



**“State of Cloud Services”**  
***Based on a survey of network managers***  
**March 2010**

**Introduction**

[Apparent Networks](#), Inc. recently conducted a survey of network managers from organizations including service providers, enterprise, government, non-profit and education. The following report highlights the current state of outsourcing cloud services, common challenges of using cloud services providers and the use of SLAs and management tools for improved performance

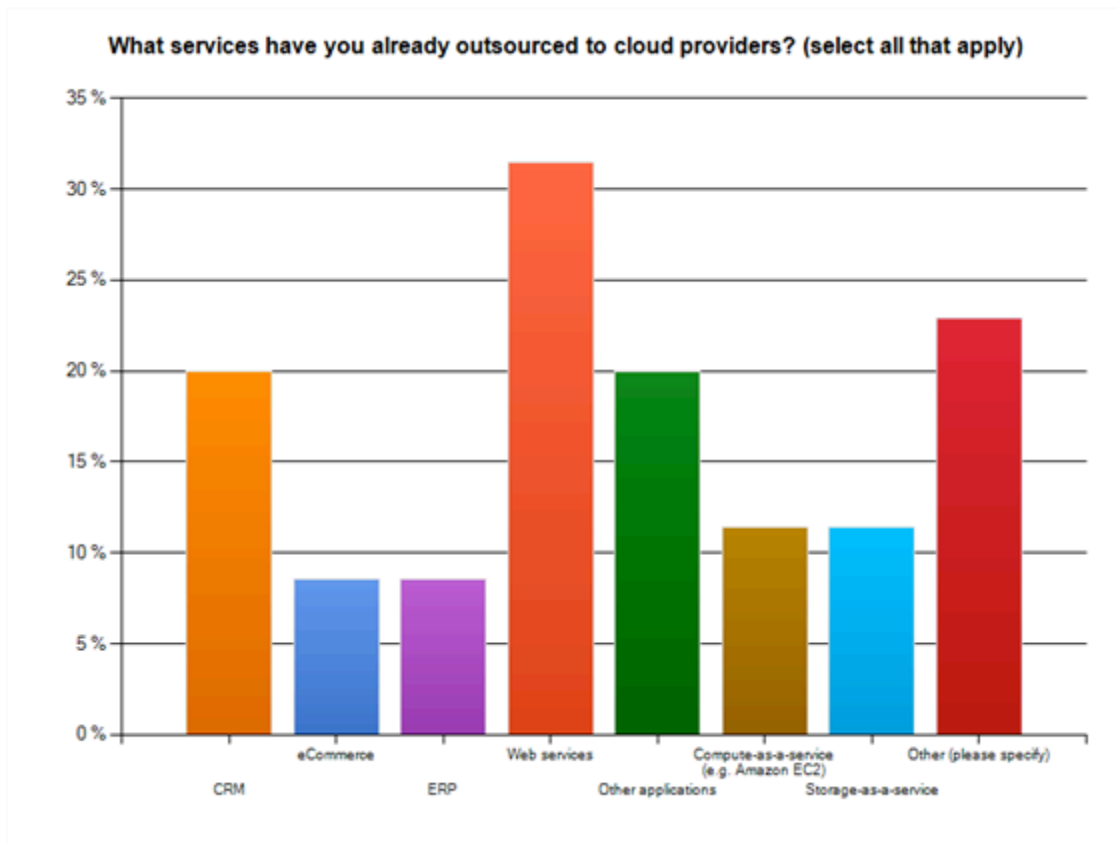
**Current State of Cloud Services**

For network managers across a variety of industries, there is a growing need for and dependence on cloud based services. 38.1% of survey respondents were service providers, 30% were enterprise, 6.3% were from a government agency and almost 8% were from a nonprofit organization. From cost efficiency to expert service delivery, businesses all over the world are realizing the many benefits to outsourcing their most important processes and services. But, as the need grows for outsourced cloud based services, so do the concerns and challenges for network managers and IT organizations.

***Web Services and CRM Lead the Move to Cloud Services***

More than one-fifth of survey respondents are currently utilizing cloud services, and the majority of these users are service providers (45%). As shown in Figure 1, of those who are using cloud services today, cloud-based support of web services is the most common service that has been handed over to cloud based service providers. Web services is followed by CRM (20%), other applications (20%), compute-as-a-service (11.4%) and storage-as-a-service (11.4%), and “other” services (22.9%) such as payroll, IT assessment management, employee performance management and applicant processing.

Figure 1

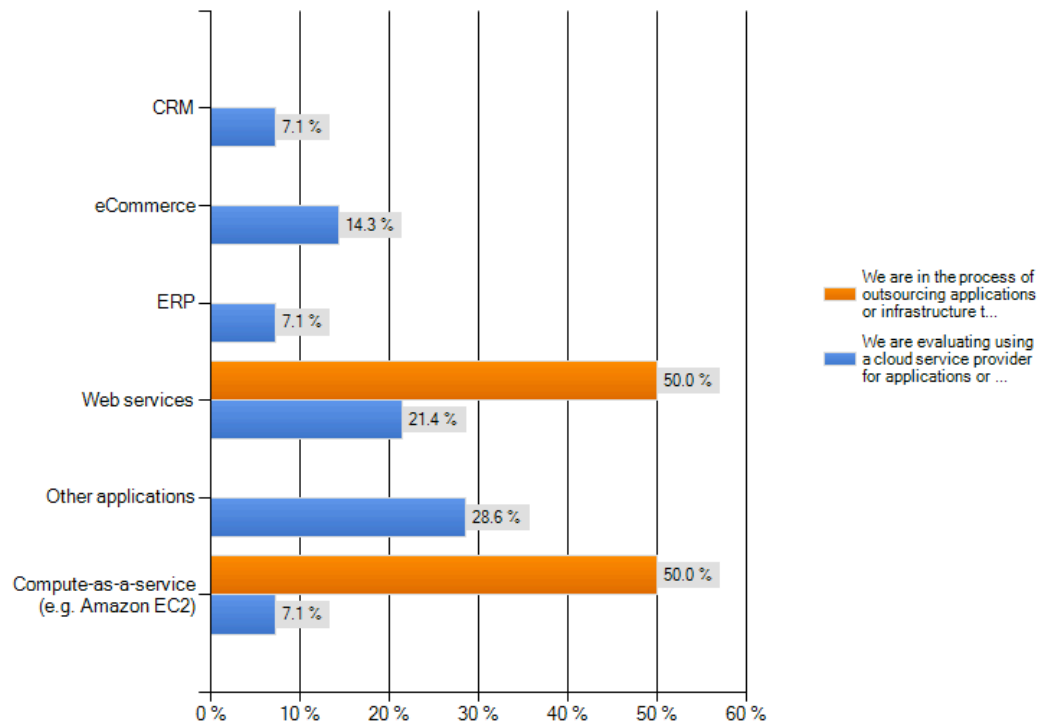


***2010 Will be a Year of Strong Growth for Cloud Services, Especially Web Services and Compute-as-a-Service***

The results from this survey also indicate the use of cloud based services is continuing to grow. More than 25% of survey respondents are either in the process of outsourcing applications or infrastructure, or are evaluating the use of a cloud service provider for applications or infrastructure. Looking to the next year, 50% of respondents who are in the process of outsourcing cloud services currently foresee adding cloud-based web services, and 50% plan to use cloud service providers for compute-as-a-service applications. For IT managers who are interested in future use of cloud services, but who have not yet confirmed providers, outsourcing applications (28.6%), Web services (21.4%), eCommerce (14.3%), CRM (7.1%), ERP (7.1%) and Compute-as-a-service (7.1%) are the services they see expanding to cloud based providers.

**Figure 2**

**Over the next year, do you plan on outsourcing any of the following to cloud services providers? (select all that apply)**

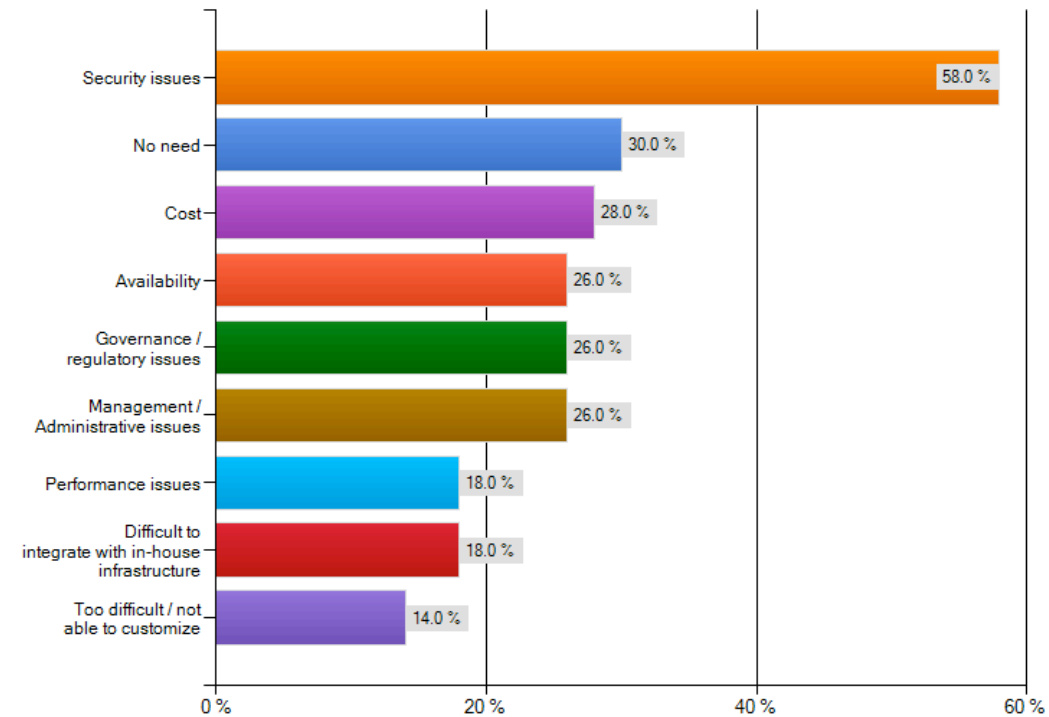


***Security and Cost Top Reasons Cited for Not Using Cloud Services***

Respondents who are not currently outsourcing cloud services said their top reasons for not using cloud services are: Security issues (58%), Cost (28%), Availability (26%), Governance (26%) and Management/Administrative issues (26%).

**Figure 3**

**If you have not outsourced applications or infrastructure to cloud service providers or have no plans to do so, what are your reasons? (select all that apply)**



Approximately one-third of respondents do not see a need for cloud services or are unaware of how they can improve business by outsourcing critical IT processes. It is important for cloud services vendors to educate their target audience about the benefits of outsourced services: cost savings and improved performance delivery. As organizations realize what they can gain from cloud-based services, their need may grow. Additionally, cloud service providers targeting organizations must address security threats – the number one reason respondents have not outsourced applications or infrastructure. Vendors need to assure future customers of how they will mitigate the concerns and guarantee security and privacy for their customers’ networks.

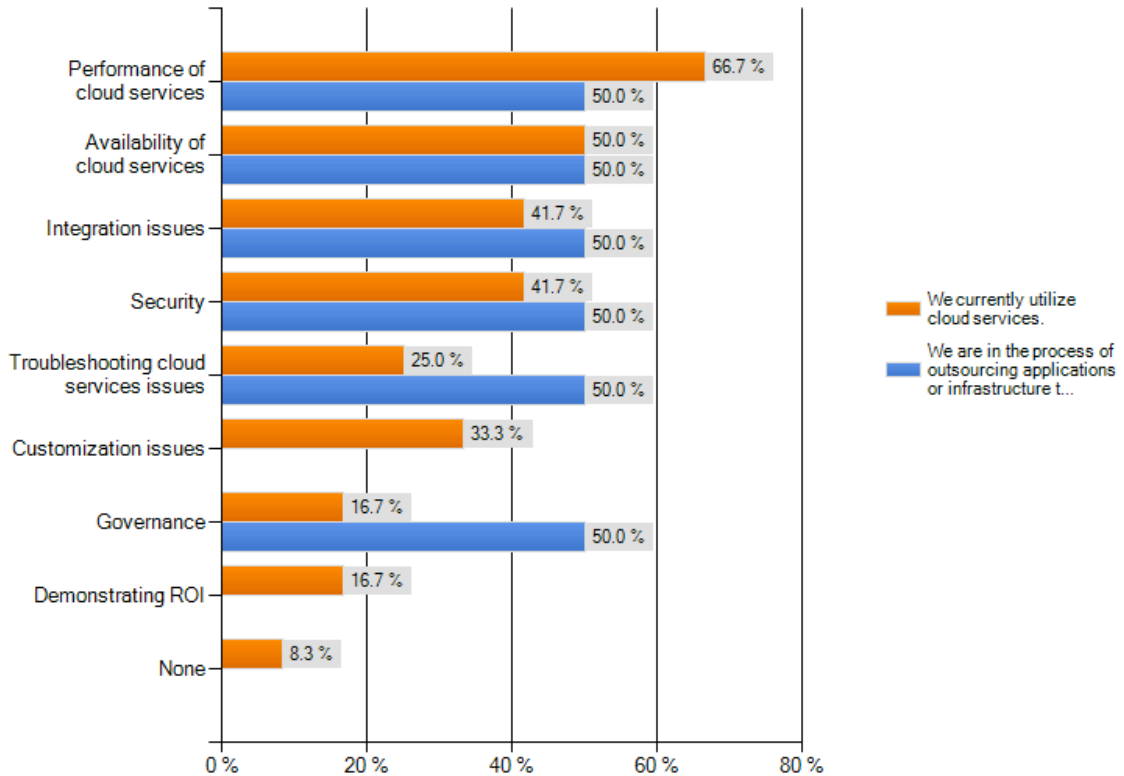
## **Challenges with Cloud Services**

### ***Performance and Troubleshooting Issues of Cloud Services Top Challenges***

Of those respondents who are currently utilizing cloud services, more than two-thirds said that “performance of cloud services” is a significant challenge they are facing everyday. In addition to performance, respondents cited “troubleshooting cloud services” and “availability of cloud services” as problematic to the success of their outsourced services and functions. Finally, for those respondents who are in the process of outsourcing applications or infrastructure to a cloud services provider, more than 50% also said that “troubleshooting cloud services” was their primary issue (see Figure 4).

Figure 4

**Which of the following issues are you facing related to your cloud services? (select all that apply)**



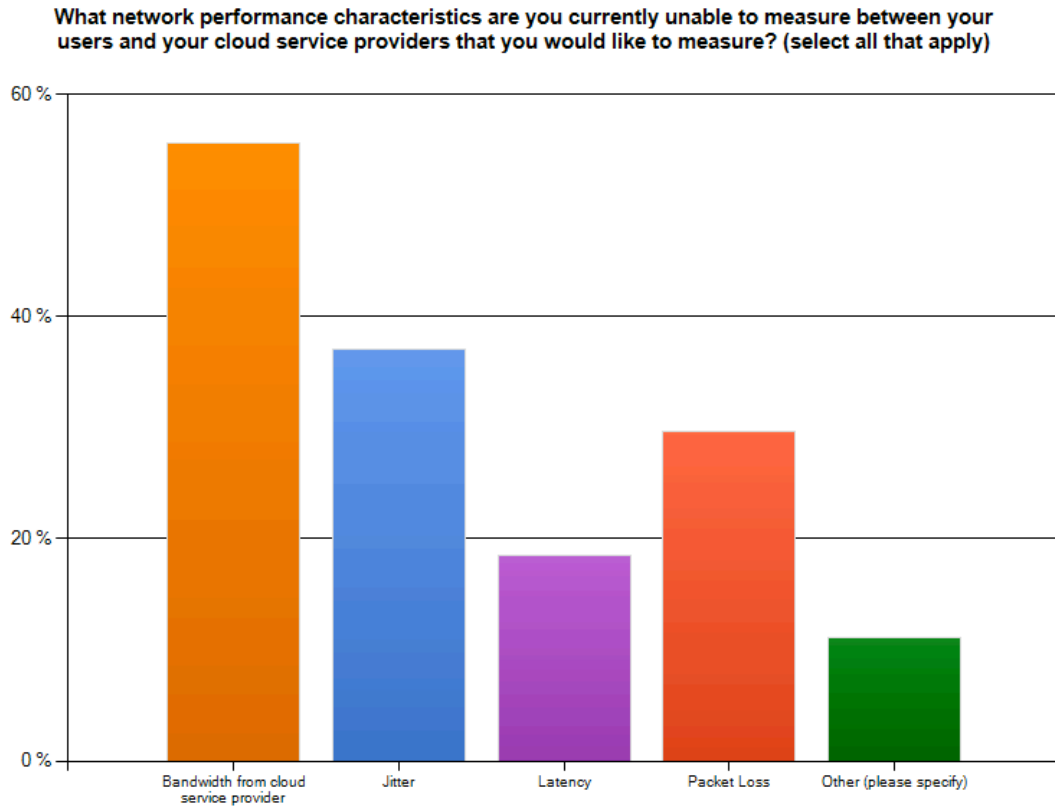
***More than Half Who Use Cloud Services Don't Have or Have Inadequate Performance SLAs***

Performance measurement is an important success factor for ensuring expected service delivery. Of the network managers who are currently working with cloud service providers, 50% said their providers do not provide them with SLAs for performance measurement, and 8% said they do have SLAs but they do not adequately cover end-user response time and recovery.

***Cloud Service Users Unable to Measure Key Performance Characteristics and SLAs***

Of those who use cloud services, many are currently unable to measure performance characteristics between their users and their cloud provider, exposing their users to potential performance issues. 64% of respondents said they would like to measure bandwidth but are unable to do so and another 46% would like to measure jitter but lack the proper tools. Latency and packet loss rounded out the list with 27% each (see Figure 5).

Figure 5



***Cloud Services Users Lack Proper Performance Management Tools***

75% of the survey respondents who are currently using cloud based services have not deployed management tools to measure end-user response time provided by cloud service providers. And only 8% of respondents say they have deployed tools specifically to enable them to measure end-user response time. Furthermore, respondents who are measuring network performance characteristic between their users and cloud service providers said latency is the most commonly measured metric. This important variable is followed closely by packet loss (48.1%), bandwidth from cloud service provider (40.7%) and jitter (14.8%). And, although 41% of respondents say they *do* measure bandwidth from cloud provider, 56% also reported they want to measure bandwidth between users and their cloud provider but are currently unable to do this.

## **PathView and Cloud Performance Tools**

Most survey respondents who are currently using cloud based services have not deployed management tools to measure end-user response time provided by cloud service providers, yet most also said they would like to be able to measure characteristics such as bandwidth and jitter. [Apparent Networks PathView](#) product, a free network performance management tool that measures the performance of complete network paths from source to destination, including segments that pass through service providers' and carriers' cloud networks, is an ideal monitoring solution for cloud-based services.

The PathView network performance tools simplify the [management of cloud computing applications and infrastructure](#). They provide complete visibility from source to destination, even through third party networks and provide performance metrics such as available bandwidth, utilized bandwidth, jitter, latency and packet loss on a per-path basis. When performance issues arise, the tools pinpoint the exact location of the problem - whether it's in your network, your carrier's network or even through to a SaaS provider's virtual machine. Their hop-by-hop analysis along with remediation information eliminates the finger pointing that too often occurs when there is a problem in complex, cloud-based environments.

### **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](http://www.apparentnetworks.com).