



Data Center Virtualization Infrastructure

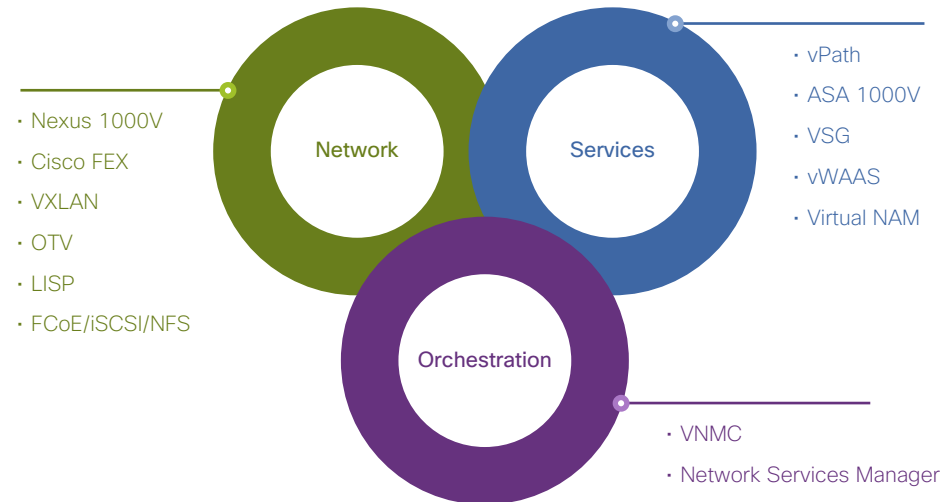
Selling Card for Partners

Sales Opportunity

At the heart of the Unified Data Center is Cisco's holistic virtualization infrastructure that bridges the evolution from physical to virtual to cloud. With the most complete virtualization portfolio in the industry, Cisco provides the fastest path to cloud-readiness for your customer's critical applications. The virtualization infrastructure includes the virtual network, virtual application services and security, as well as automated virtual workload provisioning and orchestration.

Cisco channel partners have the opportunity to increase add-on revenue to UCS server and network infrastructure deals with a broad portfolio of virtual software solutions that integrate seamlessly into the Cisco environment, maintain account control, and further differentiate Cisco's solutions from data center competitors. Cisco's virtualization technology puts your team in the position of trusted advisor to make your customer's applications and organization cloud-ready.

Figure 1. Cisco provides the most complete virtualization infrastructure stack for network virtualization, application services and orchestration



What You'll Sell

Cisco's virtualization infrastructure is comprised of the following major components:

- **Nexus 1000V** – Analogous to physical switches, the Nexus 1000V virtual switch consists of a virtual Ethernet module (VEM) for switching traffic to the virtual machine, and the virtual supervisor module (VSM) for managing traffic flows, networking policies and quality of service. Nexus 1000V includes other key virtualization technology such as VXLAN, vPath, et al. <http://cisco.com/go/nexus1000v>
- **Nexus 1010** – The Nexus 1010 and 1010-X virtual services appliances offers a dedicated hardware platform for hosting services critical to the virtualization infrastructure, including the Nexus 1000V VSM, Cisco's virtual firewall products, and the Network Analysis Module. <http://cisco.com/go/nexus1010>
- **Virtual Security Gateway (VSG)** – The VSG virtual firewall provides logical isolation of VMs into trust zones based on traditional firewall policies, as well as VM attributes that correspond to the application-type, tenant, etc. As a virtual firewall node, VSG scales easily and allows security policies to migrate easily with application mobility. <http://cisco.com/go/vsg>
- **ASA 1000V** – The ASA 1000V Cloud Firewall provides tenant edge security services in multi-tenant environments, including VPN, threat detection, DHCP, and NAT. It is operationally consistent with the physical ASA security appliances and blades for a seamless transition from physical to cloud. <http://cisco.com/go/asa1000v>
- **vWAAS** – Cisco's virtual Wide Area Application Service provides WAN optimization for improved performance of virtual data center applications out to client desktops. <http://cisco.com/go/vwaas>
- **Virtual NAM** – The virtual Network Analysis Module (NAM) provides deep insights to application and network performance issues, allowing administrators to efficiently identify bottlenecks and optimize resources. NAM can be seamlessly hosted on the Nexus 1010 for operational simplicity. <http://cisco.com/go/nam>
- **Network Services Manager** – NSM helps you provision and deploy numerous individual network components as sophisticated network "containers" to automate the deployment of virtual workloads, along with the required security and application services. NSM integrates with Cisco's workflow automation and service catalog solutions for a complete cloud orchestration stack. <http://cisco.com/go/nsm>
- **Virtual Network Management Center** – Cisco's VNMC integrates the management and deployment of virtual machines and virtual services such as VSG and ASA 1000V. <http://cisco.com/go/vnmc>



Market Trends

Application virtualization is accelerating across data centers globally, in all industries. Roughly half of all application workloads are virtual today or will soon be, and by 2015 that number is expected to increase dramatically. The economic model of cloud computing is causing organizations of all size to host applications in their own private clouds or in shared public clouds as they build out their virtualization infrastructure. Virtualization technology is a key strategic battleground for emerging cloud vendors who are seeking to commoditize the physical network, servers and storage. More and more application and traffic intelligence is migrating into the virtualization stack and it is critical for Cisco to remain a leader with the most advanced virtualization solutions going forward. This will help maintain account control and Cisco's trusted advisor status in the data center.

Target Market

All of Cisco's data center customers for physical Nexus devices and/or UCS servers should be rounding out their orders with complementary virtualization infrastructure, except in rare cases where the customer is not virtualizing applications (running on bare metal). Look for enterprise customers that are building "private" or "hybrid" cloud data centers, as well as ISP's building out larger public cloud infrastructures. Smaller organizations that are looking to host all their virtual applications in the public cloud are not suitable targets. Today, North America is ahead of EMEA, who is ahead of Lat Am and Greater Asia in terms of virtualization adoption.

Network/Business Challenges

The cost benefits of data center consolidation and the economics of cloud computing are hugely compelling, but the technical challenges to virtualize applications while delivering the same level of security, performance, reliability, and compliance can be daunting. Adapting physical network and server resources to a virtual world, while maintaining traditional IT roles and procedures, and learning new skills can be a substantial challenge for organizations.

Value to Customer

Cisco's virtualization infrastructure is designed to bring the operational simplicity and traditional management models of a physical data center to virtual servers, applications and network services. Our complete portfolio of virtual networking, security and services helps customers overcome application virtualization challenges while providing greater differentiation for all of Cisco's physical data center solutions.

Qualifying Questions

1. What data center applications are you virtualizing today and in the foreseeable future? What percentage of application workloads does this represent?

Customers must be currently or in the process of virtualizing their data center applications to need our infrastructure today.

2. Are you hosting your virtual applications in your own data center?

Customers that are hosting all their applications in the public cloud will generally not need our infrastructure.

3. Would you like an open, multi-vendor virtualization infrastructure that doesn't lock you into a single hypervisor and works seamlessly with servers and physical networks from other data center vendors?

Cisco is now positioned to work with VMware and Microsoft hypervisors, and more in the future, giving customers more flexibility, while not relying on Cisco physical hardware for the server or in the network. Customers that don't want to be locked into VMware are prime target for our solutions.

Table 1. Solution/Product Positioning Table

	Hypervisor Agnostic	Layer 2/3 Network Virtualization	Services Virtualization	Holistic Management
Cisco	●	●	●	●
VMware	○	●	●	●
Arista	○	◐	○	○
Microsoft	○	◐	○	○
HP	◐	◐	◐	○
Juniper	◐	◐	◐	○
IBM	◐	◐	○	○