

Straight Talking – Data centres: the temples of IT – Sept 2009

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The awesome scale of today's data centres can only be appreciated by touring them. Their huge halls house rack upon rack of equipment and feature seemingly endless corridors, spotless cleanliness, fortress-like physical security and resilience to power failure - all managed by just a handful of employees. They will not fail to impress.

Only those prepared to invest tens of millions can afford true enterprise-class data centres, however. In fact, many enterprises actually no longer bother, at least not for their entire data centre requirements but instead turn to co-location providers who are investing in such infrastructure on a massive scale.

Quocirca was recently shown around Equinix's LD4 data centre, which is located west of London and opened in October 2007.

Its attention to security is demonstrated by the fact we were not provided the location details until a confidentiality agreement had been signed. Having said that, it is not easy to keep such a large facility secret. Cruise around a few well known industrial estates and you can pick out the data centres: large shiny buildings a couple of stories high, with few windows, no high profile company logo on show, and fearsome looking security.

Pure co-location providers offer data centre space along with the necessary power and data connections. Their customers rent space and move their own computer equipment in.

Equinix is a global operator with 43 data centres worldwide and a turnover not far shy of \$1bn. Other co-location providers are more regional, such as Global Switch, Interxion Telecity Group and Telehouse International, which all have a strong focus on Europe.

Being able to turn to a single provider for data centre provision across multiple regions will be attractive to some customers but is not essential. Many customers will mix and match to

get the portfolio of data centre space they require.

Within an individual provider's vast halls, the racks, cages and suites that house customers' equipment are anonymous to the visitor as part of the intense physical security that surrounds the co-location industry. However, the types of customers they serve fall into four main categories and most disclose examples of their customers in each, even if they will not show you the actual equipment they use. In fact, as infrastructure is increasingly shared, sometimes they couldn't even if they wanted to.

The first type of customer is end user organisations that have given up trying to manage all their own data centre space. For instance, a bank may rent a whole suite, while a mid-market manufacturer's data occupies just a few racks.

The second type is independent software providers (ISV), many of whom now offer their applications as on-demand services. But both end users and ISVs are often only secondary customers of co-location providers, as they will rent full IT infrastructure from the third category, managed hosting providers (MHPs).

MHPs rent space from co-location providers, install servers, storage and networking hardware and rent the whole stack to end users and ISVs. The MHP market is growing fast and seems to be standing up well in the recession and is essential to the success of the co-location business.

Some MHPs are now getting so big that they are commissioning their own data centres. Quocirca recently visited MHP Savvis's new data centre and it is as impressive as any co-location facility. Another MHP, Rackspace, has also started to commission its own data centres.

The fourth category is a hybrid: the providers of computing clouds. This includes high profile companies like Amazon, Google, Microsoft and salesforce.com (the latter three can also be

considered ISVs). Their goal is to provide vast amounts of compute resources on-demand to their customers.

MHPs are also now building such clouds as they increasingly provide shared infrastructure services as well as one-to-one hosting. Compute clouds can, in principle at least, span multiple locations, including a mix of data centres owned by the cloud provider and space rented from co-location providers.

The MHP market is large and bewildering; there are the pure plays like Attenda, ELINIA, NTT Europe Online, Rackspace and Savvis. Many large system integrators offer managed hosting too but this is often as part of a broader services engagement, and confusingly some also offer co-location services but not on the same scale as the likes of Equinix, Telecity and Telehouse.

Internet service providers are in the market too, providing managed hosting as an extension of their connectivity services.

The managed hosting market is reviewed in Quocirca's recent report Managed Hosting in Europe, which is freely available on Quocirca's website.

When you visit a state of the art data centre, on the one hand you can't fail to be impressed by the sheer scale and engineering effort. But there is a nagging feeling that these engines of the internet are an increasingly large part of the global problem of climate change.

Just one of Equinix's four uninterrupted power supply units in its LD4 facility contains banks and banks of batteries to power the data centre for just a few minutes. Then eight large oil-powered generators cut in.

But if the power used by mankind's ever growing hunger for computing power is a problem, it is one that co-location providers help mitigate, rather than make worse. If the computer equipment from within a single co-location facility was disaggregated back into many small inefficient data centres, the total power use would be far greater.

And if you factor in the impact IT can have on making working practices more efficient and reducing the need for business travel, it is even harder to make the environmental charge against co-location providers stick; they're temples of IT that are as much part of the solution as they are part of the problem.

About Quocirca

Quocirca is a primary research and analysis company specialising in the business impact of information technology and communications (ITC). With world-wide, native language reach, Quocirca provides in-depth insights into the views of buyers and influencers in large, mid-sized and small organisations. Its analyst team is made up of real-world practitioners with first hand experience of ITC delivery who continuously research and track the industry and its real usage in the markets.

Through researching perceptions, Quocirca uncovers the real hurdles to technology adoption – the personal and political aspects of an organisation's environment and the pressures of the need for demonstrable business value in any implementation. This capability to uncover and report back on the end-user perceptions in the market enables Quocirca to advise on the realities of technology adoption, not the promises.

Quocirca research is always pragmatic, business orientated and conducted in the context of the bigger picture. ITC has the ability to transform businesses and the processes that drive them, but often fails to do so. Quocirca's mission is to help organisations improve their success rate in process enablement through better levels of understanding and the adoption of the correct technologies at the correct time.

Quocirca has a pro-active primary research programme, regularly surveying users, purchasers and resellers of ITC products and services on emerging, evolving and maturing technologies. Over time, Quocirca has built a picture of long term investment trends, providing invaluable information for the whole of the ITC community.

Quocirca works with global and local providers of ITC products and services to help them deliver on the promise that ITC holds for business. Quocirca's clients include Oracle, Microsoft, IBM, O2, T-Mobile, HP, Xerox, EMC, Symantec and Cisco, along with other large and medium sized vendors, service providers and more specialist firms.

Details of Quocirca's work and the services it offers can be found at

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