

# Big Virtual Switch and F5 Networks

## Key Value – Big Virtual Switch

- Increased speed and agility – networks can be provisioned in seconds without human intervention
- Cloud scalability – virtual networks are decoupled from VLAN limitations
- Improved datacenter utilization by the elimination of network boundaries
- Vendor choice in networking equipment
- Persistent security policies that isolate ensure tenant isolation regardless of the physical locations of virtual machines
- Support for both physical and virtual networking infrastructure extends virtual networks beyond virtual machines to physical servers and storage as well

## Challenge

Today, deploying a three-tiered application, such as an online store, can be a complex task. An infrastructure administrator must launch the appropriate virtual machine, potentially configure VLANs or subnets in the underlying network, and provision a new application delivery networking service. Additionally, administrators must work closely with application developers to ensure high availability, security, performance, and scalability.

The provisioning time and costs that result from this process must be reduced to drive agility in the cloud data center.

## Solution Overview

As many cloud architects have learned, employing manual processes in network provisioning can be a serious bottleneck in achieving a powerful, flexible, self-service cloud infrastructure. Big Switch Networks, the leader in Open Software Defined Networking and F5 Networks, the leader in application delivery networking, are working together to offer a network that can meet the demands of the modern datacenter.

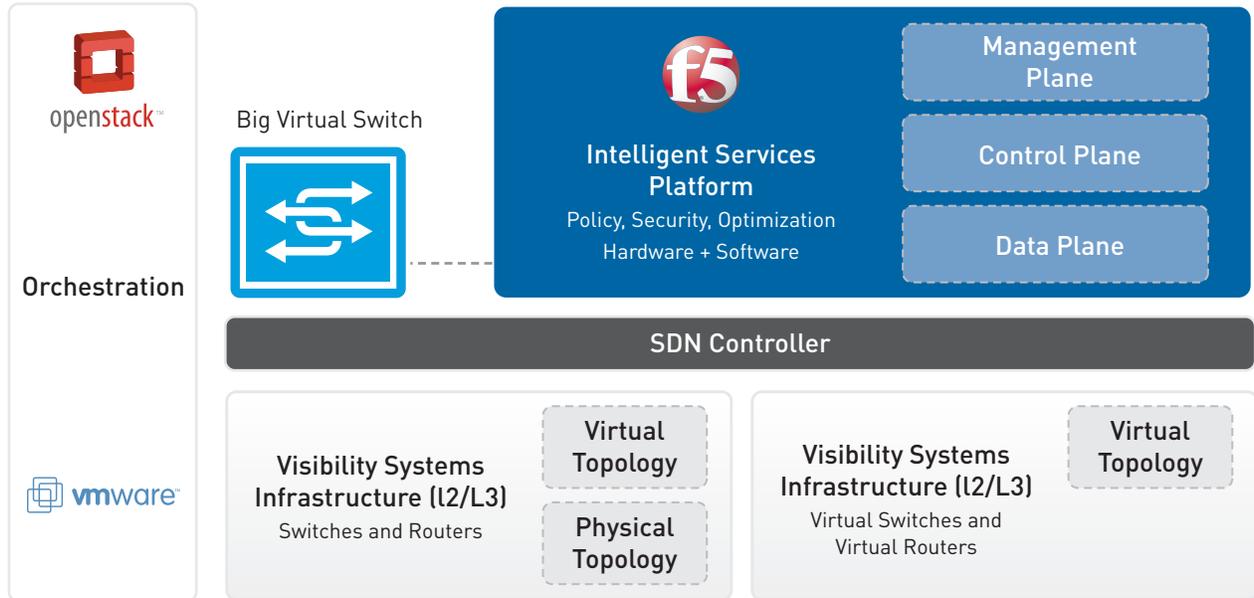
Big Switch and F5 have designed a joint solution bringing together F5 BIG-IP® Local Traffic Manager™ (LTM), F5 iApp functionality and the Big Virtual Switch network virtualization application. This solution allows a user to deploy a complex cloud application while Big Virtual Switch and LTM transparently manage network configuration in the background.

The joint solution involves two key areas of integration:

1. Big Virtual Switch passes information to LTM about both the physical OpenFlow environment and virtual network segments, helping LTM to optimize service delivery. As part of an SDN platform, Big Virtual Switch maintains information about the OpenFlow network, including the IPs and MAC addresses of all hosts, attachment points of all hosts, network topology of all switches, and traffic flows within in each OpenFlow switch.
2. Big Virtual Switch steers traffic to the appropriate LTM devices delivering the application service, potentially adding VLAN tags as needed. This functionality is possible because Big Virtual Switch works directly with both the physical and virtual switching domains using OpenFlow.

Leveraging integrations with popular orchestration platforms such as OpenStack and F5 together can fully manage all layers of the networking stack to dramatically simplify application deployment in cloud environments.





Big Switch and F5 Joint Solution

## About Big Switch Networks

Big Switch Networks is the leading platform-independent Software-Defined Networking (SDN) vendor. The company's highly scalable Open SDN architecture leverages industry standards and open APIs that enable customers to deploy dynamic and flexible networking applications, including data center network virtualization. Big Switch Networks is backed by the largest SDN ecosystem of OpenFlow applications and physical and hypervisor switches. The company's commercial controller, network virtualization, and applications, which accelerate delivery of cloud services, are in customer trials today. For more information, visit [bigswitch.com](http://bigswitch.com)

## About F5 Networks

F5 helps organizations create an agile infrastructure that aligns with their business demands. With F5 solutions in place, businesses gain strategic points of control wherever information is exchanged in the IT infrastructure. F5 is the only vendor that provides an open architectural framework, offering IT organizations new ways to deliver services that generate true business value. Just seven years after becoming a publicly traded company, F5 had made a name for itself as a pioneer of Application Delivery Networking (ADN)—a computing approach and set of technologies that ensure network-based applications are always secure, fast, and available.



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