



Nube híbrida y multcloud con Azure Arc Enabled Infrastructure

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Momentum to a hybrid and multicloud strategy

90%

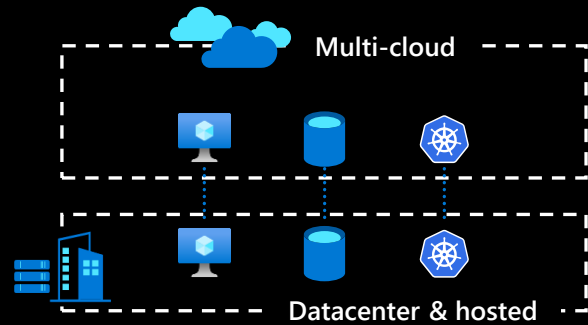
of enterprises depend on hybrid

93%

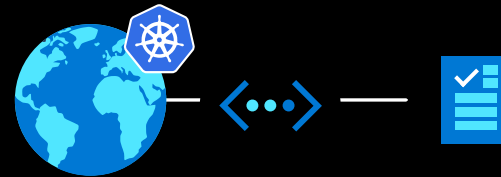
of enterprises have a multicloud strategy

Azure Arc

Extend Azure management and services anywhere



Gain central visibility,
operations, and compliance



Build Cloud native apps
anywhere, at scale



Run Azure services
anywhere



Single control plane with Azure Arc

Azure Arc enabled infrastructure
Connect and operate hybrid resources
as native Azure resources

Azure Arc enabled services
Deploy and run Azure services outside of
Azure while still operating it from Azure




Multi-cloud


Datacenter


Edge

Azure Arc-enabled infrastructure

Bring on-premises and multi-cloud infrastructure to Azure with Azure Arc



Azure Arc-enabled servers

Organize, inventory, and monitor
Governance and Security
Simplified role-based operations
Physical, Virtual, Windows, Linux



AWS Linux 2



GENERALLY AVAILABLE



Azure Arc-enabled SQL Server

Organize, inventory, and monitor
Governance and Security
Use with your existing SQL servers
Free SQL Assessment



GENERALLY AVAILABLE



Azure Arc-enabled Kubernetes

Organize, inventory, and monitor
Governance and Security
Monitoring and Policy
GitOps-based zero-touch deploy



CANONICAL



RANCHER



OpenShift



AKS on Azure
Stack HCI

GENERALLY AVAILABLE

Azure Arc-enabled servers



Azure Arc-enabled servers

GENERALLY AVAILABLE

Bring Azure capabilities to your on-premises and multicloud servers with Azure Arc



Reach

Windows and Linux

VM and bare metal

At scale searchable inventory



Configure

Consistent VM extensions

Centralized agent
management—Monitoring,
Security, Update Management



Govern

Built-in Azure policies

Compliance across environments

Audit and enforce OS settings



Secure

Azure Active Directory
Managed Identity

Server security baselines

Role-Based Access control



Any infrastructure, familiar tools



Azure Arc-enabled VMware vSphere

PREVIEW

Provision and Manage VMware VMs from Azure using Azure Arc



VM Lifecycle

Perform full lifecycle management such as create, resize, and delete on VMware VMs from Azure



Self-Service Operations

Use Azure RBAC to enable teams and workload owners to provision and manage VMs on-demand



Single Pane View

Onboard your VMware VMs from your data centers and AVS and browse along with your Azure VMs



Secure and Govern

Perform governance, monitoring and security at scale using Azure Monitor, Microsoft Defender, Azure Policy and others



← VMware vSphere environments hosted anywhere →



Azure Arc enabled servers onboarding

- **Azure Connected Machine Agent** deployment
- Deployment at scale using a service principle
- Onboarding through other applications
 - [Windows admin center](#)
 - [Azure automation service](#)
 - [System Center Configuration Manager \(SCCM\)](#)
 - [Azure Migrate](#)

Add servers with Azure Arc

Servers - Azure Arc

Azure Arc allows you to use Azure tools to manage on-premises servers and servers from other clouds. We'll start with some prerequisites and deploy the Azure Connected Machine agent. [Learn more](#)

Add a single server

This option will generate a script to run on your target server. The script will prompt you for your Azure login, so this option is best for adding servers one at a time.

[Generate script](#) [Learn more](#)

Add multiple servers

To add multiple servers to Azure, we will generate a script that handles authentication through a service principal. You will see that and other prerequisites next.

[Generate script](#) [Learn more](#)

Add servers from Update Management (preview)

Non-Azure servers managed by the Update Management service can be easily connected to Azure via Azure Arc. Once you have selected the servers, the deployment will happen automatically.

[Add servers](#) [Learn more](#)

Azure Arc enabled servers onboarding

The **Azure Connected Machine agent** package contains several logical components:

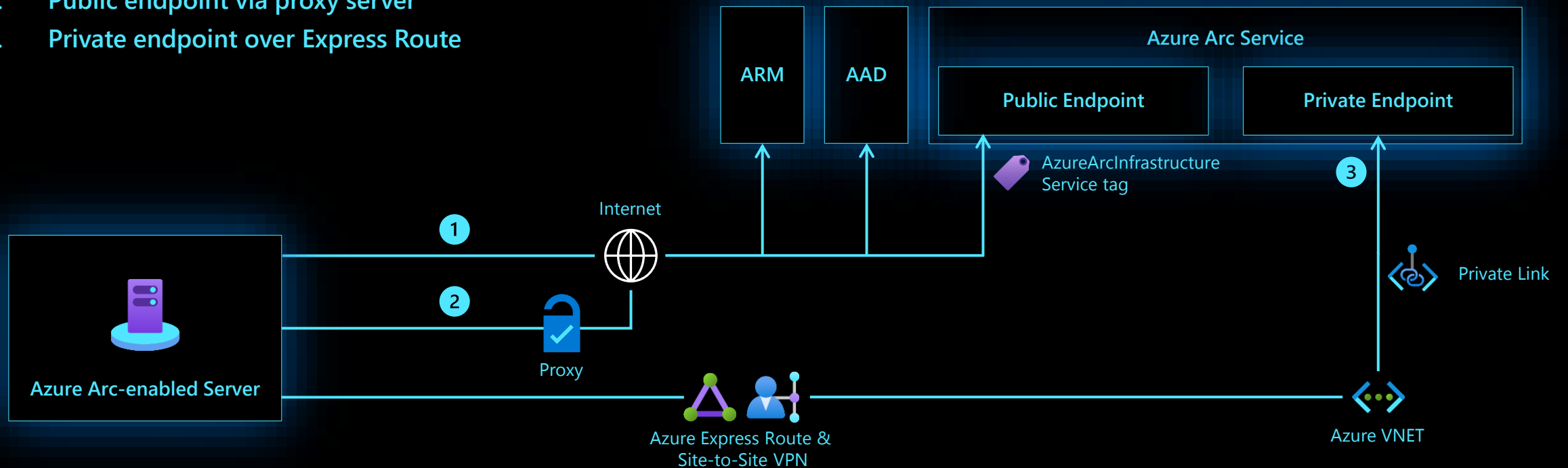
- The Hybrid Instance Metadata service (HIMDS) manages the connection to Azure and the connected machine's Azure identity.
- The guest configuration agent provides functionality such as assessing whether the machine complies with required policies and enforcing compliance.
- The Extension agent manages VM extensions

```
azcmagent connect --resource-group "resourceGroupName" --tenant-id  
"tenantID" --location "regionName" --subscription-id "subscriptionID"
```

Azure Arc-enabled servers

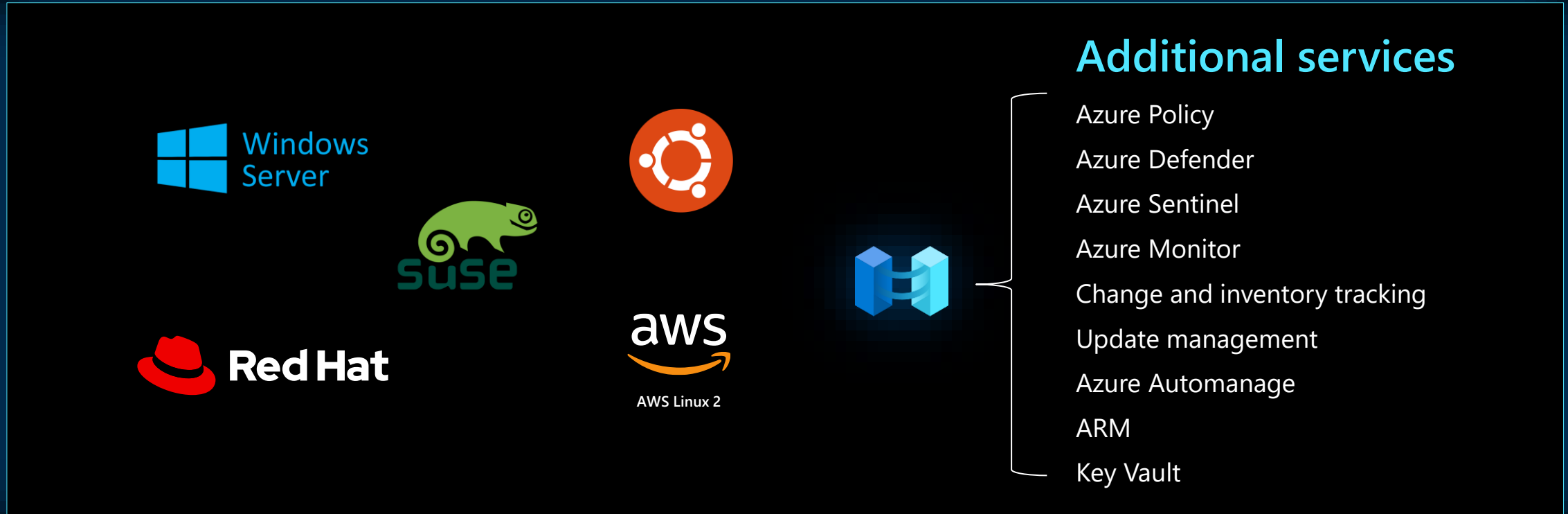
Connectivity Options

1. Public endpoint via direct connection
2. Public endpoint via proxy server
3. Private endpoint over Express Route



Azure Arc-enabled servers

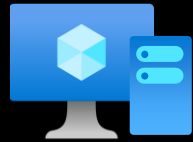
Azure Arc-enabled servers are auto-enrolled with additional Azure services



Just turn them on when you want to use them

SQL Server on Arc-enabled servers

Data management benefits for Azure Arc-enabled servers



Flexibility

VMs and bare-metal servers
On-premises and multi-cloud



Management

Searchable inventory
SQL Assessment service



Governance and Security

Azure Policy
Azure Defender

No migration needed for existing SQL Servers

Azure Arc-enabled Kubernetes



Azure Arc-enabled Kubernetes

GENERALLY AVAILABLE

Connect, manage, and operate Kubernetes clusters and applications running anywhere using Azure Arc



AKS on Azure Stack HCI
or Windows Server



Multiple 3P Kubernetes
flavors supported



Deploy apps and
configurations at-scale
with GitOps



Secure, govern, and
monitor all your
clusters, from Azure



AKS



Kubernetes



OpenShift



EKS



GKE



VMware Tanzu

NUTANIX



CANONICAL

RANCHER

WINDRVR

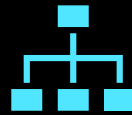


MIRANTIS

GitOps – Definition & Principles



Git as the source of truth for a system



Git as the single place where we operate
(create, change, and delete)



All changes are observable



System state described declaratively



State declaration versioned in source control

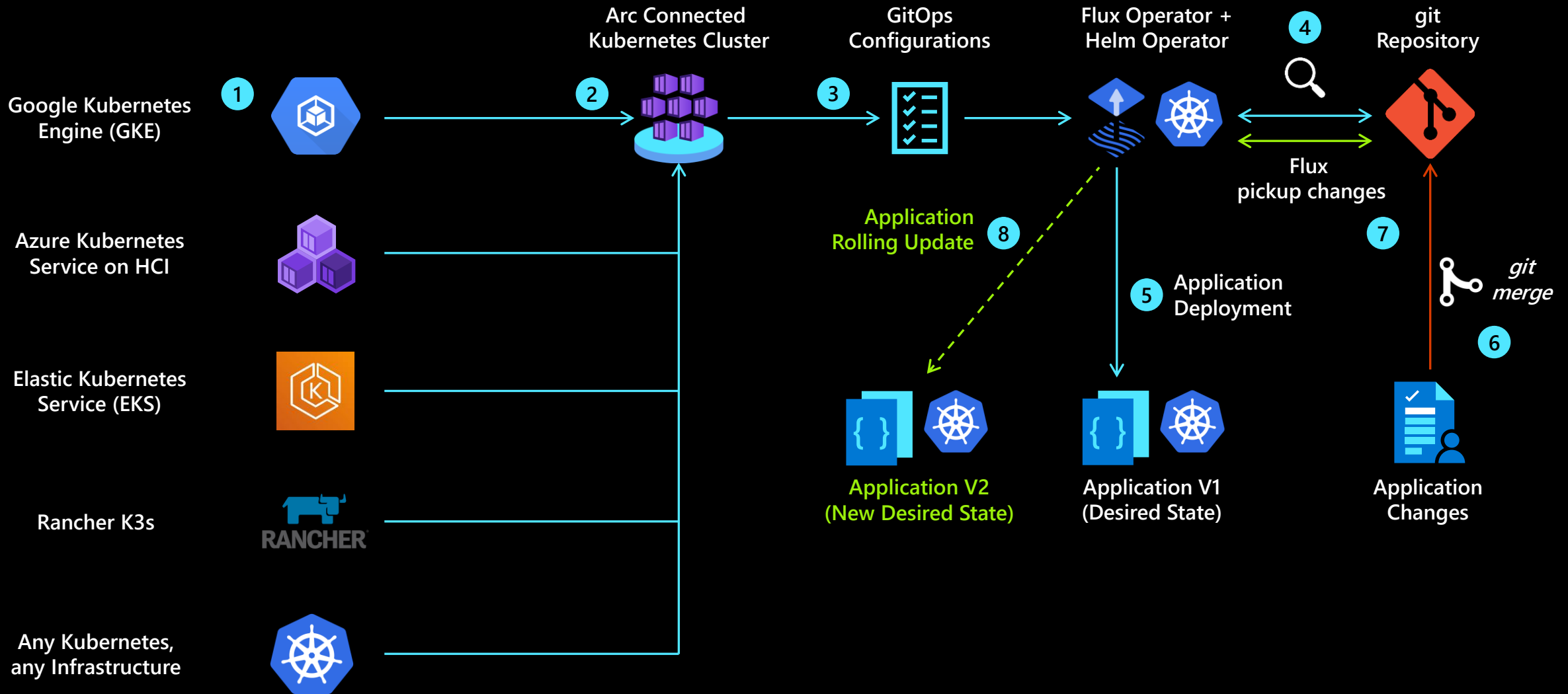


Approved changes are applied automatically



Agents enforce desired state

Azure Arc-enabled Kubernetes GitOps Flow



Azure Arc-enabled Kubernetes

Easily integrate with Azure services using Cluster Extensions



Monitor

Collect metrics and logs of application workloads

Open ecosystem

Multi-cluster roll-up and cluster drill down views



Secure

Azure Defender Integration

Threat detection across on-premises and multi-cloud

Actionable recommendations for security best practices

Azure Arc-enabled Kubernetes

Provide Azure services and users secure access to Arc-enabled Kubernetes clusters



AAD RBAC

Role assignments in Azure to control authorization checks in cluster

Cluster scope and namespace scope support

Custom roles support



Cluster Connect

No inbound ports needed on firewall

Interactive developer debugging from anywhere

Deploy using GitHub Actions and Azure DevOps Pipelines hosted agents



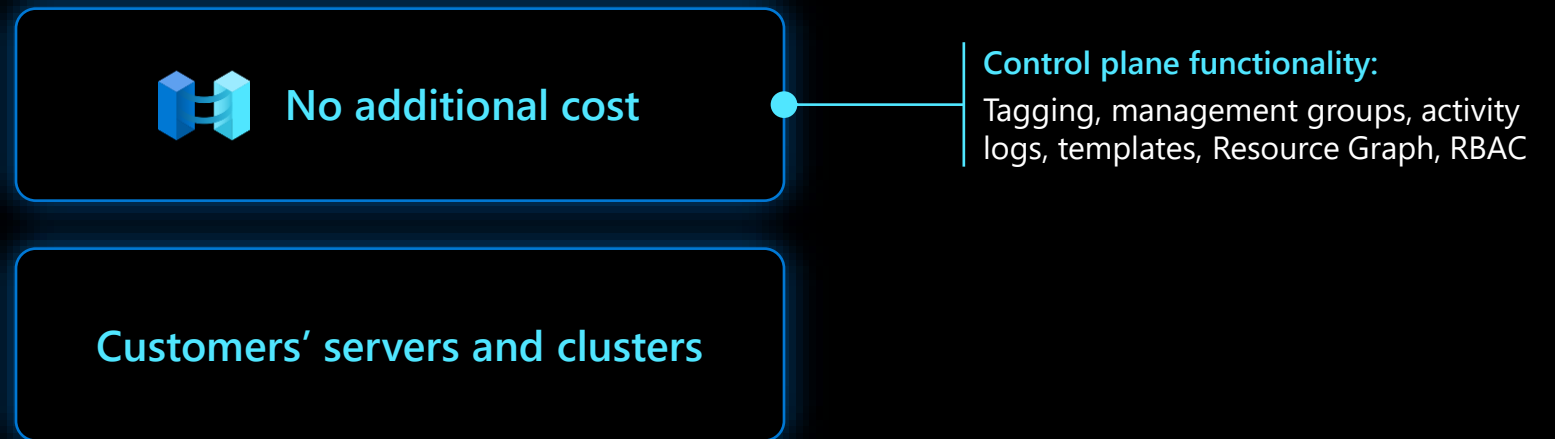
Custom Locations

Deploy Azure PaaS services to any location

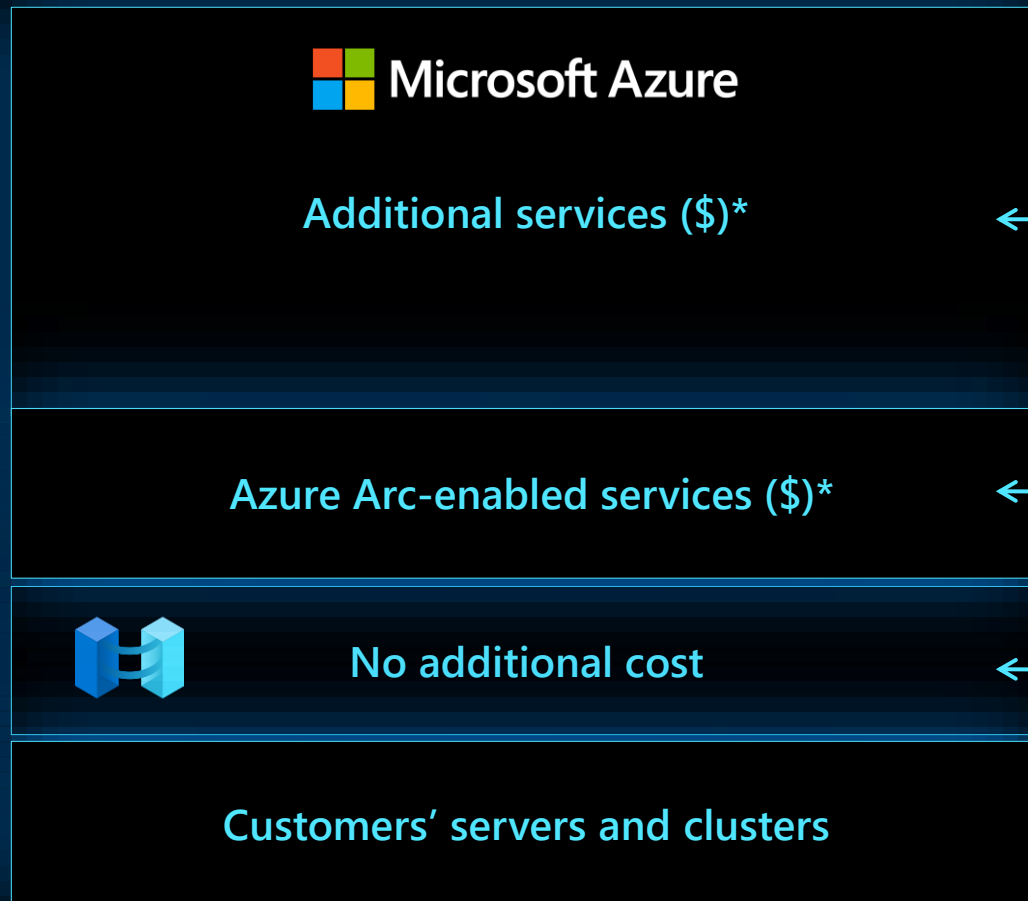
Demo



Azure Arc pricing model



Azure Arc pricing model contd.



- Azure Policy—guest configuration
 - Azure Monitor
 - Microsoft Defender for Cloud
 - Microsoft Sentinel
 - Backup
 - Log Analytics
 - GitOps management for Kubernetes
 - Application Insights
 - Config and Change Management
 - SQL Managed Instance (GA)
 - PostgreSQL (preview)
 - Azure Machine Learning (GA)
 - App Service, Functions, Logic Apps, APIM, Event Grid (preview)
- Control plane functionality:
Tagging, management groups, activity logs, templates, Resource Graph, RBAC

*Pricing for Azure Arc-enabled services and additional management services is consistent with Azure pricing. Services are available at no cost during preview.

Get started

Azure Arc-enabled servers generally available, get started today: <https://aka.ms/Azure-Arc>

Azure Arc-enabled Kubernetes generally available, get started today: <https://aka.ms/Azure-Arc-Kubernetes>

Learn more

Azure Arc Jumpstart: <https://aka.ms/AzureArcJumpstart>

Technical documentation: <https://aka.ms/AzureArcDocs>

Azure Arc Learning Path: <https://aka.ms/AzureArcLearn>



Q&A



Thank you!