

# Managed Business Networking Solution

Powering the always-on enterprise



With this solution, service providers can generate new revenue opportunities by helping enterprise customers meet new network and business requirements. Managed business networking services support today's business-critical applications, improve efficiency and reduce costs — without sacrificing network performance, resiliency, flexibility or security.



## Introduction

Your enterprise customers have growing bandwidth, reach and reliability requirements for their voice, data and video traffic, and they are also deploying new applications to meet crucial business objectives, such as increasing efficiency. However, most existing networks cannot satisfy these new enterprise needs because they lack flexibility and offer limited bandwidth. As a result, enterprises are demanding higher bandwidth services with application-level Service Level Agreements (SLAs). They are also looking for ways to reduce network costs by minimizing implementation and operational headaches. Managed business networking services provide enterprises with an effective way to meet these needs, by reducing the cost and complexity of managing their own network infrastructure.





*“Legacy networks are frustratingly obsolete to the modern enterprise — their changing requirements outstrip what telcos can deliver. That’s why we’re building innovative managed network solutions on our next-generation Multi Services Platform, MSP, transforming how large enterprises do business today”.*

JULIAN PAYNE, HEAD OF DATA PRODUCTS, CABLE & WIRELESS

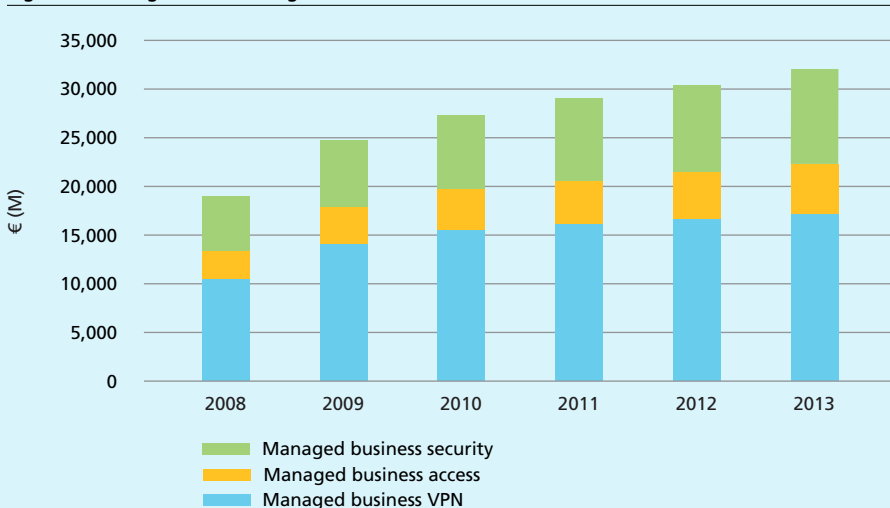
### KEEPING UP WITH ENTERPRISE NEEDS

Although many service providers already offer business VPN services, they are often implemented on first-generation IP/MPLS networks, which were designed to deliver an earlier generation of services over legacy access networks. With first-generation networks, implementing QoS is frequently labor intensive and costly, and existing edge devices offer a narrow range of services and poor access to applications. As a result, many existing VPN services provide only limited flexibility and QoS capabilities. They are also connectivity oriented — not service oriented — restricting service providers’ ability to generate new revenues.

### THE BENEFITS OF MANAGED BUSINESS NETWORKING SERVICES

Many enterprises are already embracing managed business networking services, such as MPLS-based Carrier Ethernet VPNs and IP VPNs, because they can provide higher bandwidth, superior QoS and application-level SLAs. As a result, the market for these services is already around 19 billion Euros globally — and is expected to grow to over 32 billion Euros by 2013<sup>1</sup>. Managed business access services can also meet the diverse connectivity needs of enterprises, while managed business security services satisfy security requirements.

Figure 1. Managed Networking Services Market Forecast



<sup>1</sup>Source: The 2008-2013 Global Managed Services Market Forecast, InfoTrack, March 2008



## Alcatel-Lucent Managed Business Networking Solution

With the Alcatel-Lucent Managed Business Networking (MBN) solution, you can leverage core assets to generate new revenues by selling a broad selection of managed business networking services, including business virtual private networks (VPNs), business access and business security services. With these scalable, reliable, flexible and always-on services, you can meet the business-critical communications requirements of enterprise customers, efficiently and cost effectively.

*For service providers* – These new services help offset the rapid erosion of connectivity pricing, and they can differentiate your offerings from pure-commodity network competitors, providing a sustainable competitive advantage. Deployment can be quick, accurate and cost-effective — and gives you the opportunity to up-sell additional high-value managed services and applications.

*For the enterprise* – The Alcatel-Lucent MBN solution meets the connectivity, security and networking needs of employees, partners, suppliers and customers — wherever they are located. It helps your enterprise customers increase efficiency, while freeing them from the need to manage their own network infrastructure. They gain predictable network costs, along with a guaranteed, flexible network evolution path.

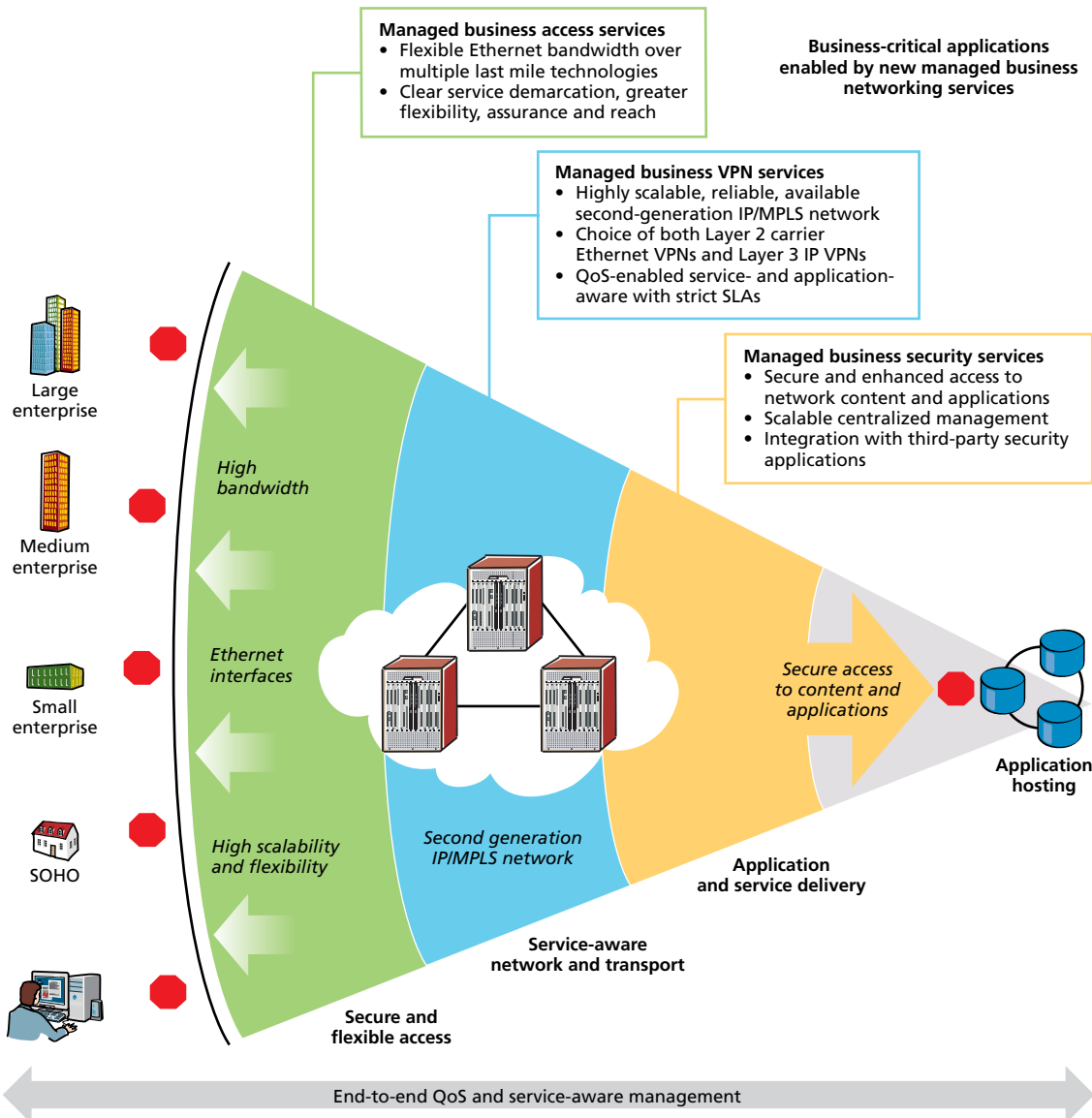
The Alcatel-Lucent MBN solution is based on market-leading, next-generation IP/MPLS networks, which allow you to evolve to packet-based network architectures as part of your IP transformation process. This approach supports the convergence of IP voice, data and video over Layer 2 or Layer 3 business VPN services — and delivers the performance and resiliency required by latency-sensitive applications.



As a result, you can support multiple-enterprise VPNs simultaneously over a highly scalable, converged, multi-service infrastructure, which provides greater network efficiency and reduces costs without sacrificing performance. You can also tailor business VPN services to the unique needs of each enterprise by leveraging a common IP/MPLS network with service-aware management.

With these capabilities, the Alcatel-Lucent MBN solution enables you to generate new, recurring revenue streams. It also provides a foundation for up-selling the Alcatel-Lucent Managed Communications (MCS) portfolio, with value-added services that can maximize business productivity.

Figure 2. Alcatel-Lucent Managed Business Networking Solution





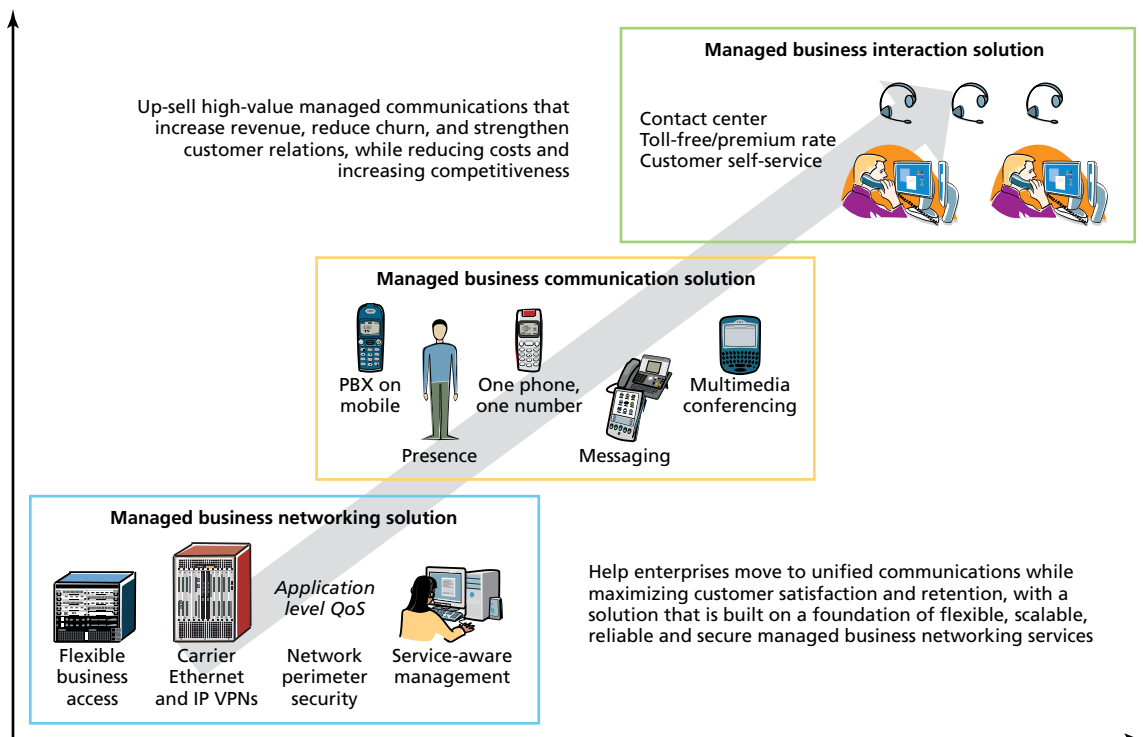
### Increase revenue by up-selling managed services

Managed business networking services provide a foundation for selling other bandwidth-intensive managed services, such as off-site storage, backup and disaster recovery. Once enterprise customers recognize the reliability, scalability and security of managed VPN services, you can up-sell managed applications and services, including managed voice and mobility, collaboration and customer interaction services. By complementing and differentiating your offerings with innovative, value-added service bundles, you gain new ways to increase revenues and reduce churn.

Alcatel-Lucent's Managed Communications (MCS) help reinforce your position with enterprise customers by offering on-demand, end-to end, high-value business communication services that optimize enterprise productivity and strengthen customer relations, while reducing costs and providing a competitive edge.

These managed capabilities allow enterprises to focus on business essentials by outsourcing their communications requirements. As a result, you become a strategic partner, helping enterprise customers unify their communications while enhancing customer satisfaction and retention. The Alcatel-Lucent MCS solution is built on a foundation of flexible, scalable, reliable and secure managed business networking services. Additional information is available at: [www1.alcatel-lucent.com/mcs](http://www1.alcatel-lucent.com/mcs)

Figure 3. Alcatel-Lucent's Managed Communications (MCS) Solution



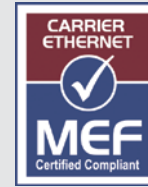
# Business VPN Service Delivery Architecture

The Alcatel-Lucent MBNS solution is based on the Alcatel-Lucent Business VPN Service Delivery Architecture, shown in Figure 4. It incorporates the following products from the Alcatel-Lucent service routing portfolio:

- Alcatel-Lucent 7450 Ethernet Service Switch (ESS)
- Alcatel-Lucent 7750 Service Router (SR)
- Alcatel-Lucent 7710 SR
- Alcatel-Lucent 5620 Service Aware Manager (SAM)
- Alcatel-Lucent 5650 Control Plane Assurance Manager (CPAM)

This architecture provides an IP/MPLS service aggregation and edge network that offers superior performance, scalability, QoS, reliability and availability. As a result, the robust service-aware infrastructure can support a broad range of secure, flexible, always-on services.

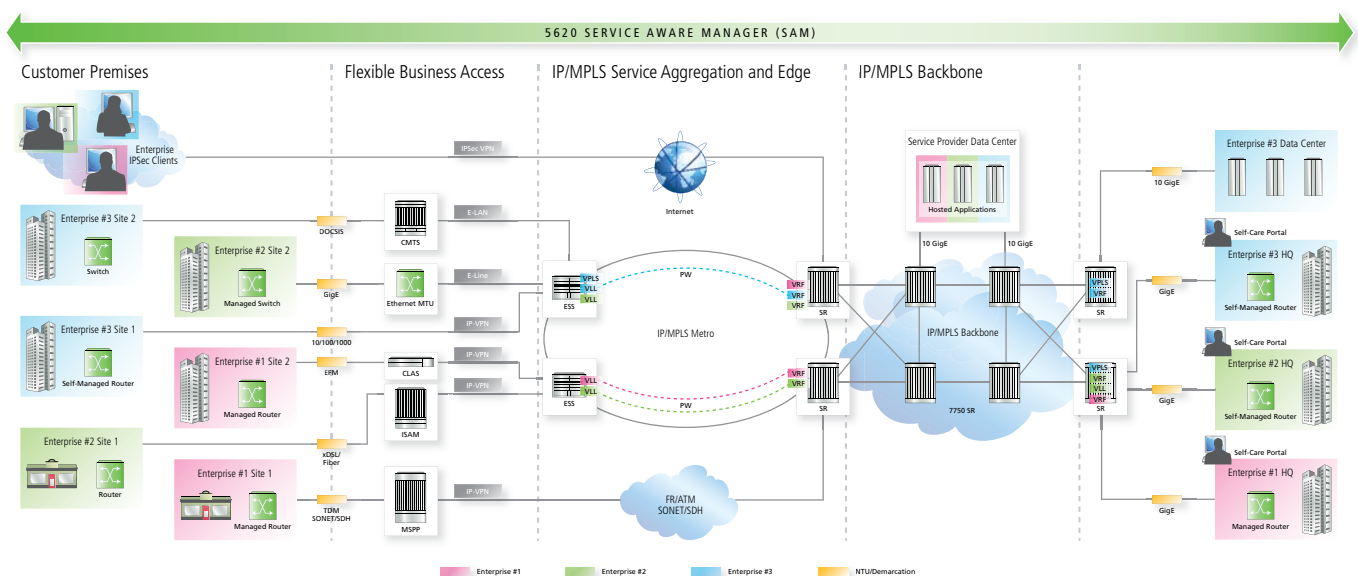
The architecture allows you to offer both Carrier Ethernet VPNs enabled by VPLS and premium IP VPNs on a single, cost-effective, highly scalable and reliable platform. You can also offer a broader selection of services and appeal to a wider range of enterprises, from small and medium enterprises (SMEs) to large enterprises. Service-aware management and control plane assurance management enable rapid service provisioning, efficient fault isolation and repair — along with performance monitoring to meet application requirements. In addition, the customer self-care portal allows customers to maintain control and monitor services against agreed SLAs, while reducing your OPEX.



## METRO ETHERNET FORUM (MEF) CERTIFICATION

The Alcatel-Lucent 7450 ESS, 7750 SR and 7710 SR products — and the majority of Alcatel-Lucent Ethernet business access CPE products — have been fully certified independently to comply with the MEF 9 and MEF 14 specifications for Carrier Ethernet services and managed QoS under the MEF Carrier Ethernet certification program. The Alcatel-Lucent 7450 ESS, 7750 SR, 7710 SR and 1850 TSS were tested to determine that each platform delivers Ethernet services to the MEF 9 and MEF 14 test specifications.

Figure 4. Alcatel-Lucent's Business VPN Services Delivery Architecture





*“The overall results indicate that the tested solution is one of the most comprehensive service delivery solutions available in the industry.”*

DR. BIJAN JABBARI, PRESIDENT OF ISOCORE

## A choice of premium IP-VPNs and Carrier Ethernet VPNs

Leveraging IP/MPLS, premium IP-VPNs provide multi-site Layer 3 IP networking with the performance and resiliency necessary to run today’s latency-sensitive applications, such as VoIP and IP video, while providing a smooth upgrade path for the future. These VPNs are suitable for any type of enterprise, but are a particularly good choice for small and medium enterprises that want you to manage all aspects of routing, which may include visibility and control of their routing domain. You can provide any-to-any connectivity, which reduces the cost of connecting multiple sites, and customize service offerings by bundling data, voice, video and other options.

With Carrier Ethernet VPNs using virtual private LAN service (VPLS), you can expand your managed business VPN services and address a wider market — by providing the same multi-point service benefits offered by IP-VPNs, but at Layer 2. These “any-to-any” Carrier Ethernet VPNs, also known as E-LAN services, provide multi-point connectivity between enterprise sites. They combine the OPEX benefits, simplicity, transparency and scalable bandwidth of Ethernet with the predictable QoS, reliability and scalability of MPLS. In addition, these VPNs allow enterprises to maintain full control of their routing domain, which is important for many large enterprises. They also provide transparent support for the multiple network protocols still found in many enterprise networks.

By supporting both Layer 3 premium IP-VPNs and Layer 2 Carrier Ethernet VPNs, the Alcatel-Lucent MBN solution allows you to address a wider market and meet the needs of any enterprise, ranging from small to large. With the solution’s advanced features, you can differentiate your offerings from commoditized, low-margin bandwidth-only services.



### INDEPENDENT VERIFICATION OF ALCATEL-LUCENT’S BUSINESS VPN SERVICE CAPABILITY

The Alcatel-Lucent 7750 SR product has been independently tested by ISOCORE to have state-of-the-art service scaling capabilities. As key components of the Alcatel-Lucent MBN solution, the Alcatel-Lucent 7450 ESS and 7750 SR have also been validated independently by ISOCORE for mass deployment of converged business VPN and residential triple-play services. The independent performance verification tested more than 43,500 enterprise class Layer 2 and Layer 3 business VPN services, as well as 120,000 active subscriber hosts, to represent a dense metropolitan region.

The test also included an in-depth evaluation of Alcatel-Lucent’s enhanced subscriber management, H-QoS, security, subscriber host authentication, high availability and operation, administration and maintenance (OAM), as well as a thorough analysis of architecture flexibility — to support deployments in any mode of operation





*“BT has a commitment to meet our customers’ increasing demand for Ethernet services and has therefore set out an aggressive expansion strategy for our 21CN Ethernet footprint. Alcatel-Lucent’s involvement gives us confidence we can achieve these timescales.”*

**KARL PENALUNA, DIRECTOR IP AND DATA PLATFORMS, BT**

*“Cable & Wireless has built an international IP/MPLS network from which we’re able to deliver a wide range of wholesale and retail services — including IP VPNs — with higher availability, faster provisioning and more flexibility. As our customers look to us to deliver more bandwidth and more sophisticated and integrated service offerings, the enhanced density, performance, service scale and virtualization of the Alcatel-Lucent 7750 Service Router will play an important role in the ongoing commercial success of our Multi-Service Platform (MSP).”*

**ANDY EVANS, CHIEF TECHNOLOGY OFFICER, CABLE & WIRELESS**

*“With our All-IP strategy and extensive network, KPN is a leader in delivering cost effective, high performance Ethernet VPN services to our customers. Alcatel-Lucent’s integrated PBB and VPLS solution will enable us to enhance network and service scalability — both in terms of reach and MAC addressing — supporting the expansion of our multipoint Carrier Ethernet VPN service offerings for inter-metro and national coverage. With this simple software upgrade to the 7750 SR and 7450 ESS, we can grow our EVPN revenue and benefit from operational cost efficiencies while ensuring faster time to market for new Carrier Ethernet services.”*

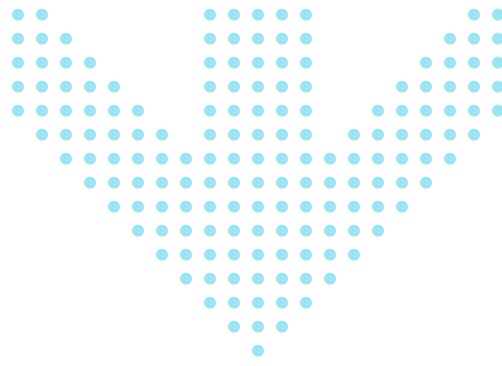
**SICCO WIERSMA, MANAGER INNOVATION NETWORKS, KPN**

## Terabit Performance and Integrated PBB/VPLS – for superior scalability

To help meet the increasing demand for bandwidth and scalability, Alcatel-Lucent offers terabit performance for the Alcatel-Lucent 7750 Service Router (SR) and 7450 Ethernet Service Switch (ESS). These enhancements leverage our unique next-generation FP2 silicon chipsets, which optimize network processing and traffic management to deliver data rates at speeds of up to 100 Gb/s. In addition, these enhancements more than double the density of Gigabit and 10 Gigabit Ethernet ports, support up to 10 times the number of services per router, reduce power consumption, increase availability and improve bandwidth efficiency. As a result, you gain a clear path to 100 Gigabit Ethernet, vastly improving your return on investment (ROI).

In addition, integrated support for Provider Backbone Bridging (PBB) and VPLS dramatically increases the scale and reach of Carrier Ethernet VPN services, helping you meet exponential growth for Carrier Ethernet services. Integrated PBB/VPLS brings together the scalability benefits of PBB with the resiliency, traffic engineering and convergence benefits of VPLS and MPLS. So you can leverage your existing metro Ethernet infrastructure while expanding service reach to national and international markets.

With these innovations, you gain substantial investment protection, while reducing capital and operating costs.



## Key features

### Hierarchical QoS

The Alcatel-Lucent service routing portfolio supports Hierarchical-QoS (H-QoS), allowing you to offer tiered and differentiated SLA guarantees. With H-QoS, a single access connection can support an aggregate SLA for multiple enterprise VPNs, as well as distinct SLAs for different applications within each service. It provides service-aware QoS with optimal service characteristics for performance-sensitive and time-sensitive applications to meet the most demanding application SLAs. Hierarchical scheduling offers greater control for service-level differentiation and can scale to thousands of customers and services without affecting performance. You can avoid over-provisioning bandwidth — guaranteeing critical application performance, while maximizing network efficiency by ensuring sufficient bandwidth for each service or application.

### Service-aware management

The Alcatel-Lucent 5620 Service Aware Manager (SAM) enhances operation of managed business VPN services by integrating element, network and service management capabilities on a single platform. This design allows efficient management of a full range of Carrier Ethernet, IP VPN and business access services. The platform also provides fault management and monitoring of SLA performance metrics — for fast, accurate and efficient resolution of VPN service problems. Previously, issue resolution might have required hours or days, but the 5620 SAM enables diagnosis and correction in minutes. As a result, enterprise SLAs are not compromised, and you benefit from lower OPEX through greater operating efficiency.

### Customer self-care portal

To provide enterprises with control and visibility of managed business VPN services, the Alcatel-Lucent 5620 SAM includes a customer network management (CNM) toolkit and reference implementation. These features simplify and accelerate integration with existing portals — or creation of new customer self-care portals. The Web-based portals can display detailed reports, showing each enterprise how their managed VPN is performing against SLAs — and providing historical SLA information and network performance levels. Self-care portals also allow an enterprise to change service parameters. For example, they can change QoS levels for a service or increase bandwidth when necessary. With customer self-care portals, you can differentiate your services while reducing OPEX by minimizing your involvement.

### Non-stop routing and non-stop services

In today's competitive environment, you need to meet customer expectations for uninterrupted service from their new on-demand applications. Because this level of performance requires comprehensive high-availability features, the Alcatel-Lucent MBN solution provides non-stop routing and non-stop services to eliminate the potentially disastrous effects of control plane failures. Non-stop routing improves network availability by providing resilient routing and control protocols. Up-to-date routing state information is synchronized between active and standby control modules, so a control failure — or a control complex switchover — has no impact on the network. Services are safeguarded using MPLS fast reroute technology that provides sub-50 ms guaranteed failover to support business-critical application SLAs without compromise or exceptions. Advanced service router software features further extend non-stop routing and non-stop services to provide advanced reliability and high availability across multiple systems.



## Containing OPEX with the Alcatel-Lucent 5620 Service Aware Manager

Forrester Consulting examined the potential ROI service providers can realize by deploying the Alcatel-Lucent 5620 Service Aware Manager (SAM). Based on interviews with four existing customers, Forrester constructed a TEI framework for a composite organization and associated ROI analysis to illustrate the financial impact areas. The study yielded the following key findings from deploying the Alcatel-Lucent 5620 SAM as an element, network and service management solution:

- **ROI** – As shown in Table 1, the risk-adjusted ROI for the composite company is 73 percent, with a break-even point (payback period) of 10 months after deployment.
- **Benefits** –The implementation showed productivity gains in both provisioning and technical support, cost avoidance in script maintenance and strategic flexibility in new service deployments.
- **Costs** – Implementation expenses included: software license and maintenance fees, hardware costs and the internal labor required for implementation and ongoing maintenance.

**Table 1: Forrester’s study of the Alcatel-Lucent 5620 SAM, risk-adjusted ROI**

SUMMARY FINANCIAL RESULTS	ORIGINAL ESTIMATE	RISK-ADJUSTED
ROI	90%	73%
Payback period (years)	0.8	0.9
Total costs (PV)	(\$1,403,370)	(\$1,444,528)
Total benefits (PV)	\$2,440,295	\$2,269,086
Total (NPV)	\$1,265,207	\$1,052,840





Forrester also carried out in-depth interviews with senior operations representatives from:

1. TELUS, the public Canadian telecommunications company
2. NextGenTel, a fast-growing private xDSL operator in Europe
3. TeliaSonera, a leading telecommunications company in the Nordic region and throughout Europe
4. PT Prime, the business solutions branch of Portugal Telecom, the Portuguese public telecommunications provider

These in-depth interviews showed that using the Alcatel-Lucent 5620 SAM:

- Dramatically accelerates service provisioning
- Improves network visibility overall, allowing for more efficient management of errors and other problems
- Reduces OSS software development costs, by eliminating the need for some custom OSS software development
- Provides strategic flexibility for new product development, because services can be deployed faster and more economically

*“The business case for introducing the Alcatel-Lucent 5620 SAM was positive, even if we only considered service provisioning and OSS integration. It was the most cost-effective and the shortest time-to-market solution that helped us meet our cost and timeline targets when introducing a new service type. On the upside, it also provided a comprehensive monitoring solution that enabled us to proactively test network and service performance so that we can consistently deliver high service availability to our customers. This 5620 SAM has really met our need for a carrier-class IP management solution.”*

**JOSE PALMA, ENGINEERING DEPARTMENT, PT PRIME**

*“We have typically developed our own systems and CLI scripts for provisioning and managing our IP network. But we revised that strategy when we looked at introducing multicast-based services and VPN services such as VPLS or Ethernet pseudowires. The development costs for provisioning were prohibitive, whereas the 5620 SAM provided us with out-of-the-box functionality, pre-integrated with the entire Alcatel-Lucent IP portfolio, ready to provision any Layer 2 or 3 services. We now have improved tools to commission the network and to diagnose any network or service issues.”*

**JORN E. HODNE, TECHNICAL CHIEF, NEXTGENTEL**



## Extending service reach with Managed Business Access

With the Alcatel-Lucent MBN solution, you can offer optional Ethernet-based managed business access services to help you increase service footprint and generate recurring incremental revenue. Ethernet is ideally suited for managed business access because it provides a universal handoff with clear service demarcation and greater service flexibility. Its easily scalable bandwidth can deliver multiple services over a single interface, while leveraging the most appropriate access technology available for the last mile.

With Ethernet-based managed business access, you can offer enterprise customers new bandwidth-intensive applications that were previously too costly to deploy using traditional access services. Enterprise servers and server virtualization can also be consolidated, presenting further opportunities for managed and hosted applications.

The Alcatel-Lucent managed business access solution offers a comprehensive portfolio of customer premises equipment (CPE). So you can extend managed business VPN services end-to-end, using Ethernet over a variety of last mile access technologies including: copper pairs, xDSL, SONET/SDH, TDM and PDH, as well as fiber and MPLS. As a result, services can reach multiple enterprise sites, from small branch sites to large corporate sites, in any location — by leveraging existing infrastructure. For example, Ethernet virtual leased lines (VLLs) that use Ethernet in the first mile (EFM) and run over copper pairs can be used to access high-speed Internet services, as well as managed business VPN services.

The CPE portfolio supports OAM connectivity and performance capabilities provided by 802.3ah EFM and 802.1ag Connectivity Fault Management (CFM), helping to ensure end-to-end service management and assurance through the Alcatel-Lucent 5620 SAM. This configuration and management support is provided directly — or through the Generic Network Element (GNE) manager, which allows cross launching of the device-specific Element Management System (EMS).

Where Ethernet business access cannot be provided, the MBN solution supports access to business VPN services over legacy access services such as T1/E1 leased lines, frame relay and ATM, or over secure broadband and Internet connections using IPSec. In addition, Ethernet/Frame Relay/ATM pseudowire interworking enables interworking with legacy services, supporting an orderly migration to converged business VPN services.

*“Based on Alcatel-Lucent’s 1521 CLIP Ethernet First Mile solution, Unidata offers symmetrical 5 Mb/s or 10 Mb/s Ethernet services over bonded copper pairs to our SME and corporate accounts. It enables us to offer our Business Services (VoIP, broadband Internet, MPLS VPNs) to those accounts which cannot be reached with optical fiber.”*

**ROSSINI GIAMPAOLO, NETWORK  
MANAGER, UNIDATA**



*“Managed services delivered by a service provider is an increasingly popular and preferred alternative to internal management of network-based services.”*

**CHALLENGES AND OPPORTUNITIES IN THE ENTERPRISE NETWORKS MARKET, IDC , FEBRUARY 2008**

*“Corporate traffic continues to grow unabated...; corporations are finding and exceeding the technology capacity limits of legacy frame relay, ATM, and private line networks; as these barriers are exceeded, corporations look for technology solutions with greater headroom that provide more bandwidth at a smaller price per bit, and the natural answer is Ethernet, and/or Ethernet access combined with IP MPLS VPNs.”*

**ETHERNET AND IP MPLS VPN SERVICES, INFONETICS**



## Securing the network with Managed Business Security

As enterprises extend their business-critical applications to customers, partners and suppliers, security is crucial. Today's new security solutions must make sure that access to enterprise assets is provided only to authorized users, while integrating with existing enterprise security applications such as intrusion detection, e-mail scanning and content filtering.

The Alcatel-Lucent MBN solution allows you to offer optional managed business security services that counter increased threats to enterprise networks and business-critical applications. Our managed perimeter security solution provides a three-tier security architecture that includes:

- *The Alcatel-Lucent Firewall VPN Brick® portfolio of security appliances* – which integrate application-layer inspection and firewall functionality with advanced site-to-site VPN capabilities
- *The Alcatel-Lucent IPSec client software* – providing secure remote access VPN services for mobile workforce and telecommuters
- *The Security Management Server (SMS)* – providing tightly synchronized firewall, VPN, service quality, VLAN and virtual firewall policy management, with robust and highly scalable performance

With this solution, you can offer a wide range of managed business security services for all types of enterprises. For example, you could provide: site-to-site IPSec VPNs that connect branch offices over the Internet, IPSec remote Internet access for remote and mobile workers, secure web/application hosting for enterprise networks — and firewall services for enterprise networks and data centers.



*“Baker Consultants built and managed our entire VPN with sites ranging from the middle of the Pacific, to the middle of Africa and to the edges of Central America. It has been a huge success with major cost savings. The reliability of the VPN, even in very difficult locations has been tremendous. The ease with which the Alcatel-Lucent VPN Firewall Brick® can be installed and maintained is excellent!”*

**RHONDA VANDERWOOD,  
IT GENERAL MANAGER,  
HILTON INTERNATIONAL**

*Telefonica Data is using the Alcatel-Lucent Firewall Brick® to provide Managed Business Security Services for enterprise customers. Telefonica Data helped a global financial services provider migrate to an Alcatel-Lucent based-solution covering 6 international locations in under 3 weeks. The migration was achieved with minimum network disruption and near zero downtime during the migration thanks to the comprehensive centralized management system and the reliability and redundancy of the Alcatel-Lucent solution.*

*Baker Security & Networks is a premier provider of IT security solutions and managed network services,*

*managed VPN nodes and firewalls for numerous clients in over 80 countries on a 24x7 basis. Baker Security & Networks built a managed premises-based VPN services solution based on the Alcatel-Lucent Firewall Brick® solution for Hilton International. The solution is one of the most geographically dispersed VPNs in the world with 185 Firewall Bricks in 130 countries. All sites, including many remote network locations, are centrally managed by Baker from Dublin, Ireland. The scalable centralized management and ease of deployment with no network reconfiguration required resulted in cost savings of more than 30 percent compared to the existing solution.*

## Value for service providers

With the Alcatel-Lucent MBN solution, you gain the ability to:

- Leverage core assets to generate new revenues from enterprise customers
- Extend the reach of Business VPN Services with a portfolio of managed CPE
- Deploy and tailor services quickly, accurately and cost effectively to meet the needs of individual enterprises
- Provide a range of managed Business Security Services, including secure remote access over the Internet and managed firewall services
- Build a foundation for up-selling Managed Communications (MCS), which can help you become enterprise customers' managed IT and communications partner of choice
- Reduce network operating costs and improve network efficiency

## Value for enterprises

The Alcatel-Lucent MBN solution helps you provide the following advantages for a broad range of enterprise customers:

- Reduced network-associated costs by up to 22 percent<sup>2</sup> — while increasing efficiency, productivity and ROI, supporting new applications and services and maintaining business continuity
- More predictable networking costs and a more flexible evolution path that reduces technology risk — while gaining the freedom to concentrate on core business
- A choice of Managed Business VPN services that provide superior performance, scalability and availability to support business-critical applications
- A range of managed business access options to extend VPN reach and provide secure remote access over broadband DSL and the Internet
- Industry-leading managed firewall and secure Internet remote-access solutions that integrate seamlessly with third-party security applications and devices
- The ability to maintain control of networks, monitor SLAs and make changes to service parameters using customer self-care portals
- Always-on services with optimum performance for business-critical communications and multimedia applications, improved productivity and consistent quality of experience, independent of location

## Managed Business Networking – dramatic cost savings for enterprises

Managed business networking services can dramatically lower total cost of ownership for enterprises, increase return on investment and eliminate many network management costs, such as equipment maintenance and upgrades. Along with more predictable operating expenses (OPEX) and significant cost savings, enterprises using managed business networking services also gain a better ability to focus on their core business.





Alcatel-Lucent has developed a business case model that evaluates the potential savings available when an enterprise decides to choose a service provider's managed business networking service, based on the Alcatel-Lucent MBN solution. The business case compares total cost of ownership differences between the present mode of operation and future mode of operation for a typical SME. It demonstrates potential cost savings of 22 percent for a typical SME across five categories:

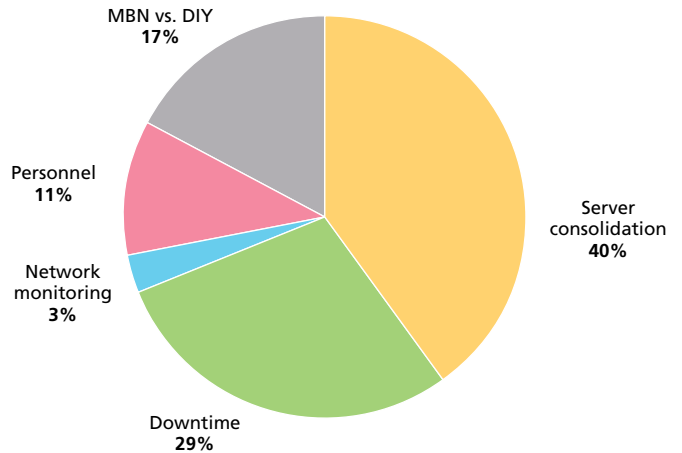
- MBN solution compared to do-it-yourself networking costs (links, support and administration)
- Network monitoring costs (equipment and maintenance)
- Personnel cost (staff reduction or re-allocation)
- Downtime costs (a reduction in complexity and failures)
- Server costs (consolidation leading to reduced OPEX costs)

**MASERGY: A MANAGED BUSINESS NETWORKING SERVICES SUCCESS STORY**

MASERGY, a privately-held global provider, offers a global Ethernet WAN service with five levels of QoS tailored to the specific needs of each enterprise customer. The MASERGY solution, called Intelligent Transport, enables enterprise customers to deliver mission-critical applications to multiple locations on a global basis using VPLS and IP-VPN technology — with the same reliability as any carrier-grade network that is deployed globally today. One key to MASERGY's impressive success is its strong focus on the customer. Feedback shows that MASERGY's Ethernet WAN service — based on VPLS — is just what enterprises want.

The foundation for MASERGY's ground breaking suite of Ethernet WAN services is the Alcatel-Lucent 7750 Service Router (SR). The platform gives MASERGY the power to provide business customers around the world with Ethernet hand-offs to all locations, allowing businesses to maintain the convenience and simplicity of Ethernet across their wide area network. In addition, the Alcatel-Lucent 7750 SR gives MASERGY the flexibility to offer Layer 2 VPLS, Layer 3 IP-VPN and public IP across the same Ethernet interface on separate VLANs.

**Figure 5. Relative share of Year 1 savings**



*“Since moving to VPLS, we have at least doubled the capacity at all of our locations, and in some cases it has increased 10-fold, while reducing our overall network costs by 36 percent.”*

**JERRY KNAUS, SYSTEMS AND NETWORK ARCHITECTURE, JEPPESEN (A MASERGY CUSTOMER)**



*“With its integrated solutions approach, including joint marketing and service support, Alcatel-Lucent is clearly the best candidate to help us expand our footprint and enhance our service mix so we can stay ahead of incumbents.”*

ADRIAN HOBBS, CHIEF TECHNOLOGY OFFICER,  
EXPONENTIAL-E

## VPN Consultative Marketing Program

Alcatel-Lucent’s VPN Consultative Marketing (VCM) program helps service providers develop and grow their managed VPN services business. Our dedicated experts provide market data, business strategies and joint marketing opportunities to accelerate the go-to-market process. Alcatel-Lucent understands that each service provider has unique requirements. The VCM program lets you choose which type of consultation you need — a short introduction to goals and issues or more involved sessions that address multiple aspects of your VPN services business. The program offers:

- *Research* – including the latest VPN market data to help you make key business decisions. Our experts can adapt the MBN business case based on real-life experiences, global market trends and primary research focused on specific business issues raised by existing customers.
- *Strategy* – which draws on a wide range of industry experts and works directly with service providers to develop business strategies targeted to their customers and their unique business requirements.
- *Marketing* – which offers joint marketing strategies and activities with Alcatel-Lucent, delivering the benefits of our global market reach. Whether through a single activity or an integrated marketing program, we can help promote your VPN services and accelerate market adoption.



## Partnering with Alcatel-Lucent

In today's competitive markets, launching any new service requires flawless execution. Implementing a managed business VPN service affects many assets and activities of your operation, including networks, applications, OSS/BSS, processes and organization. Each service provider has unique needs for a managed VPN offering, which requires considerable planning, design, integration, implementation and project management.

To assist you with this process, the Alcatel-Lucent Professional Services team provides the most experienced and knowledgeable services partner in the telecom industry. These professionals have supported the top 30 service providers, as well as enterprise and government customers in over 130 countries. They provide a comprehensive set of professional services, encompassing the entire network life cycle.

Because OSS/BSS integration is critical to the successful deployment of MBN, our OSS/BSS integration solution and professional services include: consulting, end-to-end solution design and integration, deployment, migration, program management and operation support services. Our managed network services, such as Managed Network Operations (MNO) and Carrier Network Outsourcing (CNO), offer a range of outsourcing options to help you reduce network OPEX. And our industry-leading experience in IP transformation services can also support your success, by mitigating the complexity and risk of implementing a Managed Business Networking solution.

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