

SOFTWARE AS A SERVICE:

The Next Big Thing

Applications are evolving into a Web ecosystem. Will enterprises one day get their key applications through the Web?

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IN A NOW LEGENDARY 1995 MEMO, BILL Gates raised the alarm that Microsoft was woefully unprepared for what he termed the “Internet Tidal Wave.” Fast forward 10 years to last October, and Gates blasts out another high-priority e-mail, this time warning of a coming “services wave” of applications available instantly over the Internet. “The next sea change is upon us,” he writes.

Ringling in Gates’ ears must have been the roar of Google — and the Web 2.0 hordes, whose XML-based mash-ups of sites are transforming the Web experience. As Gates observed in that same message, however, SaaS (software as a service) isn’t new. Nor is it restricted to the consumers, developers, and very small businesses that Microsoft is targeting with its customizable Windows Live page and

Office Live free Web site and collaboration service.

Salesforce.com, founded in 1999 and still the standard bearer of SaaS business applications, is enjoying dramatic growth, reaching 399,000 subscribers at the end of its most recent fiscal quarter. Employeease, which launched in 1996, now delivers HR management through the browser to more than 1,000 customers managing more than 700,000 employee records. And among the major software vendors, Microsoft is hardly the only one exploring SaaS.

“All the big players are now in the water,” says Rick McGee, vice president of SaaS strategy for IBM Global Services, noting that Microsoft, Oracle, and SAP are staking their claims.

McGee should know. IBM provides the platform for SAP’s new entry into hosted CRM. IBM also

BY ERIC KNORR | ILLUSTRATION BY JAMES STEINBERG

“I love the fact that I don’t need to deal with servers, staging, version maintenance, security, performance, etc.”

– Jon Williams, Kaplan Test Prep and Admissions

has been busy assisting SaaS startups — the darlings of the VC community -- to create a network of partners that can provide IBM customers with quick-to-market solutions.

Meanwhile, SaaS ecosystems are emerging, such as the on-demand, SOA-based platform developed by Rearden Commerce, which connects business customers with travel, shipping, and other service providers through identity-based Web apps. And then there’s Salesforce.com’s exciting new AppExchange platform, which offers a hosted space for sharing Salesforce.com-based apps that the company calls “an iTunes for business applications.”

All this activity, however, doesn’t mean the SaaS wave is poised to engulf traditional licensed software. SaaS’s share of the business application market today

is more like a drop in the bucket. And enterprises have been slow to embrace SaaS, raising objections over reliability and availability, underscored by recent Salesforce.com outages.

Yet the arrival of the big enterprise-software guns, the emergence of integrated business communities in the cloud, and increasing desperation on the part of IT to minimize application deployment and maintenance hassles, suggest that SaaS is on the verge of much faster adoption.

SaaS at the Barricades

Some IT managers see SaaS as a god-send, with time-to-market and low maintenance core to the appeal. “It’s a CTO no-brainer,” says Jon Williams, CTO of Kaplan Test Prep and Admissions, a Salesforce.com customer. “I love the fact that I don’t need to deal

with servers, staging, version maintenance, security, performance, etc.”

Another benefit is escape from the application-upgrade treadmill, where customers wait years for big new revs and then suffer business interruption during deployment, says Robert Jurjowski, CEO of Intacct, an ERP on-demand provider.

“It’s not the cost of migrating from one release to the next that’s the killer,” Jurjowski says. “It’s the retraining cost and the disruption to your business model that it creates every time you want to do that.”

By contrast, Intacct and other SaaS providers incrementally swap in new functionality, streaming new innovations to all customers at once, keeping the UI as consistent as possible.

Yet the main attraction for SMB cus-

What About Those Outages?

THE FIRST OBJECTION TO SAAS, PARTICULARLY AMONG enterprise IT customers, is that reliability and availability are in someone else’s hands. So when Salesforce.com customers experienced significant service disruptions in December and January, it’s no surprise that its execs were reluctant to comment and that other SaaS companies downplayed the incidents.

“I think these Salesforce outages have shaken things a little bit,” says Robert Jurjowski, CEO of SaaS ERP provider Intacct. “They may have been overplayed, but ... because the nature of this game, if you have a SaaS company with lots of customers, there’s this whole single-point-of-failure angle, and it’s going to get a lot of press no matter what.”

Salesforce.com CEO Marc Benioff puts the problem in perspective. “We had some reliability issues in January that we’ve bounced out of now. And in the last seven years, of course, we’ve had excellent reliability.” As a show of good faith, last month the company launched trust.salesforce.com (infoworld.com/3941), which provides a running account and history of system status. And in addition to a \$50 million investment in a new redundant datacenter architecture that began rolling out in November, the company has committed to spend an additional \$1 million to

\$1.5 million per quarter on that architecture’s ongoing R&D.

Nonetheless, some customers have headed for the exits. Last December, Charlie Crystle, CEO of nonprofit fund-raising software developer Mission Research, vowed to cancel his Salesforce.com subscription, not only because of the outage but also because of what he described as repeated system slowdowns. Since then he has switched to a homegrown, in-house sales management system.

But, as Intacct’s Jurjowski says, it’s a little unfair to hold Salesforce.com to 100 percent availability when no internal IT organization can claim that, either. In fact, one Intacct customer in Florida considered SaaS to begin with because it appeared less risky than running an ERP system in-house.

After weathering Hurricane Andrew, Abraham Elias, CIO for Circle L Roofing, decided, “We didn’t necessarily want to house the data ourselves. The first thing we looked at was possibly colocating some rack space, and then started looking into the cost of doing that, along with the cost of acquiring the software licenses. And it started getting very convoluted.”

Instead, Circle L Roofing selected Intacct — both as an ERP service and as a de facto business continuation solution.

— E.K.

tomers — letting a service provider shoulder the burden of software deployment, maintenance, and availability — can be a showstopper for large enterprises accustomed to maintaining full control. Not to mention that the huge cost sunk into existing CRM or ERP licenses becomes a whole lot tougher to justify.

As Andrew Clark, director of strategy for IBM's Venture Capital Group, puts it, "It's doubtful that a lot of our large customers are going to displace existing investments."

SAP and Oracle are trying to skirt such enterprise objections by selling their SaaS offerings as part of a suite of options that includes packaged software. In fact, SAP views its new CRM

A Tale of Two Architectures

Not surprisingly, the new SAP and Oracle offerings earn little more than scorn from the SaaS pure-plays. Although Salesforce.com CEO Marc Benioff thinks SAP's entry into hosted CRM helps validate the on-demand model for enterprise customers, he also firmly believes SAP is going about it all wrong.

For Benioff, real SaaS must adhere to an architectural principle known as multitenancy, where a single instance of the software runs on the provider's servers, and all users log onto that same instance. "I just don't buy their vision of the future," says Benioff about SAP. "I don't buy that there's going to be

so that nothing breaks when the single instance is updated on the fly. Without a true SOA and multitenancy, he says, the provider would have to host an infinite number of highly customized, inflexible applications, processes, and their respective versions across heterogeneous environments.

To be fair, Graf says SAP has conquered the update problem.

"We have pioneered what we call isolated tenancy," Graf explains. "There is a master copy of the application, which is continuously improved and updated. And we have a mechanism where we can push this new application into existing, running systems so that all the data and all the configurations are preserved and all the user experience is preserved, but we can add new capabilities and we can modify specific processes on the fly."

Graf maintains, as does Oracle's Hummel, that large enterprise customers balk at multitenancy. "The feedback from our customers and from our own research suggests that customers prefer the configurability and security of on-demand solutions that leverage a private (single-tenant) infrastructure," Hummel says. "While multitenancy reduces the resource, cost, and management burden on the supplier ... it really adds little value to the customer unless the cost savings for the supplier are passed on to the customer."

But the scalability that multitenancy imparts is precisely the point, argues John Girard, CEO of Clickability, an SaaS content management provider.

"Hosting their installed apps in a managed server farm does not an SaaS offering make," Girard says, referring to the recent efforts of conventional software vendors. "We throw a party whenever an installed competitor announces a hosted offering. It validates

"That's the change. That's the shift. We've built the eBay of enterprise applications."

— Marc Benioff, Salesforce.com

service as an on-ramp to buying and deploying SAP CRM software in the usual manner. "The key difference is that SAP has created this software-as-a-service offering and uses the same lines of code both for an on-premises as well as an on-demand deployment," says Peter Graf, SAP's executive vice president of marketing.

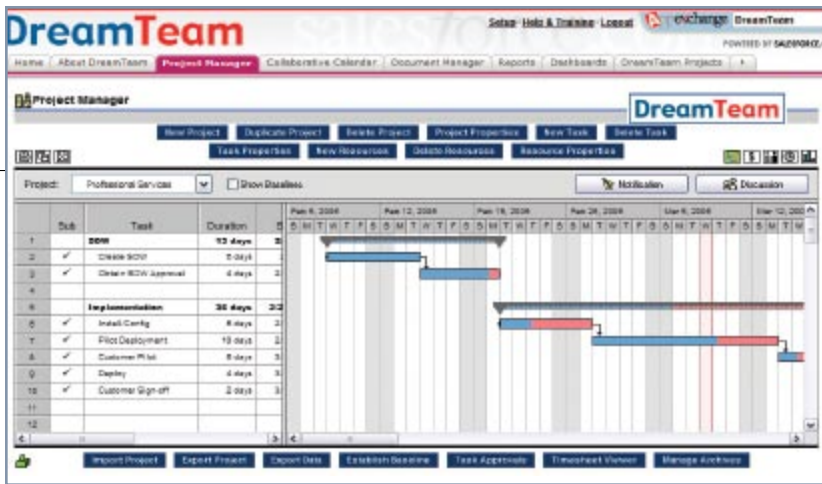
Oracle, which has offered hosted versions of its E-Business Suite for years — and inherited CRM OnDemand as part of its Siebel acquisition — sees the on-demand model as the centerpiece of its new Fusion initiative, according to Chris Hummel, Oracle's vice president of services global sales support. Like SAP, Oracle is taking a have-it-your-way approach, offering either hosted or conventional flavors, or a mix of the two, depending on the customer's preference.

all these single-tenant databases everywhere, that everybody's going to have their own server, that everybody's going to have their own stack of SAP code, that everybody's going to have their own version of NetWeaver customized with their schema. I believe that the world in the future is multitenancy."

Patrick Grady, CEO of Rearden Commerce, puts it more bluntly.

"On-demand is not a hobby," Grady says. "If you don't have a single-tenant, multitenant, on-demand, pure SOA-based platform, then it's all crap and the customer will not receive any of the advertised benefits."

Grady puts equal emphasis on SOA as a technology cornerstone, because that modularized architecture has enabled smart SaaS providers to let users customize their experience safely,



DreamTeam is a project management application native to Salesforce's AppExchange platform.

the SaaS model and spells operational disaster for the competitor.”

Cultivating Ecosystems

Whatever the merits of the architectural dogfight, one thing is clear: Without multitenancy, a SaaS offering can't cultivate a Web 2.0-like community of developers who add functionality that all can share. Instead, you'd have an old-fashioned add-on market that lacked dynamic, instantaneous distribution.

If any one venture stands squarely at the intersection of wild Web 2.0 mash-ups and more conventional SaaS offerings, it's Salesforce.com's AppExchange. "It's a brilliant model," IBM's Clark says. "Benioff has scored as close to a home run as you can with that platform."

According to AppExchange vice president Lew Tucker, the idea grew out of Marc Benioff's desire to let Salesforce.com users share their customizations, which are developed with simple, hosted Web tools against Salesforce.com's API.

Users were building project management tools and other kinds of applications for things such as recruiting and HR activities, Tucker says. "We figured out a way that we could package up these customizations that our customers were doing. Just having a [Web site] where customers could share applications was something pretty straightforward to do."

Benioff emphasizes that Salesforce.com has built a platform, not just an application.

"That's the change. That's the shift," Benioff says. "We've built the eBay of enterprise applications, a platform for heterogeneous application development and deployment. We were in the enterprise applications ball game; now we're in the application development and deployment ball game."

Independent software developers and developers inside departments and divisions or even IT departments of large corporations can not only build and deploy applications, Benioff adds, but also get high levels of reuse.

Rearden Commerce's platform is evolving along similar lines.

Grady says the nice thing about plugging into an ecosystem is that when someone builds an application on the Rearden platform — an MRO or meeting-planner app, or myriad other unique composite apps they can leverage as the grid opens up — they're not just publishing to Rearden and its sales force, but to all of the ecosystem partners.

As the market leader in application hosting, IBM would also seem a likely ecosystem host, but the company isn't announcing any plans — yet. When asked if there are any comparisons to be drawn between IBM's community of

SaaS providers and AppExchange, IBM's Clark dances around the question.

"I can only go so far here, because obviously there are other shoes to drop," Clark says. "The short answer is — there will be a great comparison."

Meanwhile, Clark — who serves as a sort of IBM ambassador to the world of venture-backed innovation — observes that mini-ecosystems have already evolved around many of the SaaS partners IBM is working with. "Intacct will tell you that they're a platform unto themselves. They've got APIs, they've got the abilities to mash up other kinds of things. Same is true with Employease to some extent."

Indeed, when asked whether Employease has plans to cultivate something like Salesforce.com's AppExchange, CEO Jeff Beinke doesn't rule out the possibility. In addition, Employease just built out its functionality significantly with a new payroll processing service introduced earlier this month for the midmarket.

The Great SaaS Mashup

IBM would also seem to be in a unique position to provide integration between its SaaS partners and enterprises, if for no other reason than the company's vast penetration in enterprise middleware, particularly its hooks into mainframe systems. After all, for SaaS to become a serious enterprise play, that depth of integration will be necessary.

According Rick McGee of IBM Global Services, however, that's not IBM's focus. Instead, he says, the company is dialed in on helping traditional ISVs make the transition to SaaS and assisting startup partners with technology, marketing, and demand prediction. Ultimately, McGee says, these partner alliances will have strategic value to IBM Global Services BPO (business process outsourcing) business.

“As they become more IT-intensive, you’ll begin to see software as a service and the BPO market ... look more and more alike,” McGee says. “It’s fair to foresee over time, as IBM is providing business outcomes for clients, there’s no reason why we would not incorporate into our value proposition software as a service offerings that allow us to extend our capabilities on behalf of a client.”

Rearden’s Grady, whose on-demand Employee Business Services (EBS) application handles expense management, sees SaaS’s true role as a platform for BPO — to the point where providers will play host to a range of business functions. “The next step is for organizations to leverage expert third parties to handle not just the applications, but the processes that the applications manage as well.”

Yet despite the big customer wins for Rearden, Salesforce, Employease, and others, SaaS so far is primarily an SMB phenomenon. And that’s fine with IBM, Clark says. “The fastest growing segments are the midmarket and we need to be there with bells on. We need to be there with a play that has a way to roll up or aggregate a lot of the value from these smaller applications into something that we can then in turn offer to our clients and customers, especially in the SMB space.”

The ultimate disruptive effect of the “services wave” may well resemble that of the dot-com era, when companies that were smart about leveraging the Web exploited unforeseen growth opportunities. As the viral growth of Web 2.0 mash-ups and walled gardens like AppExchange make clear, every true SaaS application is potentially part of an XML-driven ecosystem. The SMBs that figure out how to tap into the power of those ecosystems could become the enterprises of tomorrow. ➔

Celebrity Venture Capitalist Bets on SaaS

HUMMER WINBLAD VENTURE PARTNERS WAS ESTABLISHED IN 1989 AS THE FIRST venture capital fund to invest exclusively in software companies. These days, 12 of the 30 companies in Hummer Winblad’s portfolio are SaaS ventures.

We spoke with Ann Winblad, co-founding partner, to better understand the extraordinary momentum of SaaS and her company’s relationship with IBM.

InfoWorld: How did Hummer-Winblad get so heavily invested in SaaS?

Ann Winblad: A fourfold thing was going on. We had service-oriented architecture becoming real, and our belief was that the first applications that would come out of SOA would be delivered on-demand. Plus, people were using a pure LAMP [Linux, Apache, MySQL, and Perl/PHP/Python] stack, so new entrants didn’t have to go buy a whole bunch of expensive infrastructure to build new applications. Also, true multitenant applications were being developed. And finally, we went to a subscription basis for these companies versus the old enterprise software model, so we could address the midmarket.

IW: What was your first SaaS company?

AW: One of our earliest investments was a company called Employease, which is outsourced benefits management. It’s probably the most profitable private on-demand software company today. Employease was a great first company, because with the providers, the employers, and the employees, the application lives naturally outside the firewall.

“You have ... smarter customers. [They ask], how much am I continuing to pay for these in-place products?”

— Ann Winblad, Hummer Winblad

IW: I understand that IBM provides technology assistance and in some cases the platform for some of your companies. What else exactly can IBM bring to startup companies to help them succeed?

AW: They can do a variety of things. First of all, they can directly bring it to their marketing organization so in over-arching campaigns that might be in platform plays. On-demand computing is a great example.

IW: I suppose IBM can also bring them into Global Services engagements as well.

AW: Absolutely. And they do.

IW: Would you say that IBM is building an ecosystem similar to the AppExchange model?

AW: They have the opportunity to build that. But if you go to their Web site now you’ll find 8,000 vendors you can buy from. That’s not AppExchange, that’s a directory.

IW: In selling SaaS to the enterprise, you’re dealing with some pretty entrenched IT interests — people who want to keep control of their fiefdoms and have been running things the same way for years. Does that make a lot of this stuff a business-side sell rather than an IT sell?

AW: Not necessarily. Besides the entrenched interests, the other thing that you have is smarter customers. People say gee, you know, how much am I continuing to pay for these in-place products? I think that large vendors want us to believe that once entrenched, always entrenched. But once the meteorite hits, there are fewer dinosaurs walking the earth.