

## DATA CENTERS: OLD AND IN THE WAY

NARRATIVES by WSJ Custom Studios for Brocade, as previously published in *The Wall Street Journal*.



In October, people trying to select health insurance ran into a frustrating and unexpected roadblock: The Healthcare.gov website was down, and they couldn't log on to it. Citizens expressed anger, lawmakers demanded changes, and "Saturday Night Live" found fodder for a skit.

This kind of technical difficulty may have typified the early days of the Internet, but now big glitches make big headlines. Some other incidents involving network failures: an airline's check-in and booking system disappeared for 11 days, stranding travelers and costing the airline \$20 million; millions of banking customers couldn't get to their online accounts for six days; 120,000 people were unable to access their email for 48 hours.

It should come as no surprise that some of our cutting-edge technology breaks down so frequently. Sophisticated online services are often built upon antiquated infrastructure technology that is wheezing under the strain. Most so-called data centers — the facilities housing the computer systems that support

those online interactions — were built 20 years ago for purposes much different from what companies need today.

Think about that: The technology underpinning the innovative services that companies tie their future to dates back to a time when Bill Clinton was living in the White House, O.J. Simpson was fleeing police in a Ford Bronco, and Nelson Mandela was being inaugurated as South Africa's first black president.

"Today we expect no interruption when we access online services," said Larry Ponemon, head of the Ponemon Institute, which published the 2013 Study on Data Center Outages. "When these data centers were built, the requirements weren't that stringent."

That outdated technology is causing outages — a lot of them. Imagine how upset and frustrated you'd be if the electricity or water in your house stopped functioning once a week. Well, that would be an improvement over what happens at a third of all data centers; they experience multiple network failures

**DATA CENTERS: OLD AND IN THE WAY** CONTINUED

every week, according to a study by research group Vanson Bourne.

“The new demands are pushing data centers beyond their capabilities,” Ponemon said.

When asked privately, 91% of IT professionals admitted that their data centers needed substantial upgrades to meet the demands of new computing practices like cloud computing, the hot trend of storing and accessing data and programs via the Internet.

In the Vanson Bourne study, 61% of IT pros acknowledged that their corporate networks were not fit for their intended purpose. About 41% revealed that network downtime had caused their companies financial hardship.

Fortune 500 companies are estimated to lose an average \$46 million due to downtime, and that’s just the labor cost. The damage to a company’s reputation when a customer can’t book a plane ticket or access his checking account can be much worse.

In fact, the consequences of an outage are so high that 84% of IT professionals agreed that “they would

rather walk barefoot over hot coals than have their data center go down,” according to the Ponemon Institute study.

To be sure, there is some cause for optimism: Three-quarters of survey respondents expect that innovations in technologies used to manage and monitor data center infrastructure will help alleviate the outage issues. “We are seeing a renaissance in data centers, with a lot of innovative thinking about how to fix the problem,” Ponemon said.

Companies are looking at a host of solutions, such as software-defined networking, or SDN, a new cloud computing-based approach that can accommodate the speed and power necessary for the latest online services and applications.

Going forward, companies would be well advised to focus on data center upgrades. More and more customers have their heads in the cloud, as it were. And that means companies can no longer afford to have their heads in the sand.