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A Director's Guide to Cloud Computing

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Corporate Board Member
by **Bonnie Azab Powell**

There's a sea change under way in technology. Wired magazine recently labeled it "the good enough revolution," saying that consumers now look for "flexibility over high fidelity, convenience over features, quick and dirty over slow and polished." Think of how the iPhone has replaced expensive digital cameras, portable stereos, and video cameras. And while Wired was talking about the gadgets and software that individual consumers are going for, the same technology—cloud computing—offers the same benefits to business. It does so, moreover, at enormous cost savings, which should appeal to directors eyeing their company's future IT needs and wondering how they'll ever pay for them.

Cloud computing lets you bypass your company servers, with all the fuss and hassle they so often impose, and go directly to the Web for everyday applications ranging from e-mail to billing services to boardroom-material management programs. Not only is this a heck of a lot nimbler, it's also much less expensive to set up, maintain, and update. For one thing, you're off the financial hook for pricey licensing deals. Instead you subscribe, monthly or yearly, to software services that are hosted and administered by somebody else—paying only for features you actually use. Some directors may already be using cloud computing on their own account without knowing it. Think Gmail, Google's e-mail system, which comes to its subscribers by cloud. Or Netflix. If you watch rented movies streamed to your home rather than delivered by mail as DVDs, you're a cloud beneficiary too.

At the more sophisticated end of cloud computing is Amazon.com's Elastic Compute Cloud. Client companies—big organizations whose business is information technology—rent this particular "software as a service" (or SaaS, as it's known) by the hour to do such things as test their own applications or run mission-critical data centers.

So far only a handful of companies have adopted cloud computing for basic business functions, among them Fairchild Semiconductor, Genentech, and Motorola. All three subscribe to Google services that offer not only electronic mail but also software for operating shared calendars and drafting documents by means of real-time collaboration, among other things. Google is one of its own customers too. But plenty of board members and top executives at companies that haven't officially adopted cloud computing are toying with it as individuals—very likely the same men and women you see tweeting from their iPhones during slow moments at board meetings.



**“Everybody who’s using cloud computing just loves it. Even the professors on the boards.”
-Mamoon Hamid, Venture Capitalist**

In the main, though, it’s the folk involved with smaller companies—as venture capitalists, founders, directors—who are blazing the cloud-computing trail, as they have in most of technology’s advances. Case in point: Mamoon Hamid, 31, who’s a principal at U.S. Venture Partners, an investment firm in Menlo Park, California, and a director of Box.net, a start-up that provides cloud services for more than 3.5 million users, including individuals, small businesses, and Fortune 1,000 companies. The board members of Box.net, in which USVP invested several million dollars two years ago, use a cloud-based file-management system that makes it easier for them to be effective. Hamid, other directors, and members of his investment firm can open, read, and comment on all kinds of documents—from their iPhones if they so choose, an option Hamid often goes for.

He was so impressed at how all this technology had simplified his board work at Box.net that he advised another of his firm’s portfolio companies, CFX Battery, to become a Box.net subscriber as well. The verdict from the boardrooms? “Everybody who’s using cloud computing just loves it,” Hamid says. “Even the professor types on the boards. They think it’s cool because it cuts down on the barrage of files and information that we receive daily, which can be just unmanageable.”

Now USVP itself is getting into the cloud act, albeit cautiously. “Like most financial-services firms concerned about data privacy, the outfit has been very conservative about the kinds of information technology it has adopted,” says Hamid. The evolution of cloud security has essentially laid those concerns to rest. These days the venture firm’s partners use Box.net’s virtual workspace to create, upload, and access sensitive due-diligence materials (company financials, market research, call notes, and other confidential files) for potential investments. In the old days, the lead partner on a deal would create a shared drive or folder on the company’s internal server and have to ask the IT staff to restrict who could access it. Now, with just a few clicks on a website, the lead partner can specify who can edit and who can merely view the various items on the shared site, plus determine who should be notified whenever the information is updated. And all the material is available securely to the appropriate people, whether they’re in the office, at home, or on the road.

Another Box.net customer is Christopher High, a trainer and administrator at the sales and marketing development group of Inverness Medical Innovations Inc., which is headquartered in Waltham, Massachusetts. High, who works—“remotely,” he says—out of San Diego, just signed up for a file-management service that will house his group’s library of 12,000 product documents. He says he chose Box.net because its filing architecture was not only searchable but browsable; users can create category folders within folders within folders if they like, and can choose to drill down through them rather than use a search box. High’s move to Box.net was a good deal even by cloud standards, at \$5 per user per month, down from Box.net’s standard business rate of \$15. He has given 300 field-based sales reps, along with another 100 marketing staffers and customer-service people, access to this cloud-based workspace, which they also use for odd jobs like creating company and customer newsletters.



Rollout of a cloud-based system to house 12,000 documents was a snap and required no nagging.
-Christopher High, Sales and marketing manager

Rollout was a snap, says High, and simply involved sending the 400 employees who’d be using the library a URL and a login. That’s a big change from a few years ago, he says, when he would have had to repossess all the laptops and spend at least an hour installing software, then nag users to pay attention to the company’s update notices. (How many times a week do you get that annoying pop-up box saying, “An update is available for Buggy Software X! Install now or remind me later”?) “A brand-new installation out in the field never would have worked,” he says. “We couldn’t get people to follow update directions. If it’s user-based maintenance, you can’t depend on it.” Convenient file sharing is just one example of cloud computing in action. Box.net, for example, is integrated with dozens of third-party mini-applications that include such things as document creation and collaboration, project management, invoicing, photo editing, and, as of October, Salesforce.com, a popular cloud-based customer-relationship management service used by many sales groups.

Salesforce.com’s upgrades are free—and that’s the rule in cloud computing. For Todd Pierce, vice president of IT for Genentech, this means “I can get out of the upgrade business. I don’t need to focus on managing versions of software or deployment of the software. That all gets taken care of.”

In the case of Genentech, this means taken care of by Google. Google relies on the “freemium” business model used by most providers of software as a service (including Box.net), in which a stripped-down freebie version lures in the curious for a risk-free test drive, while a premium pay-as-you-go version offers more bells and whistles, like additional storage capacity and customer support. The free Google Apps Standard Edition suite includes Gmail, Google Calendar, Google Docs (for creating and sharing documents, spreadsheets, and presentations), Google Sites (for creating secure Web pages for intranet and team-managed sites), and Google Talk (for instant messaging). An estimated 37 million people worldwide take advantage of Gmail’s generous seven gigabytes of storage, its killer spam filtering, and a nifty plug-in that lets you read and write e-mail while offline, then send it once you’re connected again. Genentech and an undisclosed number of other companies subscribe to Google Apps Premier Edition, the company’s top-of-the-line cloud service, which includes all the above plus such extras as a

practically bottomless 25 gigs of Gmail storage per employee and 99.9% guaranteed uptime, along with additional cool tools like Google Video (private, secure hosted video sharing, for things like employee training and sales pitches).

Some two million businesses subscribe to Premier Edition, Google claims, each having forked over \$50 per year to upgrade service for an undisclosed number of employees. (Hundreds of universities and nonprofits use a customized free or discounted version.) Directors thinking about costs would do well to compare that per-person sum with the average \$400 per employee a company pays to use Microsoft's Office Standard 2007 desktop suite, plus another \$110 or so for an Outlook e-mail and calendaring program. And as Pierce points out, Google's corporate e-mail customers no longer have to deal with backing up data for disaster recovery, which saves millions of dollars.

Google doesn't disclose the identity of all its corporate customers, but it has won several high-profile contests to get new ones. It beat out Microsoft in October after a yearlong fight, snaring a \$7.25 million, five-year contract to provide a new e-mail system for the city of Los Angeles and its 30,000 employees, about 10,000 of them cops.

Microsoft's competitive position needs work. In mid-2007 it launched Microsoft Office Live Workspace, a Web-based set of document creation and sharing tools that can be accessed for free via a Microsoft Live account (or a preexisting Hotmail account). Unfortunately, reviewers and armchair critics found the tools balky to use with non-Microsoft browsers, and few people seem to be bothering with them. The upcoming Office 2010 will offer cloud-based versions of Word, Excel, and PowerPoint, but many analysts think Google Apps will have established a solid lead by then. This doesn't mean that companies won't buy the Office upgrade anyway, of course. There are a lot of Microsoft customers out there, and Microsoft's business division, for which Office provides the lion's share of sales, generated revenue of \$4.4 billion for the quarter that ended in September.

Some companies are trying to escape Microsoft's clutches. Seymour Duncker, the founder and CEO of iCharts, a Web-services start-up headquartered in Sunnyvale, California, that simplifies online data publishing and distribution, says he has "kicked the Microsoft habit completely." Make that almost completely. His lean-and-mean team of 20 people spread throughout California, Germany, and India all utilize free services. They use the free versions of Gmail for e-mail and Google Apps to track product-development timelines, record call minutes, and manage sales leads. For cheap telecommunications and free one-to-one videoconferencing, they turn to Skype, a global Internet-communications company partly owned by eBay. Microsoft's last grip on iCharts: its PowerPoint and Excel programs. "We still use PowerPoint to create presentations and Excel to download our Google Apps spreadsheets into offline. There's really no replacement yet," says Duncker with a sigh.

As directors of companies that have switched to Google Premier Edition will know, the real savings come not from forgoing Microsoft Outlook licenses but from getting out of e-mail management entirely. Simple on the surface, e-mail has lots of hidden costs attached. Cloud-based e-mail means no more five-figure purchases of Microsoft Exchange e-mail servers that have to be installed inside the company firewall, not to mention the endless IT staff hours spent maintaining and updating those servers and their software—chasing viruses, backing up

terabytes of sensitive company data, telling packrat mail savers it's time to clean out their inboxes.



“We used to pay as much for one month of [Microsoft’s] hosted Exchange as we do for a year of Google Apps.”
-Caleb Clauset, Product manager

Another Google convert is Caleb Clauset, product manager at Typefi, a start-up Newark, Delaware, manufacturer of software that automates the publishing process. “We spent more on hosted Exchange [the server-based back end of Outlook e-mail management] for one month than we spend annually with Google Apps Premier,” he says. “Hosted Exchange provided 100 megabytes of storage versus 25,600 megabytes with Google Apps, which also has far superior junk-mail filtering.” And the Google system, he adds, “is a lot easier to manage and more convenient.”

Typefi is what you would call a cloud-computing power user. The tiny 12-person concern uses Google Apps, Skype, and a cloud-based project-collaboration tool called Basecamp that helps it run its own business so efficiently that it has been able to sign up large corporate clients like Lonely Planet Publications, Thomson Reuters Healthcare, and Fodor’s Travel.

Typefi persuades its contacts within those companies to use Basecamp in managing their Typefi installations. This saves Typefi a lot of customer-service hours.

Cloud-based apps make it simple for far-flung employees to work together virtually—and cheaply. While Typefi’s official address is in Delaware, only one employee is based there. Clauset operates out of North Carolina; the rest live in ones and twos in Colorado, Delaware, Maine, New Jersey, Utah, and Wisconsin, as well as Australia and Germany. All 12 have either Google Voice or Skype Out phone numbers, cloud- and Internet-based numbers that can be programmed to ring other phone numbers in Typefi’s mini-global empire, depending on the time of day. This way, says Clauset, “we can provide 24/7 coverage. We have someone awake somewhere 24 hours a day.” Should that someone be taking a nap, Google Voice transcribes voice-mail messages (rather roughly) and immediately e-mails both the transcript and a sound file to the phone number’s owner.

Both iCharts and Typefi rely on Google Docs for real-time collaboration across time zones and continents. Instead of using Microsoft’s cumbersome “Track changes” feature and passing Word or Excel documents back and forth between various collaborators via e-mail, all Clauset has to do is click “Create new document” in his Web browser, enable sharing on it, and then send his would-be collaborators a URL that they can access from their browsers. A number of people can work on the same document at once and see one another’s changes immediately. “Not long ago we were building an XML transform [a custom software process] for McGraw-Hill, and I was in California working on the same spreadsheet in real time with people in Australia and New York and Colorado,” recalls Clauset. “We got it done in a fraction of the time it would have taken with e-mail.”

Typefi has also been using Basecamp for the past four years “to keep a lot of projects in the air with a very small staff,” Clauset says. The company just has to send its customers a link that lets

them log in to Basecamp's 37Signals, a Web interface that costs \$24 to \$149 a month and helps tens of thousands of customers share files, assign tasks and deadlines, and track their time.

How secure is cloud computing? That was certainly an issue for Los Angeles, especially its police department, when the city was eyeing a move to Google. The Google team managed to put those worries to rest, most likely by describing the terrorist-proof security measures at its physical data centers and explaining that Google Apps data is transmitted using topflight security protocols and stored in tiny, broken-up pieces across multiple servers and disks, which makes it unreadable by humans and very hard to crack with a computer. Google also includes a damages amendment in the e-mail contract and has announced plans to create a special "government cloud," to be deployed this year, that would meet the unique security and privacy needs of government entities. Smaller providers like Box.net and Basecamp also take care to give their data tight protection, both electronically and physically, in well-guarded, geographically separated locations.

Directors, it's time to get on a cloud.