# Enterprise CIODecisions

*Guiding technology decision makers in the enterprise*

# CIO Perspectives on Cloud Computing

How to sift through the cloud hype to achieve business value.

**TechTarget**
*Where Serious
Technology Buyers
Decide*

# Cloud Computing: What CIOs Really Think

**THE HYPE VS.** reality debate is nothing new to IT, from the first PC to today's iPad. But ignore the hype at your own peril.

If there's an overhyped term today, it is *cloud computing*. Check out this breathless prophecy:

"We can't even imagine today the potential of cloud computing as we look forward. But [given] the intersection of higher processing power, cheaper cost and the ubiquitous access to broadband networks that for the first time are able to deliver content in ways that we couldn't imagine before … transformation that's going to fundamentally change the way we live our lives."

Whoa. If you thought that this was spoken by Marc Benioff, guess again. It was Vivek Kundra, President Barak Obama's federal CIO, speaking on "The Economic Gains of Cloud Computing" at The Brookings Institution April 7.

Kundra's viewpoint is surprising in contrast to the conventional wisdom of many CIOs in corporate America.

*Cautiously optimistic* might be one way to describe some of those attitudes presented in this edition of *Enterprise CIO Decisions*: Many see the benefits, but costs, risk and uncertainty still prevail.

At the very least, cloud computing is forcing IT professionals to innovate.

"I've actually used cloud computing as a rallying point to demonstrate to the company that IT was thinking differently, was willing to challenge itself and to challenge conventional thinking and be a little more daring, with the hope that there was a real value proposition," said Joe Drouin, CIO of Kelly Services Inc. (see ).

Regardless of the promise, cloud computing still ranks below server virtualization, disaster recovery and business continuity, and data protection, according to SearchCIO.com's annual IT Priorities Survey. However, the 20% of IT shops that are already deploying cloud computing services will be better prepared to take advantage of cloud services when the reality does finally catch up with the hype. ∎

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# UpFront

**News, views and reviews
for senior technology managers**

BEST PRACTICES

## CLOUD SECURITY STANDARDS KEEP BANK GROUNDED

**SOME COMPANIES HAVE** shied away from cloud computing because of security concerns, but the Sun National Bank subsidiary of Sun Bancorp Inc. has followed a pragmatic approach to taking advantage of the cloud's potential for rapid deployment.

Recently, Sun National began offering mobile banking, a feat accomplished in less than four months with cloud services, according to Angelo Valletta, senior vice president and CIO of the Vineland, N.J.-based bank. Sun National now offers Short Message Service, or SMS, texting for account information inquiries; browser access to its website from Internet-enabled phones and personal digital assistants; and an application that customers can download to their PDAs for one-click access to the site.

Sun National partnered with mFoundry Inc., a Larkspur, Calif.-based cloud provider whose hardware and software back-end infrastructure is widely used by banks,

> **Sun National required its cloud provider to have**
>
> # SAS 70
>
> **Type II certification, an audit that assesses internal controls in a service organization.**

payment companies and merchants for mobile banking and payments.

Sun National required mFoundry to have SAS 70 Type II certification, an audit that assesses the internal

controls within service organizations. Sun National then reviews the SAS 70 audit to understand the provider's vulnerabilities, and uses an internal process to address them within a specific period of time.

It takes more than money to manage security in the cloud. It also requires a new skill set in the IT department—namely, people who understand the technology and can navigate the business environment,

## "You need to understand what … you're moving to the cloud."
—RICH MOGULL
*CEO, Securosis LLC*

and who are accountable from the top-down perspective, while being able to approach contracts from a partnership perspective.

Sun National's experience shows a level of sophistication in a rapidly changing environment that has yet to be tamed, according to Rich Mogull, CEO of Phoenix-based consultancy Securosis LLC.

"The biggest problem with the cloud is that it's not only the Wild West, it's a seedy bar," Mogull said. "Buyer, beware. You need to understand what [applications] you're moving to the cloud, and what is in the SLA you get from those providers." —LAURA SMITH

## BY THE NUMBERS

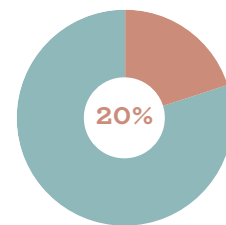SearchCIO.com's annual IT Priorities Survey asked 958 IT managers what technology projects they were deploying in 2010. We found that cloud computing, despite the hype, lagged behind other priorities:
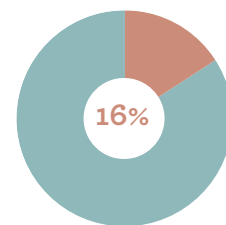
**46%**

**Server virtualization**

———

**42%**
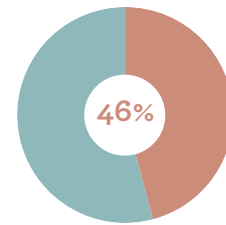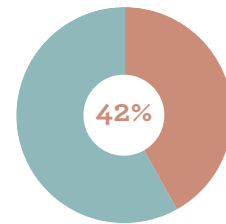
**Disaster recovery/business continuity and Data protection**

———

**20%**

**Cloud computing**

———

**16%**

**Service-oriented architecture**

CIO PRIORITIES

# PUBLIC CIO EMBRACES CLOUD— CAREFULLY

According to Utah CIO **Steve Fletcher**, who pushed the state into starting a private cloud for email and Web applications, agencies should consider four main points before pursuing cloud applications:

1 **Security**
2 **Data ownership**
3 **Transferability**
4 **Disaster recovery**

SOURCE: KAREN WILKINSON, GOVERNMENT TECHNOLOGY

WHAT'S THIS?

# CLOUD CARTOGRAPHY

cloud car·tog·ra·phy
(noun)

**1.** An approach for pinpointing the physical locations of Web servers hosted on a third-party cloud computing service.
**2.** The goal of cloud cartography is to map the service provider's infrastructure in order to identify where a particular virtual machine is likely to reside.

SOURCE: SEARCHCLOUDCOMPUTING.COM

QUICK QUOTABLE

# "President Obama's [IT] budget request for 2011 has a page dedicated to cloud computing that outlines such goals as increased efficiencies, saving taxpayer dollars and becoming more strategic about building IT infrastructures. [Cloud computing] is not a mandate, but when the president asks that you consider something, people listen."

—**PARHAM EFTEKHARI,** co-founder and director of research, Government Technology Research Alliance

ONE ON ONE

# CLOUD CLEARS UP EMAIL CONUNDRUM

**NAME:** Jay Kenney
**TITLE:** CIO
**TIME IN THIS ROLE:** Two years
**COMPANY:** Lincoln Property Co.
**HEADQUARTERS:** Dallas
**EMPLOYEES:** 4,000

**AS CIO OF** Lincoln Property Co., one of the nation's largest residential property management and development companies, **Jay Kenney** has made it his mission to outsource applications and infrastructure management wherever possible. In addition to having his ERP system and customer portal under management by a Software as a Service provider, his latest outsourcing endeavor was converting all employees from Novell GroupWise to Google Apps.

**Why did you decide it was time to move to a new email system?**
The real trigger was our email archive had gotten to a size that we couldn't back it up [internally]. Also, all of our backups and archives were on a SAN that was old, and it was just a matter of time before we were going to have to replace it. We also had some other projects coming down the pike, and we were going to need some servers for those. So it was at the point of, "Well, if we're



Jay Kenney

going to buy more servers we need to look at virtualization," and there was an up-front cost to that. So those were the drivers—we were going to have to do something from a hardware perspective, and typically our strategy is to outsource our mission-critical systems. The only thing left in the data center that I would call critical was email.

**What options did you consider?**
First we did the business case, and that went before the executive steering committee of C-level executives and senior vice presidents. We looked at continuing to use GroupWise or an internal Exchange solution instead, outsourced Exchange from Microsoft and another vendor, and then Google Apps. Google Apps was kind of just thrown in there as part of the busi-

ness case. It wasn't the leading contender going into it. The leading contender was either insourcing or outsourcing Exchange.

### What led you to Google Apps instead, then?

The business case to go to Google Apps was very compelling. It was a lot cheaper than anything else out there.

### How much cheaper was it?

A Forrester [Research] article out there quotes the cost of email as something like $25 per month, per user for an in-house solution, and for Google Apps it was $8 or $9 per user, per month. So it was about one-third of what we were spending internally, if you took in all the costs and ran it over five years, including one hardware refresh in there. So in that five years, it was about one-third of what we were going to spend in-house on email per user and for email archiving.

### What were some of the other benefits from the move?

Another benefit for the business that came along with going to Google Apps was redundancy. I didn't say, "Let's create a redundant environment internally." It was a side benefit.

### What was the most difficult aspect of the email conversion?

Change management was really the

difficult piece, getting the users across the company comfortable with the new system. It took a while to do that. We moved about 75 users per week, but a lot of that was we really had to scrub our data because of corrupted emails in our system. I don't think you would run into that on an Exchange conversion.

> **Change management was really the difficult piece, getting the users across the company comfortable with the new system.**

### How did you phase in the new email?

I put C-levels on Google Apps before the rest of the business. They gave it a go and we did a trial with a regional office, and that was with [our integration partner] Cloud Sherpas. We pretty much did a full migration there as we would with everyone else [in the company]. We were basically testing our process and our ability to execute, as well as getting that regional office up and trained and getting their feedback on, "OK, is this something we really should do," and they gave us the go-ahead as well. That's when we cut over full scale. —**CHRISTINA TORODE**

# What CIOs Want from the Cloud

## CIOs are cautiously deciphering the value of the cloud.

### BY CHRISTINA TORODE AND LINDA TUCCI

**ASK CIOS WHAT** they expect from a hosting company or an outsourcer, and they will ramble off a list of capabilities and terms, down to clauses within the partner contract.

Ask what they hope to *gain* from a cloud services provider, and they hesitate. It's not that they don't understand the technology behind the concept; it's that the concept itself means different things to different CIOs and depends on their industry, company size, economic situation, business needs and IT infrastructure ... to name a few factors.

Then comes the list of unanswered questions and uncertainties surrounding data privacy and security, application and network performance, bottom-line costs vs. an in-house deployment, existing infrastructure investments and service-level agreements (SLAs), again to name a few.

As one CIO declared, call it *cloud computing Version 1.0.* As with any new release, CIOs are waiting for the bugs to shake out—and doubts surrounding security and costs are some big bugs.

Rich Adduci, CIO of $8 billion medical device maker Boston Scientific Corp. in Natick, Mass., said he thought email would be a simple first foray into cloud computing but found that it was a no-go from a privacy and security perspective. "I thought it would be a low-hanging fruit that we could put out in the cloud, but we are just so heavily regulated that it wasn't possible," he said.

Jay Kenney, CIO of Lincoln Property Co., the fifth-largest residential property management and development company in the U.S., no longer

has a data center, having outsourced his mission-critical applications—ERP, customer portal for payments and service inquiries, and email—to a mix of Software as a Service and cloud providers. The Dallas-based

> ## "I keep waiting for someone with scale to offer a less expensive service, but it hasn't happened yet and I'm running out of time [from a cost perspective]."
>
> **—JAY KENNEY,** CIO, Lincoln Property Co.

company's conversion with the help of systems integrator Cloud Sherpas from an in-house Novell GroupWise email system to Google Apps alone is expected to save the company about $200,000 a year.

Yet, he said he doesn't think his company's approach will be emulated by a lot of other enterprises. "Many companies have big data centers that I don't see them moving," he said. "Financially, it's less compelling if you're already running a data center and could stand up another application without increas-

ing costs internally in terms of space, power and personnel in your own data center. [On the other hand,] we were renting space at a data center in Dallas, and all that was left that was considered mission critical in there was email, so we could shut it down."

He said he's even considering bringing data backup services with a third-party provider back in-house because the service costs continue to rise. "I keep waiting for someone with scale to offer a less expensive service, but it hasn't happened yet and I'm running out of time [from a cost perspective]."

## OUTSOURCING VS. CLOUD COMPUTING

Amtrak CIO Ed Trainor is using cloud services for extra capacity, although like many CIOs, he isn't calling it a cloud computing relationship. "Our outsourcing agreement is structured in a way that I can ramp up our capacity for computing and storage by paying an additional, pre-negotiated price," he said. "If we want to call that *cloud computing* I suppose we could, but it's a very mundane version of it."

As for mission-critical systems such as ERP/SAP or Amtrak's reservations system, "It is really unique," he said. "It's not a generic thing where we can go out and buy it over the Web from other people."

He said he still views cloud com-

puting, or IT as a Utility, as potentially transformational to IT and the business, and doesn't see it going away any time soon. "But I have seen so many of these things oversold. We move in [those kinds of] directions, but we don't leap. Maybe I'm a dinosaur."

Or maybe a CIO who has a long history of seeing how trends shake out. While Trainor was senior vice president and CIO of Paramount Pictures Corp., film companies used to outsource the global distribution of films. But as it became clear that this segment was increasingly a profit source, the film studios brought that function back in-house because it was a competitive advantage. He said he believes the same will hold true with cloud computing: The areas of IT than can confer competitive advantage to a company will not be hosted with cloud providers that, at least at this juncture, can't give companies the kind of SLAs and perhaps the confidentiality necessary to protect intellectual property, he said.

### WHAT CIOS HOPE TO GAIN

Erik Dubovik, vice president of information technology at private equity firm Audax Group LP in Boston, is seeking a business partner.

While vice president of IT strategy at Digitas Inc., an advertising agency bought by Paris-based Publicis Groupe S.A. in 2006 for $1.3 bil-

lion, he outsourced the company's resource, staffing and project management business processes to OpenAir Inc., now owned by Net-Suite Inc. At first, his motivation was to off-lay the burden of managing a mishmash of off-the-shelf and open source platforms supporting those applications. But what sold him and the business on cloud computing was the business process expertise gained from the relationship.

"[OpenAir] truly became a partner—we could leverage their expertise, which was based on best practices gathered from their network of customers, and use them to improve our business processes," he said.

What he was buying wasn't a technology or infrastructure, but resources his company could use to solve business problems, Dubovik said.

### THE SPEED OF CHANGE

For Denis Edwards, senior vice president and global CIO at Manpower Inc., a Milwaukee-based staffing company with 400,000 clients in 82 countries, cloud computing represents an opportunity to improve IT's ability to accommodate business needs faster.

"My only issue [with cloud computing] is that I can't do it fast enough," he said during a presentation at the Fusion 2010 CEO-CIO Symposium in Madison, Wis. "I would like to never have another

asset in our organization that carries depreciation. I would like to find a way to be as flexible as I can for the business. I do not ever want to have to say no to the business to a viable opportunity."

## Many CIOs' cloud plans are still in the works, and in turn their hopes for cloud computing have yet to be realized.

The caveat? One of the challenges preventing the company from a swift adoption of cloud services is that it's locked into assets that can't be disposed of right away.

And urged by federal government CIO Vivek Kundra to save money and go green, many public-sector CIOs are developing cloud services for other agencies and the public or are in talks to develop private clouds:

■ The Ames Research Center introduced the Nebula cloud computing platform, an open source, self-service platform that will support Mission Control and act as an information portal to the public.

■ The National Business Center developed its own set of cloud computing services for the 150 govern-

ment agencies it serves. Called the NBC Cloud, agencies can have their applications hosted on NBC's mainframe or x86 servers. The offering already includes hosted collaboration, issue and bug tracking tools and blogging applications. Upcoming offerings will include a software development tool environment, customer portal and file storage.

■ Bill Oates, CIO of the city of Boston, said he's talking to "like-minded cities" about ways to develop and share applications in the cloud. "Think of applications like 311 [Citizen Connect] available on the iPhone, and how we could work with other cities to develop such applications and share services and not have to build out [our own] systems and infrastructure for those applications," he said.

But many CIOs' cloud plans are still in the works, and in turn their hopes for cloud computing have yet to be realized, or their misgivings assuaged. As Rich Secor, CIO of Health Advances in Weston, Mass., said so succinctly, consider this version 1.0. "The biggest challenges to using cloud services now are questions about performance, security and price." ■

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# Making the Case for Cloud

## Even the easy sells are hard.

BY LINDA TUCCI AND CHRISTINA TORODE

**WHEN JOE DROUIN** joined Kelly Services Inc. as CIO two years ago, the Troy, Mich.-based company was in the midst of a business transformation: The regionally focused staffing service famous for its female clerical temps was fast becoming a global solutions provider, supplying software engineers, accountants, lawyers, scientists and other professionals of both genders to the world's largest and not-so-big companies.

"When I came in, I had to reassess IT strategy to be able to deliver solutions that would span the close to 40 countries Kelly was operating in and reach customers and suppliers, regardless of where they were located," Drouin recalled.

The $5 billion company lacked the infrastructure to reach all its offices and branches, let alone a global constituency of clients and suppliers. Cloud computing was starting to take off. "It was a perfect platform for me to grab onto and use as a linchpin for shaping a sharp right-hand turn for how we would be delivering IT solutions for Kelly."

Two years of learning pains later—coupled with a perpetual campaign to educate the business on the risks and benefits of cloud computing—Drouin is starting to take advantage of that "perfect platform." Email now is hosted in Microsoft's multi-tenant cloud environment, using the software vendor's Business Productivity Online Standard Suite. Drouin's team is also developing and hosting enterprise business applications in the Force.com cloud, a seismic shift for a company that relied heavily on off-the-shelf software. As a result, the business is seeing IT in a whole new light.

"I've actually used cloud computing as a rallying point to demonstrate to the company that IT was thinking differently, was willing to

challenge itself and to challenge conventional thinking and be a little more daring, with the hope that there was a real value proposition," Drouin said.

### AN EXPLODING MARKET— BUT NOT FOR CIOS

But Drouin is more the exception than the rule when it comes to cloud computing. For all the hype around cloud computing—and the potential benefits the various kinds of cloud computing can confer—CIOs are not moving in droves to the cloud. Moreover, the ones who are, like Drouin, often seem driven as much by philosophy as by the oft-touted potential cost savings and agility promised by cloud computing.

The numbers tell the story. From 2008 to 2009, with the global financial crisis well under way, worldwide cloud services revenue grew 21%, to $56.3 billion from $46.4 billion, according to Gartner Inc.'s most recent estimates. By 2013, cloud revenue is expected to increase threefold, to $150 billion. Other studies also project explosive growth, if not the exact revenue targets.

The figures seem to suggest that a cloud paradigm shift is right around the corner, but read the fine print on the Gartner data and it becomes clear that cloud computing has not exactly attained "phenom" status among CIOs, at least in terms of dollars spent.

The majority of the overall cloud services market, about 60%, has come from cloud-based advertising services, according to Gartner analyst Ben Pring. Throw e-commerce, human resources and payments processing services into that bucket, and the percentage climbs to more than 80%.

As for Infrastructure as a Service, the delivery model that pundits like Nick Carr predict will be the death knell for traditional IT departments,

**By 2013, cloud revenue is expected to increase threefold, to $150 billion. Other studies also project explosive growth.**

it is still very early days: Only about 6% of the overall cloud services market came from infrastructure delivered as a service last year, according to Pring, a major reality check on the notion that companies are dumping their data centers for the shared, generic computing environments offered over the Internet by the likes of Amazon.com Inc. and Google Inc. (The market for cloud application services is about twice the size of the infrastructure service

market, but as experts point out, this category is a computing model familiar to enterprise companies—the latest iteration on application service providers and Software as a Service.)

### OUTSOURCING STRATEGY CHARTS COURSE TO CLOUD

In fact, company culture often plays a major role in a CIO's decision to use the cloud. For CIO Jay Kenney, for example, the proximate cause to migrate 1,000 users from Novell GroupWise to Google Apps was financial: He didn't want to invest in new hardware. Faced with an email archive that was overloaded and an old storage area network on its last legs, Kenney was interested in neither buying more servers nor investing in the virtualization technology that would have leveraged the new hardware.

"We needed some additional servers, and if we were going to keep buying servers we would have needed to do virtualization. There's an up-front cost to virtualization. It's more expensive to get the virtualization infrastructure in place versus buying servers," Kenney said.  He said he also plans to eventually migrate another 2,500 employees who have not had dedicated email services to Gmail and Google Apps.

But Kenney, who oversees IT for the residential side of Lincoln Property Co., one of the nation's largest residential property management companies, also had a strong cultural driver for moving email to the cloud.

"Our strategy is to outsource our mission-critical systems. The only thing left in the data center that I would call *critical* was email," Kenney said.

### THE TIPPING POINT

For Kelly Services' Drouin, convincing the business that developing applications in the cloud could be a viable alternative to store-bought software was an almost insurmountable challenge.

"We knew in our gut that this model made sense," Drouin said, but making the business cases was tough because the cost of entry was so high. Any initial cloud development project had to bear the full cost of the licensing. "Even though you knew the seat would be reusable and the user would have access to the platform, we struggled as we tried to get off the ground with the first few projects in the Force.com world," he said.

The tipping point came in the middle of last year, when the business decided to shop for a new supplier management system and portal. Before the business could get out the request for proposal, a small internal team put together by Drouin hammered out a prototype in the cloud that met nearly 70% of the functionality required by the

business.

"When we could go back to the table in a couple of weeks and show them what we had done, and that simply by switching it on in the Force environment we had a global application, in 25 languages and accessible to anybody with a connection to the Internet, that was the big a-ha moment," he said. The feat was accomplished with a "small amount" of consulting money, some help from Force.com and a handful of smart IT and business people.

"We had to almost force the business into the corner and say, 'You can't ignore the value proposition. We just built this thing for you in two weeks,'" Drouin said.

**TWO EMAIL PROJECTS**
Cloud projects with obvious paybacks are an easier sell, for sure, but they also have to be managed carefully, and often call for outside help or a new set of internal partners.

Lincoln Property's Kenney estimates that using Google Apps for email will end up costing about one-third of what he was spending internally, factoring in the licensing, maintenance, data center, security and so on, plus one hardware refresh. Members of senior management were thrilled with the cost savings. They also liked the idea that by moving email to the cloud, internal IT would run "leaner in comparison to competitors," a company

principle. Still, to cement that support, Kenney did the trial run of Google Apps with the executive steering committee, and he waited for an official thumbs up before rolling out the system regionally and finally launching the full migration. Tweaks were made along the way. For the companywide rollout, he used Cloud Sherpas, a professional services company that specializes in migrating collaboration applications to the cloud.

"Technically, it is really not that difficult," Kenney said of the migration. (Getting users across the company comfortable with the new system was "really the difficult piece.") But even so, there were glitches. Corrupted email on the GroupWise system shut down the Google migration tool.

"Cloud Sherpas were instrumental in figuring out what was happening and figuring out why the [migration tool] software would just stop and go into an endless loop on users that had this corrupted email. They wrote some custom code and moved that email out of there so we could do the migration," Kenney said.

Drouin said he also found that cloud computing can require new alliances in and outside the company. "I really had to bring in a different slice of skills into the organization than you would need in a traditional IT shop," he said.

To move email to the Microsoft cloud, Kelly Services' Drouin worked

closely with his existing legal, compliance, security and human resources people to get the controls and security necessary to help ensure the data was not at risk. In addition, he recruited an experienced risk executive to manage IT risk and compliance globally—a first for Kelly. "She became pivotal in the analysis we did for cloud computing and the due diligence we followed."

Governance in cloud computing is key, agreed Denis Edwards, global CIO at Manpower Inc., a Milwaukee-based job placement firm with 400,000 customers and operations in 82 countries. Edwards has consolidated email in 30 countries, also using the Microsoft cloud platform.

"One of the things we have learned is that if you don't do the communication about governance, there are lot of misses and a lot of potential risks," he told an audience of CIOs and CEOs at last month's Fusion conference in Madison, Wis. Most of Manpower's business, 89%, is outside the United States.

"We are bound by a lot of data privacy laws around who can handle data, how it is handled and where it resides. Our data privacy people are very involved in the governance," he said.

Because of its global operations, Kelly Services also had to be mindful of where its data resides, Drouin said. "At this point, if somebody couldn't guarantee me where the data is going to sit, that would prob-

ably disqualify them as somebody I could do business with," he said, adding that he knows exactly where the Microsoft environment sits. Likewise with Salesforce.com Inc. and the small company outside

> ## "We are bound by a lot of data privacy laws around who can handle data, how it is handled and where it resides."
>
> **—DENIS EDWARDS,**
> global CIO, Manpower Inc.

Boston that hosts a Kelly Services recruiting tool.

The Microsoft email application, which Drouin characterized as geared more for small and medium-sized businesses, also had to be modified to meet data management requirements. Drouin got Microsoft "to build in things like retention policies and mechanisms for e-discovery"—without jacking up the price, by the way. "By being early in, we had a lot of opportunity to work with Microsoft to meet the compliance and legal needs we asked for."

Indeed, Drouin acknowledged, a good deal of the value proposition in Kelly's cloud arrangements has stemmed from signing up early. "Be-

ing on the leading edge gave us a lot of leverage with the vendor," he said.

**A GUT-WRENCHING SURPRISE**
Even so, Drouin said CIOs shouldn't underestimate how difficult it is to do the financial modeling for the pay-by-user, pay-per-transaction approach used by cloud providers. IT departments accustomed to buying software will have every old assumption tested.

"More than anything else, our eyes are much more wide open now," he said. "In the cloud you are going out and activating certain components of somebody else's platform and sometimes finding out later on that the ability to do x or y doesn't exist with what you have bought."

There were assumptions, especially in the early contracts, that his team made, only to find out later that the terms were not so black and white. An example would be the supplier portal "tipping point" project. Halfway through the project, members of Drouin's team realized that the Force.com component they needed in order to give supplier companies shared access to the records within the system was not included in what they bought. The licenses for the Force.com component that did allow that access cost 10 times per user seat than the licenses that Drouin bought.

"To get to the point where you are already committed, already done

70% of the development, where there is no going back, and then to realize there is an unknown in what we're buying is a problem," Drouin said. In retrospect, he said he saw "some gray areas" in the negotiations—on both sides of the table. "I don't know that they always know exactly what they are selling you either, especially in a deal done a year and a half ago."

Drouin said Force is working to resolve it in a positive way. "Even in this case I have found the vendors much more flexible than what I've been used to dealing with from large, out-of-the-box software vendors," he said. "You just hate to be caught at that point in the project and realize there is a key piece missing, after touting the flexibility and scalability."

In fact, Manpower's Edwards warned that CIOs should not make *any* assumptions about the economics of cloud. "Cloud is not always cheaper. Cloud is cheaper for very elastic applications. It is not cheap for high-transaction volumes. And even with elastic applications, we have looked at models that say it is better to put something in cloud now without capital outlay, but at some point, as we see the applications scale, it might be better to bring it back into our private cloud." ∎

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# Cloud Making Inroads
# *with* Tactical Apps

**Off-the-shelf
apps are getting
first priority.**

BY ED SCANNELL

**WHILE SOME CIOS** are hesitant about moving critical applications and data to the cloud, an increasing number are beginning to deploy a variety of cloud-based services to replace less strategic products and functions.

CIOs' growing confidence—some might say more of a growing curiosity—in cloud services stems from a combination of constant industry chatter about them the past few years, their potential for significant cost savings in tough economic times, and the prospect of gaining competitive advantages in their respective markets.

"Large organizations are adopting cloud services at an increased pace, but will they rip out their old data centers and go with cloud services right away? Probably not. But 52% of organizations with more than 1,000 employees use cloud services in some fashion," said R. "Ray" Wang, a partner at San Mateo, Calif.-based Altimeter Group.

Companies dipping their toes in the cloud services waters for the first time are focusing on transporting no-frills, off-the-shelf versions of their ERP and customer relationship management (CRM) applications. They have also shown a preference for adding cloud services to replace meat-and-potatoes, internal-facing applications dealing with human resources and accounting.

"Companies are taking specific off-the-shelf applications out of the data center and replacing them with cloud-based apps and services, things that don't have a lot of custom elements to them like ERP, human capital management and sales force stuff," said Dana Gard-

ner, a principal analyst at Interarbor Solutions LLC in Gilford, N.H.

### CLOUD STILL ON THE HORIZON FOR ENTERPRISES

Larger companies are steering clear of replacing heavily customized applications or chunks of complex infrastructure with cloud services. Many say they will do so eventually but are waiting for cloud architectures that are more flexible in accommodating these applications, more competent security technology and the necessary financial and organizational commitments to deliver meaningful cloud services.

"CIOs are OK with moving commoditized things like CRM, email systems and websites out of their data center. But if handing over an SAP installation or database even to a managed services supplier proves too complex, they tend to stay away from cloud services and manage it themselves," said Antonio Piraino, a vice president and research director at Tier1 Research in Bethesda, Md.

With corporate accounts edging into cloud services application by application, CIOs are forced to manage hybrid environments with some pieces living on-premise, and others in the cloud. Consequently, an increasingly hot cloud service is monitoring software that can keep a watchful eye in both worlds.

One company offering such a monitoring cloud service is Cloud-

kick. The company's service provides a unified application programming interface that works across both cloud and non-cloud servers. Likening it to a "Swiss army knife of IT management," according to a company spokesman, the product

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contains tools for fault detection, data visualization, trending and ops tools that work with any cloud or non-cloud server. Because it's a service, the company says it's easier for users to get access to a steady flow of new capabilities.

"We have several critical applications we can't just pick up and move to the cloud, or have interact with cloud services due to a number of government regulations and compli-

ance issues. But as we start to add services to some of our lower-level applications as a way to save money, it is monitoring services that will be at the top of the list," said Eugene Lee, an IT administrator at a large national bank based in Charlotte, N.C.

### TAKING OFF IN THE MIDMARKET

While most large banks are creeping toward a meaningful cloud services strategy, some small and medium-size banks are bounding forward. One such bank is Vineland, N.J.-based Sun National Bank, which, thanks to cloud services, delivered a mobile banking service to customers in just four months.

Using smartphones and other mobile devices, the bank's customers now access its mobile web-site and can use texting to get account information. Sun National also has an application customers can download to get one-click access to the site.

Cloud services, along with choosing the right services provider, can allow a midsized bank like Sun National to be first to market with a product like its mobile service. It can also help such an organization compete with larger banks, according to Angelo Valletta, senior vice president and CIO at Sun National.

"When you have companies like Google and Amazon helping manage things on the infrastructure side,

mid-tier companies can be perceived as a little larger than they are, giving them more time to decide if they want to bring it in-house. It can be a game changer because it allows some organizations to be flexible and have scale from a product perspective but also from a negotiations standpoint as well," Valletta said.

But while Valetta said he's a strong believer in the business advantages cloud services can bring, he added that Sun National remains very much a hybrid shop that will bring in cloud services only where they make sense. For instance, Sun National was considering moving management of its CRM application to an external services provider. But doing so made it difficult to connect other internal programs that work hand in glove with the CRM tool, including the bank's operational expense program, sales programs and a rolling 12-month revenue performance program.

"There were too many hurdles for us to do all that externally, and we would not have the control we needed, given what we wanted to do," Valletta said.

### APPDEV TRENDING IN THE CLOUD

Already hot, application development services in the cloud have turned white hot in the past year. Just two or three years ago, according to experts, cloud development services were more popular with IT

managers doing preliminary development for projects for internal use. Managers would say they liked cloud development services because they helped avoid in-house squabbles among developers fighting for scheduling time on in-house servers. Such services also helped them reduce the backlog of requested applications faster.

But during the past six months, according to experts, IT shops have not only started developing and testing more sophisticated applications for both internal and external use, but they're also now staging them in the cloud, which is one step short of going into production.

"There has been a huge swell of [IT-sponsored] services going into staging over the past six to 12 months. A lot of managed service providers are telling me they expect many of these staged projects to go into full production mode, which would take cloud services development up to a new level," said Tier 1 Research's Piraino.

Enterprise shops are also getting more actively involved with cloud services through collaboration applications such as project management. They are increasingly using Software as a Service in the front office for CRM, according to Jeff Kaplan, managing director at Think-Strategies Inc. in Wellesley, Mass.

"Many are also using Infrastructure as a Service from companies like Amazon and Rackspace to aug-

ment their internal data center capabilities or handle a seasonal demand spike or for development and testing situations," Kaplan said.

## THE BOTTOM LINE: MONEY

What has slowed delivery of a planned cloud service among some enterprise accounts, or even resulted in it being canceled, are internal budget battles over who is going to pay for the project and which department gains ownership and responsibility for it. Few companies have funds specifically earmarked at the beginning of a fiscal year for cloud services projects, which typically means monies must be pulled from a variety of budgets controlled by the CIO, IT department, and line of business managers to name a few.

"There is a lot of consternation going on in enterprises, where some people are lobbying hard for cloud services and others who push back, saying, 'Who is going to pay for it?'" Interarbor's Gardner said. "IT is under pressure to keep the existing systems up and running and will tell a CIO they don't have time to develop and test a cloud service and tell them to find someone else to do it."

The only sensible way to conceive of, craft and deliver a critical cloud service is to gain the support of all departments that will contribute to the project right from the start. That includes CFOs and CEOs, particular-

ly if the project requires monies that will have to spread out over more than a year.

"To make these [cloud services projects] work, there has to be a working partnership between IT and the business side of the house. And the third partner in the project should be the users that the services are primarily aimed at. A lot of people tend to forget that," Lee said.

But even when there is harmony among all the departments, most CIOs advise putting a single project manager in charge of it. Such a manager must have a skill set that bridges both the technical and business sides of the project both in-house and out—which is often not easy to find. If a project has two or three managers with equally shared responsibility, time-consuming political battles are inevitable.

"You need a relationship manager to orchestrate the effort. If you want it all managed by an infrastructure or development group, you are setting yourself up for failure. You need someone who knows how to navigate all the technology parts, can negotiate contracts, who understands how to deliver partnerships from an organizational standpoint, and who knows when to pull the trigger and when to put the gun down," Sun National's Valletta said. ∎

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