Alcatel-Lucent OmniVista 2500
Virtual Machine Manager

The Alcatel-Lucent OmniVista® 2500 Virtual Machine Manager (VMM), a component of OmniVista 2500 NMS Enterprise, 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 which includes VMware VMotion, Microsoft Hyper-V Live Migration and Citrix XenMotion.

The OmniVista 2500 VMM contributes to a comprehensive manageability solution that, in conjunction with the OmniVista 2500 NMS Enterprise Edition, spans the Alcatel-Lucent Enterprise 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 the 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 troubleshooting and monitoring the network.

Table 1. Product matrix

Features	Benefits
Vendor agnostic architecture for virtualization	
• Supports and interfaces with leading enterprise virtualization vendors, VMware vCenter, Microsoft Server Hyper-V and Citrix HyperVisor	• Adaptive, extensible architecture, reducing vendor lock-in • Flexible approach supporting a variety of virtualization platforms, hypervisors and distributed virtual switches
Virtual network resource visibility and inventory	
• Automatically discovers and constantly updates the complete virtual network inventory (virtual machine name, MAC, IP address, host information, network devices IP address, VLAN ID and multi-tenant)	• 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 of virtual machines	• Provides an end-to-end view of the virtual and physical network infrastructure
Automated network provisioning	
• Establishes universal network profile (UNP) definition and its extensive configuration • Manages universal network profile assignment to network infrastructure to ensure consistent service delivery	• Eliminates the need to constantly communicate between network infrastructure and virtualization team changes related to configuration changes • Streamlines configuration and related workflows to reduce human errors • Simplifies troubleshooting operations and reduces downtime • Ensures consistent 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 records for UNPs and critical events • Allows network administrators to be quickly informed and keeps track of all critical configuration changes

Features	Benefits
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 application and management tools, relying on existing cohesive workflow with a single touch • Reduces IT operations complexity and costs by consolidating management tools • Offers flexibility for IT department for optimal server OS and performance • No software add-ons required on hypervisor platforms, reducing capital expenditure (CAPEX) and operating expense (OPEX) costs related to deployment • No configuration change required on virtualization environments, preserving IT workload, reduce IT efforts and eliminating coordination across teams

Figure 1. Extensive functionalities for visibility, monitoring and provisioning
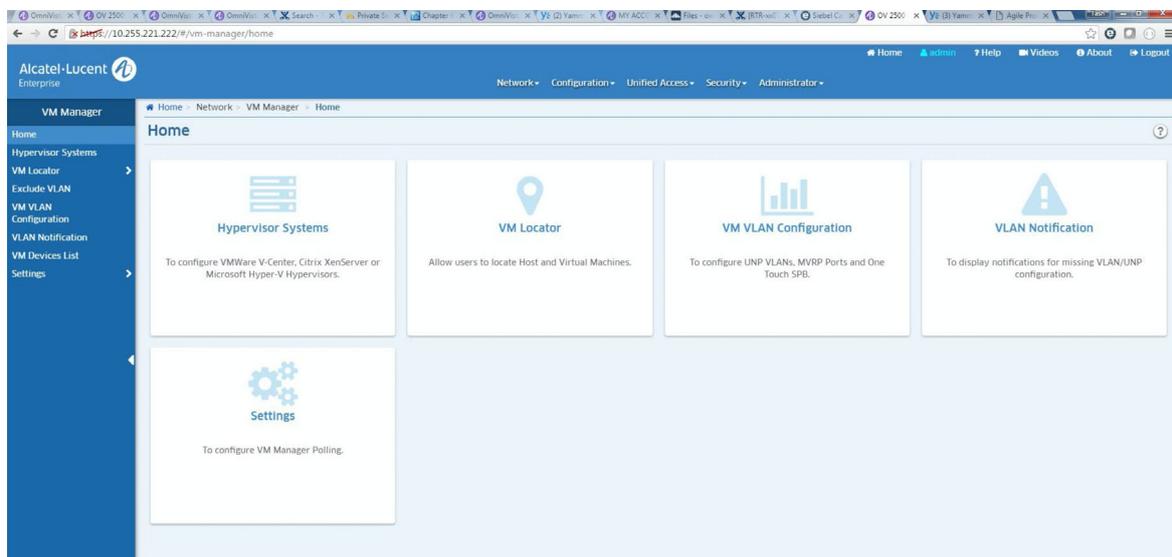
Figure 2. Direct interface with leading enterprise virtualization platforms

Datasheet
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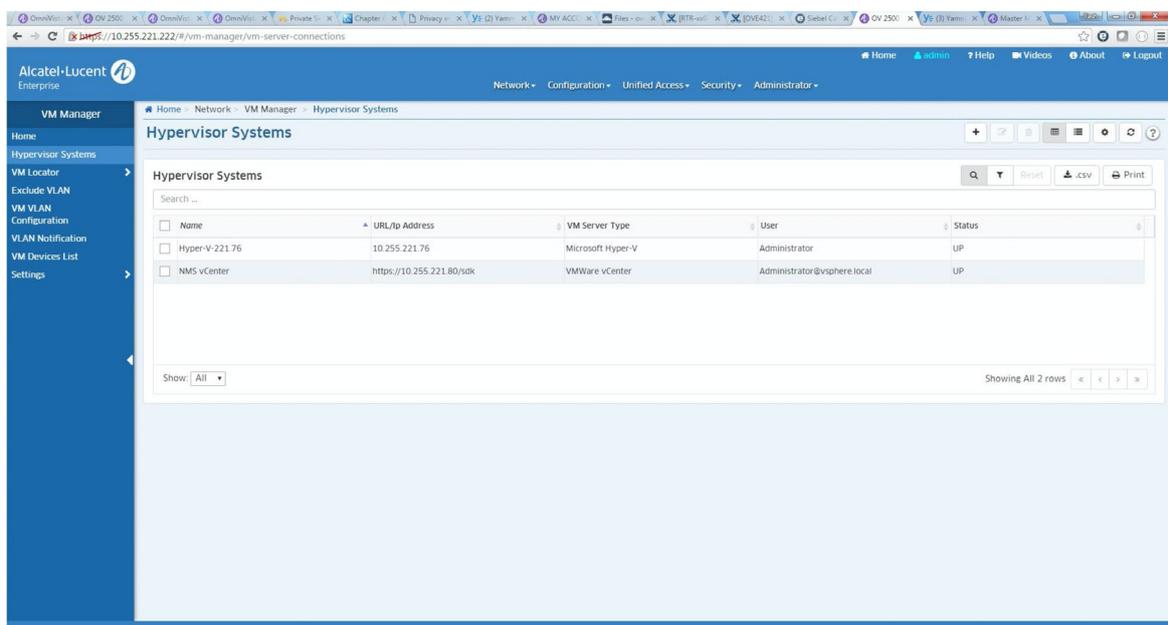
Figure 3. Collaborative management between virtual and network infrastructure
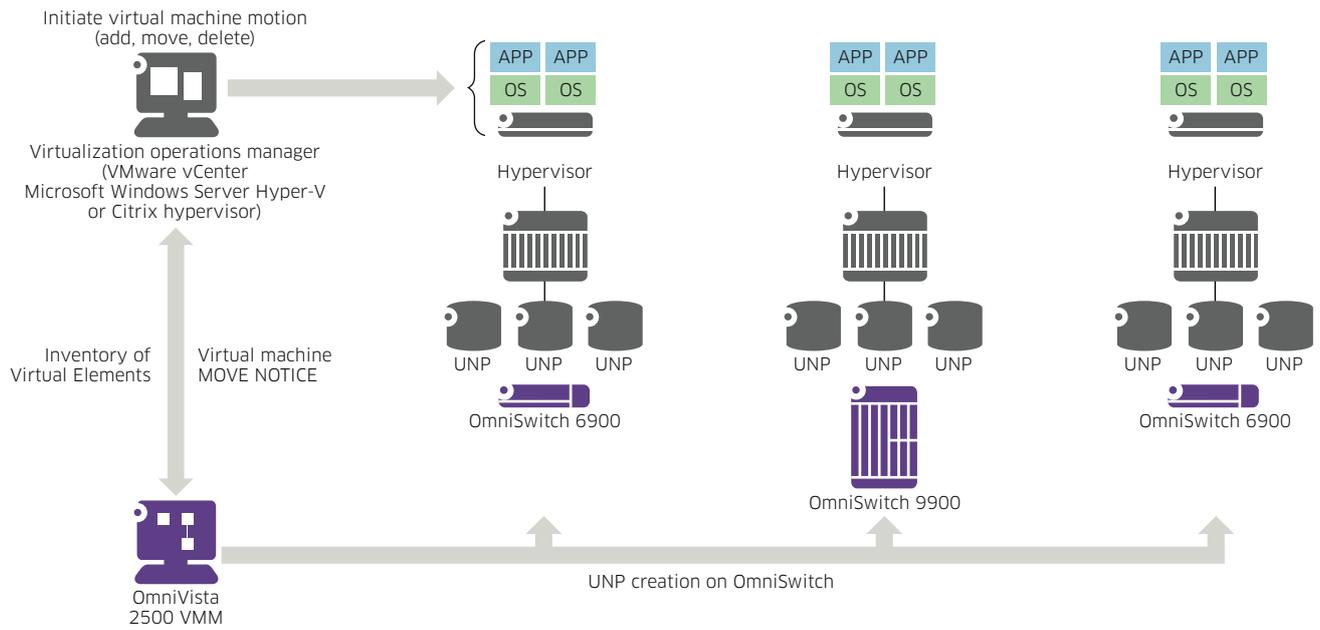
Figure 4. VM Locator extensive search capability for tracking and troubleshooting
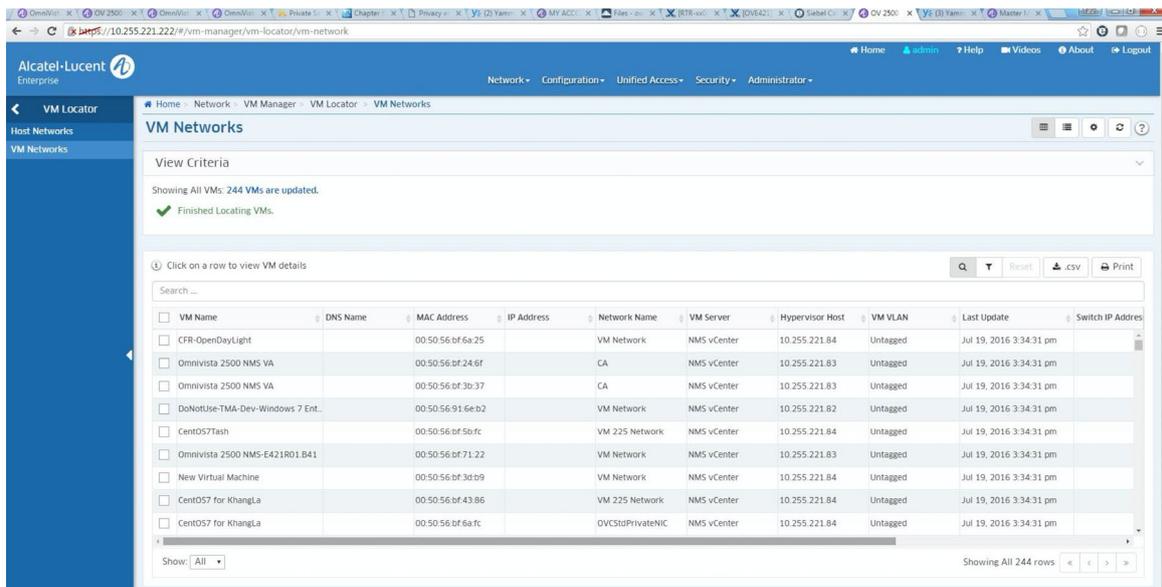
Fully integrated with leading enterprise virtualization platforms for maximum visibility and monitoring

The OmniVista 2500 VMM provides an adaptive, agnostic framework allowing support and interfaces with leading enterprise virtualization platforms from VMware, Microsoft and Citrix.

It interfaces with virtualization and hypervisor applications such as VMware vCenter, Microsoft Hyper-V and Citrix HyperVisor without any additional software installation or configuration changes.

Using the OmniVista 2500 VMM Locator, 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 the virtual machine location in the physical network infrastructure through live and historical data tracking and logging.

Automated network infrastructure provisioning for virtual machine movements

The OmniVista 2500 VMM simplifies the automatic deployment of individual and unique UNPs.

The product establishes UNPs 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 quality of service (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, and increasing the IT efficiency of day-to-day operations.

Technical specifications

OmniVista 2500 VMM runs as an optional, additional module with OmniVista 2500 NMS-Enterprise. OmniVista 2500 NMS solution is available as a virtual appliance running on certified operating systems with hypervisors and virtualization platforms. The OmniVista 2500 NMS client is HTML5 web-based.

Virtual Machine Manager (VMM) 3rd Party Hypervisor interoperability

- VMware vCenter™ Standard Release 6.0 and higher
- Microsoft Hyper-V 2012 & 2016
- Citrix Hypervisor Advanced and Enterprise Release 6.5 and higher

Network Device and software release requirements

- OmniSwitch network device supporting Universal Network Profile (uNP) feature

Virtual appliance (OmniVista 2500 NMS installation)

- Certified hypervisors:
  - ¬ VMware ESXi™ 6.0, 6.5, 6.7
  - ¬ Microsoft Hyper-V 2012, 2016 & 2019 (Microsoft® Windows™ Server 2012 R2, 2016 & 2019)
  - ¬ Hyper-V with Windows 8.1 Pro & Enterprise Editions and Windows 10 Edition
  - ¬ Linux-KVM
- Minimum requirements (Single instance configuration):
  - ¬ Intel® Pentium™ 2.4 GHz with eight Logical processors
  - ¬ 20 GB RAM - Minimum RAM reserved for the virtual appliance
  - ¬ 500 GB free disk space
- Minimum requirements (High-availability configuration)
  - ¬ Intel® Pentium™ 2.4 GHz with eight Logical processors
  - ¬ 20 GB RAM - Minimum RAM reserved for the virtual appliance
  - ¬ 500 GB free disk space

OmniVista 2500 NMS client

- PC Client Minimum configuration
  - ¬ Microsoft Windows, Red Hat ES, SUSE LP (32 and 64-bit versions)
  - ¬ Intel Pentium Dual Core 2.4 GHz minimum
  - ¬ 8 GB RAM
- Certified Web browsers
  - ¬ Google Chrome 65+ for Windows PC and Linux clients
  - ¬ Mozilla® FireFox™ 59+ for Windows PC and Linux clients
  - ¬ Microsoft Edge Chromium for Windows PC client

Ordering information

OmniVista 2500 VMM runs as an optional, additional module on top of OmniVista 2500 NMS-Enterprise. At a minimum, customers deploying OV2500 VMM must have OmniVista 2500 NMS Starter Pack license deployed. (Refer to OmniVista 2500 Ordering information for further details)

Virtual Machine Manager license

Virtual Machine Manager license is a series of optional licenses covering Virtual Machine Manager as a supplemental capability for OmniVista 2500 NMS. This license enables features set such as VM inventory, location, and state monitoring, with all the network infrastructure provisioning automation required to move VMs. VMM licenses are available in multiple extensions and can be combined to match any specific virtual machine count.

Part number	Description
OV-VMM-XXX-N	VMM EXTENSION - XXX VM - NEW Deployment. License for XXX VMs. Supplemental feature license for VMM applications for VM inventory, monitoring and uNP (Universal Network Profile) provisioning automation for VMware vCenter, Microsoft Hyper-V and Citrix Hypervisor platforms.

For VMM extension, replace XXX by the following values: 200, 500, 1K - For example OV-VMM-1K-N for an extension of 1000 VMM virtual Machines.

Alcatel-Lucent Enterprise provides Services access and continuous update maintenance support program for the OmniVista 2500 Network Management System. Evaluation licenses and upgrade part numbers from previous deployments are available.

Alcatel·Lucent *Enterprise*