Bringing Physical Network Automation and Visibility to VMware Virtualization Environments

Adoption of software-defined data center (SDDC) technologies are accelerating as customers are realizing gains in agility and cost efficiencies, especially for private clouds. To further ease adoption, Big Switch Networks and VMware have partnered, allowing data center administrators unprecedented network automation capabilities. This strategic relationship enables private clouds based on VMware products to deploy new applications and workflows automatically across physical and virtual networks thus bringing additional visibility and troubleshooting to VMware administrators.

Big Cloud Fabric – the networking industry’s only open SDN fabric designed to transform complex, expensive and proprietary box-by-box networking – offers customers agility needed for faster innovation, operational simplicity, and hyperscale economics. Data center administrators can now benefit from unprecedented physical network automation and visibility into:

- VMware vSphere® Server Virtualization Environments
- VMware NSX® Network Virtualization Deployments

Organizations deploying VMware server or network virtualization solutions can now simplify operational workflows of the underlying physical network while reducing TCO with Open Ethernet switch economics.

BCF Integration with VMware vCenter

Big Cloud Fabric now supports VMware vSphere server virtualization by delivering the benefits of open switch hardware and SDN to the majority of virtual workloads in the data center. The BCF controller directly integrates into VMware vCenter™ to automate network application deployment on the physical SDN fabric. The BCF controller becomes a single point of integration with vCenter for an entire Leaf-Spine Clos fabric, significantly simplifying application deployment across virtual and physical networks. Integration of the BCF controller with vCenter also enables VM visibility, including VM mobility, directly through the BCF controller GUI.

Integration of the BCF controller with vCenter provides Fabric Automation and Visibility including:

- Auto Host Detection & LAG Formation
- Auto L2 Network Creation & VM Learning
- Network Policy Migration for vMotion/DRS
- VM-level Visibility (VMname, vMotion)
- VM-to-VM Troubleshooting (Logical & Physical)
**BCF Interoperability with VMware NSX**

BCF also seamlessly interoperates with the VMware NSX-v controller providing enhanced physical network visibility to VMware network administrators. This added level of interoperability enables rapid troubleshooting across the entire network environment by providing complete vSwitch → pSwitch Fabric → vSwitch traceability.

Key Fabric Automation and Visibility features include:
- Auto Host Detection & LAG Formation
- Auto Network Creation for VTEP Port-Group & VTEP Discovery
- Underlay Troubleshooting – VTEP-to-VTEP connectivity
- Underlay Visibility through Fabric Analytics (VM-name, VXLAN ID, Logical Switch)

**Enhanced Analytics with BCF Fabric Analytics**

BCF also supports an enhanced Fabric Analytics module for deep visibility of VMware VMs for network administrators, including VM & host properties, VM mobility events and host connectivity to the BCF leaf switches. Having a consistent view of virtualization environments across both virtualization and network admins allow rapid resolution of cross-domain issues. For more on Fabric Analytics, please visit: [http://www.bigswitch.com/fabric-analytics](http://www.bigswitch.com/fabric-analytics)

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**ABOUT BIG SWITCH**

Big Switch Networks is the market leader in bringing hyperscale data center networking technologies to a broader audience. The company is taking three key hyperscale technologies—OEM/ODM bare metal and open Ethernet switch hardware, sophisticated SDN control software, and core-and-pod data center designs—and leveraging them in fit-for-purpose products designed for use in enterprises, cloud providers and service providers. For additional information, email info@bigswitch.com, follow @bigswitch or visit www.bigswitch.com.