Cisco Systems

CISCO GUIDE TO BUYING MANAGED NETWORK SERVICES

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BUYING NETWORK SERVICES: CASE STUDY

Fontango, an online-only business serving the European community, enables digital and conventional camera users to view, share, and organize their photos. Fontango requires 24-hour, fully scalable, high-bandwidth Internet access in a highly secure environment. Fontango chose a service provider to deliver a cost-effective, fully managed access solution, using its pan-European network of advanced Internet Solutions Centers for Web hosting and state-of-the-art fiber-optic networking. By choosing to out-task essential Internet access services to a service provider whose service is built over end-to-end Cisco equipment, Fontango retained control of its Internet presence with dedicated, secure rack space that met its requirements for support, network performance, and enterprise-level security.

"We wanted to integrate voice, IP, and data on the same high-speed network for cost-saving efficiencies in terms of IT staff and for the easy rollout of new productivity-enhancing applications such as Service Advertising Protocol (SAP). [With our service provider] we are already seeing a return on investment and have found out how much more efficient our business can be."

Bill Freyer
Vice President of Information Technology
JT International, Switzerland
Purchaser of Managed Services

Business Case for Out-Tasking

In today's market economy, businesses depend on increasingly complex networking technology to support internal processes and external relationships with customers, suppliers, and partners. Many businesses have come to realize that keeping on top of a sophisticated network infrastructure can tax resources that could be better devoted to core business competencies.

Many companies are therefore choosing to out-task some or all of their network functions to service providers. Companies are finding that out-tasking can help achieve significant revenue benefits, increase flexibility and agility, and provide access to skills that a business might not have in-house—such as networking, security, or communications—with the added assurance that these skills will be up-to-date and scalable.

As more companies realize that out-tasking does not mean losing control over critical business functions—that it is possible to determine the degree of in-house management and monitoring, even for network services whose physical components are located at service provider facilities—the trend toward out-tasking networked business functions is growing.

Whether your company is large or small, if you are considering out-tasking some or all of your networked business functions, Cisco Systems® can help ensure a positive result. Cisco® has extensive experience in making out-tasking work for businesses and, because choosing the right provider is an essential element of success, has identified service providers whose networks are built end to end with Cisco hardware and software. These recommended providers carry the Cisco Powered logo designation on their services and provide the peace of mind you need to turn over essential networking functions for your business so you can concentrate on what you do best.

The information in this guide will help you determine whether out-tasking is right for you. In this guide you will learn about:

- The basics of out-tasking
  - What services companies are out-tasking
- Growth trends
- Benefits of out-tasking
- Selecting a service provider
  - Service-level agreements
  - Cisco Powered Network designation
- Resources for further investigation
- Frequently asked questions

Fundamentals of Out-Tasking Network-Based Services

Out-tasking a network-based service means that a company hands over part or all of the management of its network infrastructure, applications, and security to networking experts. These experts might include service providers, systems integrators, or value-adding resellers. Businesses might out-task a particular service or set of services or might out-task most IT functions.

Out-Tasking Defined

Out-tasking is the contracting by an organization with a third party for the management and enhancement of ongoing operations for particular elements of its network services.

Outsourcing is typically used to describe an organization that has a third party handle entire business functions.

Out-tasking, as opposed to outsourcing entire business functions to a third party, offers companies flexibility in choosing which aspects of its operations are best handled in-house and which can be turned over to a service provider. For example, a business might choose to out-task management and service provision using its own network infrastructure or might choose to connect to a service provider's infrastructure.

Who Is Out-Tasking

The practice of out-tasking is expanding to encompass more services, strategic alliances, and industries because more and more businesses are finding out-tasking critical to competitiveness and growth. Large businesses are the most likely to out-task services, led by banking, insurance, and financial services, followed by medium-sized businesses and government.

"The out-tasking relationship is key to solving our business problems."

Joseph Quinlan
Director, Internet Architecture
Pierson Technology, USA
Purchaser of Managed Services

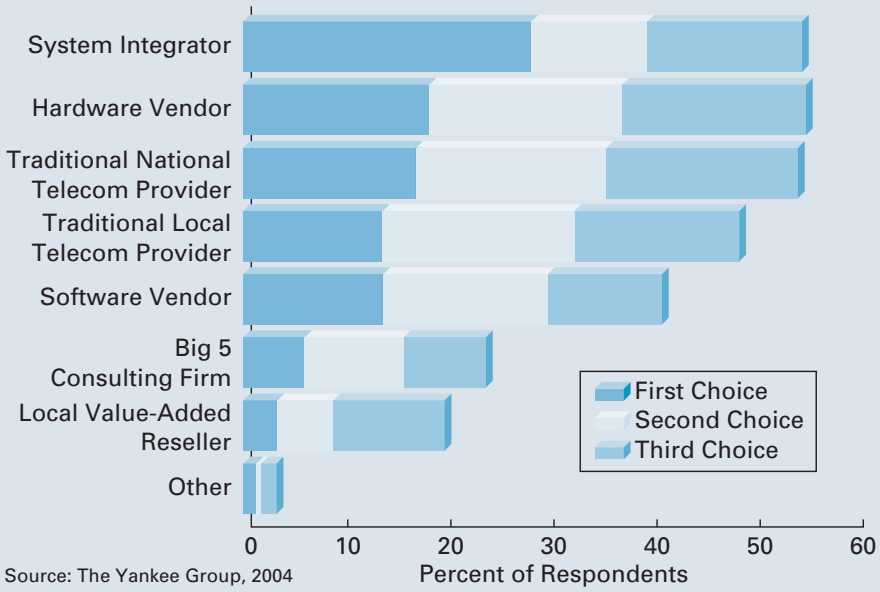
Core services commonly out-tasked are:

- Managed VPN
- Intranet and Internet hosting
- Data storage
- Managed security
- Business continuance/disaster recovery
- Backbone network transport
- Managed business voice
- Managed contact centers

Specialized services are also filling important needs. Financial companies, for instance, are using content and mobile wireless services, and health-care companies are taking advantage of hosted applications. Typical services used by one or more industries include:

- Content services
- Mobile wireless services
- Broadband services
- IP communications
- Hosted applications
- E-commerce
- Customer support and help desk

Figure 1 CIOs Say Outsourcers are Best Providers of Technology Solutions



Source: The Yankee Group, 2004

The Growth of Out-Tasking

Growth trends indicate that out-tasking is proving to be both economically advantageous and strategically effective.

- The total U.S. managed network services industry is expected to increase from US$7.9 billion in revenue in 2000 to US$31.4 billion by 2006, a compound annual growth rate of 22.4 percent (Gartner, 2002).
- Ethernet service revenue is expected to increase 57 percent compound annual growth rate (CAGR) from 2003 to 2008 (Yankee Group, 2004).
- Business voice revenue is expected to increase 214.8 percent CAGR from 2003 to 2008 (Gartner, 2004).
- Managed services can help businesses reduce overall network costs by 15 to 25 percent (Gartner, 2002).
- Compared to traditional services such as Frame Relay, DSL VPNs reduced the total cost of wide-area networking by 17 to 65 percent (META Group).
- Yankee Group research found that chief information officers consider IT outsourcers to be the best providers of technology solutions (Yankee Group, 2004).

"It would be a total waste of time for me to try to understand functionality that is not in my core business."

John Gilbert
CEO and Executive Vice President
Rudin Management, USA
Purchaser of Managed Services

When to Consider Out-Tasking

Consider the scenarios outlined in Table 1 to decide whether out-tasking is the best solution for your company.

Table 1. Out-Tasking Checklist

Why—My business is facing challenges	
√	
	Staffing IT professionals
	Staying up to date with evolving technologies, security monitoring, and IT skill sets
	Managing and maintaining current infrastructure, hardware, and software
	Securing data, transactions, and communications
	Responding quickly to time-to-market demands
	Remaining flexible enough to maintain our competitive position
	Reducing cost margins on overhead
	Operating in real time in order to meet 24-hours-per-day requirements

When—My business is in transition	
√	
	It is time to upgrade, refurbish, move, or relocate existing infrastructure
	The scope or scale of current business operations is changing
	A merger, partnership, or acquisition is altering operations
	We need to increase our range and level of service to meet customer demand or competitive challenges
	Our projected growth targets are dependent on implementing new technologies
	We are expanding into a national or international market

Who—My business is setting priorities to increase revenue	
√	
	We prefer to focus on core competencies and mission-critical processes rather than dedicating resources to supporting network applications
	We are able to purchase specialized services that complement our core business
	We need to implement a global network service but lack internal global resources
	We are concerned with the security of our network and our ability to meet privacy or security regulations
	We need better tools and dedicated resources to keep up with the latest security threats
	We are experiencing dynamic business growth while undergoing downsizing and hiring freezes

PRIMARY BENEFITS

Customers, partners, investors, analysts, and unstable market conditions have all caused increased demand for speed, access, availability, reliability, security, service, and support. Out-tasking is one way to meet these demands and remain competitive in today's shifting economic climate. Companies give the following reasons for their decision to out-task:

- Enables the company to focus on its core business
- Fuels business growth with access to world-class capabilities
- Enhances security for operations and private data
- Offers superior high-performance network availability
- Increases speed and agility to meet market demands
- Supports faster implementation and optimal interoperability of new networking and communications services
- Secures mission-critical applications and transactions
- Provides access to leading technology that companies might not otherwise be able to afford

BUYING NETWORK SERVICES: CASE STUDY

The Prudential Group is one of the United Kingdom's largest financial service providers. When Prudential needed to move complex, confidential financial transactions online, security was paramount. Prudential turned to a service provider whose fully managed solution allowed it to offer customers online trading in a secure environment using advanced digital certification and encryption technology. Access privileges for customers and financial advisers are controlled by the service provider based on Prudential's requirements. Essential security is only one of the advantages Prudential has gained by working with a service provider; network administration and management of an extensive extranet has been simplified, cost efficiency improved, and transaction times reduced. The service provider is, in turn, partnering with U.S.-based Verisign for the Managed PKI certification technology. By choosing to out-task to a service provider whose service is built over end-to-end Cisco equipment, the Prudential Group has access to the latest security, network technologies, and expertise, without the overhead.

Benefits of Out-Tasking

Return on Investment

In addition to the above reasons, 48 percent of companies that out-task do so specifically to reduce and control operating costs (Outsourcing Institute, 2001). Cost reductions can be significant in areas such as operations, maintenance, service, equipment (hardware, software, and infrastructure), and technology upgrades.

Out-tasking saves companies money:

- Reduces maintenance and operations costs
- Reduces internal IT and information services (IS) staff and service expenditures
- Reduces operational and capital expenses
- Reduces costs incurred for training, staff turnover, and keeping the staff trained on new technologies, upgrades, viruses, etc.
- Creates economies of scale
- Provides predictable costs for information technology

Out-tasking does require careful analysis of your business model and evaluation of the financial factors involved, especially if your company is used to "doing it all." For example, the level of network availability your company requires can make a difference in the cost of out-tasking. Organizations that are dependent on high levels of uptime will want to invest in the standard maximum target rate of 99.999 percent availability. Companies with lower availability requirements might be able to save in this area.

For small and medium-sized businesses, the ability to count on predictable, typically fee-based networking costs while improving operational efficiency is a very large benefit of out-tasking. It gives smaller companies access to enterprise-class economies of scale while keeping costs steady.

"[Our service provider] is by far the most proactive organization we have worked with in the data arena. We were always getting information about our installation process before we asked for it."

Kevin Jones
President
Evisions, Inc., USA
Purchaser of Managed Services

BUYING MANAGED SERVICES: CASE STUDY

As one of the leading feeder and container shipping operators in the Asia Pacific region, Regional Container Lines (RCL) covers more than 70 destinations in Asia, Australia, and the Middle East. With nearly 40 agencies operating in various countries, RCL relies on its network to provide critical sailing and cargo information updates. As its business requirements grew, the existing Frame Relay network became less flexible. In early 2003, RCL decided to upgrade to IP VPN based on Multiprotocol Label Switching (MPLS) to support its business expansion needs. The new network offered RCL significant cost savings and increased communications efficiencies, as well as benefits, including:

- **Improved voice quality and simplified call routing**
- **Better network management with built-in quality of service (QoS)**
- **Reliable technology that supports cost-effective convergence solutions**

"For RCL, the upgrade to [the service provider's] IP VPN represents a better ability to service customers with a more flexible, cost-effective IT and communications infrastructure," says Margaret Lau, senior vice president of Group IT, RCL.

8 QUESTIONS TO ASK WHEN CHOOSING A SERVICE PROVIDER

1. Does the service provider track and monitor the end-to-end network?
2. Can the provider secure its own network traffic and manage priority traffic across other networks?
3. What are minimum thresholds for network latency and availability?
4. How is network performance measured?
5. Are there procedures for trouble escalation, load rebalancing, network security assessments, and regular data backups?
6. Can its data center support your requirements for physical and network security, capacity, availability, operations, and backbone connectivity?
7. How quickly will the provider respond as your business grows or changes?
8. What are the terms if the network goes down or the level of agreed-upon service is not maintained?

Selecting a Service Provider to Manage Your Network Services

Essentials

Choosing the right service provider when out-tasking essential business functions can be vital to your business. Assessing your business requirements, environment, and objectives is an important first step in finding a provider that offers the right amount of customization to support your best practices, supply chains, and customer relations. It is up to the service provider, in turn, to deliver predictable and consistent service and performance.

Using multiple service providers and vendors can spread risk and provide fail-safe redundancy. However, the "gray area" between coverage by one provider and another needs to be considered. When multiple service providers are used, choosing providers that all build their networks end to end with Cisco equipment minimizes these complications.

Service-Level Agreement Basics

One of the first items to consider when choosing a service provider is its standards for network availability, reliability, and security. These are usually defined in a service-level agreement (SLA), a contract between a business and the service provider. This contract is your opportunity to help ensure that your business goals and the services you are purchasing are aligned. Use the SLA to define QoS across important parameters and to identify security procedures and measurements. The SLA should cover the activity of all routers, switches, paths, and points of presence (POPs) across multiple vendors.

Quality of Service

The SLA should include QoS standards, typically covering mission-critical network availability, throughput, packet loss, latency, and jitter. Most businesses can ill afford downtime, although the exact impact of a network outage varies greatly by industry. According to the Meta Group, one hour of systemwide downtime can cost a company from US$330,000 to US$2.8 million. Managed networks can help ensure business continuity in the face of everyday interruptions and unexpected disasters. The best service providers aim for 99.999 percent availability, the equivalent of about five minutes of downtime per year.

Cisco Powered Network

After the decision has been made to out-task, Cisco can help you find a service provider that uses Cisco equipment in its network, greatly simplifying and enhancing the out-tasking experience. Service providers who display the Cisco Powered logo in the promotion of their services use Cisco networking equipment and technology end to end in their networks and meet Cisco standards of network support. They supply reliable, industry-leading services that will work optimally with your internal Cisco network. Situated in more than 60 countries, the most successful service providers around the world offer services that carry the Cisco Powered logo. These providers offer a wide range of fully managed services, such as managed security, managed VPN, voice over IP, and other services that can help you take full advantage of the power of networking for your business.

"The first thing we considered was the meaning of "managed." This means that, basically, it provides the highest efficiency in terms of network management. If the network goes down or there are problems that occur there, it can be resolved from the [service provider] side."

Hee-Chol Shin
Manager, IT Services
KBS, Korea
Purchaser of Managed Services

Find these recommended service providers at http://www.cisco.com/cpn. This site includes a convenient search tool for identifying a local provider that offers the services you need. You can also link directly to the provider for more detailed information.

Q&A

Q. Will out-tasking mean losing control over important business operations?

A. When you out-task, you determine the type of services and the degree of management that will work best for your business. Managed service providers can work with you to achieve the right balance between in-house expertise and infrastructure and out-tasking. With the right service provider and a well-planned SLA, businesses can actually increase control over vital operations. They can depend on a predictable cost structure, the flexibility to meet evolving customer demands, 24-hour availability, and infrastructure management and maintenance that meets their guidelines.

Q. Will it jeopardize the security of our network if we out-task to a network service provider?

A. Security is a critical concern whether you out-task or not. Properly configuring network components such as routers and switches, installing firewalls and intrusion detection systems (IDSs) and keeping them updated, and using encryption for all sensitive data are always important. In fact, an important reason for out-tasking is the difficulty many organizations experience in maintaining the appropriate skill sets in their own staff to accomplish these crucial tasks.

Q. Will the out-tasked services be transparent to my partners and customers?

A. Out-tasking should be seamless and invisible to your partners and customers. What they will notice is that access to industry-leading technology can increase your agility, extend your range of service offerings, fuel growth, and control and reduce costs. Businesses are turning to out-tasking so that they can concentrate on core capabilities while taking advantage of expert management and world-class business technology.

Q. Will choosing a service managed by a provider be complicated and time-consuming?

A. Service providers that offer managed services can provide integration with your business practices and technology requirements. They can help you define the SLA and QoS parameters to support your business today and as you grow.

"The importance of it being an end-to-end solution is that we're getting voice data and video all by one provider. We're not going out to the marketplace for different people. It's providing us, as you say, an end-to-end service all out of one company, and that's what we're after."

Fergus Fitzsimmons
CEO
New England Area Health Service, Australia
Purchaser of Managed Services

Managed Services Quick Reference

Metro Ethernet Services

Metro Ethernet services using Ethernet technology deliver cost-effective, high-speed connectivity for metropolitan-area network (MAN) and wide-area network (WAN) applications. This simple, easy-to-use technology appeals to customers that are already using Ethernet throughout their local-area networks (LANs). Metro Ethernet services provide scalable bandwidth in flexible increments with simplified management and faster, lower-cost provisioning. They are often used by companies wanting to link multiple offices around a metropolitan area or to connect data centers for backup or disaster recovery purposes but without the configuration and management requirements of other WAN alternatives. Different service offerings provide customer network interfaces at Ethernet, Fast Ethernet, and Gigabit Ethernet speeds (10 Mbps, 100 Mbps, or 1 Gbps, respectively), at various Synchronous Optical Network (SONET) and Synchronous Digital Hierarchy (SDH) levels (OC-3, for example), or directly from wavelength-division multiplexing (WDM) equipment.

Metro Optical Services

Fiber-optic networking has several significant advantages over traditional wired and wireless networks: Optical signals can travel much farther than electrical signals, are more secure, are resistant to electromagnetic interference, and have the potential to provide bandwidth in the terabits-per-second range (1000 Gbps).

Customer LANs connect through service access points in office buildings, campuses, and curbsides. Increasingly, LANs are local in name only because a LAN can connect many sites through high-speed services in the public network. For enterprises, the primary concern is the availability of affordable high-speed services that satisfy their overall communications requirements.

Mobile Wireless Services

Mobile wireless services blend traditional radio infrastructures with modern IP backbone networks to bring new services and convenience to mobile users. Two examples of such services are access to the Internet and other data services from cellular handsets and similar devices, and wireless remote access to corporate LANs.

Storage Services

Storage services can provide secure, 24-hour storage of critical data while helping to ensure the access and availability to support business productivity, communications, and transactions. Storage services can include assessment of an organization's entire infrastructure to accommodate multiple operating systems and platforms, as well as planning for migration, maintenance, and disaster recovery. Regulatory pressures to maintain data and data privacy are important factors in evaluating the applicability of these kinds of services for your business.

Virtual Private Networks

Virtual Private Networks(VPNs) offer companies with multiple locations a means to interconnect branch and remote offices to the information technology resources at the main office. Traditional Layer 2 VPN-type services may be constructed using Frame Relay or ATM technologies, but cost and administrative difficulties are diminishing their adoption compared to IP VPNs, which are effectively operating at Layer 3. An IP VPN service offers the security and policy management of a network built from leased lines but over a shared, lower-cost environment (often the Internet). Some IP VPN services are intended primarily for data use, and others (identified by the IP multiservice VPN designation) are specifically designed to carry voice or video traffic simultaneously along with conventional IP data traffic. These services are thus an ideal solution for integrating voice and data traffic to improve productivity at branch offices.

Managed Security Services

Managed security services are networkwide management and monitoring services for security devices such as firewalls, IDSs, and VPN equipment that are offered in addition to other network services. Bandwidth optimization and traffic-filtering mechanisms are included, such as committed access rate (CAR) and anti-IP address spoofing (RFC 2827) to protect enterprise customer networks from malicious traffic and denial-of-service (DoS) attacks. Services such as incident notification service (which addresses breaches of network security and malicious or abnormal network activities) are typical. Service providers with managed security services can help ensure that businesses' networks are safe and reliable for e-business.

Business Voice Services

IP communications services are voice, video, data, facsimile, and voice messaging applications that are transported via the public Internet or other IP-based networks. These services may be offered by traditional telephony service providers or by specialist telephony application service providers that provide telecommunication services as hosted applications. The services, which may be accessed from a specially equipped PC, a normal telephone set, or an IP phone, include basic telephone calling and value-added services such as Internet calling, second-line voice, unified communications, IP contact center, IP teleconferencing, IP videoconferencing, IP Centrex, voice-enabled Websites, and more. The services may be sold to users directly or through reseller channels.

Content Services

Content services, sometimes called content delivery networks, offer features similar to Web hosting, with an emphasis on high volumes, fast response times, and customized content. Providers of content services intelligently distribute content to multiple locations, often near the edges of the network, and route queries to the location best positioned to respond. They also perform load balancing between servers based not only on traffic loads but also on content, cookies, etc.

FOR MORE INFORMATION

To find a Cisco recommended sevice provider and more details about the Cisco Powered Network program visit:
http://www.cisco.com/cpn

To find out more about managed services and how they can help your business visit:
http://www.cisco.com/go/managedservices

To find out more about service-level agreements (SLAs) and choosing a service provider, visit our online presentation at:
http://www.cisco.com/go/8questions

Find Out More

White Papers and Presentations

The following technical white papers can be found at:

http://www.cisco.com/cpn

Getting the Most From Your Service Provider

Network Availability: How Much Do You Need? How Do You Get It?

Data Centers: Best Practices for Security and Performance

Disaster Recovery Planning

8 Questions to Ask When Choosing a Service Provider (E-Tour)

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DM/LW6930 10/04

Printed in the USA