So you think you want to 'move to the Cloud'

by Morgan Killick

Cloud computing is becoming more commonplace as the range of services grows and organisations look to realise the benefits. But is it all it's cracked up to be and is moving to the cloud for everyone? In this article, Morgan Killick defines the technology, examines situations that the cloud works well for – and also what the marketing might not tell you.

The cloud (re)defined

Let's start by being totally clear at the outset - Cloud Computing is a marketing term the IT industry uses to promote the idea of moving IT functions away from Servers, PCs and Peripherals based in your office, and onto services provided to you by Third Parties. It is best understood as a switch from you purchasing and maintaining your own 'on-premises' hardware, to a pay-monthly model where you are charged to access the same or similar functions via the internet which is also known as 'The Cloud'.

Cloud Computing is therefore not a 'technology' or indeed a technical term. It is simply a method of providing particular technologies to users. This is vital to understand, because most Cloud Computing solutions comprise of functions that can also be achieved by what is now increasingly being referred to as 'traditional' or 'non-cloud' solutions. Although you now have a choice of how your technology is provided, you are not choosing between fundamentally different functions and there will always be a 'Cloud' and a 'Non-Cloud' way of achieving your desired outcome.

Why all the fuss?

So if we are talking about the same or similar functions, why all the fuss? The answer is that the option to be able to gain these functions in a different way is something of a game-changer in some circumstances. In these cases, the change to Cloud provision has been a mini revolution and naturally those people who have benefitted from this want to shout about it! This makes it a 'hot topic' in the IT world and barely a week goes by without an article, conference or event on this subject.

Coupled with this, the business model behind provision of cloud services is radically different from the model of those who sell hardware. The latter is a highly competitive environment with very small margins where it is easy to switch vendor. Cloud providers on the other hand have had to invest heavily in their infrastructure and to recoup those costs, and need a model which yields higher margins on services that users are relatively tied in to for the medium to long term. What this means for those companies delivering IT solutions to organisations like yours is that there are longer term, potentially higher returns to be had by advising clients to 'Move to the Cloud'.

None of this is intended to detract from the fact that Cloud Computing can confer a number of benefits to the small and large organisation alike. However, as a result of these trends, adoption of Cloud Computing can be seen as a largely 'supplier-led' phenomenon. What this article intends to do is to redress the balance somewhat and help cut through the hype to give you the information needed to understand whether Cloud Computing really can be of genuine benefit to you.

Just to be absolutely certain, the phrase Cloud Computing is here used to apply to the most commonly adopted Cloud solutions such as:

- Cloud based backup services (e.g. ibackup, Mozy, iCloud)
- Cloud based file storage and sharing (e.g. Dropbox, SugarSync, G-drive, SkyDrive)
- Cloud based Communications Tools (e.g. Google Mail, Hosted Exchange)
- Cloud based Collaboration and Productivity Suites (e.g. Office 365, Google Apps, Huddle)
- Cloud based CRM software (e.g. Salesforce, hosted Sugar CRM, hosted CiviCRM)
- Hosted Virtual Desktop (Infrastructure) (e.g. HVDI, Virtual PCs, Virtual Servers).

IT challenges that Cloud Computing addresses well

The nature of the Cloud Computing approach means that it offers a particularly advantageous resolution to certain scenarios. The most common ones are as follows:

Access to genuinely free or low cost functions

Sometimes the particular function you need from an IT system simply has to be free or very low cost, even if it means compromise. By definition, a non-cloud solution is likely to involve an up-front expenditure on software, hardware and/or installation costs, whereas some Cloud based services offer basic or entry-level 'self-installable' solutions at no or little cost to the user. There are some great examples under the previous headings of Cloud backup, file storage and communications tools. These services are aimed at just one or two IT functions and would not typically be seen as involving a 'Move to the Cloud'.

If you want IT costs to be an entirely predictable monthly fee

If you have a preference for meeting IT costs entirely on a monthly basis (e.g. for cashflow reasons), regardless of whether that may or may not cost you more over the long term, then Cloud is ideal. The cost of non-Cloud solutions are on balance less predictable than Cloud, but do have the advantage of being able to be brought forward, deferred or met by grants or underspend. However there are a variety of reasons why some may prefer the total predictability of a fixed monthly fee based on consumption levels. If leasing hardware is not an appealing option, then Cloud really could resolve this problem.

A need to respond rapidly to fluctuating numbers of users

If you run an organisation that needs to rapidly scale up (or down) in workforce, data storage or processing power, and your IT system has to quickly respond to this change, then Cloud solutions offer the edge over non-Cloud by virtue of their scalability. A non-cloud system based around servers is typically 'specced up' to suit predictable growth, and won't cost you any less if you suddenly shrink. Similarly, if you grow more quickly than forecast, you will need to find the time and money to purchase and reconfigure hardware. Many Cloud solutions don't have this problem - pricing structures are typically based around actual quantity used (even if less than you started with) and providers already have the infrastructure in place to cope with any requests for additional capacity.

If the users of a given IT system are spread thinly over a number of different bases

Then Cloud solutions make a lot of sense. Non-cloud solutions are built around hardware that has to reside 'on-premises' somewhere. Whilst any type of IT solution can deliver remote access of some sort, (indeed 'non-Cloud' methods for achieving remote access are frequently easier and cheaper than implementing a 'Move to the Cloud'), the fact remains that sharing IT functions across multiple sites where there are no obvious contenders for a central 'headquarters' is difficult and expensive in the world of traditional IT. In this scenario, it is certainly worth evaluating what the Cloud can do for you.

If you cannot afford to invest in maintaining, upgrading or replacing existing hardware
If you are finding that you are spending all available time and resources just to 'stay still' in IT terms, then it is absolutely worth comparing how Cloud-based alternatives stack up against an 'on-premises' upgrade. Cloud has an edge for the smaller budget in the sense that 'one-off' costs may be lower. Equally though, it may well cost you more in the long term, so a comparison of the two approaches is essential for due financial diligence. Don't make the mistake of assuming that the costs of a non-Cloud system will be the same as you have paid in the past. IT features and functions become cheaper over time, and it may well be that whilst you needed an expensive server in the past, you can now replace it with something much less pricey. Many system upgrades are best met by a mix of traditional and Cloud solutions, so make sure that your suppliers are able to offer both, rather than giving you 'one-eyed' advice.

What you should know before you Move to the Cloud
If the above scenarios sound familiar to you, then hopefully you will be considering the possibility that a Cloud Computing solution can resolve your problem. But going into that process with half the story is never a good idea! Here are some of the realities that the sales people tend not to talk about...

You still need traditional IT and infrastructure
No matter what type of Cloud solution you are considering, the fact is that you do still need a robust IT infrastructure and solid internet connectivity, and that means an ongoing maintenance overhead, coupled with periodic investments to upgrade and replace parts of it. Whilst you may be able to survive with less infrastructure, or survive for longer without replacing it; the PCs, Laptops, Internet Connections, Routers, firewall, Switches and Data Cabling you use still has to work, no matter where your IT system is hosted! Indeed, if you are planning to be very heavily reliant on cloud solutions then you may well need to have a significantly better internet connection, as well as a backup line 'just in case'.

Software is software is software
As stated at the start of the article, Cloud is just another way of delivering functions, it's rarely a new function in itself. No more is this apparent that in the field of software. The software you use – your email client, word processor, your databases, your CRM system - came at a price that you've already paid. If you have to swap these for something else as part of a cloud solution, that's an extra cost to you, and a whole load of new learning. If you want to change it for something else, that's great, but you'll pay pretty much the same for your new software 'in the cloud' as you would have otherwise. That's because it's not different software, it's just delivered to you in a different way!

If you don't have the skills in-house, you will still need IT Support
One the great myths about Cloud Computing is that it removes the need for IT Support. This is simply untrue. You either have the in-house skills and knowledge to support your IT system, or you don't. And if you don't, then you either muddle through without support, recruit someone, or outsource. This logic doesn't change just because part or all of your system is hosted in the Cloud. What might change is the way you pay for IT Support, who provides it, and what it covers. The biggest factor governing the size of your IT Support overhead is how complex your IT System is. If you want to cut IT Support costs, the best way to achieve it is to find a system that is easier to administer yourselves. That could be a Cloud OR a non-Cloud solution!

If you are transitioning to a Hosted Virtual Desktop/Server environment, be very certain how your support needs will be catered for. Most technical support is about helping users with the little things (so called 'Desktop Support'), and by their nature, Cloud Providers tend not to provide this type of

support. They are equally unlikely to want to attend your site to look at your infrastructure or your PCs.

Provider lock-in
This is a fairly well documented phenomenon within the Cloud Computing world, but is not a feature of Cloud solutions per se - many of them are no more difficult to move away from than traditional solutions. It is however a particular feature of Hosted Virtual Desktop solutions because so much time and money is driven into migration & recreating your IT system in the virtual environment that it becomes prohibitive to leave once you have started. Similarly, if you want to change provider or move back to traditional IT, this pain has to be gone through again. Whilst you are not 'Locked-in' to services like Cloud based backups, once they start running, they tend to get left to do their job. Just be sure that you aren't going to be paying through the nose on your debit card because you are consuming far more data than the free package you started with allowed!

Migration Costs
It is frequently said that Cloud carries little or no installation costs but in reality these costs exist under a different heading – that of 'Migration' or 'Transition' costs. Whatever you call them, these costs are directly proportional to the complexity of the project, not to the choice of where the solution is hosted. Don't let those easy-to-understand per user/per month charges ever disguise the fact that any large migration from one system to another will be both complex and expensive to undertake.

Understand what you get and who provides it
At times, Cloud Computing can involve some very opaque messages about the nature of the services provided. It can be tricky to work out exactly what technology you are getting access to, where your data is stored and who is responsible for what part of the system. For the simpler Cloud solutions, this isn't so much of a problem, but in more complex solutions, the people you are buying from may have one or more layers of 'upstream' providers who their solution depends on. Indeed, even these 'top-level' platforms may be replicated or backed up to other data centres based somewhere else. Beware of 'Virtual PCs' that don't stipulate what exact operating system you are getting and/or what server software you would be relying on. Often its old technology that sits behind these glamorous sounding services.

Security
If your IT system is held in a data centre it is surely more physically secure than any small office could be. Whilst this is often the case, security these days is also about hacking and the risks presented by unauthorised access over the internet. Here there is every incentive for Cloud providers to have the latest and best anti-intrusion systems – better than anything that a small organisation can afford. Yet as they are 'obvious' targets, hackers can and do get through - stories of accounts that have been compromised frequently grace the technology news media. The biggest threat though is more mundane than that: with non-Cloud solutions, remote access is typically locked down by default and 'opening access up' (e.g. for mobile or home workers), requires a discussion on suitable security levels. In contrast, Cloud solutions are by default open to the entire web - this is what allows your Cloud based system to always be 'just a username and password away'. If you need better security than that, then you'll need to be proactive about what can be offered.

Conclusion
Cloud Computing is a simple concept to understand – it's just the idea of shifting IT functions away from hardware and software stored in your offices, and onto hardware and software stored by the professionals, who then provide this to you as a service in exchange for a monthly fee.

Yet this fundamental simplicity has been shrouded in hubris. Its portrayal in some quarters as an almost miraculous solution to a variety of IT challenges is often self-serving or one-sided.
Cloud Computing does however offer some genuine benefits to organisations facing particular circumstances. Although any decision to adopt it is in reality far more nuanced than the sales patter would have you believe, if you happen to be in those situations, it is certainly worth looking at. The knowledge in this article should help you keep your feet on the ground when your head's in the cloud!

About the author

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