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Beyond.
The cloud

How the right infrastructure
helps you push past promises
to tangible results

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The cloud argument has been won.

Few CIOs today would demur that hosted 'cloud' computing and services are now a viable option for businesses or government organisations and that they are capable of delivering significant cost reductions.

What needs to be examined more thoroughly now is how that capability can best be made a practical reality. How can cloud services be done most effectively? How can they deliver against the things that really matter to organisations, like helping people be more productive and operations more efficient? Like keeping levels of customer service high despite cost-containment. And doing it all without compromising security.

For one thing is certain: the boardrooms of most organisations today and for the foreseeable future are imbued with a hard-nosed commercial pragmatism that has precious little time for hype. Unless the enthusiasm for exciting new cloud services is married with a more prosaic explanation of precisely how and what they will deliver, it will fall on deaf CXO ears.

Let's start with the fact that beneath every cloud there is not a silver lining but a simple truth: to take advantage of anything that is hosted in the cloud, be it virtualised services, data storage, unified communications or a hosted contact centre, you have to make sure the underlying structure is working as efficiently, productively and securely as possible.

That structure is, in every cloud case, the network.

Remember that cloud means networked...

This simple fact has often been overlooked amid the cloud hype. But it is of fundamental importance.

A virtual data centre is all but guaranteed to deliver cost efficiencies to any major organisation, but the value of these will be swiftly neutered if the underlying network isn't intelligent enough to monitor data traffic, optimised in a way that prioritises certain types of data and secure enough that it is as safe as storing the data in your own premises.

Supply of and demand for hosted Unified Communications are both reaching the appropriate levels for the market to finally explode, with significant productivity benefits within the grasp of organisations seizing the opportunity. What has taken UC so long to take off? In no small part, concern about the readiness of the underlying network. Optimal bandwidth and connectivity is required to cope with the flexing demands UC places on the network and it has taken time for network audit and optimisation tools to mature.

In another example, cloud contact centre services are a great way to cope with changing call volumes without having to invest in infrastructure that can cope with the peaks but be redundant during the troughs. But, again, there's no point having it if you can't connect both the agent and the consumer to the cloud in the first place. Without a global inbound network, the benefits are limited, to say the least.

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…and that it is the network that provides resilience

Even once the benefits of cloud services have been explained and accepted, much of the caution about the cloud relates to trust. And much of that trust is dependent on reliability and risk resilience.

The network has a crucial role, again, in building this trust. Modern, 21st century networks provide the highest levels of reliability. They are 'intelligent', meaning that the data flowing through them can be monitored and assessed. This has implications both for the effectiveness of the services sitting on top of the network – meaning that high priority data, such as financial information or customer calls, for example, can be routed to its destination more quickly than, say, email – and for security. By monitoring what stuff is flowing across the network, managed security applications can be literally woven into the fibre of the service, weeding out threats at the earliest opportunity.

Cloud is exciting. The hype isn't all groundless. As well as going beyond the hype that is, it's vital we remember what's beneath the cloud as well.

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3 Cloud Services: The CIO Decision-Making Process

Moving to the cloud is not a decision that can be taken lightly. For the 60 per cent of CIOs* who are actively researching cloud computing, or have it on their radar, the first thing they must consider in detail relates to the characteristics of cloud services, and how these will impact the enterprise.

Decision 1: Will my organisation benefit from the characteristics of the cloud? A comprehensive set of questions needs to be devised that are relevant to an individual enterprise, to examine the suitability of the cloud for that business. The questions to be asked can be grouped into four areas, based on the four key attributes of cloud services:

Attribute	Example questions the CIO needs to ask
Pay as you use	Do we want IT infrastructure to be an operational expense, rather than a capital expense? Can we account for costs that change according to monthly demand?
Elastic	Do we have a business model that may require the fast up-or-down scaling of IT capacity? If our requirements are steady, can we make the expected cost savings through cloud services?
Contract term length	Are we happy to deal with contracts of hours, days or months, rather than far longer fixed-term contracts? Do we have legal or procurement policies suited to buying-in cloud services?
Consumed via an online interface (either a web portal or API)	Are we comfortable consuming this service through a technology portal, without human intervention? Are we trained and do we have the systems ready to buy-in capacity on a monthly basis?

Decision 2: Are we clear what cloud services we will consume? The cloud describes a way of consuming a service in one of four categories:

1 Infrastructure-as-a-service

2 Platform-as-a-service

3 Software-as-a-service

4 Business process utility-as-a-service

What CIOs select as a service, which will depend in part on how much of a function they are prepared to impart to a trusted third party, makes a huge difference to potential outcomes such as service availability and return on investment. The potential for delivering business impacts can be described like this:

Cloud service	Example: How the CIO would use the service	Potential business benefits	Potential business threats
Infrastructure	Rent virtual servers, disk space, network equipment and data centre resources, rather than investing in your own	Eradicates capital expenditure on server equipment; can have a positive environmental impact	Loss of strategic control over equipment investment programme; loss of direct control over service level
Platform	Rent infrastructure as well as operating system and application resources required to perform your business	As above, and also eradicates maintenance of applications and operating system upgrades; speed of development can be improved	Platform may be inflexible with respect to changing enterprise requirements; the ability to switch service provider could be impaired

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How can BT Global Services help you find your way in the cloud?

"Last year BT invested £2bn in network and products. Now is the time for our customers to leverage that investment."

BTGS delivers powerful network services to connect organisations to their employees, customers and the world.

Crucially, we don't attempt to offer one type of network to everyone. Our flexible combination of connectivity can include Ethernet, DSL, Hybrid VPN, iVPN, MPLS, satellite broadband, IP networks, telephone systems, private telephone lines, analogue private circuits, managed LANs, and much more. Legacy system or new installation – we'll connect you the way you want.

Whatever the nature of the network underpinning an organisation's applications – whether they are in the cloud or not, it's critical that it is optimised. Our Applications Assured Infrastructure (AAI) solution helps organisations achieve optimum performance from their business applications, delivering insight into network demands and helping to identify and resolve applications performance problems.

BT AAI helped the data-centre team at one global manufacturer shave months off its implementation time, saving €3 million in unnecessary software costs. The company's business drivers - a recent merger and acquisition, relocation to China, roll out of SAP and server consolidation - were established during the first phase of customer engagement.

Supply chain processes and information flows were evaluated and linked back to Key Performance Indicators (KPIs) and metrics. A global engagement identified areas for optimisation and included mySAP application modelling. Optimum communications design was established by user requirements profiling.

By providing ongoing monitoring and optimisation of mission-critical infrastructure, we can make sure our networks help eradicate inefficiencies – meaning organisations can focus on being productive, secure and keeping their customers happy.

Offices worldwide

Janette Bennett
Clinical Director – Asia Pac
Global Health Practice
BT Global Services
Tel: +612 9269 1000
Email: janette.bennett@bt.com
www.btglobalservices.com
Designed by Tag