

## Network or 'not work'? New approaches to joining up your business for success in the Cloud

A survey of CIOs we carried out earlier this year found that while half was planning to increase their investment in cloud computing, barely one in five viewed their network as a critical element when formulating their Cloud strategy. I find this trend deeply concerning, as it says to me that companies just aren't thinking through the implications of the Cloud in enough detail. As data which was previously confined to the LAN suddenly begins criss-crossing the corporate network – and even the public Internet – there will be huge strains on the network, which will lead to end-users experiencing big drop-offs in performance for fairly mundane tasks.

I think networking and comms experts have a vital role to play in showing how contingency planning and 'intelligent' network design can help mitigate some of these issues.

The Cloud resolves many continuity issues thanks to its highly distributed, virtualised nature – but its reliance on the network still makes this a very prominent single point of failure – i.e. it wouldn't take much to knock out a branch office. In most cases a redundant connection (based on ADSL or ISDN) would be the obvious answer to guarantee connectivity, but would it be able to cope with the Cloud and everything else needed to run over the network, such as voice calls?

With the wide-spread adoption of cloud-based services we are seeing a rise in the demand for new product offerings that complement the existing business set up, not only in the underlying network access technologies (such as the move to low cost fibre connections), but in the way that resilient bandwidth is utilised.

One approach many companies are adopting to resolve this challenge is what we call 'active-active'. The key benefit of this new breed of solution is that it is based on two, separate access lines which work together under normal circumstances, one line taking priority traffic such as corporate client traffic, voice, intranets, ERP etc. with the second line taking non business-critical traffic such as web browsing of the Internet, social media, extranet etc. The key is what happens when the primary or secondary line fails; you need an MPLS network that is clever enough to reprioritise the traffic down the single remaining line, so the business-critical traffic can still get through.

This not only requires an observant service provider with the right monitoring tools in place to identify when a line fails, but also a core MPLS network that is smart enough to be able to reprioritise traffic based on where it is needs to go. This degree of sophistication needs careful consideration, as not all 'resilient communications' offerings were born alike.

This is not to say, though, that business continuity management can be the silver bullet to companies' cloud concerns. Cloud computing places entirely new demands on the network – and in many cases, a company's existing infrastructure will not be able to accommodate them. Given the shift from locally hosted data to hosting within external data centres, it is reasonable to assume that the service levels, performance and bandwidth of a corporate network may not be up to the task.

We know that designing an MPLS network which meets the performance criteria for key business applications, while supporting the day-to-day needs of end-users, is no mean feat. One certainly cannot make decisions based on the top-line claims of service providers. It is critical that the service provider takes the time and effort to understand where your data is physically located, and how it moves through the network, before recommending a suitable network design. The market is awash with providers offering MPLS solutions that appear simple and straightforward – neither is true if you wish a Cloud strategy to really deliver.

We believe that the time of ‘fit and forget’ MPLS networks are now over. A solution must be chosen that has an added layer of intelligence – what we call SMART MPLS. This innovative solution delivers stable connectivity at all times; should a fault occur the solution prompts the network to automatically locate the source and take remedial measures. This ensures connections remain stable, services can be quickly switched and end-users are not affected.

Over and above this SMART MPLS are simple to configure for optimum performance, with the added benefits of low capital expenditure and ease of management. The key difference between MPLS and SMART MPLS is that instead of the MPLS network understanding and prioritising IP traffic, it is able to understand, report on and more importantly react to the applications that are flowing through the network at all times.

It's critical, we think, that everyone ensures that their service provider is able to provide this application aware capability. As the Cloud is set to place ever greater demands on corporate networks, companies will expect their networks to rise to the challenge. Without the inbuilt flexibility of ‘active-active’ services, or the intelligence of SMART MPLS, there is a real risk that companies’ first large-scale experiences of the Cloud will be poor ones. I hope that I will be proved wrong.

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