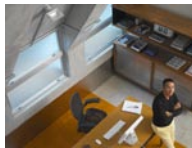
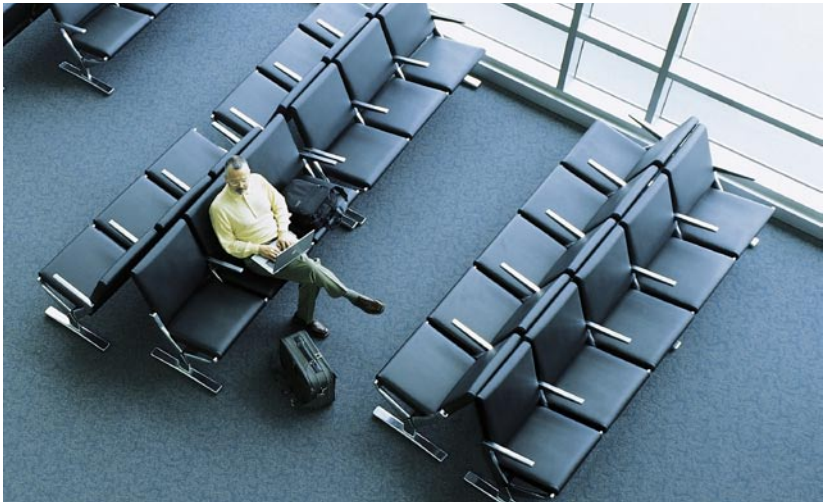




Managed Services Intelligence – The Benefits of Out-tasking



Overview



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Out-tasking network management to a managed services provider is more than a technology solution. Rather, by reducing costs and freeing up the IT staff to focus on the core business, managed services can play an important role in a company's business strategy. This primer explains the what, why, and how of managed services:

- The Expanding Role of the Network in Business Success
- What Are Managed Services?
- Reasons for Adopting Managed Services
- Types of Managed Services
- The Cisco® Powered Program

The Expanding Role of the Network in Business Success

All business has become global. Companies of any size can now market products and services worldwide over the Internet. At the same time, competition has intensified because customers can investigate global competitors with a few clicks of a mouse.

To compete effectively in a global market, companies need new capabilities:

- Global procurement and sales 24 hours a day
- Integrated internal and external business processes
- Up-to-the-minute access to sales, order processing, production, and other business-critical information required for informed decision making
- Flexible processes that can adapt dynamically to changes in the business climate

Meeting these challenges requires a fast, reliable, and secure IP network. However, maintaining the IP network requires regular, ongoing investments in networking infrastructure and IT staff training. Many companies find it expensive to keep up with new technologies—or simply prefer to devote IT resources to the core business rather than ongoing network management.

Managed services bridge the gap by giving companies access to leading network technologies and management expertise without requiring high initial capital expenditures (CapEx) or ongoing investments in technology upgrades.

What Are Managed Services?

When a company subscribes to a managed service, a service provider manages the network equipment and applications on the customer premises according to the terms of a service-level agreement (SLA) established to meet the company's unique business needs. Some managed services are also hosted, meaning that the service provider hosts the equipment in its facility instead of the customer's, and delivers services to company employees over the WAN.

For small and medium-sized businesses (SMBs), managed services provide enterprise-class capabilities for a predictable monthly fee—without requiring a large, initial capital investment. Companies that out-task enjoy high levels of network support and availability, enable internal IT staff to focus on strategic activities instead of network support, and pay only for those networking services that they need.

Key Benefits of Managed Services

- Reduces costs, including traditional service fees, hardware, IT operations, and transport
- Eases adoption of new business processes
- Increases levels of support and network availability without additional staff
- Makes the IT budget more stable and predictable
- Provides access to the latest technology with limited risk
- Provides access to an enhanced skills base
- Makes it easier to adapt to changing business conditions
- Enables the IT group to focus on the core business

Managed services generally include software, hardware, and other IP networking services. The service provider's highly experienced technical experts focus exclusively on providing the network services and support that their customers need to meet their business requirements.

Companies have the option to out-task some or all of their network management and monitoring tasks and retain control of the rest—even if the equipment is physically located at the provider's site. Following are typical scenarios for deploying managed services.

Scenario 1: Customer Owns Network and Shares Management Responsibility

Companies that already have an internal IP network can continue to manage it while out-tasking management of onsite equipment, usually known as customer-premises equipment (CPE), used for the managed service, such as a Cisco Unified CallManager system or a Cisco intrusion prevention system (Figure 1). Roles are as follows:

Service provider – Sets up, maintains, and administers the equipment needed for the managed service, including company-owned equipment such as servers

Company – Maintains and administers its internal network

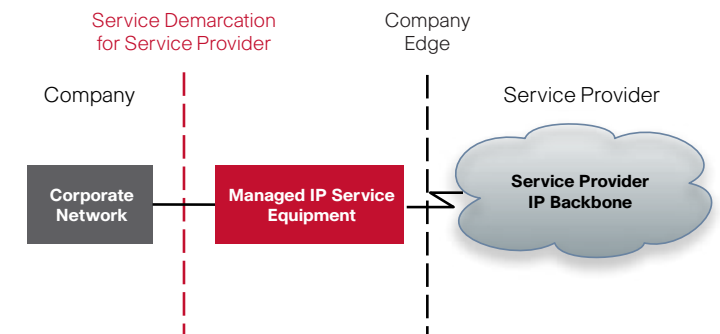


Figure 1 Service Provider and Customer Divide Responsibility for Customer's Network Infrastructure

Scenario 2: Service Provider Owns the CPE; Customer Can Share Equipment Management with Service Provider

Some companies do not own a LAN, either because the location is new or the company already out-tasks its LAN services. In this situation, the service provider can manage the equipment needed for the corporate network as well as the managed service. Many large enterprises like this arrangement because they can maintain physical control of the equipment while relying on the service provider for 24-hour network operational support. Roles are as follows:

Service provider – Sets up, maintains, and administers the equipment for the managed services as well as the corporate network (Figure 2)

Company – Monitors its corporate network through a Web interface provided by the service provider, receives regular reports on the network status and managed services, and is notified in case of a defined emergency

Scenario 3: Service Provider Owns Equipment in its Own Facility; Customer Monitors Service Provider’s Management of the Equipment

The difference between this scenario and the previous one is that most of the equipment is physically located in the service provider’s hosting facility instead of on the customer premises. Roles are as follows:

Service provider – Sets up, maintains, and administers the corporate network and related managed services; most of the network equipment is physically located in the provider’s computing center; the exceptions are the equipment for the LAN and network connections, as well as gateways for computers and IP telephony

Company – Monitors performance of its systems through a Web interface provided by the service provider, receives regular reports on the network status, and is notified in case of a defined emergency

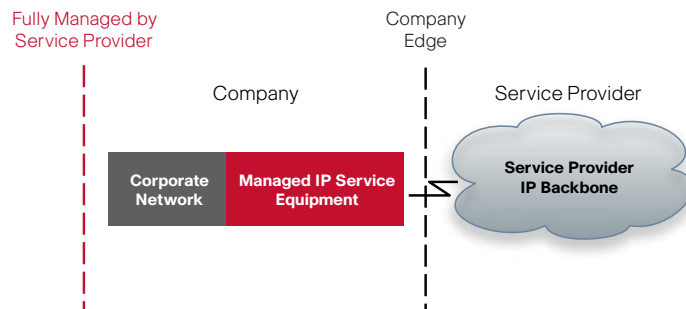


Figure 2 Service Provider Manages Customer Infrastructure as well as the Managed Service Equipment

Reasons for Adopting Managed Services

In October 2006, market analyst Ovum Ltd conducted a survey to identify the major reasons that companies adopt managed services. The primary reason for managed services adoption is cost reduction. The next most highly rated reasons are higher levels of support and availability, predictable costs, and access to the latest technology (Figure 3).

Table 1 explains the reasons for adopting managed services.

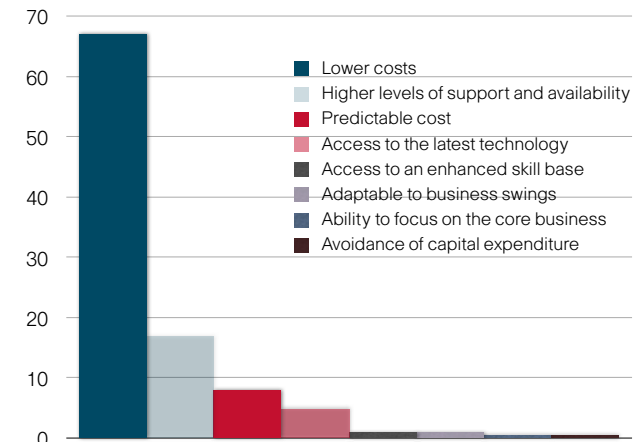


Figure 3 Reasons for Adopting Managed Services

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Table 1 Why Companies Adopt Managed Services

Motivation for Adopting Managed Services	Reason
Lower costs	Managed services are one of the most effective methods for companies to reduce IT costs while gaining access to innovative network technologies that can confer a competitive advantage. The service provider manages and administers the network equipment and applications, reducing hardware and operational costs. Managed services also eliminate the risk that the company will need to make a large capital expenditure to accommodate unplanned business changes, such as increased bandwidth or performance requirements.
Higher levels of support and availability	Managed services include professional support and SLAs for availability as well as performance.
Predictable costs	Managed services costs always remain at the level specified in the contract so that the IT budget becomes stable and predictable.
Access to the latest technology	The network is the service provider’s business. Therefore, providers can justify the ongoing investment in advanced network technologies and expertise to remain at the vanguard and companies that subscribe to managed services gain access to the latest technology for security and availability, up-to-date services, and the newest standards.
Access to an enhanced skills base	The service provider maintains a staff of specialists whose skills benefit the companies that subscribe to the managed service. Technical innovations and solutions are implemented quickly and at a reasonable cost, and the company is not required to continually expand its own IT staff.
Adaptability to changing business conditions	The service provider can expand or reduce the breadth and depth of managed services based on a company’s business needs. This flexibility enables companies to avoid the high CapEx and operating expenses (OpEx) associated with maintaining a network and keeping it up-to-date.
Ability to focus on the core business	Service providers dedicate themselves entirely to customer requirements, thus freeing the company’s IT staff to concentrate on its core business.
CapEx reduction	Managed services usually cover most networking requirements, largely eliminating all CapEx other than those for the LAN itself. Companies can eliminate even this CapEx by subscribing to managed LAN services.

Managed Services: Who Is Using Them?

Companies of all sizes are adopting managed services to gain a competitive advantage in a rapidly changing business environment. Ovum projects that global managed services revenue will reach US\$42.4 billion at 20 percent compound annual growth rate (CAGR). Managed services for IP telephony, Metro Ethernet, and security are expected to grow the fastest, while IP VPN remains the largest opportunity (Figure 4). The opportunity is worldwide, with the largest opportunity in North America (Figure 5).

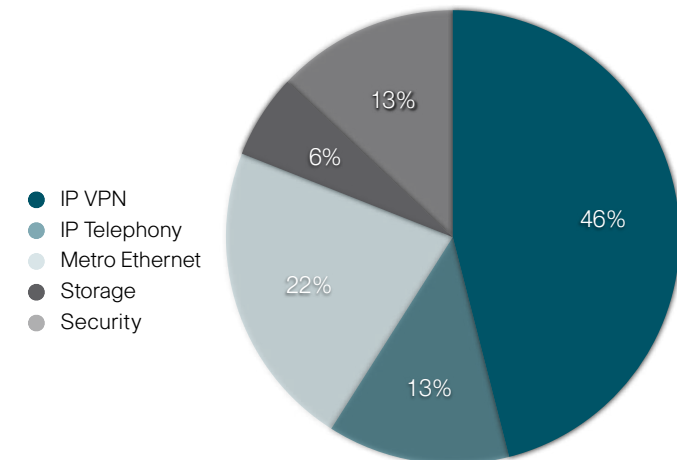


Figure 4 Individual Managed Services Revenue as a Portion of the Total Market

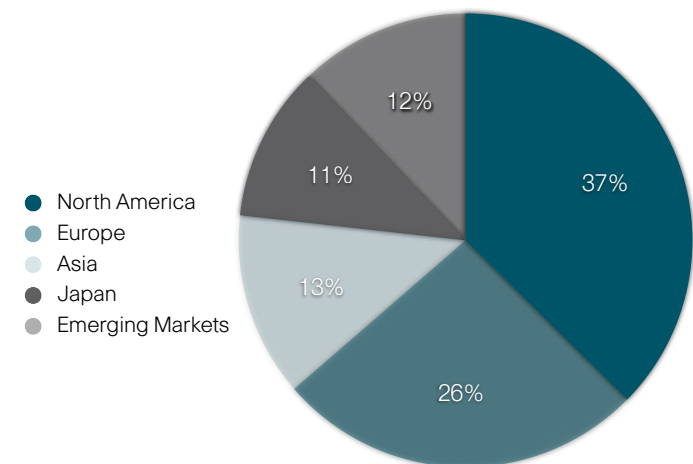


Figure 5 Managed Services Revenue Breakdown by Region

Which Business Challenges Can Managed Services Solve?

Managed services are an innovative and cost-efficient alternative to managing the network with internal resources (Figure 6). They enable a company’s personnel and financial resources to focus on core business concerns and allow the company to pay for only those services it requires. This arrangement frees the company from having to hire staff with expertise in multiple networking technologies and invest in ongoing training.

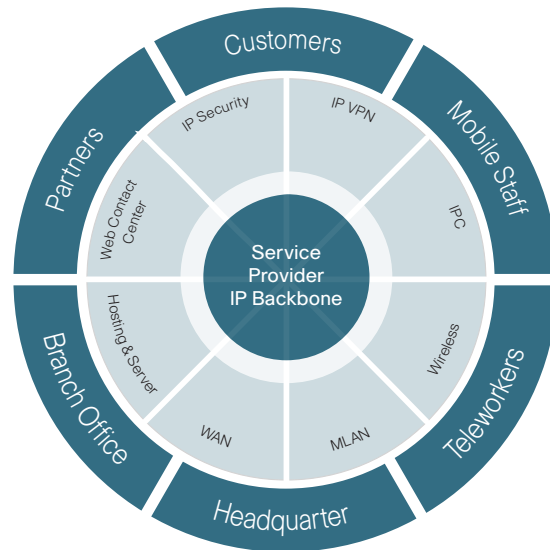


Figure 6 Overview of Managed Services

Table 2 lists commonly available managed services and the business needs they address.

Table 2 Matching Managed Services to Business Needs

Managed Service	Business Need It Addresses
Managed security	Protecting critical business information from external threats
Managed IP VPN	Communicating with remote staff, customers, and partners
Managed LAN	Monitoring the internal network
Managed IP contact center	Managing the customer experience
Managed IP communications	Unifying voice services
Managed hosting and storage	Managing the Website and stored company data
Managed wireless and mobile computing	Enabling employee mobility
Managed WAN	Transporting high volumes of network traffic

In addition to the services listed in Table 2, many service providers also host network-based business productivity applications, sales force automation tools, unified messaging, and other applications.



Types of Managed Services

Managed IP VPNs

IP VPN is among the most widely used technologies for secure, high-performance, and cost-effective networking.

The major benefits of IP VPNs are cost savings, flexibility, and the option to add managed services such as IP telephony at a reasonable cost. They are often the most effective and flexible option for providing secure access to mobile staff and business partners because they link distributed sites and centralized applications servers. As replacements for aging Frame Relay, ATM, and private-line networks, IP VPNs greatly reduce network complexity and the total cost of ownership.

Benefits

- **Eliminate expensive parallel access connections**
An IP VPN replaces expensive, multiple, parallel circuits to each remote site with a single, cost-effective access link. In addition, the IP VPN eliminates the need for time-consuming, manual configuration of each virtual network.

Managed Services Options

- **Site-to-site VPN** – Connects main and branch offices with a shared network and extends network services to external users such as customers and business partners
- **Access VPN** – Connects remote workers and mobile users to the corporate network using dial-up, DSL, ISDN, wireless, and cable technologies
- **Multiservice VPN** – Connects multisite locations, and combines voice, video, and data traffic on a single, converged network

- **Increase data security and access authentication**
Managed IP VPN traffic is secured, monitored, and controlled by the provider 24 hours a day. Companies that use a managed IP VPN service protect their distributed data and applications against external security threats.
- **Consolidate and simplify the network infrastructure**
A managed IP VPN can transform islands of network resources into a unified, efficient, and reliable communications system, improving productivity for end users and IT staff.
- **Enable powerful distributed applications and multimedia workflows**
Managed IP VPNs accommodate both older hub-and-spoke traffic flows and newer peer-to-peer applications. Consequently, companies can more easily introduce distributed, rich-media applications to gain a competitive advantage.
- **Improve performance, scalability, and reliability**
Managed IP VPNs run on a service provider's high-performance backbone, which incorporates advanced network technologies and services. To achieve similar performance levels internally would require extensive effort and high expense.

Managed Security Services

Managed security services provide “defense in depth” with a broad range of solutions.

Keeping current with constantly evolving security technologies is expensive—and requires ongoing investment. The price of failure can include loss of productivity, revenue, and intellectual property. As a result, managed security services are highly attractive options for many businesses.

Benefits

- **Achieve regulatory compliance**
Service provider networks comply with standards such as Payment Card Industry Data Security Standard (PCI-DSS), which requires secure transmission and storage of payment card information.
- **Reduce the cost and risks associated with data theft and data corruption**
A service provider’s security team can remotely monitor and protect all the devices in the company’s network from the company’s secure data center, 24 hours a day.
- **Increase productivity from reduced downtime and network outages**
Security requires constant monitoring of networks, servers, and desktop computers. Service providers can take advantage of their economies of scale to provide monitoring at lower costs.
- **Protect against internal and external threats**
As companies use their networks to reach out to customers and trading partners, they face increasing risk from viruses, hackers, and other external or internal security threats. A managed service helps protect companies’ distributed systems from becoming compromised.
- **Protect physical assets as well as data**
Experience demonstrates that hackers and intruders target not only corporate data, but also corporate systems. Managed services protect the entire network infrastructure.

Managed Services Options

- **Managed firewall** – This option protects internal and external networks by restricting the types of network protocols and traffic allowed on the network. The service can be deployed as a standalone managed service or as part of a defense-in-depth approach. Managed services that include managed firewall include secure Internet connectivity, managed VPN, distributed denial-of-service (DDoS) mitigation, intrusion prevention system, anti-x, and endpoint protection.
- **Managed intrusion prevention system** – This option detects and prevents network intrusion when used in conjunction with firewalls.
- **Managed endpoint protection** – Managed endpoint protection detects and stops anomalous application behavior on servers as well as desktops, using Network Admission Control and Cisco Security Agent.

Managed IP Communications

Businesses of all sizes are increasing productivity and reducing costs by delivering voice services over the same IP network they use for data.

To avoid the CapEx and OpEx of separate voice and data networks, companies can add a managed IP communications service to their IP VPN.

Benefits

- **Pay as you grow**
Companies can start with just the number of IP phones they need and expand the service as they grow.
- **Reduce ongoing costs**
Elements of cost savings from a managed IP communications service include reduced toll costs for intersite and long-distance calls, reduced internal staffing and support requirements, and elimination of costs for extension moves, adds, and changes.
- **Enhance productivity**
Productivity-enhancing applications available with a managed IP communications service include extension mobility, find me/follow me, companywide voicemail access, and the ability to check e-mail and voicemail from one place (either the e-mail inbox or the voicemail box).
- **Ensure highest voice quality**
A managed IP communications service helps ensure excellent voice quality with guaranteed SLAs and the option for 24-hour professional support.

Managed Services Options

- **Managed or hosted IP telephony services** – Provides an IP telephony server, either on the customer premises or the service provider’s site
- **Site-to-site voice VPNs** – Enables companies to use the provider’s voice-over-IP (VoIP) infrastructure for toll bypass on inter-company calls
- **Managed and hosted unified messaging** – Provides messaging services such as voicemail, e-mail, fax, and find me/follow me, enabling employees to define how they receive messages and calls
- **Enhanced IP communications services** – Includes centralized management of a company’s private dial plan; call blocking to international, mobile, premium-rate, or defined sets of numbers; comprehensive call reporting; and other services

Managed IP Contact Center

Managed IP contact centers combine traditional call center features with intelligent IP call routing, unified communications, and affordable pay-as-you-go cost models. They can improve sales, marketing, and customer-support functions by integrating e-mail, phone, Web, instant messaging, fax, and other human or automated forms of customer contact.

With a managed IP contact center service, companies can provide their customers with a fully functional Web contact center at a fraction of the cost of an internal solution.

The application itself is deployed on the service provider's network, and the company may or may not need a gateway to access it. Regardless, company agents access the application from any PC with a Web browser (Figure 7). Companies benefit from the carrier-class security and reliability of the service provider's network, and also because the carrier assumes the financial risks associated with operating the center. Companies also avoid the expense of purchasing or developing contact center software.

Managed Services Options

- Managed IP contact center with complete processing of communications workflows
- Unified messaging, directory, and search services
- Integration of messaging solutions such as Microsoft Exchange
- Additional tools for personal assistance, Web collaboration, reporting, and video telephony
- Corporate billing, accounting, and network communications management
- Training the staff or assisting with staffing needs

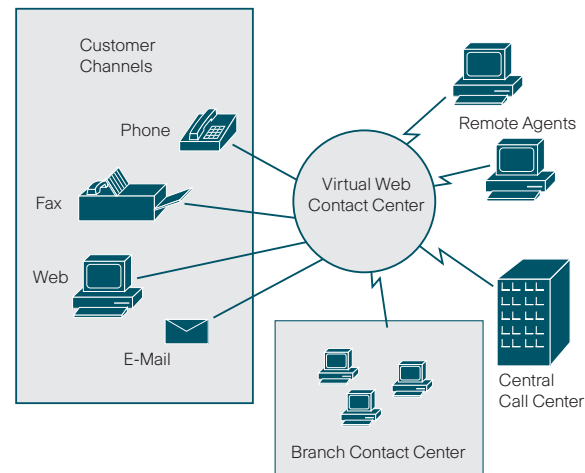


Figure 7 Managed IP Contact Center

Benefits

- **Reduce CapEx**
Call center agents do not need specialized hardware; instead, they access the network-based contact center application using a standard PC and Web browser.
- **Control OpEx**
Businesses benefit from the service provider's cost-sharing model and pay per agent or by usage. The contract can also include the cost of periodic equipment upgrades.
- **Enjoy flexible deployment options**
Companies can begin using a managed IP contact center service with as few as one agent and scale to up to hundreds of agents to meet growing customer demand. The decision to expand the contact center does not need to be influenced by capital investment costs or the risks of a lengthy deployment effort. Companies can open new contact centers in any region where the provider has coverage, and can also support home-based agents.

Managed Hosting and Storage

Companies that subscribe to a managed hosting service eliminate the costs of acquiring and maintaining equipment, floor space, and hiring and training IT specialists. Instead, they take advantage of the service provider's investment in expertise, hardened facilities, and guaranteed SLAs.

Pay-as-you-go data center services give companies more flexibility in their business and financial planning. If companies need more capacity to accommodate growth or special projects, the service provider can provision it very quickly. Companies can customize the service to meet their business needs.

Service providers can include Cisco Wide Area Application Services (WAAS) as part of their managed service. It enables employees in branches and remote offices to access centrally hosted applications and storage at LAN speeds. This service feature directly benefits companies that have consolidated their servers and storages to achieve better disaster recovery and business continuity, or to meet legal requirements for securing and archiving data.

Managed Services Options

- Microsoft Exchange servers and other messaging systems
- Major Web and database server solutions
- Remote storage, backup, and archiving
- E-commerce markets and storefronts
- Content streaming and caching for content-delivery networks (CDNs)
- Multimedia streaming, video multicast, and so on
- Customer-resource-management (CRM) and sales-force-automation (SFA)

Benefits

- **Support data center needs cost-effectively**
Service providers handle large volumes of IT activities involving Web, database, storage, and communications solutions, and can pass on lessons learned and best practices to their customers.
- **Increase performance and reliability**
By equipping their carrier-grade data centers with state-of-the-art systems, service providers can guarantee the highest level of performance and reliability at all times.
- **Greater scalability for maximum flexibility**
Service providers design and deploy their systems for optimum flexibility and with the scalability to handle peak requirements.

Managed Wireless and Mobile Computing

Wireless data services can greatly enhance productivity and collaboration, but most companies lack the expertise to operate them. Subscribing to a managed service for wireless and mobile computing enables businesses to enjoy the advantages of wireless technology without the associated CapEx, deployment effort, and complexity.

Service providers can host wireless e-mail, scheduling, and SFA servers in secure data centers for access by mobile employees using wireless laptops or handheld computers. Service providers that have wireless infrastructures can also offer managed mobile computing solutions such as wireless LAN access and mobile application software hosting. Related managed services include end-user support as well as remote management and updates for mobile computing devices.

Companies can also out-task the deployment and management of their internal wireless networks—either Wi-Fi hotspots or campuswide indoor wireless networks—to the service provider. A managed service reduces total cost of ownership and provides greater resiliency than most internally managed wireless networks.

Managed Services Options

- Managed wireless LANs or Wi-Fi hotspots, including deployment and operation
- Billing, accounting, and systems for network communications management
- Advanced mobile security architectures
- Help desk and support center

Benefits

- **Increase productivity**
Mobile employees can access important applications and information from the field, avoiding time spent driving to the office.
- **Increase deployment of revenue-generating wireless initiatives**
Companies can quickly introduce productivity-enhancing applications for their mobile employees without the expense and delays of testing and extensive training. The service provider tests the technology thoroughly and provides user-friendly interfaces.
- **Savings on in-house expertise for rapidly changing technologies**
Service providers can provide help desk services to support business-critical mobile applications.
- **Secure environment for mobile applications**
Service providers protect their wired and wireless networks end to end with Cisco Self-Defending Network technology.



Managed WAN Services

Service providers offer a wide range of managed WAN connectivity services, including Frame Relay, private lines, ATM, Metro Ethernet, and others.

Traditionally, companies that wanted to transport high volumes of mission-critical data between offices needed a leased line. Although leased-line services offer guaranteed transmission speeds and data integrity, they are cost prohibitive for all but the largest companies. Managed WAN services offer a more cost-effective alternative.

For mission-critical WAN applications, service providers can offer guaranteed SLAs for 99.999+ percent availability.

Benefits

- **Reduce costs compared to self-built WAN services**
Building and maintaining a WAN often costs more than companies estimate because of the hidden costs of support, maintenance, repair, configuration, and downtime.
- **Increase reliability and guarantee SLAs**
Service providers deliver higher availability levels than possible in most company networks because of their 24-hour operations, sophisticated troubleshooting resources, and experience with network design.
- **Enjoy onsite management of customer premise equipment**
Service providers can include management of customer internal networks in the service agreement.
- **Benefit from sophisticated planning and reporting of WANs**
Service providers use advanced planning and analysis tools to design and deploy WANs according to accepted best practices.

Managed Services Options

- **Metro Ethernet** – Provides access from remote sites to mission-critical applications demanding high bandwidth and superior performance; used mainly by large companies
- **Multiprotocol Label Switching (MPLS) VPN** – Blends the intelligence of routing with the performance of switching; provides scalability, end-to-end QoS, rapid fault correction of link and node failure, bandwidth protection, and a foundation for deploying additional value-added services; provides a popular choice for service provider core networks or large enterprise networks; benefits for application performance and availability include enhanced traffic engineering, bandwidth management, and QoS

Managed LAN Services

The costs of network maintenance and updates increase in step with network usage. Service providers can manage a company LAN over the network, helping to reduce total cost of ownership.

With a managed LAN service, service providers remotely maintain and monitor a company's internal network. Managed LAN services can include scanning desktop PCs for viruses, performing PC hard disk backups, and managing LAN network devices. Some service providers also offer first- and second-line fault resolution and help desk services. Out-tasking makes good business sense for many companies because these services are contextual—not central to the business.

Often a company begins by engaging a service provider for a managed WAN service, adds a managed LAN service, and then later adds managed IP telephony.

Benefits

- **Lower operational expense**
Service providers manage all onsite and remote LAN support activities. Therefore, businesses can avoid hiring, training, and finding office space for staff.
- **Active LAN management**
Service providers employ experts who monitor a company's LAN 24 hours a day to report on performance status, faults, and changes. They rapidly detect problems and either resolve them or offer appropriate advice.
- **Professional support options**
Service providers staff their operations centers with skilled staff, provide 24-hour self-service reporting and incident tracking with Web tools, and adhere to guaranteed SLAs.

Managed Services Options

- LAN installation and management
- Desktop and server management, including backup and archiving
- Virus checking and scanning
- Onsite and offsite support
- Monitoring and analysis of the network



The Cisco Powered Program

Cisco understands that finding a provider that is a good fit for the business is critical—and that is why the company developed the Cisco Powered program.

Cisco awards the Cisco Powered designation to a select group of service providers worldwide that offer their customers reliable, proven, and cost-efficient technologies and solutions. The Cisco Powered logo indicates that the service provider uses industry-leading Cisco solutions in its network and that Cisco recommends its managed services. Some providers have also undergone a third-party audit for IP VPN or Metro Ethernet managed services and are certified by Cisco as meeting Cisco QoS standards. Providers who are members of the Cisco Powered program receive comprehensive support from Cisco to ensure high-quality results, including security audits, troubleshooting, assessment, best practices, and training programs.

Businesses that work with a member of the Cisco Powered program can enjoy the peace of mind that comes from knowing that the service provider uses Cisco equipment in the delivery of its services; meets Cisco standards for network support; and achieves Cisco standards for interoperability, service reliability, and service quality.

For further information about finding the right service provider for your business requirements, visit <http://www.cisco.com/cpn>



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