Managed System Node Pools · GA

AKS Automatic · Hands-off

From Managed System Node Pools to AKS Automatic

The future of autonomous Kubernetes operations — less infrastructure to manage, more time for what runs on it.

Reliability by default • Lower operational complexity • Faster cloud-native journey

THE OPERATIONAL SHIFT

Who keeps the cluster running?

Every AKS cluster splits into **system pools** that host critical platform components and **user pools** that run your apps. The real question is how much of that you operate.

01

Self-managed system pools

You select VM sizes, set node counts, configure autoscaling, and plan headroom for CoreDNS, Konnectivity, metrics-server, and add-ons.

You operate it

→

02 · GA

Managed System Node Pools

Azure takes responsibility for managing and updating critical system components, so platform teams stop maintaining the cluster's plumbing.

Azure manages the system pool

→

03

AKS Automatic

An intelligent, hands-off experience that automates cluster operations, scaling, upgrades, and optimization — production-grade defaults from day one.

The platform runs itself

ARCHITECTURE

Where the system node pool lives — and who operates it

You operate · AKS-managed

AKS Standard

you operate the system pool

Azure-managed control plane

API server

YOUR AZURE SUBSCRIPTION

System node pool

mode: system

You provision · patch · scale · plan capacity

CoreDNS · metrics-server · Konnectivity · add-ons

User node pools

your apps

- System nodes billed as VMs in your subscription · you plan capacity & upgrades

AKS Automatic

system pool fully managed

Azure-managed control plane

API server

MICROSOFT-OWNED INFRASTRUCTURE

Managed system node pool

AKS-managed

Provisioned, right-sized & upgraded automatically — no nodes to see

CoreDNS · KEDA · VPA · Metrics Server · Konnectivity · Eraser · Azure Monitor

YOUR AZURE SUBSCRIPTION

User node pools

auto-provisioned · NAP

- No system VMs on your bill · capacity right-sized for you · Pod readiness SLA

BEYOND A HEALTHY CONTROL PLANE

What AKS Automatic guarantees

POD READINESS SLA

A financially backed guarantee that your pods reach readiness and serve users — closing the gap between "the cluster is healthy" and "my app is ready."

99.95%
API server uptime

99.9%
pods ready, within minutes

Deployment Safeguards

Enforces Kubernetes Pod Security Standards, blocks risky configurations, and restricts access to platform namespaces by default.

Automatic upgrades

Platform components stay current, reducing the risk of running outdated or vulnerable system software.

Managed add-on hosting

Core services run on Microsoft-owned infrastructure — system capacity stays off your subscription's bill.

THE PAYOFF

Spend less time managing infrastructure

01 **Improved reliability**
Faster remediation; SLA-backed availability instead of best-effort.

02 **Reduced operational complexity**
No provisioning, patching, or capacity planning for system components.

03 **Accelerated cloud-native journey**
Production-grade defaults free teams to focus on application workloads.

Get started in one flag

```
az aks create \
  --resource-group $RG \
  --name $CLUSTER \
  --sku automatic \
  --enable-hosted-system
```

Output confirms `hostedSystemProfile.enabled = true`. System nodes never appear in your subscription.

aka.ms/aks/automatic

RESOURCES

Take it further

Everything referenced in this session — documentation, the announcement, and hands-on learning.

DOCUMENTATION

Manage system node pools in AKS
learn.microsoft.com/azure/aks/use-system-pools

AKS Automatic overview
learn.microsoft.com/azure/aks/intro-aks-automatic

ANNOUNCEMENT & COMMUNITY

Managed system node pools — AKS Engineering blog
blog.aks.azure.com

AKS public roadmap & feedback
github.com/Azure/AKS

HANDS-ON

Microsoft Learn — Kubernetes on Azure
learn.microsoft.com/training

Try AKS Automatic
aka.ms/aks/automatic

Thank you

Managed system node pools and AKS Automatic move operational overhead to the platform — so your teams can focus on the applications, not the infrastructure.