Size Matters
for Large Companies Thinking Cloud

By Mat Herron

Let's say you own two cars. One is a four-door sedan, the other an SUV. One gets great gas mileage; the other guzzles fuel. You don't take the sedan off-roading in the Yukon, and you don't drive the SUV in bumper-to-bumper traffic. The bigger, bulkier SUV takes up more room, carries more people, and burns fuel differently. The insurance on each is different, too.

Heading into 2015, large companies are facing many reservations about the way they implement and use cloud-computing services for one simple reason: Size matters. Large corporations are not sedans; they take up lots of space, and they have a different set of hurdles to overcome than smaller, more nimble startups.

One challenge? How quickly large companies adopt cloud computing, says Ray Wang, founder of Constellation Research. While cloud computing has been around for more than a decade, he says, the 2008-2009 recession left many IT professionals hamstrung in terms of innovation over the last five years. Project budgets were cut and job descriptions changed. "They started reporting to CFOs," Wang says. "IT was stuck in a rut for quite some time. IT became a call center. Instead of innovating, they were restricted."

That lethargy prompted business to adopt cloud-based applications to meet their needs, and many of them are reaping the benefits. "It's not just the fact that you're getting the latest innovations," Wang says. "You're not having to buy everything up front. People are innovating and designing better experiences."

Staying flexible is another challenge. "The old way is that as an organization gets bigger, it slows down and ossifies," say Randy Bias, co-founder and CEO of Cloudscaling in San Francisco. Companies will have to keep their delivery and service levels up to par for their clients the same way they do internally.

Security remains a paramount concern. In Feb. 2013, a group called the Cloud Security Alliance (CSA) released a report on what it deemed the top nine threats to safe, effective cloud computing and management, or the "Notorious Nine." Data breaches top the list. While retail corporations grab the big headlines, breaches of a smaller but no less significant magnitude happen nearly every day. This year alone, the ID Theft Center reported 533 breaches affecting 18.7 million people.

Data breaches are as damaging as they sound, and CSA's report doesn't sugarcoat the persistent nature of the problem. In its report, CSA cited 2012 research from two universities that if "multitenant cloud service databases are not properly designed, a flaw in one client's application could allow an attacker access not only to that client's data, but every other client's data as well." Offline backups increase exposure, and there's always the danger of losing encryption keys used to protect consumer information.

The No. 2 risk: data loss. In its survey of roughly 3,200 organizations last year, Symantec found that as many as two in five companies reported data loss while using their cloud systems. Rounding out the nine pitfalls are: account hijacking, insecure APIs, denial of service, malicious insiders, abuse of cloud services, insufficient due diligence and shared technology issues.

Navigating and diffusing these problems might be difficult, but not impossible. A Microsoft survey, the results of which were published last June in Security Week, found that the perception of companies who did not use the cloud differed greatly from companies who did use it. Namely, companies who had adopted the cloud were able to meet federal compliance requirements under HIPAA. Most companies reported

better data protection, and half of the companies who used SaaS said they saved time managing IT.

BP's transition offers a window into how a multinational corporation with thousands of computers and employees can successfully migrate to a cloud platform. Xerox uses cloud software for sales and human resources management, according to a July 2014 article in The Wall Street Journal. Gartner, Inc., estimates 30 percent of service-focused businesses will move the bulk of their ERP applications to the cloud within three years.

In its April 2013 article titled, "The Biggest Cloud App Of All," ZDNet reported on what cloud deployment and improvement on a large scale might look like for one company, albeit one that takes up a huge amount of Internet traffic.

Netflix shifted its entire operation to Amazon Web Services in 2012, and has no traditional datacenter. Despite a significant outage over Christmas 2012, Netflix's AWS platform can deliver content to its customers even when parts of its infrastructure are broken or being repaired.

Adrian Cockroft, Netflix director of architecture for the company's cloud systems team, said in a conference that Netflix wants to "code features in days instead of months; we want to deploy new hardware in minutes instead of weeks; and we want to see instant responses in seconds instead of hours," according to ZDNet.

Over the last year, large corporations have begun to change their opinions about moving mission-critical

■ *New programs like Adobe Creative Cloud and Microsoft Office 365 have given a much-needed incentive...*

operations to the cloud. New programs like Adobe Creative Cloud and Microsoft Office 365 have given a much-needed incentive to large companies to dip their toes in the new platform without feeling like they are drowning.

The transition is also feeling less cumbersome, and more inevitable. The number of mobile web users is set to surpass desktop users this year. By the end of this year, the U.S. will have spent roughly $13 billion on "cloud computing and managed hosting services." The global market for cloud equipment will reach $79.1 billion by 2018.

Writing on The Guardian's Media Network Blog last July, Simon Withers, vice president of global cloud product at SunGard Availability Services, said that traditional IT departments will thrive under a cloud approach, developing new applications rather than just being corporate firefighters. Companies big and small will be able to provide clients and customers with data on the go. Productivity will increase, while legacy IT costs decrease.

The only question is which SUVs will be left behind, and which ones will accept cloud as a new way of doing business.

"Attempting to bury your head in the sand and writing cloud off as a fad," Withers wrote, "is comparable to a business investing in typewriters rather than mobile devices."