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360°IT – New data centre? Can it!

By Clive Longbottom, Service Director, Quocirca Ltd

New data centres are very expensive, require a lot of planning and often change in a very short period of time, making all the hard planning around power distribution and cooling a complete waste of time – and energy. Going to the cloud looks like it may help, but in reality this just moves the problem from one set of people to another.

So should organisations design data centres to last for, say, five years, then completely rebuild them? Should they design them for flexibility - refreshing on a three-year cycle over a lifetime of perhaps 10 years? Or is there a different approach that can meet the needs of small(ish) to large data centres in a manner that provides optimum flexibility for low overall costs? I think there is.

It takes the form of a 40ft x 8ft x 8.5ft box (or smaller, if needs be) - the type of container more commonly seen on the back of a lorry. This is an ideal environment for a contained data centre. It is just the right size to fit in two racks of half-sized (or one rack of full-sized) equipment with full access from a gangway, or two racks of full-sized equipment with specialised access capabilities. All cabling can be decided on at the design and build stage, as can all the cooling.

Since the complete environment is micro-designed, equipment densities can be far higher, so the effective IT power per cubic foot is way higher than most data centres. Power can either be provided externally (fed in from industry-standard 3-phase plug systems) or internally (by using half the container to house a diesel generator).

The containers can be plugged together in a modular manner using high-performance networking, so multiple containers can act as a single data centre. If there's be a problem in one container (such as a fire, cooling failure or whatever), this cannot easily replicate across the

rest of the containers, so you also get a higher level of business continuity. If the contents of a container get a little old for the job, you have several options. You can refit the container with new equipment, replace it with a brand new one, or get a new container and use the existing one as part of the overall modular data centre.

A container is also a superb way of meeting any need you may have for an outlying data centre. After all, it is built to fit on the back of a lorry and is also easily transported by boat or plane. Provided you have a bit of spare land, little preparation is needed: just availability of power, network connectivity (some containers even use satellite to minimise the need for physical connectivity) and possibly water for cooling. The container can then be left in place and managed from a distance - secure in its metal skin.

Will such containers replace standard data centres? No. But in the right circumstances they can be an attractive option - for example, for outlying data centres as mentioned above, for a company opening a new site that needs a data centre to be up and running in a matter of weeks, or as an interim solution if an existing facility goes down for some reason.

And where can you get these containers from? SGI, HP, IBM, Sun, Dell and others all have offerings. Google uses a containerised approach for some of its data centre needs. Microsoft has created a mega-data centre from a collection of containerised modules. It's not just a dream - it's reality. And as the cloud comes along, the containerised data centre offers an ideal "cloud in a box" capability. The container can be configured and prepped off site. Existing environments just see the new container as extra virtualised resources.

Or to put it another way: plug in, switch on, tune out.

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.

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