

The Cloud: a killer app or a security threat for your business?

As cloud computing – in its widest sense, the delivery of applications and services over the Internet - continues to gather momentum, 4D's Matt Harris looks at the implications of the Cloud for colo data centres.

The Cloud looks like it's here to stay. Whilst the usual suspects such as Amazon, Google and IBM, have already crowned and embraced the Cloud as the "Next Big Thing", some unusual suspects, like the White House, are now also getting in on the act.

Even better, at least for Cloud supporters, the support arm of the Federal Government, the US General Services Administration, is offering "Cloud IT Services" through the www.apps.gov portal but, disappointingly, not for immediate delivery. The three offerings of Cloud storage, Virtual machines and Web hosting are labelled as "Coming Soon". But the GSA does mean business, literally, with the option of purchasing such services directly through the GSA website when they become available. The question is, will the Pentagon be clicking on the buy button?

The likes of Amazon and Google are undoubtedly placing big strategic bets on the Cloud becoming a core, if not the core, piece of IT infrastructure of this new decade. Google's newly announced Chrome OS is clearly aimed at the masses while Amazon's EC₂ (Elastic Compute Cloud) is going after the small enterprise and developer market with their scalable infrastructure. But what might be good for the masses and developers may not be within the comfort zone of businesses, both large and small, that have data compliance and auditing concerns to address as well as legacy application compatibility issues with the cloud infrastructure.

Security alert

As is likely with the Pentagon, businesses will also have concerns about loss of control over apps and above all, security of data. Top of the data security worries will be potential loss or theft of data, particularly the identity and financial information relating to clients and retail customers. The proponents of the Cloud are of course aware of this and go to great lengths to reassure potential Cloud floaters about the security side of things. But for both malicious hackers and academics alike, this merely represents the next security and encryption challenge. Think of "unbreakable" Blu-Ray DVD encoding.

The February 2010 edition of MIT Technology Review provides a graphic account of how researchers from the University of California and MIT recently placed virtual servers, costing just a few dollars each, into Amazon's EC₂ that in theory could steal data from targeted contiguous servers owned by third parties. Amazon has since argued that as a result of changes to how virtual servers are set-up within EC₂, the theft couldn't now happen in practice. But the damage has been done. Confidence has been eroded and just as confidence is the cornerstone of banking, the same applies to IT so far as security is concerned.

In the same edition of MIT Technology Review, Vinton Cerf, “Chief Internet Evangelist at Google”, puts the case for an infrastructure “so that clouds can communicate directly amongst themselves”. Whoa! – haven’t we seen this already in Terminator?

The security of cloud computing is a classic case of perception being more important than fact. Confidence in the security of the Cloud will take time to develop. Every question mark over security will take both public and private sector IT strategists and decision makers a few steps back towards the comfort of hardware, apps and data they can, metaphorically and in many cases, practically, put a ring of steel around.

Utility computing becomes reality

The Amazon and Google cloud offerings, backed by their excellent brands, are likely to gain traction first with the potentially huge consumer market for low cost pay-as-you go utility computing. This market will be particularly strong in emerging economies if Wi-Fi broadband access is put in place. As a result, there is a strong chance that thin client netbooks of the kind envisaged by Google for its Chrome OS will help turn the dream of the \$100 dollar computer into a mass market reality.

As might be expected, the strategy team at 4D has been keeping in close touch with developments in cloud computing and its implications for the demand for data centre colocation services. Our preliminary conclusions are that the Cloud has substantial potential to expand the overall global demand for computing services but the growth will come in the short term on the consumer side, particularly in market segments and economies where basic utility services are all that people want.

Risks and rewards of the Cloud for businesses

For public and private sector operations, the theoretical advantages of the Cloud will be outweighed for some time to come by security concerns. However, the technology and processes of cloud computing provide the opportunity for major efficiency gains, particularly for those operations that have a multi-site or multi-national environment. We therefore see the development of private clouds, with the resulting oversight and control of data, as a major growth area over the next five years and with that, a growing market opportunity for colo data centres to host the infrastructure for the private clouds.

This then leads to the question as to whether the Cloud in its widest sense will ever become the environment of choice for business. Taking a long term view – 20 years or more – it is likely that something like the Cloud will eventually become the foundation of all large scale, networked computing activity. But business and governments alike will still want to have control over key parts of their IT operating infrastructure. Similarly, there will be a need and undoubtedly in some cases, a regulatory requirement for the data and information kept in the Cloud or its successor to be replicated in a non-Cloud environment in real time.

For larger enterprises, the citadels for the hardware and data storage infrastructure will continue to be their own, dedicated data centres. But for many businesses, the colo data centre will still be the solution for the physically secure hosting of kit with guarantees on power and network availability – and with secure cages for those who really want a ring of steel.

For further information how 4D Data Centres can help with providing a low cost and secure solution to some of the issues raised in this article, contact Matt Harris on: 020 7183 0602 or alternatively by email at: matt@4d-dc.com