



Datacentre Transformation and the Cloud

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When we think about how computing, there is a high standard to meet to convert enterprise IT investment to the new type of operational model that Cloud computing is proposing. We know that enterprise IT one way or another is always under some level of pressure because of market issues, because of economic issues, because changing in business culture. But the reality is that there's not necessarily more money on the table.

If we think about the ITT, the information, communication and technology budget distribution of enterprises, and here's an example of large enterprises, it's not that there's going to be more money available for Cloud computing. It's about transferring expenditure from one bucket to another. Investment away from, say, some datacentre investments, from hardware investments, from services, professional services investments, to this new type of operational model. That's part of the Cloud computing proposition, moving CapEx to OpEx in many different ways.

I don't propose to go the definitions of what Cloud computing involves but just here's a view of the different layers is you will of different services. The virtualisation layer refers to the datacentre infrastructure, which supports the delivery of these different services, be it infrastructure as a services, platform, or software as a service. And on the side is the need to provide security, compliance and governance around those different services.

Sound good, sounds like a nice idea, the reality is something else, and we're going to discuss that in the panel. But certainly for enterprises that we've surveyed motivations for one of these Cloud services such as infrastructure as service is cost. Management agility. As you can see mostly around the agility of the business and again transferring CapEx to OpEx.

The reality in terms of delivery of those types of services to my mind is a Cloud vendor community that is adolescent in its approach. It is cliché, it is squabbling over things such as standards, squabbling over service definitions. And, as someone who does spend some time in the Twitter-verse, that is a lot of what's being talked about, the focus is on the technology and not on the consumer, the paying consumer. There's a lot of immaturity.

So I think some of the common failing around Cloud computing are trust, transparency and professionalism. And I say this as someone who has audited, I think at this point almost 50

different Cloud vendors contracts, their service level agreements, their privacy conditions, the contractual terms. And in a former role my job was actually to negotiate contracts for IT and connectivity services so I know what the minimum standards are to actually—to expect in terms of procuring services for an enterprise. And I tell the gap that exists today in terms of Cloud computing contracts are considerable.

And enterprises are certainly wise to some of the realities of the Cloud service availability. And the critical reliability measures are here from this survey. They want service level agreements around network and applications, they want redundancy of the connectivity, redundancy around servers, back up. And I can tell none of this is a guarantee contractually from Cloud vendors.

Let me just give you a couple of examples before we move into the panel session, on what the reality is in terms of the contractual environment. It is worth realising, of course, in Cloud service you're not buying anything physically, you're buying a license. And you're buying a license to use a service and the term 'as is' is legally important. You're getting it with absolutely no warranties whatsoever. The Cloud interestingly is trying to displace some existing methods of doing business such as buying typical software yet it relies on a lot of the legal environment from software to disavow a lot of its contractual responsibilities. You're buying a license with very few guarantees in terms of what you're going to get in terms of support.

Here are a couple of examples from vendors. I don't want to say that they are the worst in the business, they are examples of the general standard in the business. These are just examples from their own contracts of where I think there are problems that exist.

One major player in infrastructure as a service is a company called GoGrid, and they market very heavily the fact that they provide a 10,000% SLA. So if you have a failure of their service for 15 minutes you get a credit, a service credit, of 15,000 minutes. And that sounds fantastic until you actually look at the detail of the contract, which says actually irrespective of the number of failures that their service might actually experience, the maximum you're ever going to get is two-month credit. Slight problem with that.

And pretty standard also in terms of disavowal of responsibility is this company SalesBoom, and this is standard of any contract, that you cannot get any type of liquidated damages for any problems that may occur in the service. It's your problem and your sole recourse is terminating the contract or some level of service credit. So the risk is down to you.

And the risk from a legal perspective is down to you as well. A regulatory perspective, the privacy perspective around Cloud computing is unexplored territory. But it's certainly true that the law and regulation did not anticipate Cloud computing and it is very unclear, irrespective of what jurisdiction you are in, how laws should apply to data in the Clouds, moving between Clouds, the involvement of third parties. And Cloud computing vendors again are trying to disavow any responsibility in these types of areas.

And I suggest to you you'll find very few that have actually gone through and gotten any level of certifications around security compliance. And here are some examples of the type of issues that enterprises are concerned that their ICT suppliers actually have in terms of quality processes, security and service management and data protection. You will find that very few Cloud vendors can claim that they have any of these types of certifications. Verifiable

assurance when it comes to Cloud computing is not there yet.

Now I'm not going to go through all of this but later on, if you'd ever want to go through this, these are the types of questions that enterprises must ask around Cloud computing, there's even more details that could be gone into. But even on the issue of data backup don't assume that that Cloud vendor has actually backed up your data, in most cases they haven't, the responsibility again is yours. So there are all sorts of issues that need to be addressed. And it's a black hole.

Now I'm suggesting, and this is my personal view, that if you compare Telcos and what they're providing in the Cloud and non-Telco vendors I think that Telcos could actually have a potential to fix some of these problems. And Telcos need to respond to the Cloud environment, partly because they're being disrupted by Cloud players, be they Amazon or Google or some of the software as a service players who are effectively challenging them in the peripheries of the market. I think that Telcos have a role to make the Cloud work a lot better.

And one of the roles I think for Telcos is potentially to be a trusted intermediary for the Cloud, not a broker of service but actually a trusted intermediary, providing a single contract, a single service level agreement. And allowing enterprises to if you will swap between Cloud vendors based on what rules of cost and governance and risk the enterprises might want to establish. And already some Telcos are positioning in the space and identified two European companies, BT and Deutsche Telecom. And in Asia I think that companies like SingTel and NTT potentially have got some of the assets to provide that intermediary role.

I think they're going to have to work with a number of vendors to achieve that, they're not just going to be providing their own infrastructure as a service I think there is this third party role that they can assert.

And some of the companies they might work with, and that actually enterprises should work with to make the Cloud work better are here and some of them are also on the panel and we're going to talk about what the different roles are in the market. But certainly there are a number of opportunities to federate and orchestrate Cloud services, to secure the services, to test and monitor Cloud assets for both enterprises and Cloud service providers.

And there are a number of technical dependencies for the Cloud. One is converged service management of physical and virtual resources. The applications environment needs to be reworked. You need, you need folks, you need a high performance network, you need ubiquitous coverage. And you need service persistence to make Cloud work properly. So the network isn't going to go away.

And you will need a converged datacentre infrastructure, you will need a next generation datacentre. And you know what, you're going to need IPV6, that's good news here in Asia where IPV6 has been something that has been invested in early. And you're going to need things like interconnect and settlement across different Cloud resources for Cloud interworking. So those are some thoughts around the realities of the Cloud environment.

**By Camille Mendler, Vice President – Global Service Strategies,
Yankee Group**

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