Red Hat Summit

Red Hat in azione: il GitOps nell'open hybrid multicloud

Come gestire e automatizzare le architetture ibride full ed edge con OpenShift GitOps e Ansible

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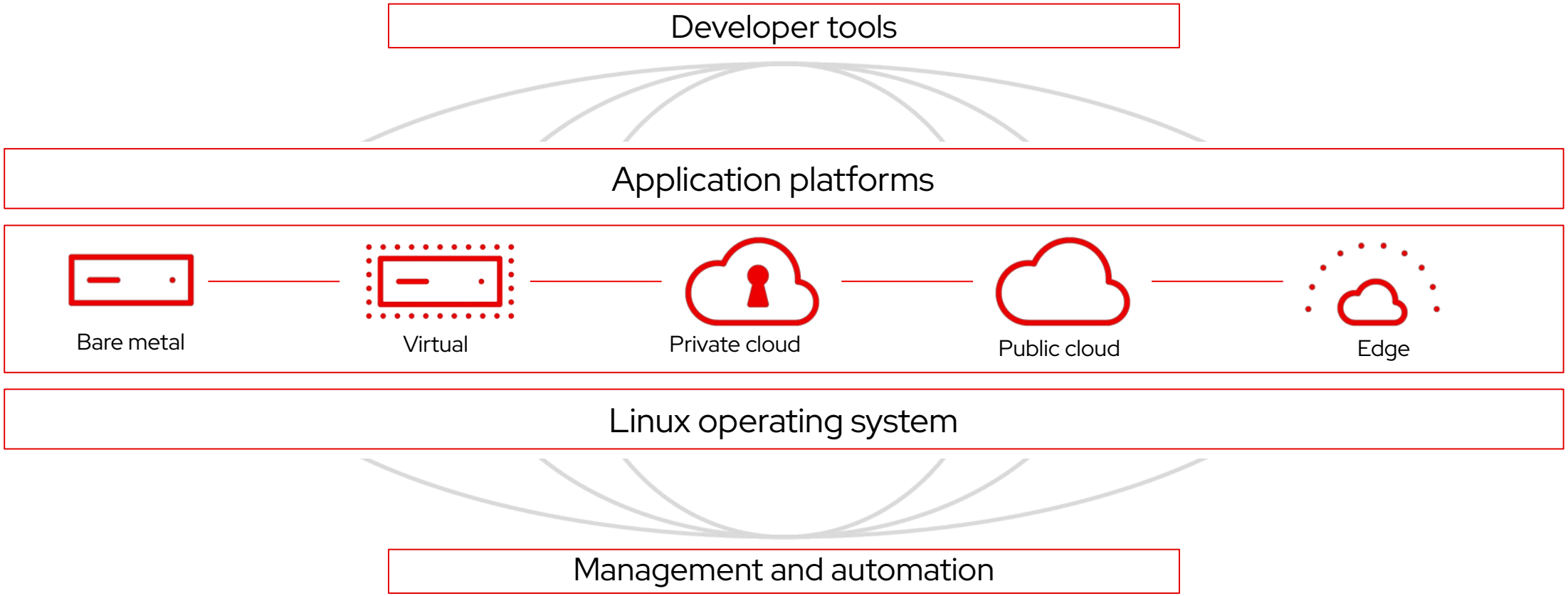
Red Hat

Evolution to hybrid multi cluster



Red Hat OpenShift

Manage workloads	Build cloud-native apps*	Data-driven insights*	Developer productivity
Platform services	Application services	Data services	Developer services
• Service mesh • Serverless • Builds • CI/CD pipelines • **GitOps** • Log management • Cost management	• Languages and runtimes • API management • Integration • Messaging • Process automation	• Databases | Cache • Data ingest and prep • Data analytics | AI/ML • Data management & resilience	• Developer CLI | IDE • Plugins and extensions • CodeReady workspaces • CodeReady containers

Kubernetes cluster services

Install | Over-the-air updates | Networking | Ingress | Storage | Monitoring | Logging | Registry | Authorization | Containers | VMs | Operators | Helm

Linux (container host operating system)

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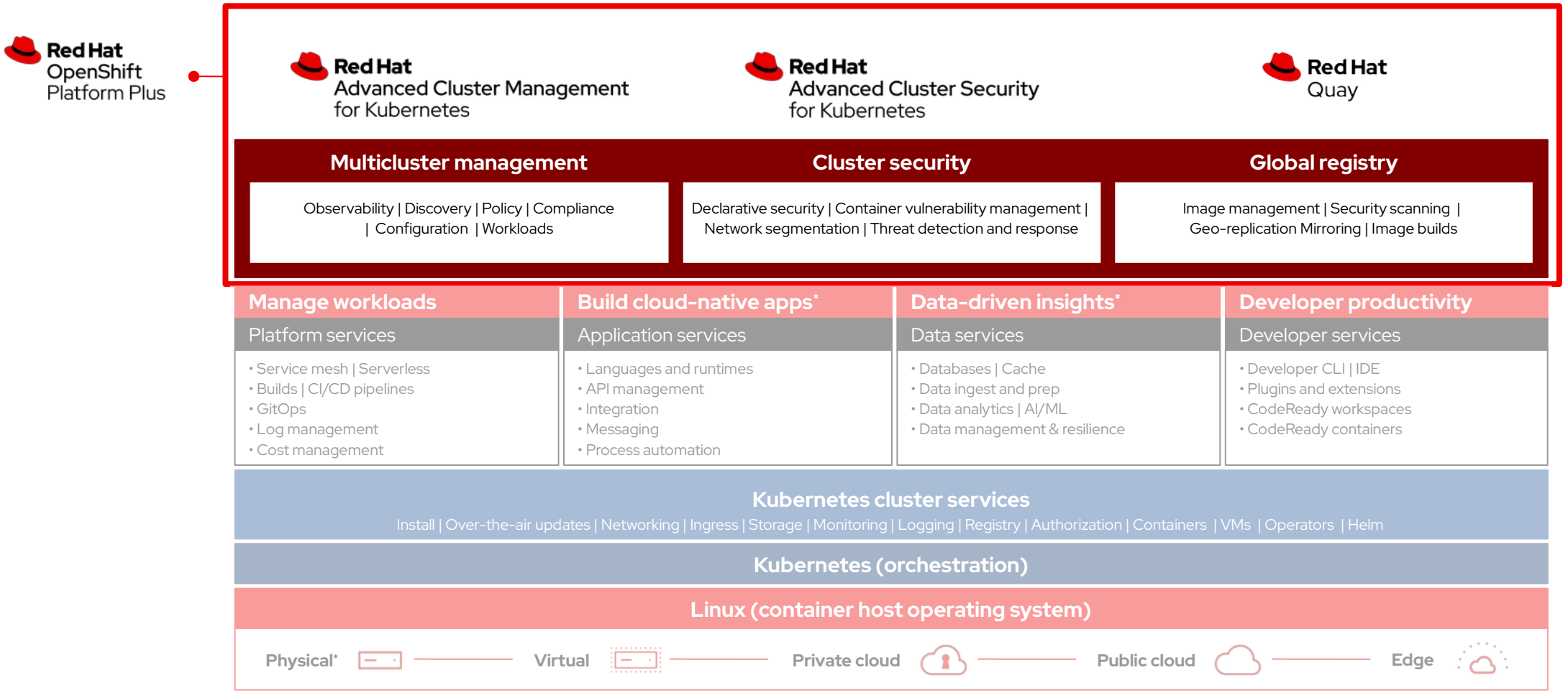
* Red Hat OpenShift® includes supported runtimes for popular languages/frameworks/databases. Additional capabilities listed are from the Red Hat Application Services and Red Hat Data Services portfolios.

Red Hat OpenShift Platform Plus



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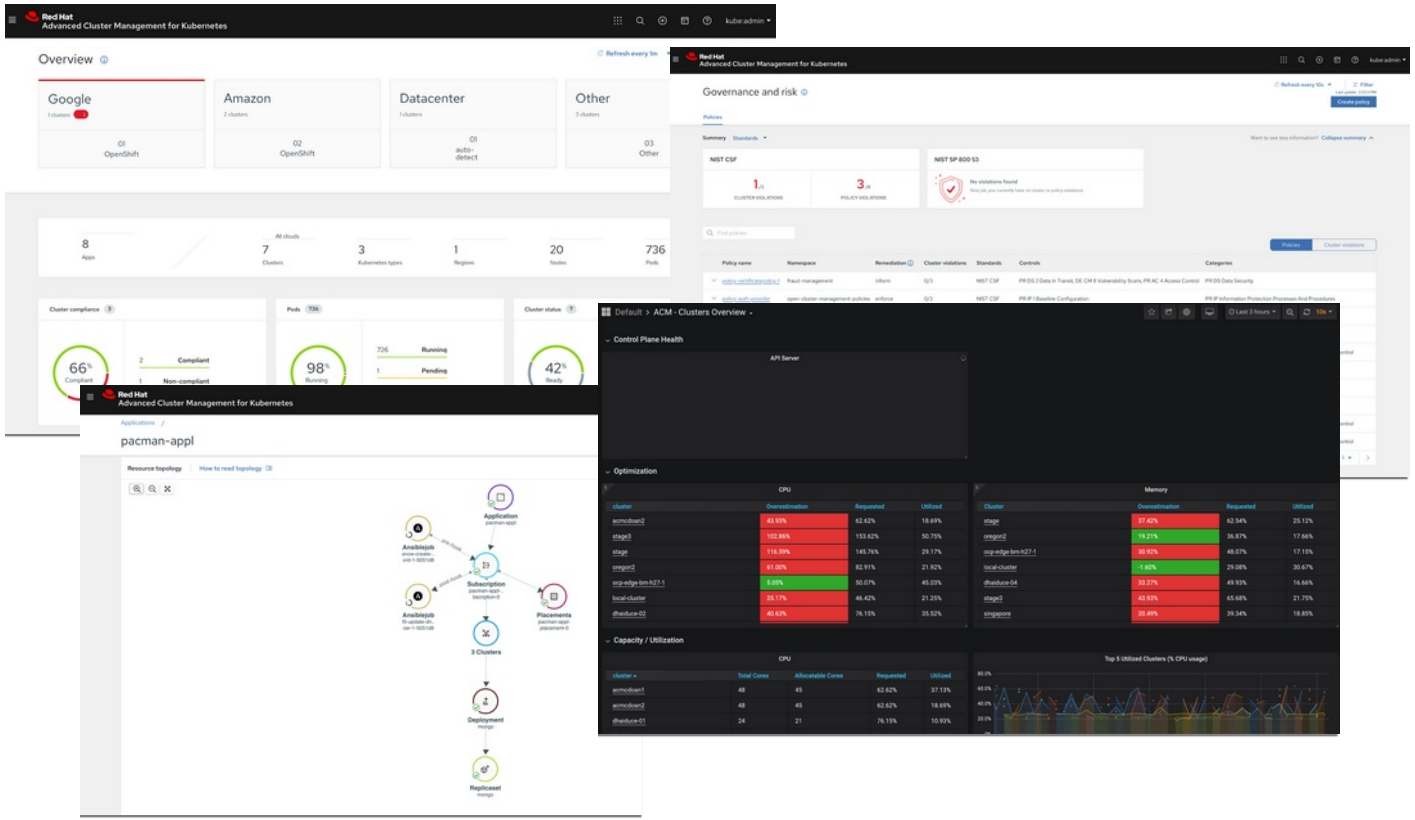
Red Hat Advanced Cluster Management for Kubernetes

Multicluster life-cycle management

Policy-driven governance, risk, and compliance

Advanced application life-cycle management

Multicluster observability for health and optimization



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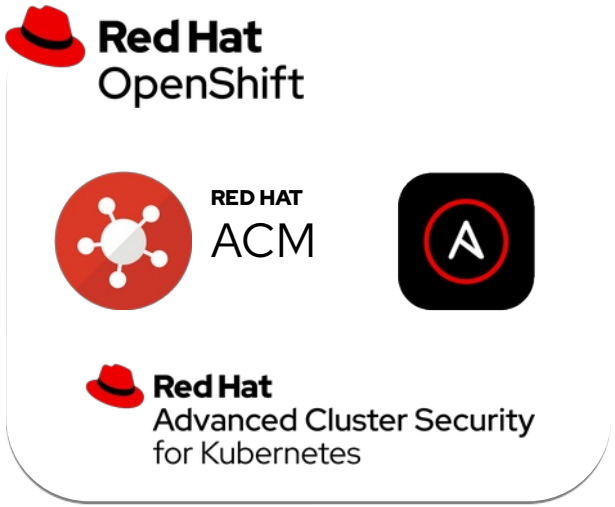
Unlocking Hybrid multicluster and Edge



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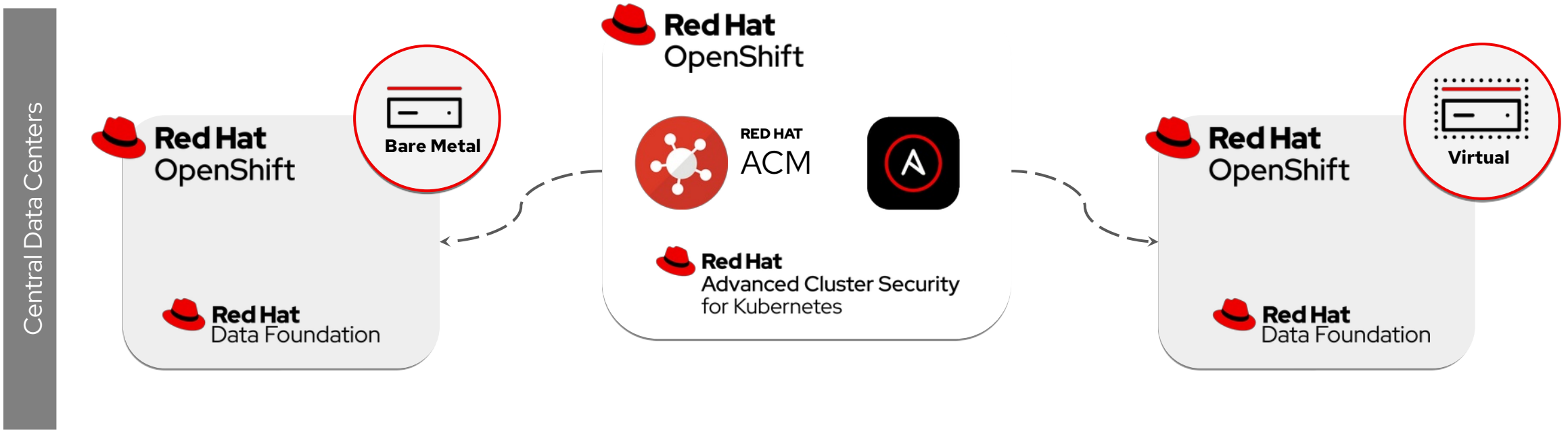

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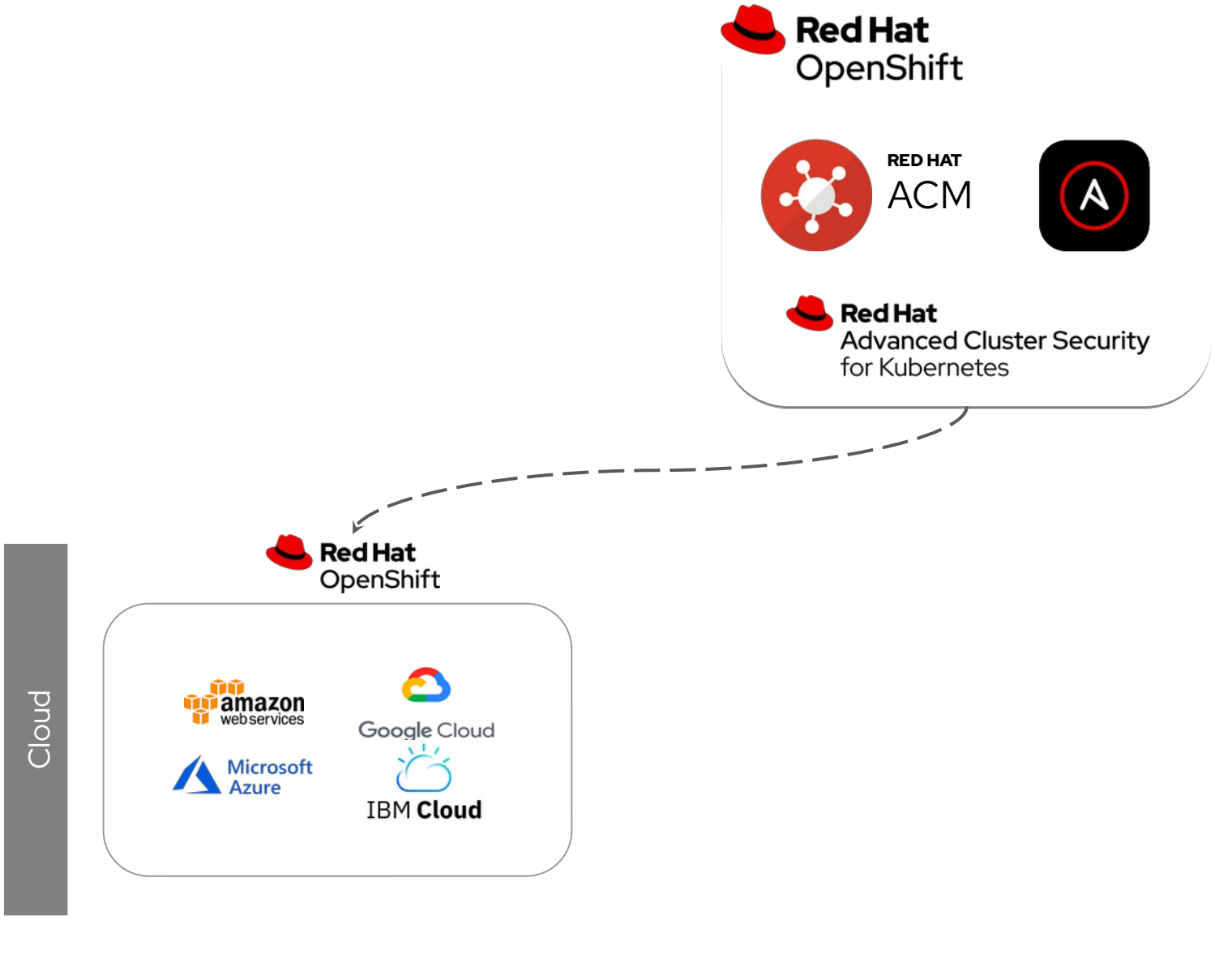
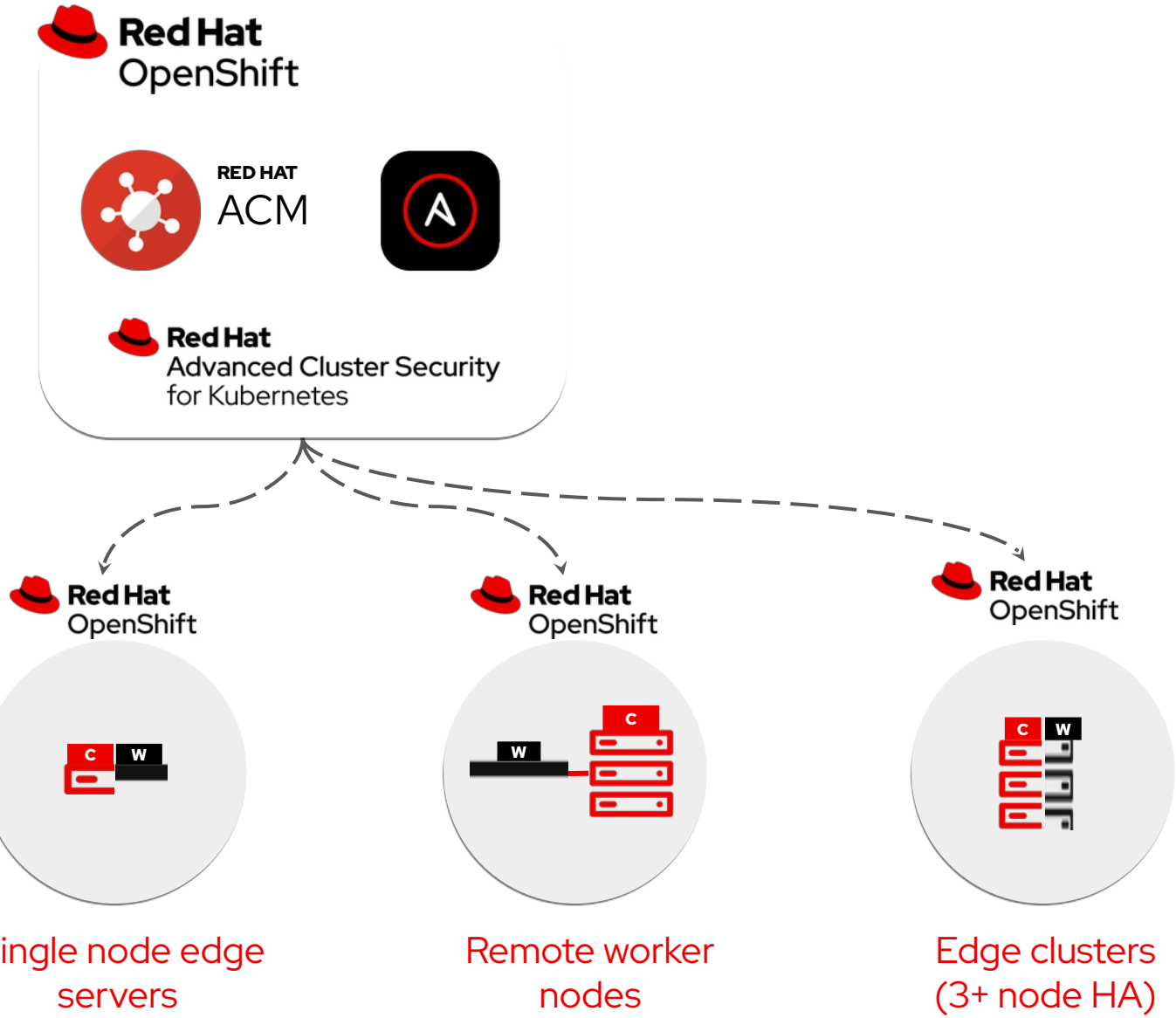
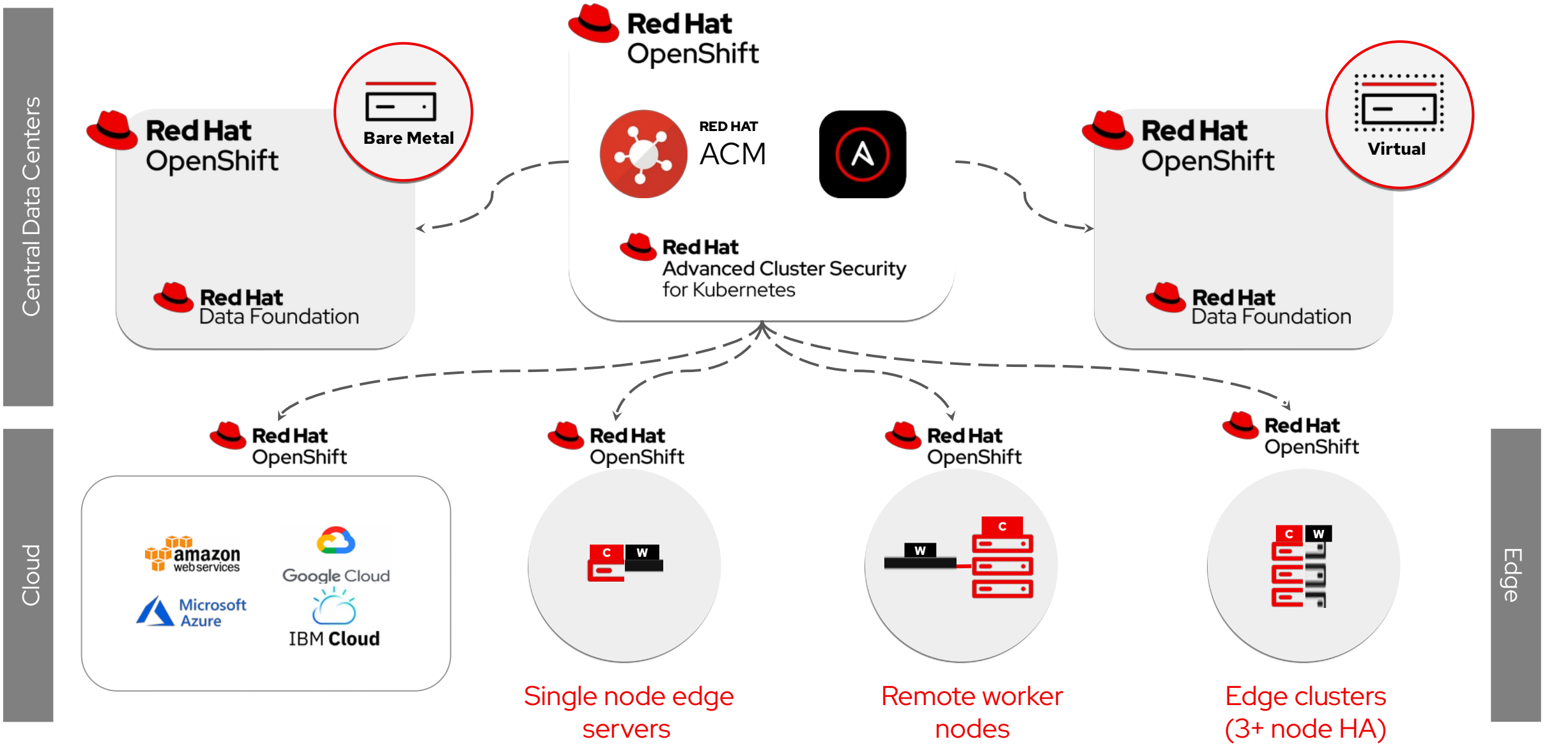


Unlocking Hybrid multicluster and Edge



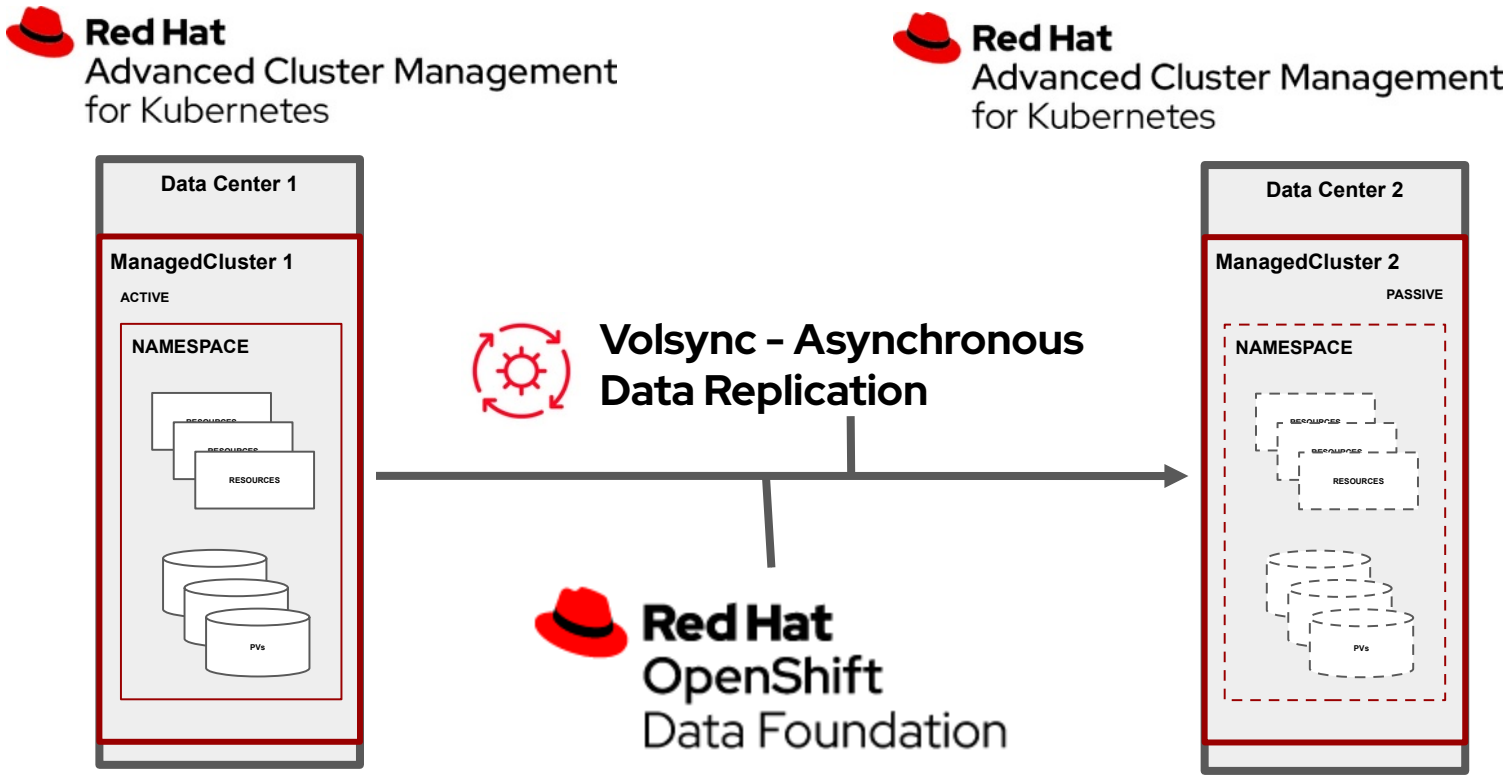
Edge

Unlocking Hybrid multicluster and Edge



Tech Preview

Stateful workloads with ACM and OpenShift Data Foundation



- Orchestrate regional DR for **stateful workloads**
- Leverage OpenShift Data Foundation for volumes replication

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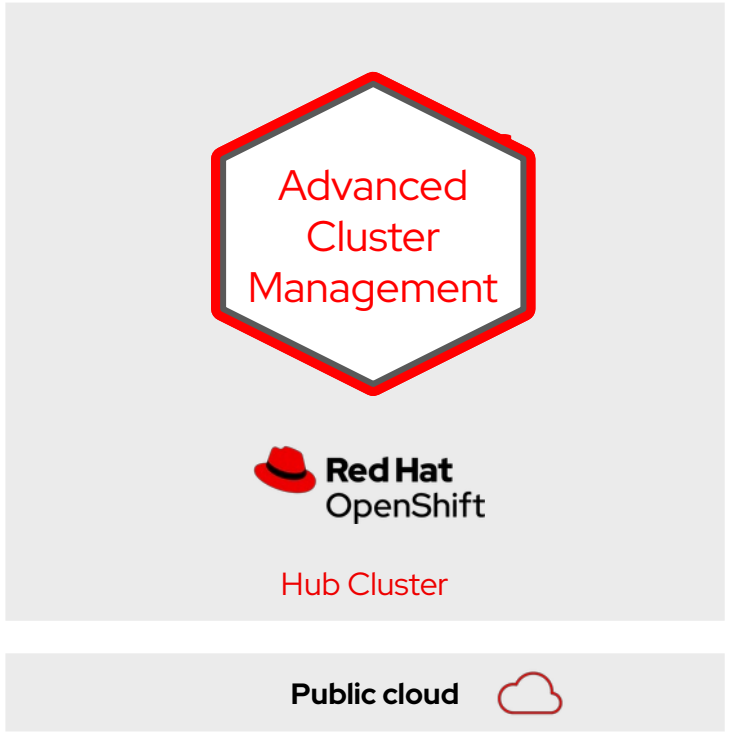
Demo Environment



- Advanced Cluster Manager is deployed in the **Hub Cluster**
- **Multi cloud** management pattern
- **Single pane** of glass

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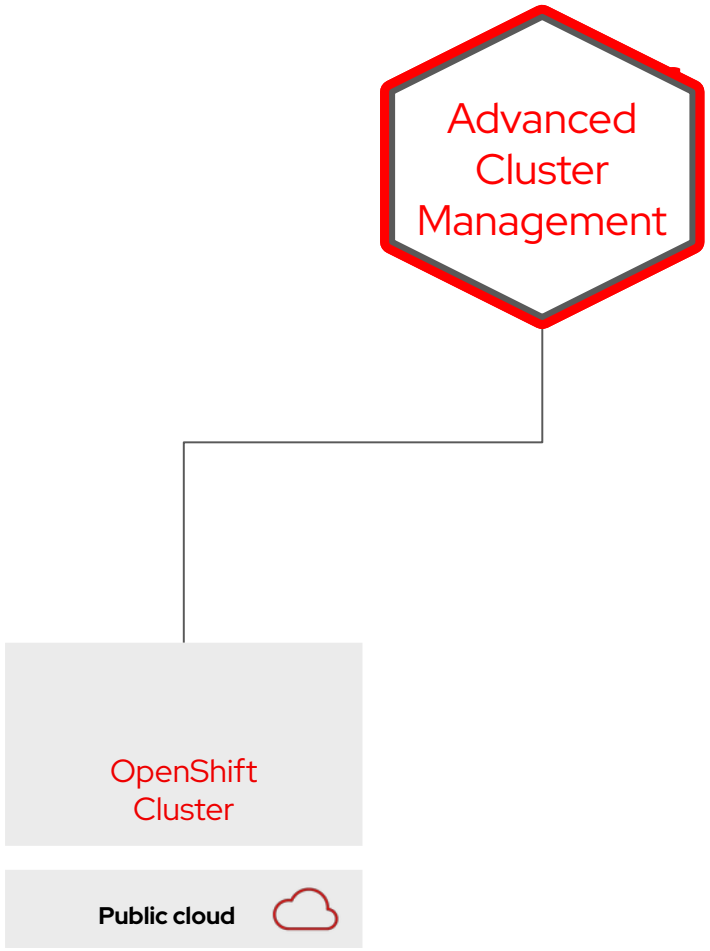
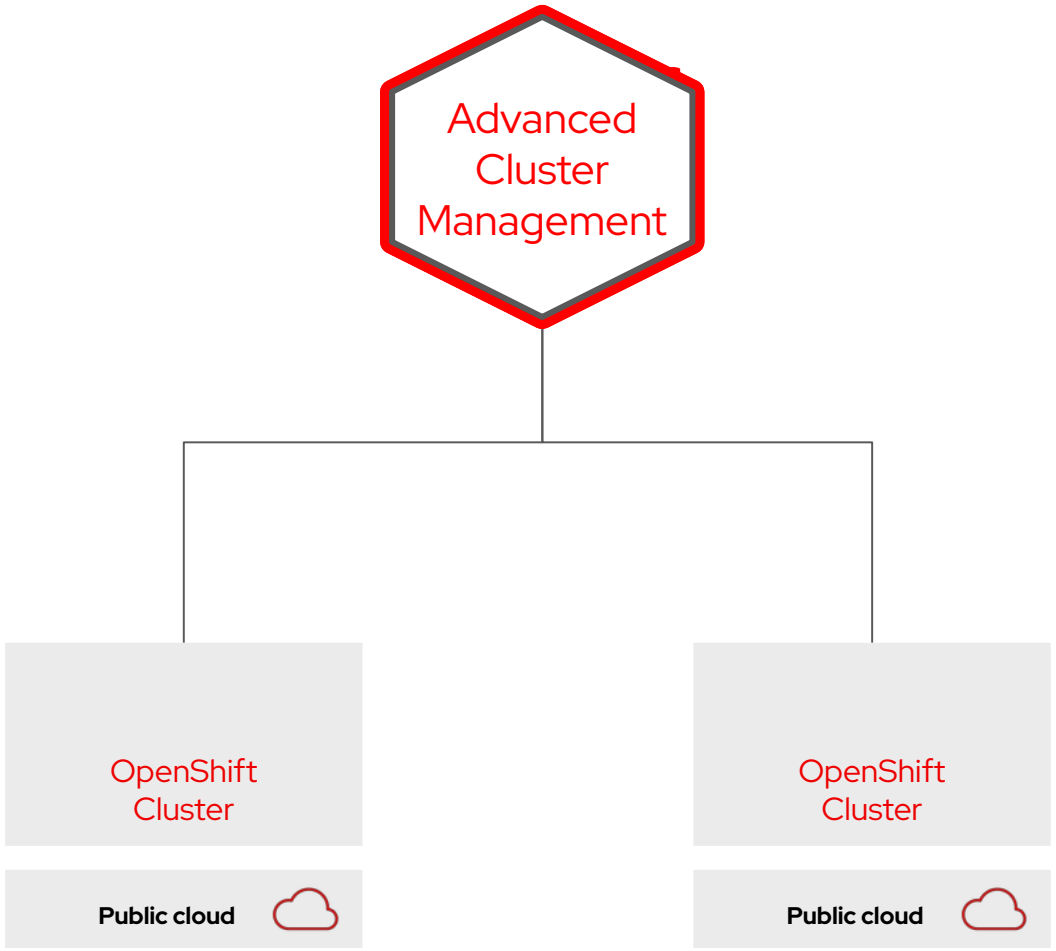
Demo Environment



- The first managed cluster was **already deployed** on a cloud

Demo Environment



- We're adding **another** cluster
- Fully **automated** installation
- Platform of **choice** for automated installations (AWS, Azure, Google Cloud, VMware, bare metal, OpenStack)

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Application lifecycle management with GitOps

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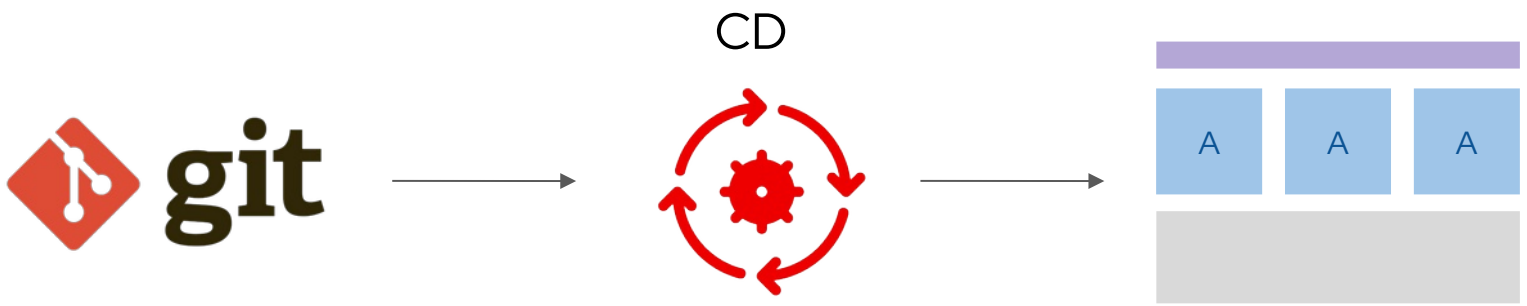
GitOps Workflow

a declarative approach to application delivery



What you want
(desired state)

What you have
(current state)

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Powered by argo

OpenShift GitOps

Hybrid -Multi-cluster config management

Enables teams to adopt GitOps principles across hybrid multi-cluster
Kubernetes environments

Automated Argo CD install and upgrade

Automated install, configurations and upgrade of Argo CD through OperatorHub

Synchronizes cluster state with git repos

Works with a variety of Kubernetes deployment tools including: Helm, Kustomize, Directories of YAML files, Ksonnet/Jsonnet

Easily deploy applications in a declarative way

Assists customers to establish an end-to-end application delivery workflow on GitOps principles

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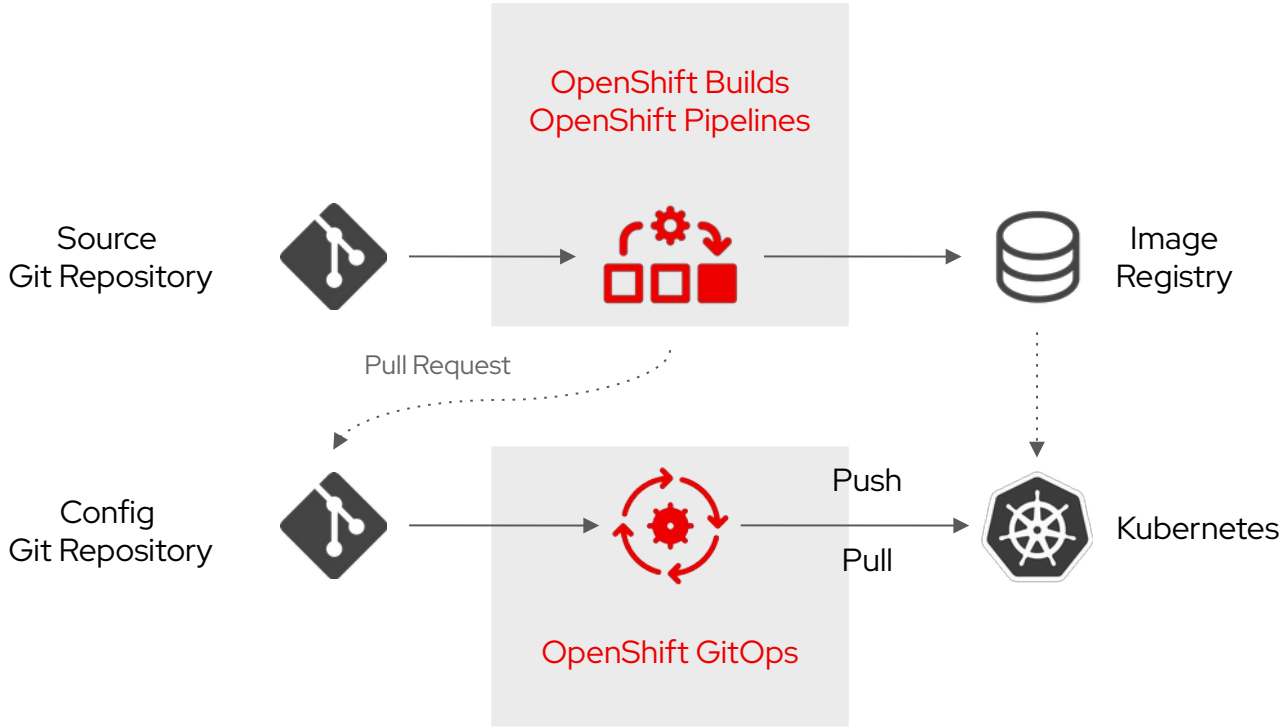
The GitOps Application Delivery Model on OpenShift



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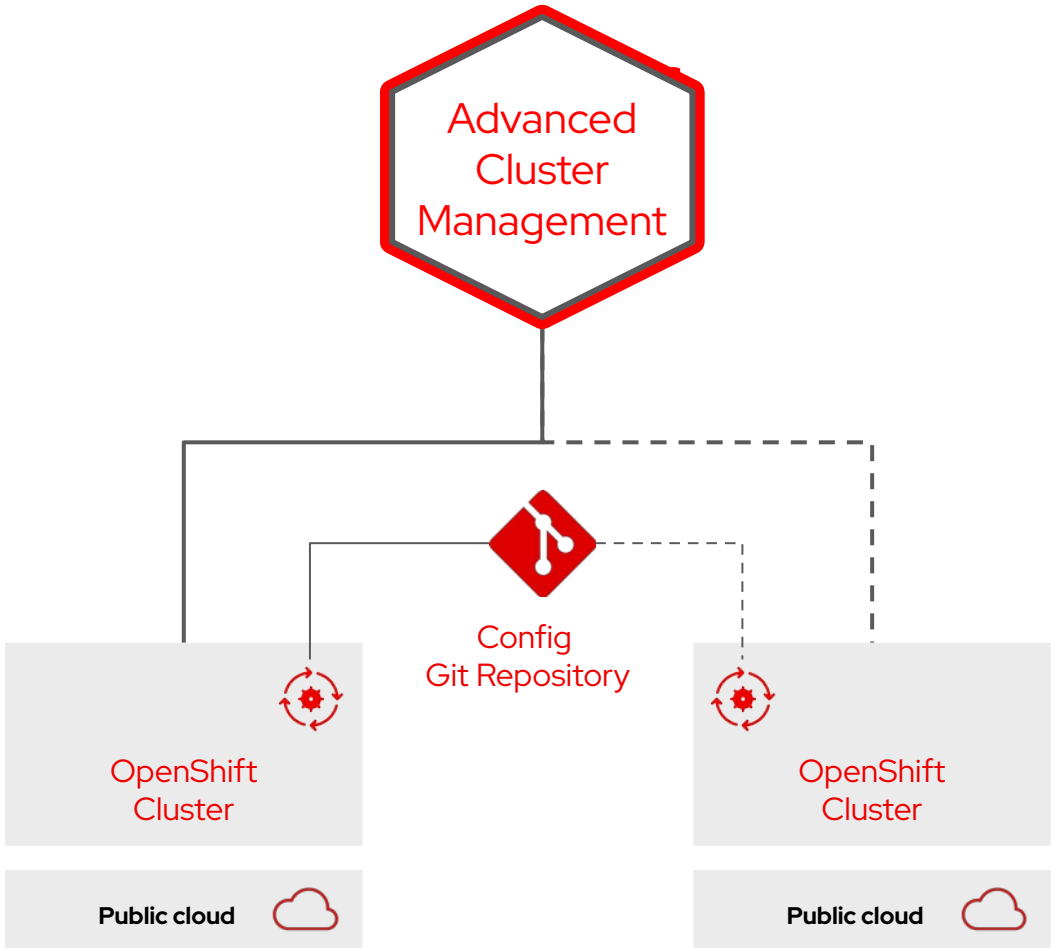
Demo Environment



- Advanced Cluster Management performs **basic cluster configuration** and installs OpenShift GitOps via the Operator
- Openshift GitOps **syncs the apps** on the cluster according to the Git repository

Extending GitOps with Ansible Automation

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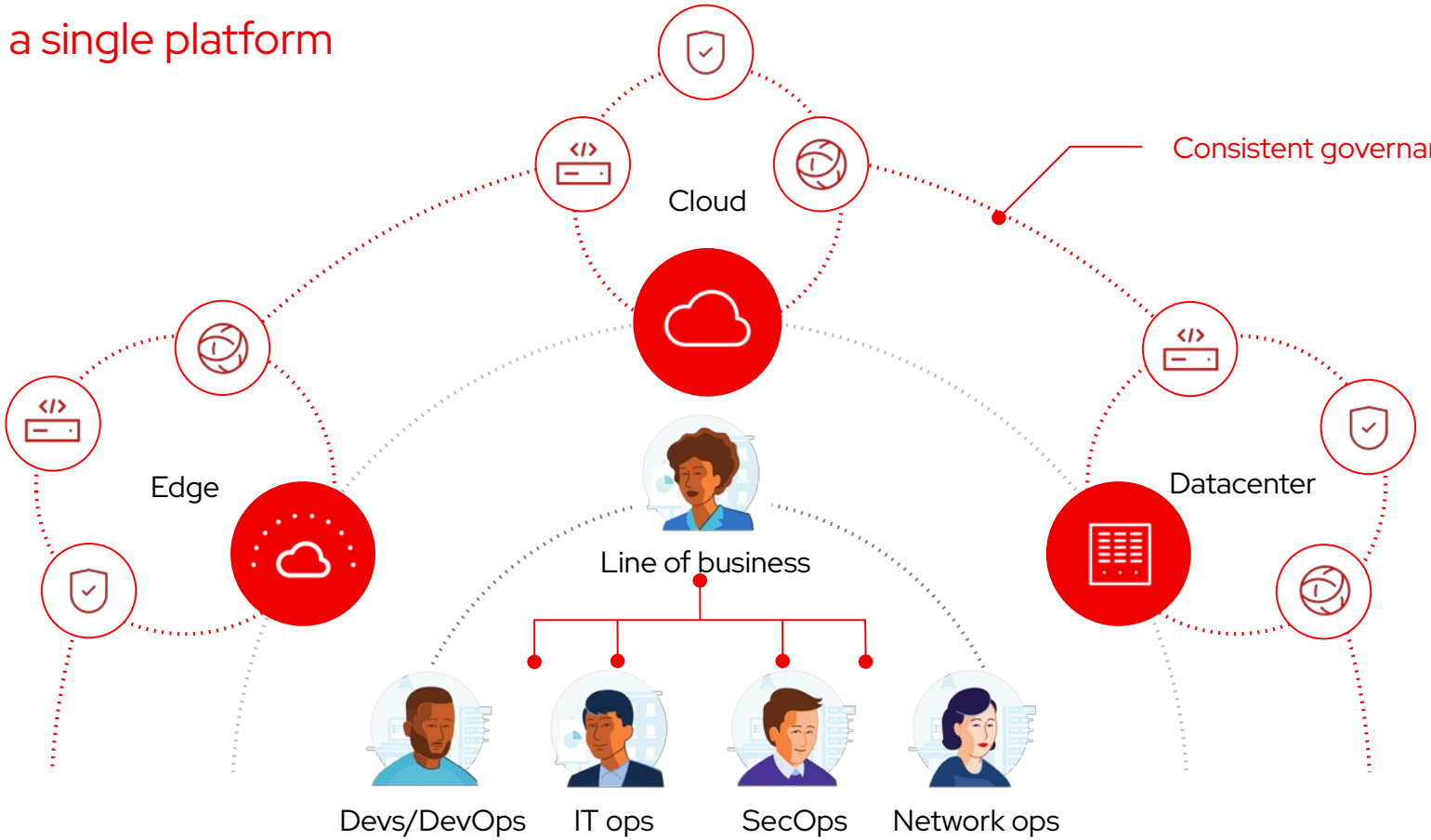
Break down silos

Different teams a single platform



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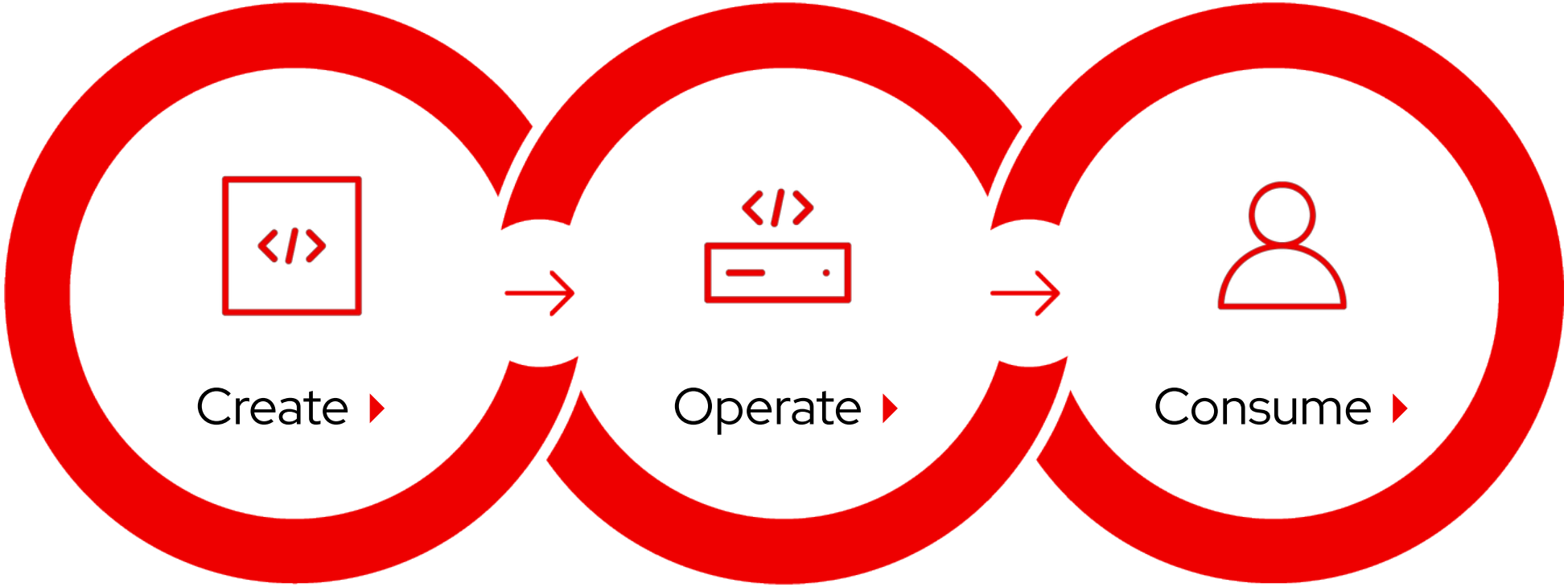
Red Hat
Ansible Automation
Platform

Holistic automation for your enterprise



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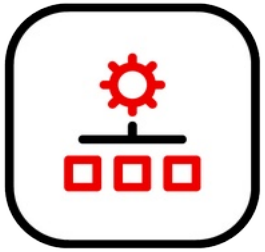
Ansible Automation
Platform

Evolving the automation platform



Ansible Automation Controller

Ansible Tower Evolution

OpenShift Ready

Multisite automation

Automation execution environments

Containerized automation environments

Portable

Customizable

Ansible Content Collections

90+ certified content collections

Jointly supported with vendors

Private Automation Hub

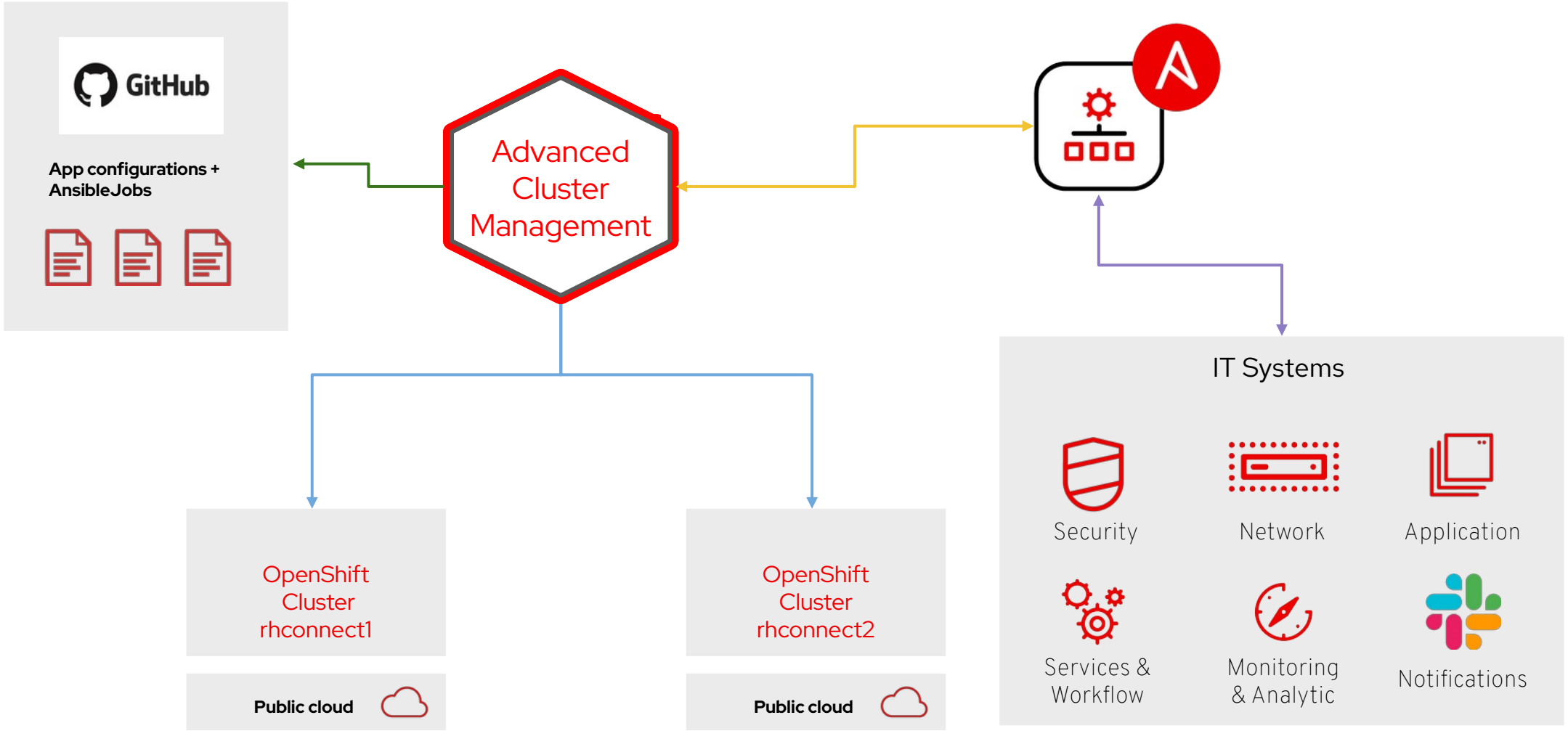
Hosting of private content collections

Execution environments registry

Integration with ACM

End to end automation pre and post hooks to integrate with systems outside OpenShift

ACM + Ansible Automation Platform



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Recap and Benefits

- E2E Automation is key to reduce **human error**
- Maximize **uptime** and provide better **SLAs**
- Speed up **recovery**
- Add **new** infrastructure **providers**
- **Reduce** lock-in
- **Single** pane of glass management
- Easily target **new** business **needs**

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