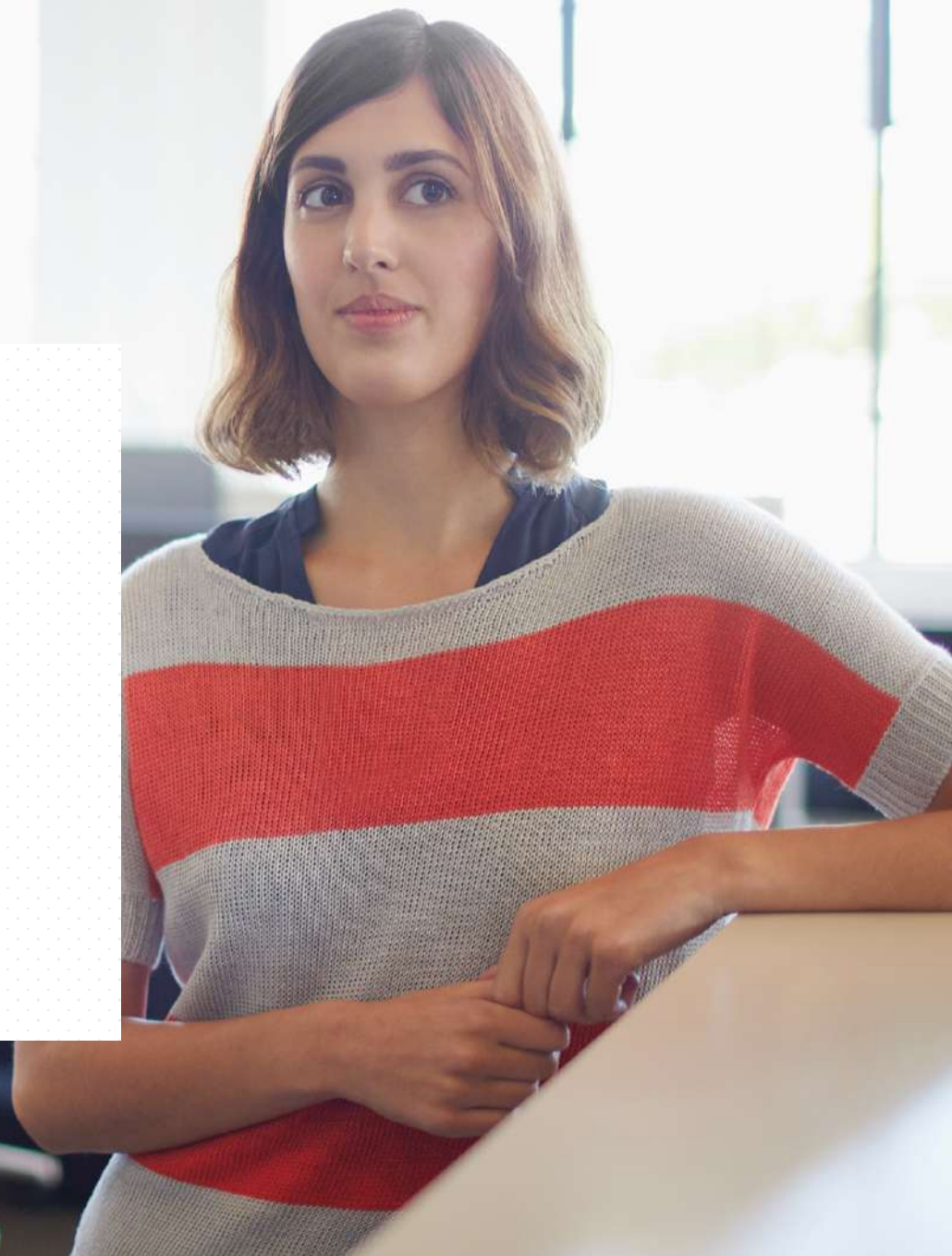


Azure Red Hat OpenShift

dall'on Premise al Cloud

Marco D'Angelo, *Developers Relationship Manager Microsoft*
Milano, 3 dicembre 2019

@marcodangelo

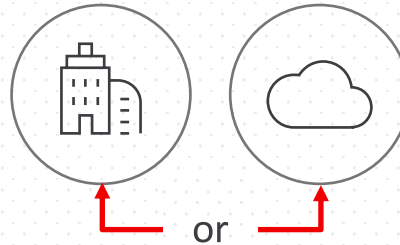


Why customers choose OpenShift

Trusted enterprise
Kubernetes



One platform hybrid
choice



Empower
developers



Open source innovation



Azure Red Hat OpenShift

Azure Red Hat OpenShift

Fully managed Red Hat OpenShift service

Jointly engineered, operated, and supported by both
Microsoft and Red Hat with an integrated support experience

Build, deploy and scale apps with
confidence

In just minutes, deploy enterprise-
grade Red Hat OpenShift clusters on
Azure



Enterprise-grade operations, security and compliance
Deploy your business-critical apps with confidence with an industry-leading
SLA of 99.9% availability



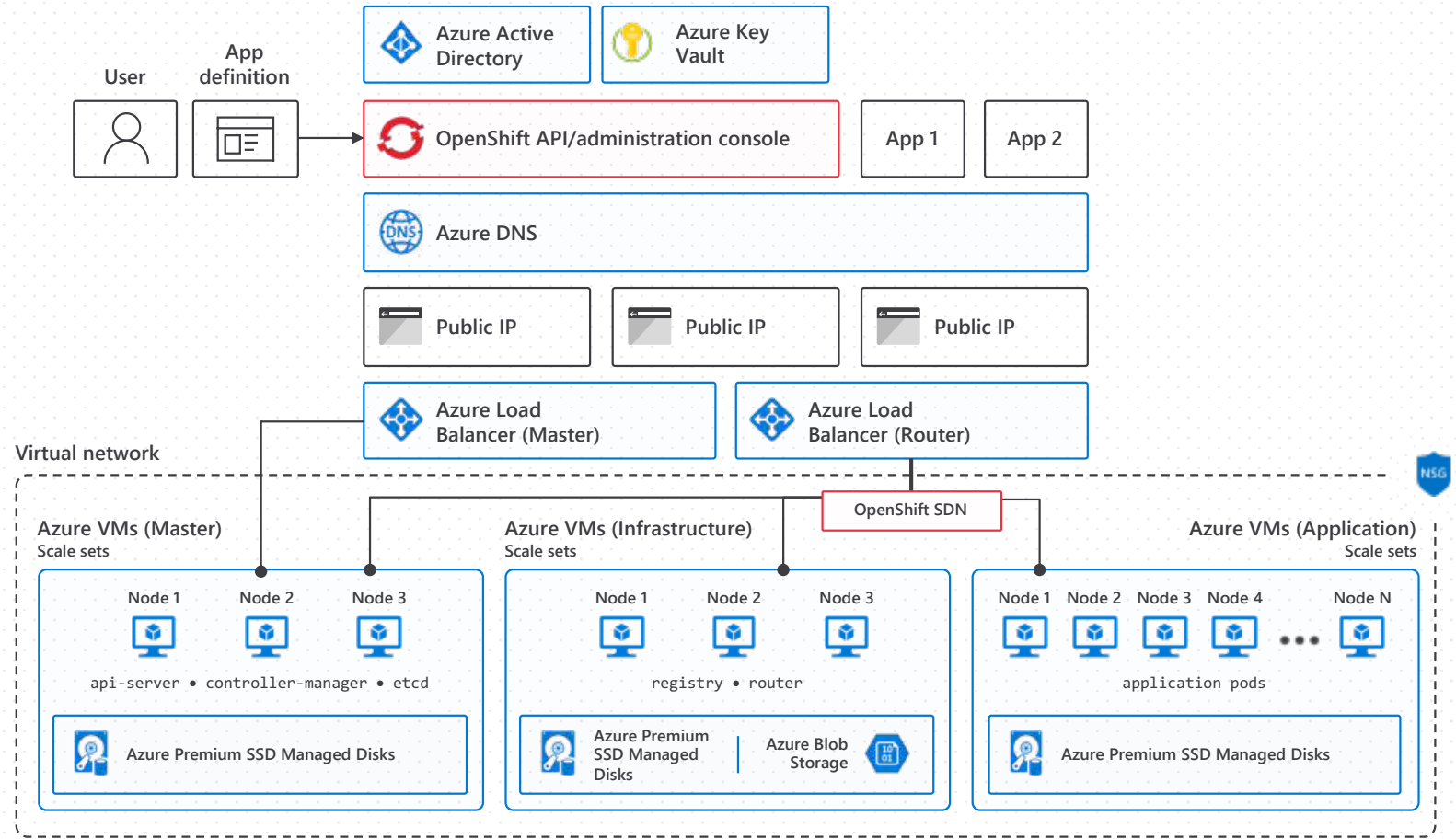
Empowering developers to innovate
Promote developer productivity with built-in CI/CD pipelines, then easily
connect your applications to hundreds of Azure services such
as MySQL, PostgreSQL, Redis, Cosmos DB, and more



Scale on your terms
Start a highly available cluster with four application nodes in a few minutes,
then scale as your application demand changes; plus, get your choice of
standard, high-memory, or high-CPU application nodes

Running your own Red Hat OpenShift cluster

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



Simplify cluster operations with Azure Red Hat OpenShift

Responsibilities

User management



Project and quota management



Application lifecycle



Cluster creation



Cluster management



Monitoring and logging



Network configuration



Software and security updates



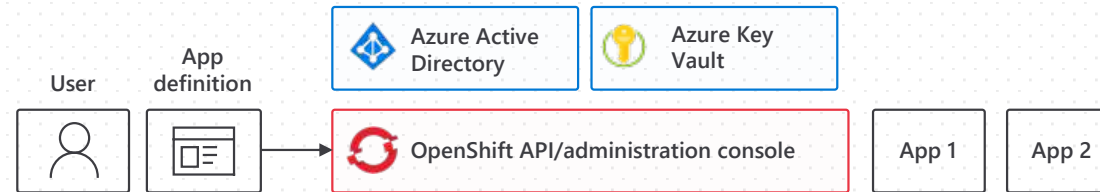
Platform support



Customer



Microsoft and Red Hat



Let **Microsoft** and **Red Hat**...










Manage all your clusters

Monitor and operate your VMs

Secure your nodes

Manage environment patches

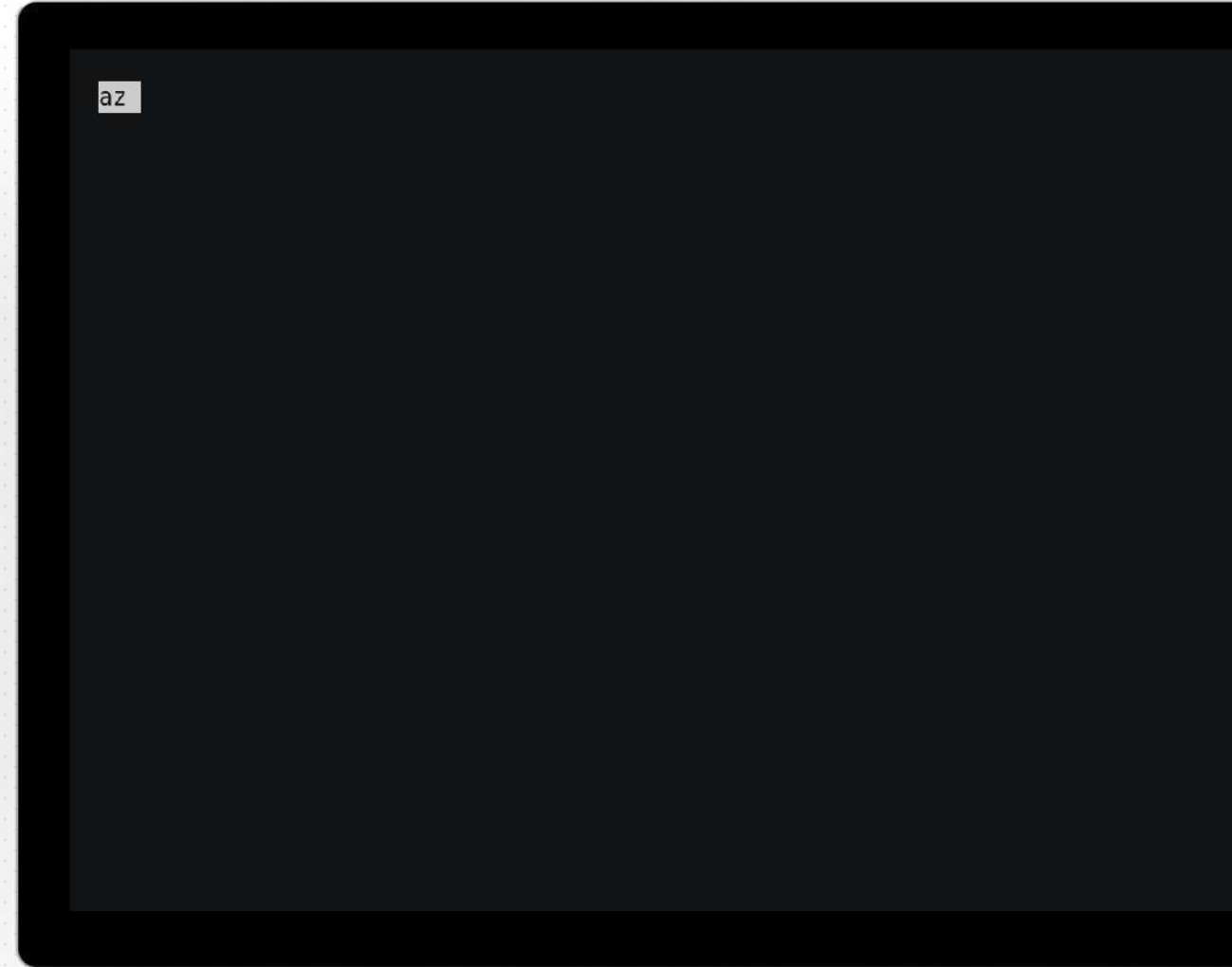
Azure Red Hat OpenShift features

-  Flexible, self-service deployment
Create fully managed OpenShift clusters in minutes
-  Cluster node scaling
Easily add or remove compute nodes to match resource demand
-  Azure Active Directory integration
Use Azure Active Directory to control access to your cluster with an integrated sign-on experience
-  Fully managed clusters
Master, infrastructure, and application nodes are managed by Microsoft and Red Hat; plus, no VMs to operate and no patching required
-  Virtual Network integration
Deploy your cluster into a new VNet, then use VNet peering to connect to your existing VNet and on-premises networks
-  High availability
Multiple masters and infrastructure nodes help ensure your cluster has no single point of failure
-  First party Azure service
Clusters are deployed into your Azure subscription and included on your Azure bill
-  Persistent storage volumes
Azure Disk is pre-configured as the default storage class, providing dynamically provisioned Premium SSD's on-demand
-  Unified support
Jointly engineered, operated, and supported by Microsoft and Red Hat with an integrated support experience

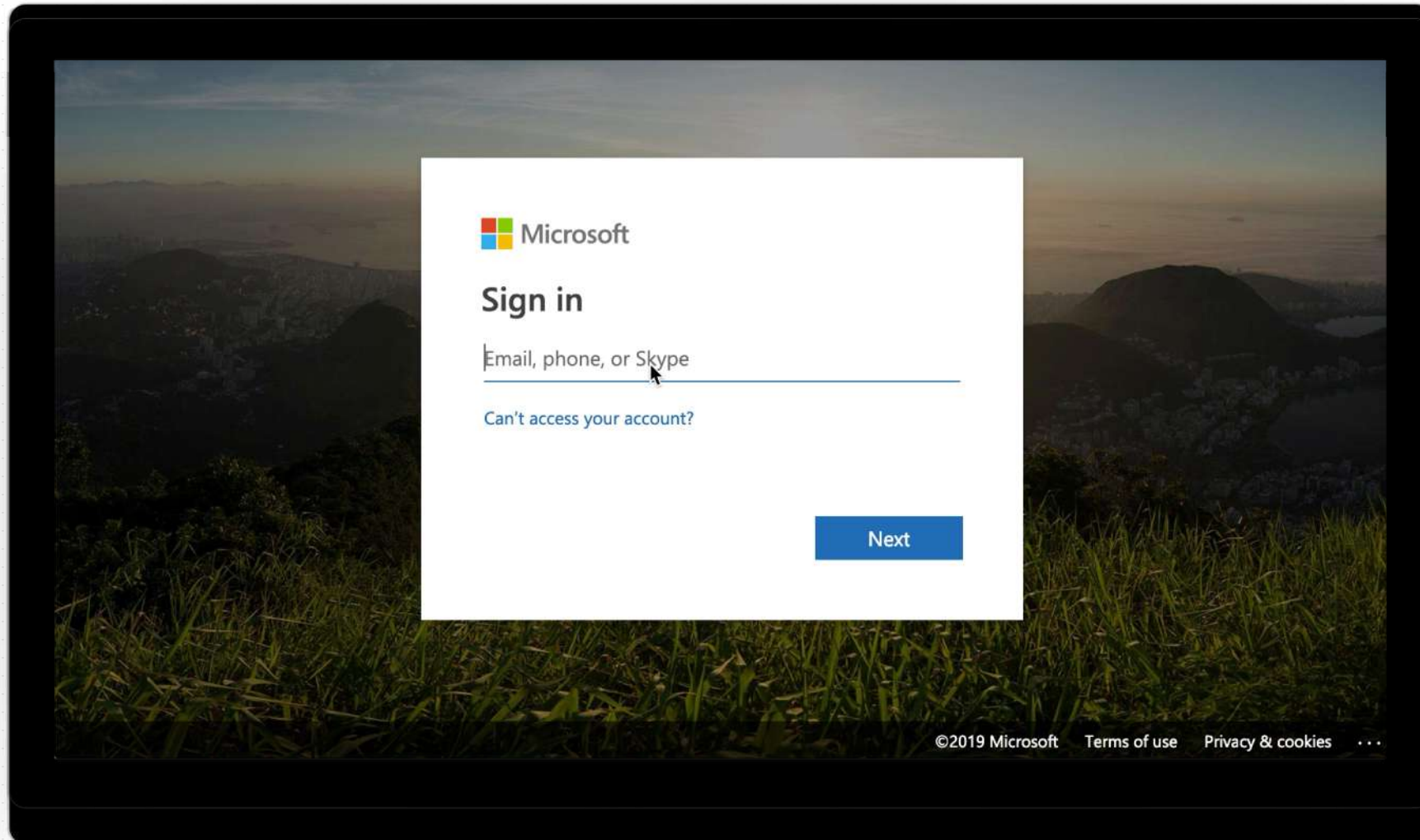
Enterprise-grade operations, security, and compliance

Flexible, self-service deployment

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



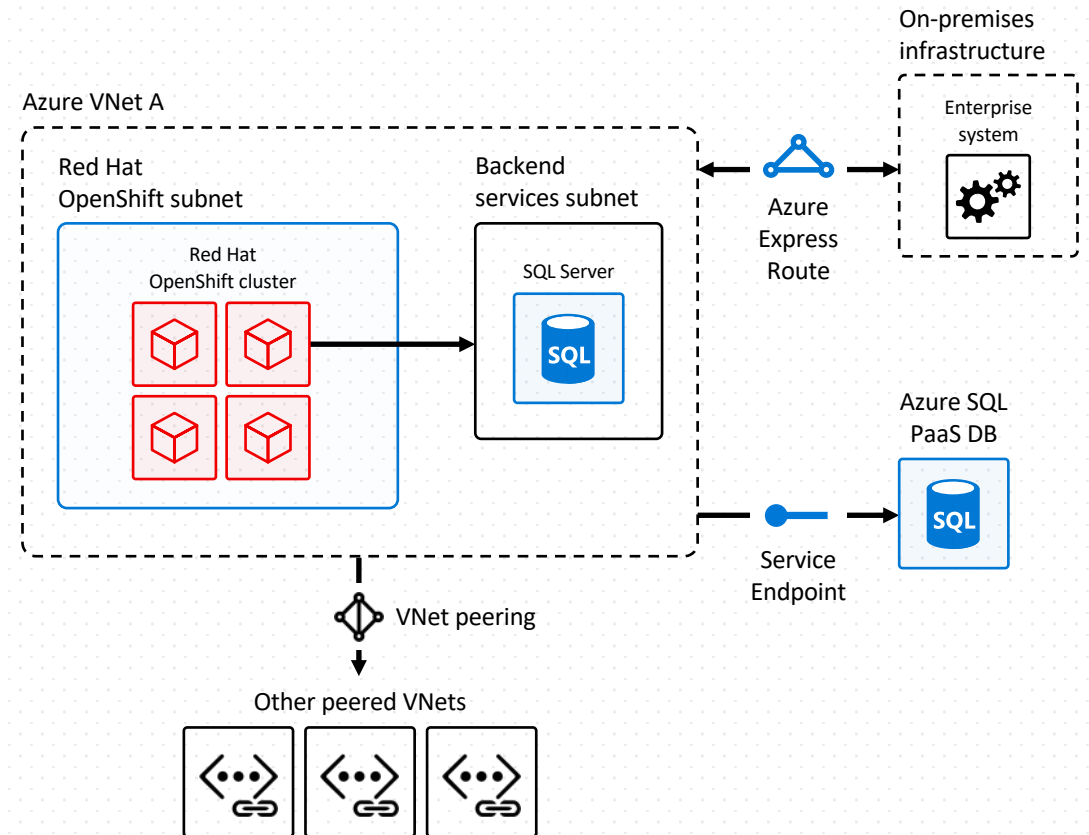
Azure Active Directory integration—integrated sign-on



Virtual Network integration

Deploy clusters into Virtual Network, then use VNET peering to connect to your networks

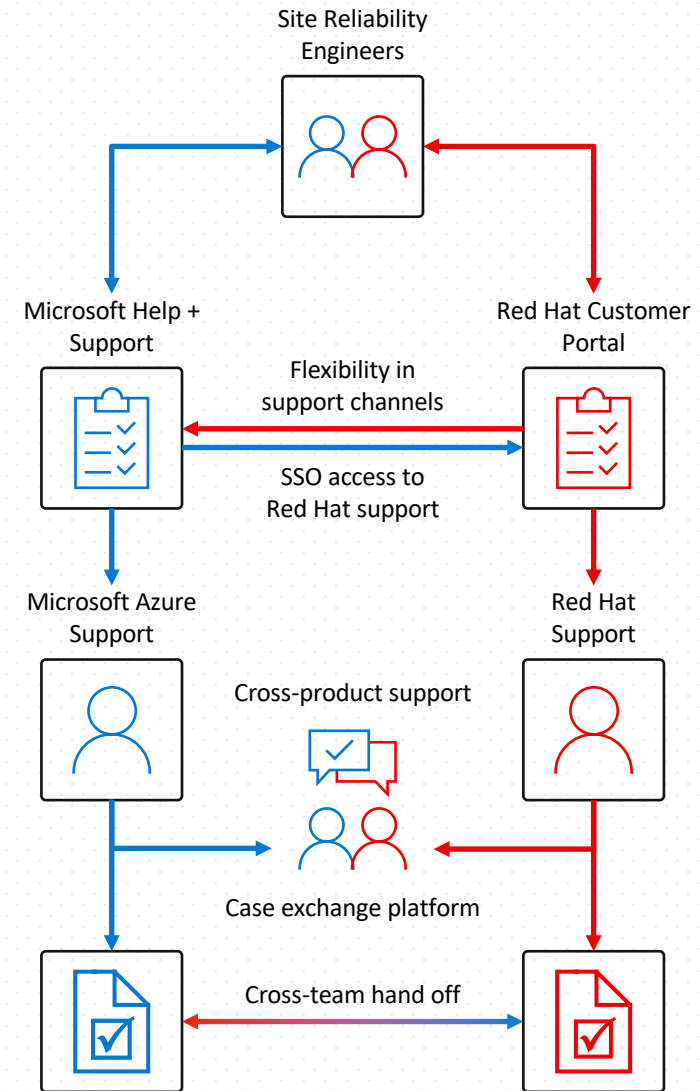
- Connect to-premises infrastructure
- Use Service Endpoints



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



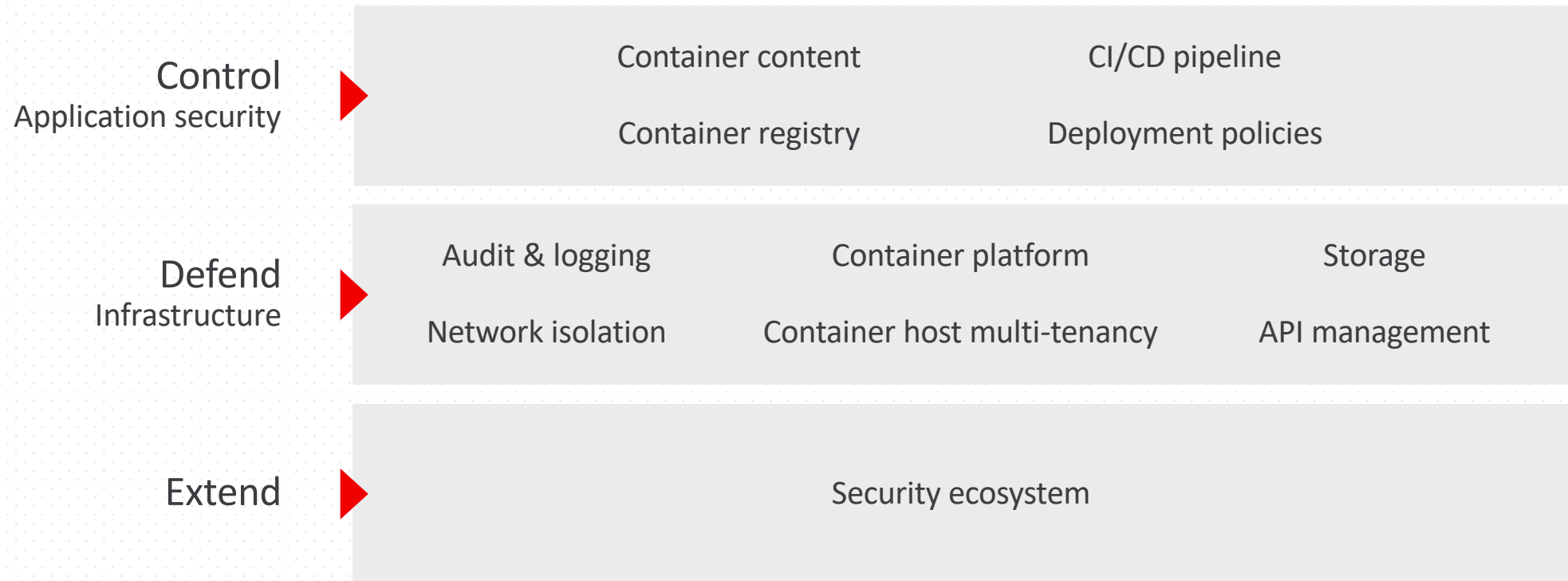
Hardened enterprise security for Kubernetes

OpenShift is Kubernetes for the enterprise

- Authentication: Use Azure Active Directory to access the cluster
- TLS support: Strong encryption with TLS 1.2 by default
- Bring your own certificates and key rotation: Ability to bring your own certificates and rotate keys when necessary
- Virtual Network integration: Deploy your cluster into a new Virtual Network, then use VNET peering to connect to your existing Virtual Network and on-premises networks



Comprehensive container security



Empowering developers to innovate

Familiar Red Hat OpenShift developer experience

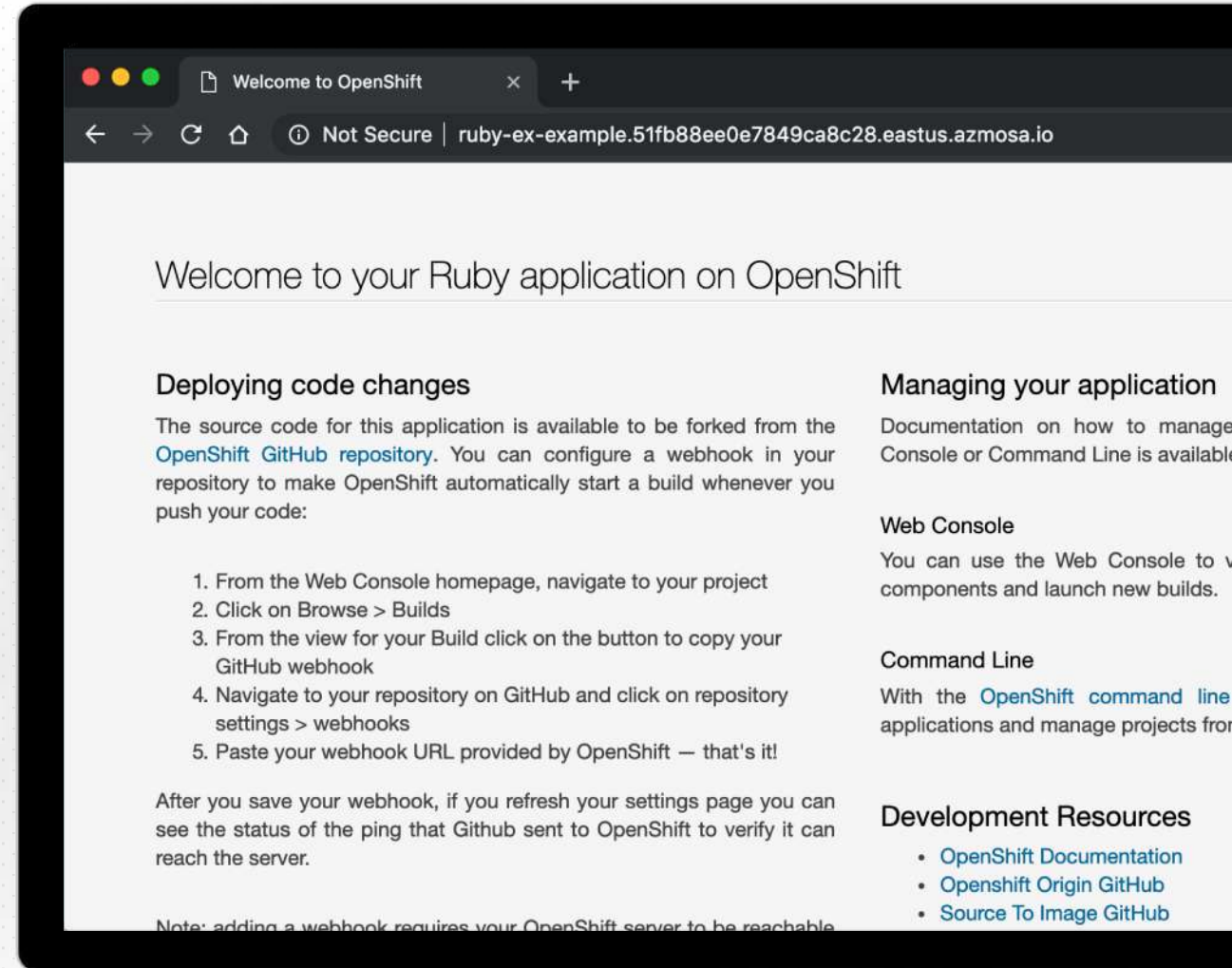
Use the tools and commands you already know

```
oc login <cluster endpoint> --token=<token>
```

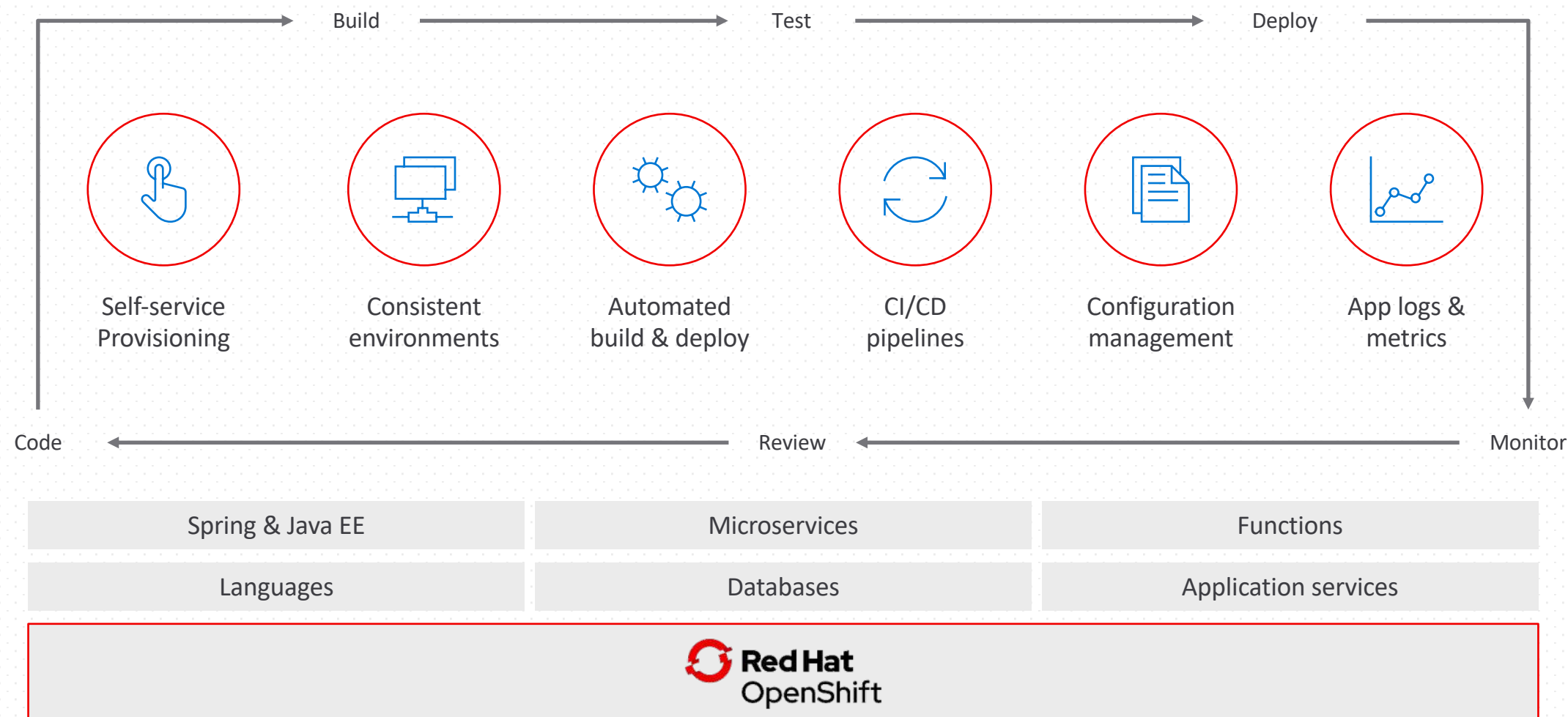
```
oc new-project example
```

```
oc new-app <path to source code>
```

```
oc expose svc/ruby-ex
```



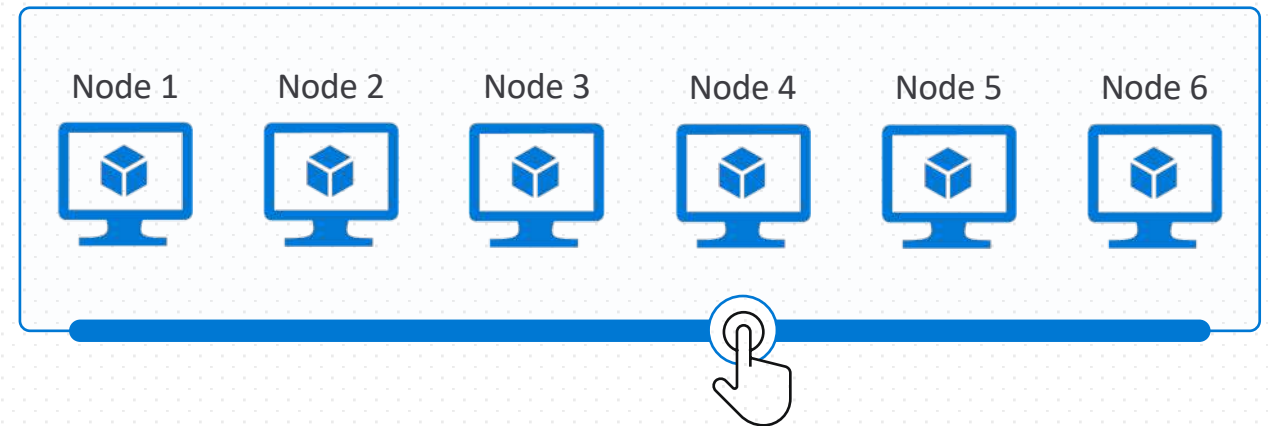
Made for developer productivity







Cluster node scaling



Easily add or remove compute nodes to match resource demand using **az openshift scale**

Application nodes



Azure Red Hat OpenShift roadmap

-  Regulatory compliance
Azure Red Hat OpenShift will be compliant with SOC, ISO, PCI DSS, HIPAA, and more
-  Private clusters
Create fully managed OpenShift clusters on your own private VNET with no public endpoints
-  BYOK for encryption at rest
Bring your own encryption keys for encrypting data on the OS and Data Disks
-  Certification rotation
Support certificate rotation
-  OpenShift 4.x support
Ability to migrate from OpenShift 3.11

-  Windows Containers Integration
Customers will be able to deploy Windows Containers and manage them from the OpenShift control plane
-  Multi-AZ stretched clusters
Support the ability to deploy OpenShift in multiple availability zones based on availability in Azure regions
-  Active Directory group sync
Control access to your cluster using Azure Active Directory group membership
-  Multiple node pool support
Support for multiple node pools
-  Cluster auto-scaling
Ability to auto-scale the clusters on-demand
-  Operator/CRD support
Support for Operator and custom CRDs

