Deploy containers by using Azure Kubernetes Service (AKS)

Description

Why choose Azure Kubernetes Service for your deployments?

In a world where containerization is becoming essential, mastering Azure Kubernetes Service is a major asset. With the course “Deploy Containers Using Azure Kubernetes Service (AKS)”, you will learn how to manage, configure, and secure Kubernetes clusters on Azure. This training is designed for anyone seeking to gain true operational skills on modern infrastructures.

Throughout this program, you will discover how to deploy an Azure Kubernetes Service cluster, use Azure Container Registry, and orchestrate your applications. You will also practice automatic scaling and integration with Azure Container Instances to meet agility and performance requirements. By following this structured curriculum, you will build confidence and expertise in managing Kubernetes clusters on Azure.

Gain strong and practical skills

Azure Kubernetes Service simplifies the management of large-scale container environments. With its integrated tools, you can automate application updates, enhance security, and optimize availability. You will also explore integration with Microsoft Entra ID and Azure Policy strategies to strengthen the governance of your resources.

Course Content
Module 1: Plan an Azure Kubernetes Service Deployment

- Azure Kubernetes Service
- Azure Kubernetes Cluster Architecture
- Azure Kubernetes Service Pods
- Nodes and Node Pools for Azure Kubernetes Service
- Namespaces for Azure Kubernetes Service
- Accessing Azure Kubernetes Service

Module 2: Deploy and Use Azure Container Registry

- Create a container registry
- Connect to the container registry
- Push an image to the registry
- View container images
- Use an image from the registry
- Create a virtual network

Module 3: Deploy an Azure Kubernetes Service Cluster

- Azure Kubernetes Service Cluster Architecture
- Network topology
- Plan IP addresses
- Configure compute for nodes and node pools
- Integrate Microsoft Entra ID with the cluster

- Secure network traffic
- Node and pod scalability
- Create an Azure Kubernetes Service cluster

Module 4: Configure an Azure Kubernetes Service Cluster

- Understand Azure Policy for Kubernetes clusters
- Enable the Azure Policy add-on
- Assign a policy definition to a cluster
- Implement host-based encryption
- Create a custom namespace for Azure Kubernetes clusters

Module 5: Deploy Applications on Azure Kubernetes Service

- Configure pods with Azure Policy
- Apply pod settings with Azure Policy
- Configure storage for applications running on Azure Kubernetes Service
- Deploy an application on an Azure Kubernetes Service cluster
- Configure storage for applications
- Deploy an application to a cluster

Module 6: Configure Scaling in Azure Kubernetes Service

- Scaling options in Azure Kubernetes Service
- Configure the cluster autoscaler
- Integrate Azure Container Instances
- Configure automatic cluster scaling
- Scale the number of nodes in a cluster
- Automatically scale a cluster

Module 7: Guided Project: Deploy Applications on Azure Kubernetes Service

- Provision Azure Container Registry and Azure Kubernetes Service
- Build Linux and Windows container images
- Deploy container images to Azure Container Registry
- Review deployment and delete resources

Lab / Exercises

- This course provides you with exclusive access to the official Microsoft lab, enabling you to practice your skills in a professional environment.

Documentation

- Access to Microsoft Learn, Microsoft's online learning platform, offering interactive resources and educational content to deepen your knowledge and develop your technical skills.

Participant profiles

- Cloud administrators
- Cloud-native application developers
- DevOps engineers
- Cloud architects
- IT infrastructure specialists

Prerequisites

- Know how to create resources using the Azure portal
- Understand the basics of Azure networking and security concepts
- Grasp the fundamentals of Azure Kubernetes Service and Azure Policy

Objectives

- Understand the components of Azure Kubernetes Service infrastructure
- Deploy and use Azure Container Registry to manage container images
- Create, configure, and connect an Azure Kubernetes Service cluster
- Apply security and compliance policies with Azure Policy
- Deploy and configure applications on an Azure Kubernetes Service cluster
- Set up automatic scaling for clusters and applications
- Integrate Azure Kubernetes Service with Azure Container Instances
- Validate and master container deployment on Azure Kubernetes Service

Description
Deploy containers by using Azure Kubernetes Service (AKS)
Niveau
Intermédiaire
Classroom Registration Price (CHF)
900
Virtual Classroom Registration Price (CHF)
850
Duration (in Days)
1
Reference
AKS