

# The Cloud is Not Just About Cheaper IT, it's About Better IT

An interview with Chuck Hollis, VP Global Marketing CTO, EMC Corporation



Dimension Data: As clients accelerate their adoption of virtualisation towards cloud computing, what are some of the major challenges they are facing and what are the steps they can take today to get ready for private and public cloud computing?

A lot can be said on this topic, but in the interest of brevity, I'll keep it to more manageable pieces:

- **Adopt a virtualisation first policy.** Don't invest a single dollar in the physical legacy unless all alternatives have been exhausted. Make sure that every piece of technology that lands on the data centre floor moves you closer to the goal, and not away from it. No U-turns.
- **Create a next-generation environment,** and point it at your loudest critics. By next-gen, we're not only talking integrated virtualised technology, we're talking service provider processes and procedures that create a cloud-like experience for end users. By loudest critics, I'm referring to the people who routinely criticise how IT goes about delivering its services. These can be application developers, business analysis professionals or just about any cadre of demanding knowledge workers in the organisation.
- **Don't underestimate the impact of organisational change.** The underlying proposition here is to do IT in a new way, using people who've made a career of doing it the old way. The larger and more entrenched your IT organisation is, the more of a challenge this can be.
- **Enlist the business.** So many IT organisations have created walls between themselves and the people they serve. Those walls are going to have to come down for meaningful change to occur at an accelerated pace. Invest in the time and resources needed to have ongoing discussions with key business stakeholders before, during and after the journey.

- **Focus on what matters.** It's so easy for this discussion to devolve into a beauty pageant around who's got the best technology, simply because that's a topic that most IT professionals feel comfortable discussing. Many IT leaders are using pre-integrated IT infrastructure (such as the Vblock from the VCE Coalition) to accelerate the transition, and focus the organisation on achieving immediate results.

- **Learn from others.** If you're an IT leader, you're not alone. Just about every IT organisation will have to make this sort of transition over the next several years, so it's easy to find people who are in your situation that you can learn from.

Dimension Data: With all this market hype around cloud computing, can you tell us about how storage and data management will need to change to support cloud computing?

We're fond of saying cloud changes everything: how IT is built, operated and consumed. Storage and data management topics aren't immune to this discussion; indeed, most of the anxiety around cloud has to do with security and data management topics.

Like other parts of the technology landscape, storage has to become fully virtualised alongside servers, networks and other components. It has to dynamically deliver a wide range of service levels (and cost points) from the same underlying infrastructure.

Storage has to be increasingly managed in concert with other technologies, and less as a standalone discipline. New control planes need to be established to make sure that information is consistently protected and secured even where it might be moving from place to place.

Using EMC as an example, you can see those themes already evident in our portfolio. Storage virtualisation is de-facto now within individual arrays, and increasingly across multiple arrays in potentially multiple locations. Auto-tiering technologies (such as EMC's FAST) automatically deliver a wide range of service levels and cost points from the same shared storage infrastructure.

New storage management models increasingly coordinate with the server virtualisation layer and the newer crop of integrated infrastructure managers. And not only are there new tools for protecting and securing data, but new ways of managing it as an end-to-end service – whether implemented in the data centre, or through a compatible service provider.

One thing is for sure: there won't be any less information to deal with in this new world, and information won't be any less important.

Dimension Data: Virtual storage is fast becoming a reality with the release of VPLEX from EMC – can you talk about why VPLEX is so revolutionary in the storage market?

One key aspect of cloud is the ability to progressively aggregate larger and larger pools of resources: primarily servers and storage. The larger the dynamic pool, the better – generally speaking. You can run more efficiently, you can respond more quickly to changing conditions, and you can protect applications and data more effectively.

From a storage perspective, we've done a good job at creating these dynamic storage pools within a single storage frame.

But that's not enough. We need to be able to create pools across multiple storage frames from potentially multiple vendors, and – ideally – allow these pools to extend over progressively larger and larger distances.

That's what VPLEX is about – creating these dynamic, flexible and non-disruptive pools of storage resources that can incorporate multiple frames from multiple vendors and, over the next year or so, progressively incorporate storage resources in multiple locations separated by considerable distance.

One thing is for sure: there won't be any **less information** to deal with in this new world, and **information** won't be any **less important**.

Taken in its entirety, it works alongside server and network virtualisation to create very appealing clouds that can not only ignore geographical distances, but leverage it in interesting ways – for example, dynamically relocating applications and information closer to users to improve the user experience, or perhaps take advantage of cost-effective capacity in different locations.

More pragmatically, clients are using VPLEX today to simply move storage workloads around from device to device without having to take downtime or otherwise impact users. It's pretty exciting stuff.

### Dimension Data: Can you talk about storage in the cloud and the how real it is for clients today?

It's more real than many people imagine, once you start focusing on real-world use cases rather than generic theory.

For example, doing backup and other forms of data protection to external service providers is quite popular, simply because the service provider is physically and logically separated from the primary application location. Technically speaking, that's storage in the cloud, although most people don't think about it that way. Many of EMC's data protection products (Mozy, Avamar, Data Domain, Data Protection Advisor, etc.), are being used for this purpose today.

A related popular application is long-term information repository and archiving, especially with compliance requirements. We've been sending physical information records off-site for decades, digital records aren't really all that different if you think about it. In the EMC portfolio, that would be Centera, the newer SourceOne information governance platforms and portions of the Documentum portfolio.

There's a growing requirement to gather and dynamically distribute information content globally for many clients. They need multiple points of presence around the globe, managed as an integrated service that conforms to policy objectives. Many of these storage clouds are being built with EMC's Atmos platform.

Those are just a few examples where there's an individual storage discussion. Far more frequently, the storage is associated with an application, both of which are run externally: think SaaS, hosting, outsourcing, etc.

Taken that way, there's already a considerable amount of storage in the cloud!

### Dimension Data: Compliance and data protection are high on the agenda for clients – when people move to cloud computing, what needs to be taken into account to ensure compliance and data protection?

It's actually worse than that – the rules change all the time, often without prior notice!

As a result, we're strong advocates of policy definition and enforcement capabilities that are built in, rather than bolted on later. From an architecture perspective, virtualised entities (servers, storage, applications, databases, etc.) are relatively self-contained, making them easy to tag and identify from a compliance or data protection perspective.

This tagging or labelling capability makes a fully automated approach far more implementable: as policies are established for labelled objects (for example, information that can't leave Belgium, or must always be remotely mirrored at least 200KM away), policy enforcement is automatic. Compliance for existing policies can be monitored in real-time, non-compliant pieces can be easily identified and remediated, and the inevitable new policies can be implemented with a minimum of drama.

Harking back to a previous discussion around security, it's not hard to show that compliance and data protection capabilities can be far better in a fully virtualised cloud model – it's more a matter of changing established perceptions and protocols.

### Dimension Data: Any closing thoughts or comments?

Personally, I think Dimension Data is well positioned to serve its clients well through this transition.

The pieces are pretty easy to see – Dimension Data has access to a broad range of relevant technologies (including EMC's!), it has the intellectual prowess to develop the new services and skills that clients will demand, it has the important trusted advisor relationship with its clients, and – now as part of NTT – it has access to a world-class service provider infrastructure as part of its offer.

Indeed, the business of IT really hasn't changed – but how we go about doing it is certainly changing. And I think Dimension Data serves as the prototypical example of what clients are going to want from their partners going forward.

Thanks for the opportunity to share a few thoughts!

Chuck Hollis has been with EMC for 15 years. When he's not travelling, he lives in Holliston, Massachusetts with his wife, three kids and three dogs – and enjoys playing the piano, mountain biking, boating and skiing – in that order. Warning: do not buy him a drink when there is a piano nearby! His very comprehensive blog can be found at <http://chucksblog.emc.com/>.

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