NETWORKWORLD

2015 State of the Network
SURVEY

Exclusive Research from Network World

EXECUTIVE SUMMARY

Networking Advancements Are Leading to IT Transformation
Security and cloud drive technology decisions

The transformation of Network IT into a collaborative and agile team that is positioned to respond to rapid changes in technology is underway, according to Network World's 2015 State of the Network survey. And IT decision-makers are optimistic that adopting advanced networking technologies will have a positive impact on IT operations.

Among the technology and business professionals surveyed, 51%—a slightly higher proportion than a year ago—agree that emerging technologies have enabled, or will soon enable the IT organization to pool technology resources and drive up utilization rates, while at the same time reducing siloed resources. A higher percentage believe, also, that they are well positioned to take advantage of these new technologies: 55% say they are doing enough to prepare for the changes that new technologies make possible, compared to 51% a year ago.

Nevertheless, they acknowledge some challenges, particularly when it comes to data security and control. Security is among the top obstacles respondents say they are facing, along with concerns related to network availability, business continuity and funding. These concerns span the data center, client-facing productivity initiatives and emerging opportunities presented by the Internet of Things (IoT)—an indication of how interconnected decisions about infrastructure have become.

The complexity faced by Network IT may be one reason why only 40% of respondents feel very confident about their readiness to effectively deliver the applications and services that are their organizations' top priorities; however, another 44% feel at least somewhat prepared.

IT organizations are responding to the opportunities and the challenges that new technologies present by changing how they work, and by pursuing timely technology investments. Overall IT and business priorities—whether for security, cloud computing, mobility or IoT—set the context for Network IT decisions.

Security and Cloud Drive Spending

During the next 12 months, respondents anticipate security (32%) and cloud (31%) to be their organization's main focus. Enterprises are somewhat more likely to be focused on cloud (35%) than companies with fewer than 1,000 employees (30%). Deploying desktops, laptops and workstations ranks as respondents' third priority (25%) although smaller companies will put greater emphasis on client technologies (26%) than enterprises (19%).

The importance of security and cloud initiatives is reflected at least somewhat in respondents' IT budgets. Among companies surveyed, the average technology budget is $106 million.

Security funding is most likely to increase in next year: nearly half (47%) say they'll spend more on it. The budget for cloud is almost equally likely to get a boost: 43% predict spending in this area will go up. In addition, 38% expect funding for storage and server virtualization to increase.

With regard to security, companies are continuing to pursue similar investments as they have in the past, though they appear to be making adjustments as their needs evolve. A year ago, employee awareness and cooperation was IT's primary security challenge. Educating employees about their role in information security is still a concern (cited by 33%), but the focus on protecting against external threats (35%), and managing the risks posed by mobile devices and mobility initiatives (34%) has increased. Preventing data breaches (35%) has remained respondents' number one network/data center challenge, while security and privacy concerns (50%) are now about tied with costs and funding (49%) as the main obstacles to productivity initiatives.

Possibly as a result, companies are more likely than they were last year to have on their radar or be actively researching data loss prevention (43%) and corporate data encryption (37%) solutions, while continuing to maintain interest in next generation firewalls (41%).

Internet of Things (IoT) initiatives may soon drive additional spending. Nearly one-quarter (22%) of respondents think it will, either through the collection of new data or use of data that is already collected. Another 42% believe new IoT-related spending is a possibility. Enterprises are more likely to expect a rise in spending for IoT initiatives (26%) than their SMB counterparts (21%). Forty-four percent of companies have this emerging area on their radar or are actively researching its potential. As with many new technologies, large companies test the waters first: significantly more enterprises (56%) than small and mid-size companies (36%) are actively looking into IoT or have it on their radar.

Investing in Efficiency, Flexibility and Capacity

Beyond security, IT decision-makers are focused on meeting demands for efficient, flexible and continuously available infrastructure.

Matching network capacity and coverage with increasing demand for bandwidth and Wi-Fi availability is less of a worry today (44%) than it was a year ago (51%), but respondents still consider it a challenge. Enterprise organizations (52%) find ensuring bandwidth/capacity to be more of a challenge than their SMB counterparts (40%), most likely due to the fact that enterprises have a higher number of user devices coming onboard at a higher rate. Additionally, ensuring the Wi-Fi infrastructure is capable of supporting evolving demands such as video is more of a challenge for Enterprise organizations (43%) than SMBs (32%).

Forty-eight percent have Gigabit Wi-Fi on their radar or are actively researching, and having a low barrier to entry makes it an appealing option. With 52% saying cell calls flipping to Wi-Fi is not in the plans most likely correlates to why determining how to handoff cell calls to the Wi-Fi infrastructure is not a big issue.

Concerns about capacity are reflected in companies' pursuit of other mobility-related productivity initiatives. A year ago, respondents were most likely to be involved with expanding access to corporate resources from mobile devices. That is still the case today: 77% say they are exploring or implementing such projects. Meanwhile they express almost equally strong interest in expanding the corporate wi-fi network (76%) and enterprise mobility initiatives generally (75%). The area where companies – both Enterprise (49%) and SMB (47%) are most actively researching is around 802.11ac (Gigabit Wi-Fi).

With regard to efficiency and flexibility, 71% of respondents report that their organizations have virtualized at least a portion of their network—on average Enterprise organizations have virtualized 35% of their network. As they were a year ago, companies are most likely to be at some stage of exploring or implementing server consolidation (83%). There is a robust interest in data center storage efficiencies (73%) and storage virtualization specifically (73%) in organizations' network and data center plans. Software-Defined Networking (SDN)/Network Virtualization ranks highest with companies having it on the radar or actively researching initiatives around it (41%). Tools to gauge application performance is right behind that with 39% having it on the radar or actively researching.

SDN represents the next technology frontier, but companies do not appear to be moving quickly to adopt it. Overall, the percentage of companies that report having implemented SDN in their data center, enterprise WAN or both places (31%) and the percentage that plan to implement it within three years (45%) are about the same as a year ago.

Respondents identified several benefits to deploying SDN, primarily increased network flexibility (33%) faster network service configuration and delivery (26%) and increased customization (25%); enterprises are more likely to have achieved these, or anticipate achieving them. But they still seem somewhat unsure of its ultimate potential. A little more than one-third (36%) of respondents overall, and 44% of enterprise respondents, agree that SDN will radically change their networks for the better.

Those surveyed also aren't certain whether legacy incumbent or startup vendors will drive SDN adoption. About one-third (32%) agree startups will lead, but 44% aren't sure.

Changing How Network IT Works

Delivering the next generation infrastructure involves more than just foresight into technology investments. Network IT is also changing how it operates in order to become more collaborative and able to tackle diverse demands. The survey indicates that IT departments are evolving successfully.

Eighty percent of respondents agree that in the future, network personnel will likely need to take on tasks that fall outside of or are new to the traditional role, including network virtualization, analytics and architecture, planning and programming. In fact, 60% agree that control of the network is already shifting away from the traditional network architect toward collaborative teams. This appears to be somewhat truer at companies with 1,000 or more employees (64%) than at companies with fewer than 1,000 employees (58%).

While such trends represent potentially disruptive changes to IT operations, most respondents think their teams are adapting well. Eighty percent say collaboration efforts between the network team and other teams are mostly successful.

Cross-departmental collaboration appears to be taking hold at most Enterprise companies. A majority of Enterprise companies have adopted or are in the process of adopting a DevOps approach to software development and deployment enterprise wide or in a limited scope (54%). Additionally, 15% are planning to adopt or are evaluating adoption. As is typically the case, SMBs are slower to adopt with only 30% having already begun to adopt DevOps in at least a limited way.

Respondents at large companies are more likely to anticipate negative consequences if they don't take the DevOps route. Forty percent worry that they won't have enough visibility into IT operations requirements, compared to respondents at small and mid-sized companies (28%). Nearly the same proportion of large company respondents (38%) envision increased development costs without DevOps, versus 21% at smaller companies. And 35% say there would be less collaboration between development, IT operations and business, compared to 31% at smaller firms.

The data suggests that IT's success at embracing and adapting to change goes hand in hand with a growing appreciation of its relevance. Respondents are even more confident in their importance compared to a year ago. Most (59%) disagree that technologies and trends such as cloud services, mobile technologies and self-service app stores are eroding IT's influence, which is also up from last year where 56% disagreed. For example, 45% of IT executives say that cloud projects originating outside of IT eventually return to IT ownership. Over half of respondents (59%), say this is due to lack of appropriate skill set.[1]

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[1] *Source: 2014 IDG Enterprise Cloud Computing Study*

Methodology

Network World's 2015 State of the Network survey was conducted online among members of Network World's Tech Connections Panel and among visitors to NetworkWorld.com. The goal of the study was to help tech marketers inform their product development, marketing and messaging strategies, specifically relating to emerging technologies that impact the network. Respondents were offered a chance to win $250 cash as an incentive for completing the survey.

Results are based on 240 completed surveys. To complete the survey, respondents must have indicated that they have purchase influence in at least one of the following technology areas to be considered qualified respondents: Servers, Storage, Virtualization, Cloud, Clients, Mobile devices, WANs, Security, Software, Data Management/Analytics, Collaboration/Social/Unified Communications (UC)/Video Equipment & Services, or Software-Defined Networking (SDN). The margin of error on a sample size of 240 is +/- 6.3 percentage points.

For the purposes of this report, enterprise organizations refer to those respondents at companies with 1,000 or more employees. SMBs refer to those respondents at organizations with less than 1,000 employees. Percentages on single-select questions may not sum to 100 percent due to rounding.

A broad range of industries are represented including high tech (18%), education (15%), manufacturing (13%), business/consumer services (10%), telecom & utilities (8%), government (8%), financial services (8%), and healthcare (5%). Respondents are employed in organizations with an average of 9,416 employees. Thirty-nine percent work at enterprises, and 57% work at SMBs. Eighteen percent of respondents hold senior IT management titles, 39% hold mid-level IT management titles, 29% hold IT staff titles, 13% hold business management titles and 1% hold other titles.