

Microsoft + Red Hat: Stronger Together

Mario Cavaldesi Solution Specialist Microsoft

Red Hat Solutions on Azure

Use Red Hat solutions with your Microsoft Azure consumption commitment

Hybrid cloud infrastructure solutions

Red Hat OpenShift on Microsoft Azure

Red Hat Enterprise Linux on Microsoft Azure

Azure Red Hat OpenShift (ARO)

SQL Server on Red Hat Enterprise Linux

Red Hat Enterprise Linux for SAP on Azure

Red Hat cloud access for Microsoft Azure customers

Microsoft Azure Hybrid benefits for Red Hat Enterprise Linux

Cloud-native development solutions

Red Hat OpenShift on Microsoft Azure

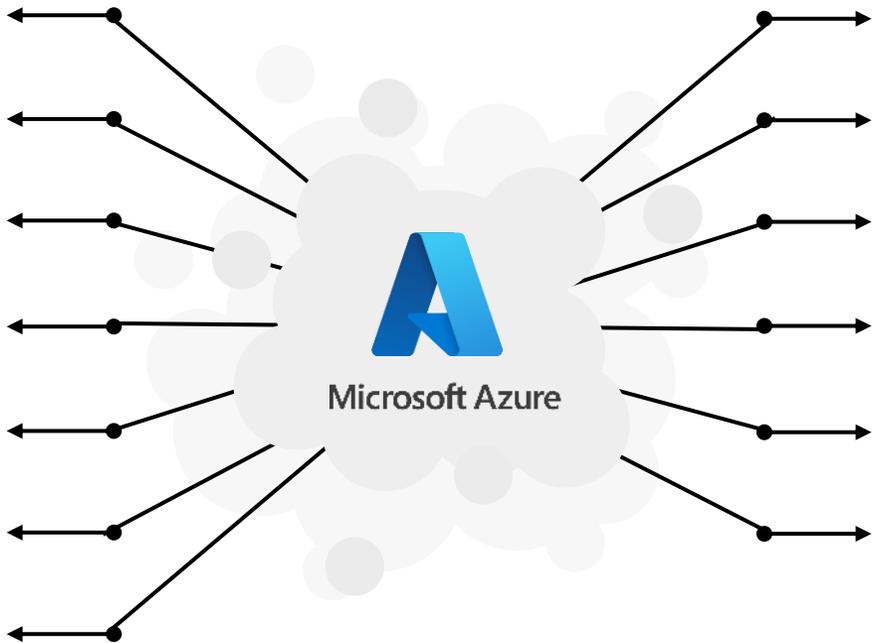
Azure Red Hat OpenShift (ARO)

Red Hat JBoss Application Platform (EAP) on Azure App Service

Ansible and Microsoft Azure

OpenShift with Azure Arc for Kubernetes

OpenShift with Azure Arc for data

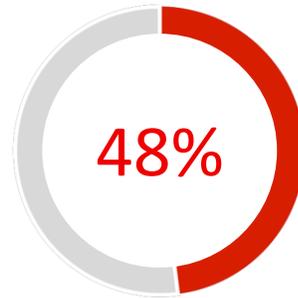


= Available as a managed service

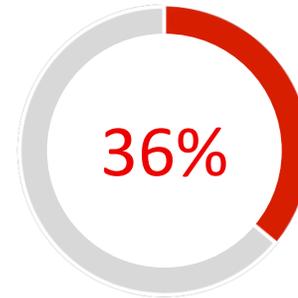
Red Hat Enterprise Linux is the preferred commercial Linux distribution

#1

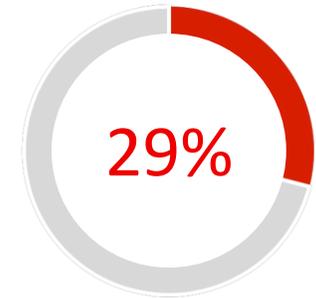
Red Hat Enterprise Linux is the top commercial Linux distribution for public cloud deployments.¹



48% of surveyed organizations choose Red Hat Enterprise Linux for current and new organization-wide application deployments.¹



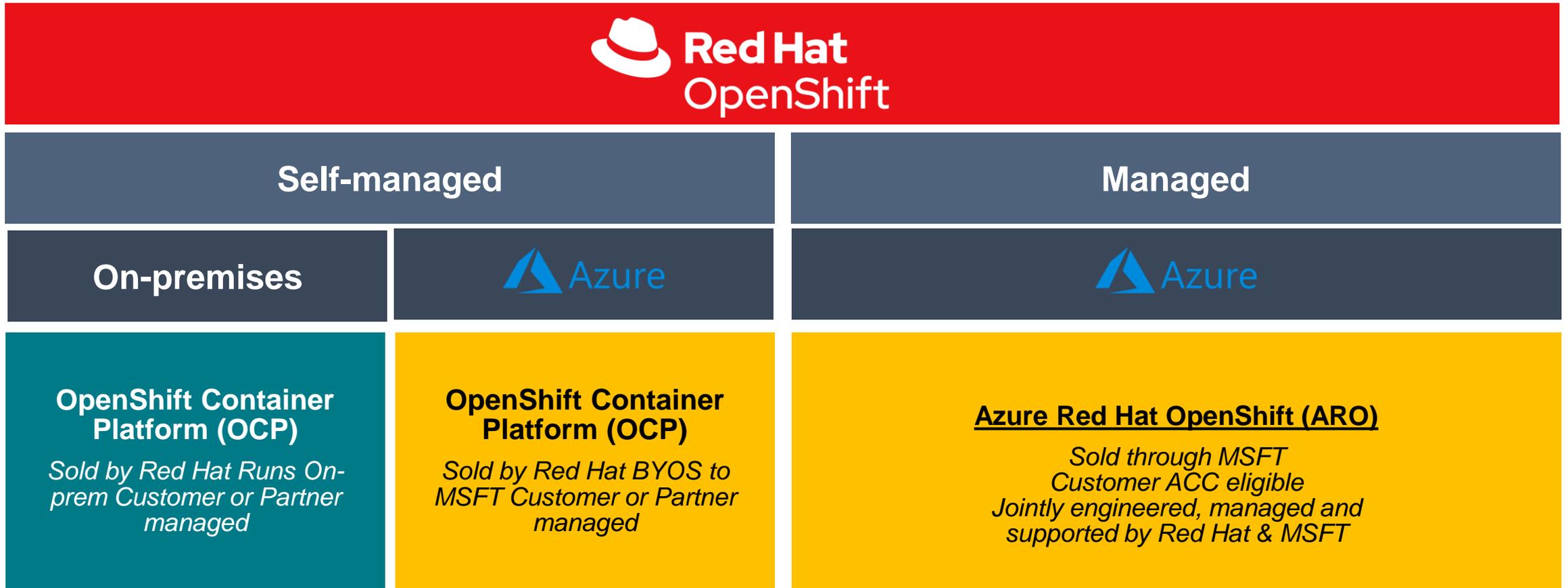
36% of surveyed organizations considered and selected Red Hat Enterprise Linux for Linux deployments.¹



29% of surveyed organizations choose Red Hat Enterprise Linux for public cloud deployments.¹

Read the complete report at redhat.com/en/resources/state-of-linux-in-public-cloud-for-enterprises.

Multiple paths for running OpenShift on Azure



What is Azure Red Hat OpenShift?

- Focus on building and scaling applications while we manage the rest.



Highly available, fully managed clusters on-demand, built on industry-leading Red Hat OpenShift Container Platform, and managed on a leading public cloud, Microsoft Azure.



Jointly monitored and operated by Microsoft and Red Hat with an integrated support experience.



Turnkey application development platform, with integrations into Azure ecosystem



Enterprise-grade operations, security and compliance



Backed by the experience of global site reliability expert (SRE) teams.

How is Azure Red Hat OpenShift different?



Native cloud service, jointly engineered between Red Hat and Microsoft



Turnkey application development platform, with integrations into Azure ecosystem



Consistent OpenShift experience



Global Site Reliability Engineering expertise with 24x7 support, 99.95% SLA

Azure Red Hat OpenShift benefits



Faster time to value

- ▶ Self-service capabilities
- ▶ Integrated and fully supported developer tooling
- ▶ Native cloud provider service:
 - Integrated experience for cluster creation and management
 - Integrates with Azure developer ecosystem



Increase operational efficiencies

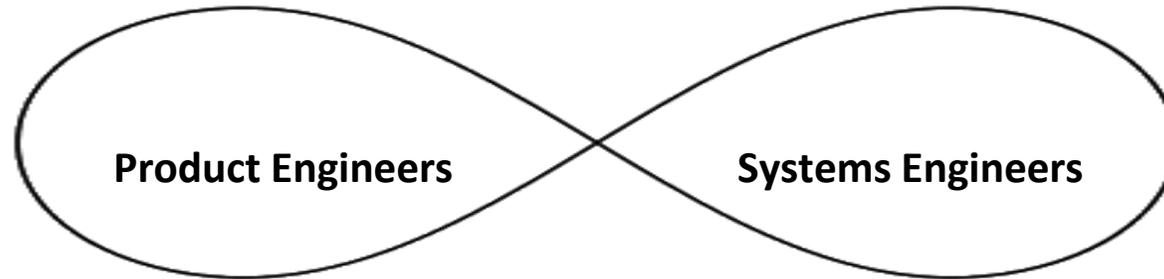
- ▶ Global Site Reliability Engineering team
 - Day 1 and Day 2 operations
 - Proactive monitoring and security
 - Automation and self-healing systems
 - Automated upgrades and patching
- ▶ Reduce risk with **joint support model** - 24x7 with 99.95% uptime SLAs on 'full-stack'



Choice & Flexibility

- ▶ Consistent experience across hybrid cloud
- ▶ Scale easily and cost-effectively to meet demand
- ▶ Unified bill; counts towards cloud commit (PAYG and Reserved Instance)
- ▶ Ecosystem: Strategic partnership with Azure; 200+ certified ISVs; OperatorHub.io; Open Source community

Full Stack Management via Site Reliability Engineering (SRE)



Building Services

- Manage and monitor OpenShift hosted environments
- New features
- Day 1 Operations: Develop and Deploy managed clusters



Automating for Scale

- Automate everything: upgrades, adding storage, capacity, auto scaling, etc.
- Repeatability manages risk, improves the user experience and enables faster delivery



Observability and Reliability

- Day 2 Operations such as lifecycle operations, monitoring and patching
- Proactive and reactive responses to and from
 - Customers
 - Partners
 - Upstream community

Running your own Red Hat OpenShift cluster

Responsibilities

User management



Project and quota management



Application lifecycle



Cluster creation



Cluster management



Monitoring and logging



Network configuration



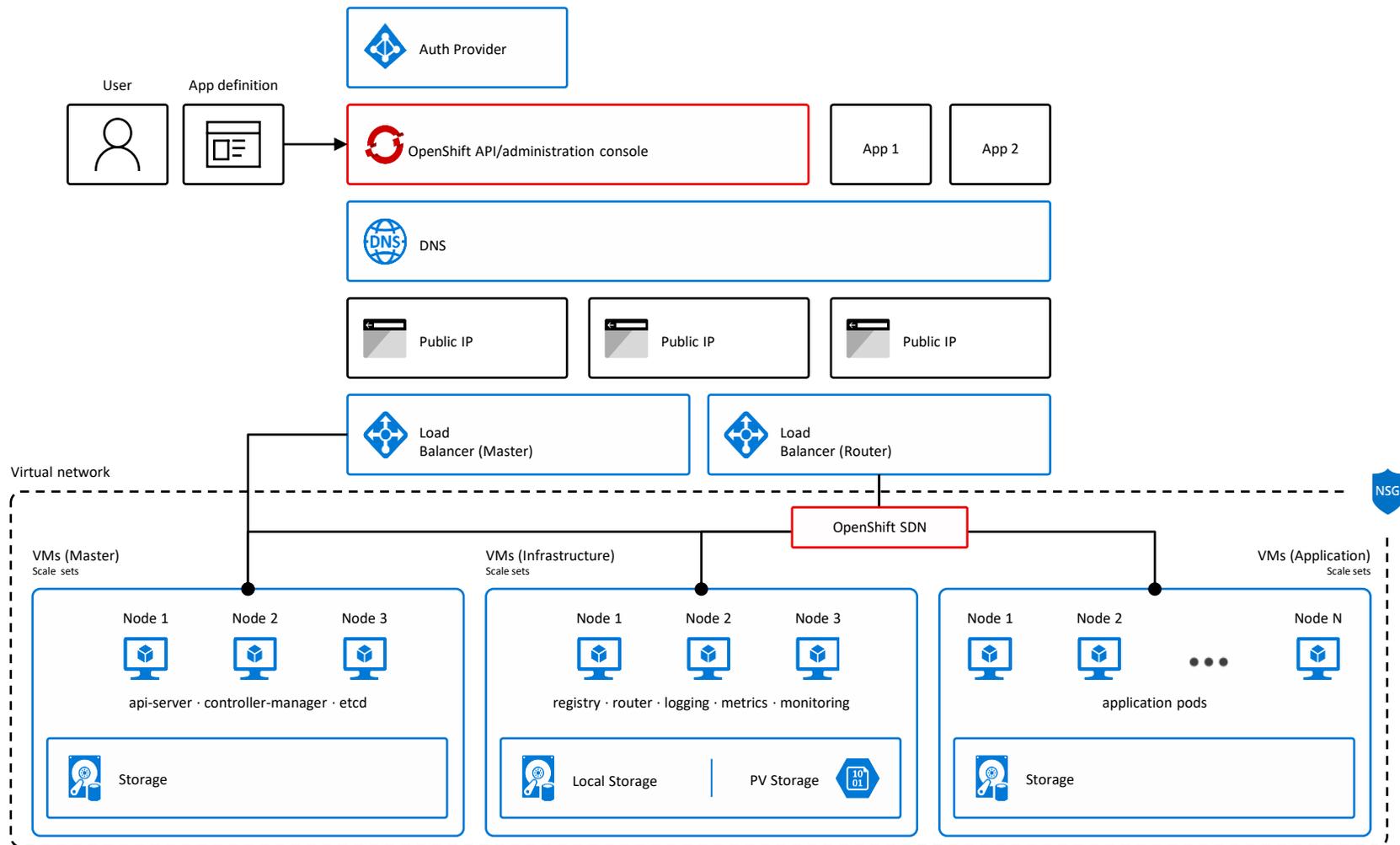
Software and security updates



Platform support



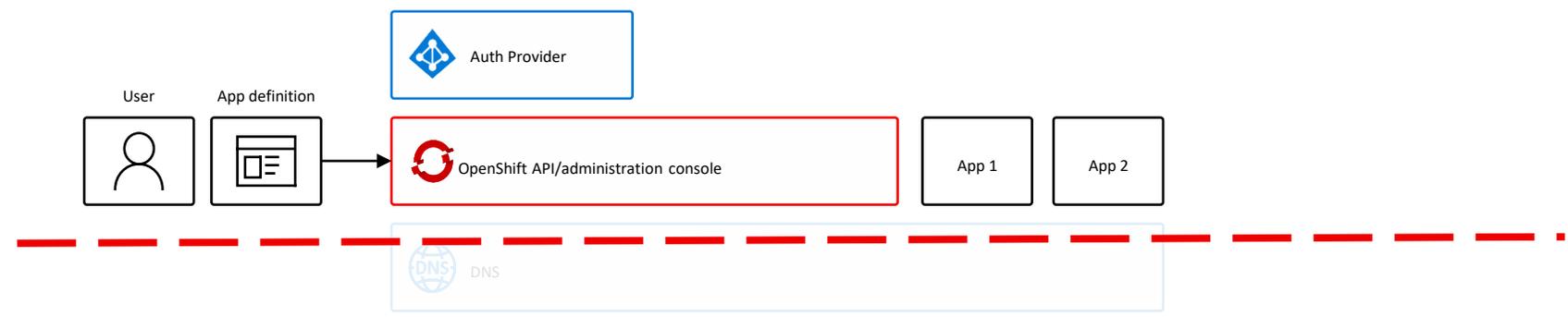
Customer
 Red Hat



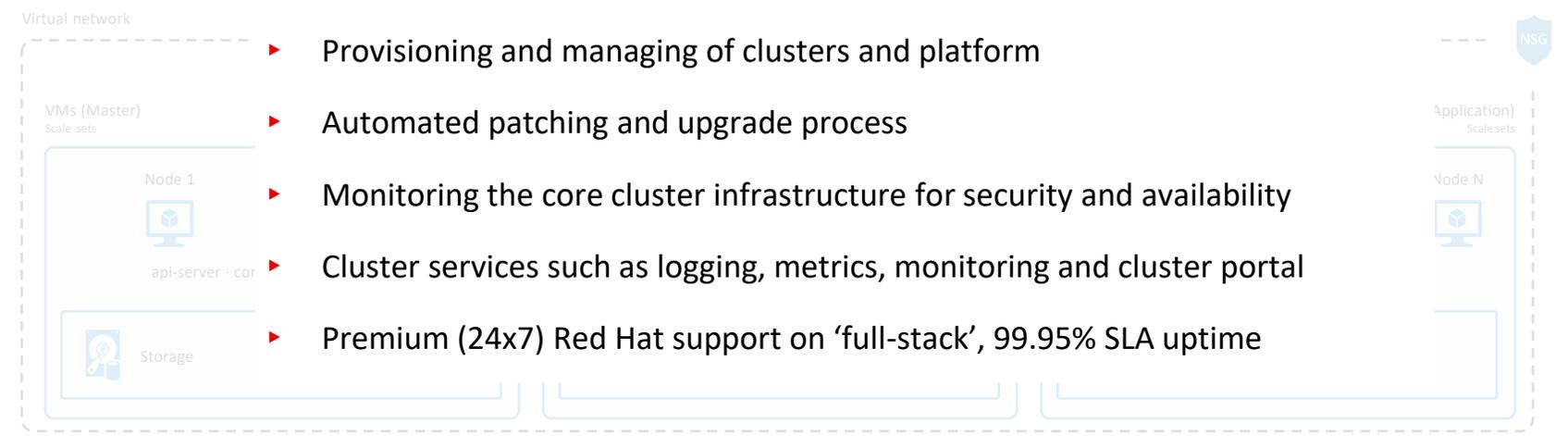
Reduce complexity with Azure Red Hat OpenShift

Responsibilities	
User management	Customer
Project and quota management	Customer
Application lifecycle	Customer
Cluster creation	Red Hat/Microsoft
Cluster management	Red Hat/Microsoft
Monitoring and logging	Red Hat/Microsoft
Network configuration	Red Hat/Microsoft
Software and security updates	Red Hat/Microsoft
Platform support	Red Hat/Microsoft

Customer
 Red Hat/Microsoft




Let Microsoft and Red Hat...
Manage Day 1 and Day 2 Operations



Azure Red Hat OpenShift on OpenShift 4 Highlights

Enhanced Features, Availability and Control

- **Full cluster admin** - Full cluster admin support for advanced customization
- **Private clusters / Express Route support** - Create fully managed clusters in a custom VNet with no public endpoints
- **Bring your own VNet** - Deploy OpenShift 4.5 based clusters into your own VNet
- **Cluster Autoscaling** - Automatically adjust the size of your cluster
- **Multi-AZ clusters** - Clusters automatically deploy across three availability zones

Operator Support

- **Operator/CRD support** - Support for Operators and Custom Resource Definitions

Improved Developer Productivity

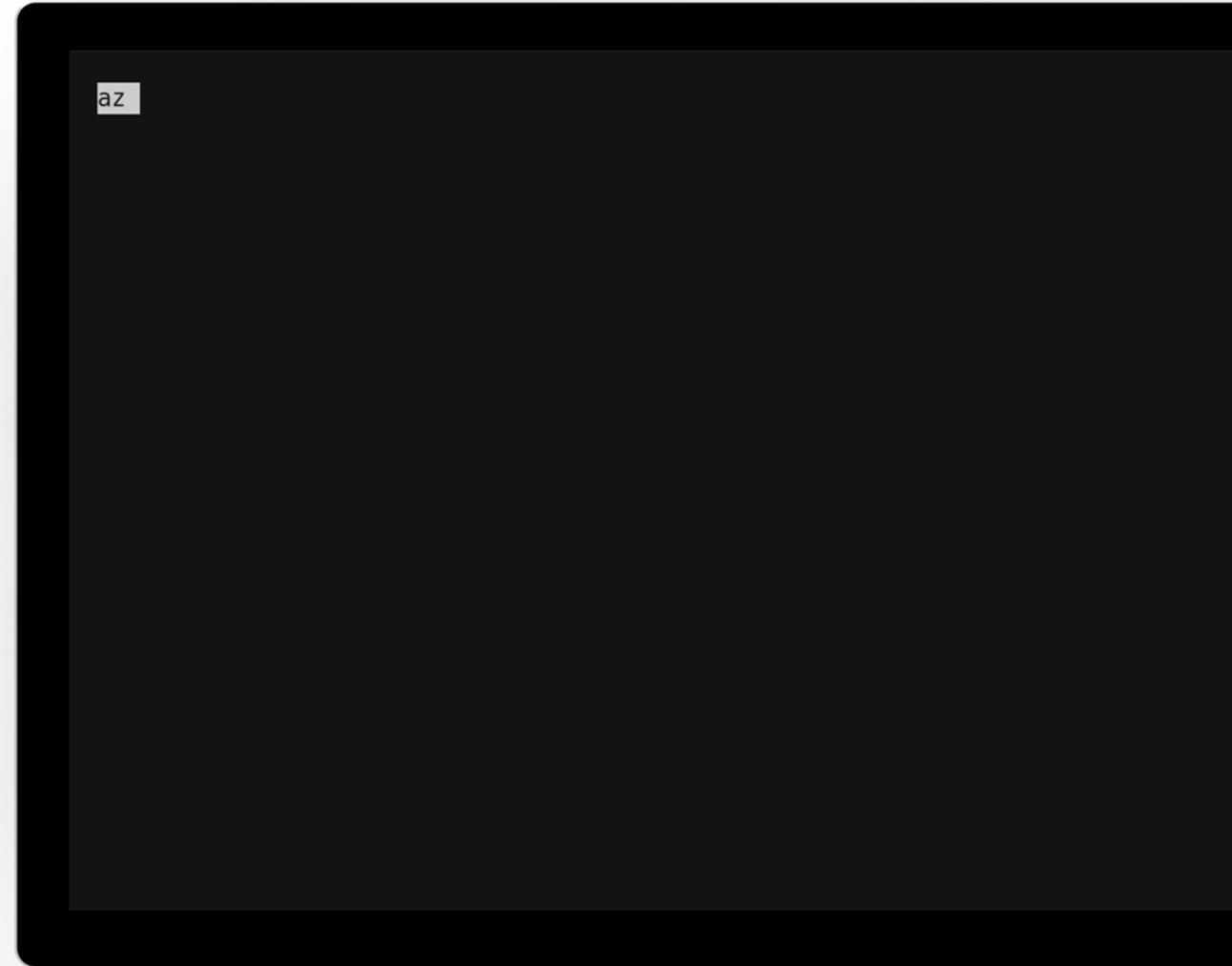
- **Developer Productivity tools** - Service Mesh, CodeReady Workspaces, serverless etc.
- **Azure Portal Integration** - Easily view OpenShift clusters in the Azure web portal

Regulatory Compliance

- **Compliance Certifications:** PCI DSS, HiTrust, FedRAMP High, SOC 2 (Coming soon: ISO etc.)

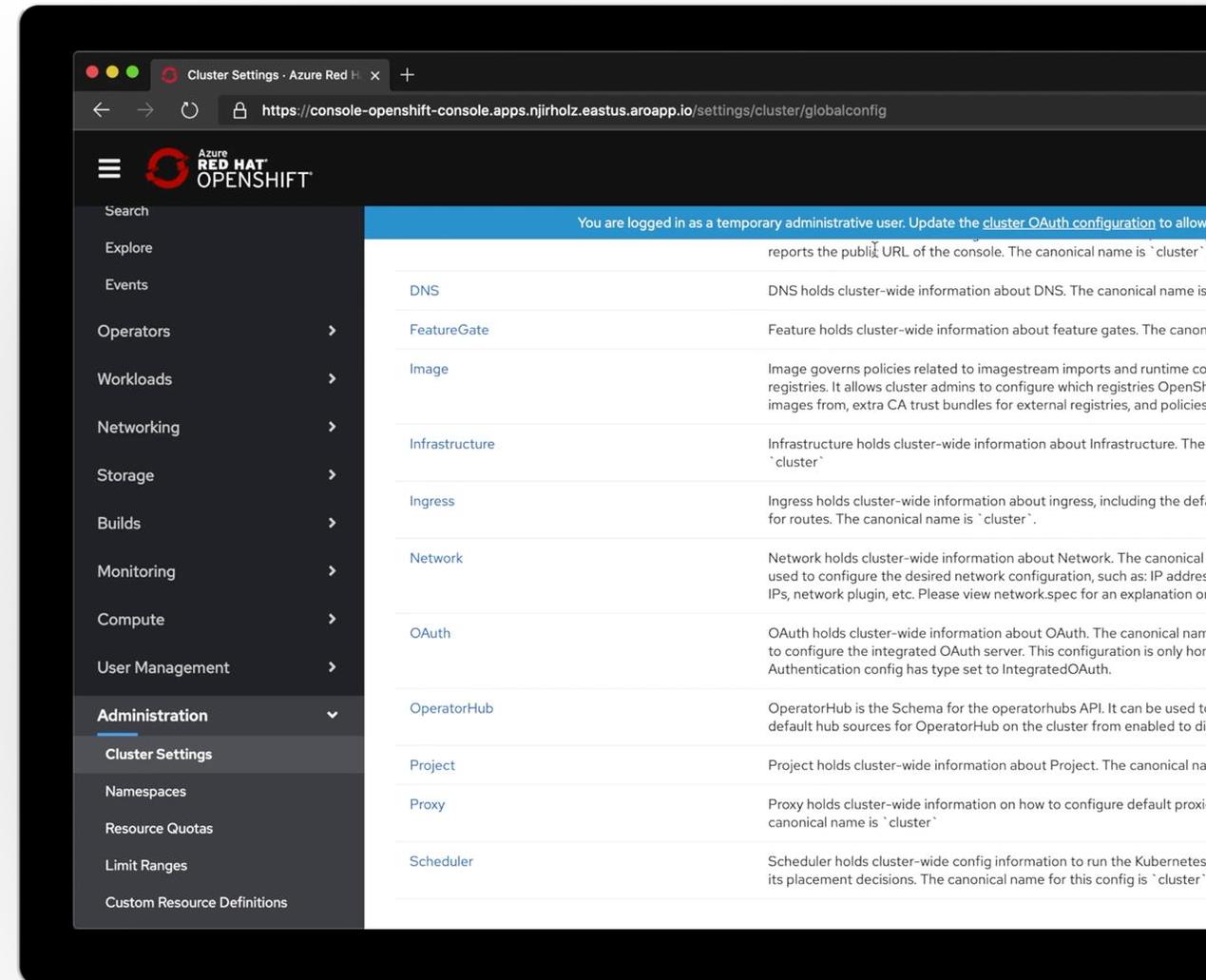
Flexible, self-service deployment

Create fully managed OpenShift clusters
in minutes using `az openshift create`

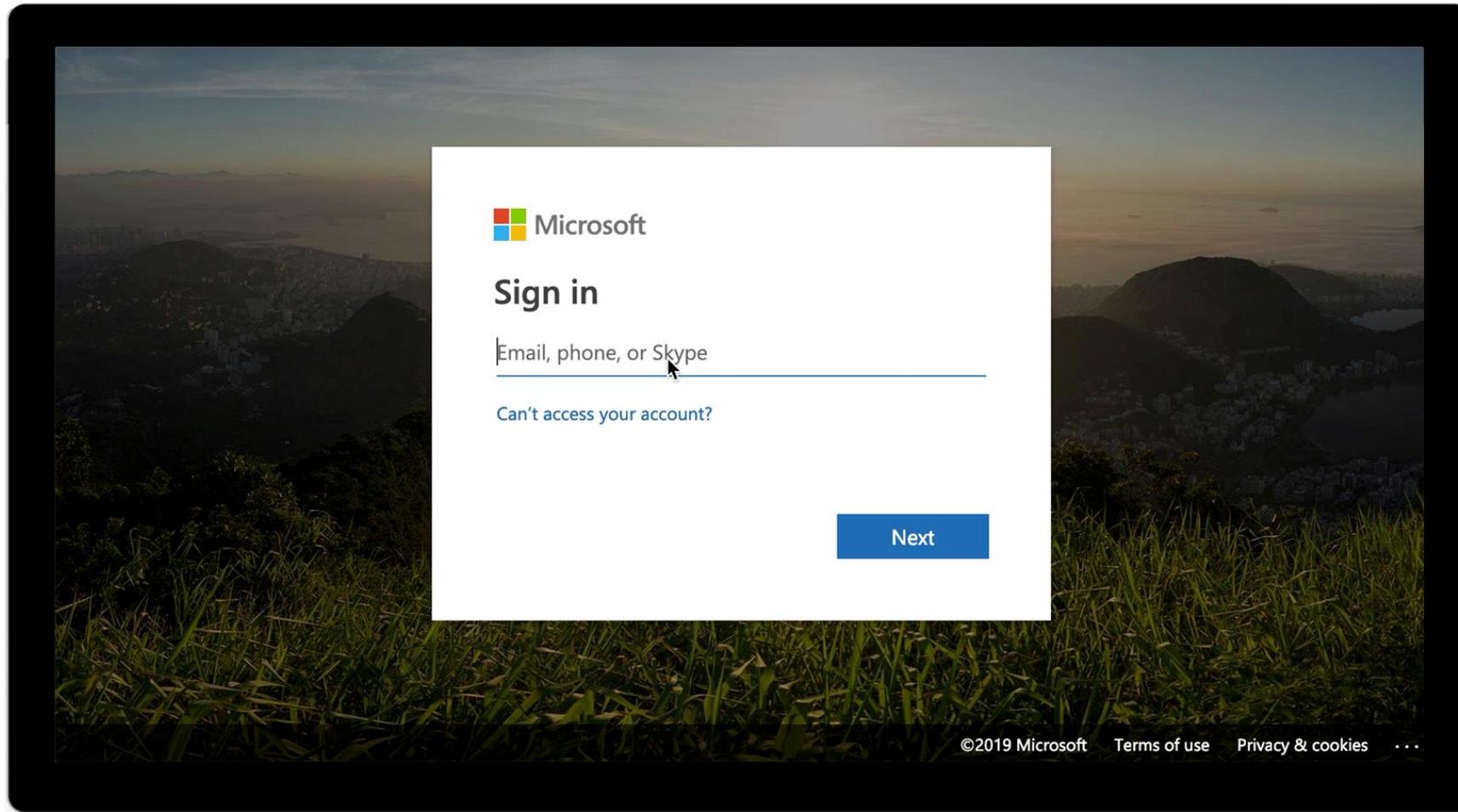


Single sign-on with your own identity provider

In addition to Azure Active Directory, configure supported OpenShift identity providers, for example using OpenID Connect.

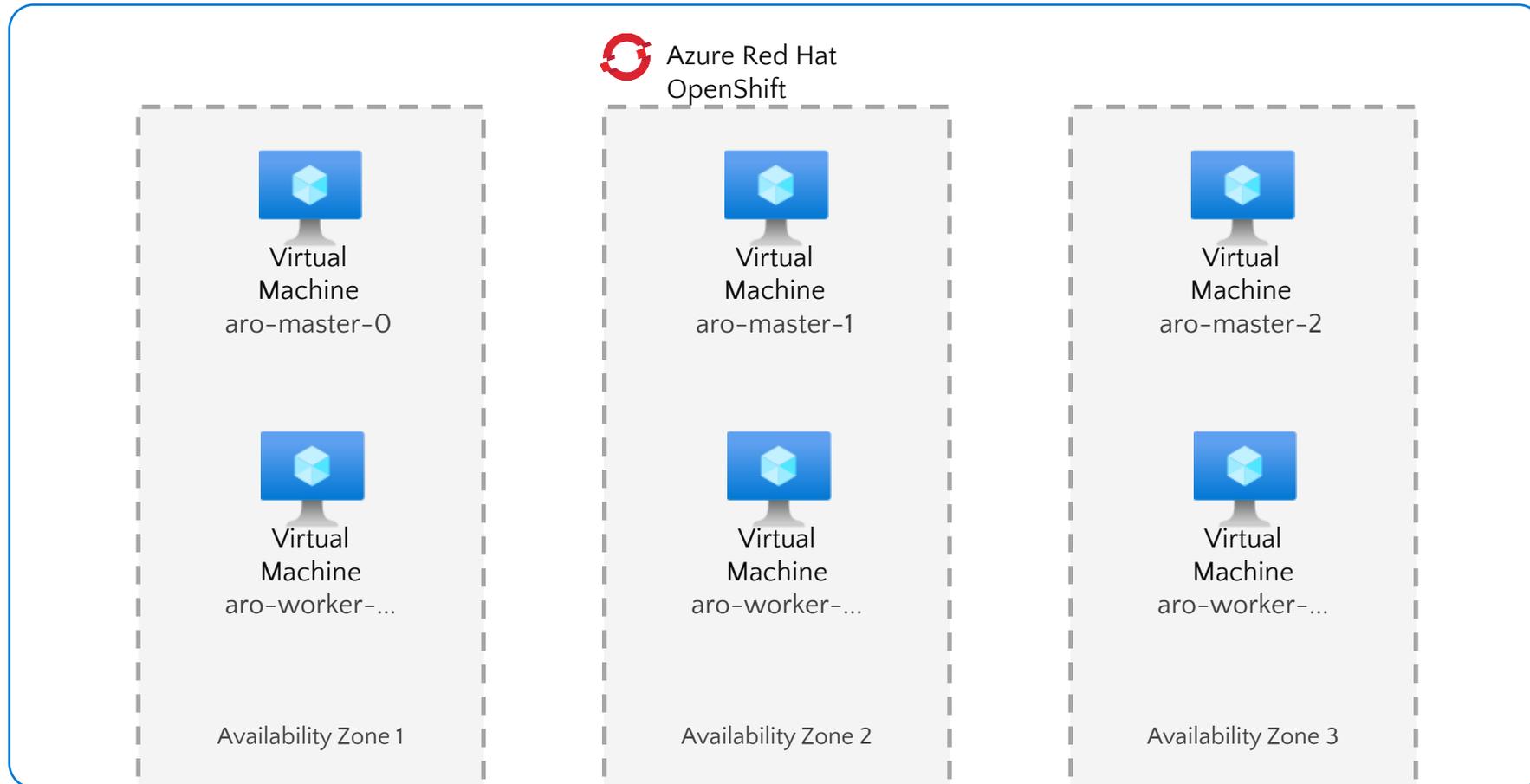


Azure Active Directory integration—integrated sign-on



Multi-Availability Zones clusters and 99.95% SLA

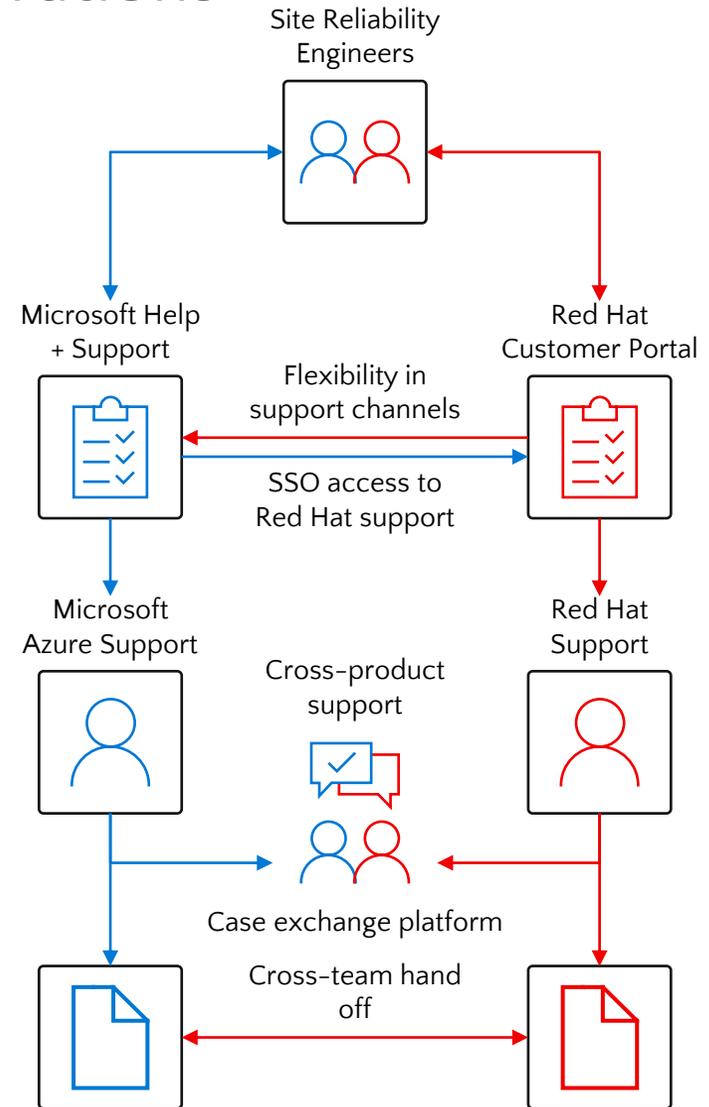
To ensure the highest resiliency, cluster components are deployed across 3 Azure Availability Zones in supported Azure regions.



Unified support and operations

Jointly engineered, operated, and supported by Microsoft and Red Hat

- In-portal integrated support experience is available 24x7
- ISO 27001 compliant B2B communication channel
- Co-located support with Red Hat on-site team
- Integrated case systems
- Microsoft and Red Hat security response team collaboration



Red Hat Ansible Automation Platform on Azure Marketplace

Automation from your Azure cloud to on-premises, edge, and IT resources

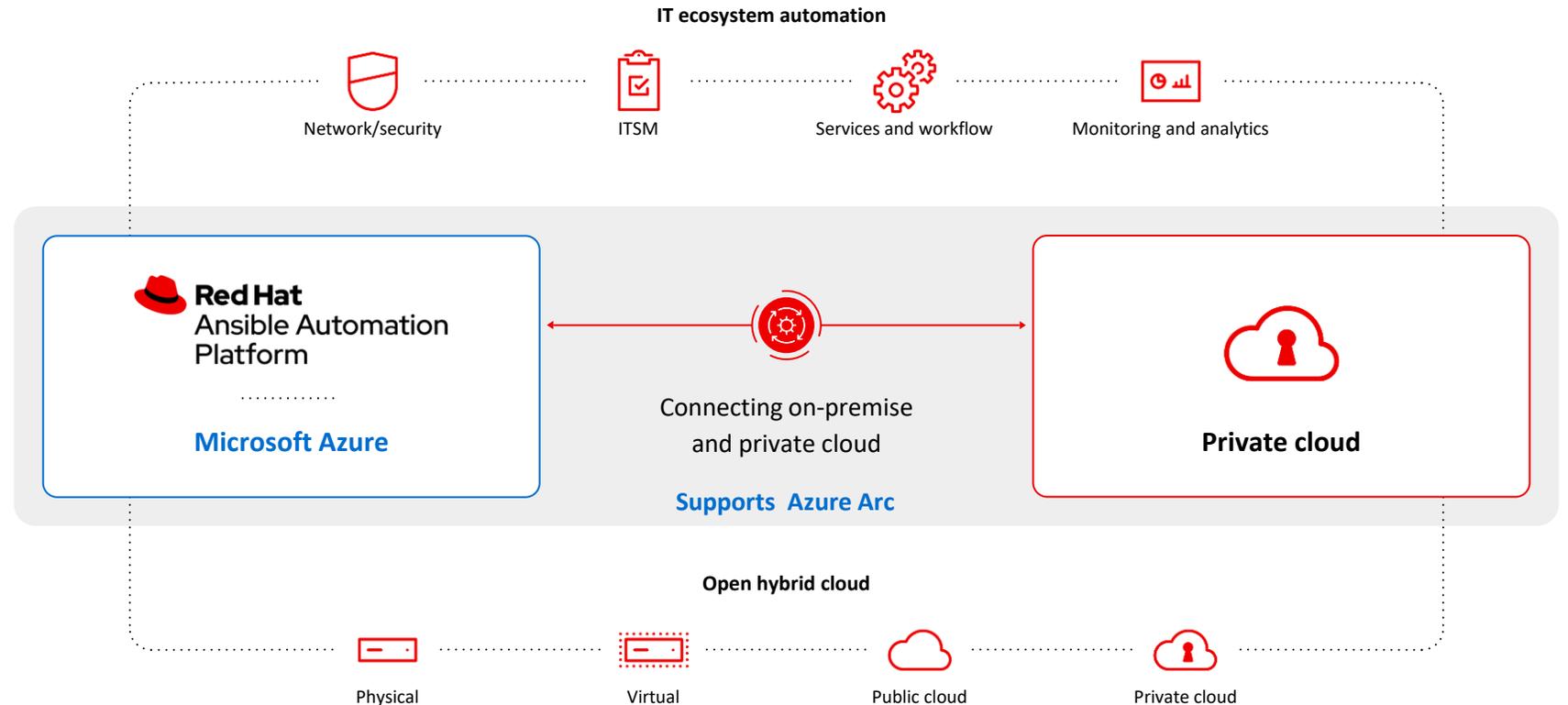
 **Runs in your Azure cloud**

 **Fully installed and integrated**

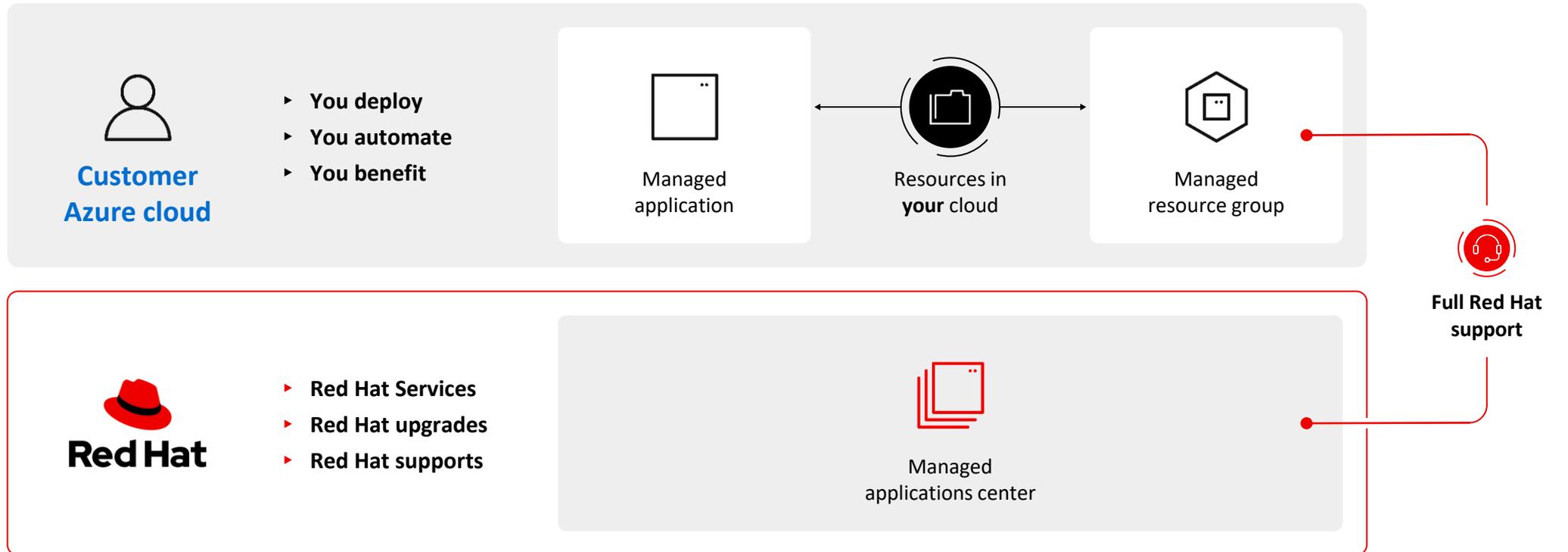
 **Fully supported by Red Hat**

 **Integrated to Microsoft Azure billing**

 **Counts toward spend agreements**



Red Hat and Azure managed application workflow



Microsoft protects OpenSource

Giuseppe Di Pasquale – CyberSecurity Technology Specialist
Microsoft



Red Hat



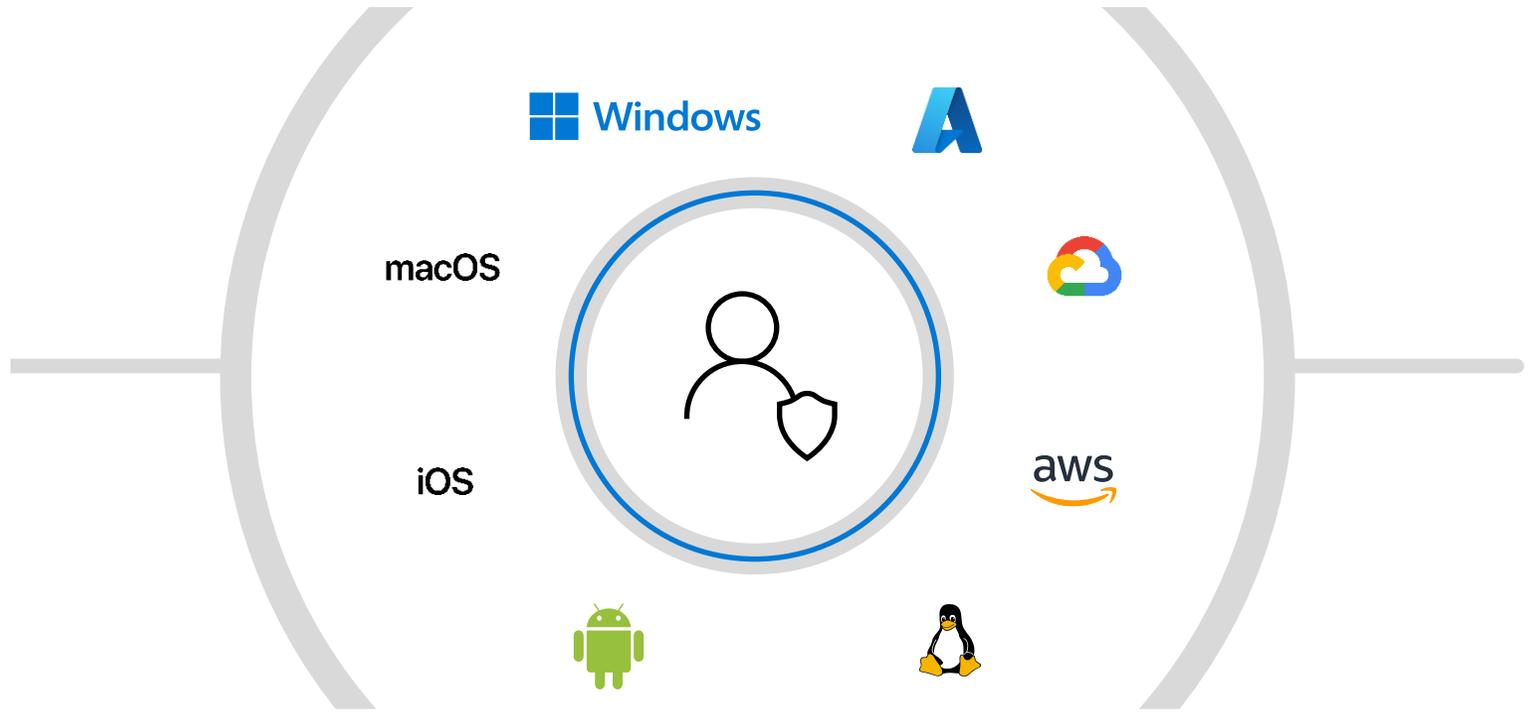
Microsoft Azure

SIEM

Microsoft Sentinel

Visibility across your entire organization


Existing security portfolio




Microsoft ecosystem

Microsoft 365 Defender

Secure your end users

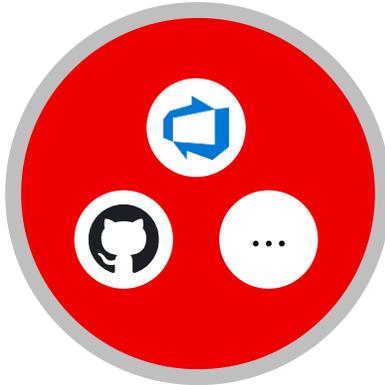
Microsoft Defender for Cloud

Secure your infrastructure

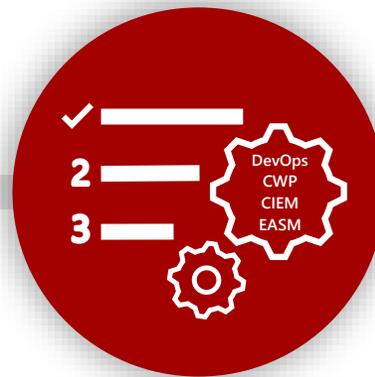
XDR

Microsoft Defender for Cloud

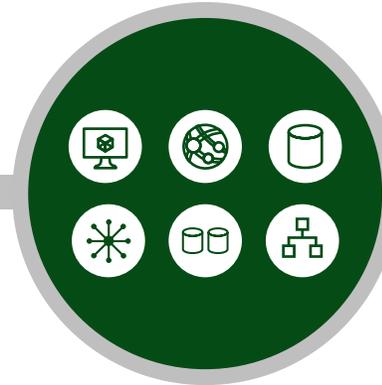
Unify your DevOps
Security Management



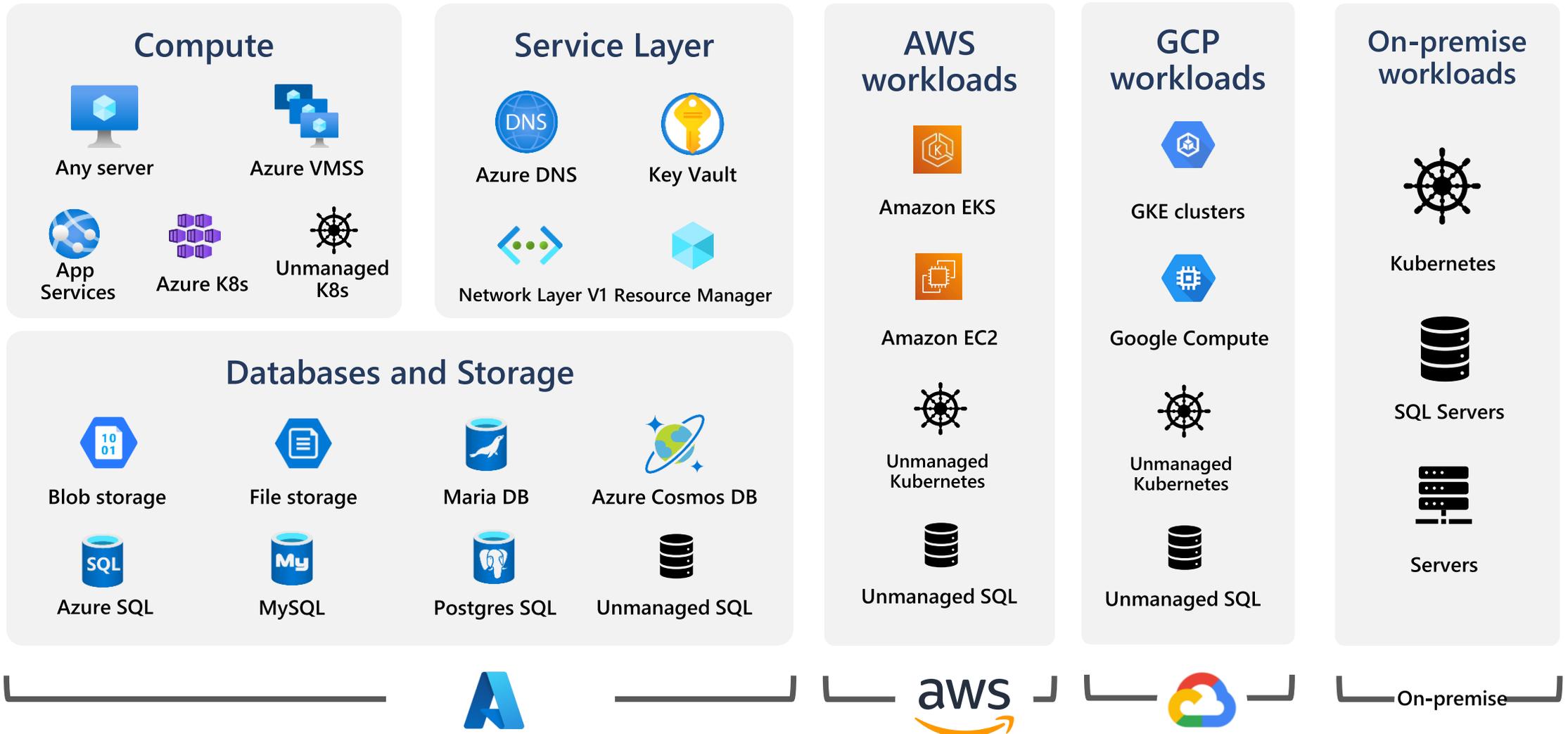
Strengthen and manage your
cloud security posture



Protect your cloud
workloads



Full-stack coverage with dedicated detections



Microsoft Defender for Servers

Protect machines in hybrid and multi-cloud environments



Multicloud support

- Support any Windows and Linux servers
- Coverage for managed services incl. Amazon EC2 and Google Compute Engine



Leading EDR solution

- Integrated with Defender for Endpoint
- Next generation antivirus protection
- Endpoint detection and response
- Automated self-healing
- Vulnerability Assessment

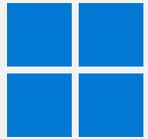


Optimized for Cloud environments

- Adaptive Application Control
- Just in time VM access
- File integrity monitoring
- Adaptive network hardening



Supported operating systems



Windows Server 2012 R2

Windows Server 2016

Windows Server, version 1803 or later

Windows Server 2019

Windows Server 2022



Red Hat Enterprise Linux 7.2+

Red Hat Enterprise Linux 8.x

CentOS 7.2+, 8

Ubuntu 16.04, 18.04, 20.04

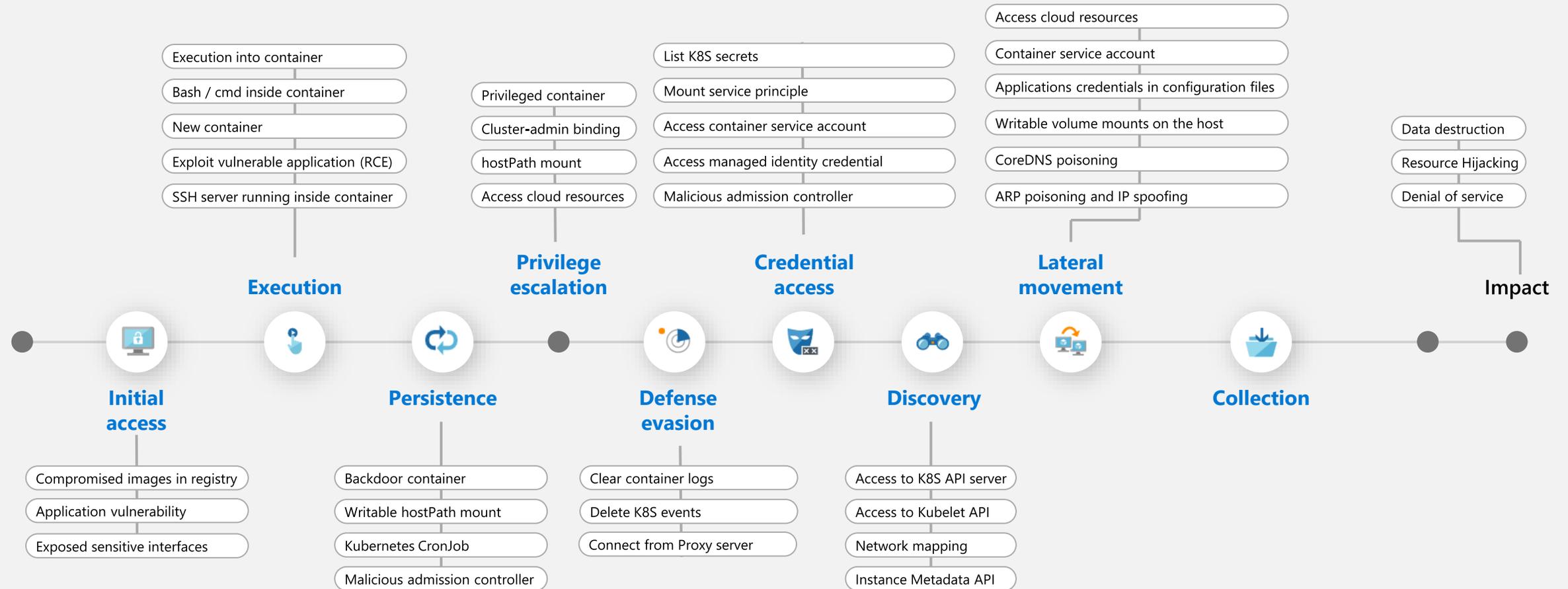
SUSE Linux Enterprise Server 12, 15

Oracle Linux 7.2 or higher

Oracle Linux 8.x

Amazon Linux 2

Threat detections aligned to the Kubernetes Attack Matrix



Database threat detections powered by Microsoft Threat Intelligence

Query analysis

- Potential SQL Injection
- Vulnerability to SQL Injection
- Anomalous amount of data extraction
- Anomalous destination of data extraction

Threat intelligence

- Access from an unusual location
- Access from a suspicious IP
- Data center anomaly
- Principal anomaly
- Domain anomaly
- Suspicious app

Brute force

- Potential brute force
- Potential brute force on a valid user
- Potential successful brute force



Data flow for Microsoft Security Copilot

Microsoft Security trust boundary

Prompting in Microsoft Security solutions



Microsoft Defender



Microsoft Sentinel

Plugins third-part



Microsoft Defender for Endpoints



Microsoft Defender Threat Intelligence

splunk> serviceview

Your context and content

Event logs, alerts, incidents, & policies

VADO A MANGIARE NONNA
VADO A MANGIARE, NONNA

Una virgola può salvare una vita.
Usa la punteggiatura, salva la nonna.

Azure OpenAI instance is maintained by Microsoft. OpenAI has no access to the data or the model



Azure OpenAI

are performed
output results

are sent to Copilot

ing

Data flow

(🔒 = all requests are encrypted via HTTPS)

- 3 Copilot sends modified prompt to LLM
- 4 Copilot receives LLM response
- 5 Copilot accesses plugins for post-processing
- 6 Copilot sends the response, and app command back to security products



Thank you