Commentary: Virtualisation and Datacentre Transformation

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Tim Dillon, Associate Vice President – Research, IDC is setting a scene around virtualisation and datacentre transformation at NetEvents 2010 APAC Press Summit. “How do I as an IT services provider, tie my service delivery to that endpoint of customer satisfaction?”

I would like to spend a few minutes setting a scene around virtualisation and datacentre transformation. And you can see there, four areas if you like, which are really different aspects of an enterprise environment. So you have a CXO, the line of business, the IT functions and capabilities. And all of those organisations face, I guess different pressures and different demands.

So if you think about it from an IT perspective the better use of kit is something that was absolutely fundamental and important.

If you think about it, from a CXO perspective, if I talk to a CFO one of the things that has been fundamentally critical and top of their agenda has been the removal of CapEx particularly in the current commercial environment with the GFC. How do I strip CapEx out of the business?
If you come back to the IT perspective, again you can see there that it’s all around optimisation. It’s about bringing benefits and efficiencies and value for my infrastructure.

And then you come to the line of business and they have different priorities again. So the line of business guys are around my customers, speed to market, different priorities.

And if you start to look at how that plays out across an organisation you end up with a different emphasis, almost a divergence of paths around IT. So you have a lot of conflict inside your organisation — a lot of conflict and different priorities.

And then we said what are your priorities, if you think about from an IT and a line of business perspective. I’ve just pulled some out of there. The red, for those of you who can see it properly, the red is the line of business and the green is IT. The thing is that if you look at where those things converge, you have datacentres and customer care and if you roll that in together you have datacentre transformation as well. So this is an area of priority both from a business and an IT perspective.

I think that's important to understand where it goes because in the current GFC climate a lot of organisations have said we're going to pull back our spending on servers and that's a problem as well. So I'm not going to spend all my time walking through all these charts. I'm just trying to give you a little bit of a flavour for what we're seeing.

The other thing is the market in IP for virtualisation, it's actually quite a good market. If you look at that chart, that shows you a couple of things. The first is the penetration of virtualised servers across AP, some peaks and troughs but also this percentage of new servers that are being shipped that are virtualised. You can see there that Australia is actually a reasonable market for virtualisation. It's quite a mature market. But if you look to that chart, New Zealand, Hong Kong and Singapore are relatively low penetration right now but a lot coming into the marketplace in terms of new shipments coming through. So a lot of focus on virtualisation — a lot of focus.

It's interesting when you start to explore where virtualisation is going to go and I think if there's one chart that I would refer you to for any discussion about where virtualisation is going, it is this. And this maps forward if you like, from where we are today which is this Virtualisation 1.0 to 2.0 to 3.0.

The thing for me is actually not so much the technology play. It's actually the driver. And you can see on this line there, the vertical line running up through the chart, that the change becomes — the 1.0 the CapEx play which is where we are now, rolling forward, this is cash management, this is OpEx, 2.0, 3.0. So the business drivers around the deployment of virtualisation are shifting. It's shifting quite significantly.
The capabilities that you can see up there, this is where we think the marketplace is going to go in terms of where virtualisation will develop.

And it's a very interesting one because if you then go and say well, what are the drivers? Top one reduce costs. It's a bit of a [gimme] isn't it. If you go to an organisation and say do you want your costs to go up by 20%, they're not going to say yes. It's always going to about the thing that we want to drop our costs.
But in a virtualisation play and a datacentre play cost is absolutely fundamental and critical. I'll give you a couple of examples of that. In Singapore I think energy costs have risen 12% this year, give or take 12%. That's being driven by the change in the price of oil. That has an impact upon your datacentre and your virtualisation environment or your server environment anyway.

In Australia the expectations are that in the next three years, energy costs will rise 60%. Now if you have, like we do in Australia a heavy loading on datacentres right now, high energy consumption, not much available space left if you like to push more servers into the datacentre, a 60% increase in costs over the next three years in the business is crippling, absolutely crippling. So that is a major problem. So cost is a big issue. It's a very big issue.

If you look at that second point, server utilisation, I think whichever analyst house you use, which vendor organisation you speak to, all of us as an industry are going to tell you the utilisation is not where it should be. You can probably walk through a datacentre and turn off even 15% of the servers that are sitting there physically and nobody is really going to yell at you, to say where's my app gone. It's about 15% unused. They're still sucking power, they're still pulling aircon, they're still all the things that they're doing just sitting there but it's not

being used. It's about 15%. I don't care what number you use, there's going to be a problem with utilisation.

The third is simplification of management. A server environment can be complex. The thing about virtualisation is that it's supposed to make it easier for you.

So the expectation around virtualisation in a datacentre is going to be cheaper, it's going to increase my utilisation and it's going to simplify my management. I've just told you two out of three of those things which are lies. So it's going to be much more cost effective, it'll drop my utilisation and it'll be simpler to manage. Anybody want to take a stab at which one is the actual truth?

The thing is, if you start to look at the economics of virtualisation, and I'm a fan of virtualisation but I have to say you have to be careful how you do it. This is a busy chart so I'll need to explain to you what this chart shows and I'll work from the bottom up. The bottom, this yellow line shows you the spend globally on new servers. It's fairly constant, give or take. It's a reasonably stable environment. Come up a layer, that grey is the management of that physical environment. This is the costs associated with running those servers in a physical environment. Again fairly stable.

What I then want to draw your attention to is the light blue that's growing, that is the cost of virtualisation. That is the cost of management of a virtualised environment.

We have organisations, we were approached by an organisation in Australia, a large corporate late last year who say we went down a two year path of virtualisation. It didn't work. It's more costly, it's less efficient, how do we go back to a physical environment. This is an organisation that has a global footprint, spent three years, investing in a virtualised environment. I would fire the IT guy frankly, but nonetheless they're now saying oops, we went too far.

So there are some catches around virtualisation and we want to explore that as a group because I think it's important to understand how these things impact upon an organisation. There is expectation that it's less costly. In some areas it is. Your management cost scales up significantly.

So where we do think this is going to go in terms of an evolved infrastructure? We are over here right now and this is the dedicated design. It's interesting listening to Jay this morning. He's talking about how HP is transforming into a converged environment away from a siloed approach from other vendors. I think this is where we're going to get to. We're going to have this shared service where we're going to end up, over there on your far right, which is probably a mix of a cloud and shared services design. This is where we think it is going to go.

So I'm going to just have a little bit of commentary on cloud. What are you going to take into the cloud? So we went to organisations and said what are you going to do now, what are you going to do three years out. So blue and red on that chart.

A couple of interesting things. At the top, IT management applications collaboration. You kind of expect that. Down at the bottom there, there's some fairly significant expectations around the server and the storage environment into a cloud. This has implications for a virtualised environment as well as datacentres.

I was talking to an organisation in Australia, 600 employees. Actually their architecture is going to be incredibly simplified. Their CIO basically said we have 600 people. All of them will use an iPhone. We have iPads pre-ordered and we're not going to get them in Australia and we want a Google Box environment. That's it. My architecture for 600 people in a national footprint across Australia is iPhone, iPad, Google Box. I don't have to worry about my servers. I don't have to worry about a lot of my traditional IT infrastructure. That's an interesting one too, in the context of where organisations are going to go.
So the server and the storage capacity is an interesting one in terms of what's going to go into the cloud. I think we have to be careful when we look at virtualisation and say it's all these things, it's going to be great, it's a panacea to all our business requirements around the datacentre environment. There are some catches.

At that point I'm going to stop. I've tried to very quickly give you a scene set for where we feel the datacentre and the virtualisation environment will go. My last comment about this is that if you think about cloud as a business model, cloud is a utility computing. Whatever you want to call it, define it however, it effectively means a pay for usage basis. That is going to significantly impact further on a virtualised environment but also the business models of organisations. So right now a business structure, let's say a 100% of my cost base is 60% hardware, 40% software, just a nominal example. We think that the cloud and the virtualisation environment is going to change that model significantly. You have a 50% fixed cost, whatever that's going to be. 35% of the cost of my business in the IT and coms environment is going to be utilisation. It will be pay as they use.

Above that you're going to have other organisations push what we term business outcomes, in other words tying that ITC service back to an outcome. NetEvents want to become if you like, nominally a broadcaster of these sort of things to a global audience. They're doing that now. One of their themes could be customer satisfaction. How do I as an IT services provider, tie my service delivery to that endpoint of customer satisfaction? That's what I'm talking about, business based outcomes.