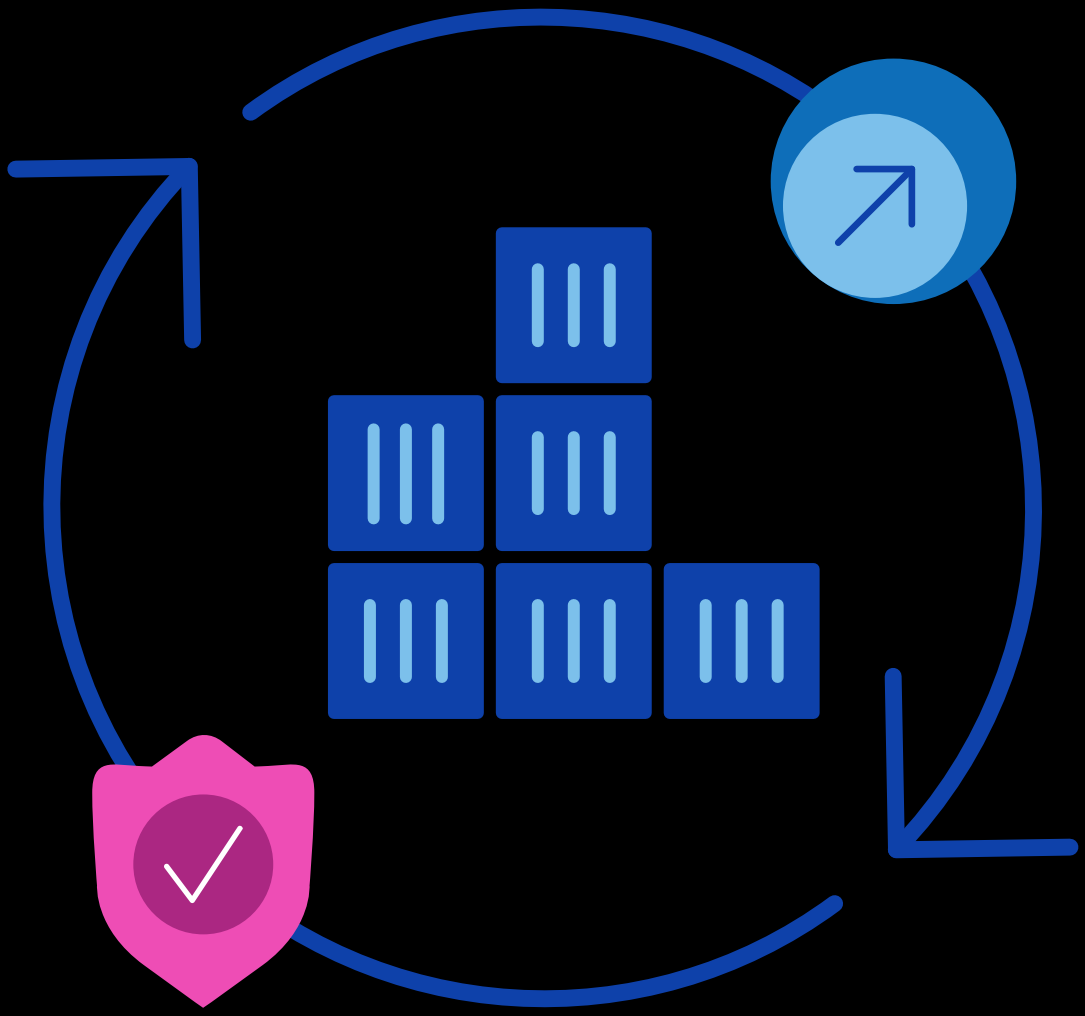
Solution Overview

F5 BIG-IP Container Ingress Services for Multi-Cluster OpenShift Deployments

Scale and secure OpenShift deployments with BIG-IP per-application multi-cluster deployments.



Key Benefits

Multi-Cluster Application Delivery for OpenShift Kubernetes.
Spread applications across multiple heterogenous clusters for scaling and resiliency.

Simplified Migrations
Eliminate cluster upgrade risk and facilitate application migrations across clusters.

Key Features

Active/active, Active/standby, and Ratio Options
Allow distribution of load to clusters on a per-application basis.

One-tier or Two-tier Deployment Options
Send load directly to the applications or to in-cluster ingress controller(s).

Bundled with BIG-IP
These features are provided at no additional cost in BIG-IP´s product and support contracts.

F5 BIG-IP Multi-cluster Container Ingress Services for Red Hat OpenShift makes it easier to publish applications in a consistent and unified manner even in complex, multi-cluster infrastructures.

Simplify Application Publishing for Multi-Cluster Deployments

As modern applications move into Kubernetes OpenShift clusters, the number of clusters in the infrastructure increases. As the complexity of the infrastructure increases, it becomes more difficult to publish applications in a consistent and unified manner.

F5 BIG-IP Multi-Cluster Container Ingress Services for Red Hat OpenShift makes it possible to expose multiple applications from multiple clusters in a single VIP. This feature can also be used for single cluster deployments to reduce the need for in-service cluster upgrades and de-risk operations by migrating applications to a newer cluster.

Increase Scalability, Reliability, and Publishing Flexibility

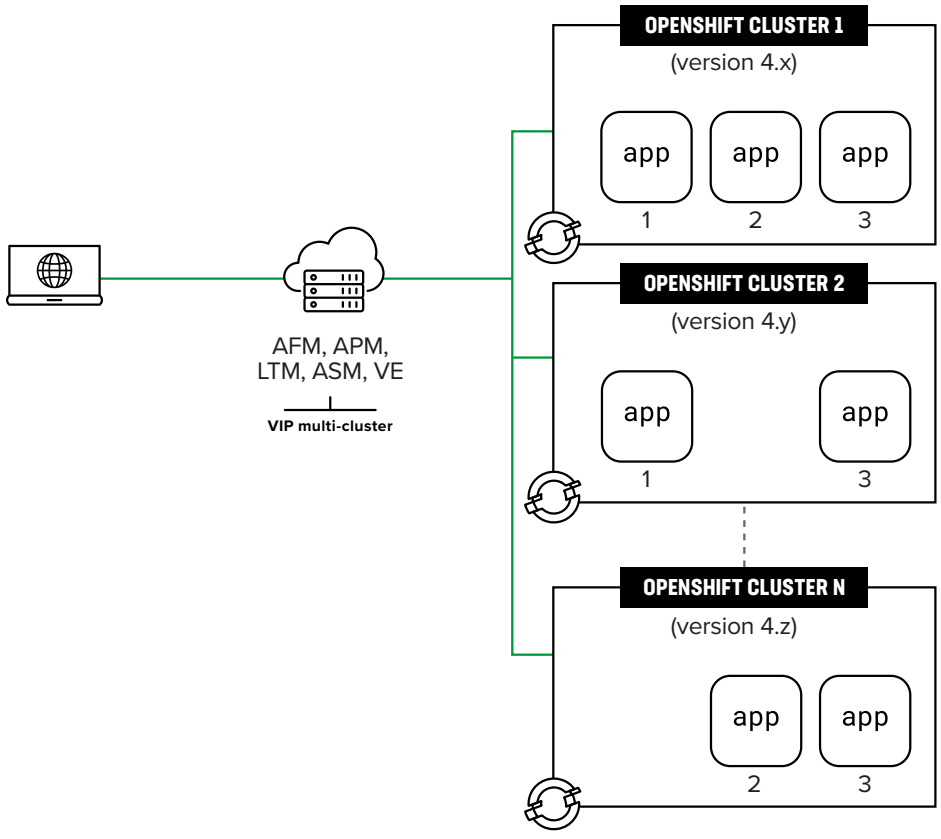


Figure 1: F5 BIG-IP with Multi-cluster Enabled

BIG-IP multi-cluster Container Ingress Services for Red Hat OpenShift allows application developers to use multiple clusters, publishing these in a single VIP regardless of where the applications are deployed or which ingress controller, API manager, or service mesh is used. This solution unifies all application publishing and optionally can be used as a secure layer, providing advanced WAF, bot protection, identity federation and access management or TLS off-loading with HSM support (with hardware, network, and cloud options available).

Simplify Application Publishing Across Multiple Clusters

This new and unique feature of BIG-IP Container Ingress Services is an important addition to the development toolbox for Kubernetes OpenShift deployments. Use cases include:

- OpenShift migrations for single- and multi-cluster infrastructures
- Capacity increases
- OpenShift high availability (including reduction of maintenance windows)
- Blue-green (A/B) testing across clusters
- Route sharding across clusters
- Disaster recovery sites
- Managing clusters in stretched data centers
- Managing clusters in different availability zones of the same cloud region
- Transparently splitting large clusters into smaller ones

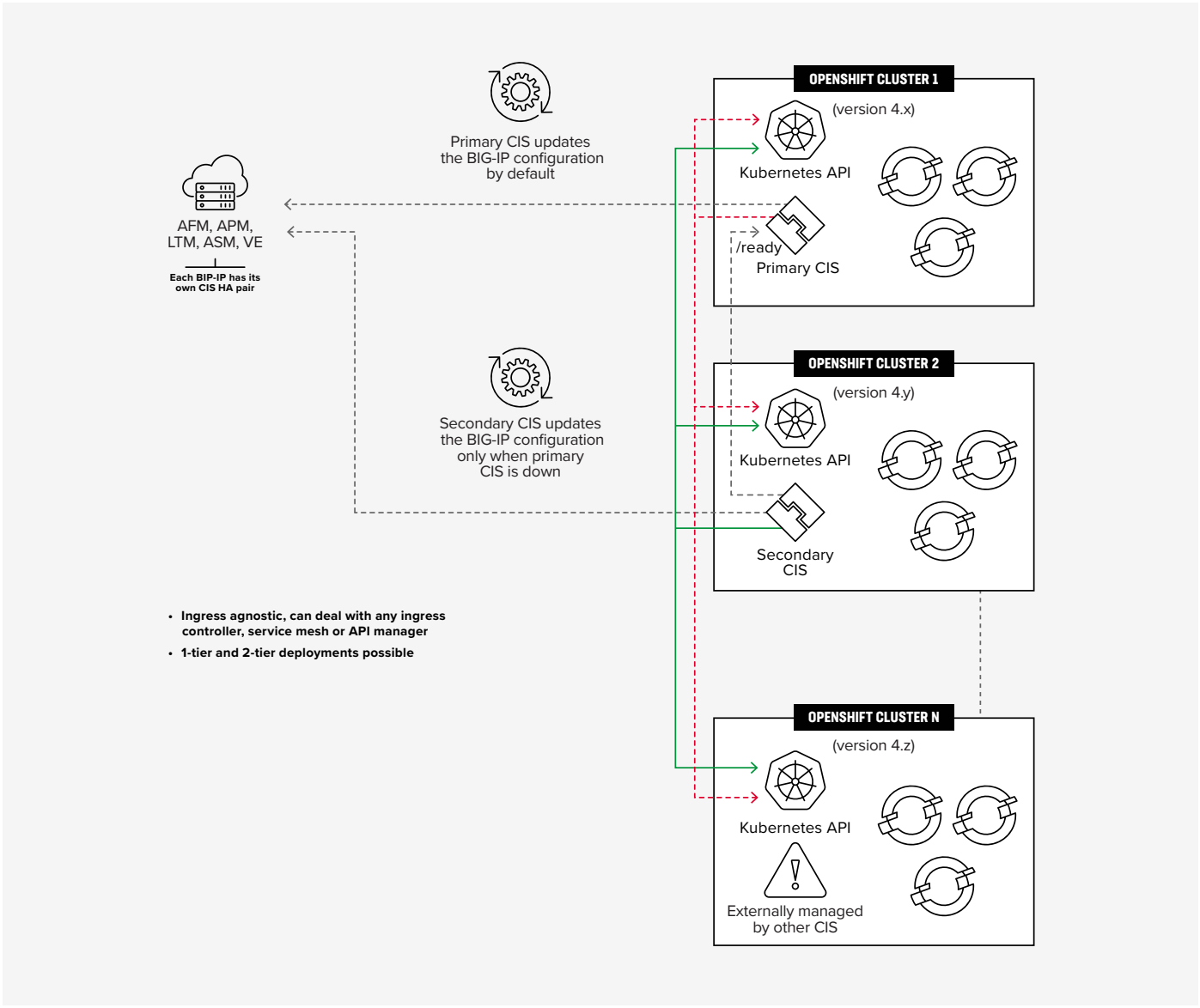


Figure 2: Control plane architecture

Next Steps. Modernize Your Stack.

Evaluate how this free solution and its features can enhance the delivery of modern apps.

To learn more, contact your F5 representative, or visit f5.com/redhat.