

Global Cloud Computing Adoption: Transformation Is in the Air

CIOs are beginning to see the cloud as much more than a web developer playground or an infrastructure add-on. It's a strategic approach that creates business value by changing the way IT is produced and consumed.

IT leaders who consider cloud computing just another asset to add to their frameworks and processes—a capacity bump-up for their core infrastructure—risk getting left behind by the organizations that recognize cloud computing as the game changer it is.

A new IDG Research study of how global enterprises are adopting cloud computing finds that CIOs are beginning to realize the strategic implications of the cloud—specifically, how it is dramatically changing IT's relationship with the business. The mature adopters understand that enterprise cloud computing will help them evolve from delivering "IT as usual" to "IT as eagerly anticipated."

The majority of IT decision makers among the more than 600 surveyed at enterprise companies in the U.S., EMEA and APAC see business agility as the top driver for cloud computing. IT innovation fuels greater business agility, and organizations can leverage the cloud's ever-expandable, self-serviced and always-available infrastructure to speed the delivery and reliability of new and existing applications. What's more, the efficiency of the cloud can free up funds for service-led innovation.

Rather than focus on the various definitions of cloud computing, the respondents say, focus on the powerful ends it serves. More than 90 percent of those surveyed agree that the cloud provides a way to access the efficient pooling of on-demand, self-managed virtual infrastructure, consumed as a service.

But the most striking survey finding is that, for a significant number of CIOs, the cloud is far more than a mechanism to support one-off projects or commodity business applications. Rather, it is a platform for IT transformation. Some visionaries even identify its potential to transform the business itself.

The Drive to Transformation

For many enterprises, the potential of the cloud to ramp up IT transformation has accelerated adoption plans. It's

becoming clear to CIOs that while transformation may not be a prerequisite for innovation, it most certainly is a catalyst. Two-thirds of the IDG Research survey respondents are adopting cloud services now or planning to adopt them in the very near future, and 22 percent say they already have department- and enterprise-wide deployments. Eighty-eight percent of respondents say that cloud computing is either a critical, high or moderate priority for their organizations over the next 18 months.

That said, for about half of all the respondents that so far have ventured into cloud computing, implementations have followed traditional routes.

Cloud Starting Point #1: Project-based

Twenty-six percent have started their cloud computing adoption with isolated projects or environments with limited scope and budget. In 69 percent of cases, those starting points manifested in using the cloud for software test and development projects.

This is not so different from the early days of in-house server virtualization, when such efforts initially took hold in test and development environments as a low-risk way of exploring the technology's robustness.

Cloud Starting Point #2: Business Applications

Twenty-five percent have used clouds to let users access business applications as a service. That's the well-established software-as-a-service model for applications such as collaboration, e-mail, and HR systems that, in the event of downtime, may not have

Drivers of Cloud Computing Initiatives at Organizations



SOURCE: IDG Research, January 2011

the same business impact as applications such as e-commerce payment processing and enterprise resource planning.

Those “safe” adoption routes—where cloud computing is used merely as an extension of existing infrastructures and processes or alternate commercial application delivery platforms—aren’t surprising. Deploying a new and potentially revolutionary model understandably raises concerns. Moving mission-critical workloads to the cloud may seem risky when CIOs still have questions over how best to deploy and integrate those workloads with internal systems, and what control they will have over them. However, these concerns can be overcome with a private cloud that integrates seamlessly with internal systems and provides the expected performance and service levels.

Cloud starting point #3: IT Platform Transformation

Yet 39 percent of the survey respondents say they are moving to the cloud for nothing less than IT infrastructure transformation. Their determination to re-architect infrastructure services for interoperable, enterprise hybrid cloud computing speaks to a pressing need: to fundamentally change the way IT is produced and consumed to create more agile and cost-effective infrastructures.

The majority (63 percent) began their move to the cloud by implementing a portfolio of infrastructure services to

support multiple applications. And regardless of how far they are into the process, almost half the respondents report that they are creating a high-level services road-map that will guide their organization’s practices across private and public clouds. Among the key attributes of any such plan, they say, are:

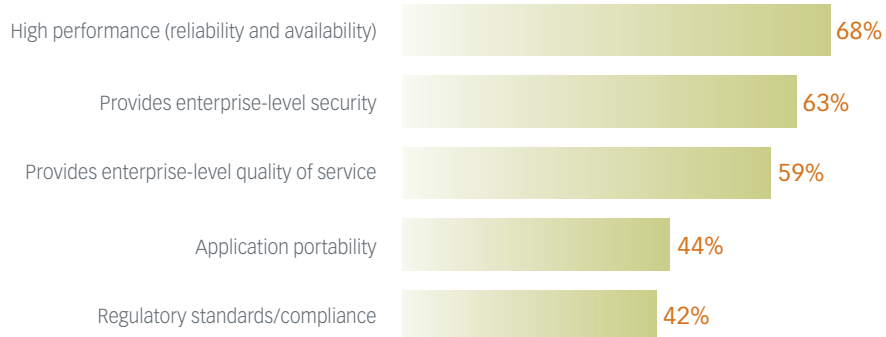
- A reference architecture that provides design and architecture best practices for deploying scalable hybrid cloud solutions.
- A rich, detailed service catalog that provides visibility of IT services in cloud computing environments.
- Service reuse requirements that allow the organization to capitalize on what is already built, saving money and accelerating time to market.

Cloud starting point #4: Business Transformation

The fewest number of respondents – 10 percent – saw their cloud starting point as business-transforming initiatives with significant organizational impact. Of these, most see their work evolving to an IT-as-a-service model, and nearly 60 percent expect to use the cloud to facilitate new or dramatic changes in their business operations or models.

Clearly, this group of respondents is most keenly aware of how essential strategy and planning are to attain that kind of return from cloud computing. The rewards are potentially great. So, too, are the risks of

Enterprise-Class Capabilities Rise as Most Important



SOURCE: IDG Research, January 2011

an all-in approach that takes up multi-million dollar budgets and stretches across multiple phases over several years.

IT Executive Leadership Required

It's important for CIOs to realize that their counterparts elsewhere in the C-suite care about agility as much as they do, but they may not be thinking of it in terms of the IT infrastructure. Those who can map their colleagues' views of agility to how cloud models can support them can build a strong business case for cloud. Indeed, the IDG Research survey reveals that 71 percent of those who are already using cloud computing technology in the enterprise are likely to rate having a strategy and business case that aligns IT capability with business needs as critical or very important to successful cloud deployment.

While it's one thing to articulate the value of cloud technology to business management, there's the additional challenge of figuring the cost. True—thanks to the cloud's variable usage model—the organization should see operational savings, but there are other factors to consider. The IT leaders surveyed say they are allocating just over one-quarter of all of their IT budgets to these transformative endeavors, with 27 percent of their budgets going to software. Sixty percent say they will redeploy enterprise application and hardware/equipment budgets to help pay for cloud projects.

Other adjustments will have to be made to ensure control over services that traverse the boundaries of

public and private cloud infrastructures. For example, IT staff will need to learn new skills to deal with functions such as group multi-tenancy and application mobility. Ideally, they'll be able to streamline processes to manage availability, reliability, scalability, security and service level agreements using the same tools for both internal and external virtualized cloud environments. As with any transformation, the importance of investing in people and processes is well understood by those surveyed, who say 30 percent of spending is going to IT staff and training.

A Shift Toward Enterprise Hybrid Cloud

There are signs that private and public cloud models are giving way to the enterprise hybrid cloud. Private cloud infrastructures ultimately depend on highly virtualized and highly optimized resources, yet they are finite; the logical boundaries of the internal data center must be somehow extended to meet scalability requirements. Public clouds answer that need, but those that don't operate with proven enterprise-scale technologies are perceived to offer lower levels of performance and quality of service. What's more, public clouds without transparent security controls, that can't be audited against security standards organizations demand today, are unlikely to support their business or IT transformation. This makes them less appropriate for hosting data that is mission-critical or subject to compliance requirements. (Fifty-one percent of the IT executives surveyed report that security tops their list of all cloud computing concerns.)

The emerging enterprise hybrid cloud takes these con-

cerns into account, and indeed, CIOs are beginning to recognize its benefits, with one in five survey respondents saying they are already taking advantage of the hybrid cloud deployment model. This model allows public clouds to interoperate with private cloud infrastructures to help IT function with greater agility:

- Workloads, virtual machines and applications can port easily between private and public clouds in response to changing business conditions.
- Performance isn't subject to the whims of other cloud tenants' requirements. Instead, compute, memory and storage resources may be guaranteed for the enterprise's own environment, either on shared or physically separated hardware.
- A single command-and-control dashboard monitors, manages and automates the infrastructure, applications, operations and processes across different cloud environments.

In addition, the same level of enterprise-class cloud security and management is provided across both internal and external environments. The importance of this feature cannot be underestimated: 88 percent of the survey respondents say they would be more likely to use or expand cloud computing if they could get the same or better levels of security in the public cloud as they can in their own data center.

The Real Risk Is Different Than the Perceived One

As the IDG Research study shows, cloud adoption is not only expanding rapidly but also growing in strategic importance. With the enterprise hybrid cloud providing high performance and enterprise-level security and quality of service, IT leaders gain the scale, cost-efficiency and capacity to run the mission-critical applications that are the most in need of those elastic resources—and likely the most vital to enabling true IT and business transformation. The real risk for organizations lies not in using cloud computing for mission-critical processes, but with continuing to use it solely as an infrastructure add-on.

The enterprise hybrid cloud not only paves the way to a more strategic IT organization, but also has great promise for the enterprise itself.

To discover more, go to www.vmware.com.

What's Top of Mind with Enterprise IT Leaders

The recent IDG Research survey on the adoption of cloud computing in the enterprise shows there's plenty of consensus around the cloud:

- 95 percent agree that virtualization is critical.
- 93 percent agree with the definition of cloud computing as an approach to computing that leverages the efficient pooling of on-demand, self-managed virtual infrastructure, consumed as a service.
- 88 percent rate cloud computing as a priority at their organization over the next 18 months.
- 88 percent say they would use cloud more if they could achieve the same or better security as their internal data center.
- 75 percent say business agility is the top driver for cloud.
- Over 70 percent rank security technologies as critical/very important for cloud deployment; however, 88 percent say they would use cloud more if they could achieve the same or better security as their internal data center.
- 60 percent say they would repurpose their budgets from enterprise applications and hardware/equipment to pay for cloud.
- Almost 60 percent say their organizations are adopting or planning to adopt cloud; 22 percent already have department- or enterprise-wide deployments.
- 26 percent of IT budgets are allocated to cloud. Of that, software spend gets 27 percent and IT staff and training get 30 percent.
- 46 percent of deployments are private clouds, but 19 percent are hybrid clouds.
- 39 percent start cloud computing with IT platform transformation initiatives.