ONE SIZE DOES NOT FIT ALL:
LESSONS LEARNED IN THE CLOUD
WHEN CLOUD IS THE ANSWER. HOW TO ADDRESS BUSINESS DEMANDS AND THE ADOPTION OF NEW TECHNOLOGIES?

While business demands continue to grow and evolve, the strains on your IT environment continue to multiply. For many companies today, a flexible Cloud infrastructure is the answer.

Cloud computing continues to mature at an astounding rate bringing new and advanced features which simplify and expand computing capabilities to address today’s agile business environments. However even with proven success stories and documented case studies, many enterprises are still hesitant to move to the cloud for a variety of reasons.

One critical reason is that legacy applications are not designed for a cloud implementation and significant investments need to be made to redesign the application to operate efficiently in a virtual cloud environment. Other reasons include security and compliance risks, which is a top concern for companies in protecting their intellectual capital. And of course standard reasons such as budgetary constraints; older generation infrastructure; ceding control to a 3rd party and reallocation of job roles and functions still exist and impede the mainstream adopters.

The lessons learned from early adopters of cloud computing can provide enterprise IT executives with the right perspective necessary to make sound business decisions. Cloud services essentially come in three different deployment models: public clouds, private clouds or hybrid clouds.

Each type of Cloud brings with it a unique set of benefits, yet choosing a single type of Cloud model may not be the right choice. Most enterprise organizations have mixed workloads, with specific requirements, that will determine the Cloud destination for that application.

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When migrating to the cloud, there are many considerations. The choice of which cloud deployment model best fits an organization boils down to a few key considerations.

**PRIVATE CLOUD DEPLOYMENTS**

Private clouds can be hosted on-premise at a corporate campus or with a certified hosting provider. On-premise deployments allow enterprises to leverage current infrastructure assets, automation and position IT as a services broker to the lines of business. Hosted private clouds bridge the gap between an organization that wants or needs more control over the underlying systems and data but does not have the infrastructure to accommodate. Internal IT staff still manage and monitor the hosted infrastructure, which is a key aspect of a hosted private cloud.

The IT-as-a-services-broker model (i.e., transforming IT into an internal cloud resource provider) has the potential to drive down costs to a granular level. Private clouds and their capabilities can enable enterprises to view their resource consumption on a highly granular level like never before. As such, lines-of-business executives now have more accountability into IT spending since IT can present highly granular metrics and chargeback accordingly to control costs.
KEY CONSIDERATIONS OF PRIVATE CLOUD DEPLOYMENTS

The choice of which cloud deployment model best fits an organization boils down to a matter of how much control the enterprise needs to have over data and systems placed in the cloud. In other words, enterprises may balk at deploying public cloud services with “consumer-grade” features due to lack of transparency or assurances that the cloud provider will be able to meet the business's demands. As touched upon above, heavily regulated industries often come across this issue related to deploying cloud resources.

The answer is choosing a private cloud when other deployments do not meet business requirements or security standards. Compliance is one issue, but from an internal perspective (or risk management perspective), private cloud deployments are the only model that will allow an organization to maintain enough governance of their data and IT environments. By its nature, public cloud services entail handing over monitoring and management of the underlying cloud infrastructure to a third-party, which may be unacceptable under any circumstances - even in the face of higher implementation costs.

PUBLIC CLOUD DEPLOYMENTS

Public clouds are virtualized, multi-tenant IT infrastructures, owned and operated by third party service providers. The most ubiquitous Web services are email, social media platforms, customer relationship management and pay-per-gigabyte storage services. End users access services via the Internet without having to manage or own the underlying IT infrastructure components. In this context, public cloud services within the enterprise are an attractive option for organizations deciding how to shepherd end users into the cloud gradually. The familiarity that most tech-savvy end users have with public cloud services makes it easier for IT executives to leverage the savings of a utility based pricing model. Public clouds are a good choice for highly elastic applications that scale up or down due to customer demands.

No one-size-fits-all solution exists in the world of cloud computing. Organizations need customized solutions to add the most value to support the business. From one perspective, public cloud services are “consumer-grade” products that may fall short of the mark. However, many of these same “consumer-grade” public cloud services may do quite well in the enterprise - if implemented methodically with the help of a trusted vendor. For a large manufacturing enterprise, public cloud services such as infrastructure-as-a-service (IaaS) or platform-as-a-service (PaaS) simply may not satisfy regulatory requirements. On the other hand, the same manufacturer’s human resources department or marketing department may do quite well with a “consumer-grade”
software-as-a-service such as a new customer relationship management software hosted in the cloud.

**NO ONE-SIZE-FITS-ALL SOLUTION EXISTS IN THE WORLD OF CLOUD COMPUTING. ORGANIZATIONS NEED CUSTOMIZED SOLUTIONS TO ADD THE MOST VALUE TO SUPPORT THE BUSINESS.**

**KEY CONSIDERATIONS OF PUBLIC CLOUD DEPLOYMENTS**
Security (or lack thereof) remains a primary concern when discussing the public cloud, and this fact will likely not change in the near future. Public cloud services have a perceived reputation for laggard security for many reasons. For instance, how public cloud providers actually provision security measures may be unacceptable from a risk management standpoint alone. As an example, if the data (or services) to be placed in the cloud are business-critical, many organizations choose to not use a public cloud. Still, for data and applications that are not mission-critical - yet devour an IT shop's budget - the public cloud may be the answer.

**HYBRID CLOUD DEPLOYMENTS**
As the name suggests, hybrid cloud deployments try to combine the “best of both worlds” when deciding between public cloud services or private cloud services. Hybrid deployments step forward as a serious option because the IT concerns of today’s enterprises are intricate to say the least. Depending on the best practices of a business’s particular industry vertical (or government regulations), deploying public cloud services or building private, corporate clouds simply may not be feasible.

What hybrid cloud deployments provide is opportunity - meaning that organizations do not have to pin themselves into a less-than-ideal situation to control costs. Hybrid clouds can offer the flexibility and resource elasticity to meet today’s business demands as needed in a utility-based pricing model. The chance to shift costs from IT capital expenditures to IT operational expenditures alone is worth starting the conversation with a cloud implementation expert.

**HYBRID CLOUDS CAN OFFER THE FLEXIBILITY AND RESOURCE ELASTICITY TO MEET TODAY’S BUSINESS DEMANDS AS NEEDED IN A UTILITY-BASED PRICING MODEL.**
**VARIETIES OF HYBRID CLOUD DEPLOYMENTS**

To gain a better understanding of the different hybrid cloud deployments available today, IT executives should keep in mind that each organization must approach cloud deployments methodically. For instance, it should come as no surprise that the IT needs of a fledgling Web content marketing company differ substantially from the IT needs of a major manufacturing enterprise. However, both of these organizations can benefit from hybrid cloud deployments in the right situation.

Hybrid cloud deployments essentially entail supplementing on-premise, in-house IT resources (including software) with public cloud services or a private, corporate cloud. Also, hybrid clouds can consist of combining public cloud services with private cloud services without the need to include on-premise resources at all. In a perfect world, these deployments would allow every organization to expand cloud resources in accordance with business needs.

**KEY CONSIDERATIONS OF HYBRID CLOUD DEPLOYMENTS**

From one perspective, the key considerations of hybrid cloud deployments boil down to a matter of preferences versus requirements. For example, a manufacturing enterprise would certainly prefer to relieve IT of the burden of maintaining several proprietary systems in geographically dispersed locations by moving to a private cloud. However, the cost to migrate such a massive system, or the limitations of private cloud services in general, may prohibit such a move.

On the other hand, an up-and-coming Web content marketing agency may do quite well in a hybrid cloud model by simply opting for public cloud services to augment computing resources. Also, managing the Big Data phenomenon is one example of a real world use case where a Web content marketing company could gain substantial return on investment in a hybrid model. By scaling (up or down) resources to run a Big Data cloud platform, fledgling organizations can now have access to powerful computing resources on-demand without allocating massive capital expenditures.

These are only a few of the major issues surrounding cloud services - whether in a public, private or hybrid model. The answer is choosing an expert implementation vendor with the knowledge to negotiate these pitfalls and offer honest assessments.

**THE ANSWER IS CHOOSING AN EXPERT IMPLEMENTATION VENDOR WITH THE KNOWLEDGE TO NEGOTIATE THESE PITFALLS AND OFFER HONEST ASSESSMENTS.**