

# EMC SERVICE ASSURANCE SUITE AND VMWARE NSX

End-to-end visibility, control, and manageability



## ESSENTIALS

### Challenges

Overcome traditional network barriers to create an agile and flexible data center

### Solution

EMC Service Assurance Suite and VMware NSX

### Key Benefits

- Network service provisioning time reduced from days to minutes.
- End-to-end discovery & topology (Physical to Virtual Network)
- Automated root-cause analysis of underlying physical infrastructure faults and impact on tenant services
- Correlate recent configuration changes with reported symptoms and root cause

## SOFTWARE-DEFINED DATA CENTER WITH NETWORK VIRTUALIZATION

As more organizations seek to fully implement Software-Defined Data Centers – which are characterized by server virtualization, storage virtualization and network virtualization – the “traditional” network and its inherent inefficiencies increasingly represents a barrier to IT’s ability to meet today’s dynamic business needs:

- Network service provisioning is slow, manual and error-prone
- Workload placement and mobility are limited
- Network changes required to support a rapidly changing environment are often complex and hard to implement efficiently and effectively
- Proprietary hardware, device-centric operations, non-standard platform interfaces, and multiple tools increase network operations complexity

Overcoming these challenges requires a Software-Defined Data Center approach.

## NETWORK VIRTUALIZATION - PROVISIONING AND MANAGEMENT FROM EMC AND VMWARE

By allowing virtual networks, like server virtual machines, to be programmatically created, cloned, migrated, deleted, and restored on-demand to enable applications to be quickly provisioned and deployed, VMware NSX™ provides the network virtualization pillar that delivers to the network the same benefits that VMware delivered to compute infrastructure.

Network virtualization with NSX provides fast provisioning of network services, service automation and increased visibility into virtual environments. Combine this functionality with a management solution that assures the availability and performance of services and applications delivered over virtual *and* physical IT infrastructures, and you can transform your IT service delivery environment into an agile, scalable data center with unparalleled data center-wide visibility and control.

This is exactly what VMware and EMC have partnered together to deliver. The VMware NSX network virtualization platform provides you with the flexibility needed to provision logical networks, while the EMC Service Assurance Suite provides the visibility and insight needed to ensure the availability and performance of critical business services delivered over this dynamic infrastructure. The integration between the EMC Service Assurance Suite and VMware NSX delivers on the promise of network virtualization.

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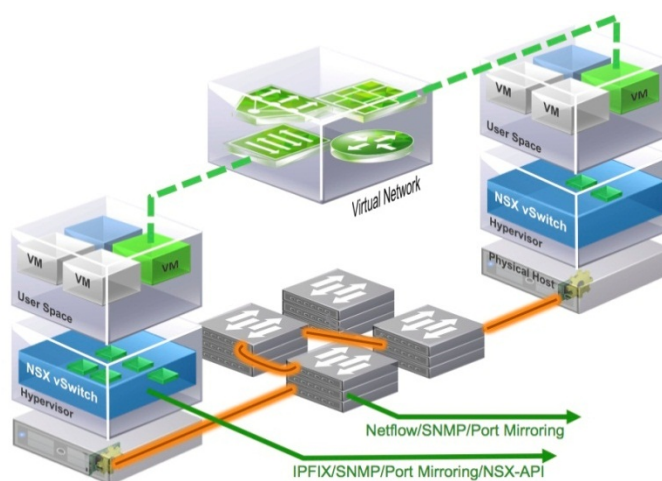
CUSTOMER PROFILE

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## SOFTWARE-DEFINED DATA CENTERS WITH NETWORK VIRTUALIZATION

VMware NSX is the leading network virtualization platform that delivers the operational model of a virtual machine for the network. Similar to virtual machines for compute, VMware NSX virtual networks are fully functional networks in software, which are programmatically provisioned and managed independent of underlying hardware.

NSX reproduces the entire network model, Layer 2, Layer 3, and Layers 4 through 7 network services, in software, enabling any network topology—from simple to complex multi-tier networks—to be created and provisioned in minutes. NSX exposes a complete suite of simplified logical networking elements and services including logical switches, routers, firewalls, load balancers, VPNs, QoS, monitoring, and security. These logical network services are provisioned programmatically when virtual machines are deployed and move with virtual machines. Existing applications operate unmodified and see no difference between a virtual network and a physical network connection.

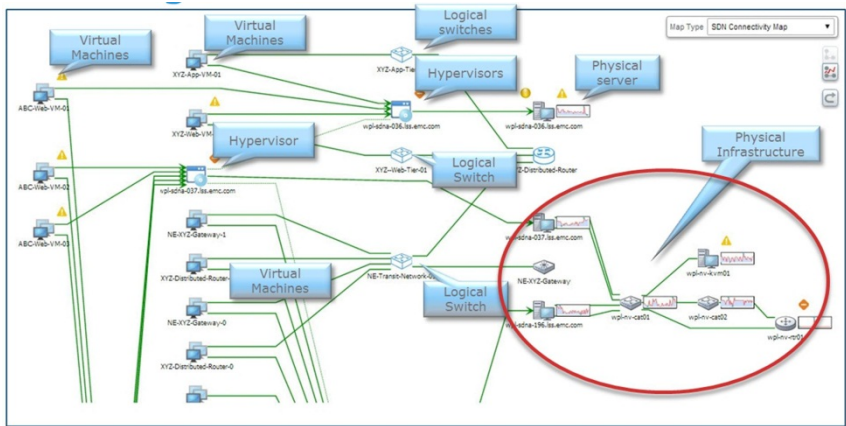


## COMPLEMENTING NSX VISIBILITY WITH EMC SERVICE ASSURANCE SUITE

Traditional networks spread configuration and forwarding state across multiple, diverse network devices, resulting in impaired visibility and a potential impact on troubleshooting. NSX consolidates all states for all NSX components and enables virtual network elements, and the mapping between virtual network topologies and the underlying physical network, to be readily accessible through standard protocols and Restful NSX APIs.

The integration of NSX with the EMC Service Assurance Suite assures availability and performance of services and applications delivered over both virtual and physical IT infrastructures. The EMC Service Assurance Suite provides end-to-end management from the tenant through the virtual network infrastructure, all the way to the physical infrastructure components.

The Service Assurance Suite discovers all of the underlying components of the NSX environment, including their relationships to the physical infrastructure, providing end-to-end discovery and visibility. The Service Assurance Suite also discovers and presents topology views of the NSX platform, which consists of a control cluster, logical switches, logical routers, transport zones, and edge gateways, in addition to the controller nodes and NSX Manager. You have unparalleled line of sight into your virtual and physical network infrastructure that helps in quickly correlating failures, performing impact analysis, and reducing Mean-Time-To-Resolution (MTTR).



The Service Assurance Suite automatically diagnoses performance and availability issues in the core fabric, and immediately assesses impacts on the logical network components of NSX. Through visualizations of both physical and logical network resources, this powerful monitoring and management system cross-correlates infrastructure events to automatically determine root cause. This allows you to rapidly respond to performance degradation and risk conditions proactively to quickly resolve issues before business services are impacted.

The Service Assurance Suite also includes a network configuration and change management capability that automatically configures the underlying physical network devices to correspond to logical network configurations. This function constantly checks the compliance of all of the physical and logical network components. By automatically alerting on any policy violations, you can ensure that the entire network infrastructure maintains compliance to standards and best practices, avoiding any risk conditions. Operators automatically receive alerts about any non-standard configuration changes in the physical and logical network elements, and can see these changes in the context of other availability and performance related events.

## NETWORK WIDE VISIBILITY AND CONTROL WITH VMWARE AND EMC

With EMC Service Assurance Suite and VMware NSX you can break through the physical network barriers and achieve the provisioning speed, operational efficiency, and management visibility and insight promised by network virtualization.

### CONTACT US

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