Why You Should Consider the Cloud

"In 2014, we' ll see every major player make big investments to scale up Cloud, mobile, and big data capabilities, and fiercely battle for the hearts and minds of the developers who will create the solutions driving the next two decades of IT spending."

Frank Gens, Senior Vice-President and Chief Analyst, IDC

InterSystems®

1. Introduction

By now, anybody working in the technology sector will have heard of Cloud computing. But the concept is increasingly being paid attention to outside of IT departments, with growing recognition among board-level executives of the potential of this range of innovations. Frequently, senior personnel are hearing stories about how the Cloud helps organizations reduce costs, boost efficiency and expand their operations, so they'll be excited about what the Cloud can do for them.

As a result, Cloud is one of the fastest-growing parts of the IT industry. Gartner forecasts that by 2016, this technology will make up the bulk of new spending in the sector Meanwhile, International Data Corporation (IDC) predicts that in 2014, Cloud spending will surge by 25 percent, taking it over the $100 billion milestone for the first time: As a result, the number of options available to businesses when it comes to choosing Cloud solutions and other related technologies is constantly growing.

Because the decisions a business takes now will affect its operations for years to come, migrating operations from on-premise networks to the Cloud is not a task that should be undertaken lightly. The key for many organizations will be knowing when they will benefit from making such a transition, what services they should be investigating and what potential risks they need to be aware of.

The choices available to organizations can be bewildering, particularly if they do not have a great deal of expertise in the area. There are Cloud-based as-a-service options available for almost any activity, including software (SaaS), infrastructure (IaaS) and platform (PaaS), as well as several others.

Determining which aspects of a business to place in the Cloud and which would be better served remaining on-premise is one of the first decisions a company must make. In addition to this, there are choices about whether to opt for private or public options, or even a combination of the two as part of a hybrid package.

This may seem a lot to think about, but by asking a few basic questions at the beginning of the process about what organizations expect to achieve as a result of using the Cloud, they can identify the most appropriate tools that will help get migration projects off on the right foot.

2. Understanding the benefits

Central to this is knowing exactly what you want to get out of the technology. The benefits of the Cloud are varied and wide-ranging, and as such there will almost certainly be advantages to adopting the technology for any business, regardless of whether its goals are to cut costs, expand internationally or improve its efficiency.

The flexibility to grow

For many organizations, a key advantage of the Cloud is the greater elasticity and scalability that the technology can provide. This is of particular benefit to enterprises facing unpredictable peaks and troughs in demand, or those that are dependent on seasonality. However, the ability to ramp up operations quickly without reengineering a business' entire infrastructure is useful to any company that expects to grow its operations.

Scalable infrastructure in the Cloud ensures that a company has access to the resources it needs, exactly when it needs them. With on-premises systems, an organization might have to make a decision between spending extra money to provision resources it may only need at peak times, or face not having the available capacity when operations get busy. But with a strong, scalable and elastic Cloud service, organizations can rest assured they are only ever paying for the services they use, and can immediately obtain additional capacity from their provider only when required.

What you need, when you need it

This on-demand provisioning and a pay-for-what-you need model can also greatly reduce the time it takes to bring new products or services to market without organizations being forced to invest large resources. For instance, researchers at Eli Lilly and Company needed to test potential solutions to pharmaceutical problems they were working on, but to get these provisioned under a traditional IT system would take many months.

In fact, the legacy systems previously in place were actually harming productivity by not allowing employees access to the tools they needed to run specific modelling scenarios exactly when they were needed. But with the help of the Cloud, the company created an 'IT vending machine,' that enables researchers to launch any application immediately when required, with a single click allowing them to take advantage of servers running fully-configured apps without relying on the IT department. This helps the company greatly speed up key research processes.

"There is a flawed perception of Cloud computing as one large phenomenon. Cloud computing is actually a spectrum of things complementing one another and building on a foundation of sharing... Because of that, the basic issues have moved from 'what is Cloud' to 'how will Cloud projects evolve."

Chris Howard, Research Vice-President, Gartner

Boosting the bottom line

These speed improvements will have a noticeable impact on an organization's bottom line, but it is far from the only cost saving organizations can receive as a result of moving to the Cloud. According to a 2013 survey by Vanson Bourne on behalf of Rackspace, two thirds of businesses say Cloud computing has reduced their costs, with the typical organization saving 23 percent on its infrastructure expenses What's more, 62 percent of respondents say they were able to invest these savings back into improving their business.

Utilizing the Cloud also makes it much easier for businesses to manage their outgoings and forecast their total cost of ownership. It is often the case that organizations coming to the Cloud for the first time are surprised by the headline monthly cost of their subscription, which leads them to believe they will not achieve the expected savings. However, a single Cloud subscription will typically cover all the resources a business needs to operate, whereas an on-premises solution will have a wide range of hidden costs that may not be immediately obvious.

Hardware costs, maintenance requirements, human resources, and even the energy needed to power a data center are all factors that need not be taken into a consideration when using the Cloud. Instead, organizations have a simplified, easier-to-understand figure on their balance sheet that helps them better understand what their true expenditure is, and enables them to plan for the future based on this knowledge.

"There's a big gap between perception and reality when it comes to the Cloud. SMBs that have adopted Cloud services found security, privacy and reliability advantages to an extent they didn't expect."

Adrienne Hall, General Manager, Trustworthy Computing, Microsoft

[4] Forbes: Making Cloud Computi ng Pay (04/13)

[5] MBS: 83% of cloud users point to cost savings according to new research (03/13)

3. Addressing the issues

Naturally, when it comes to migrating mission-critical applications or highly confidential data to the Cloud, business and IT professionals will have concerns that need to be addressed. However, the nature of the challenges organizations are facing has shifted over the last couple of years, which reflects a growing maturity and confidence in the technology. As a result, many of the original concerns surrounding the Cloud have been remedied. Security concerns, which were widespread in the nascent days of the technology, are now dissipating as Cloud computing services in production have proven to be highly resilient to attacks and data breaches. While factors such as human error cannot be guarded against, the fact there have been no major problems where the blame has been on the nature of the Cloud systems themselves should reassure many users – although some uncertainty still remains, as six out of ten business still cite security as a concern.

Protecting your assets

Data governance is a particularly prominent issue for organizations working with highly sensitive information – such as the healthcare industry. In the U.S., for instance, the Health Insurance Portability and Accountability Act (HIPAA) mandates a strict set of requirements and related business associate agreements for anyone accessing the data. Breaching these requirements can lead to hefty fines.

For this reason, these organizations are moving away from pure public Cloud deployments in favor of private and hybrid Cloud models that can offer all the benefits of the public Cloud, but with an added layer of security, as the data owners retain a degree of control.

This trend will also be highly noticeable in the government sector, where IDC estimates investments in private Cloud will outpace those directed towards public solutions by 20 to one in 2014? But for many organizations, hybrid solutions - where non-critical data is migrated to public Cloud tools, but more sensitive information is kept either in-house or on private Clouds - will be the way forward. In fact, Gartner predicts that by 2017, nearly half of large enterprises will have adopted a hybrid Cloud platform to take advantage of the best of both worlds.

High reliability

Availability is another issue that needs to be looked at carefully before an organization commits to a Cloud computing strategy. This should involve closely examining exactly how much downtime an organization can cope with and what the expected costs will be. They also need to understand exactly what liability a provider will take for this.

[7] IDC webinar: IDC 2014 Predictions: Cross-Industry Overview (12/13)

[8] Gartner: Gartner Says Nearly Half of Large Enterprises Will Have Hybrid Cloud Deployments by the End of 2017 (10/13)

Many have provisions in place for availability exceeding 99.9 percent, which may seem like a strong service. Amazon, for example, offers a 99.95 percent guarantee, with users able to receive credit if it drops below this. But this can still leave room for downtime that can seriously affect a business' operations without breaking a provider's SLA. A 99.95 percent availability works out to around 22 minutes of expected downtime per month.

If availability falls to 99 percent, this equates to 72 hours of downtime a month, which can leave organizations on the hook for tens of thousands of dollars in lost revenue. In these cases, organizations need to know exactly what recompense they can expect. Amazon Web Services, for instance, simply offers' service credits' for downtime beyond the SLA guarantee – which may not help an organization if they are without key applications for several days.

Therefore, organizations need reassurances from their provider about what will happen should downtime occur, such as a strong disaster recovery and business continuity plan. One way to deal with this is to diversify Cloud suppliers – essentially not putting all their eggs in one basket. Therefore, if one goes down, they will be able to continue operations via another provider.

4. Act early for long-term success

With such a wide range of benefits available in the Cloud – and the technology now reaching a high level of maturity – organizations across all sectors and of all sizes should now be able to find positives from migrating operations to these services. However, organizations should not assume that simply moving to the Cloud will instantly solve all their problems.

The key for organizations lies in understanding where solutions, platforms and applications stand to gain the most from moving to the Cloud, and monitoring the deployment of these solutions closely. The Cloud is not without risk, with security, compliance and availability issues that need to be addressed. But with the right approach and a clear plan, organizations should find it relatively quick and easy to deploy solutions in the Cloud.

Some organizations may believe there is a lot of intensive work to be dqne at the start of the process, but this is necessary to put a company on the right track and it will be worth this initial investment in the long-term. And with a range of tools such as automation technologies to help with this and skilled partners to provide technical and business assistance, any organization can now take advantage of capabilities that may have previously been beyond their reach.

[8] Gartner: Gartner Says Nearly Half of Large Enterprises Will Have Hybrid Cloud Deployments by the End of 2017 (10/13)

About InterSystems

lnterSystems is a global software leader that provides an advanced platform for the rapid development of breakth rough applications. Developers can seamlessly embed and extend the platform's capabilities into new and composite applications for use on-premise, in the cloud, and via Internet-connected devices.

These capabilities include workflow, business process management, business rules, data integration, real-time analytics, and more. Due to the cohesive, robust design of lnterSystems' platform, applications benefit from exceptional levels of interoperability, flexibility, and performance. lnterSystems provides 24x7 worldwide support to millions of users around the world.

For more information, visit:

InterSystems.com
www.youtube.com/InterSystemsCorp
www.facebook.com/InterSystems

@InterSystems on Twitter

InterSystems Corporation

World Headquarters
One Memorial Drive
Cambridge, MA 02142-1356
Tel: +1.617.621.0600

InterSystems.com