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SESSION PREVIEW WHITE PAPER

ITAM AND CLOUD COMPUTING
WHY DO WE NEED TO MANAGE THAT?

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THE CLOUD LANDSCAPE OF CHOICES

When making information technology decisions, executives begin by choosing between internal (in the data center) and external (with a cloud provider). Although it sounds like a choice between a cloud service and a typical server/client configuration, the decision is actually more complicated since cloud services can be used by the organization directly in the data center. Understanding the characteristics of cloud computing options and the different styles of delivering the services is helpful in understanding the criteria for selecting one option over another.

According to the National Institute for Standards and Technology (NIST), to be considered cloud computing, the option must have the following features:

- On-demand self-service
- Broad network access
- Resource pooling
- Rapid elasticity
- Measured services

That means that a highly virtualized data center is not a cloud unless these characteristics are also present.

PUBLIC, PRIVATE AND HYBRID

The configuration and the services for cloud provided by a cloud service provider is a common and growing choice for organizations. The costs for these services can be less because they offer services to numerous customers through multi-tenancy. Known as the public cloud, this option is the external option for the organization.

However, configuration and services fitting the definition of cloud can also be sourced within the data center creating a cloud that is internal and called a private cloud because it is limited in scope to the organization. The multi-tenant cloud characteristic is restricted to organizational departments rather than other organizations. The same type of metrics and costing algorithms can be applied within the organization so that the departments only pay (or are charged back) for the resources consumed. Cloud architecture is a good choice for handling big data with the rapid elasticity and if access to that data needs to be very secure, a private cloud may be a favored choice.

To add to the confusion, a hybrid cloud is one that includes private and public clouds that work together. This architecture is considered a likely future path for most organizations as the most productive way to utilize the advantages of cloud while restricting mission-critical or sensitive data to internal cloud options.

NOT QUITE THAT SIMPLE

While a public cloud is categorized as an external option, the private cloud is a bit more complicated. A private cloud, a cloud configuration only available to a single organization, can in fact be sourced by a cloud provider rather than be created with the data center. This variation meets the demands of organizations that do not have the wherewithal to build and maintain a cloud internally. Or, perhaps the executives believe that the private cloud delivered by a cloud provider has security advantages over their own data center since the expertise of a cloud provider may be greater.

Organizations and service providers have to plan how the cloud will be used or offered as well as who provides the cloud. There are numerous service models that are offered with the cloud and while they could be used on an internal cloud, most think of the external cloud when considering service models. The service models differ in what layers of the environment are provided by the cloud provider so it is important to understand what the organization is responsible for and what is being provided by a service provider.

CLOUD SERVICE MODELS

Vendor offerings are grouped based on the style of service being provided. The three most common service models are presented here. There are many variations that are being offered but the variations (known as xaaS) usually have characteristics similar to one of these three service models. The descriptions and issues discussed are present from the public (or external) perspective.

SaaS

The easiest to implement and the cloud service growing the fastest is Software as a Service (SaaS). SaaS uses a services contract with a subscription as the norm rather than a software license (the term “user license” may be used which may cause confusion about the rights and responsibilities as it does not designate a typical copyright entitlement). With SaaS, while the subscription is valid, the employee has the right to receive the service or “to use the system.” Controlling the proliferation and termination of these subscriptions is the chief organizational financial concern for this cloud offering.

Major data concerns that surround SaaS are:

- Securing access while in use and in storage
- Ensuring access to that data as needed and at termination of the subscriptions
- Understanding the legal issues related to ownership and access to that data

While the cloud provider usually provides basic security for the data, the organization remains responsible for that data unless there is specific contractual language that broadens the scope of the cloud provider’s responsibility.

SaaS may be an easy choice, but organizations need to consider how the product will be used,

by how many and for how long. Since the product is not purchased, the organization will continue to pay for the product for as long as it is in use and in some cases, it may be much more expensive over time to use SaaS even when the costs of physical installation and management are calculated in.

Common pricing models for SaaS include tiered pricing and consumption-based pricing. Premium functionality, extra products or customization frequently add significantly to the cost of the SaaS. The business model called freemium may be used with SaaS. Familiar in the consumer market, it offers a subset of services for free to create a low bar for trying their services.

IaaS

Infrastructure as a Service (IaaS) became popular at the same time that the data center became highly virtualized. The cloud vendor provides basic cloud computing resources such as networks and storage. The customer organization typically deploys the operating system and applications with licenses that specifically permit the use of the products in an IaaS model (where the devices are owned by the cloud provider). The organization is also responsible for protecting the deployed operating systems, applications and the data. The cloud provider is responsible for protecting the infrastructure.

Pricing is based on the services and devices used such as setting a price per hour by operating system and server configuration. The pay-as-you-go pricing model is typical. In addition to pricing schemes and rates, IaaS cloud vendors differ in:

- Management functions
- Identity management
- Monitoring
- Contractual language in the SLA
- Customer support

PaaS

A third common cloud strategy is the Platform as a Service (PaaS) where the cloud vendor provides only the platform. Aspects of the service management are managed by the cloud vendor. The customer organization builds and manages their own applications and is responsible for the security of those applications and the data. This cloud choice is frequently used by software developers working on mobile or web applications. When choosing a PaaS provider, "…take into consideration the programming languages and server side technologies the vendor offers along with the data storage options. Support for developer tools and applications integration is also very important as you need to consider how your application in the PaaS will integrate with other applications. Finally, consider the costs of running your applications in a PaaS and evaluate how the pricing model of the vendor you choose works."

MAKING THE CHOICE

Choosing any of these cloud models depends on characteristics such as:

- Difficulty of the transition and investment required
- Estimate of possible savings compared to internal installation (especially over time)
- Degree of customization or premium products required
- Amount of flexibility needed (such as significant variability in demand)
- Availability requirements
- Visibility through monitoring, reporting, etc.
- Ease of handling multiple access points such as smartphones, tablets, laptops
- Level of control desired
- Risk factors including governance but currently dominated by data security issues
- Costs and complexities at time of termination

Careful selection of a cloud computing model and decision on internal versus external is only the beginning of the management required. The ITAM team needs to be engaged as early in the process as possible so that the investment in cloud service models is as successful as possible, both from an investment and risk perspective.

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SCHEDULE OF EVENTS

8:30a-9:00a Networking with Refreshments
9:00a-9:30a Opening
9:30a-1:30p One continuous session covering ITAM and IT Security, ITAM Program, ITAM and Cloud Computing, Software Audits, ITAM and ITSM and What Does an IT Asset Really Mean?
1:30p-2:30p Lunch
2:30p-3:30p Birds of a Feather, Closing

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TOPICS

ITAM and IT Security
You Cannot Secure What You Don't Know You Have!

ITAM Program
What is the Most Effective ITAM Program for My Organization?

ITAM and Cloud Computing
Why do we need to Manage That?

Software Audits
Managing Audits as a Standard Business Practice

ITAM and ITSM
Understanding Best Practices and Standards in both Disciplines

What Does an IT Asset Really Mean?
Some of the latest buzz words: Big Data, the Internet-of-Things (IoT) and Shadow IT.