Big Switch + Nutanix: Ideal SDN Fabric for Hyper-Converged Infrastructure

Big Switch's Big Cloud Fabric (BCF) is the ideal SDN fabric delivering Next-Gen data center switching for Nutanix Hyper Converged Infrastructure. The BCF solution for Nutanix offers unprecedented operational velocity, network automation at VM speed and end-to-end visibility for cloud-native applications deployed in the Hyper Converged environment.

The Nutanix Enterprise Cloud OS starts with a hyperconverged infrastructure (HCI) based on distributed software principals that can be deployed on industry standard hardware. The Nutanix solution delivers simplified virtual workload deployment and streamlined operations that enables enterprise datacenters to be more cloud-like. This modern, highly scalable environment can impose unique requirements on the networking infrastructure which make it more challenging to implement with traditional networking solutions.

1. Incrementally scaling the network along with HCI based compute and storage
2. Streamlined operations through simplified workload deployment and rapid troubleshooting necessitating turn-key infrastructure for all elements including the network.
3. Open, industry-standard infrastructure to enable vendor choice.

Traditional networking solutions are simply not able to meet these challenges because of the box-by-box provisioning approach which makes workload deployment and scaling very complex. They are proprietary, expensive and inflexible to operate and difficult to troubleshoot leading to high costs.

SOLUTION OVERVIEW

The solution consists of Big Cloud Fabric as the networking fabric for the Nutanix Enterprise Cloud OS. It creates a logical abstraction for the physical network by leveraging software-defined networking (SDN) principles to present the scale-out network fabric as a single logical switch to the applications. Big Cloud Fabric (BCF) is the ideal SDN fabric for Nutanix deployments, using open networking (brite-box/white-box) switch hardware. It delivers a software defined switching architecture offering unprecedented operational velocity through network automation and end-to-end visibility, thus offering modern benefits needed for the HCI environment at the networking layer. BCF provides these operational benefits while offering dramatic cost reduction by leveraging industry-standard hardware and enabling hardware vendor choice versus legacy box-based solutions that are proprietary and expensive.

"Incheon Smart-city deployed BCF with a Nutanix Enterprise Cloud, which created a logical abstraction for the physical network via the SDN principles, which enable a scale-out network fabric as a single logical switch to the applications"

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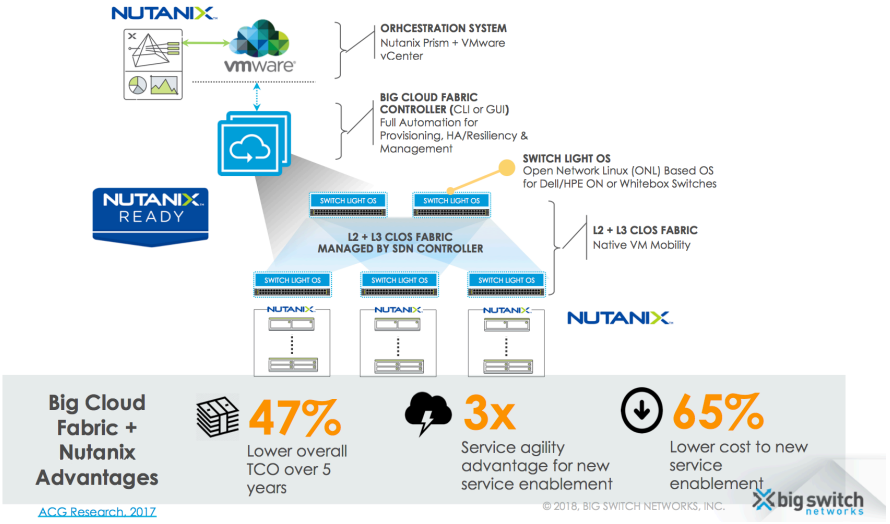


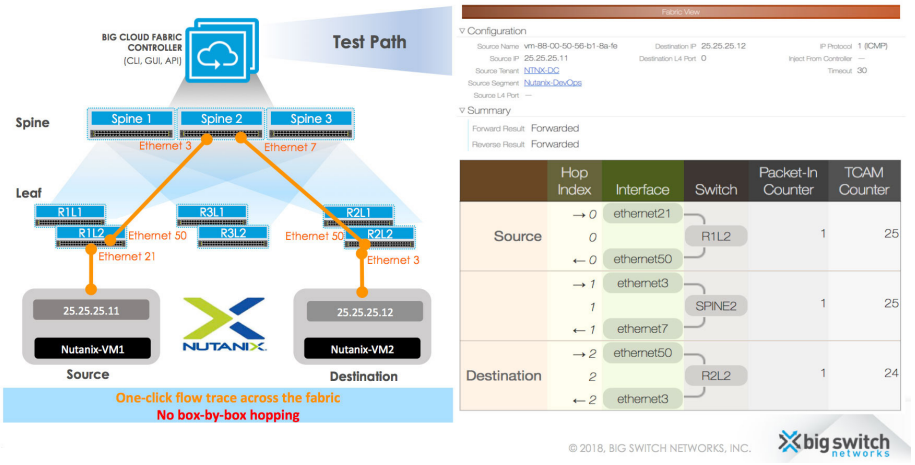
KEY SOLUTION BENEFITS

Together Nutanix and Big Switch Networks help deliver end-to-end solution to streamline application deployment and network operations.

Automation:

- Auto Host Detection
  - Automatic discovery of Nutanix cluster nodes by BCF
- Auto Link Aggregation
  - Zero-touch leaf switch connectivity
- Auto L2 Network Creation
  - Auto create, modify, delete L2 networks as part of application deployment process

BCF NUTANIX SOLUTION – TROUBLESHOOTING



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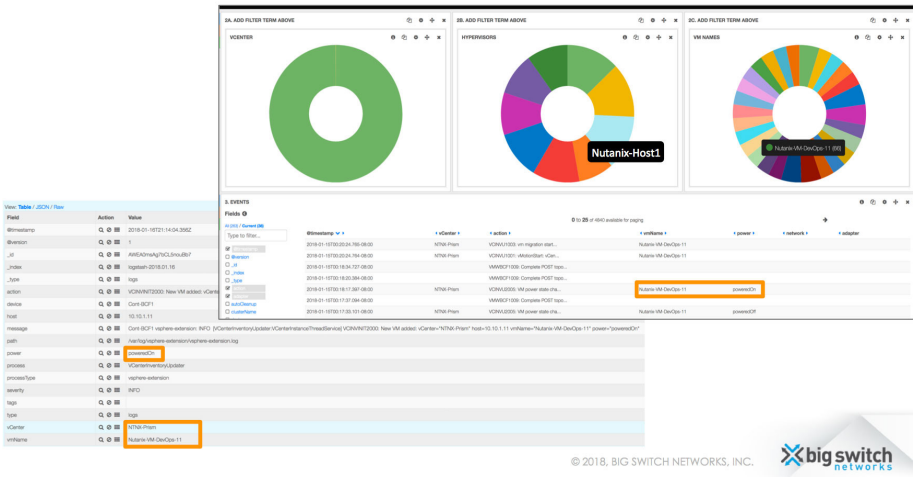
BCF NUTANIX SOLUTION – VISIBILITY



Visibility:

- VM-level Visibility
  - Granular VM-level/host-level visibility of virtualization domain for network admins
- VM-to-VM Fabric Trace
  - VM-to-VM traffic visibility across entire fabric can be visually displayed on the BCF Controller between any two VMs
- Fabric Analytics
  - Advanced analytics showing VM-related information and time-series of events related to VMs.

NUTANIX READY VALIDATION

Big Cloud Fabric Version 4.2, Nutanix AOS 5.1.0.3, and VMware vSphere ESXi 6.5b

ABOUT BIG SWITCH NETWORKS

Big Switch Networks is the Next-Generation Data Center Networking Company. We disrupt the status quo of networking by designing intelligent, automated, and flexible networks for our customers around the world. We do so by leveraging the principles of software-defined networking (SDN), coupled with a choice of industry-standard hardware. Big Switch Networks has two solutions: Big Monitoring Fabric, a next-generation network packet broker, which enables pervasive security and monitoring of data center and cloud traffic for inline or out-of-band deployments and Big Cloud Fabric, the industry's first next-generation switching fabric that allows for choice of switching hardware for OpenStack, VMware, Container, HCI, and Big Data use cases.

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RESOURCES

- Nutanix and Big Switch Joint Webinar
- Nutanix Technology Alliances – Big Switch
- Read more about the partnership on BigSwitch.com

big switch networks

NUTANIX™ READY

Nutanix makes infrastructure invisible, elevating IT to focus on the applications and services that power their business. The Nutanix Enterprise Cloud OS software leverages web-scale engineering and consumer-grade design to natively converge compute, virtualization and storage into a resilient, software-defined solution with rich machine intelligence. The result is predictable performance, cloud-like infrastructure consumption, robust security, and seamless application mobility for a broad range of enterprise applications and services. Learn more at www.nutanix.com or follow us on Twitter @nutanix.