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Rock Solid Datacenter Solutions: Which would YOU choose?

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I love starting it with this, the cloud changes everything, and I usually have a question mark on it, because I'm not so sure that I agree with this. So I usually have people that give me the roll of the eyes. I think really what's important here is how we define the cloud. So I have heard integration is a service, bare metal is a service, is a new from software, I think is interesting.

What we have really done is we have taken the definition and the IT industry has wrapped it around the boundaries of technology. That is not what it is at all. If you tell me that cloud computing is a new way to consume and deliver resources, then it is going to change everything. The fact of the matter is cloud is changing everything, because end users are ticked off.

IT has become the organisation of no, and speed – they don't have the speed, they don't have the agility, they are soaked by software providers who milk them for maintenance costs for years. So it just got to a point where that is really what's driven the market forward. IT CIOs couldn't care less about how we define cloud. What they want to do is they want to take workloads and applications, map policy against them and find the best execution venue for them; it can be internal, it can be external, it can be cloud shared, it can be cloud dedicated. It's all about choice and it's all about optimisation.

With that intro one thing I'm not doing here is saying that there is going to be four massive data centre providers that rule the world, that's not what I am saying. Keep in mind that I said it is all about choice. There can be micro data centres, latency sensitive applications where latency and proximity is an issue. And there is also going to be a number of – we talk about the internet of things, we talk about batch processing; massive amounts of processing that will have to happen. That is going to happen in some fairly big data centres.

And there is some disruption, and that's what I want to focus the panel on, is disruption. So how this ticked off user base and how cloud has really disrupted the whole value chain, right down through the facility to the network, etcetera.

So these are these big billion dollar data centres, the one up here on the left is Apple's, the one over here is VNSA, big massive, massive data centres, 15, 20 times the size of a soccer field. Google's I think that's in Great Plains, I've been there at that one. But the one that's really interesting, that made me create this slide, was I had a discussion with Christian Bladey at Microsoft. This is Microsoft's new [Boyd] and Virginia data centre.

It is really interesting for a number of reasons, one is it looks different from the others, it is outside, it is open air cooling, it is modular, and they drop those big, they look like big transportation rigs onto slabs and that's how they expand with some modular build. The really interesting thing for me though is there

are no generators. So what's happening, the more I talk with Christian, what's happening is we're moving toward this world where we have this software resilient data centre. He said to me, if stuff goes down I don't get called any more, and that's a paradigm shift. So it's this disruption down into the facility that will drive change into the network, which is where I'm trying to go with this.

What is going to be really important is, how do you build an eco system where you can ensure this resiliency? And it's not the resiliency of the facility; it's the resiliency of the service. For data centre folks and facilities folks, we own Uptime Institute, it's a bunch of facilities guys, when we talk about this their hair stands up. This is a real radical shift, and the implications on the network are pretty big.

So the way that networks have to be architected, if this is going to happen, is you're going to have workloads and mobility, VM mobility happen where workloads are spread out; the real essence of distributed computing. And the architecture of the network's going to change; you can't have a tiered architecture any more. So, what happens with protocols like [Spanning Tree] as we move to flatter networks, we move to [Trill] there's lots of discussion here about software defined networks. There are implications on security and server bandwidth. We talked a lot about bandwidth and Ethernet. Really, data centres will need to be more scalable and more application fluent if they are going to make it in terms of how we move to the next generation.

Just keeping in line with Ethernet and the discussions here about Ethernet, we are seeing this shows results of interviews with end users, gigabyte Ethernet to the desktop, 10 gig Ethernet to the backbone. We're seeing accelerations in all these services as demand rises and we see more of that east-west server-to-server traffic and bandwidths expanding etcetera.

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