



Among the Clouds

Weighing in on the differences between public and private cloud computing.

by Elise Oberliesen

Performance, responsiveness and enterprise agility rank among the top goals of today's leading organizations. More companies turn to private and public cloud computing to gain more processing, convenience and cost savings. But the first step is to assess your comfort level with the security, storage and virtual nature of the environment.

When accessing sites like Salesforce.com or running Software-as-a-Service (SaaS) applications like Gmail, end-users essentially access data in a public cloud. When using a public cloud, end-users use the Internet to access their data, which is stored in a server farm outside of their organization. With a private cloud, end-users access applications with a Web browser — much like public cloud — but they use a private line and their stored data lives inside their own data center.

Taking a bite out of rising costs

Dental practices that are looking to eliminate the hassles associated with running a local area network (LAN) and managing IT resources are outsourcing their IT needs to Web-based software companies. That means these offices can access customized software applications with features like online x-ray, patient charting and electronic billing.

Utah-based Curve Dental offers a public cloud-based "practice management solution" as an outsourced IT option. Outsourcing IT or "IT-as-a-service" (ITaaS) is becoming increasingly popular as a growing number of companies decide that they don't want to manage an IT department, yet realize they still need IT services. Curve's founder and managing director, Matt Dorey, says third-party hosting with outsourced IT services lets dentists focus more on their core competencies.

Advantages of running a business in this public cloud environment include scalability, convenience, cost savings and top-notch security, says Dorey. "The whole advantage of the cloud is outsourcing security, outsourcing data storage and infrastructure. The more you try to control that and make it private, the more you lose out on economies of scale," Dorey says.

A dental practice could easily spend \$50,000 to \$100,000 in start-up costs alone for equipment used in a traditional LAN environment, says Dorey. He estimates that the outsourcing option gives around a 75 percent cost savings to customers.

To safeguard customer data, Dorey invests millions of dollars into security and disaster recovery features. "We use

256-bit encryption and we use four tiers of data redundancy," Dorey says. "Data is being written to two locations, which gives instant data replication in real time."

More uptime saves money

Businesses that want 24/7 reliability need simple solutions that keep them running — no matter what. Want to ensure a secure connection at all times? Simple. In a nutshell, just aggregate multiple lines from different carriers. If one line fails, switch to the working line, says Ragula Bhaskar, Ph.D., CEO of Utah-based FatPipe Networks.

Bhaskar says FatPipe Networks provides failsafe connectivity to clients running in either a public or private cloud environment. In some cases, he says private cloud offers more flexibility to clients. "The major advantage is that they can decide the level of security they want and they can do a combination of private and public lines for access [to the cloud]," he says.

The Internet runs on public lines, and is more cost effective compared to private lines. But the method of transport isn't always as direct. "With private lines, you take the same path each time," says Alisanne G. Korologos, FatPipe Networks spokesperson. "With Internet, you never have the same path;

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the cloud and finally reaches its destination.”

Bhaskar says multi-line or router clustering provides more security and redundancy. Also, the increased bandwidth gets you to Point A much quicker. Organizations that have highly sensitive data — governmental institutions, for instance — opt for multi-lines. He says a multi-path VPN is the best option, if you’re looking for a highly-secure VPN that is resistant to break-ins.

Bhaskar and Dorey say companies underestimate the true cost of system downtime. But when systems fail and organizations experience the Achilles’ heel of lost communications to clients and vendors, they are more motivated to incorporate failsafe methods or protocols.

Go public or stay private?

Having a hard time making the decision? You’re not alone. Which types of enterprises make up the target market for a private cloud environment? It depends entirely on the type of organization and the data stored in that cloud, says LANDesk Software Division General Manager Steve Daly. “Enterprises that have high security and compliance requirements are the areas that are best served by private clouds. They will have a much better ability to control access

to, and the location of, sensitive information,” Daly says.

Daly says organizations that store data in a public cloud give up a significant amount of control. Just ask CIOs whether they trust a public cloud with investor relations data. Some might say that’s like putting \$5,000 in a Ugandan bank, without getting a deposit confirmation. “In my mind, that is the biggest inhibitor: the loss of control that IT has on a number of things,” he says.

The thought of what could happen to data when stored off-site raises stress levels in IT staff responsible for that data’s integrity. Though it is arguably a security issue, loss of control has more to do with introducing risk to data once it leaves the cozy firewall, says Daly.

The issue becomes compounded as more mobile devices are introduced into the environment. In a public cloud, loss of control happens when syncing devices like smartphones to laptops for calendaring or to-do list features. “[An iPhone app] takes the to-do list out of Outlook that’s in the corporate firewall, loads it up to a data center in the cloud, and then [the] iPhone goes up to the cloud service and grabs the to-do list. At that point, IT has lost control of data because it used to reside in its firewall. Now it’s residing somewhere out there

in the cloud,” Daly says. “Now data is moving all around, in and out of the firewall.”

When Jeremy Hanks, chairman and president of Orem-based e-commerce firm Doba, rides into work each morning, his brain begins a microprocessing feature called: Let’s Organize the Day. While he admits his affinity for using sticky notes to help him stay organized, his latest fling resides in his smartphone.

He uses Evernote, a phone app that helps him track expenses, monitor receipts or check travel itineraries. “I snap a picture [of the receipt] with my iPhone and it syncs up to my laptop,” he says. Then he files those records for easy retrieval.

Hanks understands the risks inherent with data flying through the cloud unprotected by firewalls. That’s why he only uses Evernote with his non-sensitive data.

Though he enjoys editing documents “on the fly” in Google Apps, Hanks considers himself more of a “hybrid” based on some of the company’s data storage practices. “Financial statements go on our internal network,” he says.

While analysts claim that security concerns are among the top reasons companies are

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slow to adopt cloud computing — either public or private — just as many contenders say the cloud is the wave of the future.

Back it up

Know your storage requirements and ask the right questions.

What you need to understand about private cloud storage options may not be so obvious. In other words, what questions should you ask when you are in the planning or information gathering phase of a deployment? LANDesk's Steve Daly offers three ideas to consider:

“First, be clear on what your ultimate goal is for your cloud computing strategy. If you believe you will want to migrate to a public cloud over time, then plan your implementation for that eventuality. That may mean you go to a virtual private cloud where a public cloud vendor carves out the infrastructure for the enterprise and separates it from others' infrastructure or a true private cloud, and the infrastructure and expertise on staff to support this.

“Second, be sure to have a well-defined process and tools to automate the process of migrating from on-premise apps to cloud apps.

“Third, have an integration strategy. You will not be able to flip a switch and have a fully cloud-based IT infrastructure. Be clear on where the integration points are between cloud and on-premise and a way to integrate where necessary.”

— EO

By the Numbers

Data show that cloud services are on the rise, but reveal security concerns.

According to a February 2010 study conducted by Findmyhost.com, “Driving factors for investing in cloud computing were similar regardless of company size, including reduced costs, uptime, scalability and performance.” Here are some interesting factoids the company uncovered about trends related to cloud computing:

✍️ Adoption rates are not impacted by company size — larger companies, 33% in the next 12 months; small companies, 34% in next 12 months.

✍️ Obstacles that service providers must overcome are predominantly Security and Administration/Support: 64% of all respondents and 75% of larger companies list Security as the top concern.

✍️ Utilization is greater among small businesses — over 50% of IT Services delivered from a cloud platform.

Disaster Recovery Options

Back it up before you lose it. Don't let fire, theft or computer viruses hold your data hostage.

✍️ Look for disaster recovery provisions that spell out the details — and read them.

✍️ Opt for a data recovery plan with storage in two physical locations in opposite directions — i.e. East Coast and West Coast.

✍️ Opt for four-tier data replication for redundancy.

✍️ Find a cloud computing provider that offers instant data replication.

✍️ Get data back-ups in real time for quicker, easier data retrieval. Costs for real time data have become significantly lower, making it within reach for more organizations. Find out how long it takes to retrieve lost data — 5 minutes or 5 hours?.