

Under the Buzz

Commentary on Business Strategy for Tech Company Executives

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Under the Buzz is an email "viewsletter" published by Philip Lay, managing director at TCG Advisors, a Silicon Valley-based firm that helps executive teams to deal with perplexing strategic, organizational, and operational issues. Now completing its tenth year, this journal is published periodically and delivered free to subscribers via email on an opt-in basis. It is also posted on TCG Advisors' website, <http://www.tcg-advisors.com/Library/utb/utb.htm>, where back issues are also available.

Please note: Since many readers are away during the holidays, this edition may be re-sent early next week to make it easier for returning readers to locate it.

So, What's Your Company's Cloud Computing Strategy?

After almost a year of intense speculation about - and pressure to seriously consider - cloud computing, it's not totally clear where this new trend is in the hype cycle(*) or the technology adoption process(**). Have we reached the peak of inflated expectations, are we entering the trough of disillusionment, or are we already climbing the slope of enlightenment? Are techies and visionaries the primary adopters or have pragmatists and even conservatives begun to adopt cloud computing in significant numbers for some of their mission-critical applications?

I mention "mission-critical applications" because this is the true indicator of adoption by mainstream customers (pragmatists and conservatives). Customers of all mindsets - visionaries and even conservatives - are tempted to try new technologies relatively early in their availability, and many often do. But there's a huge difference between a bet-the-company project sponsored by a truly visionary executive in the early days of a new technology's availability and the toe-in-the water "pilot" that many pragmatic and conservative executives conduct when they are still not completely convinced or committed to adopt the new technology. The visionary customer's project involves considerable financial and resource investment in pursuit of strategic competitive advantage (for example, gains in market share) that can eventually influence many observers to follow suit, whereas the latter usually represents not much more than a way for cautious executives to hedge their bets and put off the inevitable until it becomes, well, inevitable. As such, the latter isn't necessarily an indicator of *real* adoption - rather like the difference between the pig and the chicken in terms of real commitment.

Nick Carr's recent very readable and informative book "The Big Switch" (2008), together with a host of increasingly helpful analyst reports from Gartner, Merrill Lynch, and others, have upped the ante in terms of proposing utility (or cloud) computing as a serious alternative for companies of all sizes to consider. This latest iteration of utility computing that many people now refer to as "the cloud" has gathered steam as a result of the accelerating adoption in recent years of internet-based applications starting with search, passing through email to SaaS applications. Anyone using a PC connected to the internet has been using cloud computing to one degree or another for many years now, but what's really at stake going forward is the destiny of corporate computing in all types and sizes of business or government organization.

To date the main corporate adopters have been smaller companies and SOHO businesses that have little or no internal IT resources and that have always struggled to find suitable outsourced IT service providers (i.e., hosted services providers) to assure them of receiving a satisfactory level of service at an economical price. For these organizations, it's virtually a no-brainer to extend their use of the cloud from basic internet usage, email, and possibly one or two SaaS applications to handing everything off to a cloud computing service provider, the largest of which today is Amazon.com. However, organizations of all types and sizes are now developing strategies for using cloud computing as one of their off-premise options to go along with their more conventional on-premise computing systems. In fact, among the key questions asked today of every CEO by their board, or of every CIO by their CEO, are "What's your cloud strategy?", or more impatiently, "When are we moving to the cloud?", or even "Why haven't we moved (all) our applications to the cloud yet?"

It's worth remembering that cloud computing is just one of two main modes in which customers can consume computing-as-a-service rather than continue to depend on internally run IT systems. The other main alternative to on-premise systems, managed hosting, grew from two principal sources: 1) outsourced co-location and hosting of customers' IT applications and infrastructure provided by the likes of HP/EDS, IBM, the major Indian IT outsourcers, and some telcos such as AT&T and Verizon during the past two decades, and 2) the web hosting phenomenon that arose during the internet bubble in the mid-late nineties. Both managed hosting and cloud computing have their merits: Managed hosting's main appeal to an organization is to take the costly and labor-intensive on-premise systems off their hands and provide the customer's systems as a customized service at lower overall cost; in contrast, cloud computing's main attraction is to provide standardized compute services - for example, email and business applications such as ERP or CRM, or just server processing and storage capacity - at a fraction of the cost of a typical managed hosting service. It's important to note that what a managed hosting customer gives up if and when they transfer (any of) their computing to the cloud relates to the degree of customization - there is virtually none in the cloud except for the ability in some cases to tailor the user interface.

Behind each of these computing-as-a-service modes is a critical architectural difference: Whereas managed hosting, having evolved from on-premise computing, is based on a single-tenant architecture, the pure form of cloud computing that is exemplified in SaaS applications such as Salesforce.com or email apps such as Gmail, was designed around internet and open source principles, to serve many different customers under the same roof - and thus is multi-tenant in nature. Today, every PC user is in essence a user of cloud computing applications, from the browser itself, to search engines, to portals such as Yahoo! or AOL, to e-commerce sites such as eBay, Amazon, or Expedia, to email, or even to one or other SaaS application such as Salesforce.com, RightNow NetSuite, or SuccessFactors. But for a number of reasons including perceptions regarding security and customization, corporate IT, especially in large and medium-sized organizations, is resistant to putting their systems in the cloud, and justifiably so. In the remainder of this article, I want to provide some indicators to customers who today still consider on-premise computing for their mission-critical applications to be their home turf with a way of thinking that allows them to consider cloud computing, managed hosting, and on-premise computing according to their requirements.

The *either/or* implication sometimes inherent in questions about whether or not a CEO or CIO has a valid cloud strategy can be very misleading, to the degree that they imply an immediate and inexorable drive towards cloud computing as the solution for every IT need. True, it's not really a question of *if* a company should use cloud computing or not,

but *when*. However, except for internet companies or small or new companies that have all their systems hosted or in the cloud, the question is not about moving every application or system to the cloud. More likely for most established organizations - especially larger ones that have their own IT and, more importantly, have applications that they consider to be highly sensitive - the message should be to invest in all three main options for as long it makes strategic, operational, and economic sense to do so. Thus we expect to see every company using cloud computing for some of its applications. Many companies choose to start with test and development applications, or web site management, or mass applications such as email. What CIOs and executives cannot afford to do is remain on the sidelines regarding cloud computing - and even managed hosting, which most larger organizations still haven't used to any significant degree. Never before have cloud computing and managed hosting been as viable as they are today, although to be fair cloud computing still has a ways to go before we can consider it to be sufficiently mature in all its implications including such challenges as proving that security is not a problem. And managed hosting still has room to go to prove its value to the most mainstream organizations before they choose to adopt it.

As for which vendors are likely to provide the best options, customers should bear in mind that vendors such as Amazon, Google, Microsoft, and Salesforce.com, who design their offerings to be multi-tenant and thus deliver standardized commodity applications (such as email, CRM, or ERP), development platforms (such as Force.com, .Net, etc.) and infrastructure (such as server or storage capacity), at much lower costs are likely to provide the most cost-effective *basic* cloud computing services. Vendors from the complex systems world such as IBM, HP/EDS, EMC, Oracle, SAP, Wipro, and Cognizant, will undoubtedly struggle to produce multi-tenant offerings since virtually all their software today is architected for single-tenancy and their attempts at developing multi-tenant offerings thus far have been unimpressive. Already these companies are signaling that their greater focus will be on providing their enterprise customers with a "private cloud". The characteristics of private clouds are still ill-defined and until now this branch of cloud computing still appears to be more of a hedge than a genuine private alternative to the public cloud. In order to compete effectively in a specific application area, these vendors will almost certainly need to make acquisitions - scenarios such as Oracle buying Salesforce.com, EMC buying SuccessFactors, IBM buying RightNow, or any of them buying cloud infrastructure or applications startups, are not beyond the bounds of possibility - rather than try to catch up through their own R&D efforts.

On the volume operations side the trio of Amazon, Google and Microsoft have their limitations: Amazon offers only a standard cloud computing infrastructure and platform, so customers today subscribe to an inexpensive take-it-or-leave-it offering with no personalized service (though this could of course change if Amazon is forced by competitive pressure to offer more customer-intimate services and makes an acquisition in order to do so); Google is likely to dictate the use of its open-source based architecture for all apps to run on its cloud services, and is unlikely to provide much in the way of personalized service, and Microsoft's Azure will undoubtedly impose the company's customary proprietary architecture on its customers, and may or may not improve on its current support capabilities.

However, there are two classes of vendor that organizations would be well advised to take note of, and these are generally younger up-and-comers that will provide both types of off-premise service - cloud computing and managed hosting - in a hybrid form in order to help customers to migrate their systems to the most suitable platform in an orderly manner. Rackspace, the leader in managed hosting for small and medium-sized businesses and an early player in cloud computing, appears to be the company that today is best

positioned to provide a coherent hybrid/migration strategy along with a very strong personalized service commitment. However, other companies such as Savvis, a leader in managed hosting for larger organizations, and Terremark, a smaller player in managed hosting for enterprise organizations and in hybrid computing, are also vendors to watch. That said, it's still relatively early in the game, so customer organizations should carefully consider their requirements and act accordingly.

Overall, what is not so much in doubt is that the defensive, cost-conscious mindset of most executives regarding IT in the context of the persistent economic downturn tends to increase the appeal of managed hosting and cloud computing as compared to continuing to pay the cost of relatively inefficient on-premise IT. In particular, we should anticipate seeing a large percentage of new applications in all organizations being placed on a managed hosting or cloud platform. Therefore, while 2010 may or may not prove to be the Year of Cloud Computing, we are likely to see a new flood of investments in the cloud - with smaller and especially web-centric companies doing more and sometimes everything in the cloud, medium-sized companies putting some of their applications in a hybrid mix of managed hosting and cloud applications, and larger organizations doing increasingly more in both hosting and cloud, while they gauge how far they can go to unravel themselves from their complex and often poorly integrated systems, and substitute them with new hosting or cloud-based systems without putting their business at risk.

The author can be contacted at philip@tcg-advisors.com.

(*) The Hype Cycle is a model first described by the Gartner Group as part of its ongoing efforts to help companies to gauge when to invest in new technologies.

(**) The Technology Adoption Life Cycle was first popularized in *Crossing the Chasm*, a 1993 bestseller by Geoffrey Moore, a managing director at TCG Advisors.

Under the Buzz offers commentary on business and management issues facing technology companies. The goal is to provide provocative insights into the latest events and thinking shaping this continually evolving sector. Under the Buzz also provides commentary on strategies for building sustainable competitive differentiation and maximizing growth and market valuation.

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