Cloud Insights

By Dr Sara Cullen

TRICKS & TRAPS OF THE CLOUD

The cloud is here and screaming for attention. Every strategic IT group within the legacy organizations I am working with has been mandated by the senior executives to have a cloud strategy by the end of this year to rollout in 2015. Not to meet a particular business strategy per se, but to be seen to be doing otherwise is being seen as doing nothing (outside of business as usual).

Governments are getting on the bandwagon as well. Some governments including those in the US, Britain, and Australia have official "cloud first" policies now in place that mandate a preference for cloud versus non-cloud services in ICT procurement. Cloud is to be used unless there is a good business case against it.

But the senior folks, and most of the IT folks, in business and government legacy organizations aren't cloud literate, can easily become besieged by the sheer volume of marketing spin, and have little direct experience. This could be why the majority of current cloud expenditure isn't actually with IaaS (Infrastructure as a Service) or SaaS (Software as a Service) and all the derivative cloud vendors - it's with cloud consultants.

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This Insight is designed to help out with some of the more common tricks and traps for the commercially unwary to prepare for the upcoming cloud bursts. Every organization's cloud experience has been different, but there is enough collective experience out there now that we can start to learn from those who bravely went before. These early adopters were willing to take a punt, and we are all the better for it.

First, Speaking Cloud

It pays to be somewhat cloud literate, so let's start with the term itself. There are many definitions of cloud computing and many interpretations of what it actually is.

Cloud fans tend to focus on definitions around the concept of IT on demand like water on tap. But this implies a degree of ease which may exist for a single consumer, but not for legacy organizations. So let's move away from that.

Generally, it is common to think that the cloud is outsourcing services delivered via the internet. However, many vendors have renamed their traditional outsourcing services as cloud and

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widened the definition to include any service delivered over a network or even just all services delivered from outside your IT environment. Larry Ellison, CEO of Oracle since 1977, famously remarked when addressing financial analysts on Sept 25 2008 that, "I don't understand what we would do differently in the light of cloud computing other than... you know, change the working on some of our ads."[1]

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With the cloud-first policies of governments and the general bandwagon effect (the probability of adoption increasing as more adopt), vendors today increasingly no longer offer outsourcing services, rather they now offer cloud-based services. Outsourcing has become so synonymous with offshored labor replacing current domestic employees such that it has become a dirty word. Not so with the more benign sounding "cloud". So the first trap is to assume your definition (and the embedded assumptions therein) is the same as anyone else that you may be talking to, especially vendors.

Private vs. Public Cloud

Then we have the debate is over what exactly is a private cloud, and is it indeed private or is this just further marketing spin?

The best way to think about a *public cloud* is that you are using a vendor's datacenter/s (or server farms) to store things or run things. A *private cloud* is what you are doing now if you are insourcing IT in your own self-ran datacenter - it's all your stuff. A *hybrid* is when you connect the two.

Having said that, many vendors offer a wide range of services they also call a private cloud. This ranges from providing dedicated physical servers at the vendor's server farms (private servers on the public internet), to reserved virtual servers with higher levels of network security (public servers on the public internet but with more security layers), to merely having better service levels than those offered as standard to the public (private service). The use of the word "private" as a marketing technique infers a great deal more privacy than is likely on offer.

To add to the confusion, vendors are now offering *community clouds* which are really just an outsourced shared service by another name. These are often clusters of actual or virtual servers reserved for a select group.

The trick here is not to use the "public/private" words at all. The public/private demarcation is so arbitrary as to be meaningless as a way to describe and compare cloud offerings. It is probably more apt to use the rapidly rising concepts of "on-premises cloud"

[1] See http://www.youtube.com/watch?v=0FacYAI6DY0 for the audio recording of the address to the analysts. Highly recommended as a tutorial on cloud speak.

(insourced) and "off-premises cloud" (outsourced) rather than the "public/private" terminology.

Cloud pricing

Cloud invoices are notoriously difficult to dissect... a bit like your mobile phone contract on steroids. This is because cloud pricing model is predominately PAYG (pay-as-you-go) using a plethora of unit rates. The units are countable throughput (know as instances), units of capacity (e.g. storage) or user units. These are then further complicated with banded pricing which gives discounts based on volume, as well as different service levels, and (in the case of SaaS) different editions. For example, the first 99 users may be supported for $300/mo, the next 100-250 $250/mo and so on for the basic edition, with a different schedule for a more advanced edition, then extras for better service levels. Note that one trick for the unwary is that the bands operate distinctly - that is, if you have 350 users you will not be charged $250/mo/user, it will be according to the price bands.

Most vendors will have a price catalog providing the unit prices, for both on demand and reserved services, and volume band discounts - from which you try to negotiate downwards depending on your bargaining power.

Speaking of negotiation, you'll need to consider whether you want to negotiate a fixed dollar (e.g. $1) or percent-based (e.g. 10%) discount off standard prices. This decision is similar to when you decide how much of your house mortgage to have under a fixed interest rate and a variable one. The cloud market is quite immature and the vendors are still experimenting with the pricing models - making massive profits and losses along the way. The load balancing algorithms are continuously being refined; but, more importantly, competition is driving periodic price wars. For example, earlier this year Amazon dropped its storage prices by up to 65%, and virtual servers by up to 35% a day after Google dropped their prices, from which then Microsoft followed suit.

Unfortunately, there is no Reserve Bank when it comes to cloud pricing, so the analogy with your mortgage ends there. Equal to the need for technical engineering will be financial engineering - not just for the in initial negotiation, but to manage cloud computing costs and invoices.

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Because of the complexity of the pricing structures and billing, a "cloud cost optimizer" within your team will be key to really getting a hold of the costs and driving them down. Because it is PAYG, you can continuously improve your costs by changing your usage patterns or for example, switching between reserved and on demand services. A new market has sprouted for consultants and software developers offering cloud cost optimization services and products, but nothing beats having your own inhouse expertise.

Value for Money

Although the marketers have successfully ingrained the image that the cloud is just another utility like electricity, this is not the case. Electricity is electricity no matter which company you buy it from. Not so with the cloud.

Many cloud service providers employ a utility form of pricing by using consumption unit rates, but cloud services are not generic commodities.

There are enough differences between the services that prices are not comparable as apples-to-apples. The differences are nearly impossible to gather from the vendors themselves for two reasons: (1) no vendor wants to look bad and (2) it is deep within many little operational details (e.g. access to logs, integration back and forth to enterprise systems, and quality of online support operators) which in many cases are unique to the purchasing organization. To determine value for money, given the differences in price and in the service you'll receive, really requires you to try before you buy - with real workloads, ideally with a few shortlisted vendors to allow value-for-money comparisons.

Cloud Contracts

The buy-side of cloud isn't mature enough, with enough clout as yet, to have cloud vendors compete on the customer's terms, so it's on the vendors' terms at present. The entire nature of the unilateral contracts hoisted upon the cloud purchaser is full of tricks and traps. Reading a cloud contract will be a horrifying experience for those customers used to calling the shots with their outsourcing providers.

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The contracts are written first and foremost to protect the cloud provider (and are as one-sided towards the provider as were the old master-servant outsourcing contracts written by buyers heavily biased to themselves).

Generally, the cloud contracts have the following characteristics:

- providers can make any change they wish to the service,
- providers can terminate the service without cause or notice (although some vendors are backtracking on this),
- service disclaimers despite inference of service guarantees through service levels or KPIs,
- use at your own risk (regarding security),
- no, or very limited, liability, and
- possible disclosure of personal or confidential information.

Excerpts from a variety of cloud contracts:

"...we reserve the right to modify, suspend or stop the Service (or any part thereof) temporarily or permanently, at any time, without notice."

"...not responsible for the accuracy, completeness, and usefulness of the service."

"...does not warrant that services will meet your requirements."

"We do not make any representations, warranties or guarantees regarding data retention, integrity, service security or suitability for any purpose."

"You acknowledge that you bear sole responsibility for adequate security, protection and backup of your content and applications."

"...will have no liability whatsoever from mistakes, interruptions, deletions, errors, defects, delays, or other failures of performance...

"We may disclose personal information as part of corporate transactions such as a merger or sale."

"...access may occur by our subsidiaries and affiliates without your consent."

Conclusion

Is the cloud purely propaganda or is it a new way to operate? Is cloud just a pricing scheme or is it a technological breakthrough?

The nomenclature "cloud" has certainly given a boost to the outsourcing industry, a renewed surge in the globalization of IT off-premises, and is proving to be as lucrative to the consulting trade as did Y2K and its ERP spinoff.

Whether you are a fan or a skeptic, the cloud as a concept has captured the imagination of senior executives, and thus provides the impetus to re-imagine and re-cost the back and front offices of legacy organizations. Just don't believe everything you hear, and don't confuse what you believe with the facts until you've done your due diligence.

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About the Author

Sara Cullen is the Managing Director of the Cullen Group, a specialist organization offering consulting, training, and publications regarding commercial agreements, a Fellow at the University of Melbourne, and a Research Associate at the London School of Economics and Political Science. Prior to starting her own firm, she was a National Partner at Deloitte in Australia, where she ran the outsourcing consulting division and was the Global Thought Leader for outsourcing.

Dr. Cullen specializes in the design and management of outsourcing agreements, for buyers and sellers alike. She has consulted to 150 government and commercial sector organizations, spanning 51 countries, in over 190 contracts comprising $18 billion in contract value.

Sara is a widely published author having written 143 publications since 1994. Her books include *Outsourcing: All You Need to Know*, *The Outsourcing Enterprise*, *The Contract Scorecard*, *Toward Reframing Outsourcing*, *Intelligent IT Outsourcing*, and *Outsourcing: Exploding the Myths*. She has conducted research with various universities since 1994 including the London School of Economics, Melbourne, Oxford, and Warwick. Her expertise is globally recognized and she performs peer reviews regarding outsourcing research for the Harvard Business Review, California Management Review, the Journal of Information Systems (UK), and the European Conference on Information Systems. Dr. Cullen has lectured at many universities in Australia, Asia, and the Americas.

Dr. Cullen earned a BSc in accounting from St. Cloud State University (US), she was awarded a Masters of Management (Technology) from Melbourne Business School, and earned her PhD in the area of outsourcing from the University of Melbourne. She is also a Chartered Accountant (US) and a Certified Mediator.

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