

*Executive Summary*

For four years, Network Instruments has polled members of the IT community on technology adoption trends and daily challenges. This year 265 IT professionals were surveyed on cloud computing, video conferencing, virtualization, and application performance management. Below are the highlights.

*Key Technology Statistics*

**Cloud Computing**

- 54% have implemented cloud computing
- 47% reported improved application availability with cloud migration
- 56% lacked appropriate tools to troubleshoot cloud problems

**Video Conferencing**

- 60% have deployed video conferencing
- 30% plan to rollout video conferencing within 24 months

**Virtualization**

- 80% reduced infrastructure and energy costs through virtualization
- 35% reported troubleshooting abilities worsened after deploying virtualization

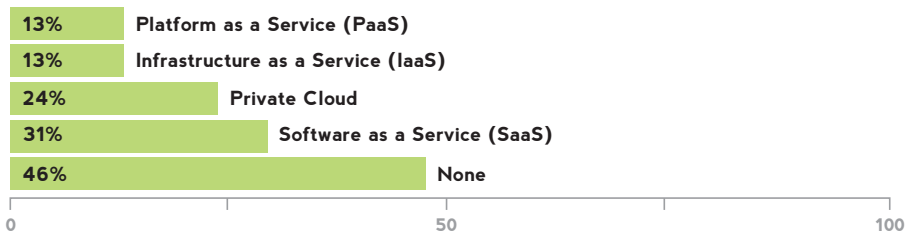
**Application Performance Management**

- 83% cited identifying the problem source as their greatest troubleshooting concern
- 39% faced serious bandwidth monitoring challenges

**Cloud Computing**

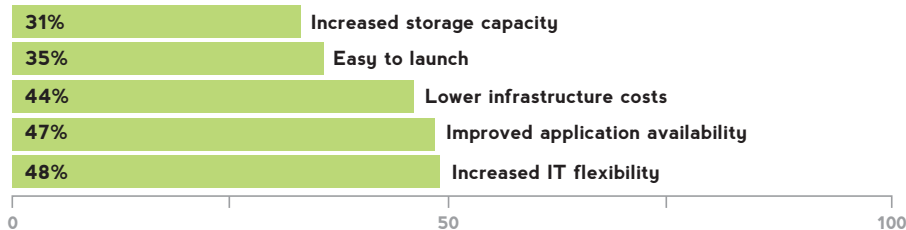
Over half of the respondents have implemented some form of cloud computing.

**Cloud Computing Adoption**



The vast majority of respondents (85 percent) achieved some benefit in migrating to cloud services. Based on this data, the pace of adoption should rapidly increase.

**Benefits of Cloud Computing**

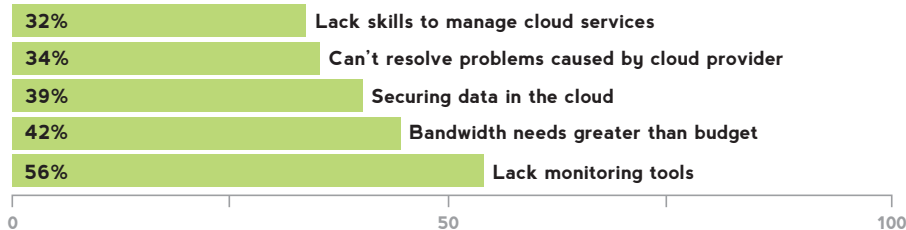


Nearly half of respondents cited greater flexibility to adapt to business changes and improved application availability as the two primary benefits.

With increased reliance on IT as a profit center and a point of competitiveness, it's not surprising to see these two reasons cited as chief benefits. Respondents realized the immediate agility and scalability cloud services gave them in responding to fluctuating market demands. With most companies operational 24x7, embracing technologies to improve application availability was also a clear priority.

In evaluating the challenges, the dominant obstacle cited by over 55 percent of respondents was the lack of tools to monitor and manage cloud service performance. The second largest challenge was bandwidth demands breaking the budget.

**Greatest Cloud Challenge**

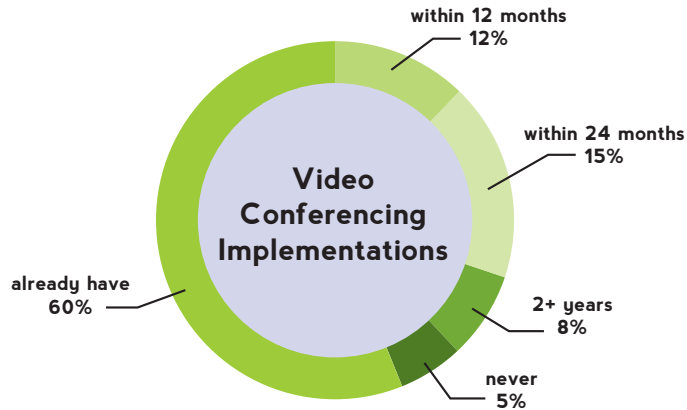


Given cloud computing's popularity, why do so many lack monitoring tools? This could either be due to a lack of budget and planning to purchase monitoring equipment, or perhaps points to a failure of monitoring vendors to provide adequate visibility into transactions passing from the user to the cloud.

With regards to the second greatest cloud challenge, forecasting bandwidth use can be difficult as it's a new technology where user demand greatly fluctuates. As network teams become more experienced with cloud services and identifying demand drivers, this concern should decrease in importance.

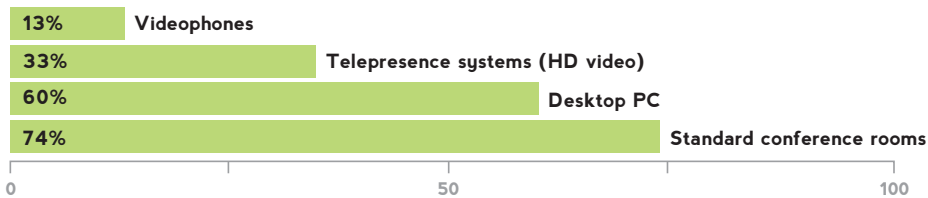
## Video Conferencing

For the past several years, IT analysts have continually predicted that adoption of video conferencing would go mainstream. With economic considerations at the forefront of every business decision and significant push from video vendors, it appears the shift is finally taking place. The majority of respondents have implemented some type of video conferencing with that number approaching 90 percent in the next two years.



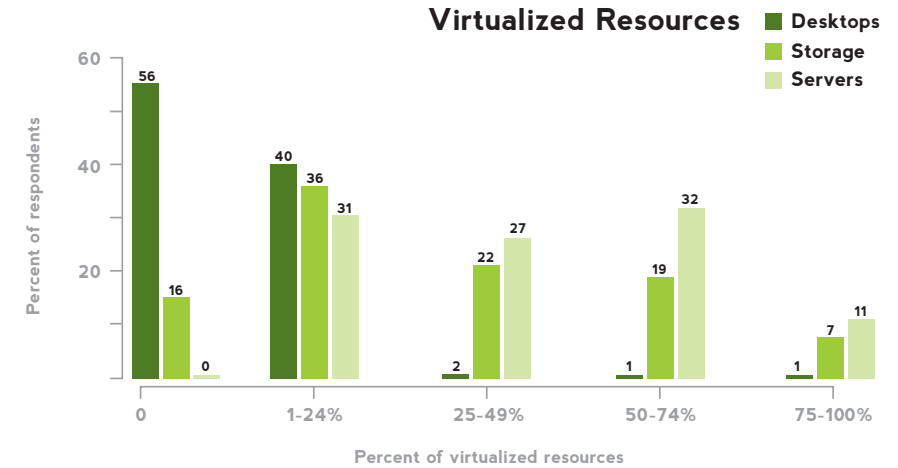
An equally compelling measure of video conferencing's strength is the pervasive and diverse number of deployments. The majority of respondents with video conferencing have implemented multiple forms of the technology, and this trend will increase in the coming years as more companies increase their use of video conferencing.

## Video Conferencing Solutions Deployed

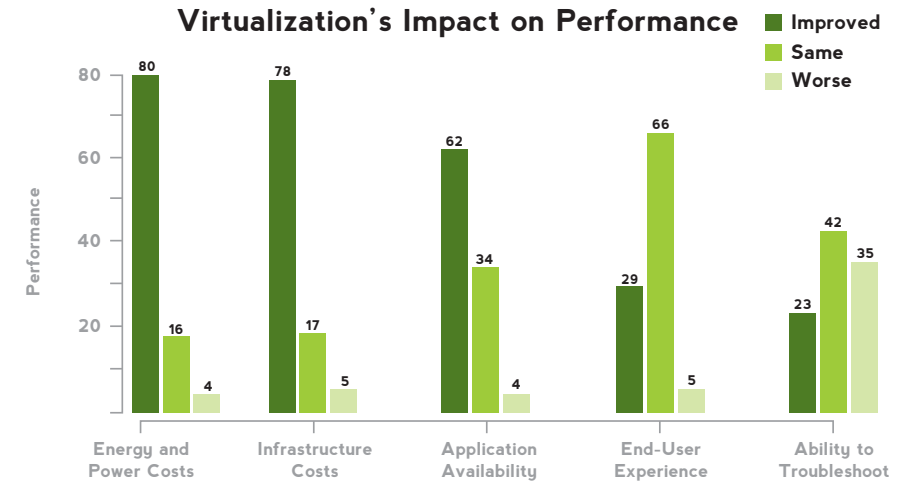


## Virtualization

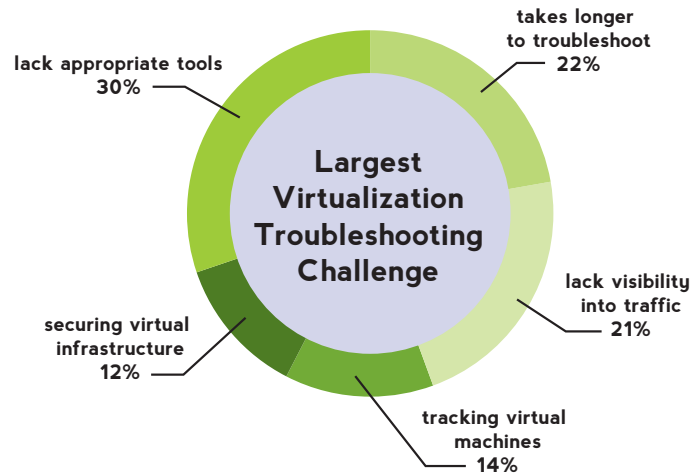
In the past two years, the percent of respondents virtualizing infrastructure has stabilized to nearly 80 percent marking a 5 percent increase over 2009. Early adopters initially focused on server virtualization; now with increased confidence respondents are moving to storage and desktop virtualization.



When considering overall performance, a high percentage of respondents reported improved application availability and reduced infrastructure and energy costs. However, improved availability did not automatically translate to an improved user experience.



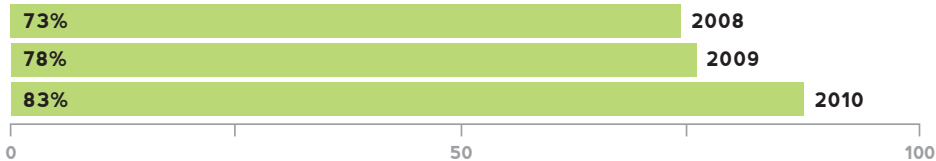
On the downside, over one-third reported that troubleshooting capabilities worsened. Thirty percent of respondents cited a lack of appropriate tools as their primary troubleshooting challenge. This could be because traditional monitoring tools have not kept pace with new technologies. Other concerns including the tracking and securing of virtual machines impacted only a small fraction of respondents.



### Network Management

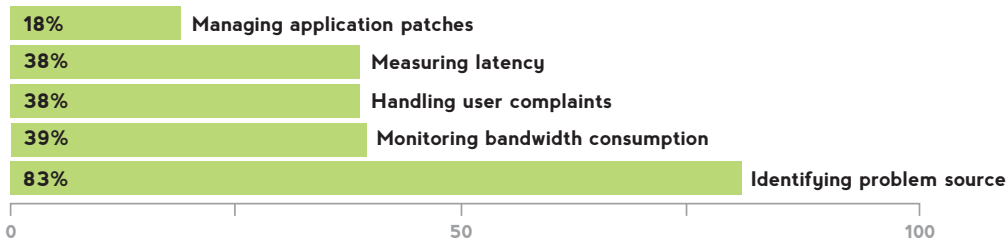
While the responsibilities of the network team have changed, monitoring challenges have not. The largest challenge, identifying the problem source, continues to rise when compared with prior year study results.

### Chief Troubleshooting Challenge: Identifying Problem Source



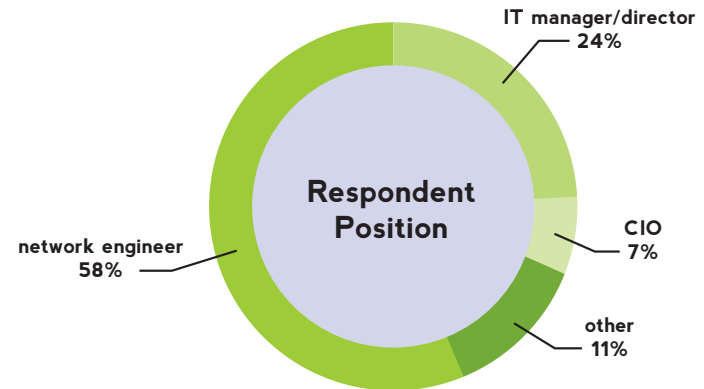
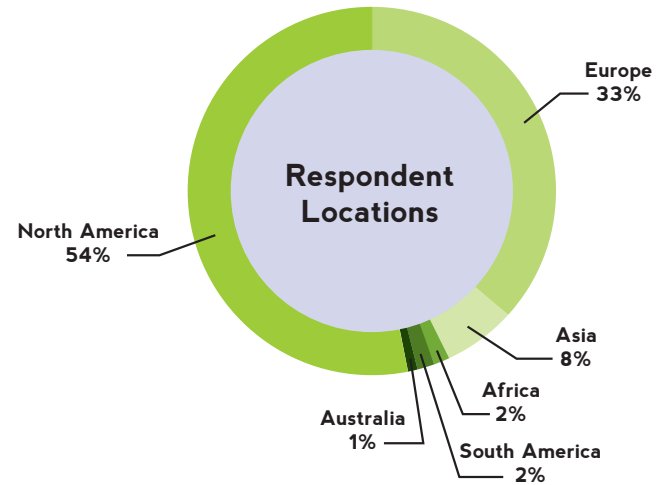
Other serious troubleshooting challenges in 2010 included monitoring bandwidth consumption and handling user complaints.

### Primary Troubleshooting Problems



### Research and Methodology

Questions for the study were designed based upon interviews with several network professionals and IT analysts. Results were compiled from the insights of 265 respondents, including network engineers, IT directors, and CIOs in North America, Asia, Europe, Africa, South America, and Australia. In addition to being geographically diverse, the population was evenly distributed among different sized networks and business verticals. Responses were collected from September 22, 2010 - October 20, 2010 via online surveys. For more information about the study's methodology or the results, please e-mail Stephen Brown at [sbrown@networkinstruments.com](mailto:sbrown@networkinstruments.com).



**About Network Instruments:** Network Instruments, a leading provider of performance management and troubleshooting solutions for 16 years, helps organizations ensure the delivery of business-critical applications. The company's platform of management and reporting products provides comprehensive visibility into networks and applications to optimize performance, speed troubleshooting, and assist long-term capacity planning. Network Instruments achieved profitability in its first quarter and posted revenue growth every year since its founding — without any external funding. Headquartered in Minneapolis, the company has sales offices worldwide and distributors in over 50 countries. For more information, please visit [www.networkinstruments.com](http://www.networkinstruments.com).