

EXECUTIVE SUMMARY

The Sixth Annual State of the Network survey incorporates responses from 170 individuals tasked with monitoring their organizations' network, infrastructure, and applications. This year's study yielded several surprising developments related to video and UC adoption, while validating the pervasiveness of cloud within global corporations. A summary of results follows.

KEY TECHNOLOGY STATISTICS

Unified Communications

- 70% have embraced VoIP and 62% have deployed videoconferencing—UC is being fully embraced by the enterprise.
- Video bandwidth use remained identical to last year's survey at less than 25% total utilization. This suggests growth in the amount of bandwidth consumed by video is not increasing at the rate many predicted, or more likely IT teams are carefully controlling how much network resources are consumed by it.

Cloud Computing

- Cloud services continue to steadily win-over IT teams with nearly 70% employing it as part of their IT infrastructure
- 32% of applications now run in the cloud, and will increase by an impressive 43% by 2014
- Businesses however remain wary; while 59% have moved their email services to the cloud, only 16% have shifted mission critical apps like ERP

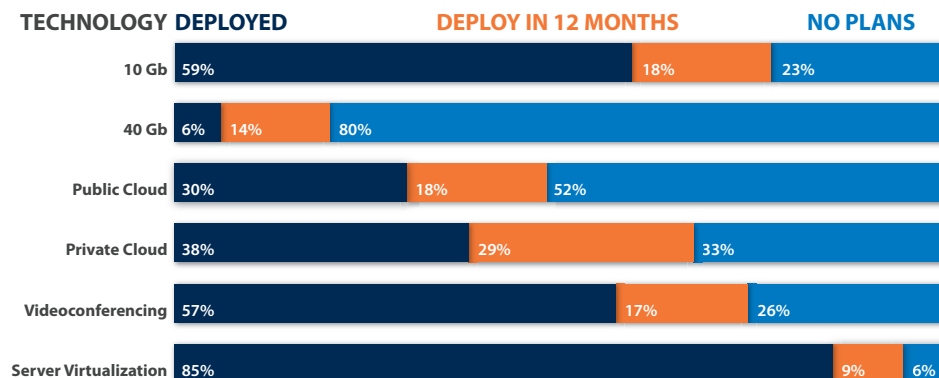
Application & Network Performance Monitoring

- The need for bandwidth is insatiable, with nearly half the respondents stating that bandwidth growth will approach 50% in the next 2 years.
- For the sixth straight year, isolating the problem source: network, system, or app was the chief troubleshooting concern (68%).

EMERGING TECHNOLOGIES

Videoconferencing and 10 Gb maintained their leadership positions from an emerging technology perspective. In fact, given the planned implementation rates approaching 60% within the next 12 months, these technologies should be considered mainstream within the datacenter, much like server virtualization and VoIP. Public and private cloud also showed steady gains from a scheduled deployment perspective with the two of them scoring 30% and 38%, respectively. 40 Gb rollouts, a new category in this year's survey remain very low (less than 7%) suggesting most businesses are handling the deluge of traffic utilizing a 10 Gb foundation.

EMERGING TECHNOLOGY DEPLOYMENTS



UNIFIED COMMUNICATIONS

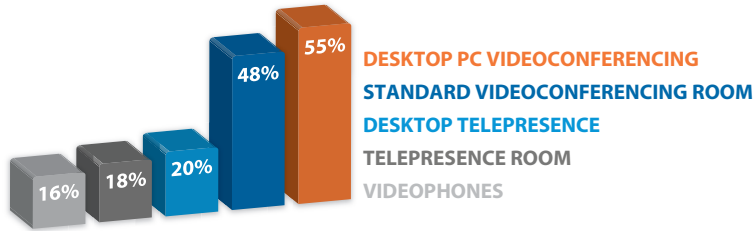
A broad cross-section of unified communications applications are being embraced by the business world; VoIP, videoconferencing, and IM should all now be considered commodities because their adoption has reached greater than 60%.

UNIFIED COMMUNICATIONS IN THE ENTERPRISE



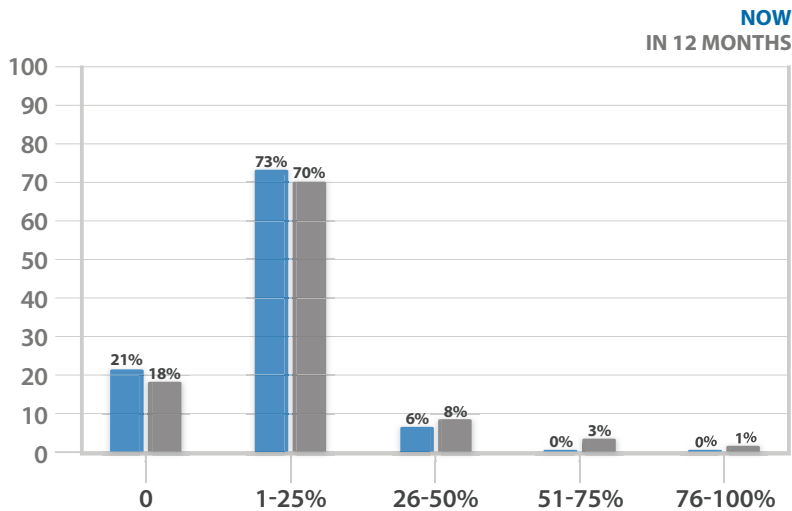
Enterprises clearly see the promise of videoconferencing in reducing corporate travel expenses while nurturing a collaborative environment. However, they are embracing the more basic versions of video available via desktop and standard videoconferencing rather than deploying more costly methods such as telepresence.

PERVASIVE ENTERPRISE VIDEO



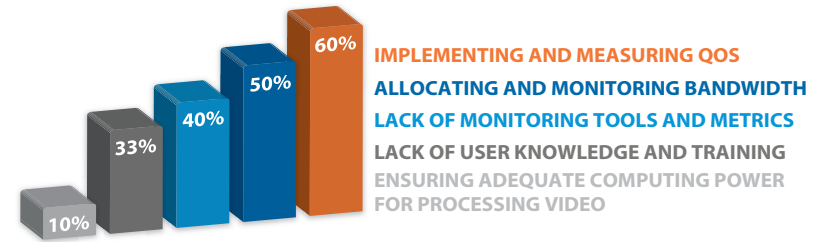
This trend is also apparent in the respondents' answer to how much of their traffic will be tied to video. Survey results show the clear majority expecting less than 25% of their entire bandwidth utilization will be driven by video, nearly identical to the last year's survey results. It seems to be strong validation of video usage being tempered by the reality of finite network resources.

EXPECTED VIDEO BANDWIDTH CONSUMPTION



Though video adoption remains steady, the challenges to achieving acceptable performance tracked closely with last year's survey. As the Challenges of Video graph in the next column illustrates, validating QoS and managing bandwidth were top concerns which is surprising given the maturity of the technology.

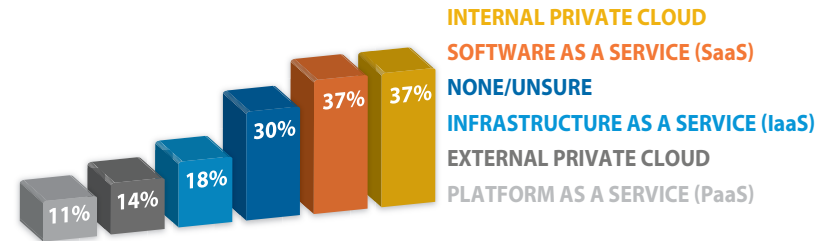
THE CHALLENGES OF VIDEO



CLOUD COMPUTING

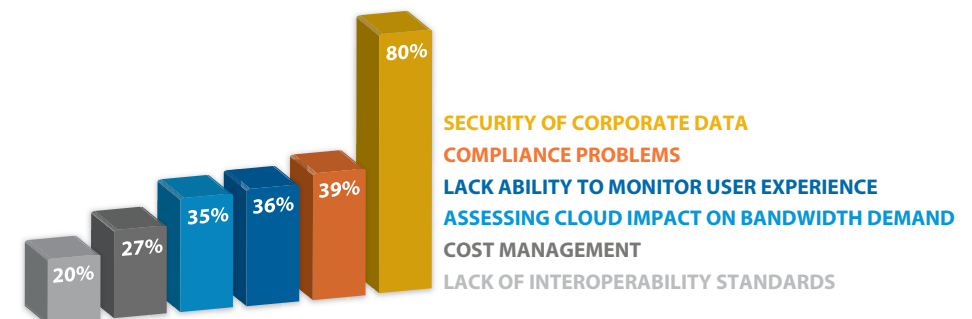
Overall, cloud adoption increased significantly over the past year growing from less than 60% in 2012 to nearly 70% in 2013. After several years of scant growth, these numbers suggest the compelling business value that cloud computing can offer are resonating with IT teams. Downside risks frequently associated with the migration are being addressed or at least mitigated, with the exceptions of serious security and compliance concerns.

CLOUD DEPLOYMENT STRATEGIES



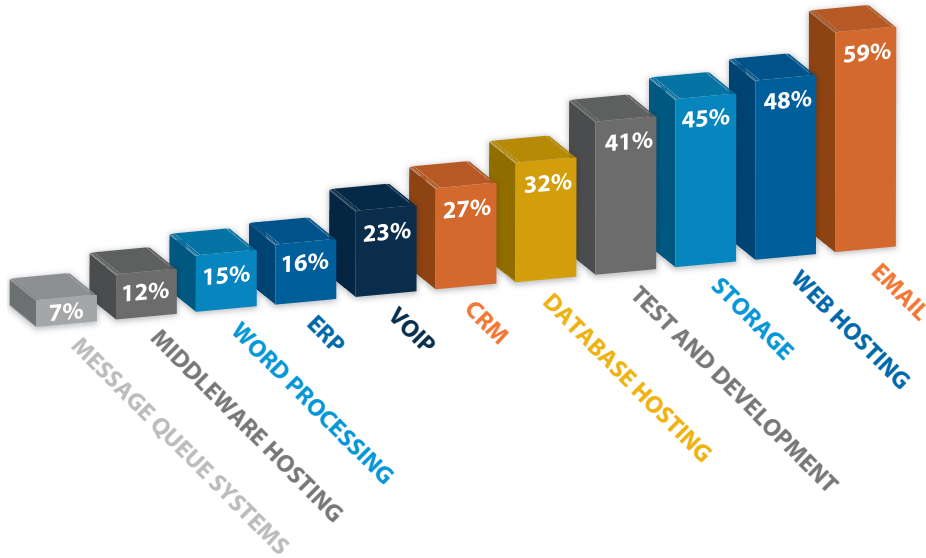
Other concerns associated with cloud migrations include ability to monitor user experience and assessing the impact on network bandwidth. These formidable obstacles speak to the importance of ensuring monitoring visibility isn't sacrificed when migrating to cloud services.

CLOUD DEPLOYMENT THREATS



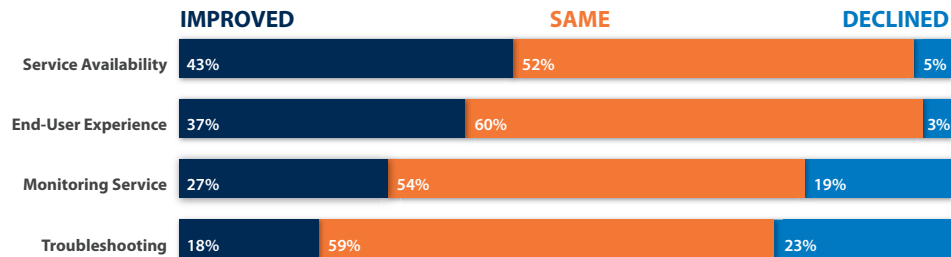
From an application provisioning angle, organizations appear to be porting selective applications into the cloud starting with the more basic solutions like email and web services as well as test and development activities. Mission critical and more complex services such as ERP remain, for the most part, internally hosted. It will be interesting to see whether the go-slow approach toward hosting critical services in the cloud remains in the future, or businesses take the ultimate leap of faith and move everything to the cloud.

CLOUD APPLICATION DEPLOYMENTS



When asked about how deploying services to the cloud impacted performance, an impressive 95% stated application availability improved or remained the same, strongly implying the shift to cloud will only accelerate. That said, the theme of degraded visibility also continued as 82% noted their ability to troubleshoot worsened or remained the same after cloud migration.

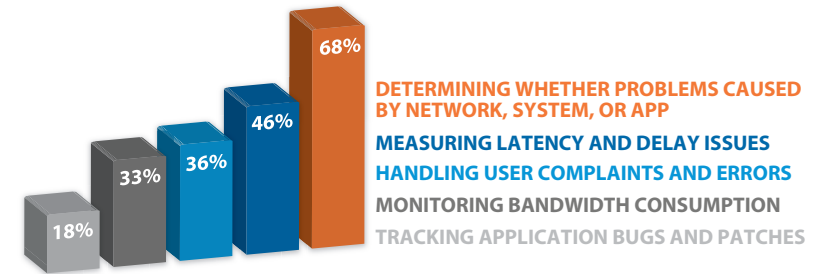
CLOUD'S PERFORMANCE IMPACT



APPLICATION & NETWORK PERFORMANCE MONITORING

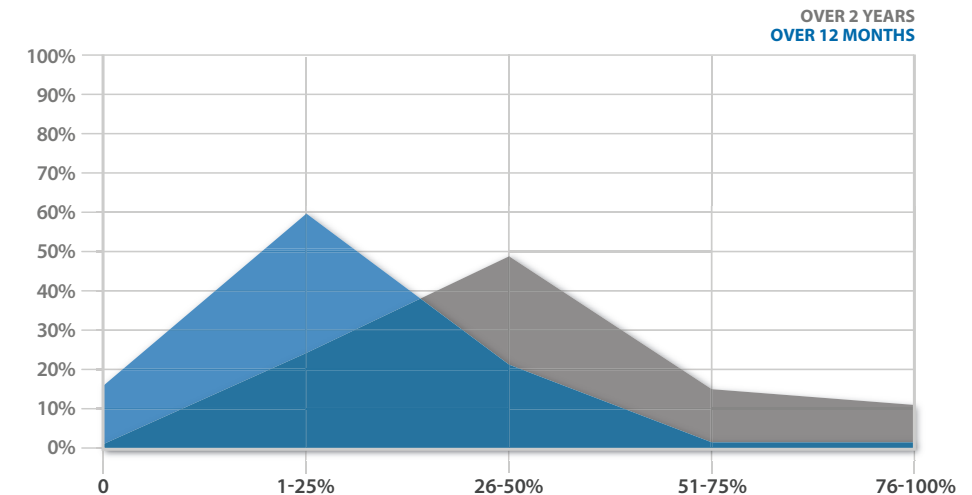
This 2013 State of the Network survey results shows IT teams holding their own regarding acceptable service delivery even as traffic loads surge and industry changing technologies like cloud computing are rapidly deployed. The ability to determine the root cause of the problem stubbornly persists as a primary issue in troubleshooting applications. Likewise, significant challenges exist with tracking latency and delay issues. The key take-away: Despite technologies designed to streamline and simplify service delivery, troubleshooting remains a complex and time-consuming labor.

APPLICATION TROUBLESHOOTING ANXIETY



Continuing a two-year trend, total network bandwidth demands continue to surge with over 20% of respondents predicting traffic will increase between 25% and 50% in the next 12 months. Given the earlier findings regarding total video traffic remaining steady, this suggests there are other services consuming significant network resources. This could be tied to the accelerating rates of private cloud adoption, which depending on application architecture could manifest itself as heavier traffic loads.

TOTAL BANDWIDTH SURGE UNABATED

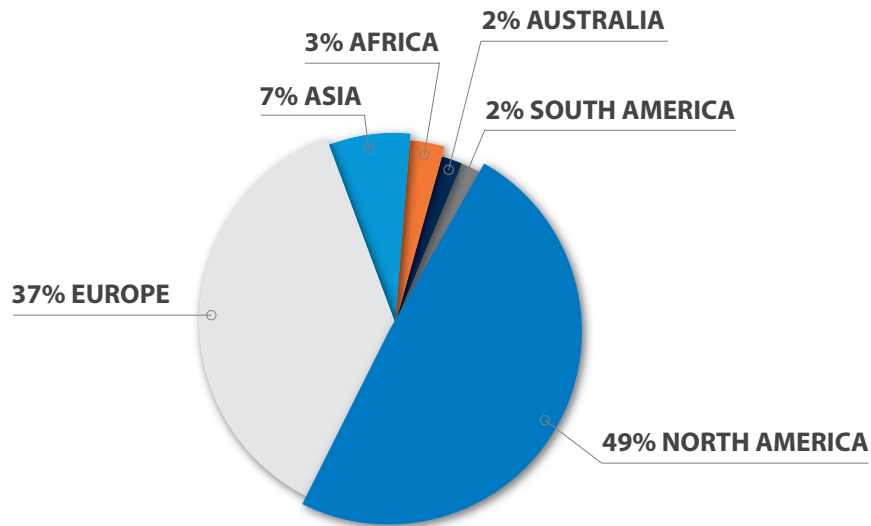


SUMMARY

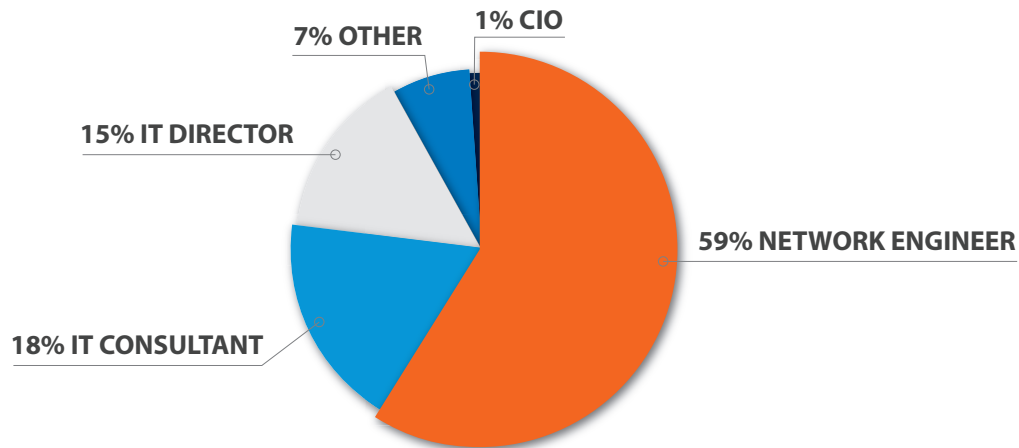
This year's results illustrate IT teams' care in cautiously embracing new technologies such as cloud and video, while ensuring they are able to preserve high levels of user satisfaction. Threats to achieving this in the future remain. As networks push the envelope on higher speeds and more complex mission critical apps are deployed in the cloud, the pressure for IT teams to deliver on exceptional performance will only intensify.

In addition, while application availability grows, the ongoing struggle to find the root cause of anomalies suggests more hectic days (and perhaps nights) ahead, when problems inevitably occur. Business would be wise to keep these challenges in mind as they seek to exploit the many benefits of these new technologies.

RESPONDENT LOCATION



RESPONDENT POSITION



RESEARCH AND METHODOLOGY

Study questions were designed based upon interviews with network professionals and IT analysts. Results were compiled from the insights of 170 respondents, including network engineers, IT directors, and CIOs in North America, Asia, Europe, Africa, South America, and Australia. In addition to geographic diversity, the study population was evenly distributed among networks and business verticals of different sizes. Responses were collected from January 25, 2013 to April 30, 2013 via online surveys.

For more information about the study's methodology or the results, contact Stephen Brown at sbrown@networkinstruments.com.

ABOUT NETWORK INSTRUMENTS

Network Instruments develops the industry's most scalable application performance monitoring solutions. Its legacy of Internet Protocol (IP) expertise allows for deeper, more actionable network visibility, so IT teams can resolve issues more quickly. Addressing the network management needs of medium-to-large enterprises through Global 2000 companies, Network Instruments supports today's important IT initiatives, such as unified communications (UC), cloud, data center consolidation and virtualization, while lowering total cost of ownership.

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