Cloud computing: Silver lining…

…or just marketing fog?

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In a nutshell:

It's impossible to nail down a single definition for cloud computing just yet. Get familiar with its guises and work out what's in it for your organisation.

Key points:

- A definition for cloud computing is less important than the business benefits it could offer
- New ways of accessing and using computing power can open up business opportunities
- Regardless of the definition, place your own requirements on it, not the other way round
- Functionality, benefit, cost and trust are the key elements to consider

It seems the marketing world has settled on its next buzz-word: cloud computing. Unsurprisingly, what it means depends largely on who you're talking to. And you can't have a sensible conversation until you've sorted that out.

To most people, it means something out there that you pay for but don't have to worry about. The something could be hardware, software or services delivered as a combination of the previous two.

Dig a little deeper and you'll see that to make the economics work for buyer and seller, the more the applications, processing and storage can be virtualised, the better the paybacks all round.

This assumes that pricing bears some relationship to cost. And if it doesn't now, it soon will do as competition heats up and the various players get their acts together.

Clouds vary in detail but all are designed to overcome capacity limitations, usually in the IT department. They might be called on to smooth out demand peaks or to run peak-prone applications.

Software as a service (SaaS) comprises more or less ready-made applications that just need a bit of configuring to get them going. Others are services to the IT department such as email spam-filtering, for example.

Depending on what you go for, clouds can accelerate your time to productive results and replace upfront expenditure with a regular service fee.

In the case of a data centre that is at or near capacity, clouds can provide an alternative place to run applications.

At the bottom end, we've been used to hosts that just provide a raw machine and some basic system software. At a higher level, some provide a platform that contains rich functionality to make application development easier.

Whether we like it or not, these different approaches, and more, are all going to categorise themselves as cloud computing. Cloud is a much more marketable term that implies some kind of meaning unlike, for example, web 2.0.

IT buyers need to nail each prospective provider down and find out exactly what they have on offer. A big name might claim a slick-sounding service but closer investigation may reveal it's still at the pilot stage.

On the other hand you might hear about a marvellous setup from a barely known vendor and find yourself worrying about the likelihood of them going out of business and taking your application and data with them.

This raises the spectre of mobility. A key question to ask is: "How can I move my applications and data quickly in the event of failure?" The platform-as-a-service approach might sound tempting but you might wish you'd gone for an infrastructure-as-a-service option. Or simply signed up for SaaS from a reputable vendor.

Fortunately, it's early days and you have a chance to watch the market evolve. Right now, few organisations are really ready to offer fully fledged cloud services. But they are all deadly serious about it.

Amazon and Salesforce.com are the poster-children of the cloud age. EMC, Google, HP, IBM, Microsoft, Sun, Yahoo! and many others also have well-advanced cloud computing initiatives.

Some companies, IBM included, are even creating internal clouds - places where parts of the organisation can go to prototype their latest ideas without affecting mainstream IT.

It rather changes the meaning of the cloud from "something out there" but, to the users and the mainstream IT folk, that's exactly where it is.

This isn't the place to offer formal classifications for cloud types, although we could make a start with SaaS, PaaS and IaaS - software, platform and infrastructure respectively. The fundamental questions relate to functionality, benefit, cost and trust.

And, when considering trust, be sure to consider the networks involved. One of the issues is latency and the other is reliability. How fast do your users need a response from your applications? How fast do the architectural components need to communicate with each other?

The quicker, the less likely you are to want cloud computing. Hopefully, as the pipes broaden, this will become less of an issue.

But, when your precious data and applications are spread around goodness knows where, you need to know, not only that your staff can reach the services they need but also that the interconnections between the elements of your cloud system are resilient.

An SLA is all very well but hard questions still need to be asked of your provider, including the potentially awkward one of: "What APIs do you provide to enable my existing and future in-house applications to reach the data that you're storing on my behalf?"

Assuming you're happy, cloud computing promises to take many of the stressful elements of IT away, leaving you to concentrate on the more strategic issues.

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