Industry trend: Multicloud architectures

As a Bi-Report of 2019, U.S.-based USDB companies actively using two or more cloud environments for production applications found 93% using multiple infrastructures to cloud. 81% using multiple public clouds to move to more private/dedicated clouds.

The move to multicloud

In an effort to modernize applications, organizations are deploying multiple clusters across multicloud and hybrid cloud environments.

Organizations choose multiple clusters to:

- Microservices
- DevOps
- Scale performance
- Manage multi-tenant applications
- Meet regulatory requirements
- Simplify application management
- Comply with geopolitical data networking guidelines
- Achieve app-level resiliency

However, multicloud management presents many challenges.

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<thead>
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<th>Single cluster</th>
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<tbody>
<tr>
<td>1. Compliance and monitoring</td>
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<tr>
<td>2. Configuration drift</td>
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<tr>
<td>3. Manual, enterprise application workload management</td>
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<th>Multiple clusters</th>
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<tr>
<td>1. Correlated cluster management</td>
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<td>2. Lack of visibility and performance across environments</td>
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<td>3. Hard integration and scalability with infrastructure and operations</td>
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<th>Enterprise-driven clusters</th>
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Red Hat Advanced Cluster Management for Kubernetes can help

Red Hat's Advanced Cluster Management for Kubernetes provides end-to-end visibility and control to manage the life cycle of your clusters and applications, along with security and compliance for your entire Kubernetes domain — across multiple datacenters and public clouds.

It provides a single view to manage your Kubernetes clusters — from Red Hat OpenShift® deployed on-premise, on bare metal, in public clouds, as well as clusters from public clouds providers like Amazon Web Services (AWS), Microsoft Azure, Google, and IBM.

Use cases

Unified multi-cluster lifecycle management

- Cloud, on-premise, and edge
- Kubernetes clusters unified, consistent, and simple
- Policy-based governance, risk, and compliance

- Use policies to immediately enforce consistency by setting policies on initial deployment

Advanced application lifecycle management

- Application resource deployment, deployment of applications that use integrated storage and increase integration and continuous delivery

- Complete application deployment process across clusters

Benefits

- Accelerate development to production with reduced complexity and friction
- Free up IT departments with infrastructure cluster deployment that automates applications delivery
- Increase application availability with the ability to deploy apps and infrastructure in multiple clusters
- Reduce security complexity with centralized policy enforcement across clusters
- Reduce operational costs with unified management interface

To learn more about Red Hat Advanced Cluster Management for Kubernetes, visit redhat.com/cluster-management.