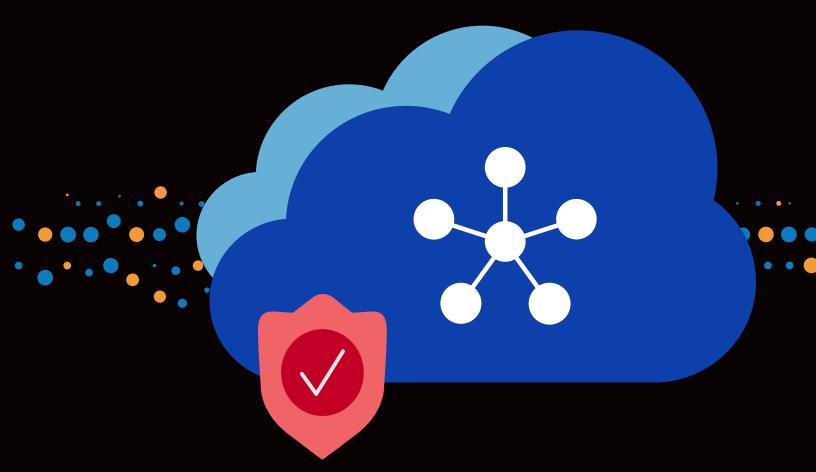
Migrating from VMware to Red Hat OpenShift Virtualization Using F5







Introduction

Migrating workloads from VMware to Red Hat OpenShift Virtualization is a complex process that involves several critical steps, such as network reconfiguration, security policy changes, and managing VM and application downtime. F5 offers a comprehensive suite of products specifically designed to ensure application availability and security throughout the migration process. Initially, customers may choose to migrate less critical workloads to minimize risk and disruption. However, when it comes to mission-critical workloads, the migration process is more challenging and typically entails significant downtime. This document provides an overview on how F5 can streamline the migration from VMware to OpenShift Virtualization by addressing network challenges and ensuring secure, uninterrupted application availability.

Maintain Application Availability During Migration

F5 can maintain the application availability of Tier-1, mission-critical applications during migration from VMware to OpenShift Virtualization through its advanced technologies, including F5® BIG-IP® and F5® Distributed Cloud Services. BIG-IP provides robust traffic management, load balancing, and comprehensive security features, ensuring that applications remain accessible and secure even during migration. By leveraging intelligent traffic steering and failover capabilities, BIG-IP minimizes downtime and ensures that user requests are seamlessly routed to available resources. F5 Distributed Cloud Services further enhance this process by creating a multicloud network that extends application services across hybrid environments. This integrated approach ensures consistent application performance and availability, reducing the risk of disruptions. The combination of BIG-IP and Distributed Cloud Services allows organizations to maintain high availability and security for their most critical applications, ensuring a smooth and reliable migration process.

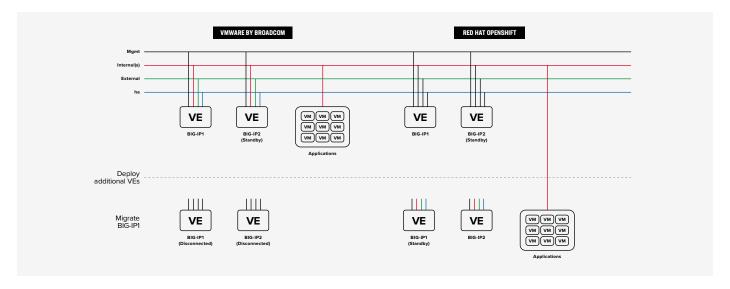


Figure 1: Layer 2 Connection

Address Challenges with Virtual Networking

F5 offers substantial advantages for straightforward migrations from VMware to OpenShift Virtualization, yet many customers encounter difficulties with VMware network virtualization technologies like NSX. Secure multicloud networking capabilities in Distributed Cloud Services provide a robust solution by effortlessly deploying F5 Distributed Cloud Customer Edge (CE) nodes into both VMware and OpenShift Virtualization environments. This capability helps to circumvent network complexity and avoids vendor lock-in. Moreover, it ensures application availability and efficient traffic steering throughout the migration process, minimizing downtime and maintaining performance.

F5® Distributed Cloud Web App and API Protection (WAAP) enhances this value proposition by delivering comprehensive web application security, API protection, and DDoS mitigation. This ensures that applications remain secure and resilient during the migration, providing a seamless and safeguarded user experience. With Distributed Cloud Services, customers gain a versatile and secure migration path that addresses both networking and security challenges effectively.

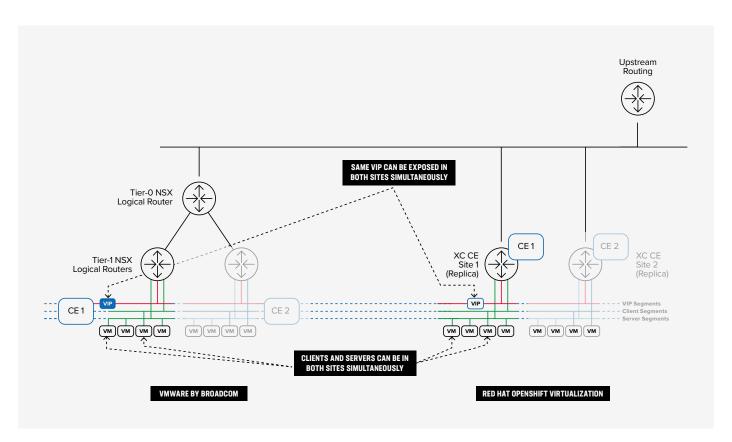


Figure 2: NSX to OpenShift Virtualization migration with XC: traffic flows

Key Benefits

- Network Traffic Management:
 Provide seamless traffic
 distribution and load balancing
 during and after migration
 with F5® BIG-IP® Local Traffic
 Manager™ (LTM).
- Traffic Management and Monitoring: Use advanced traffic management and monitoring capabilities in Distributed Cloud Services to ensure smooth operation during the migration.
- Unified Management:
 Get centralized control over
 multicloud environments.
- Consistent Security:
 Ensure uniform security policies across VMware and OpenShift.
- Reduced Downtime:
 Optimize traffic management to minimize downtime during migration.
- Layer 2 Connectivity: Support VLAN and VXLAN bridging with BIG-IP, allowing seamless layer 2 connectivity between VMware and OpenShift environments.
- Monitoring and Analytics:
 Observe and rectify
 network issues easily with
 comprehensive monitoring
 and analytics.

Conclusion

F5's comprehensive suite of products, including BIG-IP and Distributed Cloud Services, delivers robust solutions tailored for migrating workloads from VMware to Red Hat OpenShift Virtualization. These solutions are designed to operate seamlessly within a data center, across hybrid cloud environments, or even to external platforms such as Red Hat OpenShift Service on AWS (ROSA).

F5 Distributed Cloud Services ensure seamless connectivity by bypassing network complexity and avoiding vendor lock-in, thus providing a flexible and adaptable migration path. With guaranteed application availability and efficient traffic steering throughout the migration process, F5 ensures minimal downtime and maintains optimal performance. Workloads are also kept secure with Distributed Cloud WAAP to protect the user experience during and after migration.

With F5's solutions, customers can confidently undertake migrations from VMware to OpenShift Virtualization, assured of improved connectivity, security, and performance. This not only streamlines the migration process but also optimizes operational efficiency, allowing organizations to fully leverage the benefits of OpenShift Virtualization.

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

