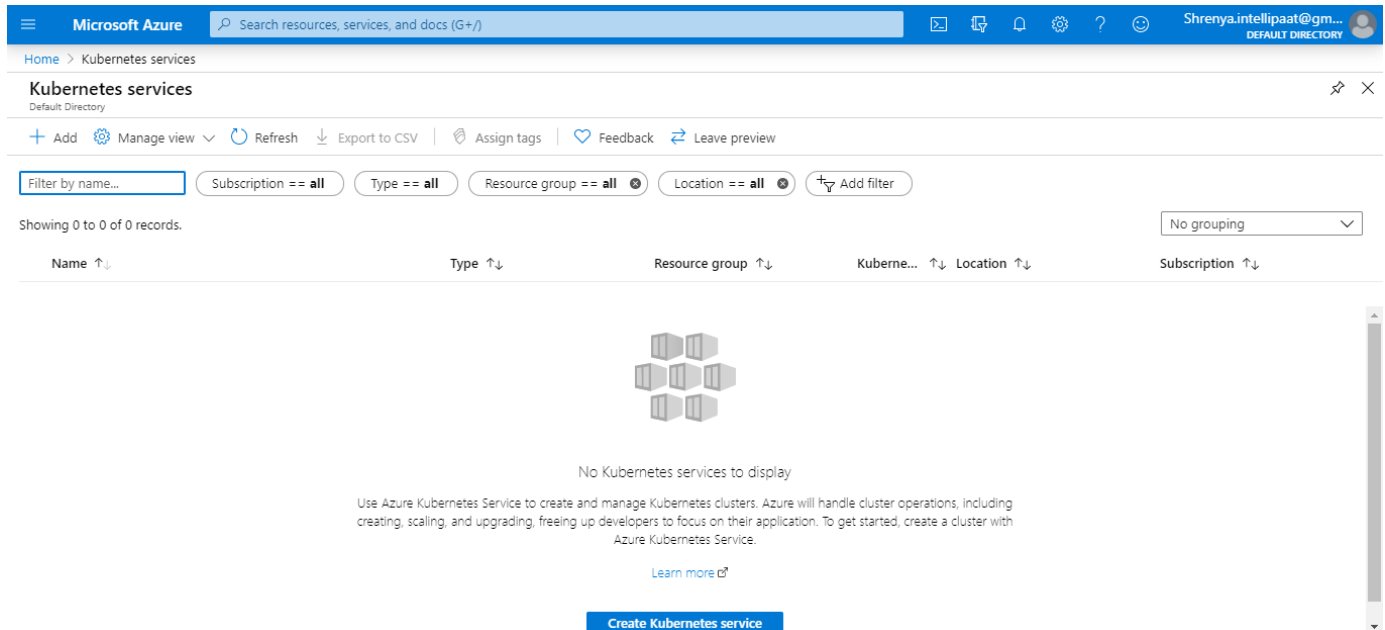


Azure 104 Module 5: Hands-On:3

Configuring Azure Kubernetes Service

Step 1: Go to Azure Portal and click on **Kubernetes services**. Then, click on **Add**



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

Home > Kubernetes services

Kubernetes services

Default Directory

+ Add Manage view Refresh Export to CSV Assign tags Feedback Leave preview

Filter by name... Subscription == all Type == all Resource group == all Location == all Add filter

Showing 0 to 0 of 0 records.

No grouping

Name ↑↓ Type ↑↓ Resource group ↑↓ Kuberne... ↑↓ Location ↑↓ Subscription ↑↓

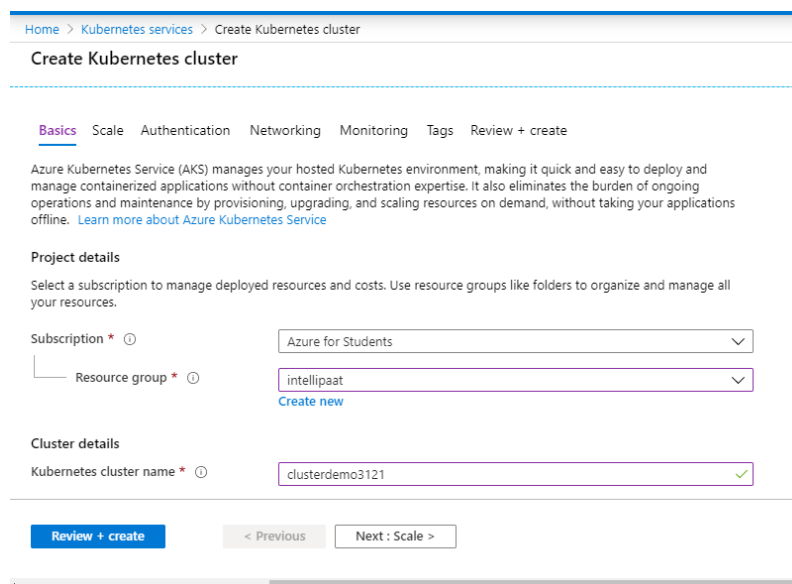
No Kubernetes services to display

Use Azure Kubernetes Service to create and manage Kubernetes clusters. Azure will handle cluster operations, including creating, scaling, and upgrading, freeing up developers to focus on their application. To get started, create a cluster with Azure Kubernetes Service.

[Learn more](#)

Create Kubernetes service

Step 2: Enter the details such as the name of the resource group and the name of the cluster; then, scroll down



Home > Kubernetes services > Create Kubernetes cluster

Create Kubernetes cluster

Basics Scale Authentication Networking Monitoring 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 * Azure for Students

Resource group * intellipaat [Create new](#)

Cluster details

Kubernetes cluster name * clusterdemo3121

Review + create < Previous Next : Scale >

Step 3: Select the primary node pool and specify the node count. Then, click on **Next**

Home > Kubernetes services > Create Kubernetes cluster

Create Kubernetes cluster

Region * ⓘ (US) Central US ✓

Kubernetes version * ⓘ 1.14.8 (default) ✓

DNS name prefix * ⓘ clusterdemo3121-dns ✓

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. You will not be able to change the node size after cluster creation, but you will be able to change the number of nodes in your cluster after creation. If you would like additional node pools, you will need to enable the "X" feature on the "Scale" tab which will allow you to add more node pools after creating the cluster. [Learn more about node pools in Azure Kubernetes Service](#)

Node size * ⓘ **Standard DS2 v2**
[Change size](#)

Node count * ⓘ

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

Step 4: Enter the scaling details. You can enable or disable **Virtual nodes** or **VM scale sets**. Then, click on **Next**

Home > Kubernetes services > Create Kubernetes cluster

Create Kubernetes cluster

Basics Scale Authentication Networking Monitoring Tags Review + create

Enable scaling features to allow flexible capacity and burstable scaling options within your cluster.

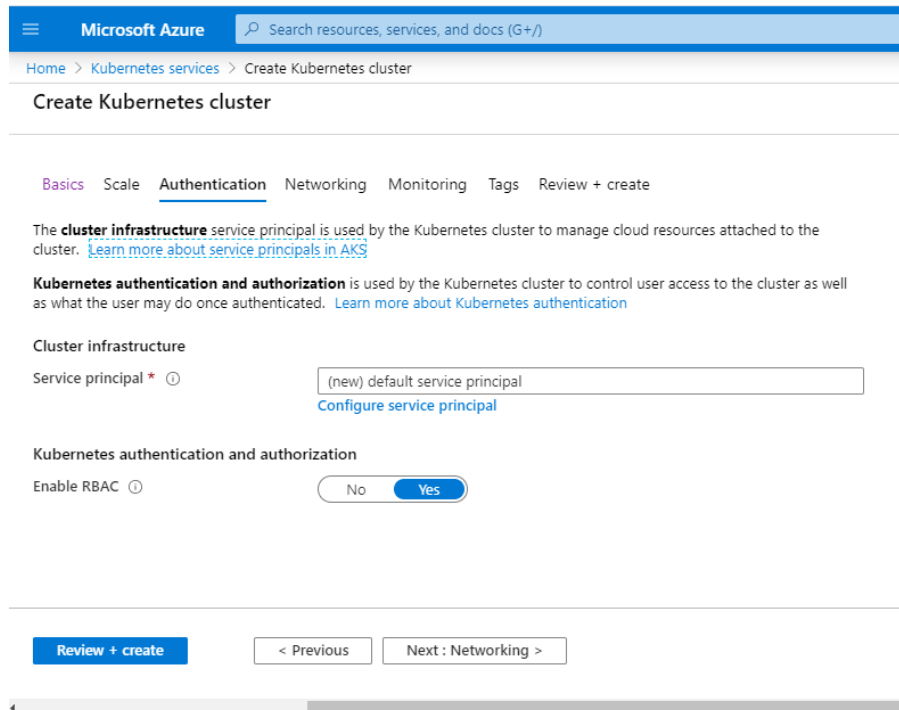
- **Virtual nodes** allow burstable scaling backed by serverless Azure Container Instances. [Learn more about virtual nodes](#)
- **VM scale sets** are required for a variety of scenarios including autoscaling and multiple node pools [Learn more about VM scale sets in AKS](#)

Virtual nodes ⓘ ☒ Disabled ☐ Enabled

VM scale sets ⓘ ☐ Disabled ☒ Enabled

i VM scale sets are required for the following scenarios:
* Autoscaling
* Multiple node pools

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

Step 5: Enter the authentication details. Then, click on **Next: Networking**

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

Home > Kubernetes services > Create Kubernetes cluster

Create Kubernetes cluster

Basics Scale **Authentication** Networking Monitoring Tags Review + create

The **cluster infrastructure** service principal is used by the Kubernetes cluster to manage cloud resources attached to the cluster. [Learn more about service principals in AKS](#)

Kubernetes authentication and authorization is used by the Kubernetes cluster to control user access to the cluster as well as what the user may do once authenticated. [Learn more about Kubernetes authentication](#)

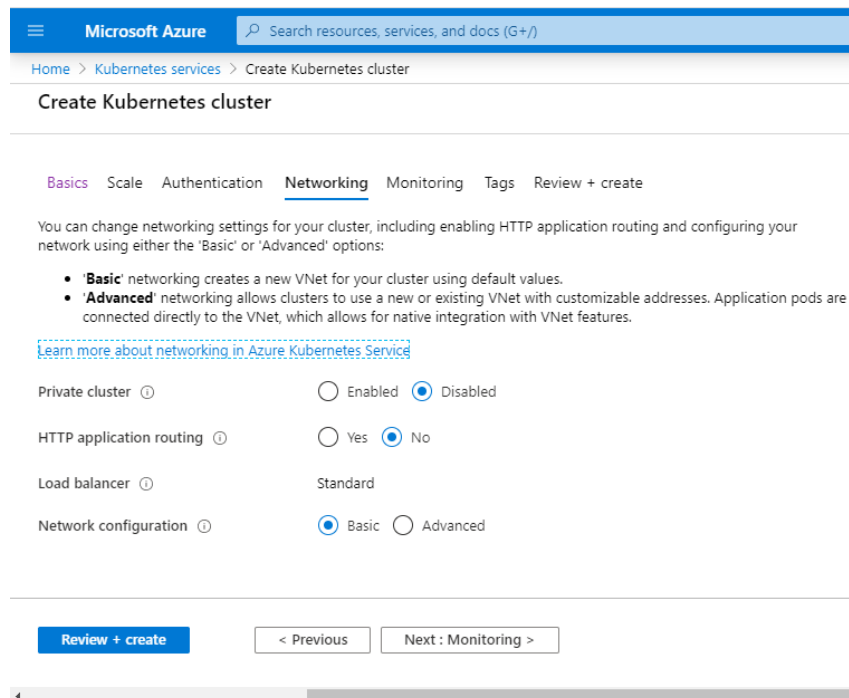
Cluster infrastructure

Service principal * ⓘ (new) default service principal
[Configure service principal](#)

Kubernetes authentication and authorization

Enable RBAC ⓘ No **Yes**

Review + create < Previous Next : Networking >

Step 6: Enter the networking details for the cluster and click on **Next: Monitoring**

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

Home > Kubernetes services > Create Kubernetes cluster

Create Kubernetes cluster

Basics Scale Authentication **Networking** Monitoring Tags Review + create

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

- **Basic** networking creates a new VNet for your cluster using default values.
- **Advanced** networking 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](#)

Private cluster ⓘ ☐ Enabled ☒ Disabled

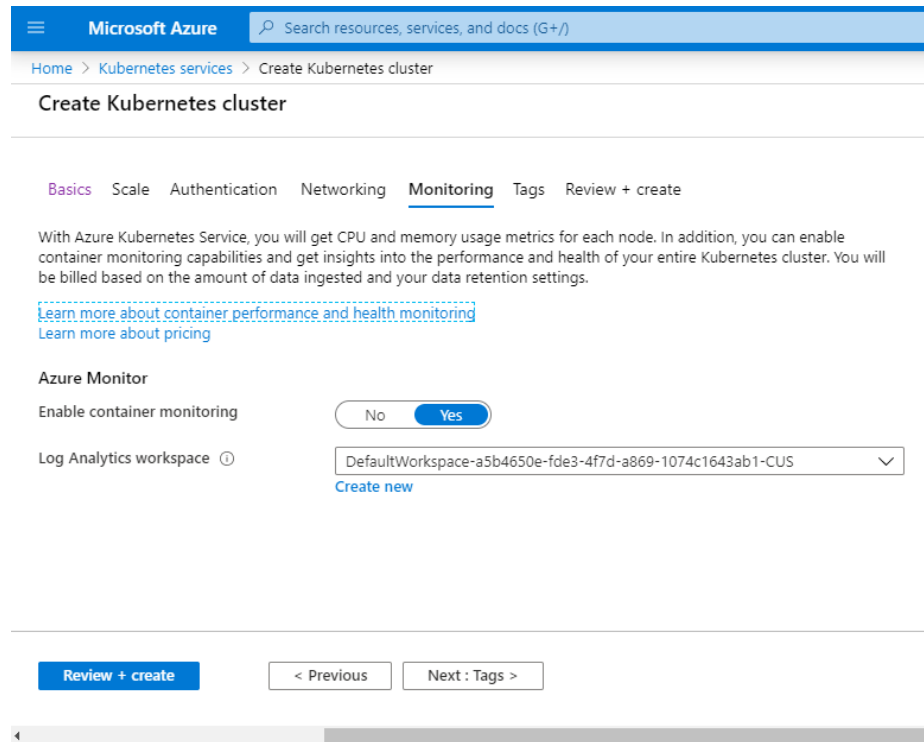
HTTP application routing ⓘ ☐ Yes ☒ No

Load balancer ⓘ Standard

Network configuration ⓘ ☒ Basic ☐ Advanced

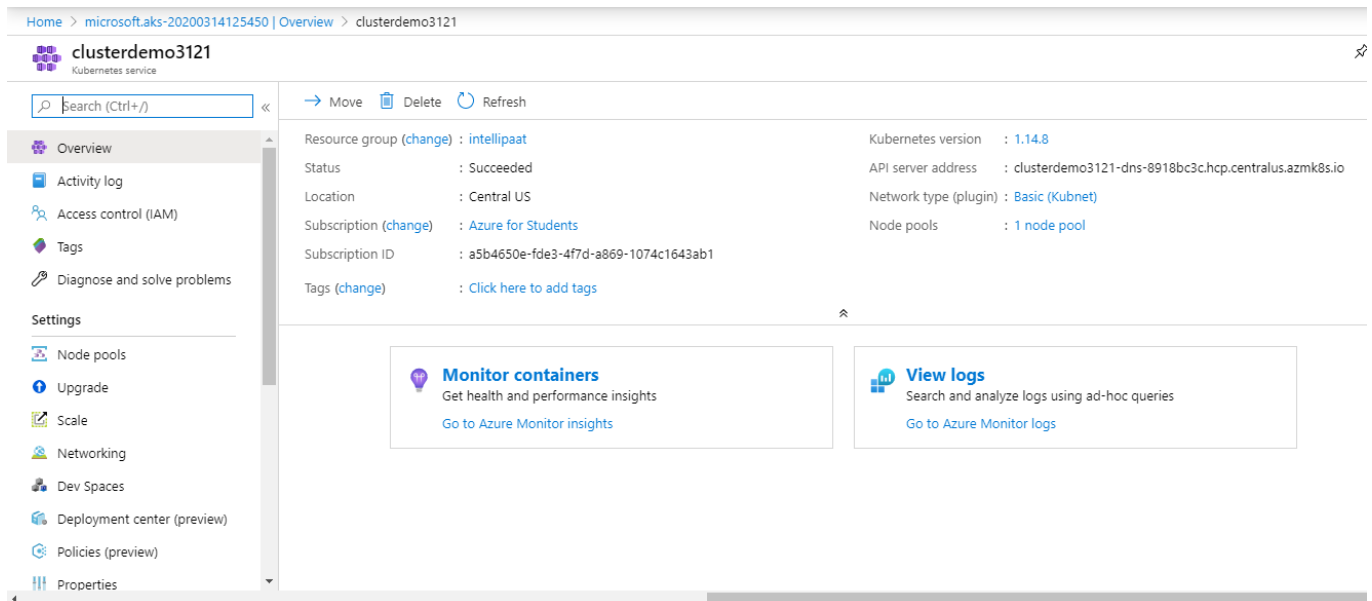
Review + create < Previous Next : Monitoring >

Step 7: Enter the details for monitoring the cluster and then click on **Review + create**



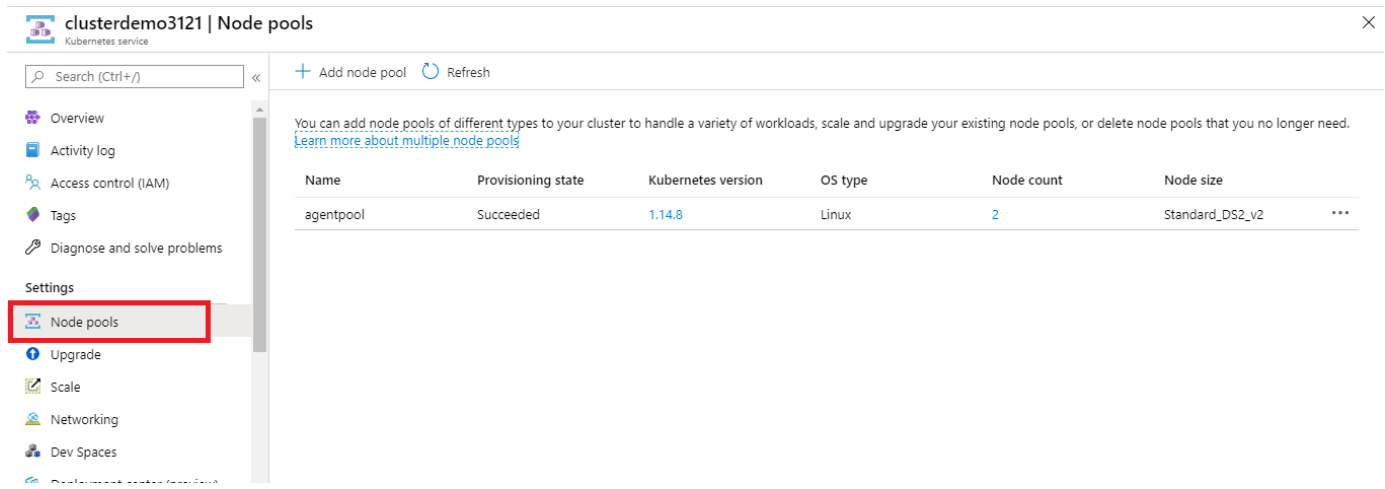
The screenshot shows the 'Create Kubernetes cluster' page in the Microsoft Azure portal. The 'Monitoring' tab is selected, showing options to enable container monitoring and log analytics workspace. The 'Enable container monitoring' toggle is set to 'Yes'. The 'Log Analytics workspace' dropdown is set to 'DefaultWorkspace-a5b4650e-fde3-4f7d-a869-1074c1643ab1-CUS'. There are links for 'Learn more about container performance and health monitoring' and 'Learn more about pricing'. At the bottom, there is a 'Review + create' button and navigation links for '< Previous' and 'Next: Tags >'.

Step 8: Once the resource has been deployed, click on **Go to resource**



The screenshot shows the 'clusterdemo3121' resource page in the Microsoft Azure portal. The left sidebar contains a navigation menu with options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Settings, Node pools, Upgrade, Scale, Networking, Dev Spaces, Deployment center (preview), Policies (preview), and Properties. The main content area displays the resource details for 'clusterdemo3121' (Kubernetes service). The details include: Resource group (change) : intellipaat, Status : Succeeded, Location : Central US, Subscription (change) : Azure for Students, Subscription ID : a5b4650e-fde3-4f7d-a869-1074c1643ab1, Tags (change) : Click here to add tags, Kubernetes version : 1.14.8, API server address : clusterdemo3121-dns-8918bc3c.hcp.centralus.azmk8s.io, Network type (plugin) : Basic (Kubnet), and Node pools : 1 node pool. There are two action cards at the bottom: 'Monitor containers' (Get health and performance insights, Go to Azure Monitor insights) and 'View logs' (Search and analyze logs using ad-hoc queries, Go to Azure Monitor logs).

Step 9: Click on **Node pools** in the sidebar to manage your node pool and add another one apart from the primary one



clusterdemo3121 | Node pools

Search (Ctrl+/) << + Add node pool Refresh

You can add node pools of different types to your cluster to handle a variety of workloads, scale and upgrade your existing node pools, or delete node pools that you no longer need. [Learn more about multiple node pools](#)

Name	Provisioning state	Kubernetes version	OS type	Node count	Node size	
agentpool	Succeeded	1.14.8	Linux	2	Standard_DS2_v2	...

Settings

- Node pools
- Upgrade
- Scale
- Networking
- Dev Spaces
- Container monitoring