



## Virtual Networking Features of the VMware vNetwork Distributed Switch and Cisco Nexus 1000V Series Switches



### What You Will Learn

With the introduction of VMware ESX, many virtualization administrators are managing virtual switches inside the hypervisor. Since the virtual switches need to be configured consistently with the physical network, virtualization and network administrators have to work closely to help ensure proper virtual machine connectivity.

This document will help virtualization and network administrators understand the virtual networking features and capabilities introduced with the vNetwork technologies in VMware vSphere 4.

### Alternatives for Virtual Networking

With VMware vNetwork, VMware is introducing a number of alternatives for virtual networking in vSphere 4. Table 1 summarizes and compares the features of these alternatives.

#### VMware vNetwork Standard Switch

The VMware vNetwork Standard Switch (vSS) is the base-level virtual networking alternative. It extends the familiar appearance, configuration, and capabilities of the standard virtual switch (vSwitch) in VMware ESX 3.5 to ESX 4.0 and vSphere 4.

#### VMware vNetwork Distributed Switch

The VMware vNetwork Distributed Switch (vDS) is new with vSphere 4. The VMware vDS extends the feature set of the VMware Standard Switch, while simplifying network provisioning, monitoring, and management through an abstracted, single distributed switch representation of multiple VMware ESX and ESXi Servers in a VMware data center.

#### Cisco Nexus 1000V Series Switches

Cisco Nexus™ 1000V Series Switches are the result of a Cisco and VMware collaboration building on the VMware vNetwork third-party vSwitch API of VMware vDS and the industry-leading switching technology of the Cisco Nexus Family of switches. Featuring the Cisco® NX-OS Software data center operating system, the Cisco Nexus 1000V Series extends the virtual networking feature set to a level consistent with physical Cisco switches and brings advanced data center networking, security, and operating capabilities to the vSphere environment. It provides end-to-end physical and virtual network provisioning, monitoring, and administration with virtual machine-level granularity using common and existing network tools and interfaces. The Cisco Nexus 1000V Series transparently integrates with VMware vCenter Server to provide a consistent virtual machine











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