

# The cloud advantage

**Date:** Tue, 10/05/2010 - 13:12 Source: From Alberto Soto, vice president, EMEA at Brocade

**The computing model has reversed. With increasing adoption of high-powered mobile devices and applications, more and more information is being created outside of centralised data centres and at exponential rates**



Alberto Soto, vice president, EMEA at Brocade

According to recent research, there will be 15 billion mobile devices in use by 2015 and by 2020 over 35Zb (Zettabytes) of data will be generated by users<sup>2</sup>. These numbers are staggering and illustrate the size of the task facing modern CIOs; how to service user needs and ensure productivity and financial success. At the heart of this task lies the network infrastructure and the cloud. Building an architecture that has the elasticity to cope with modern demands is not simple and requires a forward-thinking strategy to embrace different ideas and solutions. However, achieving this is easier said than done, as modern CIOs know all too well. Some, but by no means all, IT departments are seen as resistant to change: they regard internal pressure for new tools and faster, more nimble systems as an increase in their workload – partly because of the disconnect between day-to-day technology management and business decision-making caused by the 'service the legacy kit' rather than 'strategic unit' status of the IT department. For the CIO or senior IT manager, this creates a vicious circle of cause and effect. They have to support business goals with limited resources. By sweating every asset, the CIO can make the budget stretch further but there will soon come a point when the network will say “no more!”.

## Entering the cloud...

So how can enterprises step outside of the circle and find a new model for integrating technology with business goals? The luxury of being able to junk legacy on-premise networks and start again is out of

reach for most enterprises. Where that is possible, the end result of trying to design and build state-of-the-art networks from scratch is often a bureaucratic mess of competing suppliers, consultants, deadlines and budgetary compromises, resulting in a network that is under-provisioned when it finally goes live.

'The cloud' is emerging as the alternative model to on-premise legacy systems. The cloud means on-demand hosted services, such as computing, network and storage capacity, where all the time-consuming, complex and expensive hardware management takes place, is at once removed from the buyer.

According to recent findings by research firm IDC, cloud-based IT services are currently worth £10.7 billion globally, and that figure is estimated to grow to around £27 billion by 2013. In Europe, enterprises are beginning to embrace the business opportunities offered by virtualising assets and accessing applications through the cloud.

### **Defining the cloud**

How does this work? The cloud is a simple idea, but a more complex entity. It can be broken down into three broad areas: software as a service (SaaS), infrastructure as a service (IaaS) and platform as a service (PaaS). These on-demand services can be delivered over public infrastructures (a 'public cloud') or be provided as bespoke services to the enterprise over private networks (a 'private cloud'), or as a combination of the two (a 'hybrid cloud'). In other words, there are multiple clouds, and so the cloud refers to the concept rather than the delivery system.

Such services offer multiple business and financial benefits to the enterprise: for example, access to a highly scalable infrastructure, meaning the buyer incurs costs as operational expenditure. It also means that the upgrade path for the underlying technology is both seamless and invisible to the buyer: it becomes part of an 'on tap' service. And despite the entrenched belief within many businesses that security is best achieved in-house where on-premise assets can be directly managed and monitored, the truth is that security is usually not a core expertise of most enterprises. The cloud also means that security is also delivered as part of a service to the enterprise, by technology experts for whom security 'is' their business.

For many enterprises, a private cloud may be the closest match to their goals and create the greatest business advantages as it means a bespoke solution more closely modeled on internal processes.

What business users want is the ability to pick systems on demand from a combination of local and remote providers. What the IT department wants is the ability to configure and monitor those systems via software. Building these systems is the key to stepping into the cloud.

### **The cloud advantage**

The overall 'cloud advantage', whether public or private, means being able to select how and where an application runs based primarily on business, rather than technology, considerations (security, longevity, frequency, cost, throughput, uniqueness) and to optimise those decisions to maximise competitive advantage to the business.

Increasingly, skilled IT strategists are exploring these benefits. More and more enterprises recognise that software, infrastructure and platform delivered as on-demand services can offer strategic advantages in terms of scalability and cost effectiveness, because systems can scale dynamically rather than be built for usage scenarios that may not arise. The cloud means minimal risk. The cloud model allows senior IT strategists to set aside maintenance and patchwork and manage the network at arm's length to agreed service levels and standards. The cloud paradigm also means he becomes free to operate his department as a core business unit more in line with enterprise goals.

In other words, the traditional computing model has been reversed: both information and the consumption of that information are distributed, and because users have distributed both the computing power and the information storage, they have essentially distributed the data centre.

In such a network, smart end points contain lots of computing power and are remote, distributed and mobile. Information and applications are virtualised and can reside anywhere within the infrastructure we refer to as 'the' cloud (as we have seen, there is no single cloud, but rather multiple clouds of remote hardware and managed services running on them).

### **The great leveler**

The cloud is also an enabler and a leveler for businesses of all sizes, because it gives them access to a world-class infrastructure that can scale with ambition rather than inhibit business growth. In smaller enterprises, the capacity of the network can only be increased by significant capital outlay, and that equals risk. With cloud-based services, capacity can be added (and removed) on demand, and paid for on a per-usage basis. Virtualisation of servers, applications, desktops, storage and other

infrastructural components can be the first step on a journey that ends with moving mission-critical applications to a cloud provider, which then has an impact on the company's internal culture. This puts the CIO in a position of real power. The CIO needs to lead both the expedition and the cultural change. As enterprises move deeper into cloud deployments, they can decide what is core to the business, and what can be better run as a managed service based on business need. In such a scenario, the CIO can finally do their job: manage the information process and flow throughout the organisation. That information also needs to flow up to the CEO in terms of understanding the impact of new technologies as well as managing the internal innovation driven by the technology change. The financial advantages follow on from the business ones: a shift from expensive, hard-to-justify tranches of capital expenditure to the predictability and liquidity of operational expenditure, plus lower staffing costs as the enterprise is unlikely to need specialists for each tool or component of a complex legacy network.

### **How to start the journey**

Networks are far too complex to reliably scale to handle the amount of data and applications being proliferated today. For networks to achieve the reliability and cost effectiveness necessary to bear the expanded responsibility of tomorrow's virtualised data centre, they have to be simple. If you're going to run your business on them, or trust your data to a third party, the networking foundations have to be non-stop and optimised for all of your business applications. While the vision of tomorrow is a radical shift from today, adoption of these models must be a gradual, evolutionary process. Economies and business continuity necessitate a migration strategy that simplifies operations, protects a customer's assets and establishes new standards for uptime. As a business, you want your IT infrastructure to be a competitive advantage. To successfully start the journey to creating a truly virtualised data centre environment, where the network becomes the data centre, you need to select a vendor whose objective is to enable this new ecosystem, establish new levels of reliability, and protect your existing investments while radically simplifying the infrastructure. Not all vendors can do this, so the CIO has to choose very carefully who to trust otherwise they will make a very costly mistake.

1 Source: CIOL.com, November 2008

2 Source: IDC and EMC, May 10, 2010

<http://www.telecomkh.com/en/business-communications/news/brocade/cloud-computing/2343>