Azure Container Solutions

If you're looking for containerization solutions in the cloud, Azure has a few options: **Azure Container Instance, Azure Kubernetes Service, and Azure Red Hat OpenShift**, Azure Functions, Azure Container Apps.. Each has unique features and use cases...

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Comparison By

Overview

Use Cases

Key Features

Scalability

Management Complexity

Identity and Access Management

Network Security

Compliance and Auditing

Installation Options

Instance Types

Minimal Requirements

Acronyms

ACI	Azure Container Instance
AKS	Azure Kubernetes Service
ARO	Azure Red Hat Openshift

Overview of Azure Container Instance

1 Serverless execution

Run containers without managing infrastructure

2 Quick and isolated
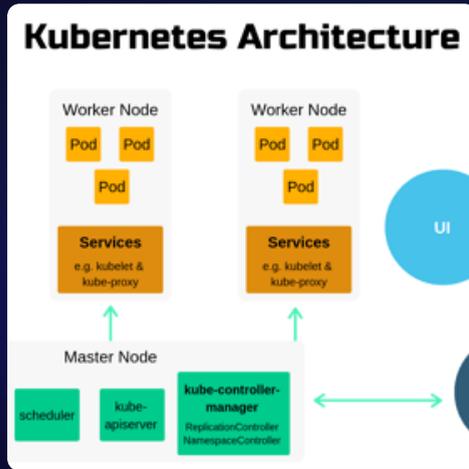
Ideal for testing workloads, batch jobs, or single containers
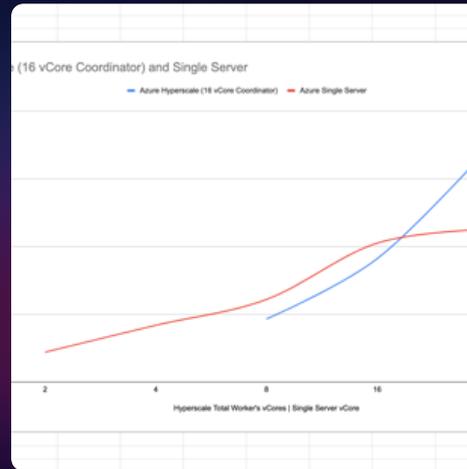
3 Simple deployment

Integrates with Azure services and pay-as-you-go pricing model
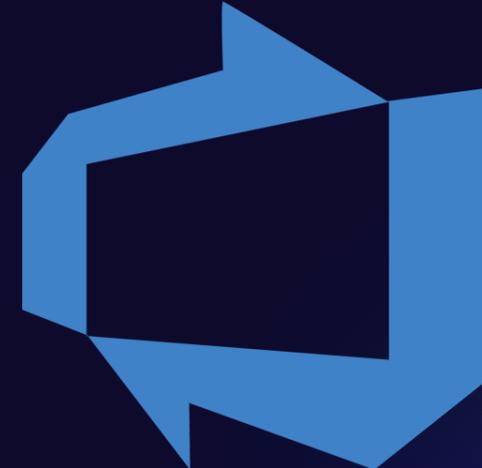
Overview of Azure Kubernetes Service

Fully managed orchestration

Simplify deployment, management, and scaling

Scalable automation

Auto-scaling and load balancing for complex applications

Integrated tools

Azure services and DevOps tools for CI/CD workflows

Overview of Azure Red Hat Openshift

Enterprise-grade

Designed for regulated industries and sensitive workloads

Managed OpenShift

OpenShift platform's power with Azure convenience and scalability

Hybrid Cloud

Azure plus OpenShift integration for collaborative development and container lifecycle management

Use Cases for ACI

1   Individual containers

Quick development and testing of containerized applications

2   Batch jobs and one-time tasks

Rapid scaling and deployment of containers

3   Minimal setup and management

Quick and isolated container execution

Use Cases for AKS

Microservices applications	Distributed applications with many services
Web Applications	Web-based APIs and applications
Stateful applications	Applications that require permanent storage

Use Cases for ARO

Kubernetes platform

Deploy and manage containerized applications on OpenShift

Enterprise-grade purity

Security and compliance features suitable for regulated industries

Collaborative Development

Deploy and manage containerized applications on OpenShift

Key Features of ACI

1 Fast startup times

Container execution without managing infrastructure

2 Pay-as-you-go pricing

Cost-effective pricing model, **Spot containers**

3 Simple deployment

Integrates well with Azure services, **can be part of AKS**

Key Features of AKS

Automatic Scaling and Load Balancing

Efficiently handles large-scale deployments

Integrated Azure Services and DevOps Tools

CI/CD workflows and Kubernetes-specific Role-Based Access Control

High Availability and Reliability

Enables you to run 24/7 production workloads

Key Features of ARO

Hybrid Cloud Deployments

Azure and OpenShift integration

1   2   3

Enterprise-grade security and compliance

Azure tools and OpenShift features

Collaborative Development

Quick installation of OpenShift applications, included Registry