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Business Value Highlights

322%
average five-year ROI

9.3 months
Payback period

17%
more efficient IT staff
network operations

65%
less network-related
unplanned downtime

8%
lower IT infrastructure costs

50%
faster deployment of
network equipment

The Business Value of IBM Networking Services

EXECUTIVE SUMMARY

IDC spoke with 10 companies using IBM Networking Services to support their networking and datacenter IT and business operations. According to IT managers at these companies, they are leveraging IBM Networking Services to make their day-to-day IT and business operations more efficient and to drive organizational IT initiatives. IDC found that these companies are achieving significant value through their investment in IBM Networking Services and projects that they will earn an average return on investment (ROI) of 322% over five years because IBM Networking Services:

» Improve IT staff efficiency, particularly for network-related responsibilities

» Make networks more reliable and robust, reducing the impact of downtime on operations and the business

» Reduce network hardware and datacenter costs through best practices, consolidation, and provisioning

» Increase business agility with improved application development based on reducing the time to deploy network capabilities

In addition, a number of interviewed companies reported that they are using IBM Networking Services to support other important IT initiatives, such as cloud deployments, big data analytics and mobility initiatives, and datacenter consolidation efforts.

Situation Overview

As server virtualization grew in the datacenter and the 3rd Platform — cloud, mobility, data analytics, and social business — supplanted the client/server era, the legacy enterprise network became an obstacle to progress. Rather than helping further efficiency and

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productivity gains, it has obstructed them. It was in the way of business agility and business value.

In the era of the 3rd Platform and digital transformation, the traditional enterprise network — both architecturally and operationally — had become too complex to manage, too expensive to monitor, too hard to secure, and too difficult to scale. The network — which had become architecturally inflexible and nearly impossible to run efficiently — had to adapt and change to meet the agility demands of the business while helping reduce both capex and opex.

Indeed, software-defined networking (SDN) arose as networking's belated architectural response to enterprise needs for agility in the era of the 3rd Platform. Born in the realm of hyperscale cloud, where the challenges associated with the cloud and data analytics were first felt meaningfully, SDN is now being embraced by enterprises and cloud service providers that wish to gain the same benefits that hyperscale datacenters have derived from the use of software-defined technology.

There's no question that enterprises are contending with business issues and technology forces that have significant network implications. Enterprises are embracing cloud, for example, as a means to improve business agility, to accelerate time to market, and to reduce costs. In this context, network agility through automation becomes essential. Networks must enable workload flexibility and optimal application performance in private, public, or hybrid clouds.

At the same time, analytics and big data are ensuring that the velocity, variety, and volume of data grow exponentially. For enterprises, there's no choice but to try and keep pace because data is increasingly the key to improved customer service and to competitive advantage. On the network, this translates into a need for greater network bandwidth, reliability, and scalability.

Feeding some of that data deluge is enterprise mobility, which is being harnessed to drive productivity and innovation. The steady growth of enterprise mobility demands that the network deliver greater bandwidth, but it also drives a need for continuous availability, higher scalability, robust reliability, seamless connectivity across devices and locations, and optimized application delivery.

Of course, security is needed everywhere, right across the network. In a world where the network perimeter no longer exists, security must be pervasive, and it should adhere to compliance and governance policies as well as to regulatory requirements.

These business drivers, market and technology forces, and network implications are manifold and complex. Many enterprises want to embrace change, empower innovation, gain business

agility, and improve operational efficiencies, but they aren't sure how to proceed, especially when it comes to overhauling their network architectures and operational practices. They often struggle with questions relating to network automation, network virtualization, and SDN, and they aren't clear on which approaches are best suited to their business objectives, application environments, cloud strategies, and resources.

The latter is a particular concern for many enterprises, which often have personnel and staff that are unfamiliar with many key technologies — cloud, SDN, network virtualization, network function virtualization (NFV), open source network automation tools — that will have to be adopted to realize goals such as business agility.

Accordingly, these enterprises will seek the assistance of trusted third parties to provide professional and technical services that will help them transform their networks and improve their operational practices. These network service providers should be vendor neutral, with a comprehensive understanding of business objectives as well as extensive expertise across the full array of next-generation networking technologies, products, and operational models.

As enterprises pursue digital transformation on the 3rd Platform, the assistance of capable, knowledgeable, and vendor-neutral network service providers becomes increasingly important.

IBM Networking Services

IBM, a New York–based multinational technology and consulting business, recently reorganized its Global Technology Services (GTS) business division, establishing Networking Services as a distinct unit from a combined networking/systems/storage group that allows a greater focus and investment in networking. IBM Networking Services has a presence in 170 countries and manages over 96,000 networking and telephony devices across its thousands of contracts worldwide.

IBM Networking Services utilizes a life-cycle approach that includes planning, design, integration, managed, and optimization services. IBM does not develop or manufacture networking technology, and this enables flexibility to partner with a broad set of network technology companies to provide client solutions. Clients can engage with IBM at any point in the life cycle of services, with requirements ranging from small, project-based engagements to fully managed networks. Technology partners play a key role in IBM's agnostic strategy, in which IBM invests significantly in its industry certifications, its best practices, and its own repeatable methodologies for consulting, optimization, and management in support of its customers' complex networking environments. IBM is an integrator of network solutions and

services that are designed to support customers' business and technology requirements while positioning customers to innovate and differentiate on current and future initiatives.

The IBM Networking Services portfolio is designed to meet clients' business and technology objectives with a strong focus on delivering on business outcomes with a high ROI and TCO optimization. The portfolio is organized into three core segments, which integrate with IBM cloud, analytics, mobility, social, security, and traditional IT solutions. All network services are designed to help clients achieve business outcomes by understanding the client's business priorities, applications, and workloads all in support of a client's journey toward software-defined architectures:

» **Network consulting services.** Align networking and communications strategy with key business and technology requirements and objectives while leveraging IBM's expertise in new networking technology advancements.

» **Project-based services.** Consolidate, integrate, and virtualize networking environments for improved availability, reliability, performance, and security. Implement projects based on a clear strategy with the goal of obtaining the value of SDN, NFV, automation, analytics, and open standards.

» **Network managed services.** Simplify and automate network and connectivity management to enhance availability, reduce complexity, and better manage costs. Longer-term engagements encompass LAN, WAN, and collaboration.

Differentiated IBM Networking Services solution offerings are as follows:

» **Software-defined WAN management services (SD-WAN).** These services dynamically manage a customer's WAN traffic across a combination of MPLS and Internet connections, using multiple carriers across multiple geographies. The services create a seamless global WAN for improved network capability, reduced cost, and simplified network management.

» **Network managed services.** These services are an IBM catalogue for customizable services for monitoring, management, and reporting of IT assets including the network, whether the assets are on-premise or on SoftLayer or reside in any cloud.

» **Converged fiber networks.** These build converged networks leveraging passive optical technology and distributed antenna systems to run a full range of IT, communications, and building services on the same network while delivering a highly engaged and secure venue experience for industries such as sports and entertainment, healthcare, education, hospitality, and retail.

» **SDN and NFV.** Both provide network strategy, design, and implementation services to create a programmable and centralized software-defined network environment as an integral part of a software-defined infrastructure to quickly deploy cloud-based workloads.

IBM has the ability to test and integrate various emerging technologies from leading networking and technology partners at the Client Innovation Centers in Dallas, Texas, and Nice, France, where they can integrate the best technologies per client requirements as well as develop innovative proof-of-concept models. Client Innovation Centers allow for the development of best practices and methodologies to support the entire IT infrastructure as well as the ability to integrate the network in consideration of the entire IT environment and to ensure the network is not siloed but part of the larger IT and business discussion.

To support consistent delivery globally, IBM uses Global Services Methods, which are definitions and tools for every engagement, such as strategy sessions, assessments, and planning all the way through delivery and management. Depending on the tool, an IBM consultant may use it onsite or remotely, and IBM is investing in tools that will allow clients that prefer self-service to engage with IBM in new ways. This also ensures consistent knowledge transfer and fosters mentoring among team members.

The Business Value of IBM Networking Services

Study Demographics

IDC interviewed 10 companies about the impact of IBM Networking Services on their networking and datacenter operations and environments. These companies were mostly large enterprises with substantial networking and IT environments and a sizable average employee base of 67,900. As shown in Table 1, interviewed companies provided experiences from a number of industries and were based in North America and EMEA.

TABLE 1

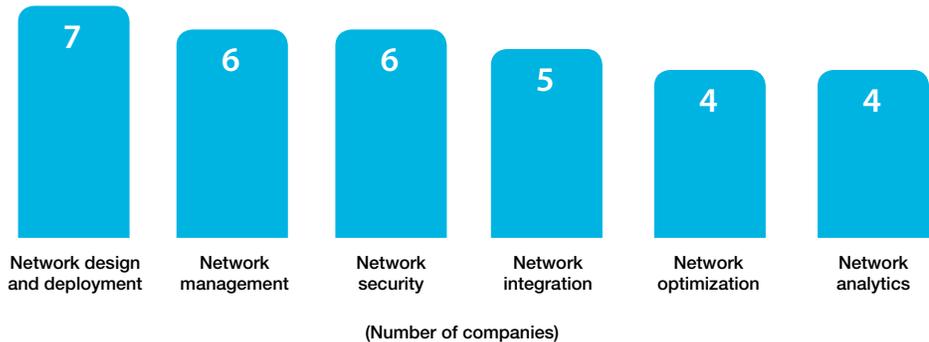## Firmographics of Interviewed Companies: IBM Networking Services Customers

	Average	Median	Range
Number of employees	67,900	37,500	2,000 to 290,000
Number of IT staff	3,177	1,250	20 to 17,000
Number of IT users (internal)	67,300	36,000	2,000 to 290,000
Number of business applications	2,372	1,275	25 to 10,000
Number of physical servers	6,500	2,750	150 to 30,000
Number of network routers	486	200	30 to 2,000
Number of network switches	470	500	40 to 1,200
Countries	United States, Canada, Turkey		
Industries	Electronics, apparel, financial services, utilities, healthcare, consumer services		

Source: IDC, 2016

Most interviewed companies reported supporting LAN and WAN connectivity and datacenter networking with IBM Networking Services. About half are using IBM to support their wireless networking efforts and for remote managed services, and three of the companies are driving converged communications efforts. By specific use case, as shown in Figure 1, companies reported diversity, with network design and deployment, network management, and network security being the most common use cases.

FIGURE 1

Use Cases: IBM Networking Services

Network design and deployment	Network management	Network security	Network integration	Network optimization	Network analytics
7	6	6	5	4	4

(Number of companies)

Source: IDC, 2016

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Business Value Analysis

Interviewed companies are achieving value with IBM Networking Services by making their IT operations more efficient, reducing the impact of network-related outages on their operations and businesses, reducing networking and other IT infrastructure costs, and making their businesses more agile. IDC projects that they will achieve average annual benefits worth $32,435 per 100 users of IT services ($21.8 million per organization) over five years in the following areas with IBM Networking Services (see Figure 2):

» **IT staff productivity benefits:** IT staffs are more efficient and productive with support, tools, best practices, automation, and higher network reliability that result from using IBM Networking Services. IDC puts the value of IT staff time and productivity gains at an average of $15,398 per 100 users ($10.4 million per organization) per year over five years.

» **Risk mitigation — user productivity benefits:** The operational and business impact of network-related downtime and security breaches is substantially reduced with IBM Networking Services. IDC projects that these companies will achieve benefits worth $11,146 per 100 users per year ($7.5 million per organization) over five years by minimizing productivity losses attributable to network problems and limiting the business impact of such outages.

» **IT infrastructure cost reductions:** IBM Networking Services enable networking- and datacenter-related cost reductions and avoidances through equipment use optimization, best practices, and improved provisioning. IDC calculates that these cost savings will be worth an average of $2,576 per 100 users ($1.7 million per organization) per year over five years.

» **Business productivity benefits:** IT operations become more agile with IBM's support, with reduced equipment and application deployment times and improved ability to support lines of business. As a result, users have more timely access to the business applications they need to do their jobs, making them more productive. IDC projects that these business-related benefits will have a value of $3,315 per 100 users ($2.2 million per organization) per year over five years.

FIGURE 2

Average Annual Benefits per 100 Users with IBM Networking Services
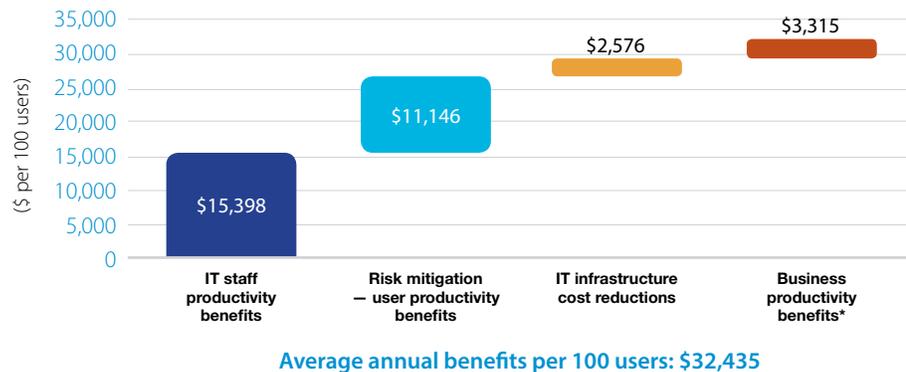
Average annual benefits per 100 users: $32,435

* Business productivity benefits include benefits interviewees attributed to IBM Networking Services. Some of this value comes from IBM Networking Services' support of organizationwide technological initiatives discussed in this study, but not all value from these initiatives was attributed to IBM Networking Services.

Source: IDC, 2016

IT Staff Efficiencies

IBM customers reported that their IT staff teams have become more efficient with the support of IBM Networking Services. This is particularly true of staff members responsible for deploying, managing, and maintaining network environments. These companies benefit from advice and best practices from IBM, automation and other operational improvements put in place with IBM's support, and having IBM do the work in some cases. As a result, these companies require less staff time to support their networking (17%), server (14%), and storage (15%) environments and do not need to make additional hires as their businesses grow.
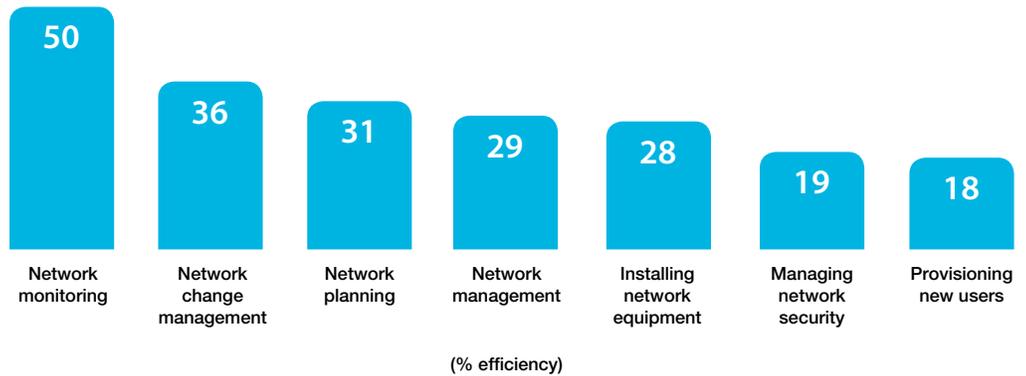
Figure 3 demonstrates the efficiencies these companies are realizing with IBM Networking Services in terms of network-specific responsibilities such as change management, planning, management, installation, and security. In all of these areas, support from IBM has helped achieve efficiencies that result in staff shifting more time to focusing on business-related initiatives. Interviewed IT managers provided examples of how IBM Networking Services have made their IT operations more efficient:

» **Less time keeping the lights on:** *"With IBM Networking Services, we have been able to go from having our network engineers spend 80% of their time keeping the lights on to 30%. This shift means that we've freed up their time to deliver on many more projects for our customers."*

» **Quality of support leading to efficiencies:** *"The solutions and tools that we use from IBM are standardized and intuitive, so they are easy to implement, track, and are applied correctly for their intended purpose … . This enables our IT staff to spend more time on new application development and deeper performance reviews and tuning."*

» **Driving automation deeper into IT operations:** *"With IBM Networking Services, we have added an extra level of automation, reduced the need for manual intervention, and lowered our TCO. They've helped automate our virtual deployments, and we can now move rapidly through the development and deployment cycle."*

FIGURE 3

Networking Staff Efficiencies with IBM Networking Services

Network monitoring	Network change management	Network planning	Network management	Installing network equipment	Managing network security	Provisioning new users
50	36	31	29	28	19	18

(% efficiency)

Source: IDC, 2016

Risk Mitigation and Availability

Interviewed companies reported substantially reducing the drag of network-related unplanned downtime and security breaches on their users and business operations. Interviewed IT managers admitted that before using IBM Networking Services they sometimes struggled to provide the levels of availability and reliability their businesses demand. As shown in Table 2, interviewed companies have been able to leverage IBM's support to minimize the impact of network-related downtime and security breaches on their users, going from an average of 5.4 hours of lost productive time per user per year to 2.2 hours, or a 59% decrease. One interviewed organization explained: *"We have much better network reliability with minimal disruptions with IBM Networking Services … . This means that our services are much more reliable, and we've reached 99.9999% uptime."*

Interviewed IT managers traced improved network availability and robustness to best practices and support from IBM that provide improved visibility and the expertise needed to resolve problems in less time. In addition, cooperation with IBM on network security helps

reduce the frequency and impact of viruses and other network security breaches. Improved network availability and reliability impact more than just users; several companies noted that improvements in these areas have enabled them to offer extended or additional services to their customers, which can translate to improved business results.

TABLE 2

Risk Mitigation with IBM Networking Services

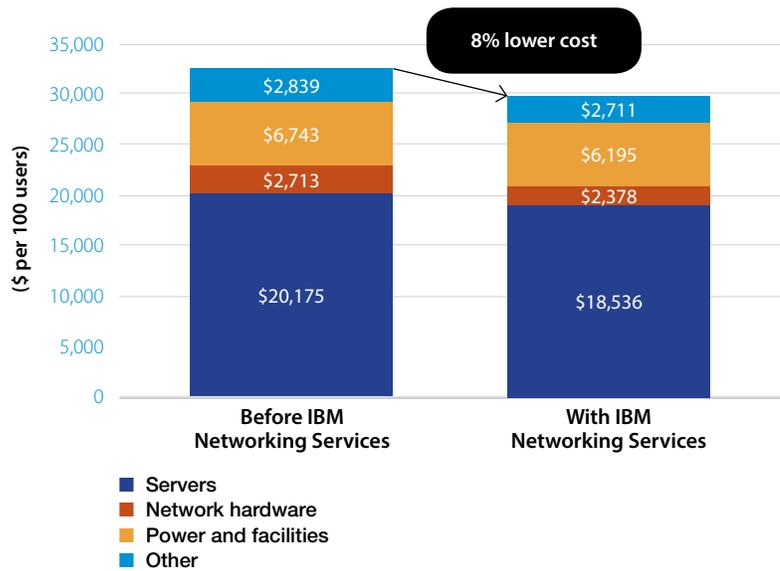|	Before IBM Networking Services	With IBM Networking Services	Difference	% Benefit
Unplanned downtime				
Number of instances per year	34.3	20.4	13.9	41
MTTR (hours)	2.8	1.7	1.1	40
Productive hours lost per user per year	4.7	1.7	3.0	65
Planned downtime				
Number of instances per year	26.9	24.0	2.9	11
MTTR (hours)	3.5	3.0	0.5	14
Productive hours lost per user per year	0.23	0.18	0.05	23
Security breaches				
Number of instances per year	0.6	0.5	0.1	13
MTTR (hours)	2.9	2.7	0.2	6
Productive hours lost per user per year	0.4	0.3	0.1	19
Total impact				
Total productive hours lost per user per year	5.4	2.2	3.2	59
Total FTE impact per year	192	79	113	59

Source: IDC, 2016

IT Infrastructure Cost Reductions

Interviewed companies have also been able to reduce their network- and datacenter-related costs. They have taken support from IBM and applied it to consolidate their networking and datacenter environments, pursue initiatives such as virtualization that reduce infrastructure requirements, and leverage IBM advice and best practices to make better use of existing equipment. On average, interviewed companies are reducing their network hardware costs

by 12% and their broader datacenter-related costs (including servers, power and facilities, and other costs such as consulting) by 8% (see Figure 4). These savings can be especially important for organizations seeking to limit capex and move to more opex-focused networking and datacenter cost models.

FIGURE 4

IT Infrastructure Costs with IBM Networking Services: Annualized per 100 Users

Source: IDC, 2016

Business Productivity Benefits

Interviewed companies are using IBM Networking Services not only to make their IT operations more efficient and cost effective but also to support their operations and businesses. Increasingly, IT departments are being called upon to serve as business partners and enablers, and IBM Networking Services are helping IT teams at these companies reach that objective.

A number of interviewed IT managers mentioned IT agility as a core benefit of using IBM Networking Services for their organizations (see Figure 5). For these companies, agility means better matching IT resources and services to evolving demands from the business. IBM is helping them deploy network, server, and storage hardware in less time through best practices, support, and initiatives such as virtualization, which enables delivery of more business applications and services and acceleration of application development cycles.
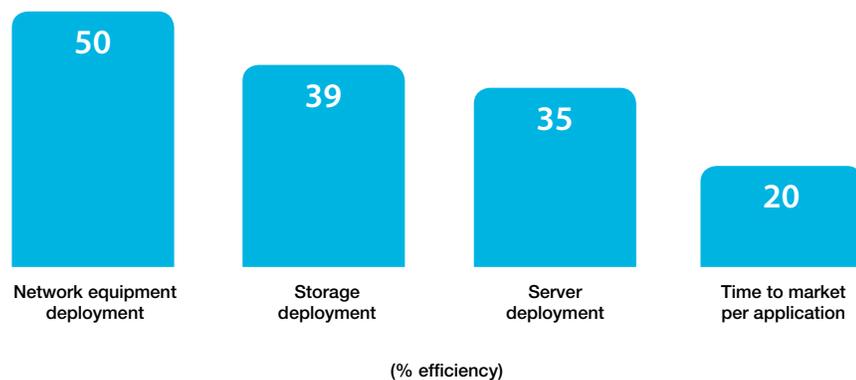
In addition, several companies mentioned that IBM Networking Services have helped them improve the quality of customer-facing services and related these improvements in part to IT staff time savings that have been reinvested in other initiatives including application and service development.

Interviewed companies provided a number of examples of how they have improved their ability to support their businesses with IBM Networking Services:

» **Ability to deliver new features or applications:** *"IBM has given us the ability to bring in products and services that have helped us deliver features or applications that we otherwise wouldn't have brought to market. For example, in the datacenter cloud space, we can now dynamically provision services for security and connectivity, which goes back to our developers being more efficient."*

» **Virtualization to support operations:** *"IBM Networking Services have eased the implementation of virtual environments for us … . This has assisted us in capacity planning to allow for quick expansion of our environments to meet business needs and alleviate network-related concerns."*

» **Faster time to market:** *"With shorter time to market with IBM, we're able to roll our solution into production ahead of our competition, which translates into more opportunities for revenue."*

FIGURE 5

Improved IT Agility with IBM Networking Services

| 50 | 39 | 35 | 20 |
| Network equipment deployment | Storage deployment | Server deployment | Time to market per application |

(% efficiency)

Source: IDC, 2016

A number of interviewed companies also reported using IBM Networking Services to support organizationwide technology initiatives. These initiatives, which include mobility, analytics, cloud, and consolidation, are often longer-term IT and business priorities at these organizations. While interviewees often could not apportion specific value from these initiatives to IBM Networking Services, they reported using IBM to support and contribute to these transformation initiatives with its experience, best practices, and expertise. As Table 3 indicates, these initiatives, when successful, can provide substantial operational and business value to these companies, with productivity benefits ranging from 8% to 34% and impacting up to 40,700 employees.

TABLE 3

Organizational Technology Initiatives* — IBM Networking Services

	Companies Pursuing Initiative	Average Number of Impacted Users	Average Productivity Benefit (%)
Employee mobility	3	40,700	8
Big data analytics	2	3,550	8
Private cloud	5	3,425	17
Hybrid or public cloud	4	24,400	34
Other (collaboration, consolidation)	2	2,600	30

* Business productivity benefits include benefits interviewees attributed to IBM Networking Services. Some of this value comes from IBM Networking Services' support of organizationwide technological initiatives discussed in this study, but not all value from these initiatives was attributed to IBM Networking Services.

Source: IDC, 2016

ROI Analysis

IDC conducted interviews with 10 companies using IBM Networking Services and recorded their results to inform this study's analysis. IDC used the following three-step method for conducting the ROI analysis:

1. **Gathered quantitative benefit information during the interviews using a before-and-after assessment.** In this study, the benefits included IT staff time savings and productivity gains, user productivity increases, increased revenue, and infrastructure-related cost reductions.

2. **Created a complete investment (five-year total cost analysis) profile based on the interviews.** Investments go beyond the annual costs of using IBM Networking Services and can include additional costs, such as migrations, planning, consulting, additional hardware or software, configuration or maintenance, and staff or user training.

3. **Calculated the ROI and payback period.** IDC conducted a depreciated cash flow analysis of the benefits and investments for the companies' use of IBM Networking Services over a five-year period. ROI is the ratio of the net present value (NPV) and the discounted investment. The payback period is the point at which cumulative benefits equal the initial investment.

Table 4 presents IDC's analysis of the average discounted benefits, discounted investment, and return on investment for the IBM clients interviewed for this study. IDC calculates that, based on information provided by interviewed companies, they will invest a discounted average of $26,976 per 100 users ($18.2 million per organization) over five years in IBM Networking Services. IDC projects that this investment will yield average discounted benefits worth $113,708 per 100 users ($76.5 million per organization) over five years. This level of benefits and investment cost would result in an average five-year ROI of 322% and a payback period of 9.3 months for these companies.

TABLE 4

Five-Year ROI Analysis

	Per Organization	Per 100 Users
Benefit (discounted)	$76.5 million	$113,708
Investment (discounted)	$18.2 million	$26,976
Net present value (NPV)	$58.3 million	$86,732
Return on investment (ROI)	322%	322%
Payback period	9.3 months	9.3 months
Discount rate	12%	12%

Source: IDC, 2016

Challenges and Opportunities

Opportunities

IBM Networking Services afford customers the opportunity to leverage capabilities across other IBM divisions and resources to deliver complementary service offers, including security, mobility, hosting, managed, and cloud services. IBM also has the capability to view a client's infrastructure in a holistic manner to encompass compute, storage, and applications and their impact on the network across the globe and in many verticals.

IBM presents a robust breadth of client satisfaction measurement systems and client retention programs. It is also developing specialized services offers, such as network optimization services to ensure ongoing client satisfaction and network readiness.

Over the past year, IBM has undergone its own transformation, realigning and reinvesting its own services practices within the GTS business unit. Specifically, the Networking Services group has redefined its position in the networking consulting and integration space. It has hardened its core network infrastructure offers surrounding key growth areas of LAN, WLAN, wireless, datacenter, and Ethernet networking as well as invested in new network technologies such as SDN, NFV, and hybrid IT. In addition, IBM has expanded into new differentiated offers such as those described previously — network managed services, SD-WAN, and converged fiber networks — to provide customers higher levels of automation, agility, and choice for managing and optimizing their networking assets.

Challenges

IBM has significant global scale and has developed a portfolio of network consulting, project-based, and managed services to support customers as they move toward cloud and mobility initiatives. In recent strategic moves, IBM has continued to focus more intently on developing and expanding its services portfolio while lessening its stake in traditional network hardware. At the same time, IBM maintains a very large, global channel ecosystem that will look to IBM to help enable it to move to meet customer demand. Traditionally, IBM has limited the IP it shared with its partners to primarily support services. Expanding into consulting services may prove challenging as IBM works to strike a balance between channel enablement and sharing IP with partners, especially around advanced networking initiatives such as SDN and NFV.

As customers look to align technology investments with business outcomes, their trusted advisor must be able to speak this language and provide appropriate guidance. Fortunately, pan-IBM capabilities allow the company to address business challenges that can be solved through technology. Where IBM Networking Services will need to fine-tune their offer is in the development of KPIs for measuring network investments for solving business outcomes. This may prove difficult in many cases as KPIs are "softer" to measure.

Summary and Conclusion

Digital transformation on the 3rd Platform is creating an environment where enterprises are contending with business issues and technology forces that have significant network implications. Enterprises are increasingly embracing cloud, big data analytics, social, and

mobile technologies to keep pace and compete. In this context, network agility becomes essential.

The business drivers, market and technology forces, and network implications are manifold and complex. Many enterprises want to embrace change, empower innovation, gain business agility, and improve operational efficiencies, but they aren't sure how to proceed, especially when it comes to overhauling their network architectures and operational practices. They often struggle with questions relating to network automation, network virtualization, and SDN, and they aren't clear on which approaches are best suited to their business objectives, application environments, cloud strategies, and resources.

IDC believes it will be imperative for enterprises to leverage trusted third-party resources to provide the technical services and industry expertise to help strategically align network requirements with business objectives. To that end, IDC interviewed 10 IBM Networking Services customers, which illustrated and quantified the benefits of working with a third-party professional services firm. IBM Networking Services customers highlighted the following benefits of engaging with IBM:

» Improved IT staff productivity

» Increased risk mitigation — lower network downtime

» Reduction in IT infrastructure cost

» Gains in business productivity, agility, and innovation

» Increased average ROI on IT projects

This IDC Business Value study clearly illustrates the business and technology benefits that customers derived from engaging with IBM Networking Services. The IBM Networking Services offerings, tools, and methodologies have been thoughtfully developed across consulting, project-based, and managed capabilities to ensure alignment with a customer's networking and datacenter technology and business needs. It is the investment in its people, process, technology, and methodology that allows IBM Networking Services to differentiate, innovate, and help customers derive maximum business value.

Appendix

IDC's standard ROI methodology was utilized for this project. This methodology is based on gathering data from current users of IBM Networking Services as the foundation for the model. Based on these interviews, IDC performs a three-step process to calculate the ROI and payback period:

» Measure the savings from reduced IT costs (staff, hardware, software, maintenance, and IT support), increased user productivity, and improved revenue over the term of the deployment.

» Ascertain the investment made in deploying the solution and the associated migration, training, and support costs.

» Project the costs and savings over a five-year period and calculate the ROI and payback for the deployed solution.

IDC bases the payback period and ROI calculations on a number of assumptions, which are summarized as follows:

» Time values are multiplied by burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and manager productivity savings.

» Downtime values are a product of the number of hours of downtime multiplied by the number of users affected.

» The impact of unplanned downtime is quantified in terms of impaired end-user productivity and lost revenue.

» Lost productivity is a product of downtime multiplied by burdened salary.

» Lost revenue is a product of downtime multiplied by the average revenue generated per hour.

» The net present value of the five-year savings is calculated by subtracting the amount that would have been realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost. This accounts for both the assumed cost of money and the assumed rate of return.

Because every hour of downtime does not equate to a lost hour of productivity or revenue generation, IDC attributes only a fraction of the result to savings. As part of our assessment, we asked each company what fraction of downtime hours to use in calculating productivity savings and the reduction in lost revenue. IDC then taxes the revenue at that rate.

Further, because IT solutions require a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis and then subtracts the deployment time from the first-year savings.

Note: All numbers in this document may not be exact due to rounding.

A message from the sponsor:

To learn more about IBM's Managed Network Services, **click here**.

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