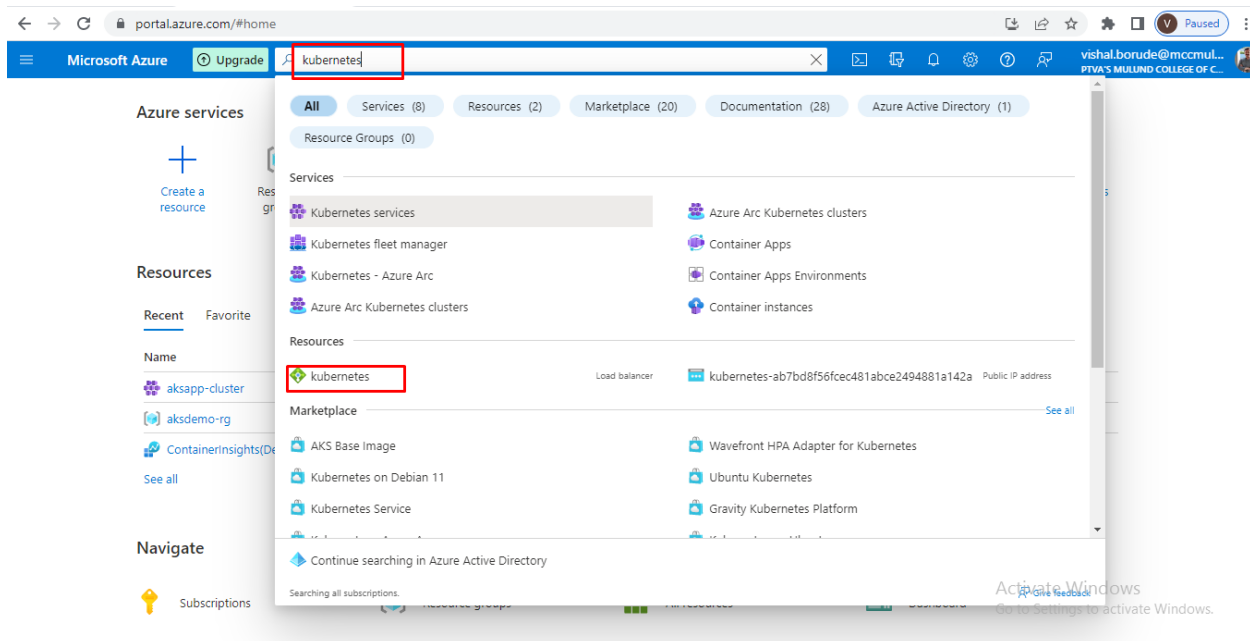
vishal_borude [ ~ ]$ az account set --subscription f5c846dd-b696-4b56-93a6-7fce3c336ca6
vishal_borude [ ~ ]$ az aks get-credentials --resource-group aksdemo-rg --name aksapp-cluster
Merged "aksapp-cluster" as current context in /home/vishal_borude/.kube/config
vishal_borude [ ~ ]$ kubectl create deployment aksdemo --image mcr.microsoft.com/azuredocs/aci-helloworld:latest --replicas=1
deployment.apps/aksdemo created
vishal_borude [ ~ ]$ kubectl get deployment
NAME READY UP-TO-DATE AVAILABLE AGE
aksdemo 1/1 1 1 5m59s
vishal_borude [ ~ ]$ kubectl get deployments
NAME READY UP-TO-DATE AVAILABLE AGE
aksdemo 1/1 1 1 6m29s
vishal_borude [ ~ ]$ kubectl get pods
NAME READY STATUS RESTARTS AGE
aksdemo-74664df974-njw6c 1/1 Running 0 8m23s
vishal_borude [ ~ ]$ kubectl expose deployment aksdemo --type=LoadBalancer --port=80 --target-port=80
service/aksdemo exposed
vishal_borude [ ~ ]$
```

15.

To view the application: minimize the power shell and go to the home and search the kubernetes



16.



17.

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Home > kubernetes

kubernetes | Frontend IP configuration

Load balancer

Search Filter by name...

+ Add Refresh Give feedback

Overview
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Diagnose and solve problems

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Frontend IP configuration
Backend pools
Health probes
Load balancing rules
Inbound NAT rules
Outbound rules
Properties
Locks

Name ↑↓	IP address ↑↓	Rules count ↑↓
c88457bc-8ce1-4e08-b6dc-a9fdcbbf7407	52.140.19.0 (c88457bc-8ce1-4e08-b6dc-a9fdcbbf7407)	1
ab7bd8f56fcec481abce2494881a142a	52.140.56.33 (kubernetes-ab7bd8f56fcec481abce249488...	1

Activate Windows
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18. Copy the IP of kubernetes and paste it in browser and run

Home > kubernetes

kubernetes | Frontend IP configuration

Load balancer

Search Filter by name...

+ Add Refresh Give feedback

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Load balancing rules
Inbound NAT rules
Outbound rules
Properties
Locks

Name ↑↓	IP address ↑↓	Rules count ↑↓
c88457bc-8ce1-4e08-b6dc-a9fdcbbf7407	52.140.19.0 (c88457bc-8ce1-4e08-b6dc-a9fdcbbf7407)	1
ab7bd8f56fcec481abce2494881a142a	52.140.56.33 (kubernetes-ab7bd8f56fcec481abce249488...	1

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19.

Welcome to Azure Container Instances!

