



Crossroads in the Cloud: How IT Leaders and Business Stakeholders Make Smarter Decisions on Cloud Computing

A white paper investigating new cloud research and adoption trends

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Overview

Now that cloud computing's efficacy as a viable and often necessary method for the delivery of IT services has been well established, organizations are now focusing heavily on ways to implement cloud strategies in the most efficient manner possible. At the same time, many early adopters of cloud computing are plotting strategies to derive the greatest value from the technology, particularly as it relates to business outcomes.

Market researcher Gartner predicts that worldwide cloud services revenues will approach \$150 billion by 2014, driven heavily by skyrocketing demand for all cloud delivery models: software, infrastructure and platforms. But there's an important story behind data points quantifying the cloud's heady growth potential. It centers upon the realization that cloud computing is much more than a new technology paradigm for IT service delivery — it's really about how the cloud is helping organizations become more customer-centric, more opportunistic and more competitive.

This trend is highlighted by an increasing array of both anecdotal information and statistics that point to tremendous interest by business stakeholders around cloud computing adoption. At the same time, it's becoming more clear than ever that business leaders' interest in — as well as their concerns about — cloud computing is further redefining the collaborative relationship between business stakeholders and IT organizations in midsize and large enterprises. The IT selection criteria is now subject to new levels of accountability and transparency, as business stakeholders are both more vocal in their participation and more informed in their evaluation.

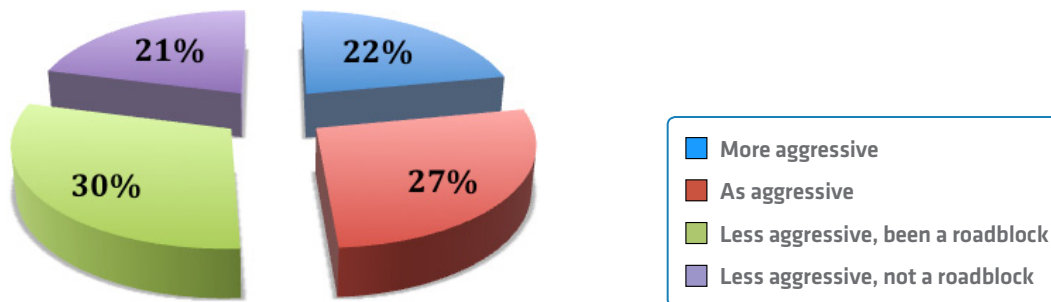
A few key trends are emerging that help explain how and where organizations are placing strategic bets on cloud computing in order to help advance their business goals. These are:

Business stakeholders at least match their IT counterparts in their desire to adopt cloud computing. In fact, business executives may be even more inclined toward cloud adoption in a number of circumstances. Although cloud computing is relatively young and still evolving as an IT service delivery model, business executives' attitudes toward cloud computing seem to have undergone a dramatic shift in the past few years.

In 2010, a study by the Outsourcing Unit of the London School of Economics for HFS Research pointed out that business executives were far more likely than their IT counterparts to agree with the statement, "Cloud might have a negative impact on the way businesses collaborate." But a more recent study published by global consulting firm Accenture indicated that nearly one-half of business executives surveyed felt that cloud computing is a way to gain access to "innovative, best-in-class applications with the potential to transform the business." In fact, one CEO interviewed for the survey gave what surely is a widely shared stance: "I am moving to only two sets of metrics: customer satisfaction and key business performance indicators." The Accenture study stressed business respondents' belief that cloud computing has great potential to shape the all-important customer experience.

Now, a new study conducted by SearchCloudComputing.com sheds more light on how business shareholders and IT organizations are becoming increasingly aligned on their views of — and approach to — cloud computing. Almost one-half of the 233 North American IT and business decision-makers who responded to the survey said that business stakeholders are either as aggressive as or more aggressive than IT in supporting cloud computing adoption. Another 20 percent said that although business executives are less aggressive than IT in wanting to adopt cloud computing, they have not gotten in the way of IT's decision to implement a cloud architecture.

Business executives' stance on cloud adoption compared with IT



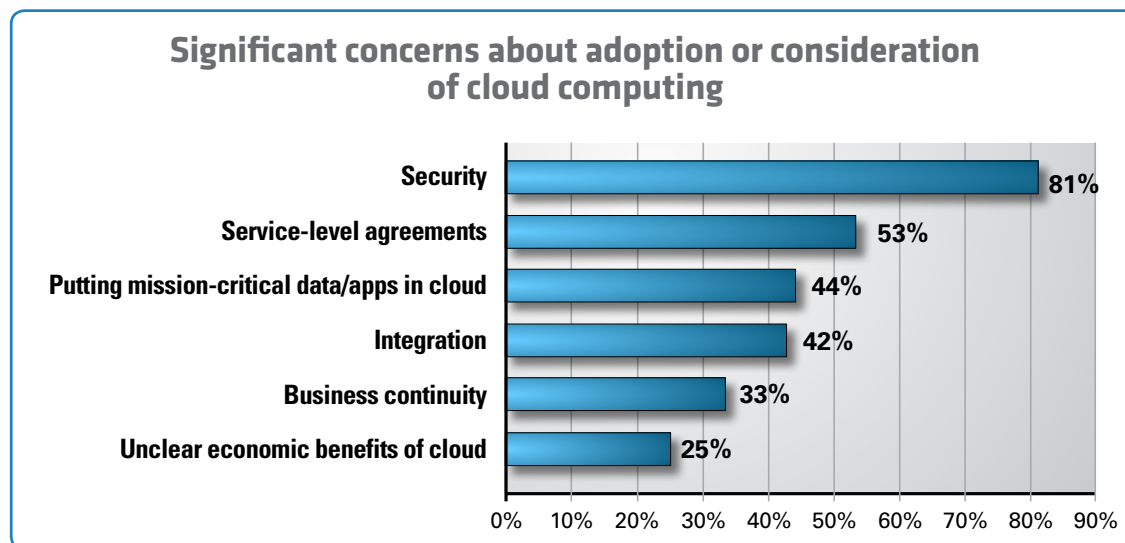
Source: 233 registered visitors to SearchCloudComputing.com

Strong, lingering concerns over security in cloud computing environments.

It's easy to be dismissive of any list of concerns where security shows up at or near the top; it happens with such regularity that it hardly even seems like news that IT decision-makers and business stakeholders have significant concerns about security in the cloud. But the fact that this perception has persisted, even as cloud computing has become more pervasive and new tools and services have emerged to address cloud security, means that it must be acknowledged and confronted with even more urgency.

Certainly, IT professionals understand full well the security challenges associated with putting valuable data and applications in the cloud. At the same time, there's little doubt that business stakeholders harbor limited concerns about data security in any kind of off-premises model, be it traditional IT outsourcing, managed services or cloud services. For instance, Gartner notes that most cloud computing projects are initiated by business stakeholders, rather than by IT. Gartner further points out that, while IT may not always be involved in the sourcing process, it usually ends up being held accountable. Of course, cloud security breaches carry potential for huge economic loss to an organization, as well as long-lasting damage to brand reputation

and customer confidence. This dynamic is putting more pressure on organizations to build in additional levels of due diligence to ensure that business-initiated cloud projects don't run into problems around security or service-level agreements.



Although business executives often envision a “doomsday” scenario of service provider problems causing a catastrophic event that takes down their business operations for hours or even days, IT decision-makers tend to focus more investments on issues such as identity management and malware prevention. The SearchCloudComputing.com survey noted that, by nearly a 3-to-1 ratio, respondents were more concerned about intrusion prevention and data theft due to malicious usage than they were about fail-safe backup, archiving and disaster recovery. This finding was reinforced by the Cloud Security Alliance, which pointed out that data loss and leakage are the top security threats of cloud computing.

Add to these issues the inexorable move toward “bring your own device” (BYOD) by end users, which presents its own assortment of security issues around identity

management, user rights, client virtualization and remote computing. A recent study by the Ponemon Institute pointed out the importance of addressing BYOD security issues in the cloud by noting that most employees find ways to skirt security features such as passwords and key locks.

Another adoption trend centers on “shadow IT spend,” particularly spending on mobile technology. A Forrester Research study found that in 2011, IT-related spending outside the IT department was rising significantly — in other words, directly by business decision-makers. This seems to support similar findings from a Gartner study that estimates that, by 2015, 35 percent of enterprise IT expenditures for most organizations will be managed outside the IT department’s budget.

IT organizations looking to allay latent concerns about governance and cloud security need to take a holistic, strategic view at securing mission-critical data from the cloud to the client. Failure to take into account business stakeholders’ issues will either delay or subvert the organization’s ability to leverage cloud computing’s potential for agility, flexibility and cost savings.

A preference for private and hybrid cloud architectures over public cloud models.

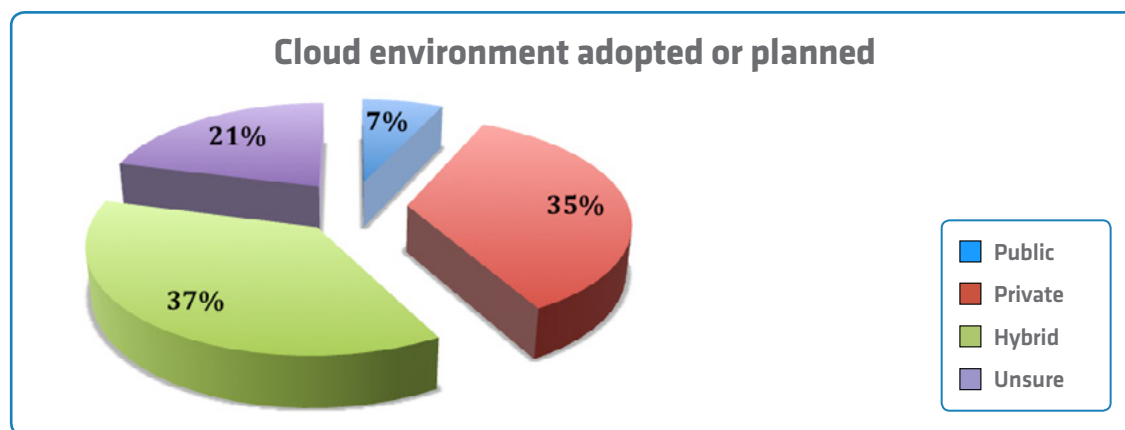
Public clouds get a lot of publicity because of their appeal to consumers and small businesses, as well as the name-brand recognition of such public cloud providers as Amazon, Google and others. And while spending on public cloud services certainly is skyrocketing, it’s clear that midsize and large enterprises are generally eschewing public-only cloud models in favor of private clouds or, increasingly, hybrid models incorporating an architecture mix of public cloud, private cloud and/or on-premises infrastructure.

The reason why this is happening centers on one of the most fundamental reasons cloud computing is appealing: the flexibility to architect the delivery of IT services according to business needs, at any point in time. For instance, a hybrid cloud architecture could allow an organization to use an external cloud service provider’s infra-

structure to store less-critical data or information that is accessed at predetermined, less-frequent intervals, while maintaining its most essential data on premises or in a private cloud. This affords the organization maximum control to decide where the data, applications and services reside, and what can be moved either back in-house or to a cloud service provider's infrastructure.

The move to hybrid clouds, in fact, is one of the most significant trends that will affect cloud strategy through 2015, according to Gartner. It noted that “over time, hybrid cloud computing could lead to higher-value-added activities for the business, or to support business innovation and, potentially, lower risks.”

In the SearchCloudComputing.com survey, respondents overwhelmingly indicated that their organizations had adopted or plan to adopt either a private cloud environment or a hybrid solution. Public cloud, in fact, was either deployed or planned for deployment by only 7 percent of survey respondents. Why did such a preponderance of respondents opt for non-public cloud options? It seems clear that there is a strong link between concerns over security — as well as the need for a high level of confidence in cloud service providers' security infrastructure — and the preference for either a private or hybrid cloud architecture.



Evaluating and Selecting a Cloud Solution Supplier

A vast array of issues come into play when organizations decide to migrate at least some of their applications and services to some form of a cloud computing model. Pricing, service-level agreements, track record in cloud computing, robust security infrastructure and many other factors all weigh heavily on the minds of IT and business decision-makers. When evaluating potential partners with the technical and business expertise that can help them make the move, companies are placing significant emphasis on the ability to see, plan, implement and support the entire cloud computing vision for the organization.

Among the issues a cloud services partner should help enterprises address are:

- Determining the right cloud approach — private, hybrid or public.
- Architecting the right level and type of security into the cloud solution.
- Creating the ideal mix of cloud-based services, such as SaaS, PaaS or IaaS.
- Migrating legacy applications to a cloud environment, as well as developing new, cloud-aware applications.
- Establishing best practices for implementation that minimize risk and create the best opportunity to fully realize business benefits.

Inevitably, architecting a cloud strategy involves an organization's existing data center, and cloud-engineered data center solutions help enterprises and even cloud services providers themselves fine-tune and upgrade, as necessary, the organization's computing infrastructure.

Conclusion

With cloud computing, the issue no longer is, “Should we do it,” but rather, “How aggressively do we make the move.” For most IT decision-makers, the organizational benefits are well established, and now business leaders are aggressively echoing the cry for cloud architecture to help reduce costs, improve agility and increase flexibility.

Particularly with midsize and large enterprises, cloud computing is demonstrating its ability to help organizations transform their operations by utilizing their IT resources in a more strategic, innovative way for competitive advantage, rather than for routine, tactical activities. With business and IT decision-makers now aligned tighter than ever on the benefits of cloud computing, the inexorable rush toward cloud adoption is hitting the inflection point by incorporating a wider array of choices, starting with software applications and now spreading to infrastructure and platforms.