

# Précis

Thoughts on IT in Business



Pay-as-you-go IT

# Editorial Panel

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# Pay-as-you-go IT

We've come a long way from the days when a single computer filled a vast room and had an army of experts to attend to it. Through successive generations of IT, there's been a quiet revolution: nowadays businesses don't run without it.

Not only are businesses dependant, but cities, countries and international commerce are all woven into a world where everything is networked... for many, connectivity and computing are so pervasive they're scarcely thought-about commodities.

This revolution has some remarkable outcomes: operating model fundamentals can be disaggregated and bolted together anew.

In this issue of Précis we consider one such remodelling – cloud, utility and ultimately, pay-as-you-go IT models. We explore the landscape and look at infrastructure and communications as services. We go on to review the implications of shared services on costing and IT service management.

In the words of Derek Wilcocks, our executive interview this month, cloud models can “provide the opportunity to completely redefine what one's IT organisation actually does”. What does this quiet revolution entail for your business?

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Editors

# Pay-as-you-go IT



## Lore of Cloud Computing

Computing in the Cloud a Matter of Building Trust

4

The IT market is abuzz with concept of cloud computing. That's partly because it is the next phase in IT deployment, operation, and consumption. More importantly, cloud computing promises significant business benefit from the fact that organisations can move some or all of their computing activities to specialist providers.

## Communications as a Service

Enabling Smooth Evolution Through Technologies

8

Whereas communication used to travel from the organisation outwards towards the consumer, it now also has to travel inwards from the consumer to the organisation. And that requires a different approach by the organisation to communication – as well as an ability by the organisation to understand, efficiently and effectively deploy, and then use a range of different technologies.

## Infrastructure as a Service

What's Your Appetite for Managing Things Yourself?

11

While most enterprises would prefer to control directly mission critical applications and the platforms that support those, they are increasingly open to not managing their entire infrastructure themselves. Using IaaS to augment or off-load utilitarian services is clearly appealing.

## Perspectives on the Journey to True Unified Communications in the Cloud

Interview with Derek Wilcocks, Managing Director of Internet Solutions

14

*Précis* recently spoke to Derek Wilcocks, Managing Director of Internet Solutions, a Dimension Data company, for his thoughts on the move to cloud services and what this means going forward, from a business and an IT perspective.

## It's Easier to Converge Machinery than People

Virtualisation is the First Step on the Way to Cloud Computing and, Eventually, Utility IT

17

The process of virtualisation forces organisations to decouple their systems and understand that hardware, software, networks and information are all commodities that can – and very often should be – independent of one another to provide flexibility of operations. However, while it reduces physical complexity – by enabling consolidation of, say, multiple racks of servers down to a single server – it introduces a level of management complexity.

## You Pay For the Type of Utility You Ask For

Ensure that Today's Ground Rules are Good Ones

20

As we move towards to a world in which IT becomes a utility and we pay per use – as we would for electricity – the question arises of how we will be billed by cloud or utility providers... and how to measure the value of the rates being offered.

## From Cloud Computing to Shared Services

Sharing IT Services with Others is Back in Vogue, Thanks to Cloud Computing

23

The move to standardise, abstract and utility-provision not only IT assets but also the management of those assets in many ways represents an evolution of the decades-old 'shared services' business model. This article considers remote infrastructure management (RIM) as a capacity and a construct to achieve shared services, from an IT service management perspective.

## Case Study

Financial Services Organisation Explores a Hybrid Model as a Vehicle to Utility IT

27

Dimension Data recently assisted a South African banking conglomerate to consolidate four smaller, separate data centres – one serving the holding company and three serving subsidiaries – into a single, state of the art, green data centre that supplies services to the four entities on a pay per use basis.

## Research Notes

What's New in the World of Technology Research

29

- Leading analyst firm recognises Dimension Data in the challengers quadrant for Communications Outsourcing and Professional Services Magic Quadrant, Worldwide, 2010.
- Over 50% of IT network devices have reached obsolescence

# Contents





# Lore of Cloud Computing

## Computing in the Cloud a Matter of Building Trust

The IT market is abuzz with concept of cloud computing. That's partly because it is the next phase in IT deployment, operation, and consumption. More importantly, cloud computing promises significant business benefit from the fact that organisations can move some or all of their computing activities to specialist providers.

This begins to make the concept of IT as a utility more tangible. IT as a utility would, like electricity or telecommunications, be provided on a pay per use basis by organisations dedicated to the provision of IT services.

In other words, cloud computing has the potential to redefine the financial metrics of the IT budget – allowing organisations to limit many risk factors at much lower cost points while getting better services than they can provide for themselves. Also, services can be tailored to demand, allowing organisations to fine tune costs as they grow or shrink. And, organisations can deploy new applications or services much faster – making IT an even more strategic platform for growth.

However, migration to cloud computing will not happen overnight. It will be a journey – and different for each organisation. One has to start with the reality of the existing IT architecture and make the changes needed to be able

to exploit appropriate cloud services, finding an appropriate balance between what is kept in-house and what is acquired as a service from a specialist provider. IT as a utility will evolve as more cloud services become available and prove themselves to businesses over time. Arriving at true IT as a utility could take five to ten years simply because of the wide range of changes in technology, business process, legislation, governance, and management frameworks that are going to be needed.

Adoption models for cloud services will vary but most organisations will have to start by making changes to the historical architectures that have allowed for tight integration between IT elements. IT functions will have to be separated to allow them to be replaced by services from a relevant cloud provider. Because the process amounts to virtualisation of the IT infrastructure at all levels, it allows organisations to take structured, risk-free decisions until they get to the point where IT can be viewed in a utility framework.

Many new complexities will emerge. Once IT functions have been separated and moved to various specialist cloud service providers, they'll need to be re-integrated in ways that ensure that the organisation's operations and strategies remain coherent. That usually means using system integrators – or cloud service integrators, as they're beginning to be known – as your single point of contact with the management of your multiple virtualised components. And right now there are not many system integrators who understand the cloud models, let alone know how to guide a client through the choices available. Finding a trusted advisor is therefore pivotal to the ease with which an organisation will evolve into cloud computing.

### Defining the cloud

It's also essential to understand what the cloud is before entrusting any part of your technology operations to it.

In very simple terms, therefore, the cloud denotes Internet-based computing, whereby shared resources, software, and information are provided to computers and other devices as on-demand utilities. Gmail is a very basic example. Google provides an email service to which users can subscribe (in this case at no fee) from a range of devices, whenever they choose.

A more detailed, business orientated definition from research house, Gartner, is: "IT resources and services that are abstracted from the underlying infrastructure and provided 'on demand' and 'at scale' in a multi-tenant environment."

By definition, therefore, the cloud has five essential characteristics: on-demand and self-service, broad network access, resource pooling, rapid elasticity, and measured service.

As Dimension Data global chief technology officer, Etienne Reinecke, points out: "By implication, cloud service providers will be focused on a specific area and must be able to provide clients with a better service at a more attractive price point than clients can provide for themselves. The provider must, therefore, have deep enough pockets to have invested in the

technologies and expertise – and in all cases, the redundancy – to give itself the economies of scale, the security, and the capabilities to substantially reduce both client cost and client risk while still ensuring its own profitability.

"Quite specifically, its own operations must be extremely highly automated, so as to provide the extraordinarily fine-grained, flexible services and pay per use billing that deliver the cost savings and operational efficiencies for which users move to cloud computing."

Cloud computing must not be confused with outsourcing – although outsourcing attempts to offer many of the same benefits. In outsourcing, the outsourcer assumes ownership of a client's assets as a whole and runs them on behalf of the client. The outsourcer's fee is directly related to the service provided. In the cloud model, however, services are more granular and organisations use someone else's infrastructure and applications on a pay per use basis. Also, they often use a number of specialist cloud service providers as opposed to a single outsourcing entity.

It's also essential to understand what the cloud is before entrusting any part of your technology operations to it.

Outsourcers will probably gravitate to a cloud-based architecture to deliver their services. Whether using the cloud or an outsourcer, however, the organisation loses control over the assets and, therefore, what is charged for them. But the level of trust in the provider that is required is greater in the cloud, because the organisation is that much more removed from control of the underlying technology.

### Elements of cloud computing

Changing to cloud computing is neither a rip and replace or short-term option. The reasons lie in Gartner's definition: "IT resources and services that are abstracted from the underlying infrastructure and provided 'on demand' and 'at scale' in a multi-tenant environment."

#### Abstracted from

Most IT architectures today are closely coupled, with the underlying elements heavily dependent on one another. The functional elements must be separated to allow each to be viewed as a service. One can then run the services oneself or have a specialist cloud service provider supply them as a service.

#### Provided on demand

Many companies use, at best, a low percentage of their in-house IT capacity. And yet they pay 100% of the purchase, installation, licensing, upgrading, support, management, and operational costs. So much more cost effective (and responsible towards shareholders!), surely, to pay only for what you use – and to be able to increase or decrease what you use in relation to your needs?

#### At scale

Cloud providers servicing multiple clients have to have more capacity and scalability than any one of their individual clients could afford to provide for themselves. Why limit your scalability when you can benefit from someone else's and also impose a rigorous service level agreement (SLA)?

### Multi-tenant environment

By sharing infrastructure among many clients, cloud providers can create scalability and economies of scale.

Cloud providers servicing multiple clients have to have more capacity and scalability than any one of their individual clients could afford to provide for themselves.

# Basics of Cloud Computing: Cloud and Service Types

Cloud types describe how the services are delivered as well as underlying ownership. Cloud service types describe the nature of the specialised services that are offered.

## Current cloud types

- Public Clouds – a core infrastructure made available to and shared by many. Examples include the Internet and Public Switched Telephone Network (PSTN)
- Private Clouds – are for a single entity. Infrastructure can be on- or off- premise.
- Hybrid Clouds – use a combination of private and public cloud services.

## Current service types

- Software as a Service (SaaS) – delivers an application as a service and eliminates the need to install and run an application on the client's own computers.
- Platform as a Service (PaaS) – delivers a computing platform or solution stack as a service, most often

providing a complete development platform for organisations requiring a development instance of an application.

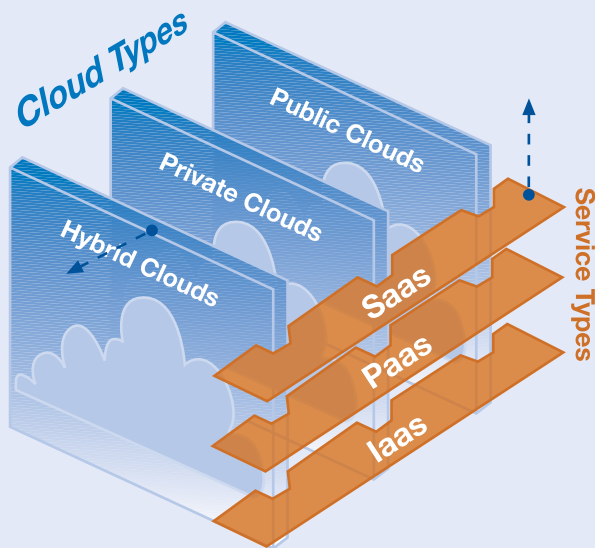
- Infrastructure as a Service (IaaS) – delivers infrastructure as a service with good examples including server CPU cycles, data centre space, storage resources, and database capacity. Usage is billed on a per use basis, capacity can be increased in small increments, and the service is governed by stringent SLAs.
- Communications as a Service (CaaS) – delivers granular communications applications as a service including voice, conferencing, and video services.

## Early challenges of cloud computing

- Performance and Scalability – Scaling offerings and maintaining sufficient performance is a challenge, especially for SaaS providers, who must deliver over networks and environments that they do not necessarily control.
- Security, Trust and Compliance – Many industries and countries disallow data or asset transparency. Also, some cloud providers have had outages with disastrous results, so trust remains an issue.
- Federation and Interoperability – IT functions typically automate a contiguous business process – and will thus require service integration among cloud providers.

There will be challenges around inter-cloud federation and integration standards.

- Vendor lock-in and Data Management – Data ownership in the cloud is not clear cut. Nor is the process by which data is to be reclaimed from cloud provider systems.





# Communications as a Service Enables Smooth Evolution Through Technologies

Business to business and business to consumer communication is technologically complex – not only because of the range of technologies and services on offer, but also because of the fact that, these days, communication with consumers doesn't go only in one direction.

The organisation is no longer in charge of which communication technologies it will use. The consumer drives demand for such technologies.

Consumers are, literally, talking back. They demand interaction with the organisations from which they buy products and services.

So, whereas communication used to travel from the organisation outwards towards the consumer, it now also has to travel inwards from the consumer to the organisation. And that requires a different approach by the organisation to communication – and, inherently, an ability by the organisation to understand, efficiently and effectively deploy, and then use a range of different technologies.

In addition, the organisation is no longer in charge of which communication technologies it will use. The consumer drives demand for such technologies.

In many instances, the consumer has in her home or in her pocket more sophisticated technology than most organisations have had the time, expertise, or money

to acquire on an enterprise-wide basis. Moreover, the consumer, in his role as employee, expects to be able to use that sort of technology in order to do his or her work. In fact, retention of talent is becoming dependent on whether or not an employer can provide the technology that its talent wants to use.

Perhaps more importantly, users are paying for and bringing their own technologies into the work place. So, organisations are having to find ways to integrate those technologies into their own systems. If they don't, they lose money – either through security breaches in their communications systems or through loss of control of how their employees communicate with one another and with customers.

On top of all that, effective communication can be a differentiator in the market. Organisations therefore need to find ways to incorporate it into their business model so as to ensure continuous performance improvement and, as a consequence, sustained profitability.

In other words, as Dimension Data's senior strategist for IT services, Wayne Yarr, says, "communication capability is the new killer application. It's not an application in the traditional sense of software. The term refers to the way in which communications technologies are applied to give an organisation the means to transmit and receive information in ways that drive the business forward.

"So, for many organisations, the question of which communications technologies they use is becoming irrelevant. What they want is a specific capability. How it is delivered or who delivers it matters only in respect of its reliability, performance, and cost. In the same way, people really don't care which power station is making the electricity they consume. They just want the lights to go on when they flick the switch."

### **CaaS is capability that doesn't rely on capex**

The business case for Communications as a Service (CaaS) is, therefore, very strong and, to a large extent, self-creating.

Organisations don't want the hassle of buying, installing, running, maintaining communications technologies – which are, in any case, in the domain of specialists. A range of specialists, in fact. People who specialise in outsourcing, or hosting, or providing cloud facilities for call centres would not automatically also be telecommunications operators or experts in video conferencing or Telepresence. It's difficult to find IP telephony specialists who also specialise in itemised billing.

Certainly, none of these areas are plug and play. They're complex solutions that have to be customised at least to some degree for individual organisations.

And, as Gene Chao, Dimension Data's vice president for sales in the Americas, points out, they all have to be made to work together to deliver the end result the organisation wants. "In line with the fact that most organisations want communication delivered as an application or service rather than battling with the hardware and related human resources themselves, they want all the disparate elements of their particular solution wrapped up in a single offering. At the very least, they want a single point of contact for managing all the elements.

"CaaS enables that, particularly if all the elements are managed on behalf of the client by a systems integrator or aggregator of CaaS offerings."

### **A telco is not necessarily the answer to CaaS**

Initially, many telecommunications operators moved into a space that looks a lot like CaaS. And, indeed, many organisations look first to carriers to find a communications package. It does seem the logical place to start.

What looked so promising, however, has more often than not turned out to be simply bandwidth with some relatively simple services attached. There is almost no customisation of services.

Yarr believes that that works for a large proportion of small and some medium-sized organisations whose communication needs, currently, are not especially complex. “It’s a bit like having your mobile service provider back up your files. If you don’t have that many files, you don’t have multiple branches, and you don’t need high speed access to those files under deadline pressure, then why not?”

“But if you need 300 people in offices spread over four continents to share and work on files for the next generation of passenger airliners, you’re going to want iron-clad security, extremely high access speeds, and tele and video conferencing on tap. If you’re a global or regional bank, with hundreds of branches and tens of thousands of customers, you’re going to want 100% network availability every second of the day, multiple call centres with access to all relevant information around the clock, and multiple carriers so that redundancy of bandwidth is guaranteed. Accordingly, you’re going to want a CaaS provider who is vendor agnostic and of sufficient financial health to be able to provide you with both advanced architectures and advanced services that will remove from your operations the burden of trying to co-ordinate and control all the diverse elements of your communications system. Ideally, you would work through an intermediary that can do everything in communication better and more affordably than you can – or at least one that knows how to source what you need and put it all together in the way that is most appropriate to you.

“Whether the intermediary does all of that for you on-premise or off-premise – or in a combination of the two – what you’re buying is not technology, but the use of it. That’s CaaS.”

### **Control**

Dimension Data’s global technology director, Neville Cousins, warns, however, that organisations do need to be clear about what their ultimate objective is in opting for CaaS.

“At the most basic level, organisations can take their communication assets off balance sheet and buy the facilities that those assets would have provided, at a fixed rate or on

Ideally, you would work through an intermediary that can do everything in communication better and more affordably than you can.

a pay per use basis, from a service provider. At one level up from that, the organisation can have its communications assets hosted externally or managed on-premise by a service provider. At the CaaS level, the service provider owns all the assets and the assets are shared by multiple customers. The organisation simply pays for what it uses of the assets and the related services.

“In all cases, however, and whatever the choice, the organisation needs to know that, while each option provides an opportunity for the organisation to cut costs, it also reduces the organisation’s ability to manage the costs taken over by the service provider.

“For example, if an organisation builds and manages its own network and infrastructure, it retains control over call charges. If it buys use of someone else’s network and infrastructure, it loses that control. So, always ask the question: what do I lose when I sign this contract? The gains will always be clear. The losses might not.”

When it comes to opting for CaaS and choosing the services you buy, decide on the functionality you want and then weigh up the risks of having it in-house versus off-premise. The decision will always come down to the ease with which owning or buying it will enable you to transition from one technology to another as technology evolves. Because evolve it will – and you need to be able to evolve with it.



# Infrastructure as a Service

## What's your Appetite for Managing Things Yourself?

One of the most fundamental aspects of cloud computing, Infrastructure as a Service (IaaS), is not a new concept. Organisations have been outsourcing the design, deployment, and management of wide area networks (WAN), storage, and data centres for many years.

IaaS is simply an evolution of those situations. What makes it attractive is that it is Internet (IP) based, the services provided are more inclusive and componentised than before, and it offers the operational and financial elasticity of paying per use.

In addition, it comes to market at a time when organisations are focusing on consolidating their infrastructures. Telecommunications operators (telcos), for instance, are rationalising as many as 80 data centres down to half a dozen – and financial institutions are increasingly consolidating instances of applications, infrastructure, and the facilities of their data centres.

One of the many benefits of consolidation is, of course, reduction of management requirements and, therefore, management costs.

“The recession has motivated organisations to go back to basics and focus on their core competencies, of which

managing infrastructure really shouldn't be one – unless the organisation is a systems integrator or a telco!” says Dimension Data's chief technology officer for Middle East and Africa, Mayan Mathen. “By the same token, while organisations are going to consume ever more technology, because it is the business enabler of our time, their appetite for managing it is going to diminish proportionately.”

Keith Murray, Dimension Data's director for managed services in Australia, feels that while most enterprises would prefer to directly control their mission critical applications and the platforms that support those, they are increasingly open to not having to manage their entire infrastructure themselves. Using IaaS to augment or off-load utilitarian services such as e-mail, sharepoint, or web-services is clearly appealing.

Infrastructure as a Service (IaaS) defined: Organisations buy servers, software, data centre space, or network equipment in a virtual capacity as fully outsourced services that are billed on a utility computing basis that reflects the level of activity.

“For large organisations, IT has historically been about just in case, rather than just in time. However, cloud facilities show enormous promise because, amongst other things, elastic compute capacity can be used to service peaks while potentially lowering costs. Coincidentally - and possibly triggered by the recent financial crisis - many enterprises are looking to augment their current IT assets or repurpose old ones. The quickest and most affordable way to do that is by exploiting some form of IaaS. That simple step is probably the most important one to take on the journey to cloud computing.”

In addition, technology and the business and regulatory environments it must serve are becoming increasingly complex. Organisations have quite enough on their hands, without having to find and keep in-house the expertise, real estate, and equipment needed to keep up and running something that they could simply buy on a pay per use basis from organisations who have the critical mass of financial, technical, and human resources to do it better and more affordably.

“Really, it doesn’t matter what you buy as a service – software, virtual desktop or data centre management, or your entire infrastructure,” Murray says. “For many, a hybrid environment will be the first step, with Tier 1 applications being kept in-house and everything else, such as development, QA, and non-mission critical facilities, being procured from organisations that specialise in the delivery and operation of such capabilities. In other words, it’s the housekeeping that becomes someone else’s responsibility.”

### **Find a Trusted Advisor**

According to Mathen, an organisation’s first IaaS priority should be to choose a provider that has invested in sufficient skills, intellectual property, and partnerships to ensure the best approach for their organisation. “The transition needs to be cost efficient, risk management must be built into the planning, and it should provide a better end-user experience ... or otherwise what’s the point?”

“Ideally, you would buy from an organisation that provides a service or aggregates the services of others, rather than

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simply providing technology, and has just enough technology capability of its own to deliver the service at an efficiency and price point that suits you.”

Obviously, every provider or aggregator must have – or have access to – the same basic IaaS building blocks. The blocks themselves are well-established. There are, after all, only so many telecommunications carriers and vendors of routers, switches, servers, and network equipment and all of them operate to industry standards.

What differentiates one provider from another is the astuteness with which it combines the blocks to give the client the most pertinent service at the best cost.

But why deal with one systems integrator or aggregator rather than with multiple providers, each providing a piece of the IaaS puzzle? As Mathen says: “If your objective is to reduce your IT management burden, then why would you complicate your life with having to manage multiple vendors?”

### **Cheap and cheerful or customised?**

So how do you choose a provider? Mathen says the ideal provider is the one that can articulate your business needs to you before it proposes a solution to those needs. “Without close alignment and cultural fit between the provider and client, the provider cannot ensure that the IaaS sub-vendors that it co-ordinates, manages, and integrates on behalf of the client are the best mix for the client in terms of cost and capabilities.

“In the mid size business and consumer market, cultural fit is less of an issue because, usually, there’s less customisation

of the service needed. A highly automated, standardised, less personalised service will cover most of the needs of most small to medium businesses and so the IaaS provider doesn't have to know the client's business at all. That's one of the reasons why Amazon and Google have done so well in providing infrastructure for small businesses.

"For large enterprises, however, some elements of a bespoke infrastructure will often be necessary to ensure that the infrastructure is flexible, scalable, and easily responsive to innovation by the business."

### **What's the lock-in risk?**

Designing and implementing a customised IaaS offering can be a complex project. Theoretically, an organisation should simply be able to subscribe to a service and be up and running in a few hours or days.

In reality, at the enterprise level, there is no one size fits all. Mathen cites the example of Dimension Data building a government security system that gives the state access to technology that enables it to perform the security functions it needs without having to worry about its own systems.

"Understanding what the client required, identifying the most appropriate technology components, sourcing them, and then implementing them took several months. Again, all the building blocks were available. It was a question of putting them together in the way that made the most affordable sense for the client.

"In the process, even though we were dealing with only one element of the operations, we gained a deep understanding of the client's business. That positions us to not only implement other projects faster than any organisation having to start from scratch, it also means we can innovate more effectively on behalf of the client.

"So, for both the client and for the systems integrator, there are enormous individual and mutual operational and financial

benefits to a long term IaaS contract, three years minimum. There's just too much investment on both sides for short term relationships to be useful."

Evolution of a service is another reason for extending an IaaS relationship or contract. Technology never remains static and the updating, upgrading, or enhancement of an externally provided service is as crucial as it would be if the organisation were running its infrastructure in-house. Effective evolution, however, is only possible with a full understanding of why the original service was chosen, how the business currently operates, how it intends to evolve itself, what the technology trends are, and how those might be put to best use for the organisation.

"Those kinds of insights develop over time," Mathen says. "So, a good IaaS contract takes into account the need for time as a ripener of strategy, both on the technology and the business front.

"By the same token, every good IaaS contract will have well thought out exit clauses for client and provider, so that there is no sense of legal lock-in for either party."

### **Trust**

There are many levels at which trust plays a role in successful IaaS. The most obvious one is security, and many organisations are still a little chary of entrusting mission critical processes and data to the Internet. But, as Mathen says, technology-savvy organisations understand that cloud or utility computing providers take their businesses seriously – and if they're prepared to entrust their shareholders and profits to the Internet, then so too should their clients.

"In any case, there is no requirement to entrust all of your business to the cloud in one go. The cloud, and IaaS as a part of the cloud, can and should be attained incrementally. Go with a provider that you can trust as an objective advisor and put one part of your business out there. If it works, move on to the next one."



## Perspectives on the Journey to True Unified Communications in the Cloud

*Précis* recently spoke to Derek Wilcocks, Managing Director of Internet Solutions, a Dimension Data company, for his thoughts on the move to cloud services and what this means going forward, from a business and IT perspective.

### Could you provide us with some background on Internet Solutions and how it fits into Dimension Data?

Internet Solutions was founded as a corporate Internet services provider and today we are the largest telecommunications operator in the African marketplace that is not primarily focused on, or originally founded to, provide voice services. During our 17 years of existence, we've become increasingly diverse in terms of our portfolio of offerings and today we have over 80 different individual products and services, which are clustered into four key areas:

- Connectivity services, which involves the provision of corporate Internet access, virtual private networks as well as wired and wireless broadband services.
- Cloud computing, specifically in the data centre space. As of this year we have over 9,000 square metres of data centre capacity in South Africa housing several thousand servers. We also provide a number of software as a service (SaaS) offerings, primarily security and business applications.

- Communications, which involves the provision of person-to-person communications technologies in the cloud and includes hosted email, voice over IP and fixed-mobile convergence.
- Carrier services, which centre around leveraging alternative 'last mile' technologies. such as dark fibre, metro Ethernet and wireless broadband for small niche markets in South Africa and the rest of the African continent.

### What is your role at Internet Solutions?

My role at Internet Solutions is to act as a change agent who facilitates Internet Solutions' transition from an organisation that provides predominantly technical solutions and solves technical problems related to the Internet to one that provides business solutions to business problems and takes advantage of the fact that clients are increasingly looking to the Internet and Internet-type technologies as a mechanism to outsource or out-task part of their IT requirements. A very good example of this is cloud computing.

### **What activity in the market do you see with organisations moving to cloud services and adopting utility IT models? How and why are things changing?**

I believe that cloud computing is actually just new terminology for something that has been around for 15 years or more. For example, Internet Solutions launched its first web-hosting services to the market in 1997, which involved hosting components of clients' high-volume, transactional websites in our data centres. This business is not just about 'lodging' servers in machine rooms, it involves selling clients dedicated, enclosed, physically secure areas within our data centre, referred to as vaults.

As far as SaaS is concerned, the most mature of our offerings – and one of the most mature areas of the market globally – is hosted security services. We've been offering hosted firewall services to clients for over a decade, either via the provision of a dedicated firewall (often referred to today as a private cloud firewall) or through a shared firewall platform. Over the years we've augmented these services via the inclusion of hosted anti-virus, hosted URL-filtering, hosted spam management and hosted intrusion management.

In order to outsource any aspect of your IT successfully, a certain level of service maturity is required.

So these parts of our business have been around for a very long time. What is less mature is the move to true virtualised services outside of the security domain. Internet Solutions launched its hosted virtualised service to the market about ten months ago. Our initial business plan was to fill the environment up over a three year period. However, today it is already at capacity! The reason it's filled up a lot more quickly than we expected has a lot to do with the economic slowdown which I believe has accelerated the move to utility computing, but also due to the flexibility these services offer.

Another area that is still very immature is communications services in the cloud. We launched our first hosted Microsoft communications service to the market, somewhat prematurely, in 1999 and, at the time, it only really appealed organisations with a small number of users. However, over the last few years we have seen take-up of our hosted Exchange services amongst much larger enterprise clients.

### **What do you see as the key challenges organisations face in the immediate future when considering how (and if) to adopt cloud models?**

In order to outsource any aspect of your IT successfully, a certain level of service maturity is required. This means contracting with an organisation such as Dimension Data that can provide you with that service management function, and bundling your decision to move to a hosted platform with that.

If you opt to provide these service management disciplines yourself, and look to a company like Internet Solutions to provide you with hosting, back-up and connectivity but keep activities such as change management and root cause analysis of applications outages in-house, I would suggest that you approach this very carefully and that you experiment. Start off with a limited number of non-core applications. If you wish to opt for a 'big bang' approach, in other words, if you want to get rid of your data centres and servers completely, I would strongly advise that you look to a partner with a robust service management capability combined with separate or integral telecommunications operations.

If you can find the right mix of partners it is possible to outsource everything but remember that you will probably be in the first 10% of companies to go down this road. This comes with certain risks so be sure that this is indeed the right business strategy for your organisation. Having said that, for this 10%, I believe the business benefits and cost savings can be significant. It can also provide the opportunity to completely refocus and redefine what one's IT organisation actually does.

### **What do you see, looking ahead, from a communications as a service (CaaS) perspective?**

This is a very interesting area from a technologist's perspective. Today, Microsoft, Cisco and many others have fully embraced cloud computing and have developed a host of licensing, provisioning and configuration management models that allow companies such as Internet Solutions to deliver some very exciting new services. However, unlike the data centre environment, it's important to realise that these services are in their infancy and as such they generally appeal to a sub-set of highly technical users within an organisation. That's because from a service provider's perspective, in order to offer true unified communications in the cloud you need an integrated architecture in the back-end, which currently most telecommunications operators don't have.

The other challenge facing hosted unified communications in the cloud is that today there are very few 'greenfields' sites. Many organisations are burdened with legacy PBX systems that are on long depreciation cycles and which have inadequate interfaces to integrate with IP technologies. For that reason, I believe it will be a number of years before we see the promise of hosted unified communications being fully realised. Nevertheless, I would advise companies in

such situations to start experimenting. Get 30 or 40 users up and running – maybe just your IT department – and begin understanding what these technologies can do for your business. If you have tech-savvy executives, get them on board because this is one area that has the potential to fundamentally change the way companies work.

Bear in mind too that hosted unified communications is not purely an IT decision: it's an area where you need to get the business involved early on and you need to spend time educating your business stakeholders about the possibilities that these technologies can open up for them. The human change management that hosted unified communications involves is significant, and you need to be proactive about clearing potential adoption hurdles.

If you can find the right mix of partners it is possible to outsource everything but remember that you will probably be in the first 10% of companies to go down this road.

# It's Easier to Converge Machinery than People

Virtualisation is the first step on the way to Cloud computing and, eventually, utility IT – in part because it gets organisations used to the concept of abstracting their data and applications from underlying hardware and working with them in an apparently non-tangible form.

Also, the process of virtualisation forces organisations to decouple their systems and understand that hardware, software, networks, and information are all commodities that can – and very often should be – independent of one another in order to provide flexibility of operations.

So virtualisation leads organisations assess what their operational priorities are as well as which technologies they really do want to keep in-house and which they can affordably or safely hand over to an external provider on an outsourced, hosted, or managed basis.

The difficulty that arises with virtualisation, as Dave Hanrahan, responsible for driving Dimension Data's virtual data centre initiatives in Australia, points out, is that while it reduces physical complexity – by enabling consolidation of, say, multiple racks of servers down to a single server – it introduces a level of management complexity.

“When technology is managed in a physical environment, a range of technical specialists is involved. Your storage



experts deal with storage. Your server specialists work within their area of expertise. The application manager rarely intrudes into the other areas, even though their applications depend on both storage and server infrastructure. There is a clear delineation of who works where and when, and under what circumstances.

“When you virtualise technology, those lines appear to blur. For instance, a network switch becomes a piece of software managed by the server specialist instead of the traditional network manager... in fact, some network traffic will no longer even touch the physical network complicating both management and security... So virtualisation can create a great deal of confusion and often triggers turf protection. To be fair, area specialists carry a lot of responsibility for their work. It's difficult for the voice team, for instance, to trust the server team to do what the voice team has spent a lot of time and money learning to do superbly and for which it takes responsibility under stringent service level agreements (SLAs).”

According to Hanrahan, the best way to resolve the conflict is through the development of an enterprise architecture that clearly outlines the benefits to be achieved and identifies what management responsibilities and processes need to be revised. “Next, create a new team environment in which all the different disciplines function together to make virtualisation pay the dividends of which it is capable.

“It’s also crucial that an objective middleman helps the organisation and its area specialists to create the new business processes needed to fully exploit virtualisation to the advantage of the organisation. This is particularly necessary when multiple service providers and vendors are involved,” he adds.

### Integration, integration, integration

Integration was a major focus some years ago, when it was understood that running technologies in silos was counter-productive because it led to duplication of resources, unnecessary expense, and confusion among departments and employees.

So, organisations see recommendations for virtualisation and utility IT, which are based on the decoupling and commoditising of the technology on which they rely, as a direct contradiction of what they’ve been told to do in terms of integration of systems, data, and business processes.

Actually, there is no contradiction. It’s just that the integration needed in virtualisation and utility IT needs to happen at a different level.

Commoditisation of technology to arrive at a technology services model creates flexibility. It enables the combination of components in unique ways designed to best suit the organisation. It eliminates duplication of functionality – and therefore significantly reduces the cost of acquisition and usage. And, in the long run, it enables pay per use, which provides an order of operational and financial agility not possible before.

That said, all the components that need to be combined or repurposed still need to work together to enable the desired end result.

“So, instead of focusing on integration at the hardware, operating system, or application level, what organisations should be looking for now is integration of the various services that virtualisation and utility IT are making possible,” Dimension Data’s principle consultant for professional services delivery in the Americas, Kris Domich, says.

“It’s up to the vendors and the service providers to make sure that the technologies on which they base their services will work together. That, in itself, creates a great freedom for the client and may, in fact, be the best reason of all to embark on the virtualisation path in the first place. In other words, whether you initially virtualise on premise and then migrate to the cloud or stick with a hybrid of non-core operations off-premise and mission critical operations on-premise, you’re still adjusting your focus away from technology and on to the services it enables. You start to focus on benefits and opportunities rather than tactical issues. You begin to get used to making other people worry about the belts and braces, while you steer the organisation.

“Part of doing that is to bring in a systems integrator or what is now being called an aggregator of services. In other words,

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if you're going to let someone else worry about the belts and braces, then let it be someone who understands what they are, what they do, how best to source and combine them, and knows exactly – because it works with all the vendors and all the service providers across many different scenarios – how much the combination should cost you.”

Dave D'Aprano, Dimension Data's national solutions and services director in Australia, agrees. “In the end, all any organisation wants is to use technology more efficiently and affordably in order to run to its full potential.

“In that context, buying anything as a service is almost never about cost and almost always about the risk. It's about just in case rather than just in time. For example, you're running your own technology, supplied by multiple vendors, and your ERP system is mission critical to the business. What sort of burden is it to the business to retain, in-house, the kinds of people who understand how to restore the system if it goes down and how, specifically, to remediate a multivendor environment? Would it be less of a risk to have all of that capability in the cloud? What sort of burden to the business does it constitute to have employ people, who know how to virtualise your servers and your storage to meet price points and who know how to patch your operating system – or how to secure it? Or would you rather, simply, make an integrator responsible for all that?

“Of course, you're not going to hand over all that responsibility overnight. But you probably will need to hand over most of it eventually, so that you can focus on your core business... especially if your competitors have shrugged off those burdens and given them to the cloud. To prepare yourself to be able to do that, start virtualising your environment now.”

### Legalities

Virtualisation does carry some legal issues. One of the most easily comprehensible and remediable is software virtualisation, because the primary issue is licensing. Most software licences were designed before virtualisation, so they don't account for non-physical servers, core

processors, or desktop machines. With a little advice from a systems integrator and the relevant software vendors, most virtualised software licensing issues can be resolved.

At the other end of the spectrum is migrating your virtualised systems into the cloud or to some other version of utility IT. Migrating in is not really the issue, provided your organisation is clear about what cloud services it wants and puts SLAs in place. Migrating out, however, is another matter altogether.

Currently, there is no easy way to ensure that what you hand over to your IT utility, whether it's data or an application, is returned to you in full or that the provider doesn't keep a copy.

For instance, some cloud providers have clauses in their cloud-based service contracts that state that they have the right to mine the data entrusted to them. That might not suit a given organisation. More dangerously, that sort of clause usually clashes with a country's privacy laws. So, as with any other contract, read the small print very carefully. Also, be aware of laws that govern the movement of data over international boundaries. You might have to migrate to a cloud limited to your country or region.

There also some very basic practical issues – such as changing your provider of video conferencing as a service and that provider then being able to return to you in a single instance all the video footage assembled over many conferences. Downloading all the video footage takes time and storage capacity and removing it from the service provider entails the nuisance value (and cost) of having to do the downloading.

Compared with the benefits of virtualisation and utility IT, however, these kinds of issues are really no more than minor irritations.

However, it is important to see utility IT as a continuum; a journey. There very probably is no end state to arrive at. There is a beginning, though: Virtualisation.



# You Pay for the Type of Utility You Ask for

As we move towards to a world in which IT becomes a utility and we pay per use – as we would for electricity – the question arises of how we will be billed by Cloud or utility providers... and how to measure the value of the rates being offered.

The problem is that we're still only in the foothills of utility computing. So the ground rules clients and their providers lay down now will influence the financial mechanics of true utility computing when we get to that summit – in what Dimension Data anticipates will be five or ten years from now. Best, therefore, to ensure that today's ground rules are good ones.

## No standard price book

Gene Chao, Dimension Data vice president for sales in the Americas, believes that the financial mechanics cannot realistically be standardised because they must be dictated by what utility services an organisation wants. “Every organisation has different operational and strategic needs. And it must seek to differentiate itself from its competitors. So it will utilise software, infrastructure, and development platforms in different ways.

“Unlike electricity, which is a single product with usage varying only in the amount required by a given business in a given period of time, there are enormous variations in IT products and services. If you take a single application

example, in the form of an ERP system, yes, the functionality basics are the same. But some organisations will have more emphasis on supply chain management and others on procurement only. When it comes to communications, some organisations may want Telepresence, others not. Some may want IP phones, while others will be squeezing the last of their investment out of a PABX.”

To make things more complex, each of the individual components of a utility IT system may be provided by a separate vendor, each of whom has its own way of costing its products and services. Then, there are the separate layers within an IT system, ranging from storage and desktops to the network and software – each of which requires a different type of expertise and, therefore, cost to implement, maintain, and manage it.

Also, there are different types of cloud computing. Software as a service (SaaS), Infrastructure as a Service (IaaS), Platforms as a Service (PaaS), and Communications as a Service (CaaS) all quite naturally have different pricing models.

“In addition, precisely because of the variety of products and services that go into creating the components of a utility IT offering, most organisations need to call on a systems integrator to manage the variables on their behalf,” explains Chao. “That adds another pricing component into the situation – although working through a systems integrator that has the depth of understanding of the way cloud technology impacts organisational efficiency as well as the right sort of influential relationships with vendors, telecommunications operators, and other service providers can save the client a great deal of money. That’s because the systems integrator will ensure that the final outcome is both streamlined for optimal positive impact on the organisation’s current and future operations and is priced in the most appropriate way. Even so, there is no standard price book – because there is no standard utility IT offering.”

### Utility risk

For the moment, then, cloud or utility computing can be priced only on a case by case basis – and may remain that way.

That makes it very difficult for organisations to compare apples with apples, when it comes to requests for proposals. “As an organisation, your best benchmark is simply to consider what capital investment you’d have to expend on building whatever utility services you’re looking for yourself,” says Graham Parker, Dimension Data’s global solutions chief financial officer. “Whatever you save on capex by moving to an opex model through utility services boosts your bottom line. The degree of the boost will tell you whether you’re in the right pricing ballpark for your utility services.”

Simon Gay, Dimension Data’s line of business manager for data centres and storage in Europe agrees. “Choosing an opex over a capex route implies in any case that you want to change the way you run your business and that you want operational agility, speed to market, and the ability to innovate. You want to be able to do more for less. You also want to reduce your IT risk, whether it’s operational or financial. You should, therefore, choose the price point of

For the moment, then, cloud or utility computing can be priced only on a case by case basis – and may remain that way.

your IT utility services based on whether or not the services will deliver those things for you.

“If, by contrast, you opt for a private or hybrid cloud, there will be some capex involved. At some point, therefore, financial support is going to be useful – to ensure that the financial risk is not all yours and that you’re not confronting it all upfront. In an ideal world, your service provider or systems integrator will assist with finance. You’d then be saving on capex but, overall you won’t be saving money – because your provider will build the cost of money into its assistance to you.”

Ultimately, there is really no good argument for choosing your cloud or utility provider on price alone. Let price be a factor, certainly, but measure the value of what you’re getting based on the operational benefits you gain rather than purely on the costs you believe you will save. Operational agility and speed to market will give you a financial agility that is much harder to achieve simply through cost savings.

If you're being charged on a pay per use basis, then the provider's billing functionality will be extremely fine-grained and you'll be able to see which department is using what services when. You'll know exactly what to charge to that department and your recovery of costs will be clear, timely, and measurable.



Andrew Pike, Dimension Data global services chief operating officer, points out that a monthly rental or subscription rate, which is the most likely and most appropriate financial mechanism for cloud and utility services, does contain its own challenges because of the difficulty of setting prices for ever-evolving technologies. “The simplest example is the steadily dropping cost of storage disks. Predicting what they’ll cost even one year from now is well-nigh impossible. We recommend that the only way for financing models to be fair to both provider and client is to have quarterly reviews of equipment prices and the potential impact on the client of the evolution of technology as a whole.”

Parker recommends that organisations look for financing along the lines of a basic initial monthly amount that is not related to uptake by an organisation’s users or customers of a particular cloud or utility service. “The provider of the service to the organisation has a responsibility to cover its own costs and is, in any event, not likely to take upon itself the risk of the utility model working for the client organisation. As it is, the provider is helping to fund the utility model simply by charging a monthly rate and not expecting full payment up front. What we do, though, is charge a flat rate per user per month up to a certain minimum number of users. As soon as that minimum number is achieved, a pre-determined discount kicks in. In this way, the client minimises his own risk by being able to go the opex route and we, the provider, don’t take on all the risk of enabling that.”

### **Charge back**

An issue for many organisations is determining the internal charge back rate for conventional IT within the organisation. Would it be more difficult in a cloud computing or IT as a utility environment?

Pike says no – it’s actually easier. “If you’re being charged on a pay per use basis, then the provider’s billing functionality will be extremely fine-grained and you’ll be able to see which department is using what services when. You’ll know exactly what to charge to that department and your recovery of costs will be clear, timely, and measurable.”

# From Cloud Computing to Shared Services

Sharing services with other companies is back in vogue, thanks to cloud computing.

The move to standardise, abstract and utility-provision not only IT assets but also the management of those assets in many ways represents an evolution of the decades-old 'shared services' business model

Many of the fundamentals of cloud computing are not new concepts. In fact, they represent the logical evolution of well-established business and sourcing models. For instance, anyone involved in business in the 1980s and 1990s will well remember the rise of the concept of shared services, a business model that blossomed as large companies set their sights on standardising systems and business processes in order to drive cost reduction and improve efficiencies. In its pure form, shared services refers to the provision of a service by one part of an organisation or group where that service had previously been found in more than one part of the organisation or group.

Whereas historically each division of an organisation had typically been resourced with its own HR, IT, marketing, finance and administrative teams – which often led to duplication of effort, lack of consistency and end-to-end visibility, not to mention unnecessary expense – the shared services business model involved the centralisation of disparate resources into a single entity, which assumed responsibility for managing that particular business function or service in a consistent fashion across the entire organisation. With this model, the funding and resourcing of the service was shared and the providing department effectively became an internal service provider.



Many of the fundamentals of cloud computing are not new concepts. In fact, they represent the logical evolution of well-established business and sourcing models.

Naturally, in order to achieve the level of consistency required to operate in this manner entails the adoption of certain standards for each business service. That said, the degree to which one can standardise may be limited in certain areas. For example, for organisations that operate across multiple geographies, standardisation within the HR function may be tricky, given that industrial relations and employee benefit specifics will differ from country to country.

It could be argued that the evolution and adoption of cloud services in the IT domain represents an example – or rather an evolution – of the traditional concept of shared services outlined above. The key is the idea of ‘sharing’ within a group with a view to achieving greater efficiencies and cost savings (because by sharing infrastructure among many clients, cloud providers can create scalability and economies of scale, as well as specialisation in operations resulting in more reliable service continuity.) And, importantly, as with the traditional shared services model, cloud computing involves assets and resources being centralised and standardised.

### Why share now?

Key trends that have facilitated and expedited the ability of technology to metamorphose into a shared service include the move to the IP standard, the adoption of centralised data centres, followed by the virtualisation of technology

It could be argued that the evolution and adoption of Cloud services in the IT domain represents an example – or rather an evolution.

infrastructure, which allows the multi-tenanting of hardware in a secure manner. In addition, the growth of bandwidth and evolution of ‘Web 2.0’ Internet enabled applications or front-ends to traditional applications, represent further enablers.

Interest in sharing IT services across companies picked up significantly when the economy began to falter eighteen months ago and corporate executives began considering non-traditional ways of cutting IT costs. CIOs found themselves under tremendous pressure to do more with less and many had exhausted the tried and tested techniques for doing so, such as offshore outsourcing, data centre consolidation and server and storage virtualisation.

Meanwhile, the technological world has been transformed by the global expansion of broadband networks, open source and the emergence of cloud computing, which make any discussion about sharing systems considerably more practical. Seeing the opportunities, service providers have in turn, invested heavily in making their infrastructure, software and platforms scalable enough for use across many companies by offering them as a shared service.

### Remote Infrastructure Management – a shared services approach to managing enterprise infrastructure

Today, IT’s evolution into shared services has gone a step beyond the standardising, sharing and centralising of physical IT assets; it has extended into the actual management of those assets... take for example, remote infrastructure management (RIM).

Essentially, RIM provides end-to-end support and management of IT assets, regardless of their location. Like other cloud models, RIM operates on a utility or ‘pay per use’ basis – IT service providers own all the systems management assets which are shared by multiple clients. Clients simply pay for what they use. As many of the IT service management side activities associated with management of enterprise infrastructure are commoditised and repeatable, the potential cost savings that can be gleaned from the creation of a shared system are enticing.

The appeal of RIM lies in its modular design, which allows companies to implement services as they need them, delivering a phased evolution that aligns with organisational requirements. And because RIM services are available on-demand, companies only need to source or buy what they need. From the CIOs perspective, RIM introduces a host of new options – the technology gives them the opportunity to engage with fewer providers on a wider range of services and across a broader range of processes within the organisation, safe in the knowledge that they will only pay for what they use, when they use it. For instance, they can implement a complete remote service desk solution or simply start with remote monitoring and notification for a portion of their network, a select site, or a group of servers. Additional remote infrastructure management services can easily be added as needs change.

Indeed, flexibility is a hallmark of today's remote models. RIM services are typically multi-tenanted and allow for regionalisation and client customisation as needed. Their modular and scalable design not only enables them to support a variety of technologies and products but also allows for the seamless assimilation of new technologies and easy integration with an organisation's own systems and those of its partners.

The elimination of the need for hefty capital outlays is another reason RIM services are being eyed by an increasing number of CIOs. In the past, IT infrastructure management usually consisted of asset-based transformations. Not so today. The emergence of remote models in combination with cloud models means enterprises can now offload their IT assets and subscribe to a suite of IT service components without having to actually acquire hardware. Essentially, the focus is on the reduction of total cost of ownership with simultaneous improvement of service quality.

Cost savings can also flow from the fact that RIM and cloud models allow you to deploy services across your company-wide network in a way that allow them to be easily shared and used by multiple applications and users. Instead of having several instances of the same service, these models

Also important is the fact that companies can source RIM services from vendors at a far better rate than they could do themselves.



establish reusable, standards-based services that you can access when and where needed. In this way, they play a key role in synchronising business and IT, efficiently integrating business processes enterprise-wide.

Also important is the fact that companies can source RIM services from vendors at a far better rate than they could do themselves. The advantage of handing over significant parts or even all of one's infrastructure management to an organisation that manages infrastructure not only for itself but for other companies is that the providers who invest in RIM platforms, while having had to make significant upfront investment in the sophisticated architectures, are able to drive down the cost of providing these services as they

leverage economies of scale. RIM providers have many clients and therefore better scale. These savings are in turn passed on to clients, so RIM is a win-win solution for clients and service providers alike. Other advantages include access to scarce resources and knowledge base expertise as well as reduced risk in deploying new technology – for which no internal skills exist, for example, in areas such as IP telephony and virtualised infrastructure.

As with traditional shared services models, the ‘one-to-many’ design of RIM services means that companies are able benefit from the application of industry-wide best practices as well as a captured knowledge base, which the provider will leverage and apply across all geographies and industry verticals.

### **ITIL – the great enabler**

The early pioneers of the shared services approach of 1980s and 1990s quickly learned that successful implementation of this model revolved around standardisation. The same holds true for the remote management of IT assets. Like any shared service model, standardisation is key to the effective delivery of RIM services. Building a RIM platform that can deliver services that are modular, scalable, automated and most importantly, consistent, is a tall order. For that reason, today’s advanced RIM platforms place a heavy emphasis on ITIL, an integrated, process based, set of best practices to manage IT services.

### **Before you take the plunge...**

As with all cloud services, slowly but surely, the RIM market is gaining in maturity and acceptance. But it’s a road full of peril. As with the traditional shared services business models of yester-year, RIM has its limitations and careful consideration needs to be given to where and how to integrate and apply it in the enterprise. For instance, RIM works well on commoditised services (for example, incident management or moves, adds, changes and deletes (MACDs)) – which is why vendors typically base their RIM processes on the ITIL standard, however, it will prove less effective for non-utility tasks, for example, applications development

such as interactive voice response (IVR), where each voice prompt needs to be customer-specific.

We’ve seen that going the RIM route brings clear advantages from an efficiency and cost perspective. Bear in mind however that while leveraging the RIM resources of an efficient network service provider can help your business cost-effectively meet its technology needs, while relieving you of the need to self-manage your network, it is essential to select your partners with care.

Be mindful that when you opt into RIM services, your IT infrastructure will be monitored and managed by engineers sitting far away... so you need to place your infrastructure in the right hands. Be sure that your partner has the capability and experience of managing complex, mission critical IT infrastructure and understands all nuances of mission critical IT infrastructure management.

Ultimately, RIM outsourcing is a long-term strategy. Enterprises have to make sure that their partner has a strategic interest in infrastructure management and has made the right investments to grow this practice.

As with all cloud services, slowly but surely, the RIM market is gaining in maturity and acceptance.

## Case Study

# Financial Services Organisation Explores a Hybrid Model as a Vehicle to Utility IT

Today, many forward-thinking enterprises are taking incremental steps towards IT as a utility – because it's the best way to minimise risk while the concept of IT utility matures and all currently hidden pitfalls are identified and concreted over. Taking incremental steps implies the use of hybrid systems, in which mission critical IT is kept in-house and 'housekeeping' IT is handed over piecemeal, on a test basis, to external service providers. As an organisation's confidence in external providers grows, so more and more of its IT can be migrated to the cloud and to utilities.

A good example of this is a South African banking conglomerate that has consolidated four smaller, separate data centres – one serving the holding company and three serving subsidiaries – into a single, state of the art, green data centre that supplies services to the four entities on a pay per use basis.

In the process, all four organisations have achieved significant cost savings through drastically reducing their real estate, heating, cooling, management, maintenance, security, connectivity, and redundancy requirements related to data centre facilities.

They have all also reduced their carbon footprint. The point being that a utility service, whether public, private, or hybrid, always delivers more overall value than the sum of the parts of the utility would appear to offer.

### Quick Overview

- **Industry:** Financial Services
- **Country:** South Africa
- **Challenge:** The banking conglomerate operated four separate data centres, each in a different location. The server rooms had serious efficiency, cooling, and energy consumption flaws, there was little capacity for future growth and the management of the centres had become a time and effort intensive process.
- **Results:** Dimension Data consolidated the four smaller, separate data centres down to single, state of the art, green data centre that supplies services to the four entities on a pay per use basis. Today the bank enjoys a stable, scalable environment which is geared to adapt to future IT changes and growth.

### Client Overview

Our client is one of the largest financial institutions in South Africa with approximately USD 125 billion in assets under management. The company operates a number of prominent

financial services subsidiary brands in South Africa and employs in excess of 42 000 people.

### Business Challenge

Each of the banking group's four data centres was in a different location – with three in different buildings. Three of the four server rooms had not been designed as such and therefore had serious efficiency, cooling, and energy consumption flaws. All four server rooms had also grown with the businesses they served and competed with them for office space, which was at a premium. Accordingly, costs were mounting uncontrollably and the risk of a major system failure had become unacceptably high.

The management of the centres had become a time and effort intensive process, with many processes overlapping and repetitive – and there was no capacity for future growth.

### Our Solution

Dimension Data applied its expertise in data centre and storage networking to build a scalable, flexible data centre that not only improves quality and speed of access to data and processes for all four businesses, but provides for ample future growth in performance.

The overall scope of the project included site design and preparation, followed by full project implementation and management. All elements of the solution were designed to provide an open and flexible architecture. Hot scalable power systems, close coupled cooling, high density computing, and security and access control technology were all features of the design.

The project was delivered in three stages. The plan phase included the design of the system to accommodate current load requirements as well as a 50% expansion capability. It also included building the physical elements of the new data centre. The migration phase included moving data centre operations from the old to the new facilities using industry best practice methodology to mitigate risks. The final phase is ongoing, ensuring seamless implementation of additional infrastructure to cater for an expected 112% increase in loading requirements.

### Adding Value

The holding group and the three subsidiaries now have, on a pay per use basis, access to a live environment that can be upgraded or maintained while users are logged on – ensuring zero downtime. The data centre is intelligent, so it monitors itself and responds to changes, reducing the need for human intervention. Efficiency gains for all four organisations include a data centre power utilisation efficiency (PUE) of better than 1.6, showing a major reduction in power consumption costs, and a cooling system coefficient of performance (COP) of close to or better than 5, resulting in further power cost reductions. In addition, the organisation's reduced carbon footprint demonstrates its good corporate citizenship.

This project represents all the benefits to be gained from one of the new cloud offerings: infrastructure as a service (IaaS). It's a private IaaS offering, but the underlying principles and business case are clear. Consolidation and virtualisation of technology, whether in the cloud or on-premise, delivers economies of scale as well as access to the latest, most efficient and effective technologies at minimal (pay per use) cost. Focusing on consumption of technology services rather than on the overheads of maintaining and managing equipment enables organisations to be agile and competitive while continuously improving performance.

This project represents all the benefits to be gained from one of the new cloud offerings.

# Research Notes

## LEADING ANALYST FIRM RECOGNISES DIMENSION DATA

*Positioning Based on Completeness of Vision and Ability to Execute*

Dimension Data was recently positioned by Gartner, Inc., in the Challengers Quadrant of the Communications Outsourcing and Professional Services Magic Quadrant (COPS) Worldwide report. The Magic Quadrant examined 17 vendors of IT services for business communications systems worldwide, employing two main evaluation criteria. These include ability to execute and completeness of vision. Dimension Data CEO, Brett Dawson said, "We are pleased to be evaluated by Gartner for our completeness of vision and ability to execute. There are hundreds of service providers in the worldwide market, yet only a handful of designated Challengers. We are delighted to be one of the few."

### **About the Magic Quadrant**

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## OVER 50% OF IT NETWORK DEVICES HAVE REACHED OBSOLESCENCE

*Approach to IT governance by organisations integral to business strategy*

Lifecycle milestones of IT assets are not being managed efficiently, with 35% of all network devices beyond end-of-sale (EoS), and over 50% of those assets are late in

the obsolescence phase (beyond either end-of-software-maintenance or last-day-of-support). These are two key findings in the Dimension Data Network Barometer Report 2010 published in April 2010.

The Report covers the results of 235 Technology Lifecycle Management (TLM) Assessments carried out in organisations of all sizes and industry sectors across five continents.

According to Rich Schofield, Dimension Data's global business development manager for Network Integration, "Sweating network and IT assets beyond end-of-life (EoL) places organisations at risk which could have an impact on overall business strategy. It's essential for organisations to establish the lifecycle status of their assets in order to determine their age and viability. The TLM Assessments carried out for the 2010 Report reveal that networks continue to run with issues that could affect overall business productivity and efficiency."

### **About the Network Barometer Report 2010**

The Network Barometer Report 2010, published by Dimension Data on the status of networks globally, aggregates data from 235 organisations and the Technology Lifecycle Management (TLM) Assessments conducted by Dimension Data around the world during 2010.

### **About the Technology Lifecycle Management (TLM) Assessment**

The Technology Lifecycle Management (TLM) Assessment is an IT infrastructure asset assessment service that discovers, catalogues and analyses assets on the network. It identifies basic configuration, end-of-life and security issues so that they can be proactively addressed.

For more information about Dimension Data, and to download the free Network Barometer Report 2010, visit [www.dimensiondata.com/networkbarometer](http://www.dimensiondata.com/networkbarometer)

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