



“State of Virtual Network Management”
Based on a survey of networking professionals
November 2009

Introduction

[Apparent Networks, Inc](#) recently conducted a survey of network managers across a variety of industries including service providers, enterprise, government, non-profit and education. The following report highlights the state of virtualization, common network performance challenges and the use of tools to manage virtual network performance.

Apparent Networks is especially interested in these findings. The company recently released [PathView Cloud](#), a free tool for performance management in both virtual and physical environments. PathView Cloud is a hosted network management tool that measures the performance of complete network paths from source to destination, including segments that pass through service providers' and carriers' networks.

Survey Findings

The transition to virtualized environments is happening across organizations of all sizes and geographies. From small network updates to massive database storage, virtualization is becoming critical to cost-effective, efficient and secure IT management. Nearly 75% of survey respondents have virtualized infrastructure and another 10% plan to adopt within a year. Of those who have virtualized part of their network environment, government organizations have the highest rate of adoption at 80%; followed closely by enterprise companies (77%); service providers and educational institutions (72%); and non profit organizations at just over 33%.

As shown in Figure 1, of those who currently have virtualized infrastructure, 93.3% have virtualized their servers; 50% have virtualized their operating systems; and 37% have virtualized their applications and/or storage. Of those respondents who are in the process of virtualizing their infrastructure, 100% intend to transition their servers; more than 66% will virtualize their network and 33% are in the process of moving over their operating systems, applications and storage. Respondents who have not yet moved to a virtualized environment cite cost, lack of internal expertise, or no need as the top three reasons for not moving to a virtualized infrastructure.

What type of virtualization have you already adopted?(select all that apply)

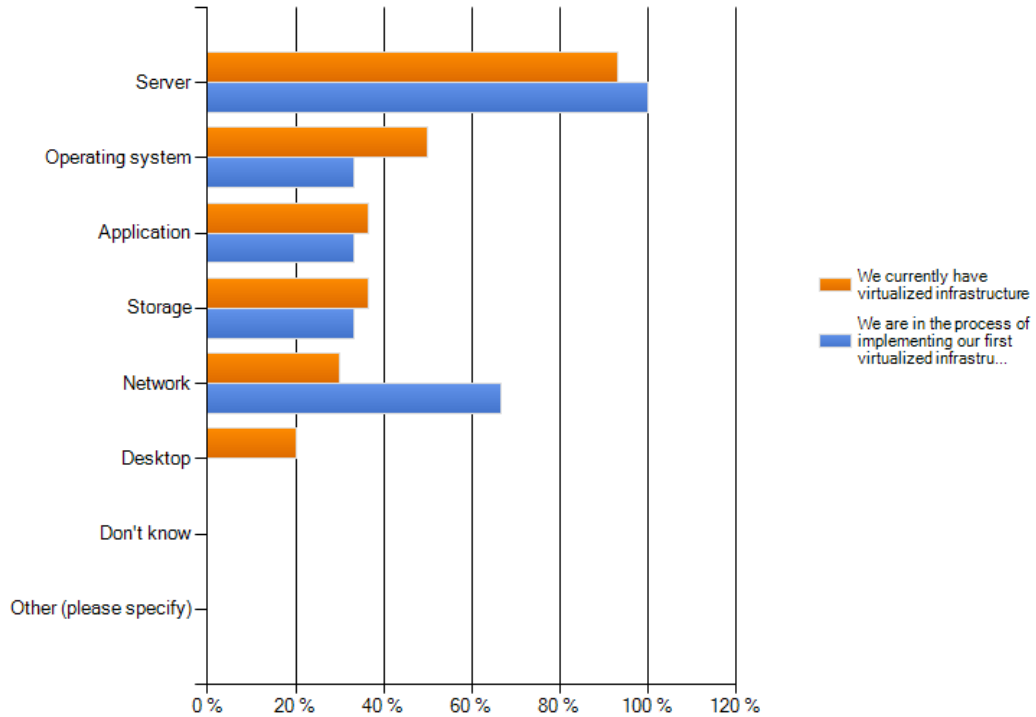


Figure 1 State of virtualized infrastructure

Despite the rapid acceptance and transition toward virtual environments, network managers are now facing new challenges such as the performance of their virtualized infrastructure and problematic delays that occur when infrastructure is virtualized. Often, these issues occur in the network - which now has even more demands placed upon it due to the centralization of resources. For example, survey respondents who have virtualized operating systems or applications said the top issue is troubleshooting virtual infrastructure bottlenecks; of those who have virtualized desktops or servers, the top challenge is performance of virtual machines; and for those who have virtualized their networks, the top issue is interoperability of different virtual platforms and overall performance.

As noted above, more than 55% of survey respondents said their top issues with virtualization are "Performance of virtual machines" or "Troubleshooting virtual infrastructure bottlenecks".

Which of the following issues are you facing related to your virtual environment? (select all that apply)

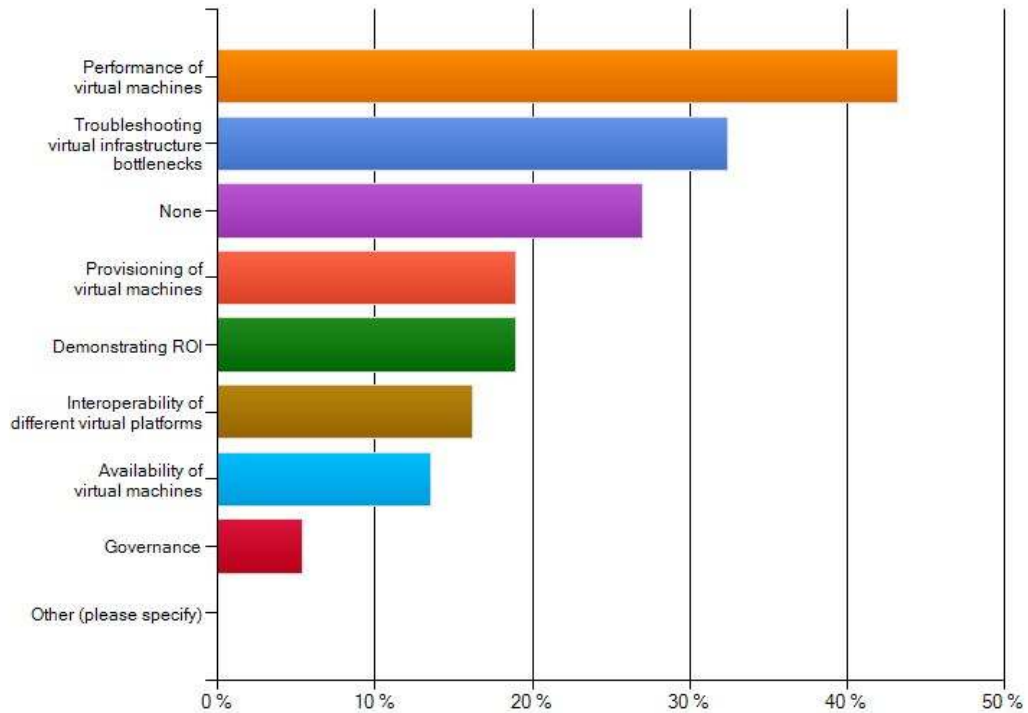


Figure 2 Top issues faced in virtualized environments

Given these issues, it is surprising that only 10% have adopted tools specifically to measure the performance and availability of virtual infrastructure. Of those who have not deployed new tools and/or are using pre-existing network performance tools, 94% are facing performance issues: 62.4% said their top issue is “Performance of virtual machines” and 61% said “Troubleshooting virtual infrastructure bottlenecks.” As shown in Figure 3, survey respondents who have adopted tools specifically for monitoring the performance and availability of virtual infrastructure are significantly less likely to encounter issues related to performance of virtual machines and troubleshooting infrastructure bottlenecks than those respondents who were using pre-existing performance management tools.

What is the *top* issue you face related to your virtual environment? (select one)

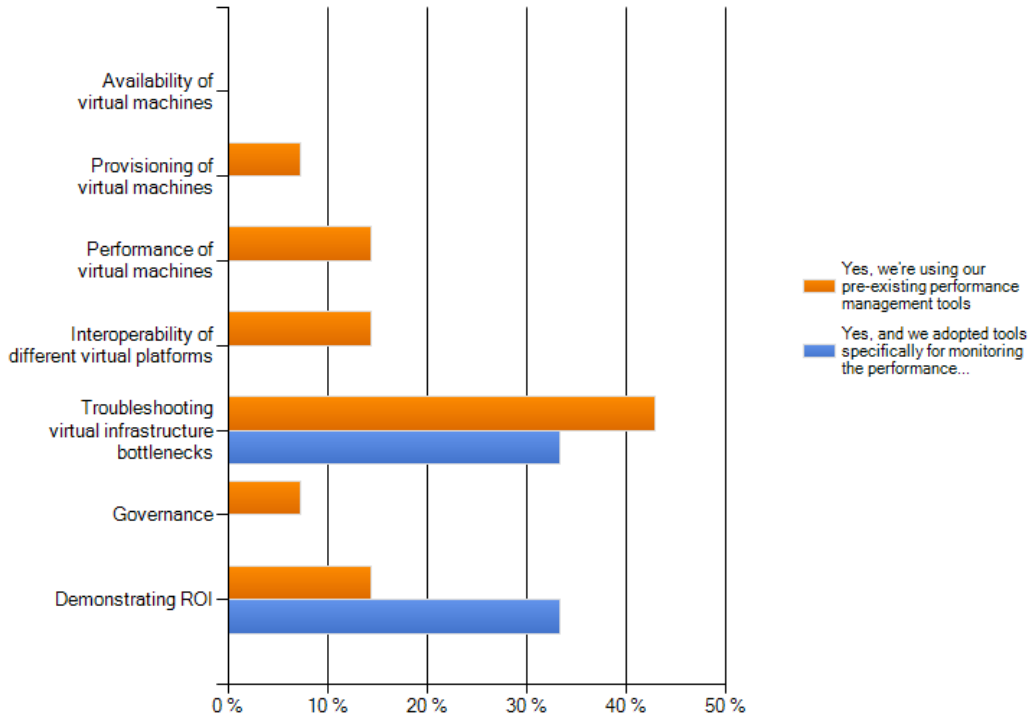


Figure 3 Issues related to use of traditional network management tools

This disparity between the issues encountered among those who have and have not adopted new tools is likely due to the inability of most traditional network management tools to provide visibility across and through virtual environments. Therefore, when problems arise, it's often difficult to diagnose them. Tools like PathView Cloud that provide visibility into virtual infrastructure make it much easier to find and diagnose bottlenecks that can impact the usability of this infrastructure.

The adoption of performance tools for virtual infrastructure also affects the overall satisfaction of respondents with the virtualization deployments. Of those who have not deployed new tools or are using pre-existing tools, almost 20% are dissatisfied with their adoption of a virtual infrastructure. In Figure 4, nearly all survey respondents who have adopted tools specifically for monitoring the performance and availability of their virtual networks reported being satisfied (33.3%) or extremely satisfied (66.7%).

How satisfied are you with your adoption of virtual infrastructure?

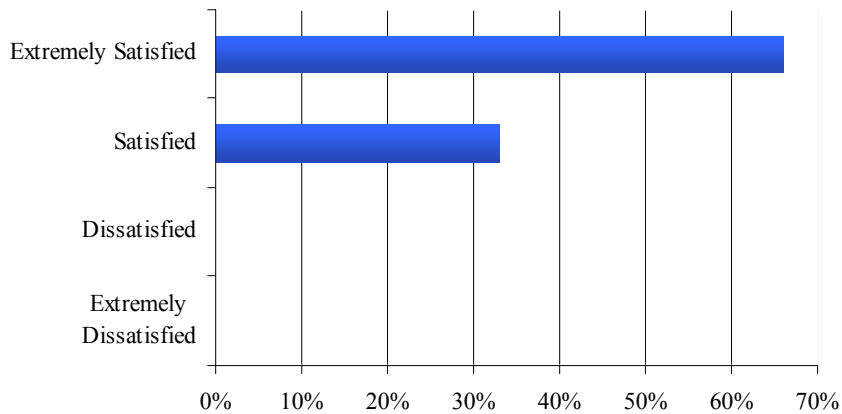


Figure4 Satisfaction levels of respondents who have adopted new tools specifically for monitoring performance and availability

About Apparent Networks

Apparent Networks is the only IT performance management provider that delivers the end-to-end service insight required for today's cloud applications. By experiencing network performance without affecting it, the company's patented path solutions assess network readiness, monitor service levels, and diagnose problems otherwise hidden from sight. Leading companies rely on Apparent Networks to assure application delivery and expand their service portfolios with confidence. For more information, visit www.apparentnetworks.com.

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