

## WISH UPON A CLOUD

*Graham Oakes examines the trend for utility – or ‘Cloud’ – services.*

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**Graham Oakes: let's not descend into Babel**

Servers are out. Clouds are in. Players like Amazon, Google, EMC and IBM are all positioning themselves for a world where we purchase computing and storage as utility services rather than as physical boxes. They make the analogy to the electrical grid – buy power, not generators.

There are a number of reasons why this makes sense. Operators of large data centres gain economies of scale as they build out their capacity. This enhances both their financial and their environmental performance.

Developments in virtualisation make it easier to share these economies of scale with their customers. Growing capacity and availability of public networks makes it possible for everyone to access their services.

Many organisations' frustration with their local IT support makes them only too keen to consider alternatives.

I think this trend is exciting. A number of my clients have really interesting projects underway to explore and exploit the Cloud.

However, it's also clear that there are a number of traps we need to overcome before the Cloud is anything more than an old-fashioned mainframe data processing bureau. In particular, I see four layers of connectivity that we need to manage:

- Physical connectivity. There is still much to be done to improve the reliability and performance of our networks. The core network may be fine for many organisations, but too many branch offices and mobile workers experience poor availability, latency issues and so on.
- Syntactic connectivity. This layer is functioning pretty well. We've made a lot of progress in defining protocols for applications and services to talk to each other. Let's not descend back into Babel as Cloud services evolve.
- Semantic connectivity. We're pretty weak here. The Cloud is most interesting when it delivers an ensemble of services that all work together to achieve larger goals. To do this, they need to agree on the meaning of the information they exchange, not just on the format of their data packets.

The semantic web is still a vast untapped space. We need to tap it if we are to gain the benefits promised by the Cloud.

- Strategic connectivity. When most services are delivered from the Cloud, it makes little sense to try to do everything 'inhouse'. There is no inhouse. Organisations will need to get better at managing their activities within a web of partnerships if they are to prosper in a Cloud-driven world.

Will the Cloud deliver everything its proponents promise? Probably not. I've seen the pendulum swing too many times.

Economies of scale always run into disruptive innovations. Local, personal support is always nice to have. Nonetheless, some very valuable stuff is going to emerge out of the Cloud.

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