

# Azure Kubernetes Service

## Update and roadmap

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# Recent announcements

## AKS on Azure Spot (GA)

Get steep discounts on AKS agent nodes for workloads that can tolerate interruption.

## Proximity Placement Groups (GA)

Minimize latency between nodes by ensuring that they're physically close together in a region

## Containerd support (GA)

Leverage the most stable and performant container runtime in your AKS clusters

## Ephemeral OS disks (preview)

Improve performance and save costs on agent node OS disks

## Resource health (preview)

See current and historical issues impacting your cluster, all in one place

## Portal resource view (preview)

See your Kubernetes resources directly in the Azure portal

## Azure Policy for AKS (GA)

Manage corporate policy in a declarative, cloud-native fashion using Azure Policy

## Azure RBAC for K8s AuthZ (preview)

Use Azure RBAC roles to manage access to your AKS clusters

## Confidential nodes (preview)

Run sensitive containerized workloads in a trusted execution environment

## Kubernetes 1.19 (GA)

Run the latest upstream release of Kubernetes

## Start/stop cluster (preview)

Stop a running cluster to save on compute costs, then start it back up later exactly where you left off

## Mutate default storage class (GA)

Set the default storage class for a cluster based on its expected workloads

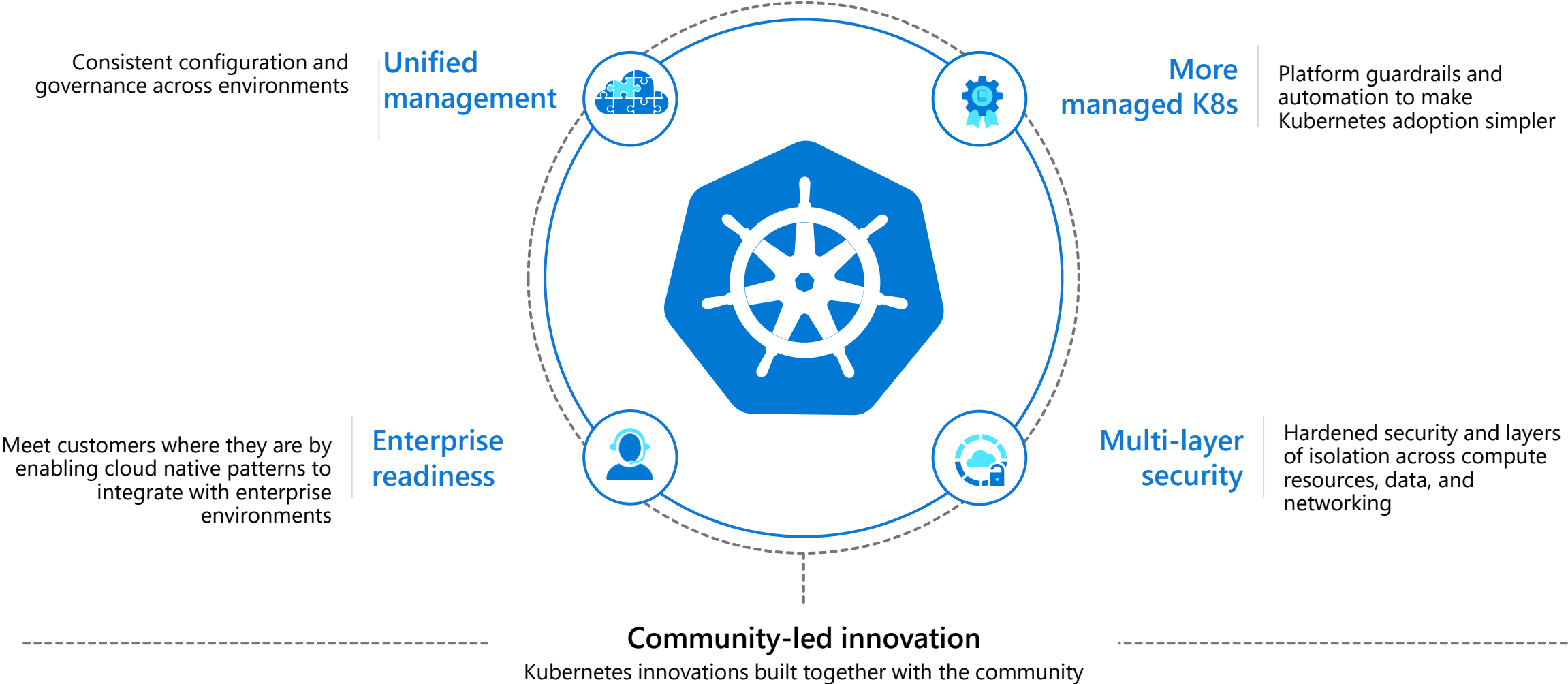
## Node image upgrade (GA)

Upgrade the OS image of an AKS worker node without consuming a new Kubernetes version

## Managed AAD (GA)

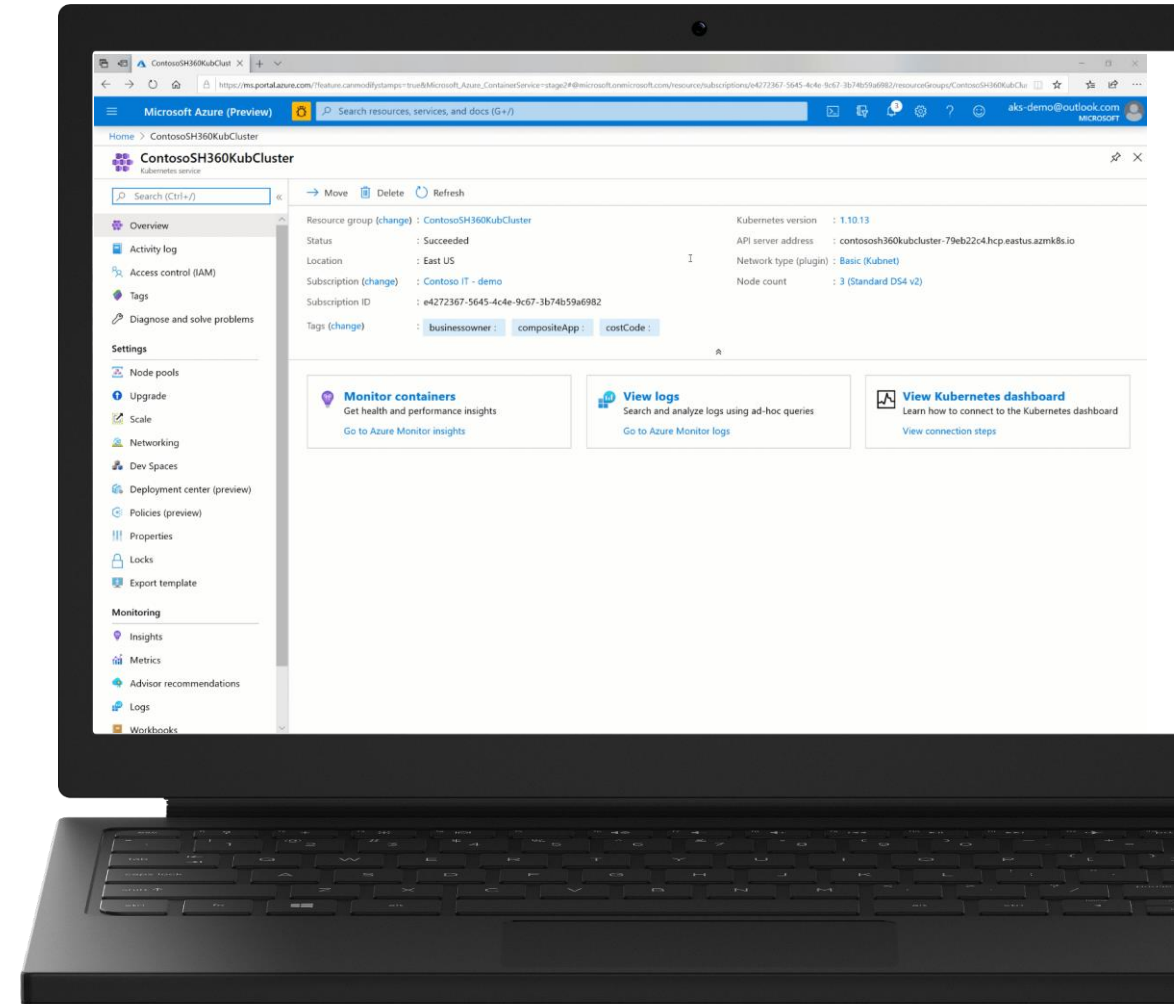
Integrate your cluster with Azure AD with a single command

# Kubernetes on Azure



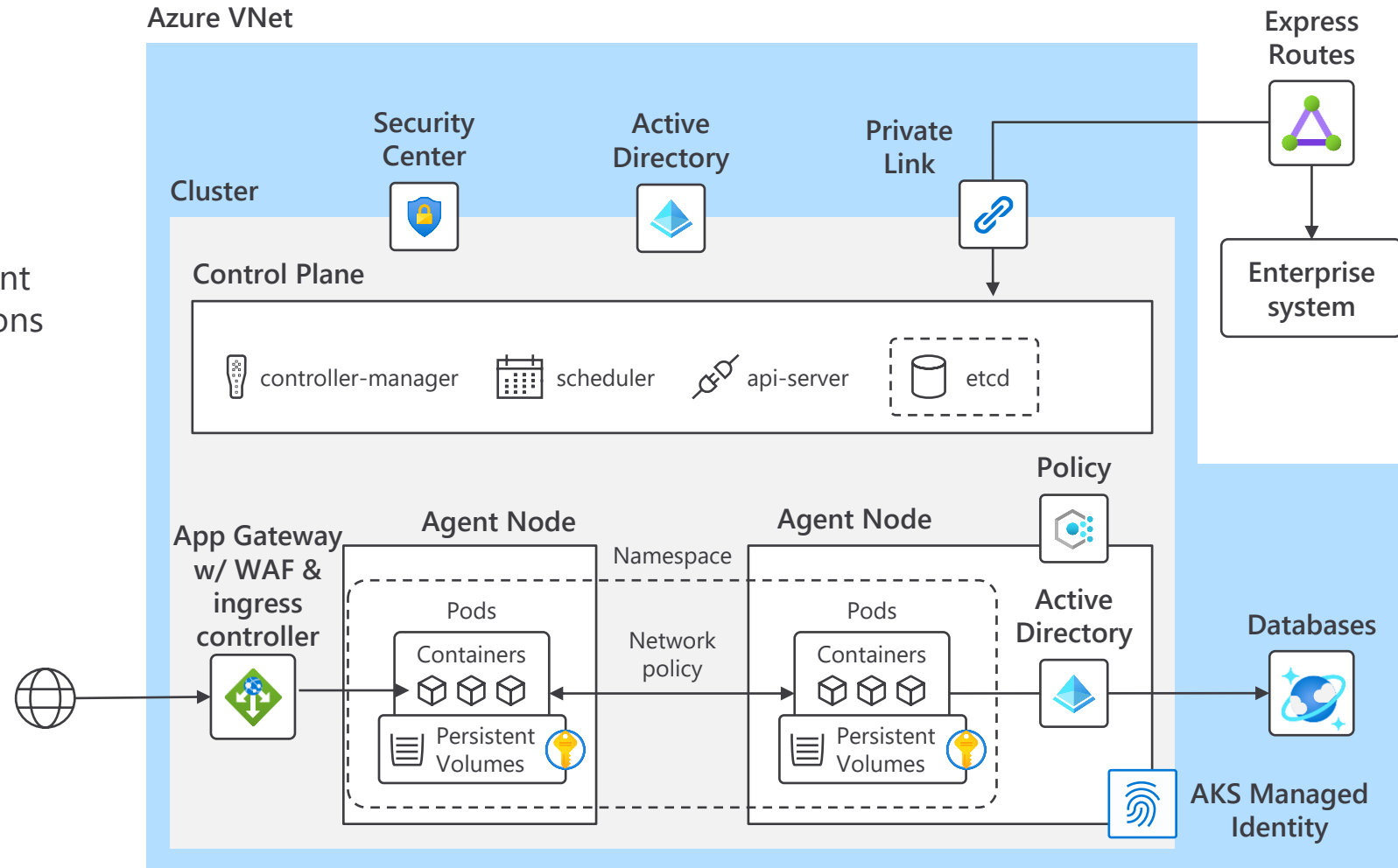
# More managed Kubernetes

- Proactive and actionable recommendations from Azure Advisor based on your configuration and usage telemetry
- Automated upgrades and node repair
- Integration with the latest Azure IaaS innovations to ensure maximum performance and reliability out of the box
- Deep observability of Kubernetes resources from the Azure portal
- Easy troubleshooting of common issues



# Multi-layer security

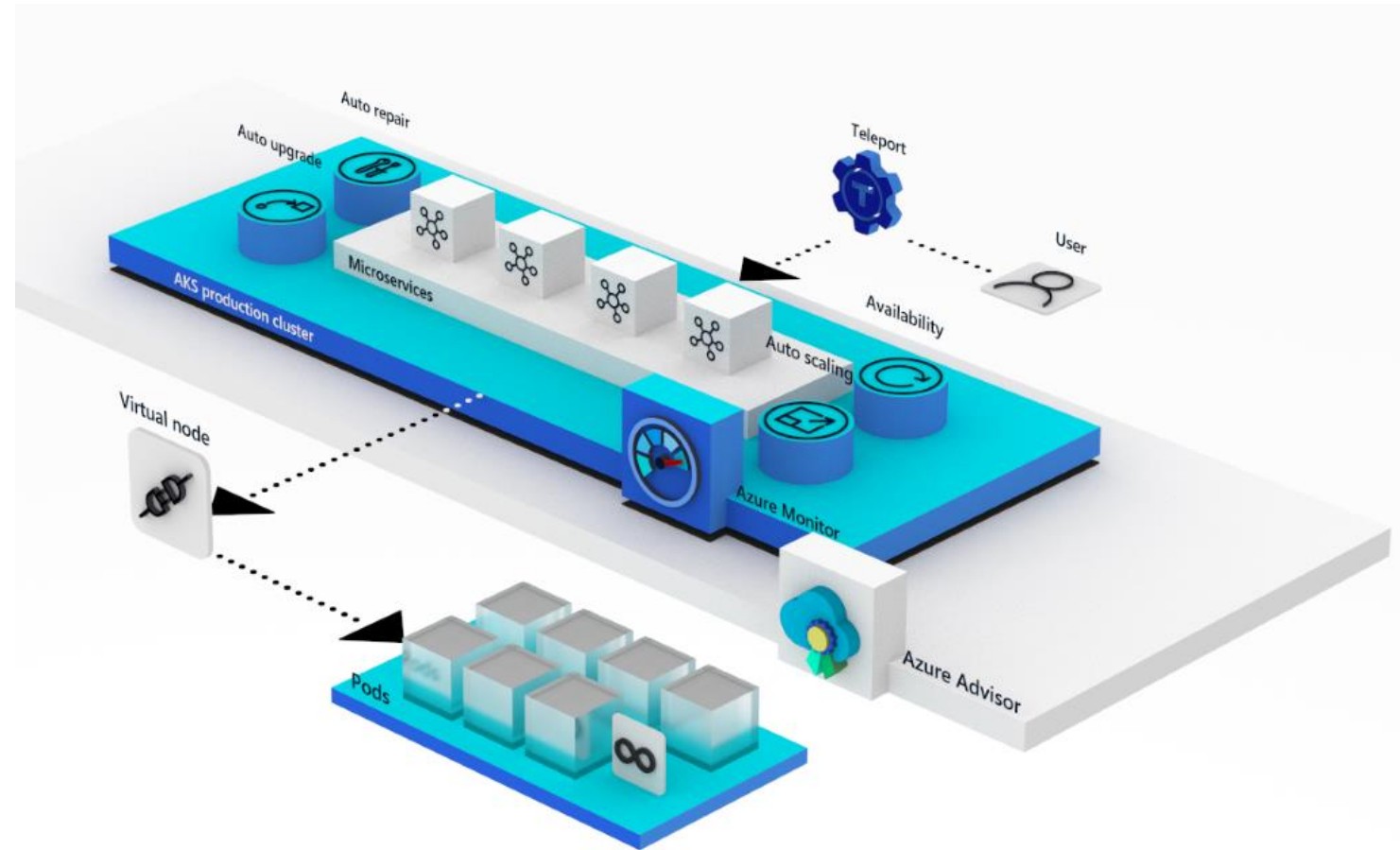
- Apply fine-grained identity and access control using Azure Active Directory
- Encrypt the disks used in your AKS cluster using your own keys, stored in Azure Key Vault
- Gain unmatched security management, intelligent threat detection, and actionable recommendations with Azure Security Center integration
- Enforce compliance rules to your cluster with Azure Policy
- Interact with the Kubernetes API server as a private endpoint using Azure Private Link





# Enterprise readiness

- Controls and configurations required to bring the cloud native world into an existing enterprise environment
- Solutions for acute enterprise challenges such as the scarcity of IP space
- Cost visibility and control for multi-tenant environments



ActivitiesTerminal

nick@pop-os: ~

nick@pop-os: ~

nick@pop-os: ~

demo - Microsoft Azure

ms.portal.azure.com/#@microsoft.onmicrosoft.com/resource/subs...

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

Home > Resource groups > start-stop-demo >

demoKubernetes service

Search (Ctrl+ /)

ConnectDeleteRefresh

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Security

Kubernetes resources

Namespaces (preview)

Workloads (preview)

Services and ingresses (preview)

Settings

Node pools

Configuration

Scale

Networking

Dev Spaces

Deployment center (preview)

Policies (preview)

Properties

Locks

Export template

Monitoring

Insights

Alerts

EssentialsView as JSON

Resource group (change)  
start-stop-demo

Status  
Succeeded

Location  
West Central US

Subscription (change)  
Azure Container Service - Development

Subscription ID  
c1089427-83d3-4286-9f35-5af546a6eb67

Tags (change)  
Click here to add tags

PropertiesCapabilities

Kubernetes services

Kubernetes version  
1.16.13

Azure AD integration  
Not enabled

Node pools

Node pools  
1 node pool

Kubernetes versions  
1.16.13

Node sizes  
Standard\_DS2\_v2

Virtual node pools  
Not enabled

Networking

API server address  
demo-dns-849f2bfd.hcp.westcentralus.azmk8s.io

More managed  
Kubernetes

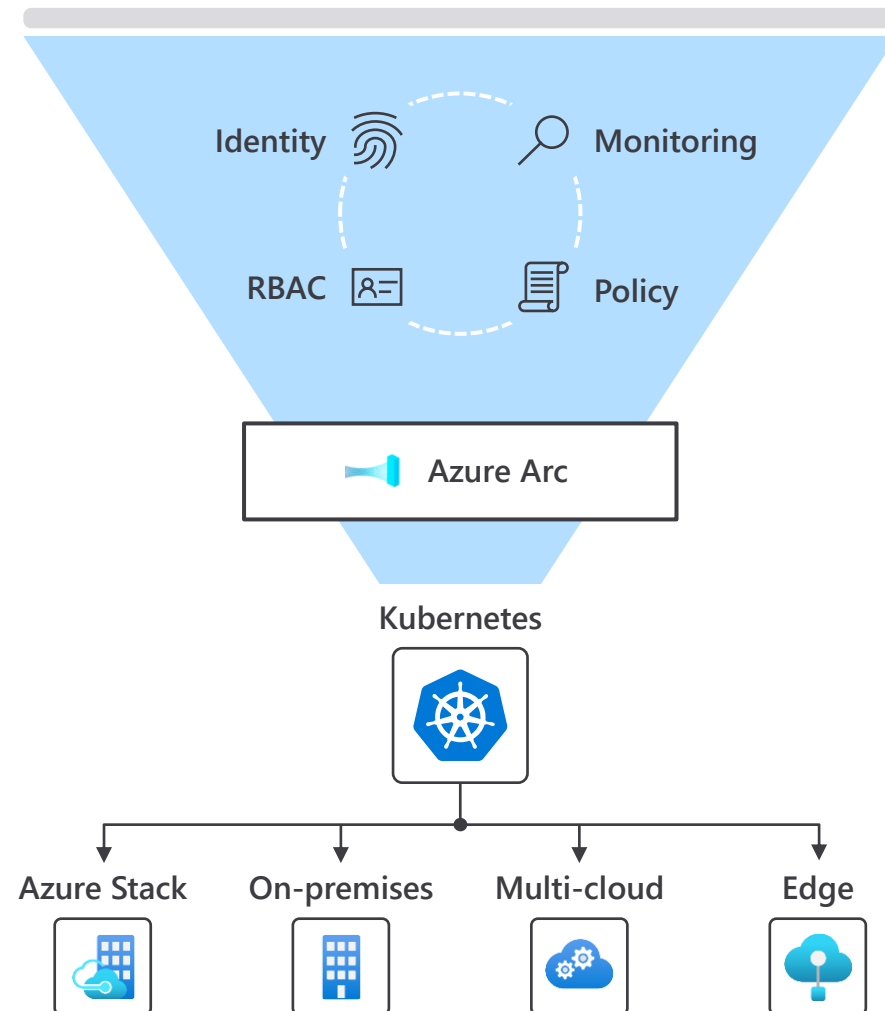
Multi-layer  
security

Enterprise  
readiness

Unified  
management

# Unified management

- Central inventory and monitoring of the sprawling assets running anywhere from on-premises to edge
- Consistently apply policies, role-based-access-controls (RBAC) for at-scale governance
- Deploy Kubernetes resources to all clusters using a GitOps-based workflow





# AKS Roadmap Highlights (through H1 CY21)

## Open Service Mesh integration

Lightweight, Envoy-based service mesh managed within AKS

## Hyper-V Isolation for Windows Containers

Ensure back-compat and secure multi-tenant Windows workloads

## Event Grid integration

Subscribe to AKS events (create/scale/upgrade) via Azure Event Grid

## CSI Secret Store driver integration

Mount keys/secrets/certs from Azure Key Vault directly into K8s pods

## Azure CNI Flexibility

Separate node and pod CIDR ranges

## gMSA support for Windows nodes

Support Windows authentication for applications running on Windows agent nodes

## AAD pod identity integration

Give individual workloads in the cluster unique AAD identities

## ACR Teleport integration

Pull containers from ACR in record time

## Cluster auto-upgrade

Set your cluster to automatically consume new K8s releases

## Arc GitOps Config integration

Easily connect AKS clusters to GitOps config managed in Arc

## Application Insights integration

Get APM for K8s workloads with no code changes

## Portal quickstarts

Choose preconfigured cluster templates based on intended usage

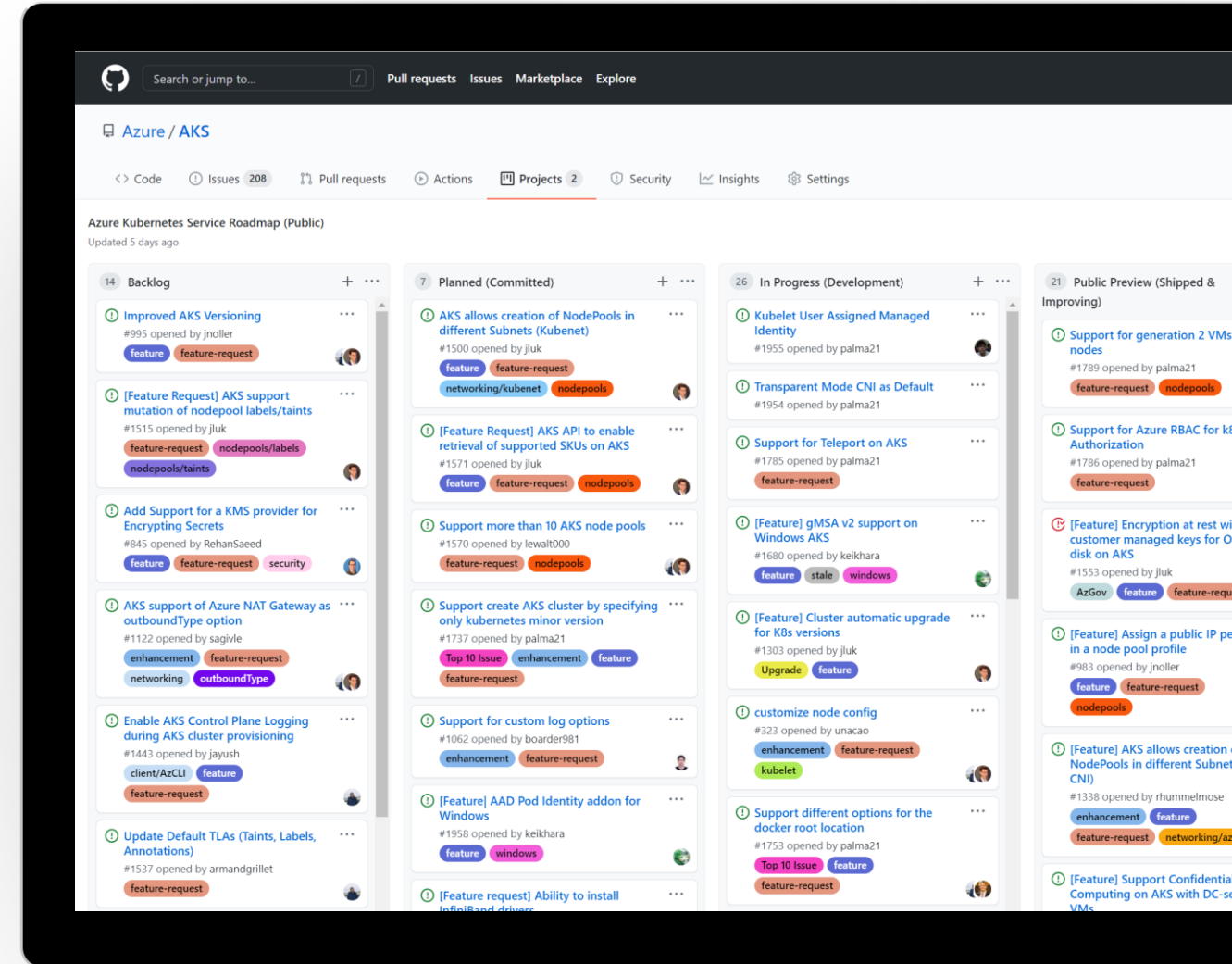
# AKS on GitHub

Find detailed roadmap updates and discuss investments

<https://aka.ms/aks/roadmap>

See weekly release notes

<https://aka.ms/aks/releases>



# Resources

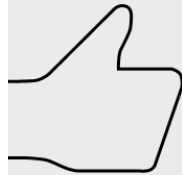
## Learning path

[aka.ms/LearnKubernetes](https://aka.ms/LearnKubernetes)



## What is Kubernetes

[aka.ms/k8sLearning](https://aka.ms/k8sLearning)



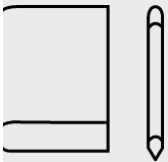
## Hear from experts

[aka.ms/AKS/videos](https://aka.ms/AKS/videos)



## Case studies

[aka.ms/aks/casestudy](https://aka.ms/aks/casestudy)



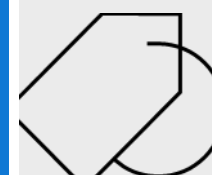
## Azure Kubernetes Service

[aka.ms/AKS/page](https://aka.ms/AKS/page)



## Try for free

[aka.ms/aks/trial](https://aka.ms/aks/trial)



Feedback on the roadmap? Tell us at <https://aka.ms/aks/feedback>

# Q&A