ALCATEL-LUCENT OMNIVISTA 2500 VIRTUAL MACHINE MANAGER

The Alcatel-Lucent OmniVista™ 2500 Virtual Machine Manager (VMM) automates Data Center network operations, streamlining virtualization deployment for new business imperatives.

Data center operators are facing significant challenges on how to manage virtual network elements in conjunction with the physical network. OmniVista 2500 VMM unifies physical and virtual infrastructures providing network operators with a comprehensive view into a complete end–to-end network from monitoring to advance provisioning operations. This enables error-free network administration operations and simplifies the deployment of new value added services.

The OmniVista 2500 VMM, an optional component for the OmniVista™ 2500 Network Management System (NMS), addresses new operational requirements and new capabilities required to ensure consistent, unified management and operation simplification for the new virtualized infrastructure deployed in data centers. The OmniVista 2500 VMM offers a comprehensive end-to-end solution that unifies physical and virtual infrastructures into a single pane of glass for network operators.

Using the OmniVista 2500 VMM, network operators can monitor and control virtual networks, ensuring that virtual network policies are consistently and automatically applied across the infrastructure. This enables error-free network operations for the IT organization and simplifies deployment of value-added services such as live virtual machine migration such as VMware® VMotion™.

The OmniVista 2500 VMM contributes to a comprehensive manageability solution that, in conjunction with the OmniVista 2500 NMS, spans the Alcatel-Lucent routing and switching network portfolio.

VIRTUALIZATION APPLICATION DEPLOYMENT IS BRINGING NEW OPERATIONAL CHALLENGES FOR IT

Virtualization technology in the data center creates new challenges for network administrators, such as how to manage virtual elements in conjunction with the physical infrastructure. Server virtualization technology allows IT organizations to drive effective and efficient use of computing and storage resources by collapsing multiple physical servers onto a virtual machine running on a single host using Hypervisor. Hypervisor platforms blur the line between the traditional network infrastructure, security and server teams.

Virtualization infrastructure requires a different set of management tools from physical infrastructure, making it difficult for network operators to obtain a consolidated and consistent view of the entire network. Because the physical network must be in sync with the virtual network to provide the connectivity services required by applications in a virtual environment, this lack of visibility negatively impacts network operators' ability to ensure smooth operations in virtualized data centers, especially when dynamic events such as virtual machine motion require immediate network provisioning.

The OmniVista 2500 VMM addresses these challenges by providing for network IT administrator transparent automated provisioning capabilities with an integrated view of the virtual server and network environments, enabling a unified and cohesive management system for trouble-shooting and monitoring the network.

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AT THE SPEED OF IDEAS™

Table 1. Product Matrix

FEATURES	BENEFITS
Integration with VMware®	
• Supports and interfaces with VMware vCenter™	• Supports the leading Enterprise virtualization vendor
Virtual network resource visibility and inventory	
• Automatically discovers and constantly updates the complete virtual network inventory (virtual machine name, MAC and IP address, Host information, network devices IP address and VLAN ID)	• Increases the efficiency of operations • Offers a complete, single pane of glass for end-to-end physical and virtual networks
Simplified tracking and troubleshooting capabilities with Locator	
• Provides correlated information and a single pane of view on connectivity between virtual and physical networks • Real-time and historical location tracking for virtual machine	• Offers a complete current state of the network with constant synchronization • Provides an end-to-end view of the virtual and physical network • Simplifies troubleshooting operations and reduces downtime
Automated unified provisioning	
• Establishes virtual network profile definition and configuration • Manages virtual network profile assignment to network infrastructure to ensure consistent service delivery	• Streamlines virtual network profiles configuration to reduce human errors • Eliminates the need to constantly communicate between network infra-structure and virtualization teams changes related to configuration changes • Ensures consistent virtual network profiles across data centers
Event and audit logs	
• Maintains a log of all OmniVista 2500 VMM events and automatically records all critical actions	• Provides historical record for VnP and critical events • Allows network administrators to be quickly informed and keeps track of all critical configuration changes
Reduced IT learning curve and training costs	
• OmniVista 2500 VMM runs as optional module fully integrated with the OmniVista 2500 NMS	• Integrates with existing OmniVista 2500 NMS workflow and management tools, relying on existing cohesive workflow with a single touch • Reduces IT operations complexity and costs by consolidating management tools
Flexible installation	
• Supports leading IT platforms and leading Server Operating Systems • Leverages VMware vCenter™ directly out of the box	• Offers flexibility for IT department for optimal server OS and performance • No software installation required on Hypervisor platform, reducing CAPEX and OPEX costs related to deployment

FULLY INTEGRATED WITH VMWARE® VCENTER™ FOR MAXIMUM VISIBILITY AND MONITORING

The OmniVista 2500 VMM integrates with the VMware® vCenter™, providing access to the VMware HyperVisor framework. Using the OmniVista 2500 VMM dashboard capability, the network administrator can discover, visualize and monitor the entire virtual network inventory. The OmniVista 2500 VMM Locator constantly monitors, logs and reacts to virtualization events by keeping track of virtual machine location in the physical network infrastructure through live and historical data tracking and logging.

**Figure 1. Inventory of virtual network components**

OmniVista 2500 VMM discovers and constantly updates the complete virtual network inventory. Locator capabilities ensures IT administrator always knows the current location of each Virtual machine on the Network infrastructure.

AUTOMATED NETWORK INFRASTRUCTURE PROVISION-ING FOR VIRTUAL MACHINE MOVEMENTS

The OmniVista 2500 VMM simplifies the automatic deployment of individual and unique virtual network profiles (VnPs). The product establishes VnPs for physical and virtual machine bindings and coordinates the distribution of them across the data center fabric. The OmniVista 2500 VMM also simplifies the virtual network profile definition and critical parameters settings, such as VLANs and QoS for applications and network security, ensuring continuous performance and delivery of services regardless of the physical location of the virtual machines.

The OmniVista 2500 VMM automates network infrastructure provisioning, eliminating configuration conflicts between virtual and physical networks, increasing the IT efficiency of day-to-day operations.

Figure 2. Virtual Network Profiles provisioning
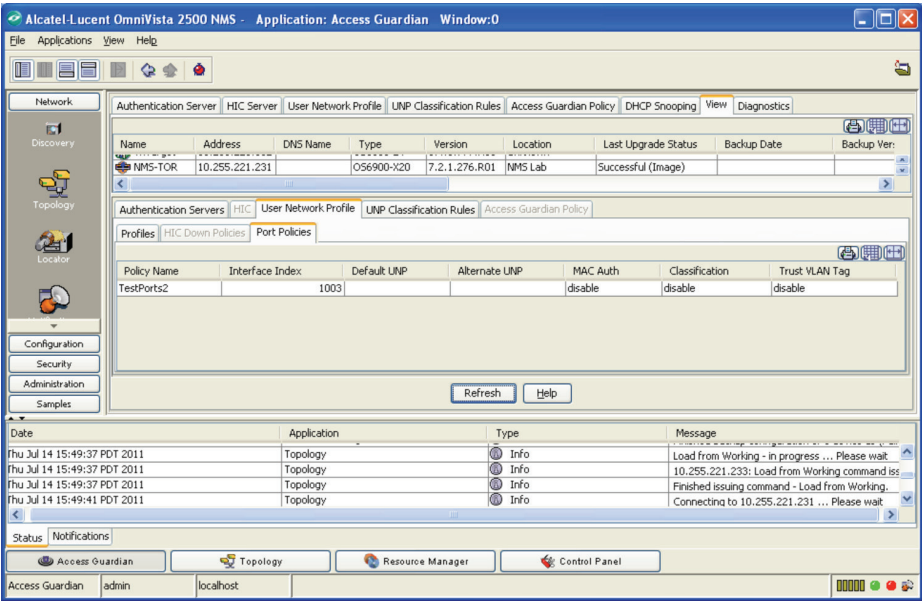
OmniVista 2500 VMM enables the network operator to provision, define and deploy end to end Virtual Network Policies across the network infrastructure for seamless virtual machines movements.

Figure 3. Collaborative management between Virtual and Network infrastructure
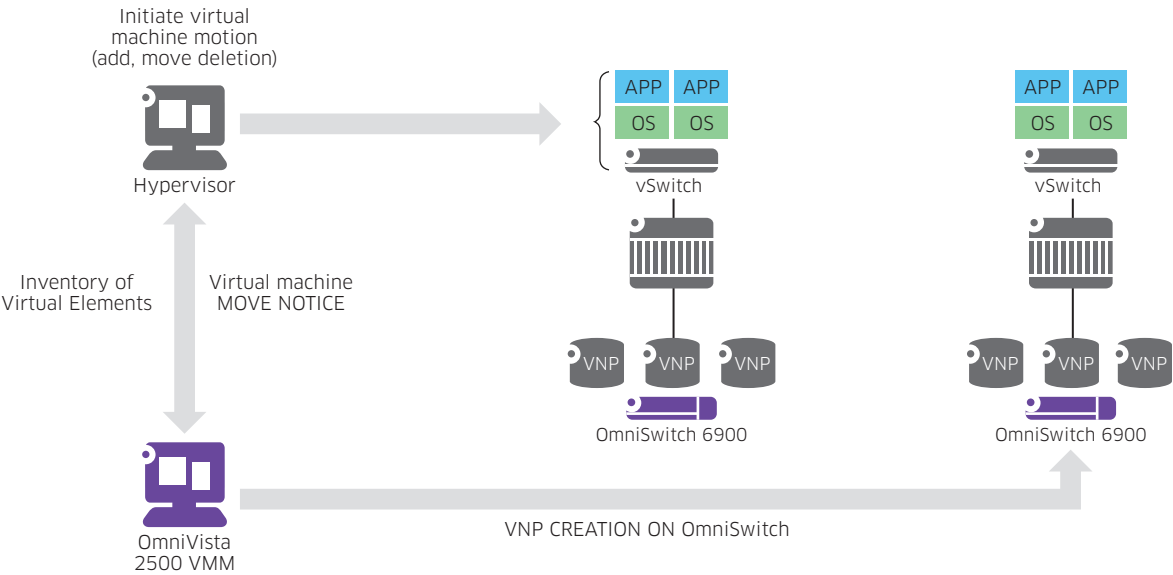
TECHNICAL SPECIFICATIONS

Minimum OmniVista 2500 VMM software requirements (Server & Client)

- Microsoft® Windows® Server 2008
- Microsoft® Windows® 7 Business (32 & 64 bits version)
- Red Hat® Enterprise Server 5.7 (32 & 64 bits version)
- Novell® SUSE® 10.0 (32 & 64 bits version)
- Oracle® Solaris V10 Sparc Platform (32 & 64 bits version)

Minimum OmniVista 2500 NMS & VMM Server configuration

- For Microsoft® Windows®, Red Hat® ES, Novell® SUSE® configuration
  - ¬ Intel® Pentium® Quad Core 2 GHz minimum
  - ¬ 2 GB RAM minimum
- For Oracle® Sun Solaris V10
  - ¬ Oracle Sun SPARC 2 GHz minimum
  - ¬ 2 GB RAM minimum

Minimum OmniVista 2500 NMS & VMM Client system configuration

- For Microsoft® Windows®, Red Hat® ES, Novell® SUSE® configuration
  - ¬ Intel® Pentium® Dual Core 2 GHz minimum
  - ¬ 2 GB RAM minimum
- For Oracle® Sun Solaris V10
  - ¬ Oracle Sun SPARC 2 GHz minimum
  - ¬ 2 GB RAM minimum

Minimum VMware® requirements

- VMware® vCenter™ Server Standard release 4.1 minimum

Network infrastructure requirement for Universal Network Profiles support

For OmniSwitch OS 6900:

- AOS Release 7.2.1R01 minimum

ORDERING INFORMATION

OmniVista 2500 VMM runs as an optional, additional module on top of OmniVista 2500 NMS. At a minimum, customers deploying OV2500 VMM must have OmniVista 2500 NMS Starter Pack deployed. OmniVista 2500 VMM requires minimum release 3.5.3 to operate.

PART NUMBER	DESCRIPTION
OV2500-VMM-S	License for OmniVista 2500 VMM, Small deployment: Supports single instance of VMware® vCenter™ R 4.1 for support of virtual machine monitoring and infrastructure provisioning for deployment up to 200 virtual machines; requires OmniVista 2500 NMS installation to operate
OV2500-VMM-M	License for OmniVista 2500 VMM, Medium deployment: Supports a single instance of VMware® vCenter™ R 4.1 for support of virtual machine monitoring and infrastructure provisioning for deployment up to 1000 virtual machines; requires OmniVista 2500 NMS installation to operate
OV2500-VMM-L	License for OmniVista 2500 VMM, Large deployment: Supports a single instance of VMware® vCenter™ R 4.1 for support of virtual machine monitoring and infrastructure provisioning for deployment up to 5000 virtual machines; requires OmniVista 2500 NMS installation to operate

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