ALCATEL-LUCENT OMNIVISTA 2500 NETWORK MANAGEMENT SOLUTION

NETWORK MANAGEMENT FOR THE
APPLICATION FLUENT ENTERPRISE

Genesys • Communications • Network

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Enterprise

In today's highly competitive business environment, enterprises must be dynamic and adaptable, and be able to respond in real time to new opportunities as they arise. Time is of the essence, and speed and efficiency are critical — and all are dependent on technology.

To be agile, corporate networks must enable connections, communications and, most importantly, actions. Users need reliable whenever/wherever access to the right services and applications as determined by their specific functions and responsibilities. Yet, the more sophisticated networks become, the more complex they are to manage and protect.

A role-based, user-centric network management approach is mandatory, and it needs to be within an infrastructure that can cope with unpredictable traffic volume while remaining secure against intrusion and other malicious activity.

Managers need to oversee all activity from the highest level to the granular level of specific equipment and devices — all using advanced, intuitive troubleshooting tools to resolve issues quickly. Downtime is an unaffordable liability. And, of course, all of this has to happen within an increasingly multivendor environment, accommodating all equipment, not just some.

WITHIN VIEW, WITHIN REACH

Good network management and security practices drive efficiency and productivity, and they also optimize return on investment. The integrated, easy-to-use Alcatel-Lucent OmniVista™ 2500 Network Management Solution (NMS) uniquely combines the full set of end-to-end network operations, security management and data center capabilities for large, diversified infrastructures within a single cohesive platform. The solution oversees daily network operations that encompass operational domains under virtualization deployment.

The OmniVista 2500 NMS puts a full range of applications and tools in the hands of network managers so that they can meet the complex demands associated with new services, fast growing and evolving technologies such as data centers and virtualization, and constant security threats. The OmniVista 2500 NMS provides much needed support to IT managers and network administrators dealing with a deployment of converged, mission-critical applications and challenged with upholding service level agreements (SLAs) for existing services.

The OmniVista 2500 NMS is a single, cohesive platform that allows you to monitor network activity from end-to-end, automatically configuring and managing devices. OmniVista 2500 NMS provides data centers with the ability to streamline a virtual infrastructure and physical network under one roof, providing location troubleshooting operations and network provisioning automation for virtual machine life cycle.

In network security domains, it enables greater control over access and privileges through user-based profiling that supports the needs of the day-to-day business, and better protects the network from intrusion and attacks. It also provides extensive troubleshooting capabilities for rapid location and remediation of failures and other issues that might interfere with network performance, thus ensuring maximum network availability.

The OmniVista 2500 NMS provides:

- Operational simplicity through ease-of-use
- An intuitive interface to reduce the learning curve
- Automation for operations optimization
- A wizard to translate complex IT settings into OneTouch business-oriented complex policies
- Streamlined virtual machine life cycle and troubleshooting for data center network operations
- Scalable architecture to sustain large deployments

A SINGULAR, COHESIVE SOLUTION

Although ideal for Alcatel-Lucent network equipment, the OmniVista 2500 NMS supports products from any third-party equipment vendor. Its common tools and cohesive, seamlessly interoperable components and applets make it extremely easy-to-use, thus reducing an operator's learning curve. Plus, it reduces the cost of deployment and network operations through increased automation, reduced human error and minimized operator intervention.

The point of intersection

From the single Alcatel-Lucent OmniVista 2500 NMS platform, managers exercise complete control over their enterprise network and data centers — from initial configuration through definition, monitoring and remediation — ensuring security, optimum performance, and the reliability and availability essential to maintaining business continuity.

All critical network management steps for network and data center operations occur in a cohesive lifecycle, as shown below:
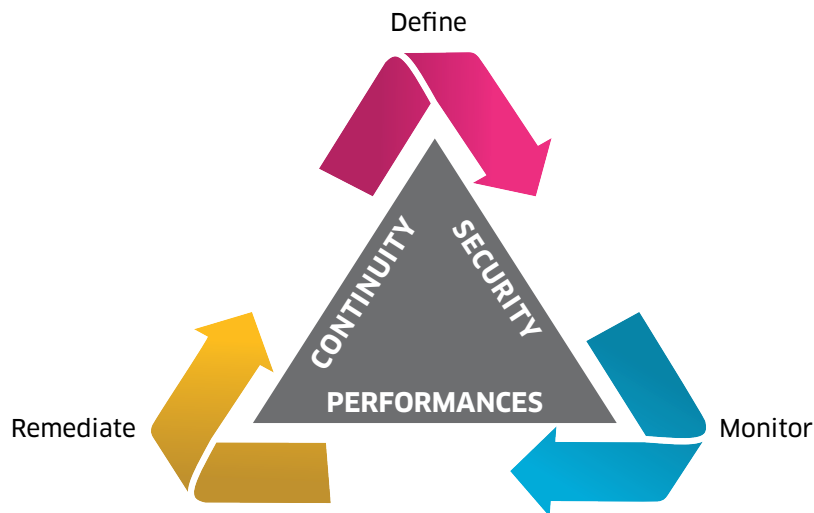
Define

CONTINUITY | SECURITY
PERFORMANCES

Remediate

Monitor

KEY FEATURES AND BENEFITS OF THE ALCATEL-LUCENT OMNIVISTA 2500 NETWORK MANAGEMENT SOLUTION

FEATURES	OMNIVISTA 2500 NETWORK MANAGEMENT SOLUTION	BENEFITS
Provides cohesive management and network-wide visibility	OmniVista 2500 NMS	• Reduces IT burden and costs • Improves control through a single application for network administrators • Provides extensive view of network activity and status (with physical and logical topology maps with spanning tree domains) • Has a single consolidated interface for event management, performance analysis, configuration operations and network security deployment
Offers device discovery, mapping and monitoring	Topology	• Intuitive, visual representation of the network topology, Alcatel-Lucent devices and third-party devices • Logical and physical map of devices with actual neighbor linkage info (physical, subnet, layer 2, IEEE 802.1ab LLDP, VLANs, spanning tree domain and manual links) • Dynamic map to create custom logical map based on user defined based filters (IP subnet, location, model, user provided descriptive info) • Graphical status indication for device and performance monitoring • Launch pad for key OmniVista 2500 NMS components
Monitors and analyzes network performance and status of SNMP-enabled devices in real time	Notification Manager	• Enables advanced alerting capabilities for network administrators • Categorizes alerts through multiple views and through filtering for Alcatel-Lucent and third-party devices • Makes it easier and quicker to troubleshoot and provide faster resolution of alerts by pinpointing their root cause • Remediation and notification actions based on predefined conditions via a single click
Manage device configuration change lifecycle	Resource Manager	• Simplify configuration changes management through scheduling and backup operations • Use simple, effective automation to create infrastructure-wide software image update for baseline version management • Increase infrastructure availability by reducing time to repair with up-to-date device configuration archive
Deploy QoS and bandwidth management for VoIP and data traffic	PolicyView for QoS	• Simplifies IT tasks with OneTouch automation of complex tasks • Reduces costs and time required for efficient deployment of QoS across thousands of devices • Simplifies the complexity of QoS settings through Policy Wizard, automating the process of configuring QoS and delivering consistent QoS policy behavior
Detect network anomaly through traffic behavior analysis	Traffic Anomaly Detection	• Strengthens quarantine protection with network behavior-based intrusion detection • Monitors network traffic for threats, and pattern and behavior changes • Provides network-wide anomaly reporting configuration • Flags abnormal behavior for detection and incident remediation
Protect corporate data through a secure perimeter	Quarantine Manager	• Provides an open approach by integrating with third-party IPS/IDS solutions or any other intrusion notifications • Leverages security and traffic monitoring built into Alcatel-Lucent OmniSwitch and Alcatel-Lucent Wireless solutions • Responds automatically and remediates threats in real time • Provides threat mitigation on offenders through various quarantine mitigation actions (Quarantine VLAN, port shut down, blocking MAC address) • Reduces IT staff burden and costs while increasing overall network availability

FEATURES	OMNIVISTA 2500 NETWORK MANAGEMENT SOLUTION	BENEFITS
Define – role-based access control for end user network access rights	Access Guardian	• Combines a unique workflow and all security components for user-centric, role-based access • Ensures centralized configuration for end user authentication management, end-system compliance and user network profile through profile-like approach • Provides appropriate access to network resources • Global Configuration and settings for Host integrity check such as remediation definition • Dynamic network security configuration without IT staff and burden • Fully aligns network infrastructure access with business objectives
Simplify virtual net-work resource visibility and inventory for data center deployment Manage virtual network profile assignment to the data center infrastructure	Virtual Machine Manager	• Offers a complete , single pane of glass for end- to-end physical and virtual networks • Automatically discovers and constantly updates the complete virtual network Inventory • Automates unified provisioning to streamline virtual network profiles configuration to reduce human errors • Ensures consistent virtual network profiles across data centers
Secure device access and define network administrator credentials	SecureView Secure Access	• Centralizes control of switch administration access rights, with one-touch setup for user login, password and partitioned management (user credentials and access rights)
Scale to accommodate growth and future needs	OmniVista 2500 NMS	• Extensible architecture providing single- and multi-user versions • A broad number of operating systems and platforms are certified and supported for optimal server performance • Robust architecture allows large infrastructure deployment to scale up to thousands of devices • Flexible licensing scheme to accommodate future network growth • Web services application for northbound interface for cross-application collaboration

KEY COMPONENTS OF THE OMNIVISTA 2500 NMS

Providing a single-touch, network-wide management solution for the Alcatel-Lucent Enterprise OmniSwitch portfolio, the Alcatel-Lucent OmniVista 2500 NMS comprises a comprehensive set of components and tools for infrastructure configuration monitoring, security, device configuration, quarantine, troubleshooting, downtime resolution and overall management under one umbrella.

The solution brings a new level of simplicity for management operations by building all applications into a unified OneTouch workflow encompassing network and data center infrastructure. With smart integration and advanced third-party support, the convergence of network and security management helps reduce overall administrative costs, improve return on investment, simplify implementation and monitoring, and provide effective network protection from threats.

## The key components include:

Discovery

This module provides full control over the discovery of Alcatel-Lucent LAN switches, OmniAccess wireless devices or third-party devices. OmniVista 2500 NMS topology applications discover all supported devices and allow network managers to sort device lists however they choose (for example, by IP address or device type). A dynamic indicator shows the status of each device.

Topology

The OmniVista 2500 NMS' topology map presents a quick and easy-to-interpret view of network issues to facilitate rapid troubleshooting. Its dynamic, color-coded status feature pinpoints current and impending problems at a glance. Network managers are able to launch specific applications and http-based management for any solution components, such as Alcatel-Lucent OmniAccess wireless devices, as well as any other third-party element management application.

The topology graphical display eases the infrastructure component identification process for items such as spanning tree instances, link aggregation, VLAN associations and ports statuses. The map can be organized into a set of sub-maps that allow a network to be represented from different groupings or hierarchical levels.
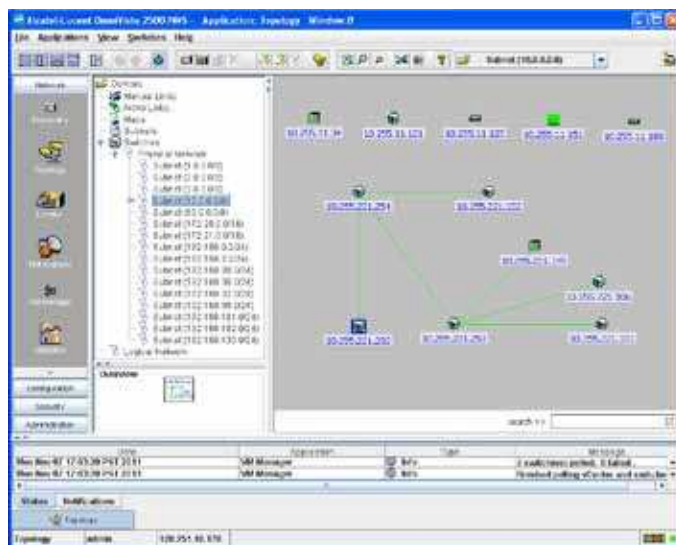
Locator

Locator allows administrators to quickly pinpoint hostile elements in the network and contain them, providing a first line of defense against security hazards. Locator's right-click menu provides direct interaction with other OmniVista 2500 NMS components such as Quarantine Manager and VLAN Manager — expediting troubleshooting and problem resolution. It also discovers third-party devices and indicates the nearest Alcatel-Lucent operating system device to which the third-party device can be switched, showing the link on a topology map. In short, Locator provides rapid isolation and one-click mitigation of network issues.

Notification Manager

OmniVista 2500 NMS includes a very powerful Notification Manager for troubleshooting network-related events. It receives SNMP traps from any SNMP compatible device, including third-party systems for analysis, monitoring and remediation. A set of tools is provided to help network administrators focus on fault analysis.

Notification Manager includes a configuration tool based on in-depth filtering to trigger responders, such as e-mail notification or other notifications, based on predefined, specific alarm conditions. This information may be archived, exported or searched to further root cause analysis.

The trap forwarding feature allows OmniVista 2500 NMS to filter SNMP traps and pass them on to third-party applications capable of managing events. It helps organizations to increase network availability and meet their SLAs.

## Command line interface scripting automation

Clean and simple command line interface (CLI) scripting allows network managers to consolidate a wide range of configuration information within a single set of commands. These scripts are copied and distributed easily from one switch to another since they are standardized across all devices with Alcatel-Lucent operating systems.

Network administrators set up context-based CLI commands and define variables to be used in commands. The repetitive tasks are automated and scheduled with CLI scripting —saving IT managers' time, reducing costs and eliminating human errors. CLI scripting provides a very efficient way to roll out network deployment using configuration templates with minimal administrator intervention.

Resource Manager

The Resource Manager provides control over device software and tracking switch configuration changes. Configuration backups may be performed manually, or scheduled to run automatically, with maximum granularity and flexibility to reduce repetitive operations. Bulk software image management is required to standardize device software version across the network and define base line. Resource Manager reduces all risks of human errors and associated remediation costs. Resource Manager is a critical component of the infrastructure availability by reducing Mean Time to Repair (MTTR).
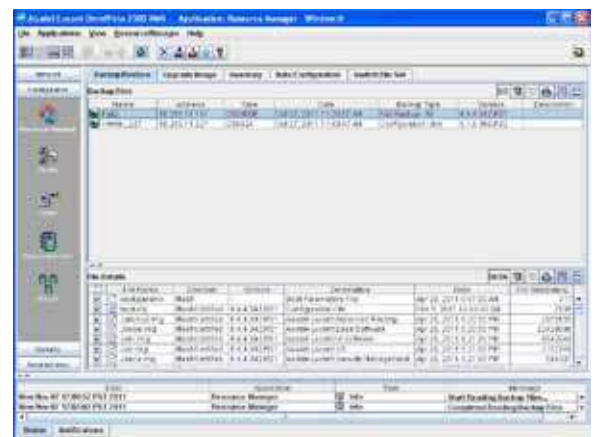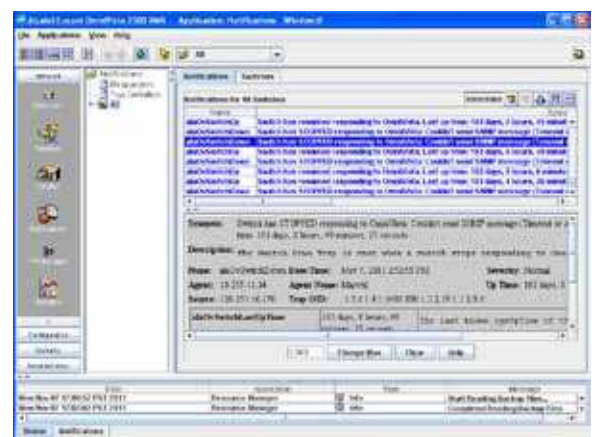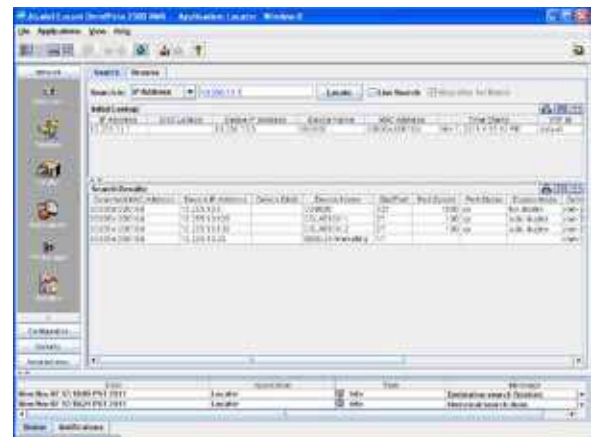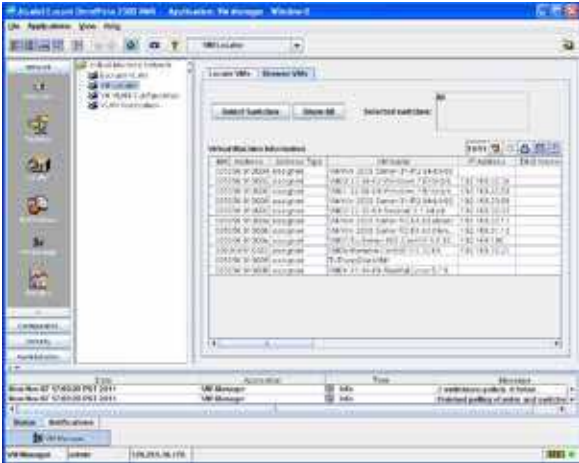
Virtual Machine Manager

With new challenges in data center operations such as virtualization deployment, network managers are facing a paradigm shift. Alcatel-Lucent OmniVista 2500 Virtual Machine Manager reduces operation issues on how to manage virtual network elements in conjunction with the physical network.

The OmniVista 2500 Virtual Machine Manager — an optional, additional component for OmniVista 2500 NMS — provides integration with leading data center virtualization hypervisor platforms such as VMware vCenter to provide effective visibility and monitoring for all network operations related to the Virtual Machine life cycle. It constantly monitors, logs and reacts to virtualization events by keeping track of virtual machine location in the physical network infrastructure.

OmniVista 2500 Virtual Machine Manager automates network provisioning for virtual machine movements by establishing definition for critical parameters settings such as VLANs, QoS and security settings, and distributing the binding rules between the virtual infrastructure and the data center fabric. The Virtual Machine Manager eliminates configuration conflicts between virtual and physical networks, thus increasing the efficiency of day-to-day IT operations.
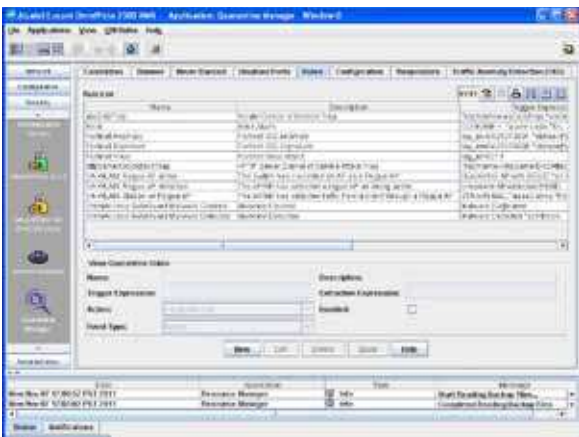
Quarantine Manager

The Quarantine Manager combines intrusion detection notification and containment management in one component, enforcing a secure perimeter. It defends against attacks through external Intrusion Detection Systems/Intrusion Prevention Systems (IDS/IPS) notification, and through the device-embedded Alcatel-Lucent Traffic Anomaly Detection (TAD) capability, which reports network behavior based on security risk analysis.

The Quarantine Manager provides a comprehensive approach, simplifying network-wide configuration and threat reporting for traffic anomaly detection. It offers flexible threat mitigation responses plus several methods of containment, including quarantine VLAN, port shutdowns, blacklisting for wireless infrastructure, or a containment method based on access control lists. In summary, the Quarantine Manager combines network behavior and threat intrusion detection into a single workflow, with broad options for wired and wireless incident mitigation and extensive incident reporting.

Access Guardian

The OmniVista 2500 NMS component called Access Guardian provides complete end-to-end support for authentication, host integrity check and role-based access according to user access profile rules. Access Guardian provides centralized visibility and granular control of enterprise network resources. It dynamically provisions network security using a role-based access approach, based on user, device, location and protocol.

Access Guardian provides network administrators with the ability to centrally define policy-based network access rights that allow the network administrators to automatically adapt the needs of users and devices as they connect, thereby enforcing network security while providing appropriate access to network users and devices.

Access Guardian simplifies the complete security posture, including global authentication services and network-wide end-user compliance for host integrity servers, thus providing consistent and effective network security. The Access Guardian approach simplifies the definition and enforcement of end-user security processes by addressing network security and network management as a single workflow through a powerful graphical user interface (GUI) for configuration and reporting.
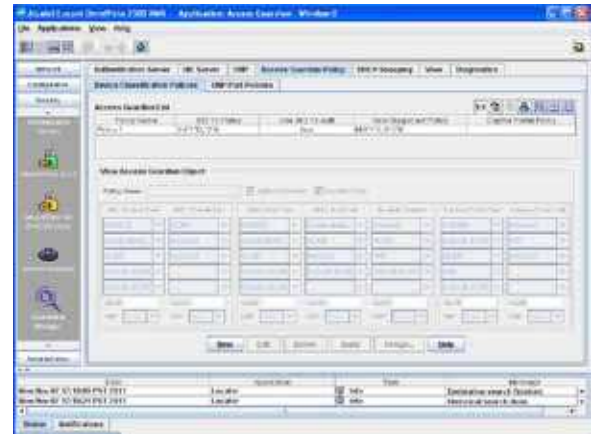
PolicyView for QoS & ACL

PolicyView simplifies the complex task of configuring quality of service (QoS) for voice and data applications, and enables enhanced policy-based management across multiple devices with OneTouch simplicity. Parameters are set once and distributed to relevant devices, reducing the number of interfaces required to configure QoS for VoIP and time-critical data operations.

This component simplifies and automates the complex task of configuring network security policies using ACLs. Once a policy is defined, an administrator applies it to all devices at once. This increases IT department productivity by eliminating repetitive tasks, prevents security breaches and strengthens network access policies. PolicyView also helps conserve bandwidth that is allotted elsewhere within the network.

Web Services

Web Services provides a flexible, versatile, northbound interface for collaboration and integration with diverse network management applications. It simplifies the introduction of Alcatel-Lucent Enterprise IP solutions into large, complex environments — making it essentially a plug-and-play exercise. It reduces the cost, time and risk associated with Operations Support Systems/Business Support Systems (OSS/BSS) and process automation. It also allows the Alcatel-Lucent OmniVista 2500 NMS and its data structure to be scriptable and accessible to open environments.

ALCATEL-LUCENT OMNIVISTA 2500 NETWORK MANAGEMENT SOLUTION- FEATURES & COMPONENT SUPPORT PER PRODUCT FAMILY

		Alcatel-Lucent OS10K & OS6900 series	Alcatel-Lucent OS6850, OS6850E, OS6855, OS6400, OS900E series	Alcatel-Lucent OS6250 series	Alcatel-Lucent OmniAccess WLAN series	Alcatel-Lucent 7750SR & 7450 ESS series	3rd party device w/ SNMP support & MIB-2 Compliant
Infrastructure deployment & centralization of operations	Topology map with graphical display for Links & Device status	●[1]	●	●	●	●	●
	Trap & Alarms Management with "action on event" for remediation	●	●	●	●	●	●
	VLAN configuration wizard	●	●	●			
	Telnet/SSH	●	●	●	●	●	●
	EMS launch tool Web based device mgr or third party app launch	●	●	●	●	●	●
Performance monitoring & Troubleshooting	Locator	●	●	●		●	●
	Device MIB browsing	●	●	●	●	●	●
	Performance & Statistics measurement	●	●	●			●
	Inventory Reports	●	●	●			
	Health & Environment performance	●	●	●			
Configuration operations & Firmware management	Configuration automation with CLI scripting	●	●	●	●	●	●
	Resource Manager	●[3]	●[3]	●			
Performance Optimization	PolicyView for QoS	●	●	●			
Policy Management for Network administrator & Device access Credentials	SecureView Switch Access	●	●	●			
Policy Management for network resource access	SecureView ACL	●	●	●			

		Alcatel-Lucent OS10K & OS6900 series	Alcatel-Lucent OS6850, OS6850E, OS6855, OS6400, OS900E series	Alcatel-Lucent OS6250 series	Alcatel-Lucent OmniAccess WLAN series	Alcatel-Lucent 7750SR & 7450 ESS series	3rd party device w/ SNMP support & MIB-2 Compliant
User network profiles for role based access & access authentication	Access Guardian	●	●	●			
Virtual Machines inventory & network provisioning for VM moves	Virtual Machine Manager	●[2]					
Intrusion notification & containment management	Quarantine Manager	●	●	●	●	●	●[4]
Northbound Interface/Web Services support for application collaboration	Web Services	●	●	●	●	●	●

1- Includes support for Multi Chassis Link aggregration topology
2- Only supported on OS6900 series- Required AOS support for VNP
3- ISSU (In Service Software Upgrade) supported on OS10K & OS9000E series
4- Port Shut Down supported only on third-party devices

Operating system & platform requirements

PRODUCT	DESCRIPTION
Minimum OmniVista 2500 VMM software requirements (Server & Client)	• Microsoft® Windows® Server 2008 R2 • Microsoft® Windows® 7 Business Ultimate (32 & 64 bits version) • Red Hat® Enterprise Server 5.7 (32 & 64 bits version) • Novell® SUSE® 10 (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 for support and certification	• For OV2500 VMM support
	  -VMware vCenter™ server 4.1 standard release with VMware ESXi 4.1
	  -VMware vCenter™ server 5.0 standard release with VMware ESXi 5.0
	• For OV2500 NMS installation
	  - VMware Virtualization & HyperVizor ESXi 4.1 minimum (64 bits installation)
	  - VMware Bare Metal Installation for Microsoft Windows 2008 (32 & 64 bits) & Red Hat Linux ES (32 bits & 64 bits) server virtual images

ORDERING INFORMATION

OmniVista 2500 Management Solution is based on OmniVista 2500 NMS, the Core solution, and OmniVista 2500 VMM, an optional, additional module focusing on data center management, operating in concert with OV2500 NMS.

Alcatel-Lucent OmniVista 2500 NMS

PART NUMBER	DESCRIPTION
OV25START-R35-N	OmniVista 2500 NMS Starter Pack License – New installation includes activation license for all OmniVista 2500 NMS application components. Starter Pack license includes support for up to 10 IP management addresses/managed devices.
OV25EXT10-NEW	OmniVista 2500 NMS Extension License for 10 supplemental IP management addresses/managed devices – New installation. Extension license requires OmniVista 2500 Starter Pack activation. Extension licenses can be combined (model & quantity) to provide specific IP management address number.
OV25EXT20-NEW	OmniVista 2500 NMS Extension License for 20 supplemental IP management addresses/managed devices – New installation.
OV25EXT50-NEW	OmniVista 2500 NMS Extension License for 50 supplemental IP management addresses/managed devices – New installation.
OV25EXT100-NEW	OmniVista 2500 NMS Extension License for 100 supplemental IP management addresses/managed devices – New installation.
OV25EXT500-NEW	OmniVista 2500 NMS Extension License for 500 supplemental IP management addresses/managed devices – New installation.
OV25EXT1000-NEW	OmniVista 2500 NMS Extension License for 1000 supplemental IP management addresses/managed devices – New installation.
OV25EXTUNLT-NEW	OmniVista 2500 NMS Extension License for unlimited IP management addresses/managed devices – New installation. Unlimited license extension requires OmniVista 2500 Starter Pack activation.

Alcatel-Lucent provides service access and maintenance support program for OmniVista 2500 Network Management Solution for constant update support. Upgrade part numbers are available. Customer evaluation licenses are available as well. Contact your Alcatel-Lucent representative for further details.

Alcatel-Lucent OmniVista 2500 VMM

PART NUMBER	DESCRIPTION
OV2500-VMM-S	License for OmniVista 2500 VMM, Small deployment: Supports single instance of VMware® vCenter™ R 4.1 and higher for support of virtual machine monitoring and infrastructure provisioning for deployment up to 200 virtual machines; requires OmniVista 2500 NMS installation to operate.
OV25EXT10-NEW	License for OmniVista 2500 VMM, Medium deployment: Supports a single instance of VMware® vCenter™ R 4.1 and higher for support of virtual machine monitoring and infrastructure provisioning for deployment up to 1000 virtual machines; requires OmniVista 2500 NMS installation to operate.
OV25EXT500-NEW	License for OmniVista 2500 VMM, Large deployment: Supports a single instance of VMware® vCenter™ R 4.1 and higher for support of virtual machine monitoring and infrastructure provisioning for deployment up to 5000 virtual machines; requires OmniVista 2500 NMS installation to operate.

OmniVista 2500 VMM runs as an optional, additional module on top of OmniVista 2500 NMS. At a minimum, customers deploying OV2500VMM must have OmniVista 2500 NMS Starter Pack deployed. OmniVista 2500 VMM requires minimum release 3.5.3 to operate. Customer evaluation licenses are available as well.

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