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Why selective contracting of network management services makes good e-business sense.

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Contents

Executive summary

The growth of business-to-business (B2B) and business-to-consumer (B2C) transactions, Enterprise Application Services (EAS) and Customer Relationship Management (CRM)—all of which use the Internet as their primary delivery mechanism—is accelerating the need for reliable, efficient and resilient networks.

Organizations of all sizes are striving to transform business strategy and direction into viable information technology (IT) solutions. Whether redefining a go-to-market approach to reduce costs, or going through rapid downsizing and industry consolidation or merger and acquisition, no one can afford to overlook the fact that a versatile and high-performance network is a critical business resource.

The network is essential for interconnecting buyers, suppliers and customers virtually anywhere, anytime—providing them with rapid access to information. Ongoing vigilance is required to manage multiple and disparate network environments, implement new network technologies, and securely transform legacy networks. At the same time, companies face an unprecedented and critical shortage of skilled resources, especially networking professionals, for managing their IT infrastructure.

This combination of factors is prompting many businesses to look beyond their walls for effective and efficient means with which to manage their networks. Many companies are pursuing selective contracting as a flexible alternative to outsourcing or giving up the ownership of a key asset. With selective contracting, companies can maintain overall control of their IT infrastructure while contracting out specific, critical services needed to run their networks.

Highlights

The benefits of selective network management contracting center around high availability, lower total cost of ownership, and continuous improvement and accountability.

It is important to select a services provider that can reliably support your business objectives as well as your infrastructure requirements.

The benefits of this approach center around high availability, a lower total cost of ownership through scalable service options and a more strategic approach to infrastructure that focuses on results, continuous improvement and accountability.

However, not all offerings are created equal. It's important to select a services provider that can:

- *Support major multivendor networking local area network (LAN) and wide area network (WAN) device manufacturers*
- *Support new technologies, such as Voice over IP (VoIP), virtual private networking (VPN), optical networking and security features, when you need them*
- *Provide a seamless, "end-to-end" network management solution consisting of automated processes and procedures combined with experienced, highly trained and certified professionals*
- *Demonstrate global reach coupled with local presence, with highly skilled personnel who have real-world experience*
- *Offer 24x7 monitoring*
- *Deliver on aggressive service-level objectives*
- *Achieve fast, efficient and easy customer implementation*
- *Give a single point of contact and accountability*

Highlights

IBM offers modular, scalable solutions that are designed to help simplify network monitoring and management.

IBM Remote Network Management Services (RNMS) offers modular, scalable solutions that help simplify network monitoring and management. We combine powerful management tools and integrated applications with proven methodologies and processes to deliver high-quality services that are designed to increase network availability and optimize performance—at a fixed monthly cost.

IBM Global Services' suite of remote network management services is enabled via state-of-the-art Network Operations Centers (NOCs). Components of the offering include:

- *Monitoring*
- *Performance Management*
- *Problem Management*
- *Configuration Management*
- *Change Management*

IBM is recognized as the global leader of the network consulting and integration services space.

Beyond its worldwide global infrastructure and vast contingent of networking professionals, IBM offers centralized management, which eases the burden of multiple vendor relationships, as well as a single point of contact and flexible pricing options.

The considerable benefits of the IBM Remote Management Network Services offering has led IDC to declare: "In the current marketplace, only a handful of vendors possess the breadth of capabilities and resources to deliver on all the requirements. IBM stands out as the global leader of the network consulting and integration services space, with its enormous financial and human resources and its worldwide reach."—Richard Dean, IDC[1]

Highlights

Businesses depend more than ever on networks to accomplish their goals.

Self-serve, network-enabled applications are creating huge demands on network performance.

Why network management matters

The networking challenges of the e-business environment

Since the emergence of e-business and the ascendancy of the Internet as the compute-model, businesses depend more than ever on networks to accomplish their goals. Networks not only form the backbone of business, but as computer usage penetrates consumer markets around the world, networks are transforming everyday behaviors.

Traffic on data networks is doubling every few years. Much of this traffic is related to the growth of e-business and our increasing reliance on the Internet and private networks as a key communication channel. Gone are the days of the centralized data center.

To make applications and processes directly available to customers, suppliers and business partners, organizations are making strategic investments in self-serve, network-enabled applications, creating huge demands on network performance. And because availability can't be taken for granted, network management services designed for high availability have become essential.

For the purposes of this report, we define network management as the "strategies, policies, applications, tools, processes, methodologies and skills required to sustain the performance of the network." The goal is to ensure that business networks are managed to deliver high availability. Realtime performance monitoring is critical, because as network traffic skyrockets, bottlenecks can have a drastic impact on business. Indeed, tolerance for downtime diminishes because people expect the network to be up and running at all times.

Highlights

IT departments are under increasing pressure to reduce costs and produce a demonstrable return on investment.

Adding to the challenge of availability is the fact that new technology choices appear almost daily, many of which call for integration into existing network environments. As attractive as these innovations are, IT departments are under increasing pressure to reduce costs and to produce a demonstrable return on IT investments.

Added to these pressures are the challenges of an ever-shortening time-to-market cycle. In today's e-business environment, development and deployment of products and services must happen faster in order for companies to maintain their competitive edge. Yet the skills to handle the resulting network complexity and multivendor technologies are hard to come by.

In such an environment, outsourcing network management may be preferable to building and sustaining it yourself. And "selectively contracting" the service may be the best option of all.

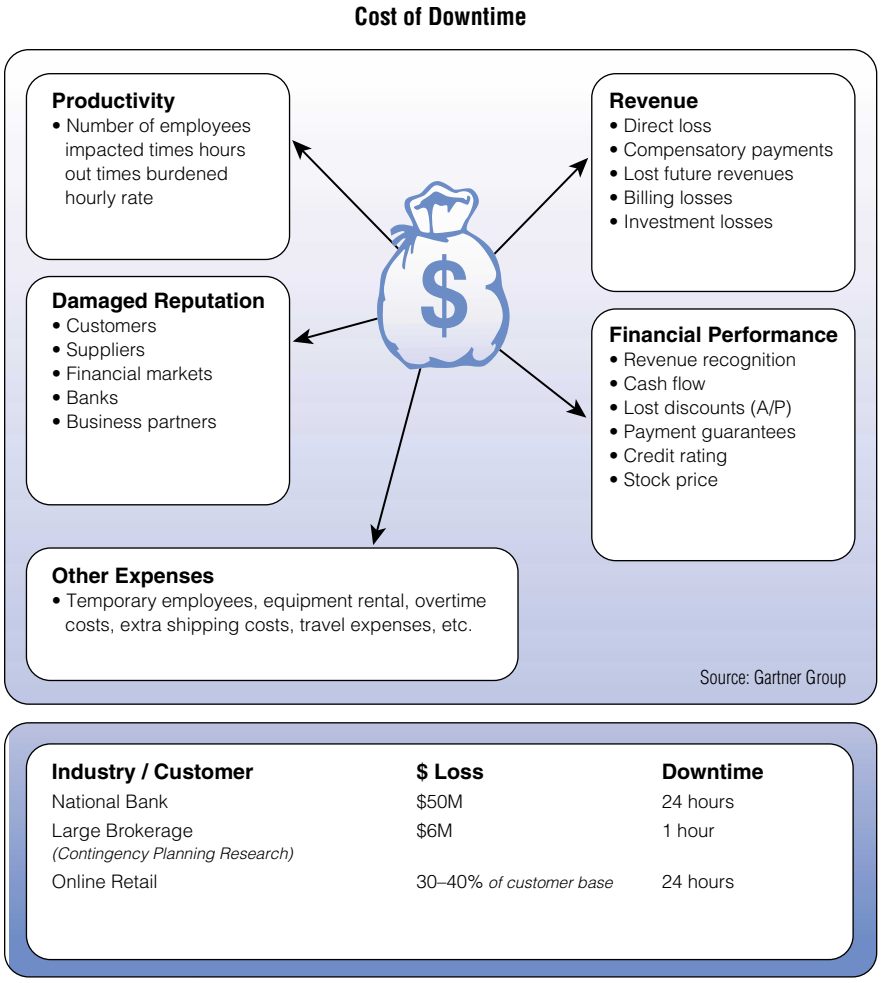
Network downtime can result in significant losses not only to a company's bottom line but to its reputation as well.

The high cost of ineffective network management

A large brokerage company whose network goes down for one hour can lose as much as $6 million. A large bank whose systems fail over a 24-hour period may lose $50 million. An airline reservations service can drop $90,000 for each and every hour its systems are down. Companies dependent on the Internet for customer sales and service can lose as much as 30 to 40 percent of their customer base if business is shut down for a 24-hour period. And while losses like these can be measured, the damage to an organization's reputation persists long after the outage has been rectified. Downtime can also result in significant losses associated with B2B transactions.

Highlights

Investing in the assurance of network availability is money well spent.



Industry / Customer	$ Loss	Downtime
National Bank	$50M	24 hours
Large Brokerage *(Contingency Planning Research)*	$6M	1 hour
Online Retail	30–40% *of customer base*	24 hours

Network downtime can result in significant losses in terms of employee productivity, revenue generation and financial performance, as well as damage to a company's reputation.

Given the high cost of ineffective network management, an investment in the assurance of network availability, for continuous user access to business applications, is money well spent.

Highlights

Organizations can benefit from network management in a number of ways.

The pay-off of network management practices
Network management can pay off for the organization in the following ways:

- *It is designed to improve business effectiveness and efficiency and can yield higher revenue opportunities as networks, systems and applications stay available to users—including management, staff, customers, business partners, suppliers and other constituents attached to the network.*
- *It provides a framework for helping to manage the risk of business loss that may be caused by operational threats—including system failures, natural disasters and security breaches.*
- *It helps reduce network, systems and applications operations costs.*

Given these benefits, it's not surprising that network management is one of the fastest growing sectors of the IT market today.

The underlying value proposition of network management is enhanced return on investment.

Moreover, the underlying value proposition of network management is enhanced return on investment (ROI). Customers are making uninformed buy decisions for more/bigger devices and more bandwidth without network baselining and comprehensive reporting of network utilization and performance. Network management can help customers optimize their networks, which may reduce their need for additional devices and ultimately save them money.

Highlights

Using continuous improvement through Service Level Management (SLM) as an adjunct to network availability, organizations are adopting a systematic protocol for putting IT operational guarantees in place for internal and external users. Needs are determined and delivery metrics are established, monitored and modified as required. IT departmental groups are appraised on how well they meet their specific SLM objectives. Company divisions receive direct customer feedback on how well they meet their objectives in serving them. This all leads to a culture of company performance improvement and quality management.

The overall objective of a Service Level Management strategy is to improve productivity, growth and customer allegiance.

The overall objective of an SLM strategy is to improve productivity, growth and customer/user allegiance. This strategy has the potential to drive a company's direct market share and revenue capture rates upward, which can equate to millions of dollars of revenue generation. Network Management Services provides the IT/networking component solution for baselining and measurement, and is a very compelling value proposition for those organizations that have chosen this path.

Highlights

Dimensions of network management

The human resources challenge

The increasing complexity of today's IT environment presents numerous challenges for those who strive to tame their networks and ensure high availability.

The experience IBM has had with customers in North America and Europe strongly suggests that IT resources spend an inordinate amount of time with daily tactical "firefighting." Within this daily regime, network performance issues, troubleshooting and performance of business applications appear to be enterprises' biggest challenges. These activities put pressure and strain on IT staff responsible for these functions.

Finding good people who can keep up with the advancing complexity of network management tools and devices is becoming increasingly difficult.

Many organizations will admit that attracting and keeping capable staff who can manage a job that is neither attractive nor strategic is a growing challenge. It is increasingly difficult to find good people who can keep up with changes in technology and the advancing complexity of network management tools and devices. Talk to most IT managers today and they'll tell you that the ability to attract and retain staff is one of their biggest challenges.

As the "network" increasingly forms the backbone of business, the demand for networking professionals will easily outstrip supply. The worldwide shortage of networking professionals will approach 1.4 million by 2003.[2] As competition heats up for skilled workers, salaries will rise and, because today's workers

Highlights

Network management solutions must encompass the entire lifecycle of tasks associated with maintaining an effective, efficient infrastructure.

Planning and network strategy may be the most important element of network management.

are far more mobile than their predecessors, networking professionals will gravitate towards markets that pay the most. Thus, companies will feel the effects of increased labor costs, further destabilizing their push towards greater cost effectiveness.

Requirements
When considering network management solutions, it's important to consider an entire lifecycle of tasks, all of which have cost implications for the organization doing the job on its own. Network management requires:

- *Skilled people to plan, integrate and execute the applications and tools*
- *Continuous training on new network management technology*
- *Ongoing investments in infrastructure hardware and software to maintain network viability*

To help assure high availability, network management encompasses several components:

Planning and network strategy—This is perhaps the most important element of network management, for it defines high availability in the context of acceptable performance levels and assesses an organization's risk of failure. The network management plan should set out capacity and performance levels, backup, recovery and restore processes and methodologies.

Highlights

Remote diagnostics, network monitoring and reporting are among the important components of network management.

Diagnostics from a remote location—Rather than having a technician identify and resolve problems onsite, remote diagnostics allows for fast remedial action.

Detection and alerts—Once certain thresholds of network performance have been reached, additional loads or potential bottlenecks are identified promptly and alerts are automatically generated.

Monitoring–The network must be closely monitored at all times to help ensure detection of problems that may originate with hardware or software components.

Proactive management–These features enable advanced reporting of possible weaknesses before they ever reach the point of failure. They may even identify possible fixes including hardware upgrades and software patches.

Detailed reporting—Network management reports provide the information necessary to make informed decisions and to identify problem areas.

Realtime information—It is most important to receive critical network information in realtime in order to resolve potential and immediate problems in a proactive and responsive manner.

Highlights

Organizations can build or buy their own network management capabilities, or they can choose to outsource some or all of their management to a services provider.

Network solutions today must work across platforms, databases and business applications.

Models for network management delivery

Organizations can achieve network management capabilities internally—by building or buying solutions themselves—or externally, by outsourcing or selectively contracting the work to network management services providers.

Whether to acquire, build or buy outside

As attractive as it may seem on the surface to build and manage one's own network management solutions, many companies have encountered significant obstacles.

For one thing, developing network management solutions requires an enormous investment of time and resources, which many organizations—faced with increasing pressure in other IT areas—simply cannot afford. Beyond the initial cost of buying network management tools and supplying an infrastructure environment, there is also the need to customize the tools and integrate them into a comprehensive solution.

As with any deployment, network management solutions present risks to the business—not the least of which is the diversion of IT resources from other business priorities. Other risks include the potential threats and failures which can result from implementing a network solution that must accommodate complex and critical Internet operations and must work across platforms, databases and business applications.

For similar reasons, companies that seek off-the-shelf network management solutions may find that such solutions do not perform to their requirements "out of the box" and require extensive configuration and customization. Additionally, there may be serious issues with interoperability.

Highlights

Investment in internal network management capabilities can be onerous for all but the largest corporate IT departments.

Even when solutions are built or acquired successfully, the ongoing challenge of properly managing the required infrastructure must be addressed. Network managers must stay on top of the latest developments and be constantly prepared to implement new devices and tools to keep their networks running as they should. Today's ever more powerful applications, including collaborative and remote computing, add to the strain, requiring investments in network management technologies that can be onerous for all but the largest corporate IT departments.

Studies also show that one of the biggest drawbacks of owning and operating a network management solution is the scarcity of human resources.[3]

More and more resource-constrained organizations which require comprehensive, enterprisewide views of their networks are turning to outside management providers to help operate their networks—and, in some cases, are outsourcing network management completely.

Benefits of using external providers
The benefits of using an external network services provider can be summarized as follows:

Outsourcing network management can result in numerous benefits, from cost savings to more efficient and strategic use of internal resources.

- *Cost savings—By using an external provider, you offload the heavy up-front costs of hardware and software, and significantly reduce ongoing costs. IBM has anecdotal client data which indicates savings anywhere from 24 percent to 67 percent resulting from the selective contracting of network management services.*

Highlights

- *Predictability—External providers can supply their services for an up-front cost, known and negotiated in advance. Subscription-type pricing lets you allocate spending on a predictable path.*
- *Strength of solution—You can take advantage of the services provider's economies of scale and access better performance through best-of-breed solutions that you may not be able to afford and maintain on your own.*
- *Service—A services provider can detect and resolve problems faster and more completely than you may be able to do on your own.*
- *Fewer headaches—As network management becomes more complex, you offload the ongoing challenge of systems and skills updates. If you choose a provider that has a broad scope of applications and infrastructure experience—legacy, distributed, Web-based and otherwise—you can avoid the risk of failure that can come from the increasing interdependence of platforms and complexity of network management tools and devices. Additionally, because your solution can be implemented in a shorter period of time, you can begin receiving the benefits that much sooner.*
- *Time—Instead of dealing with the operational challenges of network management—which can strike at any time of day or night—your IT professionals can be focused on the business, and on other IT activities that directly support revenue generation.*

Network management outsourcing allows customers to offload the ongoing challenge of systems and skills updates.

Selective outsourcing allows companies to purchase network services on a subscription basis.

Selective contracting: the best of both worlds

Organizations that turn to external providers for network management services will find two avenues to pursue: The first is outsourcing, in which the organization turns over control of its network management operation to an external provider through a long-term service arrangement. The second option is selective contracting or selective outsourcing, in which the organization purchases from an array of services on a subscription basis.

Highlights

Many organizations are finding outsourced arrangements too limiting for today's fast-paced business environment and IT advancements. Agility has become a chief competitive advantage, yet outsourcing contracts do not give organizations the desired flexibility and speed to take advantage of technology enhancements vis-à-vis technology refresh.

While outsourcing does fit a certain profile, chiefly in the large enterprise category, even companies that are outsoucing their network management are moving away from long-term, 10-year outsourcing contracts, to contract terms of five years or less; in fact, three years is not an uncommon contract term.

With selective contracting, companies enjoy a low entry-level cost and a higher level of control than with traditional outsourcing.

Selective contracting, on the other hand, carries a low entry-level cost and enables customers to maintain a higher level of control. Selective contracting is becoming more popular because it affords customers much more flexibility than an outsourced arrangement. By selectively contracting, customers can:

- *Avoid signing long-term contracts*
- *Maintain control over their networks*
- *Have the flexibility to scale up in services as their businesses grow and change*
- *Save money over acquiring and maintaining an in-house solution*

IBM Remote Network Management Services—A "make versus buy" comparison

This model shows a network management solution for a hypothetical organization. In this exercise, you can compare building an in-house solution with buying the service externally. The example utilizes a number of assumptions, which are used for purposes of identifying cost savings. It is understood that there are many variables, including device size and services selected, that would contribute to a costing scenario. This is a simple example and each client situation may be different.

The experience that IBM has had with deploying Remote Network Management Services with enterprises of varying sizes has shown annual cost savings between 24 and 67 percent on a "make versus buy" comparison.

Scenario—Current Situation

- Mid-size company operating on an international scale, based in the United States
- 200 device networks: routers/switches (WAN/LAN)
- Network availability running at 95 to 96 percent
- Daytime staff on pager for extended-hour support
- Projects slipping due to "firefighting"

Scenario—Desired Solution

- 24x7 management will require six people to provide a combination of first- and second-level support (training, salaries, benefits)
- Requires investment in network management tools/ systems and integration of these pieces to deliver a seamless solution
- International reach of operations means that 24x7 network management is needed, and availability must be at least 99 percent

Scenario—IBM Solution

- Full management of the WAN/LAN
- 24x7 principal period of support delivery
- 99.5-percent availability
- Three-year commitment
- One-time implementation fees: US$21K
- Monthly recurring fees: US$21K
- Operational readiness: under 30 days

Scenario Comparison

Solution	*Service Level*	*Availability*	*Resources (Person-years)*	*One-time Charges*	*Setup Costs*	*Annual Costs (Recurring each of 3 years)*	*Savings*
Current	8x5	95%	3	$50K	$280K	$330K	
Desired	24x7	99%	6	$180K	$558K	$738K	
IBM	24x7	99.5%	N/A	$21K	$252K	$259K	
Savings with IBM				$159K	$306K	$477K	65%

The IBM solution presents a one-time cost of US$21K amortized over three years for US$7K per year. The total annualized cost per year is US$259K, which is fixed for the three-year term of the contract. The desired (internal) solution would also have inflationary costs associated with it, but for purposes of simplicity, none were attached in this comparison.

Amounts are in US$. Per-year amounts are fully loaded, and capital amounts including maintenance are factored into the annual recurring costs.

Highlights

It is imperative to assess network management services vendors against key selection criteria.

How to choose a provider of selectively contracted network management services

With the number of vendors and range of service offerings available in the market, it's imperative to identify key selection criteria and assess each network management services vendor against those criteria.

The following summary addresses the key criteria against which to assess a network management services solution:

- *Supports major multivendor LAN and WAN networking device manufacturers*
- *Is able to support new technologies, such as VoIP, VPN, optical networking and security features, when needed*
- *Is scalable, to support small to large, geographically dispersed, multivendor networks*
- *Provides an "end-to-end" network management solution of automated processes and procedures including a single point of contact, problem ownership and resolution, optional operating system and configuration downloading, and OEM second- and third-level support*
- *Provides 24x7 support coverage*
- *Provides standard and customizable performance and trend analysis reports*
- *Provides historical data for trends and performance, and problem management reports*
- *Uses a centralized architecture and delivery and provides network management services through inband connectivity, with flexible contract provisions and per-device pricing methodology with discounting schemes*
- *Targets aggressive service-level objectives*
- *Offers fast, efficient and easy customer implementation*

Highlights

Vendors should be able to demonstrate real-world experience in support across a wide range of system types and configurations.

A network management services vendor must have an infrastructure capable of supporting emerging requirements in addition to current network management needs.

Beyond assessing the features of the solution itself, organizations must carefully assess other characteristics of the vendor.

Expertise

Network management requires specialized technical competence and familiarity with heterogeneous system environments. The vendor should also have the skills necessary to provide you with the level of customization you may require and demonstrate "real-world" experience in support across a wide range of system types and configurations. The vendor's employees should be knowledgeable and well-trained, and the company should make significant investments in ongoing skills development and certifications.

The vendor should demonstrate a continual investment in cutting-edge and cost-reducing tool sets. In addition, the vendor should provide clear performance metrics and the highest standards of excellence.

Global reach, local presence

The vendor should have a strong background in network consulting, network systems integration, management and systems availability in a variety of sectors.

Because networks traverse borders, the vendor should have an extensive geographic scope of services operations, and be ready to provide support to global operations. The services infrastructure must be adequate to support not only your current network management services needs, but emerging availability requirements.

Highlights

Together with depth and breadth of services, the vendor should be able to provide you with a single point of accountability for heterogeneous system environments.

IBM as a provider of remote network management services

IBM Global Services provides remote network management services on a selectively contracted basis under the offering name "IBM Network Management Services." This section explores the features and benefits of this IBM offering in the context of the selective contracting model described in this report.

IBM Remote Network Management Services combines powerful tools and applications with proven methodologies and processes to deliver high-quality network management services.

IBM Remote Network Management Services—An overview

IBM Remote Network Management Services offers modular, scalable solutions that help simplify network monitoring and management for LAN, WAN, VoIP, VPN and network security technologies. Powerful tools and applications are combined with methodologies and processes to deliver high-quality services that can increase network availability and optimize performance—at a fixed monthly cost.

IBM Global Services' suite of remote network management services is enabled via state-of-the-art Network Operations Centers (NOCs). NOCs monitor the customer's infrastructure 24 hours a day, seven days a week (24x7x365). The services offering includes tracking problems and performance, driving problem resolution, performing software and firmware updates, monitoring and managing servers and even enhancing network security features. IBM provides monthly and online reports, as well as an information portal that allows customers to view various deliverables in realtime.

Highlights

Network Management Services from IBM comprises monitoring, performance management, problem management, configuration management and change management.

Traditionally, most information in NOCs is made available to clients only in the form of paper reports, delivered at specific intervals. The IBM customer interface facilitates a more comprehensive relationship between the services provider and the customer by forging a dedicated information link between parties.

Clients benefit by gaining the information they need, when they need it, without the burden of building and maintaining their own operations centers. By receiving comprehensive service-level reporting, clients understand whether or not they are receiving targeted levels of service and what actions are being taken to address deficiencies.

Standard Network Management Services—Detailed components

Monitoring—24x7 remote monitoring services are available for all network-manageable elements. Service-level metrics are tailored to meet customer-specific business processes:

- *Availability, health thresholds, errors and alarms*
- *Network map (topology and status)*

Highlights

Performance Management—This component focuses on measuring and reporting on the behavior of the network and its elements. Corrective tuning, statistics and trend analysis are also performed. Performance management deliverables may include:

- *Monthly reports on network behavior and trend analysis*
- *Daily reports accessible via a Web portal*
- *Recommendations for improvement*

An integrated trouble-ticketing system helps ensure realtime problem tracking and resolution.

Problem Management—This component consists of alarm detection, reporting, isolation and resolution of problems or faults. Network help desk services and an integrated trouble-ticketing system help ensure tracking and resolution of problems in realtime. Specific activities may include:

- *Incident tracking and analysis*
- *Fault isolation and correlation*
- *Problem identification and resolution and vendor dispatching*
- *Monthly incident reports*

Configuration Management—IBM maintains a database repository of all of a customer's corporate network assets and the interconnection specifics of these network elements. Configuration management includes:

- *Inventory of monitored assets*
- *Software and firmware updates*
- *Moves, adds, changes and deletes*

Highlights

Customers can choose from several flexible and scalable contracting options to fit their requirements and budget.

Change Management—This component has to do with controlling and coordinating the ongoing changes in network topology and systems configuration, including adds, moves and changes. Network modeling and integration services to facilitate planning are also provided. Deliverables may include:

- *Asset change reports*
- *Asset configuration history*

Flexible pricing options
IBM Remote Network Management Services provides several flexible and scalable contracting options from which organizations may choose, including the following base services:

- *Monitoring*
- *Performance Reporting*
- *Monitoring and Performance Reporting*
- *RNMS Full Suite, which includes monitoring, performance reporting, problem management, configuration management and change management*

The realtime customer Web interface is included in some packages and is an option in others.

The modular packaging strategy allows virtually any customer to obtain Network Management Services from a low entry-cost level to a full suite solution, depending on the customer's requirements and budget. The packaging allows the customer to choose the services they need today, and add other services as growth dictates.

Highlights

Market pricing is basically standardized in the industry and is delineated by device type, size and complexity—and is charged on a per-month basis. The IBM pricing strategy is more granular than that of many service providers who simply use a percentage of the device purchase price as a measure of Network Management Services cost.

Contracting—Any IBM RNMS services package can be contracted for terms of one, two, three years or more.

IBM provides a multilevel discounting plan to reward customers for the size or length of contract term chosen.

Discounting Strategy—IBM RNMS suite of services provides multilevel discounting plans to reward customers for the size or length of contract tenure chosen. Discounts are applied depending on the customer's selection of services and packages.

Competitive strengths of IBM RNMS offering

Completeness of solution

IBM offers customers a myriad of networking solutions.

Unlike many external providers of network management services, IBM provides an end-to-end services offering. This is significant because networks, by their very nature, are complex entities that must be managed across platforms and within an overall infrastructure and IT support strategy. A customer can go to IBM for a myriad of networking solutions and not have to go elsewhere for network management.

Highlights

IBM Global Services can bring the expertise of 3,500 consulting professionals worldwide to the deployment of network management solutions.

IBM can also provide a multitude of multivendor networking hardware solutions in conjunction with the RNMS services portfolio.

Expertise
With more than 150,000 employees worldwide, IBM Global Services has a larger critical mass of scarce networking specialists on a global basis than its competitors. Among the Global Services specialists are 3,500 consulting professionals in 164 countries, including professionals skilled in key systems management, networking, PC desktop and UNIX® products (both IBM and non-IBM).

IBM uses highly skilled personnel, who leverage well-defined and documented enablement processes, to deploy Remote Network Management Services. IBM also partners and works alongside some of the best network technology companies in the industry, such as Cisco Systems, Nortel Networks and others, to quickly deliver proven, flexible and reliable networking solutions for both existing technologies and emerging technologies, such as wireless and Voice over IP.

The IBM Remote Network Management Services team has real-world experience in network management, network engineering and operations management.

The IBM Remote Network Management Services team features the following management personnel with real-world experience:

- *Network Management–Network operators provide first-level support and help desk services. Proficient with network and systems management activities, the operations staff helps ensure delivery of service.*
- *Network Engineering–Network engineers provide second- and third-level support, escalation, design and planning services. Customer Engineers have expertise in network and information system disciplines, and work closely with clients to help maintain satisfaction levels.*

Highlights

- *Operations Management—Senior staff members are experienced in the ongoing operations of mission-critical facilities/network management centers. The Operations Manager is ultimately responsible for ensuring client satisfaction for NOC services.*

Selectively outsourcing network management to IBM can provide a single point of contact for network issues.

Simplified multivendor management
Today's networks consist of a variety of vendor hardware, software and tools, resulting in a growing number of vendor relationships for the customer to manage. However, IBM can centralize management, helping to ease the burden of multiple vendor relationships, and providing a single point of contact for the customer's network issues.

Reputation and service infrastructure
With thousands of successful customer networking engagements, across all industries and geographies, IBM Global Services offers both global reach and local presence. Customer references, case studies and success stories demonstrate that IBM helps customers increase the value and reduce the cost of their IT infrastructures and investments, increase control and reduce risk, improve availability, improve performance and operations, and reduce the number of problems and outages.

IBM has the global reach and local presence to help customers increase the value and reduce the cost of their IT infrastructures and investments.

Finally, IBM Global Services heads IDC's annual "Top 10 Leaders in Network Consulting and Integration Services," with a 12.5 percent share of the U.S. market and a 17.9 percent share of the world's US$18.2 billion market.[4]

"In the current marketplace, only a handful of vendors possess the breadth of capabilities and resources to deliver on all the requirements. IBM stands out as the global leader of the network consulting and integration services space, with its enormous financial and human resources and its worldwide reach."
—Richard Dean, IDC[5]

Highlights

Selective contracting presents an attractive solution for the management of today's complex, multivendor networks.

Conclusion

To operate effectively in today's sophisticated business environment, organizations must take steps to help ensure that their network infrastructure is fast, available and security-rich. Finding the necessary time, resources and technical expertise, however, can prove to be a significant challenge. More and more companies are looking for a services provider that can help manage their complicated, multivendor networks and reliably support their e-business applications in a security-enhanced environment today and in the future.

Selective contracting presents an attractive solution, offering the benefits of cost savings, high availability and service-level management. The key is to carefully evaluate vendor offerings and find a network management services provider who can keep your network up and running, and provide the benefits of high availability, low total cost of ownership, and performance metrics for continuous improvement.

People, not products, make network and systems management work; yet the biggest challenge facing IT today is finding and keeping good people.

Through its Remote Network Management Services, IBM offers the skills, technologies, reputation and infrastructure to help keep customers' networks running at high availability on an affordable, "selective contracting" basis.

For more information

To learn more about IBM Remote Network Management Services, contact your IBM sales representative, or visit:

ibm.com/services/nc/management

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Footnotes

1 *IDC Network Consulting and Integration Services: Year 2000 Top 10 Market Share Leaders and Winning Attributes*, June 2001.

2 *IDC Networking Skills Shortage—No Letup in Sight*, August 2001.

3 *Id.*

4 *IDC Network Consulting and Integration Services: Year 2000 Top 10 Market Share Leaders and Winning Attributes*, June 2001.

5 *Id.*

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