

## IP Networking Solutions for Enterprises

A comprehensive portfolio of highly available, secure, easy-to-manage network solutions.

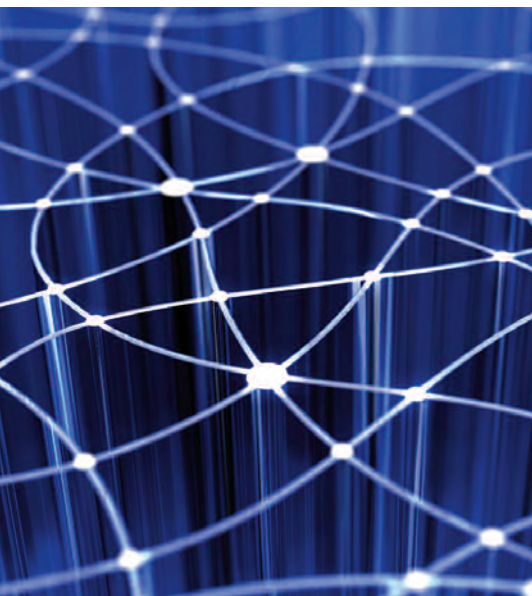






## IP networking solutions

Alcatel-Lucent – a leader in the enterprise networking, telephony and contact center industries – addresses IP networking challenges by incorporating into its products innovative research and technology advances. Alcatel-Lucent has the familiarity and knowledge necessary to address the communication concerns and challenges faced by small to large multinational enterprises. This research and experience have made Alcatel-Lucent IP networking solutions:



- Highly available – for continuous enterprise business support through network resource and performance management
- Cost-effective and future proofed – for budget control through scalable technologies and optimized designs
- Secure – for business critical information through detection, prevention and by controlling access
- Easily managed and interoperable – for remote, cost effective control through centralized management and support of industry standards
- Mobile – for secure employee access while working on/off-site and at home through Wi-Fi technologies
- “Green” – for lowering your power consumption costs through minimizing power and cooling requirements

Alcatel-Lucent IP networking solutions are also supported by business partnerships and sales teams worldwide, providing a complete portfolio of enterprise services and solutions.

Corporate social responsibility (CSR) has become a business imperative. For Alcatel-Lucent, CSR is not merely a set of policies: it is a key component of the company’s business strategy. Network World benchmarks confirm that the Alcatel-Lucent OmniSwitch 6850 was the least power hungry 10 Gigabit Ethernet switch currently available.





### **HIGH AVAILABILITY THROUGH NETWORK RESOURCE AND PERFORMANCE MANAGEMENT**

With the increase in telephony, video and business applications all being transported over a single enterprise network, it is critical that the network always be available. If the network fails, applications can't run and business, including income, will cease. To address this, Alcatel-Lucent has integrated availability in all of its IP networking products through redundant switches, power supplies and switching fabrics, as well as through network topologies, Wi-Fi radio coverage, hot swappable modules, and failsafe network address management.

### **OPTIMIZED DESIGN FOR COST-EFFECTIVE, FUTURE-PROOFED SOLUTIONS**

The Alcatel-Lucent product portfolio reduces network operation costs by offering equipment that scales from a few users to thousands saving on upgrade costs. Other cost-saving features include interoperability with other equipment using industry standards and through energy efficient hardware which also lowers cooling expenses.

### **SECURE CRITICAL INFORMATION**

The frequency of data breaches requires organizations to secure their critical information. Alcatel-Lucent addresses this through a state-of-the-art authentication, authorization and system compliance security infrastructure based on standards that allows the IT staff to maintain control of user access and limit the spread of malware, even on remote laptops.



### **CENTRALIZED MANAGEMENT AND INTEROPERABILITY FOR COST EFFECTIVE CONTROL**

The Alcatel-Lucent IP network management system offers a centralized, enterprise-wide solution to manage all network and key applications, saving money by limiting the need to travel and onsite IT support. Through IP address management it is possible to build a single, highly available and manageable IP address and DNS system. And with service level management, IT managers have an enterprise-wide view, not only at the IP network level but at server and client levels as well.

### **SECURE MOBILE ACCESS**

Alcatel-Lucent applications allow the mobile workforce to transparently connect inside and outside the office using meshed Wi-Fi networks and at home through Internet tunneling. Flexible, managed, and secure network user access is seamless and transparent, whenever and wherever the user connects.

### **COST SAVINGS THROUGH MINIMIZED POWER AND COOLING REQUIREMENTS**

Alcatel-Lucent scalable switches also offer low energy consumption which reduces the amount of heat dissipated. This reduces energy costs for the switch itself and the investment in related hardware such as cooling equipment.

## THE ALCATEL-LUCENT DYNAMIC ENTERPRISE

The Alcatel-Lucent IP networking portfolio empowers companies to transform their business into a Dynamic Enterprise. These world-class solutions create a highly available, secure, and easy-to-manage dynamic infrastructure that automates and integrates business processes connecting people, processes and knowledge. A Dynamic Enterprise must have a network that is always-on, offering a secure, converged communications infrastructure – any where, any time, over any access and any device.

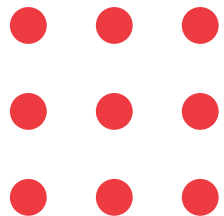


Bringing **network**, **people**, **process**  
& **knowledge** together as one.

## Alcatel-Lucent data network product families

The Alcatel-Lucent data network portfolio offers a complete set of products for an IP network that is secure, always on, resilient, flexible and scalable. Alcatel-Lucent data network products include:

- Chassis based LAN switches with interface speeds up to 10Gbps for core or aggregation layer applications
- Stackable layer 2/layer 3 local area network (LAN) switches for core and edge applications, which support for PoE and interface speeds ranging from 10/100 up to 10Gbps
- A highly scalable, wireless LAN (WLAN) solution supporting the latest 802.11n high speed access protocol
- Unified Services Gateways that enable wide area network (WAN) access while providing a wealth of services from a single box
- Highly-available MPLS based service switches and routers for feature-rich, high-performance, layer 2 and layer 3 WAN services





## INDUSTRY AWARDS

- “Alcatel-Lucent OmniSwitch 6850 and OmniSwitch 9800 – Tolly Tested - Functionality Certification and Cooperative Interoperability Evaluation”. Alcatel-Lucent switches shown to be interoperable with competitors in more than a dozen tests to meet The Tolly Group’s “Up to Spec” certification dated July 2007.
- “OmniSwitch 9700 takes Network Computing’s Editor’s choice Award” March 10, 2006

## ALCATEL-LUCENT CHASSIS SOLUTIONS

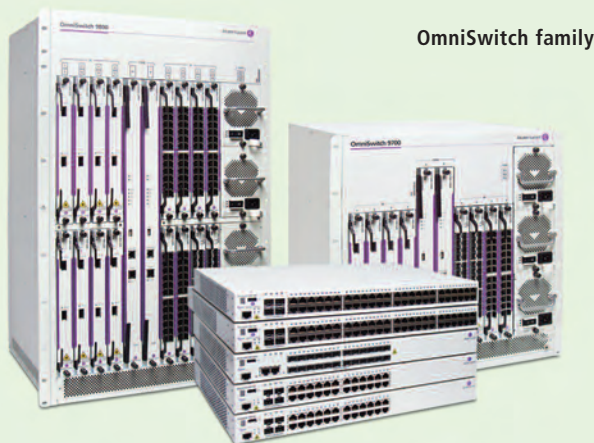
**Alcatel-Lucent OmniSwitch™ 9000 Chassis LAN Switch series** is comprised of full featured layer-2 and layer-3, high-performance 10 Gigabit Ethernet (10GigE) switches that provide advanced security, IPv4 and IPv6 routing, quality of service (QoS) and power over Ethernet (PoE) support. Its industry awards, benchmark-setting performance and high reliability, makes it an industry best value for next generation networks.

## ALCATEL-LUCENT STACKABLE SOLUTIONS

**Alcatel-Lucent OmniSwitch 6850 Stackable LAN Switches** provide layer-3 Gigabit Ethernet and 10 Gigabit Ethernet uplinks with support for PoE, IPv4 and IPv6 routing, and extensive security features. Its flexible port design and redundancy features enable businesses to realize the full potential of highly available networks.

**Alcatel-Lucent OmniSwitch 6855 Hardened LAN Switches** are industrial grade Gigabit Ethernet switches designed to operate reliably in environmentally challenged locations. The rugged hardware design coupled with AOS software makes it ideal for mission-critical applications that require wider operating temperatures, more stringent EMC/EMI tolerance and optimized feature set for high security, reliability, performance and management.

**Alcatel-Lucent OmniSwitch 6400 Stackable Gigabit LAN Switch series** is comprised of layer-2 + Gigabit Ethernet LAN switches for small/medium-sized enterprises and branch offices. It supports converged voice, data and video as well as residential and business Ethernet access service provider requirements.





**Alcatel-Lucent OmniStack™ 6200 Stackable LAN Switch series** consists of layer-2 Fast Ethernet switches that address small enterprise edge and residential Ethernet networking needs. Its comprehensive feature set makes it ideal for small/ medium-sized businesses and branch offices requiring converged voice and data services.

**ALCATEL-LUCENT WIRELESS SOLUTIONS**

**Alcatel-Lucent OmniAccess™ 6000** Wireless LAN Switch series consists of high performance, fully featured modular WLAN switches able to aggregate up to 2,048 campus connected access points (APs).

**Alcatel-Lucent OmniAccess 4000** Wireless LAN Switch series is a family of high-performance switches designed to support the requirements of differently sized wireless networks needs for 802.11a/b/g or recently introduced 802.11n.

**Alcatel-Lucent OmniAccess line of wireless access points (AP)**

support mobile enterprise networks from large campuses to small branch offices. They aggregate user traffic onto the enterprise network and direct it toward OmniAccess WLAN switches. The OmniAccess Wireless APs are offered in indoor and outdoor models, with dual and single-radio configurations for different environments such as in/outdoor, ceilings, workspaces, telecommuters, and harsh environments.

**OmniAccess WLAN family**



**OmniStack family**



**ALCATEL-LUCENT UNIFIED SERVICES**

**Alcatel-Lucent OmniAccess Unified Services Gateways** reduce the cost and complexity of managing branch office networks by unifying multiple hardware and software networking solutions (security, voice, routing, switching, availability) found in a branch site through a single remote management interface.

**ALCATEL-LUCENT IP/MPLS WAN SOLUTIONS**

**Alcatel-Lucent 7710 and 7750 Service Routers** are purpose-built multiservice routers that give mission-critical enterprise and industry customers a competitive advantage with industry-leading throughput, high-performance routing, resiliency, scalability, and simultaneous support for highly available layer-2 and layer-3 MPLS services.

**Alcatel-Lucent 7705 Service Aggregation Router** delivers industry-leading IP/MPLS reliability and pseudo-wire capabilities in compact platforms.

**7710 SR-c12**





## Alcatel-Lucent user-centric security product families

Alcatel-Lucent user-centric approach to security minimizes the risk to corporate assets and end-user involvement in the security process, increasing productivity and optimizing technology investments. This approach delivers a coherent, comprehensive security strategy around the diverse challenges associated with networks, mobile technologies and business applications. Alcatel-Lucent security deploys in layers providing protection and services based upon customer needs and budget.

Alcatel-Lucent enterprise network security product line includes:

- Secure, remote management of mobile laptops 24/7
- Secure automated business processes to meet corporate governance obligations
- Comprehensive network access control (NAC) system that is user based
- Integrated high-speed firewalls for core and network-edge environments
- Automated attack containment via quarantine and elimination
- Host integrity check system to enforce endpoint compliancy
- Real-time antivirus protection against threats from the Web, email, file transfers and VPN traffic

Alcatel-Lucent awards for enterprise-focused solutions include:

- Info Security named the Alcatel-Lucent OmniAccess 3500 Nonstop Laptop Guardian recipient of its Best Wireless/Mobile Product award for 2008. Additionally, the OA3500 NLG was finalist in three categories: 2008 Global Excellence in Access Solution, 2008 Global Excellence in Policy Management Solution, and 2008 Global Excellence in Wireless/Mobile Security Solution.
- INTERNET TELEPHONY magazine named the Alcatel-Lucent OmniAccess 3500 Nonstop Laptop Guardian a recipient of its 2007 Product of the Year Award (March 2008)
- Alcatel-Lucent VPN Firewall Brick™ 1200 was overall winner of Network Computing's benchmark test of security appliances, taking first place in both the VPN test and the firewall and quality-of-service test (August 2007)
- Info Security Products Guide named Alcatel-Lucent a winner of the 2007 Tomorrow's Technology Today Award for the OmniAccess 3500 Nonstop Laptop Guardian (August 2007)



Network  
Computing

Network  
Access



**Alcatel-Lucent OmniAccess 3500 Nonstop Laptop Guardian** is a secure, always-on 3G wireless platform that allows enterprise IT managers to track, troubleshoot and manage mobile laptops 24/7, even when they are powered off or offline.

**Alcatel-Lucent OmniAccess 8550 Web Services Gateway** secures automated business processes to meet corporate governance obligations. It protects sensitive corporate data from misuse and ensures data is always available when and where it is needed.

**Alcatel-Lucent OmniAccess Safeguard** offers comprehensive network admission control (NAC) with visibility and auditing, user segmentation and threat containment benefits that differentiates users and applications while controlling LAN access.

**Alcatel-Lucent VPN Firewall Brick** takes data security to a whole new level with an integrated high-speed firewall, VLAN, and virtual firewall capabilities, bandwidth management features, and high performance abilities provide solid security for both data centers and network-edge environments.

**InfoExpress CyberGatekeeper** Host Integrity Check (HIC) automatically ensures all network endpoints are checked to make sure they meet enterprise security policy requirements before being allowed network access.

**Fortigate** family provides real-time antivirus protection that continuously and automatically updates itself against the latest threats to web, email, file transfer and VPN traffic.

**Alcatel-Lucent OmniVista Quarantine Manager** integrates with external intrusion detection and prevention systems (IDS/IPS) to create a simplified yet configurable security management tool that automates the containment of malware. By automatically isolating network end-points identified by the IDS/IPS systems the network infrastructure is protected from further infection.

Alcatel-Lucent provides the industry's best value for Dynamic Enterprises with highly available network solutions that are secure and easy-to-manage while satisfying regulatory compliance and corporate security standards.



**OmniAccess 3500 Nonstop Laptop Guardian**



**OmniAccess 8550 Web Services Gateway**



**OmniAccess Safeguard**



**VPN Firewall Brick**



**InfoExpress CyberGatekeeper**



## Alcatel-Lucent Management Product Families

Alcatel-Lucent management solutions and services allow enterprises to monitor networks, applications and devices remotely, control security across a range of access points, and manage unpredictable traffic flows more efficiently. Alcatel-Lucent management solutions enable simplified and centralized management functions to protect and enhance the converged, mission-critical network infrastructure that supports advanced business communications applications.

The Alcatel-Lucent management product line offers:

- Centralized network and application management of all elements - supports bulk operations, policy configuration and deployment as well as quality of service (QoS) and access control list (ACL) management
- Centralized performance management of IP services across the entire network enabling rapid provisioning of address space and critical IP name and address services
- Enhanced delivery of business services from a single location across multiservice, multivendor networks
- Worldwide recognition as the best IP address management and (D)DNS management system available
- Consolidated service level management to report and predict behavior of IP infrastructure, IP telephony, contact center business applications and end-systems

### MANAGEMENT SOLUTION AWARDS AND ACKNOWLEDGEMENTS

- The VitalQIP/ENDFORCE Enterprise solution was a Secure Computing Magazine 2006 award finalist in the categories of Best Integrated Security Software and Best Enterprise Security Solution.
- VitalSuite Performance Management Software won the Network Testing Labs "World Class" award for Best Network and Application Performance Management Solution - Sept. 2006
- IDC ranks VitalQIP software as the clear market leader in IP address management



#### **Alcatel-Lucent OmniVista Network Management System**

provides administrators a unified view of the network and its functions and provides services to support network devices and functions such as centralized management, bulk operations, policy configuration and deployment, as well as quality of service (QoS) and access control list (ACL) management.

**Alcatel-Lucent VitalSuite** family integrates multiple innovative components and capabilities to keep enterprise networks, applications and business processes working together effectively. From a single location, network managers can monitor, measure and enhance delivery of business services across multiservice, multivendor networks.

**Alcatel-Lucent VitalQIP™** provides an efficient means to configure, automate, integrate and administer IP services across the entire network — locally or globally. These market-leading appliances and software offer centralized planning and administration, enable rapid provisioning of address space and reliably deliver critical IP name and address services throughout the network.

**Alcatel-Lucent 5620 Service Aware Manager** is a single management platform offering element, network, and service management of converged IP/Ethernet/MPLS multiservice networks. It helps enterprise customers address the key challenge of ensuring operational excellence while they converge services over their IP/MPLS network infrastructures.





In 2008 Alcatel-Lucent was awarded the “Best Fixed Networking Product Range in the fourth annual NME Innovation Awards 2008, which recognized the best networking projects, products and individuals across the Middle East”.



**LEADER IN RESEARCH AND INNOVATION**

Alcatel-Lucent’s successful research and innovation efforts have resulted in many awards for its data products. The commitment to being an innovator is exemplified by the ongoing cutting-edge activity of Bell Labs where the adoption of products developed into the enterprise portfolio includes advanced mobile and network security applications. In 2007 alone, Alcatel-Lucent invested €2.7 billion in research and development, which is 15% of its annual revenues. This investment can additionally be seen in Alcatel-Lucent’s eco-sustainable solutions, network and performance management solutions, and innovative infrastructure to support future growth and collaboration capabilities. The company holds more than 25,000 active patents worldwide, and is active in 130 standards bodies.

**ALCATEL-LUCENT ENCOURAGES ECO-SUSTAINABILITY**

Alcatel-Lucent addresses eco-sustainability issues by being on the cutting-edge of Green IT initiatives with solutions that use less material, have fewer toxic substances (lead, cadmium and mercury), are in compliance with ROHS, WEEE and Electrical Emission standards, are power efficient and are optimized for recyclability. Alcatel-Lucent has also developed a tool for enterprises to better understand its eco-footprint – an energy calculator to estimate how much power is saved by using its data products.

**WORLDWIDE BUSINESS PARTNERS AND SUPPORT**

Alcatel-Lucent provides programs that support customers, developers, and business partners with technical and product training, sales resources, marketing support, and professional services. Through these programs, customers have access to a global network of third-party products and application experts who offer world-class networking, security, and management solutions that transform the enterprise.

**ALCATEL-LUCENT IP NETWORKS ARE IN YOUR FUTURE**

Through innovation, partnerships, and existing networking solutions Alcatel-Lucent enables your business to be a Dynamic Enterprise. The foundation of your business is your IP network. When built using Alcatel-Lucent networking solutions you are empowered to transform your business into one that has automated and integrated business processes that connects your people, your processes and knowledge. Your business will have rich customer interactions through an always-on, secure, converged communications infrastructure. With a Dynamic Enterprise, you will differentiate your business from competitors becoming the successful and profitable business you want it to be.

For more information about the Alcatel-Lucent enterprise portfolio and transforming your business into a Dynamic Enterprise, please see the following sites:

- Data networks [www.alcatel-lucent.com/enterprise/datanetworks](http://www.alcatel-lucent.com/enterprise/datanetworks)
- Security solutions [www.alcatel-lucent.com/enterprise/security](http://www.alcatel-lucent.com/enterprise/security)
- Management solutions [www.alcatel-lucent.com/vital](http://www.alcatel-lucent.com/vital)
- Eco-sustainability [www.alcatel-lucent.com/enterprise/eco-sustainability](http://www.alcatel-lucent.com/enterprise/eco-sustainability)

# Alcatel-Lucent IP Networking Solutions for Enterprises



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