



Connect

# Migrate and Modernize: Building an AI-Ready Future with Red Hat and Microsoft



Microsoft Azure



Red Hat



Red Hat



Microsoft





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# Agenda

**Introduction ARO**  
**New Features**  
**Segitur Case**  
**Intelligent Apps**





# Introduction



# Azure Red Hat OpenShift

A jointly supported, turnkey application platform native to Azure.



- Comprehensive application platform
- Hybrid cloud flexibility
- Fully managed Day 2 operations
- Integrate with Azure services
- Consistent updates and patches
- Single invoice and draw down on MACC

**65%**

Shortened dev cycle<sup>1</sup>

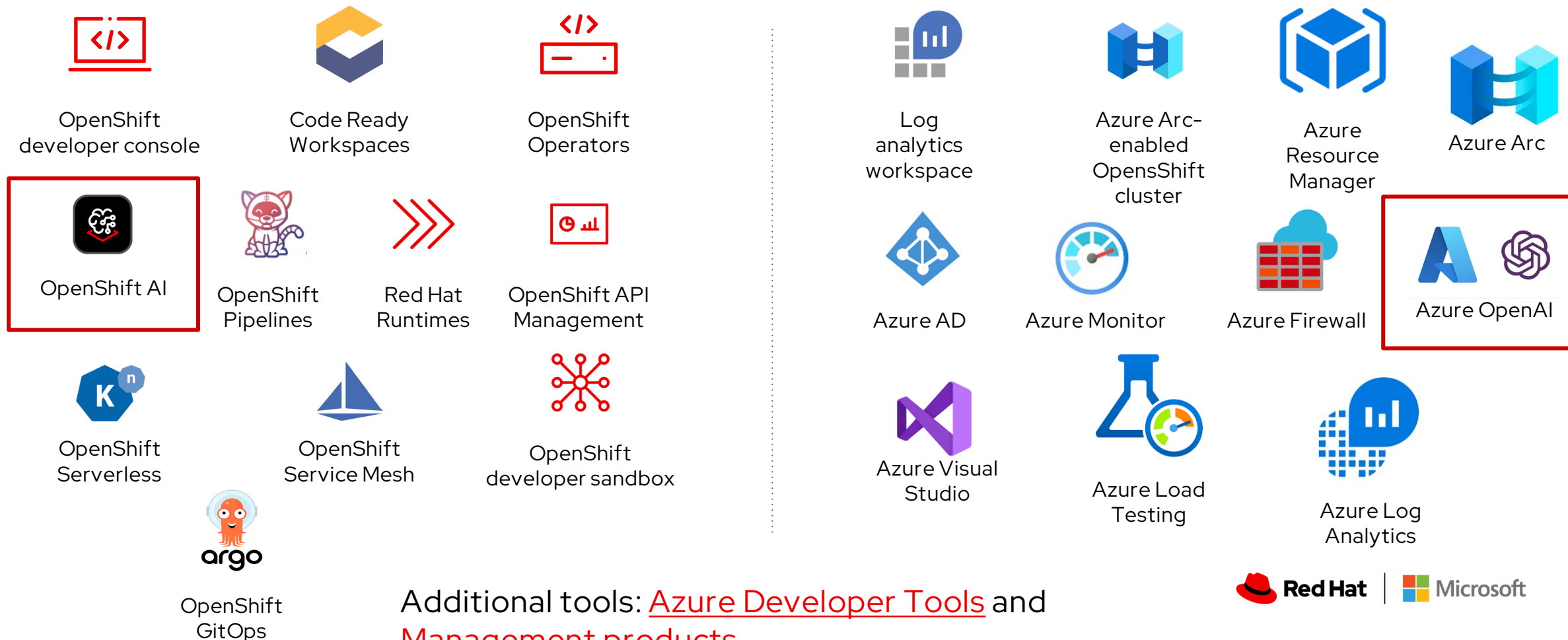
**50%**

Improved operational efficiency<sup>1</sup>

<sup>1</sup> "The Total Economic Impact® of Red Hat OpenShift Cloud Services by Forrester, "Mar. 2024.



# Azure Red Hat OpenShift integrates with OpenShift and Azure Developer and Management Tools





A vertical red bar on the left side of the slide contains various white icons representing technology and security: a cloud with a keyhole, a database cylinder, a server rack, a document with an 'X', a magnifying glass, and a laptop. Arrows indicate flow and connectivity between these elements.

# New features



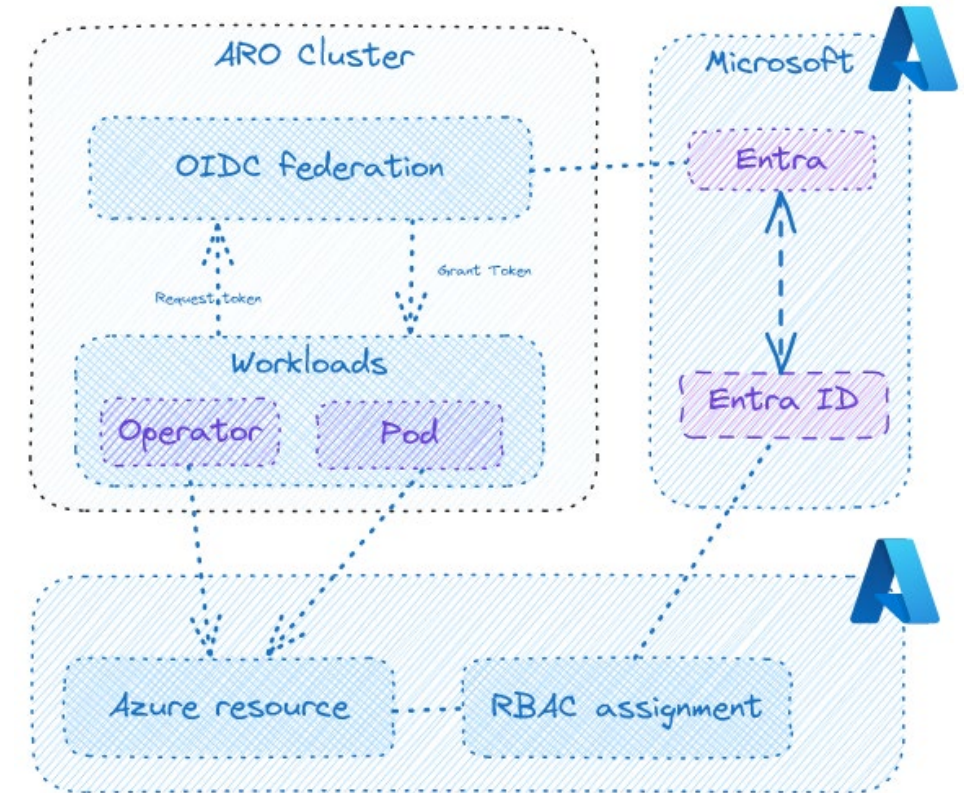
# ARO Managed Identity and Workload Identity

## Key Components

1. **Short-term** token based authentication
2. **Minimal set of permissions** - Abiding by the principle of least privilege

## Benefits

- **Improved security with granular permissions** - each component only has the permissions it needs to complete its function
- **Reduced operational burden** - no need to manage and rotate long lived Service Principal credentials
- **Simplified access control** by using Azure RBAC role assignments





# ARO Confidential Containers

Public preview

## Key Components

- **Separate confidential environment** – containers operate in a separate Confidential VM (CVM)
- **Trusted Execution Environment (TEE)** – provides encrypted memory enclaves to protect data



## Benefits

- **Enhanced security** posture for container workloads with hardware-level isolation
- **Protects sensitive information** by encrypting data in use, at rest, and in transit
- **Zero-Trust security model** that strictly limits access from unauthorized individuals

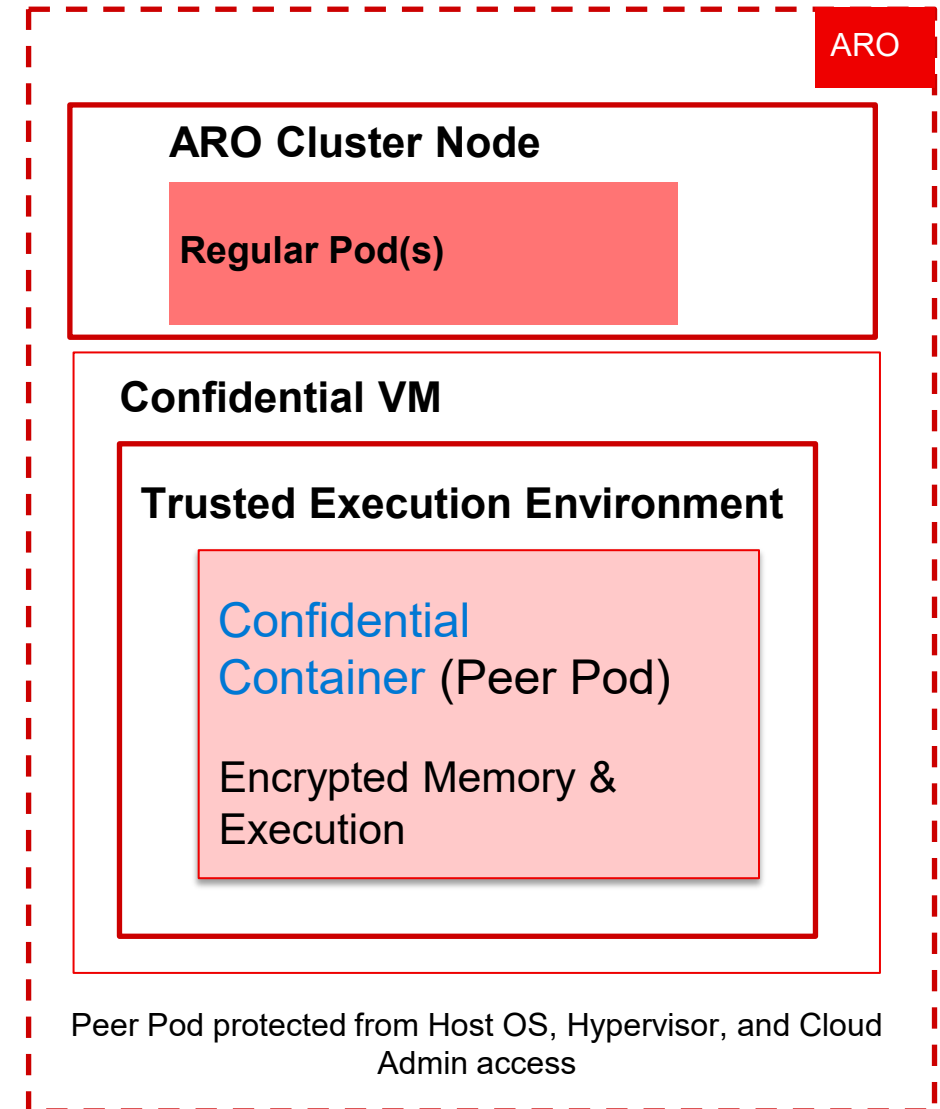


# What makes a container confidential in ARO?

- **Hardware-level isolation** - leveraging Azure Confidential Computing infrastructure for peer pods
- **Trusted Execution Environments (TEEs)** - providing encrypted memory enclaves within peer pods
- **Zero-trust security model** - protecting against unauthorized access, even from cloud operators
- **Data encryption in use** - ensuring confidentiality during processing within the peer pod
- **Remote attestation** - verifying the integrity of the peer pod environment
- **Seamless integration** with existing OpenShift workflows and tools
- **Performance optimization** - minimal overhead while maintaining security

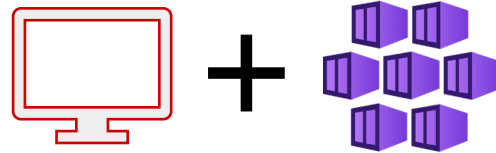
## While maintaining:

- Compatibility with standard container images
- Scalability across ARO clusters





Public preview



# OpenShift virtualization on Azure Red Hat OpenShift (ARO)

Run VMS and containers together. Simplify modernization. Accelerate cloud adoption.

Migrate Virtual Machines  
Seamlessly

Modernize Applications at  
Your Pace

Unified Management for  
VMS and Containers



# Virtualization on ARO accelerates the migration of VMs while offering the cloud flexibility to modernize

## Use Cases

Migrate VMs as is to the cloud

Modernize apps with cloud-native tech

## Why Virtualization on Azure Red Hat OpenShift

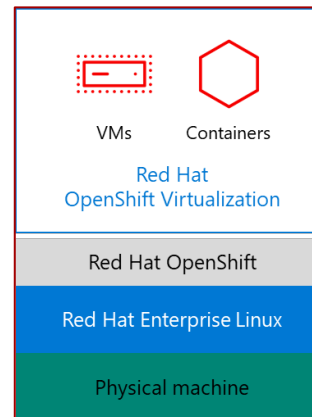
- Migrate & modernize at **your own pace** on a **consistent** platform
- Traditional VM behavior & existing VM roles in a modern platform
- Built on a trusted platform
- **Accelerated migration** with a 1st party Azure solution
- Cloud flexibility with pay-as-you-go pricing and dynamic resource scaling



# What is OpenShift and OpenShift Virtualization?

## Red Hat OpenShift

- Kubernetes platform for container orchestration and app development and deployment
- Built-in tools for CI/CD, monitoring, logging, and security



## OpenShift Virtualization

- Capability for running VMs alongside containers
- Based on KubeVirt open-source project
- Uses the trusted RHEL KVM hypervisor
- No additional OpenShift subscriptions cost

## Key Use Cases

### Migrate Virtual Machines Seamlessly

Move traditional VMs to OpenShift without rewriting

### Modernize Applications at Your Pace

Gradually refactor monolithic apps  
Run legacy and cloud-native together

### Unified Management for VMs and Containers

Single platform for all workload types w/ consistent tools, security, and governance

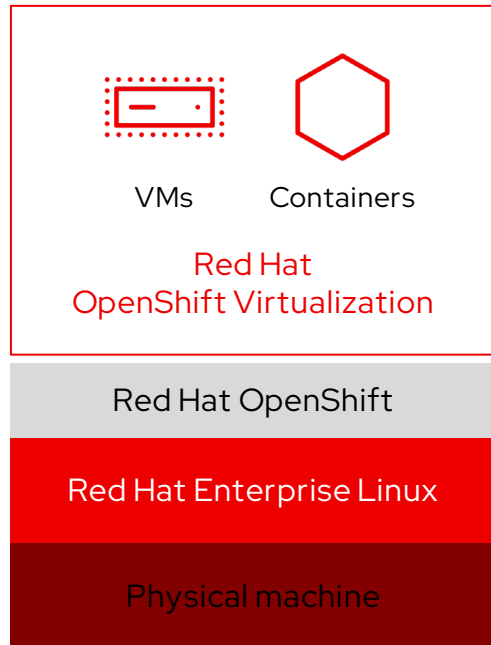
### Operational Efficiency

No extra licensing  
Pay only for VM compute  
Leverage OpenShift investments and skills



# What is Red Hat OpenShift Virtualization?

Now coming to Azure Red Hat OpenShift – Public Preview May 2025

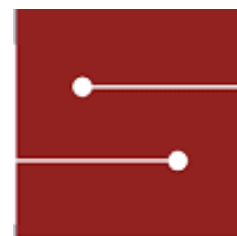


- **Unified platform**  
for virtual machines and containers
- **Consistent management**  
tools, interfaces, and APIs incl. ACM and AAP integrations
- **Performance and stability**  
of Linux, KVM, and qemu
- **Thriving open source ecosystem**  
the **KubeVirt project is a top 10 CNCF\*** active project, with 200+ contributing companies
- **Diverse ecosystem**  
of Red Hat & partner operators
- Includes Red Hat Enterprise Linux guest entitlements
- **Supports Microsoft Windows** guests through Microsoft SVVP
- **Inbound guest migration** using Migration Toolkit for Virtualization, Training and Consulting
- **15+ years of expertise** in virtualization

<sup>14</sup> \*KubeVirt's status as a top 10 CNCF active project indicates substantial industry adoption, robust development momentum, and long-term viability in the cloud-native ecosystem.



# Plataforma Inteligente de Destinos



**SEGITTUR**  
turismo e innovación



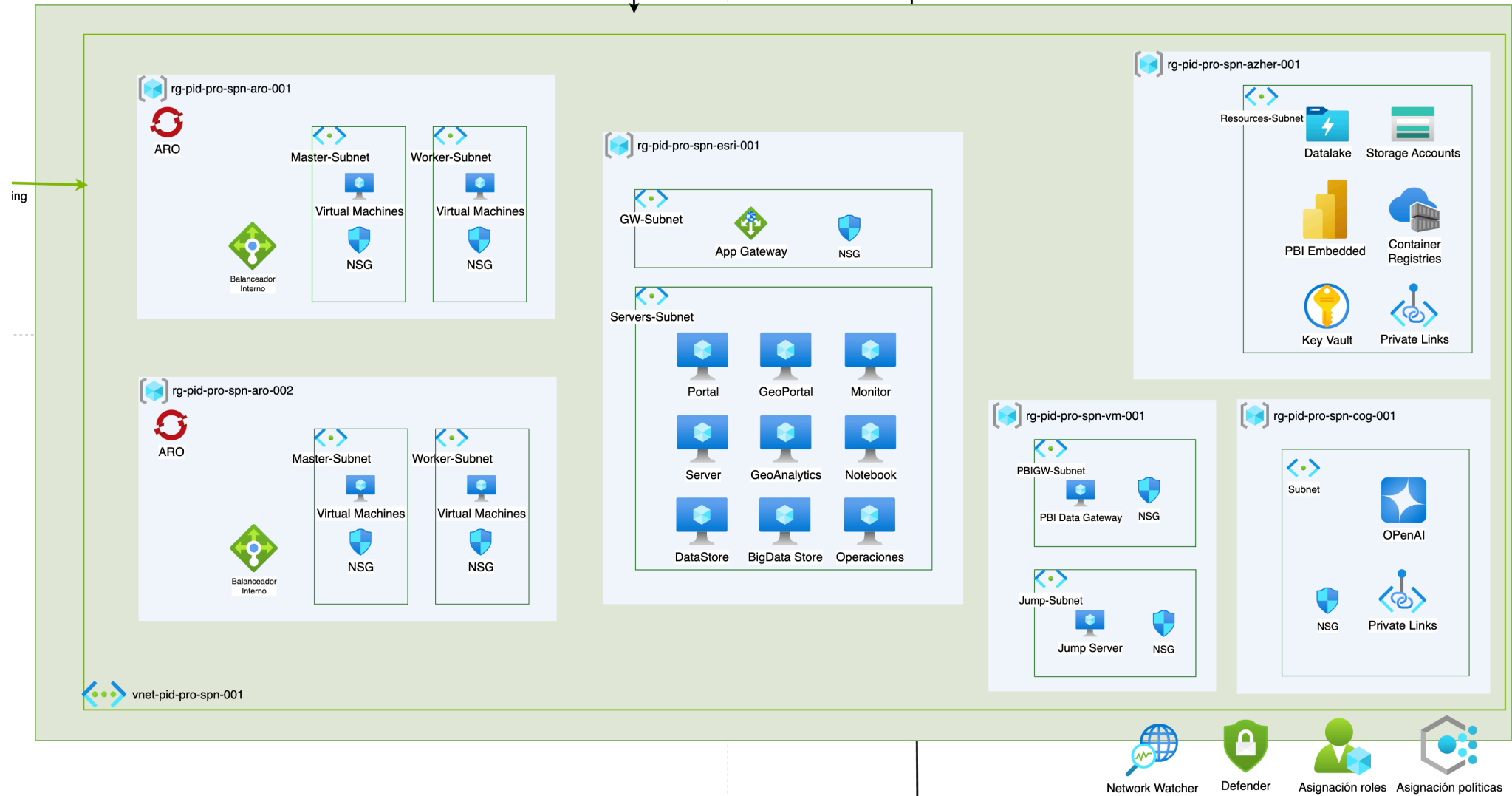
**Red Hat**



**Microsoft**



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# Agentes Inteligentes con Azure y ARO



**Red Hat**

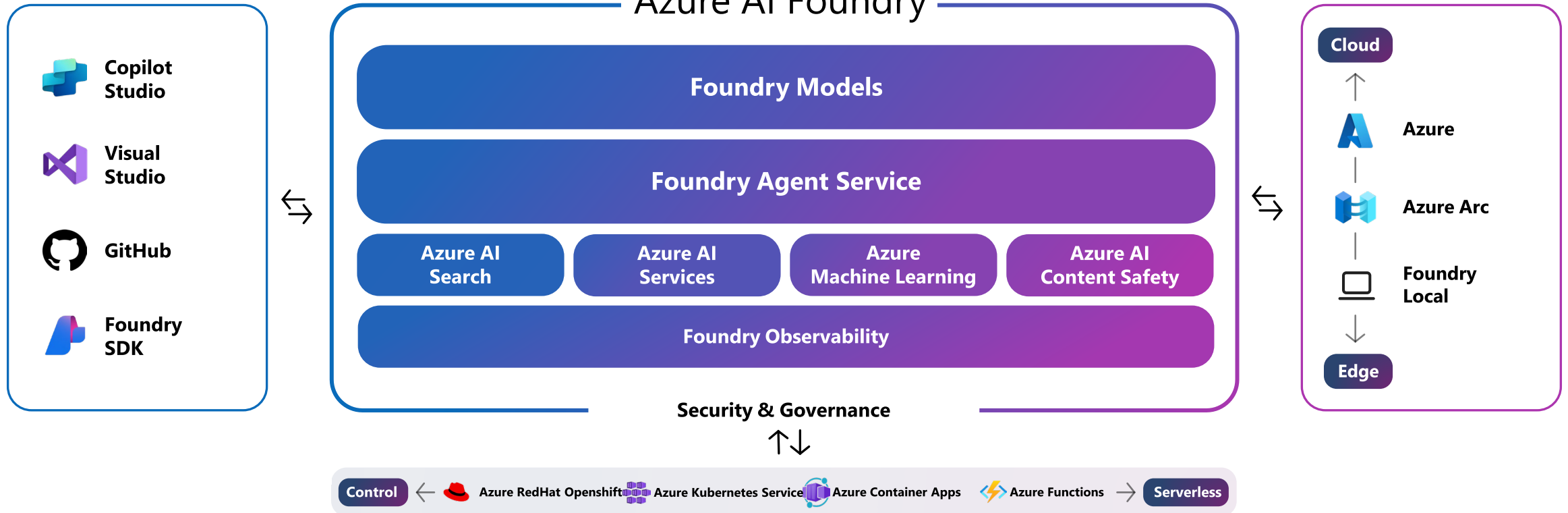


**Microsoft**





## Azure AI Foundry





A vertical red bar on the left side of the slide contains a collage of white icons representing various IT and cloud concepts: a cloud with a keyhole, a database cylinder, a server rack, a monitor, a cloud with an upward arrow, a box with 'X' and 'O' symbols, and a cloud with a downward arrow.

# Demo