

IS THE CLOUD KILLING YOUR COMMERCE?

Increasingly, online retailers are relying on cloud-based services and applications such as storage, elastic computing, comparison engines, search, product locators and dynamic imaging to run their businesses. With this reliance on outside services comes a grave risk: Retailers are relinquishing control of the end-user experience. When cloud service providers (CSPs) are unable to quickly deliver their piece of these composite applications in the application delivery chain (ADC), the consumer experience suffers.

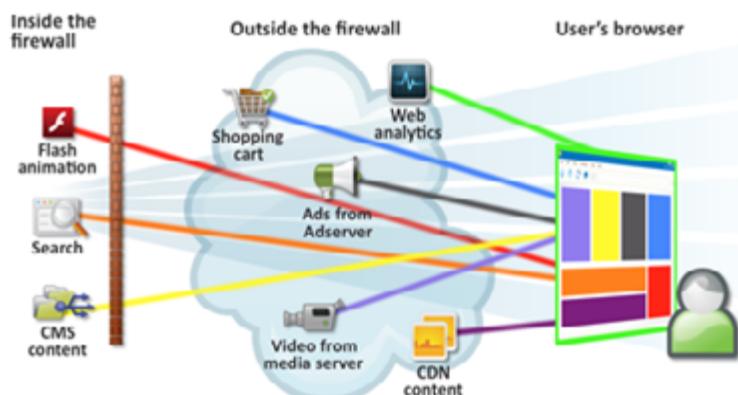
As a result, retailers are not only failing to tap into the promise of the cost and elasticity advantages of the cloud, they're risking a direct hit to their brand image, customer satisfaction and revenues. The problem is that retailers lack visibility into all activity and performance across the ADC. In turn, they are unable to hold CSPs accountable for helping to ensure a satisfactory end-user experience. Businesses need to capitalize on the promise of cloud-based services and applications by demanding strong service level agreements (SLAs) based on more than just availability. This paper clearly exposes the risks that online retailers face by ceding control of applications to CSPs. It also offers solutions to help retailers mitigate them.

THE CLOUD CAN BE DEADLY TO YOUR BOTTOM LINE

Cloud-based applications represent a complex and extended delivery chain, involving components that cross both organizational and geographic boundaries, as shown in the Figure 1. And the performance of that delivery chain can have serious consequences for online retailers.

Imagine you're a leading retailer relying on a cloud service provider to host a mission-critical, revenue-generating web application. The multi-step nature of the end-user experience compounds performance issues. For example, a shopper clicks on your product page and has to wait five seconds for the online catalog to appear, followed by another 30 seconds for the catalog to download and yet another 15 seconds for a selected product image to appear. Then she clicks on the "Buy Now" button and waits another five seconds for the form to appear, another 10 seconds for the billing/shipment information page to appear, and so on. What impression does this leave on shoppers? Or worse yet, what is the likelihood that they'll stick around to complete a transaction?

WEB APPLICATION DELIVERY TO BROWSER



Problems in the application delivery chain negatively impact retailers.

Among the 100 top retailers, 40 percent use Amazon Web Services, and across the top 50 retailers, there are 107 separate outsourced applications in use.¹ Yet, organizations in North America are losing on average almost \$1 million per year because of the poor performance of their cloud-based applications. In Europe, the figure is more than \$0.75 million.²

¹ Compuware survey of its customer base

² Compuware Gomez, "Performance in the Cloud" Survey Report, 2011

BREAKS IN THE CLOUD CAN BE COSTLY

Such a breakdown in the ADC is not a hypothetical scenario. In April 2011, Amazon's EC2 experienced an inexplicable four-day outage affecting millions of end users and costing online retailers incalculable revenue and brand damage. Twenty minutes of disrupted service can be damaging; four days offline had an enormously detrimental effect on these businesses. Although the impacted online retailers took a serious hit to their finances and reputations, this outage did not breach Amazon's EC2 SLA. Because of the broad and nebulous language of the SLA, there was no recourse for the retailers affected. In other words, the SLA was not breached, legally speaking.³

Yet, even less dramatic failures are possible with equally disturbing consequences to retailers. Customers of the cloud need to know why a transaction was not completed, why a service that should be quickly and easily accessible is malfunctioning, why a loaded shopping cart is abandoned before a checkout is completed. The multiple failure points in the ADC may render an e-commerce site unusable. And each failure point presents an opportunity for consumers to abandon their shopping carts and click away to a competitor's site. After all, the demands of end users continue to increase as their tolerance for delays decrease. The six-second window providers previously enjoyed is quickly shrinking to two to four seconds, giving retailers far less room for error on their sites.⁴

Some retailers may wonder how significant the impact to their businesses will be for unacceptable web-site performance during peak traffic times. The answer: It's big. Consider that 78 percent of consumers have switched to a competitor's web site because they encountered slowdowns, errors and transaction problems during peak traffic times. After a poor online experience, 88 percent are less likely to return to a site, 47 percent have a more negative perception of the company and 42 percent have discussed it with family, friends and peers, or through online social networks.⁵

THE GOOD, THE BAD AND THE NECESSARY OF THE CLOUD

The good news is that retailers who are adopting the cloud are seeing significant savings in IT costs. For example, 76 percent of the 159 global respondents in a report by Enterprise Management Associates claim measurable cost savings from cloud adoptions.⁶ However, almost two-thirds of companies (58 percent in North America and 57 percent in Europe) indicate that their inability to manage application performance is forcing them to delay or even halt the adoption of cloud-based applications.⁷ In essence, application performance issues are preventing many companies from realizing the business benefits of cloud computing.

Retailers have virtually no choice but to work with outsourced CSPs; research indicates that over the next two years, the number of cloud users will double.⁸ To thrive in this environment, savvy retailers must take strong action to assure the SLAs negotiated with CSPs best serve them and their businesses. They must demand performance specific to their needs – availability is not nearly enough. After all, what does 99.9 percent uptime really mean to your business and shoppers on your site? What protection is a retailer offered when its site underperforms, or worse, is inaccessible and no one inside or out of the company understands why? Even when a CSP fails to uphold an SLA, most companies struggle to get compensated – and often the compensation is limited to service credits, rather than monetary remuneration. To add insult to injury, the customer often bears the burden of proving that the CSP didn't honor the agreement.

HOW CLOUD CUSTOMERS CAN RECLAIM CONTROL

Historically, SLAs have been written by and for the service provider, not with the customer's best interests at heart. Far too often, retailers are left without adequate information about site or application breakdowns and little to no recourse when a service provider fails. In fact, no cloud provider currently offers monitoring of any of their services from the perspective of the end user, nor do they offer SLAs that guarantee the performance of their infrastructure. In other words, even if a retailer's cloud dashboard lights are signaling green, there's no guarantee its customers are having the web experience its business demands. Success is ultimately judged by completed transactions, not merely by a site's accessibility. With so much control now relinquished to CSPs, retailers must force accountability through stronger, more specific and pointed SLAs. To neglect this is to leave the business in peril.

The old adage will always hold true on the web: Performance dictates profit. In other words, cloud usage will not yield business benefits if the result is a poor end-user experience. Yet, as with all IT services, failure, at some point, is inevitable. It only takes one break in the very long and complex ADC to derail the end-user experience and, in turn, the online retailer's bottom line. That's why better understanding and better control of potential "breakages" in the cloud is of critical importance. And that's why it's paramount that retailers' business objectives be overtly addressed in SLAs.

ENABLING THE ULTIMATE SLA

Exacting service management technologies are essential to the successful marriage between online retailers and CSPs. Specifically, SLAs must support better collective processes and faster decision making for cloud customers. To ensure site visitors are consistently enjoying a quality experience, it is vital that retailers regularly test and monitor their cloud-based web applications from the users' perspective: the outside in.

³ ZDNet, "Seven lessons to learn from Amazon's outage," April 24, 2011

⁴ Compuware Gomez, "Performance in the Cloud" Survey Report, 2011

⁵ Gomez, "When More Web Site Visitors Hurt Your Business," October 2010

⁶ Enterprise Management Associates, "The Responsible Cloud," January 2010

⁷ Enterprise Management Associates, "Optimizing Cloud Computing to Support Application Delivery," 2010

⁸ Enterprise Management Associates, "The Responsible Cloud," January 2010

Rigorous application performance management (APM) tools enable retailers to not only monitor, but to manage, the entire ADC from the first mile (the data center) to last mile (the user's device). In other words, these tools empower retailers to measure the end-user experience across all tiers of the ADC. Compuware Gomez provides integrated web performance management, web load testing and web performance business analysis solutions ideally suited to gauge the true business impact of cloud computing. With these solutions, retailers can identify and resolve business-impacting issues by testing and measuring web applications from the outside in — using a large, distributed global testing network.

Plus, because these performance management solutions are available in a SaaS, pay-per-consumption model, they're faster, easier and more cost-effective for retailers to use than ever before. In addition, the solutions leverage comprehensive testing networks comprising real-user desktops and devices, offering retailers a critical, realistic firsthand view into how different end users and customers around the world are experiencing their cloud-based services and applications.

CONCLUSION: CLOUD CONTROL IS WITHIN YOUR REACH

Remember: If a retailer's cloud-based application or service performs poorly, site visitors won't know — and won't care — who's at fault. Instead, they will simply blame the retailer, resulting in dissatisfied site visitors and, potentially, lost customers, lost revenues and brand damage.

Unfortunately, the legacy tools and dashboards used by many retailers were never designed to look at the new ADC, so they do not provide any clear indicators of end users' true experiences. Retailers must delve deeper and see the true experience of their cloud-based services and applications from the end users' perspective. Only then can they hold cloud-service providers accountable for the performance levels required to satisfy end users.

GAIN A COMPETITIVE EDGE WITH COMPUWARE GOMEZ

Gomez solutions give companies an edge in the market and help to enhance revenue opportunities. That's why Gomez serves more customers on the Internet Retailer Top 500 than the number two and three competitors combined (*Compuware 116, Alertsite 71 and Keynote 42*).

Additionally, five of the top online retailers in the Internet Retailer Top 500 Guide 2011 are Gomez customers (*No. 1, Amazon.com, Inc.; No. 3, Apple, Inc.; No. 4, Dell, Inc.; No. 5, Office Depot, Inc.; and No. 6, Walmart.com*).⁹

It starts with demanding performance-focused SLAs from cloud-service providers, enabled by the best performance monitoring tools. Compuware Corporation can provide the technology to help retailers achieve this goal. As the leading provider of web performance monitoring solutions to the largest online retailers in the U.S. for five consecutive years, Compuware helps online retailers optimize the performance and availability of their e-commerce web and mobile applications so they can provide fast and successful online shopping experiences.

Ready to take back control of e-commerce and reap the full rewards of managing applications via the cloud? Or do you already have an application or site deployed in the cloud? Visit Instant Test to see how they perform from different locations:

compuware.com/instanttest

⁹ Compuware News Release, "Compuware Gomez Ranked #1 Web Performance Monitoring Solution to Internet Retailers for Fifth Consecutive Year," August 10, 2011

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