SDDC Approach Redefines Data Center Network Security

The Software-Defined Data Center (SDDC) enables a substantially improved operational mode with greater speed and agility, lower operational overhead, and a lower capital expenditure model.

VMware NSX delivers network virtualization for the SDDC, with a full service, programmable platform that provides logical network abstraction of the physical network with programmatic provisioning and management abilities. Following the successful abstraction of the compute and storage elements, network virtualization provides the next step towards a fully virtualized data center.

VMware NSX also offers an opportunity to redefine the way we secure our networks. One of the fundamental challenges of network security has been the inability to isolate policy enforcement from the operational network plane. Within the SDDC, the hypervisor provides a perfectly isolated layer to enforce security policy while maintaining the application context to enable better security control and visibility.

NSX provides isolation and network segmentation by default. Virtual networks run in their own address space and have no communication path to each other or to physical networks. Native firewalls and policy enforcement at the virtual layer provides segmentation, and micro-segmentation for security controls at the unit level or virtual machine level.

Leveraging network virtualization technology, the SDDC enables security to be architected into the network itself. This allows security controls to be based on logical boundaries and makes data center micro-segmentation operationally feasible.

The Tufin Orchestration Suite™ Solution for VMware NSX

The Tufin Orchestration Suite is a complete solution for automatically designing, provisioning, analyzing and auditing network security policy changes from the application layer down to the network layer.

With the Tufin Orchestration Suite, IT and security organizations can centrally manage and control micro-segmentation, continuously monitor and track security policy compliance, and automate security policy management throughout the entire data-center via a single interface. The Tufin Orchestration Suite provides unprecedented visibility and control of security in the SDDC ensuring a unified security policy management across the entire enterprise – including physical and virtual networks as well as hybrid cloud platforms.

Cross Data Center Micro-Segmentation

The joint solution featuring VMware NSX and the Tufin Orchestration Suite delivers automation and visibility that significantly reduces the management burden of micro-segmentation across physical and virtual environments. With Tufin’s Security Zone Matrix you can visually map network zone-to-zone traffic flows and instantly gain insights and visibility for your enterprise’s micro-segmentation (see Figure 1).

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Summary

VMware NSX with the Tufin Orchestration Suite provide a unified plane of visibility and control to IT professionals who are planning to deploy a software-defined data center. The joint solution enables IT and security organizations to reap the benefits of the SDDC while ensuring consistent security behavior and micro-segmentation policies throughout the data center, across both physical and virtual networks, and hybrid cloud environments.