INSIDE

Cloud Computing

GUIDE TO SAAS AND IaaS
Before ordering, ask the tough questions

INSIDE

2 How to become SaaS savvy
Tips for tough conversations with providers

4 Florida hospice saves with SaaS
Salesforce.com delivers savings, efficiency

5 6 tough questions for your next IaaS vendor
One expert shares his advice

6 Tips for picking IaaS providers
Vendors offer variety of options

7 ConnectEDU chooses IaaS
Gets elasticity, scalability and cost-savings

8 10 SaaS companies to watch
Some familiar, some not
How to become SaaS savvy
Tips for having those tough conversations with potential SaaS providers

BY BETH SCHULTZ

As enterprise use of cloud services grows, so too does the understanding of how best to approach this new computing model and work with service providers.

It’s about developing cloud smarts, if you will. The savvier you are about the cloud, the less prone you are to focus only on basics such as cost, back-end infrastructure and security provisions. Yes, even the latter has become a bit of a no-brainer.

“Originally everybody worried about security. But reputable cloud vendors have incredible security stats, and are able to provide potentially much better security than most corporations have right now because of the way they’ve designed their software,” says Julie Smith David, director of the Center for Advancing Business through IT at Arizona State University. She also wrote a recent cloud integration report from the Society of Information Management’s Advanced Practices Council.

“This doesn’t mean that security isn’t a critical asking point, but one that’s easily enough satisfied with proof of SAS-70 certification and the like, as well as through interviews with existing users, says Dave Strasser, IT infrastructure services director at Sterling Savings Bank in Spokane, Wash. Strasser recently put Proofpoint, an e-discovery, compliance and email security software-as-a-service (SaaS) provider, through its paces. “We look at published success rates of the solution, and validate those with customer references. It’s important to make sure what the sales channel at these vendors are telling us is really the same thing as customer experience.”

Have the tough talk

On the flip side, Smith David says, as security concerns lessen and enterprises lock themselves in with a SaaS provider the greater are the risks associated with that vendor. “Vendor survivability or changes in vendor strategy are becoming much more important,” she says.

As you evaluate the cloud decision and potential providers, you’ve got to not only look at the here and now but also weigh potential futures. The idea of being a big fish in an upstart SaaS provider’s small pond may be highly appealing to you, but what happens if that company gets acquired and suddenly you’re a little fish in a big pond? Not only does your influence diminish, but you’re likely paying the same rates for less functionality, cautions Smith David, citing the experience noted by a case study subject she recently profiled.

“Because the functionality is in a proprietary or partnerships, as the case may be — a critical discussion point with cloud providers. “The integration is the avenue to do that data extraction and transformation,” Smith David notes.

Experienced cloud users agree about the criticality of data integration. “What APIs are available?” figures among the top questions Schumacher Group asks of potential cloud providers, says Doug Menefee, CIO at the Lafayette, La., emergency management firm. The company has 68% of business processes running in the SaaS model today and fires up infrastructure-as-a-service server instances in Amazon’s Elastic Compute Cloud.

“Figuring out integration requirements and how providers handle those and getting everything in sync have been among our tougher challenges,” warns Steven Birgfeld, CIO at Hostess Brands in Irving, Texas.

To date, Hostess uses SaaS-provided benefits, employee portal, lead management and recruiting applications, Birgfeld says. In these providers’ cases, he says, “the models are preset and we’ve had to push our way into what they have.”

For example, he says, all the providers need core employee data such as name and address. “We built one extract but then had to tweak that for each of these players — you’d hope they’d have more flexibility, but in these cases, they didn’t.”

First comes SaaS strategy

On the SaaS side, IT executives need to be just as shrewd about how they’re going to embrace service solutions as they traditionally have been about developing internal architecture standards. The onus of doing so becomes increasingly clear as SaaS adoptions mature and enterprises realize that long-term success hinges on how well the applications can integrate into their technology architecture, Smith David says.

“You’ve got to ask yourselves, ‘Are we going to go with platform as a service [PaaS] so we

“Figuring out integration requirements and how providers handle those and getting everything in sync have been among our tougher challenges.”
-- Steven Birgfeld, CIO at Hostess Brands
can develop custom solutions on top of and pre-integrated with the solutions that we’re getting ... or are we going to allow best of breed, where we look for ideal SaaS solutions and then rely on an integration approach to make those work seamlessly throughout the business processes?” she says. Because most SaaS providers’ footprints are limited, many IT organizations today will default to the best-of-breed approach — and that should trigger a bunch of integration-related questions for potential SaaS providers, she says. The most basic among these is whether the providers offer data integration services or are partnering on integration, she adds.

Workday, an HR and financial management SaaS provider, offers integration on demand through enterprise service bus technology gained in the 2008 acquisition of Cape Clear. Salesforce has Informatica data integration tools available in the cloud through AppExchange. What you want to determine, Smith David says, is not only what integration services your SaaS provider offers, but also whether those will be sufficient to work with other partners to which links would be needed — to pass data from Workday to Salesforce, and vice versa, in the course of a business process, for example.

What’s more, if a SaaS provider has an integration platform, you also have to ask whether it has process modelers so you can specify the rules for your organization, Smith David says. If your first choice doesn’t have a process modeler, and you’ve got in-house integration expertise, you could extend your premises-based tools should your vendor offer APIs through cloud vendors. “Many integration vendors are providing good business process modeling tools that allow businesses to specify the process steps and then have either preconfigured integration adapters that allow those to fire or to have an IT person step in and handle some of the mapping across the systems.”

If you don’t have resident integration expertise, then seeking out SaaS providers with integration as a service is the wise move, she adds. And to the point that integration vendors can provide the avenue between old and new SaaS providers, Smith David uses this example:

Say you need to switch from one SaaS CRM provider to another, for whatever reason, and you’re evaluating eight stable providers. “If your integration vendor already has adapters between four of those, then it’s easy to say, ‘Extract my data out of the current system, transform it, and push it out to my second-choice system.’ That integration vendor has already done the mapping of fields, the logic, and can port data out of one and into another.

“But what if the SaaS functionality is in an area that hasn’t matured to the level where there’s standard data structures, like in knowledge management? For collaboration, one vendor might use wikis and the other Word docs updated sequentially. Without the adapters, passing data from one out to another will be difficult,” she says.

No standing still

Being cloud smart also means probing the policies providers have in place for software updates, change control and disaster recovery, cloud users and experts say.

With SaaS, you’ve got to be ready to accept updates when the provider pushes them out — but that shouldn’t mean being forced to use them. “The smart vendors give you the option of turning that new functionality on or off depending on your needs,” Schumacher’s Menefee says, noting that Host Analytics (see “10 SaaS companies to watch,” page 26) and Salesforce.com are good at this.

Likewise, you’ve got to understand a provider’s change control cycles, Birgfeld says. He cites one example in which Hostess discovered that a SaaS provider’s implementation was missing some fields that it required. “It had to make a change on its side and we on our side. We were done in a day or two, but the provider couldn’t incorporate those for two weeks because the update would have been outside of its change control cycle — so that delayed the whole process,” he says.

Early cloud experiences also have shed new light on what to ask of cloud providers in general regarding disaster recovery, Smith David says.

“When we started working with companies two to three years ago, we thought if we argued for off-site storage with nightly backups and escrowed software then we were doing a really responsible job of disaster recovery,” she says. “But it turns out that that’s not enough in this environment because you’re going to have to find an alternate platform quickly should you need to move from your existing vendor to somebody else.”

With that in mind, she says, you need to be asking about the data structure and demanding that you can get access to the data from your own facility and not just from a third-party off-site location.

“If your SaaS goes out, there may not be any place to put that data. Going and getting it out of some secure facility isn’t going to help you if you can’t use it on your systems,” Smith David says. “We’ve worked with companies that have gotten data dumps from their SaaS providers that weren’t even in a data structure that any of the databases they have can read. So they get a file, they have the off-site backup, but it’s data that’s absolutely unusable to them.”

What you want from your SaaS provider is the ability for you to extract your data and do your own local backups at least once a month but perhaps more often depending on how critical that data is to your strategic where-withal, she advises. You need to be sure you can use and manipulate the data should the need arise, she adds.

Such cutover plans have begun working their way into SaaS SLAs, Smith David says. “However, I haven’t worked with any companies that have used those yet, so I don’t know how effective they’ll be. Still, that’d be something I’d definitely by looking for during my negotiations with SaaS vendors.”

Schul is a longtime IT writer and editor. You can reach her at bschultz5824@gmail.com.
Florida hospice saves with SaaS

Salesforce.com delivers savings, efficiency and visibility

BY BETH SCHULTZ

When David Lafferty arrived at Tidewell Hospice two years ago, becoming the care provider’s first CIO, customer relationship management was a bit of what he calls a “milk crate” operation.

“Our liaisons were going from account to account with their own little binders, spreadsheets and Rolodexes. We had a typical offline, manual, decentralized, zero-visibility situation,” he recalls.

Now, Tidewell, which serves 8,000 families annually in four Florida counties, has one of the most sophisticated CRM implementations within the hospice industry. Tidewell uses Salesforce CRM, integrated with its internal electronic medical record (EMR) system.

The aha! moment for Tidewell was the realization that it didn’t need a high-priced, hospice-oriented package — a long-standing misconception, Lafferty says.

“Our CRM needs are really almost the same as those in any other industry, just called different things,” he says. “We build relationships with physician practices. We educate and develop those relationships into leads. We get referrals. We admit those referrals as patients, and then administer care to them. When a patient dies, we facilitate grief and bereavement counseling and, should the family wish, take advantage of philanthropic or donation opportunity.”

“That sounds an awful lot like opportunity, contact, quote, order, fulfill, ship,” the typical components of a CRM-based workflow.

Once Tidewell decided to adopt generic CRM, the next decision was hardware/software on premises, a CRM add-on from its existing EMR provider, or SaaS-based CRM. Salesforce won out, and cost had a lot to do with the decision, Lafferty says.

“While I can’t talk in hard, fast dollars, I can tell you that the cost to run Salesforce for a year, with about 70 or so users today, is probably a little over a third the cost of some of the typical hardware/software solutions we had quotes on,” he says. However, there is a caveat, he says: “Salesforce provides us with beneficial pricing because we’re a nonprofit organization. If that had not been the case, those economics would have been very different.”

Of course, Tidewell must comply with Health Insurance Portability and Accountability Act privacy rules — and the cloud computing concept gave folks pause, Lafferty says.

“Historically, all the data we cared about, so to speak, was in one system — our EMR system — on one database, in one data center, in one building. Conceptually it was easy for our IT and compliance teams to own, manage and protect that data. So at first, when we talked about keeping our information in the cloud, we needed to do a lot of education on Salesforce.com’s approach to security, disaster recovery and so on,” he says.

Unidentified cloud-based objects

In addition, Tidewell has implemented CRM in such a way that while liaisons can create patient information in Salesforce, no unique identifiers get attached to those records.

“Clinical info stays in the EMR, the system of record for that data. We bring over patient activity, I’ll call it, just so we have the benefit of that census data from a reporting standpoint. But that’s all there is in the CRM,” he says.

Tidewell uses role-based security controls in Salesforce to ensure that only certain limited individuals even have access to patient information, Lafferty adds. “Casual users, like administrative back-office staff, have visibility into accounts and contacts, but they don’t see patient objects when they pull up information on a particular physician, for example.”

Tidewell uses an Informatica tool to achieve real-time integration between the EMR system and the Salesforce cloud. Lafferty says, The tool plugs into the EMR database and, multiple times daily, sends patient activity updates directly into Salesforce CRM. Lafferty says he’d eventually like to make that interface bidirectional so data entered into Salesforce CRM would automatically populate in the EMR system.

Creating the patient object, Lafferty says, was the only significant customization Tidewell needed for its initial implementation. “If you look at Salesforce, you’ve got accounts, contacts, events and tasks — vanilla CRM. But with the patient object, when I meet with Dr. Joe Smith, as a liaison I can look at Dr. Joe’s account and see, ‘Oh, Dr. Joe has referred 20 patients in the last month, and we’re currently caring for four, one of whom is in a hospice and the three others are at home.’”

For the customization and other deployment guidance, Tidewell relied on the
expertise of Model Metrics, a Salesforce partner that has counted a hospice among its diverse clientele. That earlier project established the industry knowledge Model Metrics would need for Tidewell’s project.

“It gets down to the analytics,” he says.

“In a hospice, we measure everything in terms of patient census. What’s our census today? What’s our average length of stay? What’s our cost per patient and our revenue per patient or per service line? The metrics we use to measure our business are different from those used by a public company that’s going to be looking at gross sales, net sales, orders shipped, days of supply, etc., and we’ve got a number of dashboards that provide an instant pulse of those metrics for us,” Lafferty says. “Model had already been through that drill so … that whole portion of the development process was accelerated.”

**Rapid deployment, centralized visibility**

Overall, rapid deployment and change support are among the biggest benefits of the SaaS model, says Lafferty, recalling a recent quarterly meeting between IT and the liaisons. A couple of liaisons had suggested a change and within five minutes Lafferty’s certified Salesforce administrator already had done the update and refreshed the screen on the presentation to show everybody.

“That just doesn’t happen with a premises-based implementation where you submit a wish list and hope that what you want is in the next release — and then worry whether you’re going to be able to apply it on your own or call your contractor back in,” he says.

Just one year into its Salesforce CRM deployment and Tidewell already is self-sufficient. Tidewell is now using Salesforce CRM for IT project portfolio management, facilities management and maintenance and expects to work on projects for philanthropy and funds development and human resources within the next two years, he says.

“We’re moving down a path, and not that gradually, that’ll bring us to one source of truth for all of Tidewell’s accounts, contacts and contracts. The benefits of that will continue to yield themselves day after day,” he says.

---

**6 tough questions for your next IaaS vendor**

**ONE EXPERT SHARES HIS ADVICE ON WORKING WITH IaaS PROVIDERS**

**CAPGEMINI CTO JOE COYLE SAYS** he’s been asked hundreds of questions from clients seeking cloud advice. Here are the six must-ask questions for prospective infrastructure-as-a-service (IaaS) providers. If your first choice isn’t prepared to answer these, you might consider moving on to your second.

1. **What happens if your cloud computing resources are unavailable?**
   While questions about disaster recovery and high availability in the cloud will be similar to those asked about your own data center, you need to be a lot more specific when looking to implement or utilize a cloud environment.
   Service-level agreements (SLAs) vary widely among providers so you’ve got to make sure you’re clear on the details surrounding guaranteed uptime, and then decide if that works for your business.

2. **How (and, more important, where) do you back up data?**
   In a cloud environment, IT executives need to be confident that their data not only will be replicated but also stored across multiple sites in separate locations to ensure they will still have access to that data in the event of a data center failure.

3. **How do you handle large data migration and what are the associated costs?**
   While provisioning a cloud environment literally only takes minutes, populating that cloud with the necessary data is an entirely different story.
   For example, if you need to migrate or populate a database to the cloud that is too large to send over the network, you need to consider factors such as additional costs, available data load options, and the process for working with your provider on the migration.

4. **What are my network access options — and, more important, the restrictions?**
   One of the biggest benefits of the cloud is being able to access critical data over the Internet from any location. Beyond obvious questions such as whether you can access the cloud from mobile devices such as a BlackBerry or an iPad is whether the provider can support VPNs or dedicated connections. This is particularly true for organizations like financial services firms that have more stringent rules around access.

5. **My organization must comply with regulations. What are my options for using IaaS?**
   For some organizations, particularly ones that have to comply with stringent regulations, public cloud IaaS offerings might not make sense.
   Ultimately, everything is shared even though it’s separate both logically and from a security perspective. For this reason, many CIOs may look to community clouds, which enable companies with similar requirements — for example, two pharmaceutical companies that both must meet strict FDA regulations — to share a cloud and achieve true economies of scale.

6. **What’s the cost to decommission an IaaS project?**
   While most cloud providers are upfront about the cost of specific IaaS offerings (e.g. the cost per megabyte for storage), it is much more difficult to provide a cost for decommissioning — a critical but often forgotten step in the cloud life cycle.
Tips for picking IaaS providers

Vendors offer a variety of options, from pure-play to managed services

BY BETH SCHULTZ

Making the leap to a public cloud infrastructure requires careful planning.

As Gartner analyst Lydia Leong cautions in a recent report, the cloud infrastructure as a service (IaaS) market “is immature, the services are all unique and evolving rapidly, and vendors must be chosen with care.”

The temptation may be to first look to vendors with which you have a pre-existing relationship, but experts say you want to be sure you ask the right questions.

For example, Post-n-Track, an online healthcare transaction and information exchange based in Wethersfield, Conn., decided to move to cloud computing for scalability and flexibility.

The company found out that its managed services provider, NaviSite, was building up a cloud infrastructure, says Randy Ulloa, vice president of technology at Post-n-Track. “We immediately jumped on that potential and dug into how it was going to achieve its cloud service,” he says.

But a good working history with NaviSite didn’t make the company a shoo-in for Post-n-Track’s cloud business, Ulloa emphasizes. “It wasn’t until we understood its physical cloud architecture - the underlying CPU and storage builds and the software and management layers on top - that we could put our minds at ease and decide to take the next step with it,” he says.

When moving to IaaS, some IT executives, such as Schumacher Group CIO Doug Menefee, look first to the market leader, Amazon EC2.

While already running 85% of its business processes in the software-as-a-service (SaaS) model, Schumacher only recently ventured into cloud IaaS. The impetus was an internal data center glitch experienced over the Christmas holiday, Menefee says.

“That was a big wake up call. And recognizing the maturity level of site services like Amazon EC2, we’ve now decided to leverage external cloud service providers to provide the infrastructure for anything we don’t have to put inside our own data centers,” he says.

“We don’t want to be a single point of failure for the organization.”

Managed IaaS

To some users, IaaS is about being able to carve out a private space within the public cloud infrastructure. They get similar availability, cost and scalability benefits as they do with pure IaaS, without the security concerns related to sharing infrastructure with others. Others like the idea of cloud IaaS but want some hand-holding rather than the purely self-service model.

Many enterprises, like Post-n-Track, fall into this latter category, as might be expected given IT’s comfort level with using outsourcers and hosting providers for management help, says James Staten, principal analyst with Forrester Research.

Managed IaaS comes in three forms, Staten says.

If you’re already using an IT outsourcer such as Accenture, Capgemini or IBM, going with that provider for managed IaaS can be the ”cleanest, easiest and quickest” option, he says. ”It already knows your systems, your applications and what SLAs you care about.”

However, you will need to make sure your outsourcer’s expertise matches up with your IaaS of choice. “A lot of these guys already have a cloud practice, managing at least the Amazon cloud. But the key thing is to make sure the company can demonstrate experience managing the cloud instance you’ll be using,” he cautions.

Managing the load

A second option is to select a traditional hosting company that has developed a cloud infrastructure and has a services arm that will help you manage the operating system, applications and anything else you’d like.

IaaS providers of this ilk include AT&T, Fujitsu, GoGrid, HP, IBM, NaviSite, Rackspace, SoftLayer, SunGard and Verizon Business, which includes Terremark.

“You’re making a decision that you’re going to use this particular cloud, and you’re not necessarily going to value portability nor are you going to value having multiple clouds,” Staten says.

“This company’s expertise is going to be limited to its cloud, but those consultants are probably the most knowledgeable about what the cloud can do, and they’ll have insider tricks because the guys who built the cloud sit right next to them,” Staten says.

The data center host-cum-cloud IaaS provider model has worked perfectly for SaaS provider Cycle30, Jim Dunlap says, company president.

When the Cycle 30 team received the go-ahead to create a subsidiary, it decided not to spend “precious capital” on building its own data centers but rather to partner with a traditional hosting company, SunGard. “And that gave us the opportunity to look at our business model and determine whether or not we could use cloud computing as a way to decrease our cost of going to market,” he says.

Its cloud theory was put to the test right off the bat, Dunlap says.

“We had the immediate need to test the process of giving SunGard our specs and systems to clone, and telling them that they’d need to turn up 25 to 50 new environments in the course of a week. And that we’d want to use that cloud computing facility for six to nine months, then we’d be done and they’d need to turn the facilities down and we’d stop paying for that infrastructure,” Dunlap says.

It worked - so much so that Cycle30 now handles all such projects via SunGard’s managed cloud service, he adds.

The third option for managed IaaS, Staten says, is pure-play cloud managers - companies such as Cloudscaling. “What you’re buying here is 100% pure expertise in the cloud. They know how to best take advantage of the cloud and what’s unique to cloud environments,” he says.

Cloud first

The difference between a Capgemini and a Cloudscaling, for example, is that the former approaches the cloud from an enterprise perspective, so manages the cloud from an operational point of view, while the latter thinks cloud first and so has an application design viewpoint.

“As a result, a pure-play cloud provider can put things in the cloud and can do things programmatically that can help you reduce your cloud bill, improve the availability of
your application and recommend changes in your application design to get better cloud economies,” Staten explains.

With such a provider, for example, you could drop an application onto Amazon EC2 or other cloud and then have its consultants manage it for you. It’s not a bad way to go, he adds. “They can tweak your application and its deployment, push it across multiple geographies and do a whole bunch of other things that you don’t have a clue how to do and probably don’t even know that you could do such things in the cloud.”

Cloud IaaS services, managed or not, are becoming viable options for enterprise deployments of all sorts. They offer a nice foundational starting point in some cases, quick on and off in others and business-enabling infrastructure in others. There are caveats, of course, with the one painful lesson learned of late with the Amazon EC2 outage - have high availability and disaster recovery plans in place with your provider of choice.

ConnectEDU chooses IaaS

BY BETH SCHULTZ

As most parents and teachers can attest, teenage students have a tendency to procrastinate - not a particularly endearing characteristic, especially if you’re a company that helps students with their college applications.

“You know how students are - they leave everything for the last moment, which for us means millions of students trying to file an application on deadline. That makes scalability a huge issue,” says Rick Blaisdell, CTO at ConnectEDU, a Boston-based education and career management company.

And scalability, in turn, makes cloud infrastructure-as-a-service (IaaS) an enticing alternative to traditional architecture. “The elastic nature of IaaS, the ability to scale up and down and have that directly relate to utility pricing, is the No. 1 reason we decided to go with infrastructure as a service,” he says.

That technology driver dovetailed with a critical business decision. Rather than rebuilding legacy software platforms to meet changing business demands, ConnectEDU decided to break up its products and deliver them via the software-as-a-service (SaaS) model. Blaisdell came on board in April 2009 to help orchestrate that shift. From day one, he says, the plan to move to cloud-based architecture began taking shape.

“From a CIO/CTO perspective, I always look at simplifying things. If you can simplify, clone and reproduce, you’re always in a much better place. So when I started looking at the physical architecture and the number of servers we were maintaining and the number we needed to purchase, I knew from previous experience with virtualization and cloud that that’s where I needed to go,” Blaisdell explains.

But Blaisdell says he didn’t want to deal with management of the cloud environment and so decided to explore managed IaaS options. Three managed services companies came immediately to mind, he says: NaviSite, which Time Warner Cable acquired in February, Savvis (now being acquired by CenturyLink) and Terremark (now Verizon Business).

“I wanted a company that would manage my servers and systems all the way from security to maintenance and, if we had any issues, I needed people there at a 24/7 center that I knew would carry out our procedures or, if that couldn’t be done, call in my team. I knew I’d be spending more money for that, but it was a baseline requirement for us,” he says.

When Blaisdell came on board, ConnectEDU was already doing some hybrid virtualization with NaviSite. And while that was working out well, it had neither the true elasticity nor utility features he wanted, Blaisdell says.

Taking a flyer on Cisco’s UCS

He discussed those concerns with NaviSite and learned that his hoster would be one of the first beta and production facilities using Cisco’s Unified Computing System (UCS). “Would he care to be a beta tester himself?” Blaisdell says he was asked.

Already impressed with Cisco’s integrated approach to the cloud, and having further investigated the NaviSite environment and architecture plans, Blaisdell decided to go for it. He tested NaviSite’s UCS-based cloud service in late 2009 to early 2010.

“The beauty of being in the beta was really that we weren’t paying so we could create virtual instances like there was no limit on the money we had in our pockets. We tested our beta code on some of our new products and tried massive scaling for load testing - mainly we were trying to test the limits of the system to find out how much scalability and power/performance we could get out of the environment,” he says.

Liking what it saw during the beta testing, ConnectEDU moved into production in July, Blaisdell says.

“This has proven an extremely flexible model that lets us scale tens of millions of users on the system and lets us repack all of our products in many different ways. Communications among these products can run at very, very fast speeds and very efficiently in a cloud environment, especially on the UCS platform,” he adds.

Today ConnectEDU has about 90 virtual servers, most with four virtual CPUs and between eight and 16 gigabytes of RAM, running Microsoft Windows Server 2008 and SQL Server. It has about 21TBytes of storage, which is growing at a rate of 1TB per month, Blaisdell says.

With one peak period behind him since ConnectEDU’s move to NaviSite’s managed IaaS, Blaisdell has proof the decision paid off. “The beauty of the cloud environment is that you can scale up on front-end application servers, load balance them and quickly clone the ones you have so you can multiply that infrastructure 10 times in a matter of hours, and that’s one of the things we did,” he says.

Now the only physical servers at ConnectEDU itself are two domain controllers. All of its other needs are handling in the cloud, via IaaS or SaaS.

“I’m drinking the cloud Kool-Aid,” he says, “maybe more so than most people right now.”

But it’s not just a sugar high Blaisdell is experiencing. The numbers give him a nice feeling too. By embracing the use of public cloud services, ConnectEDU saved more than $1.6 million in infrastructure development costs in 2010, Blaisdell says. With infrastructure requirements tied directly to sales, he adds, that’s the kind of figure ConnectEDU hopes to equal or better annually.
10 SaaS companies to watch

Antenna Software
JERSEY CITY, N.J.

What it offers: Mobile SaaS software and Antenna Mobility Platform (AMP), an enterprise mobility platform for building, deploying and managing mobile applications.

Why it’s worth watching: Antenna sits at the intersection of two of today’s biggest enterprise IT focal points: cloud computing and mobility. “With things getting pushed into the cloud in terms of where they’re hosted, and the devices that we’re using to access those applications increasingly being smartphones or tablets vs. laptops or desktops, a huge trend right now is enterprise mobility in the cloud. I’d even say that’s near the top of most CIOs’ to-do lists,” says Justin Perreault, general partner of Commonwealth Capital Ventures, an Antenna backer. That puts Antenna in a good spot: It offers mobile SaaS software as well as an on-demand software platform for building, deploying and managing mobile applications in the cloud.

How it works: The AMP comprises five interconnected components: AMP Gateway, which routes and manages all transactions between the back-end systems and the mobile applications; AMP Studio, a “build-once, deploy on any device” development environment; AMP Enterprise Connect, for bridging between host systems and the AMP Gateway; AMP device-side client software; and AMP Management Center, a role-based Web management application.

Where it resides: In the Antenna Mobile Cloud, a platform-as-a-service environment within Antenna’s data centers, which the company says it runs as a carrier-class network operations center.

How much it costs: Mobile SaaS software pricing is an annual subscription fee per device for employee-facing applications and websites, and an annual subscription price based on a range of expected users or usage for consumer-facing applications and websites.

Who’s using it: Coca-Cola Enterprises, Hologic, E-Trade and Pitney Bowes, among others.

SOME FAMILIAR, SOME NOT, THESE COMPANIES SHOW WHAT SOFTWARE AS A SERVICE IS ALL ABOUT

These days, companies are applying the software-as-a-service (SaaS) model to just about everything, from core business functions, including IT, to industry-specific processes. This list, compiled with the help of SaaS trend watchers and users, provides a representative look at what types of software you’ll find offered in the cloud.

BY BETH SCHULTZ

These days, companies are applying the software-as-a-service (SaaS) model to just about everything, from core business functions, including IT, to industry-specific processes. This list, compiled with the help of SaaS trend watchers and users, provides a representative look at what types of software you’ll find offered in the cloud.

10 SaaS companies to watch

Antenna Software
JERSEY CITY, N.J.

What it offers: Mobile SaaS software and Antenna Mobility Platform (AMP), an enterprise mobility platform for building, deploying and managing mobile applications.

Why it’s worth watching: Antenna sits at the intersection of two of today’s biggest enterprise IT focal points: cloud computing and mobility. “With things getting pushed into the cloud in terms of where they’re hosted, and the devices that we’re using to access those applications increasingly being smartphones or tablets vs. laptops or desktops, a huge trend right now is enterprise mobility in the cloud. I’d even say that’s near the top of most CIOs’ to-do lists,” says Justin Perreault, general partner of Commonwealth Capital Ventures, an Antenna backer. That puts Antenna in a good spot: It offers mobile SaaS software as well as an on-demand software platform for building, deploying and managing mobile applications in the cloud.

How it works: The AMP comprises five interconnected components: AMP Gateway, which routes and manages all transactions between the back-end systems and the mobile applications; AMP Studio, a “build-once, deploy on any device” development environment; AMP Enterprise Connect, for bridging between host systems and the AMP Gateway; AMP device-side client software; and AMP Management Center, a role-based Web management application.

Where it resides: In the Antenna Mobile Cloud, a platform-as-a-service environment within Antenna’s data centers, which the company says it runs as a carrier-class network operations center.

How much it costs: Mobile SaaS software pricing is an annual subscription fee per device for employee-facing applications and websites, and an annual subscription price based on a range of expected users or usage for consumer-facing applications and websites.

Who’s using it: Coca-Cola Enterprises, Hologic, E-Trade and Pitney Bowes, among others.

SOME FAMILIAR, SOME NOT, THESE COMPANIES SHOW WHAT SOFTWARE AS A SERVICE IS ALL ABOUT

These days, companies are applying the software-as-a-service (SaaS) model to just about everything, from core business functions, including IT, to industry-specific processes. This list, compiled with the help of SaaS trend watchers and users, provides a representative look at what types of software you’ll find offered in the cloud.

BY BETH SCHULTZ

These days, companies are applying the software-as-a-service (SaaS) model to just about everything, from core business functions, including IT, to industry-specific processes. This list, compiled with the help of SaaS trend watchers and users, provides a representative look at what types of software you’ll find offered in the cloud.

10 SaaS companies to watch

Antenna Software
JERSEY CITY, N.J.

What it offers: Mobile SaaS software and Antenna Mobility Platform (AMP), an enterprise mobility platform for building, deploying and managing mobile applications.

Why it’s worth watching: Antenna sits at the intersection of two of today’s biggest enterprise IT focal points: cloud computing and mobility. “With things getting pushed into the cloud in terms of where they’re hosted, and the devices that we’re using to access those applications increasingly being smartphones or tablets vs. laptops or desktops, a huge trend right now is enterprise mobility in the cloud. I’d even say that’s near the top of most CIOs’ to-do lists,” says Justin Perreault, general partner of Commonwealth Capital Ventures, an Antenna backer. That puts Antenna in a good spot: It offers mobile SaaS software as well as an on-demand software platform for building, deploying and managing mobile applications in the cloud.

How it works: The AMP comprises five interconnected components: AMP Gateway, which routes and manages all transactions between the back-end systems and the mobile applications; AMP Studio, a “build-once, deploy on any device” development environment; AMP Enterprise Connect, for bridging between host systems and the AMP Gateway; AMP device-side client software; and AMP Management Center, a role-based Web management application.

Where it resides: In the Antenna Mobile Cloud, a platform-as-a-service environment within Antenna’s data centers, which the company says it runs as a carrier-class network operations center.

How much it costs: Mobile SaaS software pricing is an annual subscription fee per device for employee-facing applications and websites, and an annual subscription price based on a range of expected users or usage for consumer-facing applications and websites.

Who’s using it: Coca-Cola Enterprises, Hologic, E-Trade and Pitney Bowes, among others.

SOME FAMILIAR, SOME NOT, THESE COMPANIES SHOW WHAT SOFTWARE AS A SERVICE IS ALL ABOUT

These days, companies are applying the software-as-a-service (SaaS) model to just about everything, from core business functions, including IT, to industry-specific processes. This list, compiled with the help of SaaS trend watchers and users, provides a representative look at what types of software you’ll find offered in the cloud.

BY BETH SCHULTZ

These days, companies are applying the software-as-a-service (SaaS) model to just about everything, from core business functions, including IT, to industry-specific processes. This list, compiled with the help of SaaS trend watchers and users, provides a representative look at what types of software you’ll find offered in the cloud.

10 SaaS companies to watch

Antenna Software
JERSEY CITY, N.J.

What it offers: Mobile SaaS software and Antenna Mobility Platform (AMP), an enterprise mobility platform for building, deploying and managing mobile applications.

Why it’s worth watching: Antenna sits at the intersection of two of today’s biggest enterprise IT focal points: cloud computing and mobility. “With things getting pushed into the cloud in terms of where they’re hosted, and the devices that we’re using to access those applications increasingly being smartphones or tablets vs. laptops or desktops, a huge trend right now is enterprise mobility in the cloud. I’d even say that’s near the top of most CIOs’ to-do lists,” says Justin Perreault, general partner of Commonwealth Capital Ventures, an Antenna backer. That puts Antenna in a good spot: It offers mobile SaaS software as well as an on-demand software platform for building, deploying and managing mobile applications in the cloud.

How it works: The AMP comprises five interconnected components: AMP Gateway, which routes and manages all transactions between the back-end systems and the mobile applications; AMP Studio, a “build-once, deploy on any device” development environment; AMP Enterprise Connect, for bridging between host systems and the AMP Gateway; AMP device-side client software; and AMP Management Center, a role-based Web management application.

Where it resides: In the Antenna Mobile Cloud, a platform-as-a-service environment within Antenna’s data centers, which the company says it runs as a carrier-class network operations center.

How much it costs: Mobile SaaS software pricing is an annual subscription fee per device for employee-facing applications and websites, and an annual subscription price based on a range of expected users or usage for consumer-facing applications and websites.

Who’s using it: Coca-Cola Enterprises, Hologic, E-Trade and Pitney Bowes, among others.
Cloud9 Analytics
REDWOOD CITY, CALIF.

What it offers: Pipeline Accelerator, real-time sales forecasting and pipeline management SaaS for line-of-business managers.

Why it’s worth watching:
Despite some initial skepticism that business intelligence was too complex to tackle from a SaaS perspective, enterprise interest in BI as a service is taking off, says Jeff Kaplan, managing director of ThinkStrategies, which compiles the SaaS Showplace of providers. Among many interesting BI SaaS providers, Cloud9 is representative of those focused on moving capabilities to the edge of a company. “BI used to be this thing cloistered in the corporate headquarters because it was so complex that the information could only be filtered out to the field,” Kaplan says. “What SaaS in general and Cloud9 in particular have done is make BI more readily available at the field level so frontline workers can take advantage of it and make better decisions.”

How it works: Cloud9 says it has deconstructed the traditional data warehouse infrastructure and processes and instead uses a technique it calls versioned replication. With this approach, Cloud9 makes no upfront assumptions about how warehoused data will eventually be used. Instead, it manages the warehouse separately from the solutions being built on it, thus turning the data warehouse tier into the system of record of historical truth. The automated data warehouse technology comprises a replication service and proprietary data management technology called versioned database. It offers a number of advantages over a traditional relational database, such as the ability to ensure that changes are cumulative rather than destructive, the company says. Cloud9 provides proprietary and industry-standard interfaces to the database technology.

Where it resides: Internal data center.

Who’s using it: Dow Jones, Schneider Electric, Thermo-Fisher Scientific and Thomson Reuters, among others.

CVM Solutions
OAKBROOK TERRACE, ILL.

What it offers: CVM Supplier Central, supplier risk and performance management SaaS.

Why it’s worth watching: While enterprise resource planning and traditional supply chain software has been slow to move into the SaaS model, some segments are slicing off and moving more quickly to the cloud, notes Liz Herbert, a principal analyst with Forrester Research. Supply risk and performance management, a category that includes CVM as well as companies like Achilles and Aravo Solutions, is among them. ThinkStrategies’ Kaplan calls out such supply chain SaaS activity as the evolution of the extranet model that sprang to life in the dot-com era. “The reality of extranets is taking shape as SaaS-based supply chain solutions,” he says. “CVM is interesting in that it created a software capability that ties multiple companies together so they can track their merchandise among themselves and use the Web to make that happen,” he adds.

How it works: Built on the Force.com application development platform, Supplier Central provides supplier management in three steps. First, it provides the ability for users to “clean” supplier information by consolidating silos of supplier data, standardizing names and information, eliminating duplication, and establishing family linkage and supplier groups. Next, it allows users to centralize and standardize information, automate manual processes, empower suppliers through online portals and survey suppliers for prequalification. Finally, with an eye toward supplier intelligence, users can use the software to monitor compliance and risk programs, track standard metrics, examine supplier performance, and automate corrective action plans and risk mitigation, CVM Solutions describes.

Where it resides: Force.com infrastructure.

How much it costs: Pricing scales based on usage and product functionality required, but a company spokesman says customers can get started with CVM Supplier Central for less than $50,000 per year.

Who’s using it: Booz Allen Hamilton, Colgate-Palmolive, Delta Air Lines, ExxonMobil and Walmart, among others.

Exoprise Systems
WALTHAM, MASS.

What it offers: CloudReady, a SaaS application suite for evaluating the readiness of on-premises systems, orchestrating cloud migrations and providing real-time performance monitoring for cloud-based applications.

Why it’s worth watching: Exoprise is among a number of SaaS providers borne with the goal of helping companies make sense of all the stuff they have out in the cloud. The idea is to give IT professionals a way to “seize the benefits of the cloud quickly and confidently,” as Exoprise founder and CEO Jason Lieblisch said at the company’s March launch. ThinkStrategies’ Kaplan says he likes what he sees of the company’s strategy so far: “It’s starting by letting you take an inventory of email usage so you can determine which of a growing array of...
Web-based or cloud email services might be the best fit for your company. But really it’s setting up to do the same thing for any migration to the cloud.”

**How it works:** In a five-step process, users first tap into the CloudReady service and download ExoShell, a secure Web service application that lets Exoprise analyze the enterprise infrastructure without need for complex database and Web servers. Exoprise then configures, adjusts and schedules its assessments. At the appointed time, ExoShell scans the messaging environment, gathering information on cost, reliability and end-user usage that it then securely uploads to CloudReady for analysis. Finally, users can use the customizable analysis results to help determine the right cloud offering for their organizations, Exoprise says.

**Where it resides:** Rackspace hosted data center.

**How much it costs:** Per-mailbox pricing for CloudReady Insight is available now, with pricing bands between $10 and $2 per mailbox, depending on the size of the total assessment; free trial available. CloudReady Monitor, in beta, also is available for free trial. (The third piece of the suite, CloudReady Control, is in development and slated for availability later this year.)

**Who’s using it:** A mix of commercial, government and education institutions have run assessments, Exoprise says, but has no names to share at this time.

### GagelIn
**SANTA CLARA, CALIF.**

**What it offers:** GagelIn, content-driven business information networking and employee collaboration.

**Why it’s worth watching:** Collaboration is a leading SaaS segment, with lots of activity and interest in tools that have a Facebook-like look and feel to them. However, Kaplan says GagelIn has caught his eye in a saturated market for its content-driven approach. “So if you’ve got interesting content you build a network of relationships around that content instead of the more traditional Facebook-like approach of building around people,” he says. The question is whether GagelIn, available in beta now, has legs. “My guess is that it’ll be acquired in the next 12 to 18 months and folded into another platform,” Kaplan says.

**How it works:** GagelIn aggregates information about a company from corporate websites, news outlets, social content sites and other such sources. Users configure agents and keywords to receive alerts on business events such as new product announcements, mergers and acquisitions and leadership changes at companies of their choosing. Networking and social tools connect users and facilitate communications with an external business network and collaboration with colleagues. It runs on a proprietary J2EE-based platform that can directly and automatically convert business requirements into data access, business logic and user interface workflow modules, the company says.

**Where it resides:** Amazon Elastic Compute Cloud (EC2).

**How much it costs:** Free public beta; following midsummer general availability, the basic service will be available for free to individuals who follow five or fewer companies and for a fee for those who want to follow more than five companies. Enterprise customers — GagelIn’s target market — will receive additional features; pricing not yet disclosed.

**Who’s using it:** Individual business users and unnamed companies participating in limited group tests and moving toward full-scale adoption, GagelIn says.

### Host Analytics
**REDWOOD CITY, CALIF.**

**What it offers:** Host Analytics CPM, corporate performance management SaaS suite.

**Why it’s worth watching:** Getting a tighter handle on spending is top of any financial or business leader’s wish list. Host Analytics aims to help out with software aimed at improving budgeting, forecasting and other money matters. At Schumacher Group, for example, Host Analytics has slashed the annual budgeting process from three to four months to a month or so, says Doug Menefee, CIO at the Lafayette, La.-based emergency management firm. “Our 100 to 125 budgeting managers would do everything in Excel files, like they do in most organizations. [Finance] would blast out a template, managers would populate their line items and send to a centralized resource. They’d be married up to create a giant Excel file, which would be reviewed and sent back out for another pass,” he describes. “Now managers access and update their chart of accounts in real time ... and the finance and accounting departments see the impact on EBITDA, revenue and those types of things right away.”

**How it works:** Host Analytics, created using Microsoft’s SQL Server database, OLAP engine and application development tools, tightly integrates with Excel. Users make updates and run queries from an Excel-like browser interface. All applications use a single database model, which enables integration and sharing across the suite. In addition, Host Analytics can interface with any general ledger or other source system for automated loads from operational systems. An integrated OLAP/Relational architecture handles budgeting and multidimensional reporting, the company says.

**Where it resides:** Private cloud at Xiolink hosting facility.

**How much it costs:** $250 per user, per month.

**Who’s using it:** Aon, Otis Spunkmeyer, Proctor & Gamble and Schumacher Group, among others.

### KnowledgeTree
**RALEIGH, N.C.**

**What it offers:** KnowledgeTree, open-source document management SaaS.

**Why it’s worth watching:** Traditional on-premises document management deployments outnumber SaaS instances, especially within large enterprises, Forrester’s Herbert says. But in the right instances, benefits of on-demand document management can be unbeatable. Anthony Mashkovich, IT director at Miramax, in Santa Monica, Calif., says he’s found that to be the case. Following the December 2010 sale from Walt Disney Studios to investors, Miramax has had to morph from a virtual to a physical company — and among other tasks, find a home for some 150,000 documents. “This was a large undertaking, but we needed to do something super fast while still fitting all our criteria.

---

**NetworkWorld | INSIDER**

---

[Image 350x311 to 525x434]
Going the traditional route of an EMC Documentum wasn’t an option. We had no infrastructure, and the cost would have been too high,” he says. “KnowledgeTree quickly stood out as the best choice, doing everything that a traditional Documentum system does but in the cloud and at a great price.”

**How it works:** KnowledgeTree enables traditional document management and collaboration features, including document versioning and auditing, metadata and content searching, workflow, tagging and tag clouds, RSS feeds and email triggers. It runs on the Ubuntu platform.

**Where it resides:** Amazon EC2 and Simple Storage Service clouds.

**How much it costs:** Annual pricing for Professional, Team and Company versions, with unlimited users, is $86 for 20 gigabytes of storage and 1GB file-size limit, $266 for 60 GB of storage and 1GB file-size limit, and $428 for 150 GB of storage and 2GB file-size limit, respectively.

**Who’s using it:** Fujifilm, Miramax Films, Orbitz and Panera Bread, among others.

**LiveOps**

**SANTA CLARA, CALIF.**

**What it offers:** LiveOps Contact Center Application Suite, which integrates call-center functions such as chat and email, inbound call routing, interactive voice response and workforce management.

**Why it’s worth watching:** LiveOps represents another aspect of the evolving cloud model in that it couples SaaS with business-processing outsourcing (BPO). In other words, Kaplan says, it’ll host the contact center applications in its cloud and provide the helpdesk or service desk personnel as well. “The demarcation between SaaS and BPO is blurring, and a lot of BPO folks, especially in India, are hurrying to get into SaaS. They’re doing so because they can no longer afford the labor arbitrage associated with the traditional business — companies stealing people back and forth and then having to deal with the customer satisfaction issues that go along with that,” he says. “Why not offer a SaaS solution that automates the process anyways?”

**How it works:** The contact center applications run on the LiveOps Contact Center Cloud Platform, which uses a Web-based architecture and grid computing technology. A company can let its own agents use the contact center SaaS applications or use the LiveOps virtual contact center, staffed by 20,000 remote agents.

**Where it resides:** Unnamed secure Tier 1 facility.

**How much it costs:** Varies by number of seats, total data volume and a range of other factors.

**Who’s using it:** AAA, Salesforce.com and West Marine, among others.