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PRIVATE CLOUD ROUNDTABLE





At this Reseller News roundtable on private Cloud, service providers got together to discuss the opportunity and challenges in the New Zealand market for Cloud service provision to enterprises and SMBs.

SATHYA MITHRA ASHOK (SMA): There is a mix of people representing different parts of the market at this roundtable. How does each of you perceive the market for private Clouds in New Zealand?. What are your customer's thoughts on the private Cloud and how are they reacting to it?

GEOFF OLLIFF (GO), VIFX: I come from a background where we would use a National Institute of Standards (NIST) definition of Cloud, which indicates that private Cloud happens inside a firewall. Yet it seems we have a lot of people working outside the firewall. My space is the enterprise space. We build Cloud-like environments for enterprises and Cloud for us has a definition of on-demand self service, scalable and metered solutions. It's an operational model not a product. And those are attributes which are fundamentally and economically more effective than traditional IT delivery mechanisms.

What we are seeing is a tremendous surge towards a much better way of doing what we have been doing in the past. Research, some of it from Microsoft, indicates that savings are in the order of 90 per cent, for moving to a multi-tenanted, on-demand Cloud mode. There is a 2010 MS paper and if you read it it will scare. it indicates that around 100,000 statistically independent workloads. The total cost of ownership (TCO) drops to around 10 per cent of self-provisioned infrastructure. now we know that the friends at Amazon are currently running around 360,000 physical machines and running about 2 million workloads.

We are really at the early stage of this change, and what it will look like in another five years is anybody's guess. This is not something that the technologists are going to control. It is something that the CFOs are going to control. However, getting there is hard, and the bigger you are the harder it is.

For me private Cloud exists inside the enterprise's secure space, whether on-premise or off premise – those constructs are irrelevant. What matters is that it is trusted and secure and inside the firewall. Its gonna be the the only way of doing things in the future in our opinion. and so the only challenge is how we help people cross that bridge.

This roundtable was sponsored by NewLease

Pictured above. Standing (L to R): Frazer Scott, Microsoft; Liam Barton, Telecom; Lee Miller, Voyager; Don Williams, Veeam; Divina Parades, CIO; Narendra Singh, ZeroOne/Compass Managed Services; Sathya Mithra Ashok, Reseller News NZ; John Wiltshire, Microsoft NZ; Warren Nolan, Newlease. Sitting (L to R): Doug Tutus, NewLease; Geoff Olliff, VIFX; Heather Gordon, Microsoft NZ; Joe Nacagilevu, Datacom



Liam Barton, Telecom NZ
Frazer Scott, Microsoft NZ

LIAM BARTON (LB), TELECOM NZ: Apart from security aspects to the overall managed services and professional services, the challenge is actually involved in getting someone from a current segregated architecture into web-based apps and data, and having security built into and between those layers. It is about being scaleable and being able to manage them. Actually the private side of it all is allowing you to be able to do some parts of it in-house before moving to the public or the hybrid Cloud. That's the model. There is a lot of work to be done

within NZ to get to that stage, and there is a lot of money sitting there in the next 10 years in getting to that state. It is the opening in the market – where private Cloud would allow you to move to that sort of position.

JOE NACAGILEVU (JN), DATACOM: In New Zealand private businesses have some virtualisation. Cloud is scaleable, and gives the users ready access to compute power and storage – on demand, up and down. A lot of people have virtualisation, not all of them have private Cloud. You

have to drive the automation to make enterprises realise what a Cloud service is – private or public. This is the area in which some consulting has to be done. There should be more sharing of experiences on the nature of public and private Clouds – that is the big kicker and it is not easy to do. But there is certainly a market for hybrid Clouds. That's the next big thing for us.

NARENDRA SINGH (NS), ZEROONE/COMPASS MANAGED SERVICES: Customers are generally used to the old model of running things, something they have done for years. With the Cloud, and moving part of their resources and data to another location potentially raises security as a concern and a factor. When they run the business, in the back of their minds, they are wondering where the data is sitting.

However much you assure them at the time of selling the service that all their data is secure and everything is behind firewalls, they have a nagging sensation at the back of their minds about where the data is actually sitting. There is a lot of work that needs to be done to convince this part of the New Zealand market and overturn their mindsets to have them believe that their data is truly secure.

The good part about that is that there is a whole lot of studies backing up Cloud security. And, even though there is still a feeling of businesses being like families and keeping things internal, the families themselves are changing. The family molds are changing, it is only a matter of time for people's mindsets to change,

Savings in the cCloud

ViFX's Geoff Olliff stated early in the roundtable that, according to a research paper from Microsoft, customers could look to save costs by up to 90 per cent.

He was referring to a 2010 paper that was published by Microsoft, claiming that with the right use of cloud technologies a 100,000-server datacentre can display 80 per cent lower total cost of ownership (TCO). According to the paper, the combination of supply-side economies of scale in server capacity, demand-side aggregation of workloads and the multi-tenant application model leads to the drop in TCO costs.

"The savings depend on what you are measuring," said Microsoft NZ's Frazer Scott, in response to a question on whether companies in New Zealand were seeing similar savings. "If you are strictly looking at licencing, you might not see that. But if you look at all the other savings that go around it, like power management, infrastructure, staff and others – the scale of it allows an organisation to likely reach it."

Voyager's Lee Miller, said, "I can think of a situation where savings could reach that high. We have had customers come to us with four users. Imagine them running an inhouse server and providing IT services. Now, imagine the cost of that versus running something for five dollars a month."

"I would challenge 80 per cent to 90 per cent savings on most services. That's a pretty big number, and you have to realise there are additional costs in moving to the cloud. What appears to be a relatively high savings can have a cost structure built on top of it. I would be very surprised with any cloud service that saves a business 80 to 90 per cent of costs, while delivering the service in exactly the same manner as they have been used to before," NewLease's Doug Tutus, said.

"As the number of independent workloads climb, the savings can become potentially available. The challenge is which economic and technical model is going to deliver those savings. The first provider to bring that to market and to realise on its value is going to have an advantage. It is kind of a race to find the right balance between technology and commerce," added Olliff.



Narendra Singh, ZeroOne/Compass Managed Services; Heather Gordon, Microsoft NZ

especially in the New Zealand market. And that will eventually determine how much of a force private Cloud will be.

LEE MILLER (LM), VOYAGER: To me the Cloud is all about savings and customers are dedicated to savings. There is a huge market out there as companies look to upgrade their existing infrastructure and people are increasingly talking about the subscription model. There are still people who prefer the traditional model, but they shouldn't be scared of what the Cloud brings to them. The move to Cloud is being facilitated by rapid virtualisation as well.

FRAZER SCOTT (FS), MICROSOFT NZ:

We consider the private Cloud as physically on premise or within a hosted environment with dedicated services. The interesting thing about that form is that it is more attractive for consumers. We were recently talking about Azure and Cloud services at Microsoft's 18th TechEd in New Zealand. Not always, but certainly frequently, I would trust data in an environment where I know there is an efficient organisation and a locally hosted environment backing up data and services. This is opposed to SMBs, where they might think they have a firewall and protection, but that's just what they think. Having the right expertise in the Cloud environment de-risks your investment.

SMA: Are New Zealand customers more happy with seeing something on-premise when it comes to private Clouds? Do they prefer to have their infrastructure where they can see it?

JN: I would have said 'yes' to that last month, but we are in constant conversation with customers. There are still small business that are hiding behind HyperV environments, but that is coming to an end. Customers are realising that they can put stuff out there and trust certain service providers, as long as they good SLAs in hand. That's true Cloud mentality – businesses want their services to be delivered to them.

LB: We are seeing active changes in group policy that enables Cloud services as well.

GO: Funny – we have observed that organisations that have legacy business models will take unusual steps to preserve those revenue streams. Certainly security and sovereignty are both raised as issues. That is a competitive platform rather than real platform. It suits agendas to raise security as an issue, but in fact it is becoming less of an issue. Very rapidly, and where there is substantial economic benefit in addressing that issue square on, then that's when the change will happen more quickly. Reaching and changing those business models are a big hand brake at the moment.

DOUG Tutus (DT), New Lease: From a customer standpoint, I don't think a lot of customers know what they want. The buyer is exposed to technology issues and only the amount of time they spend learning about it is. If you look at your average CIO they know what is specifically important to them but they don't know what they don't know. So

educating them in the process around the public and private Cloud has been a relatively short time frame journey, in which we stick to how you can utilise these tools to run your IT infrastructure.

If you are not sure about what you are buying you go back to your trusted partner or advisor, which is generally an IT guy, and that person is limited by his knowledge. We are in a chasm now where there is some knowledge out there with relation to the advantages and disadvantages of the Cloud and what it can do for your business, whether private, public or hybrid. We're dealing with what it's going to take to shift some of your workloads into an appropriate environment.

The future is really rosy. If you look at NZ market specifically it has generally had a high adoption rate into the Cloud, but there is still a vast blue eye of opportunity. Bearing in mind that an adopter of public Clouds is limited in what they can do or not do in them, the hybrid model would be the right model. There would be some attached to the public Cloud, some potentially on premise, some in a datacentre, and someone needs to manage these effectively whether through internal IT or outsource to some of you guys. An effective process to manage that environment – that's where we are today.

JN: As a sales target, there is the CIO and then the CFO as well. The CIO is being driven by partners and if he can't move fast enough then he will take it elsewhere. He has got on-premise solutions, and that's all he does. The sprawl will appear increasingly within the business and that's when things will change.



Carolyn Agombar and Keryn Algie, NewLease; Doug Tutus, NewLease

DT: I was reading an article the other day about the CIO. The consensus is that the CIO's role generally has been to manage IT internally. The tech officer's job is to go out and look for technology and bring them into the organisation. Most organisations don't have the funding to have a tech officer and a CIO. So they try and merge the two. so there is an interesting discussion to be had with respect to how these people have been exposed to the new technologies and how they perceive it for their business. And the exposure they have with regards to getting advice on that. So that's something that I think going forward from a Cloud perspective is definitely a challenge but also an opportunity – having these C-level executives understand what it can deliver and working with the financial department to have them see the commercial benefit of the technology choices.

SMA: Is there a specific kind of organisations that is more suited for or more likely to adopt private Clouds?

JN: Whether the Cloud is on premise, off premise or public, its a business discussion. The CIO is involved but the smarter way to have the conversation is to concentrate on doing something innovative with IT for the business as opposed to fighting. Provider-based datacentres and Cloud services are a great fit for any business. Any business is suitable to it. It does depend on what kind of uptake they are ready for and what they are looking to achieve from it. And it

is more than just technology – it is about availability and SLAs.

GO: There is a big application challenge. I don't disagree with Joe much. But there is the element of legacy systems. Customers who are new can adopt new technology more easily than those who have got legacy and momentum. The smaller company has an advantage over the large. The challenge for the large is then to break themselves into multiple small bits and find areas where it can be adopted. But what few are seeing in the enterprise space is the challenge or tension between historical monolithic app stack, which we have virtualised quite successfully. Now you have virtualised monolithic application stacks. So you can buy load balancing as a service at cents per the

hour as and when you need it. and when you need it you just get more.

Most applications are not built to take advantage of that technology. And until apps that big enterprises use can be interpreted into the new paradigm or re-architected. and that is a really big programming job, Cloud adoption will be delayed. The big vendors say it is going to happen, maybe around 2020. To me it is a very one directional kind of movement. You either get crushed by it or you move along with it.

But there's also a lot of people that would like to go to Cloud but they can't because their legacy apps are holding them back. And we can't get enough software engineers to build new apps with clients screaming for stuff, little alone moving to this.

Closing the skills gap

The roundtable saw strong discussion on the skills gap in the New Zealand market and how it currently affects, as well as is likely to affect, the perception and adoption of cloud technologies in the future.

"There is a lack of skilled software engineers in the NZ market. But the lack of them should have organisations better understand that Cloud will enable the IT staff to do more value-added activities. A certain proportion of our IT is non-differentiating – it is about keeping the lights on. That does not create value for the business. If we can offload that to somebody else, then theoretically we can use our staff for more differentiating activities, like creating value for our shareholders," ViFX's Geoff Olliff said.

"Partners are especially having a tough time with the skills gap problem. Qualified people get poached all the time. We are working with the industry to figure out how to build more skills, right down to talking to universities. There are growing opportunities, and people see that, so things should change slowly," Microsoft NZ's Frazer Scott said.

"Kids coming out of schools these days do not find technology very sexy. The way we deliver schooling these days is still archaic. That has to change. When technology is used within schools and for teaching, technology can get invigorated as a place to work in as well, and there will be more people keen to build new technology as well. New Zealand's not very different from any other market in this regard," NewLease's Doug Tutus, said.



Lee Miller, Voyager
Geoff Olliff, ViFX

DON WILLIAMS (DW) VEEAM SOFTWARE: I would like to add something on the challenges from a vendor perspective. Moving companies, especially publicly-traded companies, from a perpetual licence model of services to a subscription model is a big shift. It is hard to make that jump. But if you look at evaluations of companies that are subscription based these evaluations are much higher, by an x factor much higher, than those that are on the perpetual licence solutions. So if companies can't make that leap to that model, they will be left behind.

GO: Don, I think the challenge there is the terms of the subscription itself. Everyone will value up to 36 or 60 months subscription – not a 30 day subscription. so the idea of agility and the idea of scaling goes in both directions.

WARREN NOLAN (WN) NEWLEASE: If you look at finance models over a period of time where you have a mix of businesses and clients that are either very short term scalable subscription vs a mixed to longer term contracts, those businesses fit into what Don says in what they value. And I think in terms of valuing a business, customers might bring on a variable stack and because they are constantly bringing on new customers, some of those customers move from short term customers to mid term or long term. Because they then see that 90 per cent value saving that they can make by using outsourced, consumerised IT. In the past they might have said, I need to bring that in-house, I need to build a monolithic

stack. But the economic model does not allow that. So they use that short term initially and then they end up more and more in the Cloud.

The other thing going on from Don's statement about enterprises that can't shift is that perhaps there are some SMBs that are stuck with legacy systems, and they need to slice-and-dice their businesses to be able to adapt to the Cloud. Vendors are doing exactly the same. We have been dealing with Microsoft for a decade in supply licencing. Microsoft is constantly looking at what they can let go and slowly release and allow that into a subscription model.

With server and tools you can now licence on premise, on client-owned hardware, whereas in the past you could only use it with a perpetual licence. That enables Cloud-based utilisation. It allows service providers to work with a client that may not be able to move workloads into a Cloud environment, into a datacentre but get used to the business model of subscription licencing.

The CFOs are happy and the CIOs are able to take advantage of productivity improvement across the business. Vendors are working to break up the business into smaller chunks and make it subscription enabled to make the channel more subscription enabled at the customer end.

LB: Is that actually breaking the business into smaller chunks or allowing them to migrate in a transition – in that there is one service following the other in a time frame?

WN: I think they moving forward, all services are going to be licence or

subscription based, on a monthly, operational basis.

GO: What are your thoughts on the topic of opex and capex and whether one is inherently better than the other?

WN: It depends on what your business structure is. Depending on your cash flow, you might not value an opportunity cost valuation. Or if you are saying I have to invest upfront in a model solution where my licencing is all virtual and stuck in three-year agreement. I have spent that half million upfront and next month I have a major opportunity to take advantage of the fact that NZ has just done something like win its America's Cup back. I want to scale up to take advantage of it, but I can't do that because I cannot borrow more money from the bank. In that case, opex would have been extremely valuable to you – you wouldn't have committed all that capital. In some cases for a cash-rich company with poor assets, opex is certainly more valuable because they can pay for things as they go. For SMB businesses that are trying to scale, opex is very valuable.

GO: You don't have to predict the future in an opex model.

WN: Correct. That's the beauty of that model – you are only paying for what you consume. There is no future purchasing, no lock in. we were talking before about contracts with two- or three-year agreement. It doesn't have to be that either. There are many partners that



Joe Nacagilevu, Datacom
Don Williams, Veeam

provide short-term, mid-term and long-term choices, and they will look at how your purchase can be accommodated. Depending on when and how you purchase, you pay a particular rate.

DW: Veeam has been in the software industry for a while. Five years ago how many of the customers had software on their desks with pay-per-month options for they were using? As a vendor, we believe that we have to sell with our partners to customers, and not to our partners. We believe in helping our partners take different solution types to the customers.

WN: What customers are learning is that they have a service provider with a trusted environment, and if they don't consume then can stop paying for the service. More businesses are also providing excellent migration tools that allow organisations to shift easily. All

of a sudden there are commercialised IT services that are available to them.

SMA: Are all your customers seeing savings in the Cloud? Have you had examples of people stepping into the Cloud and stepping back?

EVERYONE: Not a single one.

DT: I did that. I stepped into the Cloud and stepped out of the Cloud. On some of the apps. And some of the services. To give you an example, take the desktop-as-a-service (DaaS) perspective. We drink our own cola and buy DaaS. The organisation that we were buying from couldn't scale technology-wise as fast as business was scaling, so service delivery dropped off. So we then adopted the public Cloud – we are on the Office 365 platform today. That means I get apps on my desktop and we have educated our business to use that technology in a different way.

We began using Sharepoint, CRM

online. We use Azure for some of our database management. We have built our bespoke Cloud infrastructure with some on-premise, and that works very well for us today. Larger or smaller organisations, each one of them will have respective needs that the Cloud can somehow provide for. It is not necessarily an all consuming everything into the Cloud scenario. Not for the mid- to long term anyway.

SMA: What are the challenges you are facing in delivering these services to the customer?

NS: In service delivery it takes time to build relationships with the person at the customer end. Relationships are an important factor, sometimes they are easy and sometimes they are not. Another factor is that both companies might have an SLA, but this is not exposed to staff. So staff demand becomes automatically priority one, even though it is not as per

Working on realistic SLAs

While availability of technology can affect Cloud adoption, so can the general situation in the larger economy and environment.

“There were a lot of companies calling us following the Christchurch earthquake. We saw pretty much the same interest level after the recent Wellington shakes. It is in everyone's mind, and these natural upheavals drive more people to take an active interest in Cloud services,” Voyager's Lee Miller said.

“There is also the factor of reasonable expectations. Customers need to understand that during disasters even providers might go down. The guarantee of the Cloud does not mean it covers everything. You can't just expect that the data will be replicated and recovered. Customers need to have a disaster recovery plan,” according to Datacom's Joe Nacagilevu.

NewLease's Doug Tutus said, “It also depends on what they are paying for.

There is a lot of difference between a 999 SLA and a 9 SLA. I am not sure that is very well understood today. It might be well understood in the enterprise space but not necessarily so under that level. Organisations build redundancies into their organisational IT most often, but they shouldn't assume that the providers have them in place as well. If an organisation like Netflix can make a mistake in the SLA with Amazon, then imagine anybody else.”

“It is not very different to any other service. Consider electricity. I get very annoyed when electricity goes down and more so when I can't get through to them or if the website is not updated. It is no different to any other expectations. Expectations can far and away be greater than the SLA in place. Customers need to be aware of what is realistically possible and some education might be warranted in that direction.”



Warren Nolan, NewLease

the agreement. Then it gets escalated to a level because you have not met the demand but from company's point of view you are still meeting the SLA. The service provider also has to have support people and maintain staff levels. That is ongoing. But the most important thing is the relationship with the customer – up to what level it is built and how long it will take to build.

JN: With private Clouds, the more self delivery that that can be provisioned to give power to users, the better. They

no longer have to wait for IT to procure or stand up a server – they can go up and grab the server. It reduces time and cost at the business end. It is all about empowering the user. With automation and self-provisioning the user experience goes right up.

GO: This is an area that is holding everybody back. The only environment in which you can automate is a relatively coherent, organised predictable environment. Trying to automate in the middle of chaos, or in situations that happen once, is a really expensive way of automating. So our experience is that many organisations are incapable of absorbing the process change that is needed to take advantage of these technologies.

We have had examples of a virtual server taking 10 weeks to provision, when a physical server takes 6 weeks to provision. It was a large outsourced contract for a multinational bank, and the system and procedures that controlled change in the environment were very rigid. So technology has extended well ahead of the organisation's ability absorb it and again, if we are in a competitive buss environment, then we wil take advantage by adapting our systems more quickly than our competitors.

JN: I think you will find the challenge being the virtualisation or presentation of the server being the easy bit. if you had a physical networking – people and teams to deliver the end to end service – but it breaks down. That's where

places like Amazon, they have got the whole stack. I mean the next things are network virtualisation and that's where it can all pick up our game and adopt those services.

FS: I think there has been a lot of conversation over the last few years on moving to the Cloud, and if you don't it will make your business model redundant. But businesses shouldn't rush in with everything they have. They need to be smart and do some precise thinking. They also need the right guidance on what they should move. Legacy being a problem to move to the Cloud is absolutely right. The other thing to consider is cost, whether it works for the business to move service off-premise and have someone else manage it professionally for them, and how it affects business satisfaction and productivity.

SMA: Where does each of you think the market is heading in the next three years' time?

GO: Ultimately, the agility, innovation and flexibility arguments win. Organisations will reconstruct themselves through competitive pressure to enable themselves to absorb the technology and use it to replace legacy models. It is my belief that the Cloud is a fundamentally better delivery model for IT.

A time frame of three to five years is optimistic. It will be two to three years. We set up our business in 2007 to be virtualisation specialists. And that became a redundant model years ago. Despite the fact that we are small and agile and not

Five key takeaways

- 1 Hybrid Clouds are the model of growth for the New Zealand economy giving companies the best of both worlds in terms of on-premise and off-premise availability.
- 2 Bigger enterprises might find it harder to get to the Cloud than their smaller peers due to legacy applications and the non-availability of apps that can function effectively in the Cloud environment.
- 3 Companies should not be afraid to move workloads slowly into the Cloud environment, and ensure that the service provider they choose has the right environment and security measures.
- 4 Businesses should have reasonable expectations when experimenting with the Cloud and create comprehensive SLAs that provide them the availability they require.
- 5 Cloud is definitely the future, and it won't be long before all of IT will be delivered as a utility to companies large and small.



Far left: Nick Elias, Reseller News; Left: Narendra Singh, Zero One/Compass Managed Services; Frazer Scott, Microsoft; Don Williams, Veeam; Warren Nolan, NewLease

married to legacy, we have been surprised by the pace of change. We see early signs – we see the storm front coming and suddenly it will be there.

Government regulation is helping in this regard. The NZ government has been prescient in its demand that all government products are supplied as a service. That's the kind of lead the market needs and it has given this Cloud concept legitimacy. We are facing a time of system-wide sudden change. It is a time of turbulence. Early adopters are setting the pace and people will follow quickly.

LB: Moving the entire IT department and services will take time. We see the rapid adoption of hybrid-type capability, where you have some on site, some co-located, a bit of private and hybrid. That is going to get people interested. If I was a CIO or an IT manager, I would draft an SLA and see what a business can deliver to my business. So the hybrid model, with increased bandwidth, will push adoption. That will certainly be a great thing for NZ.

JN: I agree with both of them. Private on-premise will become less of a strategy as hybrid Clouds come on. You can't beat them, you have to work with them. The hybrid model is going to be the preferred model for a few years. But it is evolving, and the landscape is going to change considerably.

NS: I agree with all of them. In New Zealand, small businesses and medium

ones are investing. The recession mindset is easing up and they can see the potential of the Cloud. Another factor is organisations currently using the Cloud that will be presenting them as references. This will improve confidence and adoption. I can see that happening and it will happen soon.

LM: There will be consolidation to start off with, especially in the area of apps and Cloud infrastructure. For us the future is about offering a one-stop shop to provide apps through syndication, and Cloud and infrastructure services that business need. We are also moving into Cloud storage and there will be a lot of innovation coming through.

WN: The biggest drive from our businesses is going to be not just technical, but making themselves Cloud-ready as a business. Vendors are moving towards licencing programmes that enable you to have one type of licencing across all aspects of Cloud or on site deployment you choose with service providers. The operations side is going to ensure that they are getting the right services from service providers, and that they are providing cost-effective services that fit the SLA. From the productivity side, sales and marketing will get the promise of IT delivery as a result of service providers and vendors working to deliver on the SLA. They are providing options to clients to help them consume the technologies as they are ready to.

FS: The whole move towards consumer services on a pay-as-you-go level is absolutely where everything is going. Moving forward, at the infrastructure level, everything will be virtualised. It is about how we build together a conversation about what's right for customers – yes, on premise, yes hosted, yes ultimately public Cloud as well. Our vision of the Cloud is that's the direction we are heading in – a licence model that enables you to get what you want and the way you want it. That is what makes your business move ultimately.

DW: People were thinking about virtualised apps a few years ago. Now the discussion is around private, public and hybrid Clouds – the definition is purely a matter of where the data sits with regard to the firewall. The private Cloud is an easy step to go forward into the Cloud – a launching pad onto the stage. In two or three years time, it is going to be the norm.

DT: The line between public and private will be merged going forward by both service providers and consumers. Customers won't even know where they are getting their services from. The future is not about brands of software and what their relative advantages and disadvantages are, it will be about whether customers want to do particular things with the business. It will come down to platforms and services, and whoever can deliver them the best and in the most economical way will win.