

Behind the cloud, there is a silver lining of new possibilities

By Jeff Morgan,
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Everyone's talking about the cloud and the opportunity it provides to transform the way businesses and people work. Traditionally, enterprises have made new capital investments to keep up with growing IT demands, but the old approach is increasingly cost prohibitive and often comes with lengthy provisioning delays. While users wait for infrastructure to be deployed, applications run slowly or not at all, making businesses inefficient and inflexible. Meanwhile, businesses continue to spend money on in-house personnel to manage the infrastructure. As well, Web 2.0 technologies and mobile trends have created user expectations for *instant* IT and communications resources. Consequently, the old approach simply doesn't work for many enterprises.

That's where cloud services can help. Cloud services let enterprises quickly and easily tap computing, storage, software and development resources on demand. Cloud services reduce capital expenditure burdens by moving to a "pay-as-you-go" service model, reducing overall IT spending and service-commitment terms.

Defining the 'cloud'

The definition of 'cloud services' varies, but the main idea is that IT resources become available on demand – without capital investments, lengthy provisioning turnaround times and service contract terms.

In its simplest form, cloud computing allows companies to access IT-based services, including infrastructure, applications,

platforms and business processes via the internet. The environment scales easily via a portal or other graphical user interface, allowing businesses to manage capacity behind the scenes to help ensure that resources are always available to users or applications.

The buzz about cloud is growing louder because technology advances in virtualisation and workflow automation have allowed service providers to offer flexible infrastructures that can be shared among organisations and billed on a no-commitment basis.

Several evolving technologies have contributed to the development of cloud services. Among them is the continued commoditisation of hardware, open-source software, service-oriented architectures, automation of technology management, increased bandwidth requirements, as well as enhanced mobility and social computing platforms. These technologies are being combined to provide rapid access to massive compute capacity and flexible functionality at significantly lower price points.

What cloud model works for your enterprise?

In moving to the cloud, businesses can implement any combination of cloud models, but there are three basic ones to keep in mind:

- A **public cloud** offers shared resources accessed via shared networking, like the internet.
- A **private cloud** includes private resources accessed via private networking.

- A **virtual private cloud** is a hybrid where the resources are shared among several organisations, though they are virtually separated – the network is private.

While none of these models meet the needs of every application in every organisation, part of the cloud's unique power is its flexibility. Cloud models are designed to work

together, so an enterprise can combine the models to fit both organisational and individual needs. Depending on an organisation's specific need, a service provider can help determine which model is the best fit, implement the technologies, facilitate running a hybrid environment or simply run it on their behalf.

As cloud computing moves from concept to reality, certain

broad trends and best practices are emerging as it pertains to the public cloud versus private cloud debate. Many enterprises are first looking to the private cloud as a way to 'test drive' cloud tools and alternative applications in the safety of their own secure environment. However, this may be a costly and time-consuming effort because of the need to find (and potentially hire) the expertise required.

Instead, an organisation could turn to a service provider that can deliver the cloud experience needed to drive business forward. Maximum results cannot be reaped unless organisations create a roadmap for integrating cloud technologies in a broader IT strategy. An experienced service provider can help IT and business teams create a cloud strategy and governance plan that works in the near term, but prepares for achieving high performance in the long term.

Before any enterprise moves its data to a public cloud, enterprise IT executives want assurances about security,

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availability, reliability and performance of enterprise applications. How can one be certain that applications, data and customers are securely isolated during the migration of critical applications to an infrastructure in which servers, networks and storage are all shared resources?

One consideration is to find a service provider that can create a secure environment in which separate applications or customers can share the same server, storage and networking infrastructure with complete isolation. This helps ensure that sensitive information is not compromised. Key attributes should include an efficient, ‘continually-on’ infrastructure with elastic scalability; integrated data protection; advanced automation; and the ability to transparently migrate both applications and data across the infrastructure.

Wireline or wireless data network operators can possess these technologies and experience, yet are consistently overlooked. These providers often have a long history of providing highly sophisticated technology solutions that offer

end-to-end security and isolation in virtualised, shared environments across vast networks.

Providers that operate large Multi-Protocol Label Switching (MPLS) based global data networks that use multiple wired and wireless access technologies to keep critical customer data separate and secure are a sound option.

The logical separation provided by MPLS essentially maps the customer’s cloud environment to the service provider’s MPLS network connection. This technology combined with cloud technologies and layered security measures, maintains and isolates data from the point at which the customer enters the network, through the cloud and back. This approach gives customers the ability to realise better network performance, reliability and security over services that rely on internet connectivity alone.

Cloud-based products

There’s also an alternative to deploying a dedicated cloud solution: a company could choose to dig deeper into the cloud and buy services rather than the whole store. For example, some enterprise customers need an entire cloud upon which to run their mission-critical business applications due to all the reasons we discussed.

However, what if they only need the database layer? Or, perhaps they need a Java or PHP-based environment upon which to run their applications. IT is tasked with the major and the mundane, but platform-as-a-service (PaaS) options can ease their workload by offloading platform support to the provider.

Software-as-a-service (SaaS) goes a step further by providing the platform *and* the application without the complex pricing or constant platform support. A managed suite of services eases the pain for both enterprise and medium-sized businesses. The cloud extends to become even more versatile.

Conclusion

Cloud services can offer an expansion of an existing relationship between enterprise and service providers into a new area of support. This may save the enterprise money, offer more flexible contract terms and provide the agility to get new services and resources up and running instantly.

A network operator may offer advantages in that it often controls the access network to the cloud and can assume responsibility for the entire cloud service package, including diverse-site redundancy.

Having control over the end-to-end virtual infrastructure can enable the network provider to offer more stringent SLAs to enterprises for resource availability, application performance, security, latency and many other important computing and networking variables.

About AT&T

In addition to being one of the world’s largest providers of wired and wireless services, AT&T owns and manages the world’s leading global IP network, which carries more than 20.8 petabytes of data traffic on an average business day and includes more than 883,000 fibre route miles worldwide. AT&T is a provider of hosted and managed application services.

AT&T’s hosting portfolio includes cloud computing, cloud storage, platform-as-a-service, dedicated managed hosting, co-location and data centre services. AT&T also has more than 10 years of experience hosting and managing business software applications for customers using its resale partnerships with Oracle, SAP, PeopleSoft, Siebel, Ariba, IBM WebSphere Commerce, ATG commerce, Microsoft OCS, Microsoft Exchange, SharePoint, other software solutions.

These solutions are supplied in a variety of pricing models, including selected services offered in pay-per-user per-month pricing models. In addition, AT&T offers business process outsourced payroll processing services associated with solutions using managed PeopleSoft and Oracle e-Business Suite HCM applications.



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