

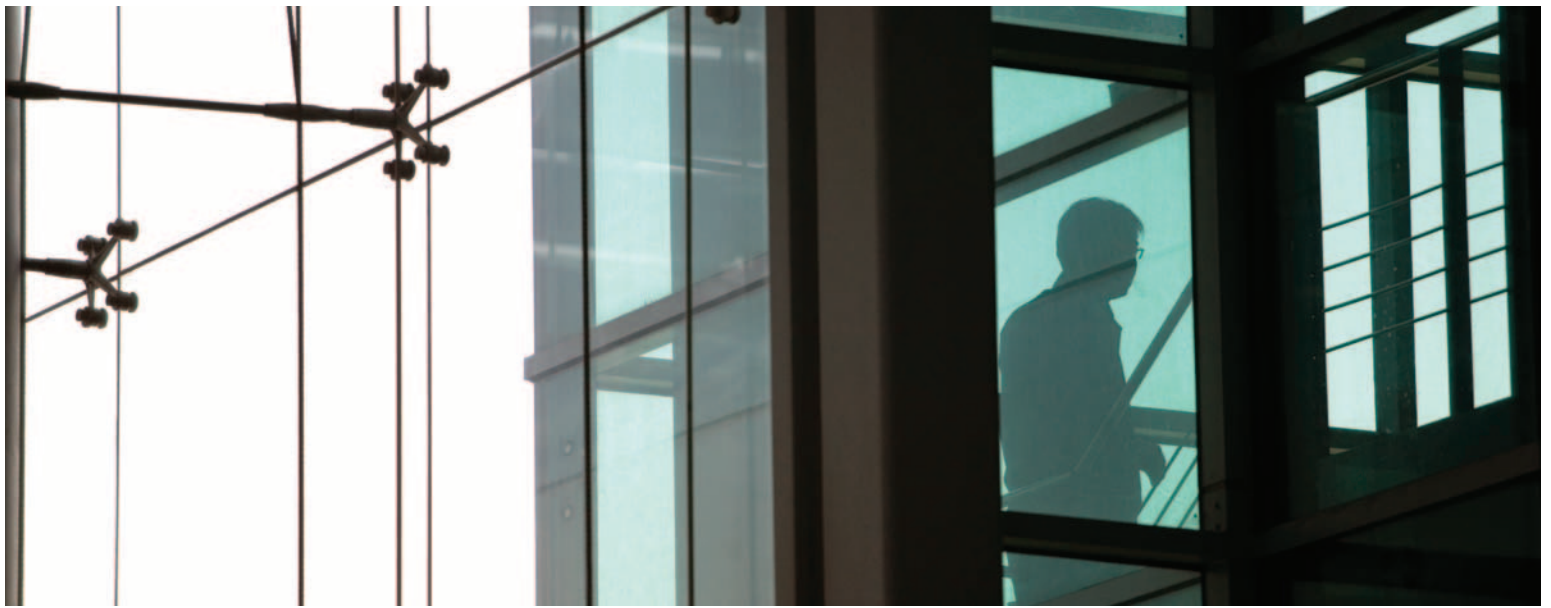
Managing the complexity of network convergence through outsourcing

White paper



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Executive summary

The convergence of voice, video and data networks, along with wired and wireless environments, brings unprecedented opportunities for a business that can capitalize on change. When managed correctly, network convergence can enable companies to operate more efficiently, increase returns on technology investments and realize other business benefits. Yet despite these potential gains, network convergence remains a complex undertaking that creates new technical, operational and managerial challenges.

Faced with these challenges, enterprises are increasingly turning to outsourcing service providers. The extensive infrastructure, expertise and services of an outsourcing service provider can help an organization overcome the complexity of bringing together diverse networks. This allows companies to capitalize more fully on the unique opportunities brought by convergence.

The network convergence opportunity

Network infrastructures are evolving at a rapid rate. This evolution is driven by the need for cost-effective deployment and management of new and existing services. Companies today need to evaluate and manage a growing menu of advanced communication services, including voice over IP (VoIP) and IP communication technologies (IP telephony, unified messaging, video, audio and web conferencing, presence and mobility), along with services that enable data and application integration, rich media and MultiProtocol Label Switching (MPLS). Each of these offerings brings its own set of requirements, including installation of infrastructure, integration of applications, deployment of services and management of ongoing operations.

Faced with such business and technical challenges, companies are struggling to find cost-effective ways to deliver new services alongside more conventional service offerings. Historically, enterprises have invested in multiple communication infrastructures and workflows to support separate voice, video and data networks. Today, these companies are seeking ways to simplify and streamline their operations by bringing together their disparate communications networks to capitalize on asset consolidation and management synergy.

The need for network convergence is also fueled by changing technology and shifts in the way people and businesses work. In particular, these fundamental shifts are now under way:

- All processes and all content are being transformed from physical and static to digital, mobile and virtual.
- Wireless environments are growing rapidly, and must be linked back with the traditional wired network.
- There's a demand for simpler, more manageable and adaptable technology. This is changing the way people work and interact, as well as how they buy and use technology. User expectations for network services are rising—in a time when levels of service are measured by end-user perceptions.
- It's becoming a horizontal, heterogeneous, networked world. Companies have a variety of vendor equipment and solutions within their own enterprises. They need infrastructure improvements to support new value-added communication services, and they need to work cooperatively with service partners who manage diverse network environments.

Today's CIOs try to balance an unbalanced equation: reduce costs + mitigate risk + improve quality + increase agility = better return on IT.

These trends are accelerating the convergence of previously separate network infrastructures. A sweeping transformation is under way. In enterprises around the world, stand-alone voice, video data and wireless networks are transitioning toward a single network for unified communications within an Adaptive Enterprise. This converged network supports the centralized operation and management of network services while enabling easier mobility, data transactions and collaboration for end users. Convergence allows a level of pervasive connectivity that was previously impossible to achieve.

While the network convergence creates new technical and operational challenges, it also brings unprecedented opportunities for business that can capitalize on change. In one potential outcome, the convergence of voice, leased line and packet networks could result in lower total operating costs stemming from reduced network management burdens, lower overall equipment requirements and increased utilization of network assets. In essence, convergence creates the opportunity for companies to operate more efficiently while gaining a return on their technology investments. In addition, convergence creates the opportunity to deploy new business models that require converged network services. Viewed from this business-oriented perspective, convergence is not just about doing current things better, but about enabling entirely new things—or new ways to capitalize on market opportunities.

But reaching to seize opportunity is not without its own risks and its own set of management challenges. Given this reality, growing numbers of enterprises recognize the opportunity to leverage the inherent capabilities, experience and efficiencies of an outsourcing services provider to capitalize on network convergence. For a larger enterprise, an outsourcing service provider with a global reach can hold the keys to improving service levels and enhancing the scalability, reliability and security of a converged network.

Meeting business needs

Competition has led to increased client churn, driving up costs and lowering overall profitability. But this churn also presents unprecedented opportunities for organizations that can build effective service delivery networks that span network and access types.

In an age when people connect to networks via mobile, fixed, home and business locations, there is tremendous value in delivering a service that enables a business to connect to the person, not the device. This level of simplicity encourages client loyalty in an increasingly competitive marketplace. Network convergence can make this happen.

In addition, the outsourcing of converged network operations can be one of the keys to enabling IT to meet business needs. Faced with a rapid pace of change, CIOs know that IT organizations need to be agile, and that agile organizations are better able to respond to changes by adapting the value-delivery system quickly, reducing cost and meeting clients' needs.

In these efforts, today's CIOs try to balance an unbalanced equation: reduce costs + mitigate risk + improve quality + increase agility = better return on IT.

How do these four categories apply to the network and their related IT operations?

- **Maximizing return on investment**—A company can maximize its return on investment by handling more users and demands on a current network. The goal is to optimize use of the network, maintain peak performance, and leverage current infrastructure.
- **Increasing agility**—Agility allows the network staff to deploy and manage new services faster and more efficiently, and introduce these with minimum disruption to the network and business users. Agility is a particularly

important goal for enterprises that are experiencing mergers and acquisitions. Many such companies discover that the integration of two disparate network environments can be overwhelming.

- **Mitigating risks**—More users, more remote locations and higher service level expectations can increase risk. An inability to meet service levels, for instance, can have high associated costs. The same holds true for network intrusions, attacks and viruses, all of which are on the rise. Security of the network is crucial to maintaining continuous business operations. Networks have become a key component of the IT and business infrastructure. And if networks are down, so, potentially are applications, telecommunications and the business operations they support. In today's network-driven world, down networks are simply unacceptable.
- **Improving operations**—Today's business transactions require peak performance to avoid latency in completing transactions. This includes both the performance of the network and the performance of the staff managing it.

The outsourcing of network services can help companies meet these all-important goals. When a company outsources functions to a global services provider who specializes in running converged networks, it stands to reduce the capital and assets that it has tied up in IT and business processes, increase financial flexibility and streamline operations. This increased agility positions an organization to turn dramatic changes, such as network convergence, into a competitive advantage, and allows for greater focus on strategic, not operational, management.

Overcoming complexity

While the network convergence is bringing new opportunities, it comes with its own set of challenges. Assessing the existing telecom environment from both a financial and technical perspective is a complicated task for enterprises, but essential to derive return on investment (ROI). For example, here's one piece of the ROI puzzle: An enterprise must analyze asset values or leasing contracts for legacy telecom equipment, their support agreements and the IT staff needed to operate them, balanced against the business services they deliver. By any measure, the process of unifying diverse communication services and operating a converged network takes a great deal of management focus, technical expertise, and dedicated and fractional physical resources.

Network convergence is a complex proposition that can drive up operations costs. While some companies are successful at using convergence to reduce the unit costs of network services, they may struggle with the change. The growth in overall network traffic and the costs of operating new services can lead to increases in total costs and decreases in network performance. For example, managing growth properly—with new technologies and workflows—will temper the need to merely expand bandwidth and serve to contain wide area network (WAN) costs.

In another challenge, converged networks must support an ever-growing range of devices and an expanding universe of users with different interests and needs. This trend, which is expected to continue, should bring more seamless management of users and tighter integration of information and processes. Yet at the same time, this trend introduces another level of management complexity. This complexity puts a premium on effective network operations and management.

Converged networking truly links the infrastructure with communications services and applications. This creates the need for advanced hardware modules in components and enhanced quality of service (QoS) capabilities and security features in both local and wide areas networks (LANs and WANs). While in the past, a straightforward technology refresh might have been required to keep products under support and to gain a performance increase, today a technology refresh also requires the addition of support for advanced services. In addition, convergence requires highly reliable and available and redundant component links into most all locations. This is different from earlier models, where only one high-speed link was required to remote sites.

The onset of business and network challenges can be a side effect of the widespread acceptance and global use of IP communications, self-service applications, multicasting offerings and other new-generation services. The network that supports these services can't keep up with the demand. In a sense, the converged network becomes a hindrance to its own success.

Faced with these challenges, large enterprises are increasingly focusing on outsourcing their network services to companies that have special expertise in deploying and operating converged networks. The extensive infrastructure, expertise and services of an outsourcing service provider can help an organization overcome the challenges—and capitalize more fully on the opportunities presented by network convergence.

How outsourcing can help

There are several ways in which outsourcing can help an organization work through the complexities of network convergence. An organization that is considering outsourcing network convergence services should look for a provider who can achieve all of the following results:

Manage the broad scope of network services

Network architectures and technologies must be robust and flexible enough to support delivery models linking the digital and physical business processes. When services are outsourced, the need to provision and support new services and improve the management of existing services needn't interfere with efforts to execute against business priorities.

Enable global expansion

An outsourcing model gives an enterprise the ability to scale up its network services to support the globalization of business. A large-scale service provider should give an organization the flexibility it needs to support increases in global users and worldwide locations. An outsourcer's established global delivery models should provide an enterprise with ready access to flexible pools of IT professionals worldwide.

Increase cost predictability

While a global outsourcing provider might help an enterprise reduce its overall network costs, it can definitely make costs more predictable. Many organizations have found that outsourcing is a key to better financial management for complex services. Consideration should also be given to an outsourced integrated model in the interest of gaining access to new technologies in an affordable manner.



Maintain network security and performance

With new devices, complexity and processes all running on one network, the importance of security becomes higher than ever before. Organizations have to manage who has access to what resources on the network, guard against malicious code (such as viruses and worms), and work proactively to prevent attacks. Many organizations would not consider the management of their network services a core competency or a strategic focus. The increase in threats and attacks from viruses, other malware and hackers requires skills specialization and a technology suite that is rapidly changing and expanding. For an outsourcer, network performance management and security are core competencies. The outsourcer's expertise can be a key to enhancing security, maintaining reliable network performance and improving the network experience.

Facilitate regulatory compliance

Increased governmental requirements for security, auditing and records retention are encumbering IT organizations within enterprises in new ways. Outsourcers have deep experience in this area and have grown capabilities to deal with the impact of compliance. For the typical IT organization, these capabilities are simply not scalable.

Integrate infrastructure and applications

In a converged network, a company has to not only support diverse devices on a common network, but it must allow those devices to work together. The expertise of an outsourcer can be a key to success in these integration efforts. An outsourcing service provider should be able to assume the role of an integrator who links infrastructure and business applications to improve productivity and bottom-line results.

Create a flexible, adaptive network architecture

The architecture of a converged network should be flexible and agile, so it can adapt quickly to changing business needs and new market opportunities. An outsourcing service provider offers expertise in designing and building

adaptive network architectures, as well as structured methodologies for matching network and security solutions with business needs.

Enable a smooth migration

The transition to a converged network is a major undertaking. If not managed effectively, this transition can drain staff resources and cause service disruptions. The experiences and expertise of a managed services provider can ease this process.

Putting best practices to work

An outsourcing service provider can help an enterprise put best practices to work to improve processes and drive operational efficiencies. In the course of its own internal and external outsourcing experiences with network convergence, HP has identified the following key best practices.

- **Leverage existing infrastructure**—To move to an outsourced solution, a company shouldn't have to scrap its current networks. In the case of HP, the outsourced solution can make use of a company's current onsite infrastructure, leverage HP's vast network infrastructure, or use a combination of the two.
- **Design for convergence**—Re-evaluate existing support models, organizations and solutions and design them to support converged network operations.
- **Streamline operations**—Enable seamless monitoring, support and administration across all IT operations and processes.
- **Bring resources together**—Break down the barriers that exist between IT and networking. Eliminate the silo-like architectures and operational teams that separate voice, data, video and applications. View network requirements in holistic terms.
- **Invest in the future**—Use the savings derived from network convergence to build a network for the future. Devote more resources to innovation.

- **Enhance service delivery**—Leverage the converged network to create the pipelines through which global service delivery of outsourcing can truly occur. Enable services to be delivered from anywhere to anyone or anything across multiple delivery channels.

HP can help

With its global reach and proven successes, HP is well positioned to help enterprises capitalize on network convergence. HP has the human and technical resources needed to assess a company's needs, design a convergence solution, and then migrate diverse services to a converged network.

Here are some other advantages that HP offers to enterprises seeking to capitalize on network convergence:

- While many providers can manage voice services, HP can also add data network and voice convergence support across the entire enterprise.
- Working closely with its alliance partners, HP can provide an end-to-end view of the converged network to enable higher levels of service quality.
- HP, together with alliance partners, offers unique capabilities for E911 services. HP can provide an E911 database to keep track of location information and IP addresses.
- HP offers special expertise in compliance issues and solutions, including those associated with the Sarbanes-Oxley Act. (To learn more, see the HP white paper titled "Working through SOX compliance and outsourcing IT services," HP publication 4AA0-3762ENA.)

- HP offers expert services and workshops to help assess convergence issues and needs. HP has the breadth and depth of expertise to evaluate infrastructure readiness, develop convergence strategies, and unravel complex security and mobility issues.

In a recent Forrester Research report, HP was ranked as a leader in global delivery infrastructure management. Forrester noted HP's global delivery infrastructure centers, offshore/nearshore staff and network bandwidth as specific areas of strength.*

HP's leadership in networking services, server, storage and outsourcing can help enterprises find their way through the complexities and management of network convergence. Drawing on its vast resources, HP can help companies drive better business results with less risk, improve productivity and IT performance, and respond faster to dynamic business conditions.

To learn more

To learn more about outsourcing and how it can help an organization capitalize on network convergence, visit www.hp.com/go/outsourcing.

For information on how HP can help address your specific network convergence challenges, contact your HP representative or outsourcing@hp.com.

* Forrester Research, "Q4 2005 Forrester Wave Report, Global Delivery Infrastructure Management," Dec. 12, 2005.

To learn more about HP's offering, visit
www.hp.com/go/outsourcing.

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