Independent analytics

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Many things in life go full circle, and IT is no different – the key to success is optimising your infrastructure

With the mainstream use of server virtualisation and enterprise storage arrays, there is now a need to focus on skills that were required in the mainframe world for managing complex mixed workloads on shared infrastructure with varying performance objectives.

Detailed performance analysis, workload profiling and capacity planning, are all skills required to ensure that the utilisation of this intricate shared infrastructure can be optimised while maintaining the required SLAs/RPOs/RTOs etc. Additionally, this abstraction of a customer's workload (applications, databases and systems) from the physical hardware by hypervisors, and sophisticated disk arrays etc. also means that fault diagnosis of performance problems becomes far more complex to resolve.

As many organisations don't have the time or skill sets to do this type of analytical work, they are potentially missing opportunities to save significant costs in their infrastructure, which is also compounded by a number of further factors:

Outsourcing

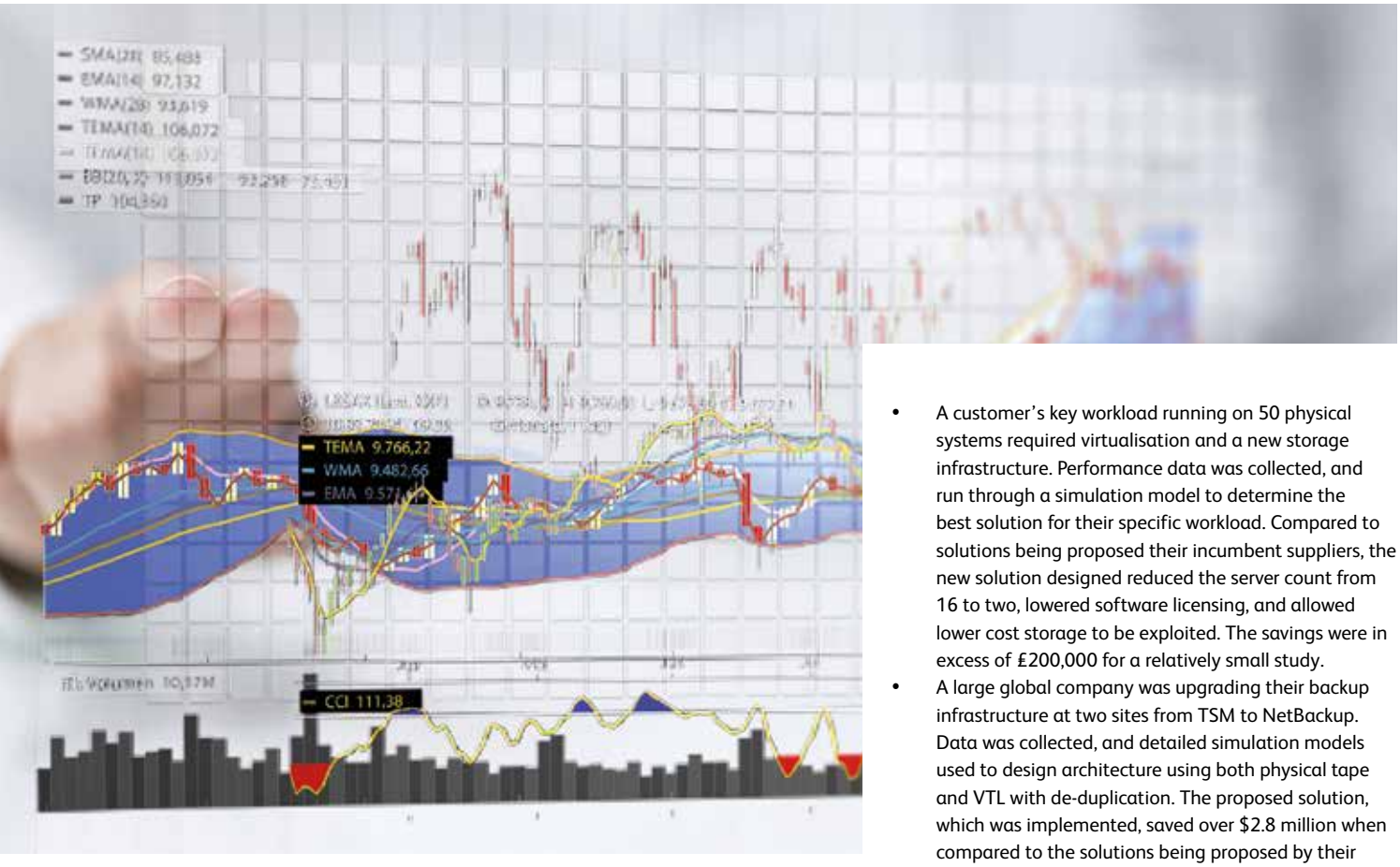
Providers may not be motivated to save costs even when there are clauses in the contract to deliver cost saving initiatives as part of the service. Additionally, outsourcing can often mean there is a dilution of technical knowledge within the organisation reducing the ability to robustly challenge what the service provider delivers.

Cloud

Despite the hype and mystique, cloud providers are simply exploiting the same underlying technologies, and may be focused on extracting the maximum amount of revenue from the customers for the minimum amount of expenditure. The potential for using the airline principal of 'overselling the tickets' means that customers may have limited visibility of the actual resource they have available, e.g. just because their machine is provisioned with four virtual CPUs, the physical CPU resource may not be available if the underlying infrastructure is under high load – potentially from other customers.

Vendors and suppliers

Vendors will often offer services for analysis and sizing, but these will typically start with the answer – their product(s) – and work backwards from there. Services from a cloud provider to assess whether a customer has candidate systems to migrate to their cloud solution, or a disk vendor



for an optimum storage solution, will have predictable answers. Therefore, ICT analytical analysis services need to be focused in the following factors to deliver the optimum benefits to customers:

- Vendor independent analysis. Focus on a customer's unique environment, and position a solutions lead approach.
- Gain control over vendor relationships. Focus vendor conversations based on a customer's specific business objectives. This saves significant time and money in procuring infrastructure.
- Optimise existing infrastructure. Identify infrastructure optimisation opportunities, and establish principles for measurement of the benefits – 'sweat the assets', and 'do more with less'.
- Independent capacity planning. Provide and out-task the delivery of capacity management and planning as a monthly service, enabling customers to predict capacity demands, and react to changing business needs.

As an example to how these types of services can be extremely beneficial, here are some brief case studies where tangible benefits were achieved:

- Working with a large global company who were outsourced, analytical and storage optimisation services were carried out over a period of six months. The results were that storage consumption and their associated costs were dramatically reduced resulting in a cost reduction of over £2 million per annum.
- A customer's key workload running on 50 physical systems required virtualisation and a new storage infrastructure. Performance data was collected, and run through a simulation model to determine the best solution for their specific workload. Compared to solutions being proposed their incumbent suppliers, the new solution designed reduced the server count from 16 to two, lowered software licensing, and allowed lower cost storage to be exploited. The savings were in excess of £200,000 for a relatively small study.
- A large global company was upgrading their backup infrastructure at two sites from TSM to NetBackup. Data was collected, and detailed simulation models used to design architecture using both physical tape and VTL with de-duplication. The proposed solution, which was implemented, saved over $2.8 million when compared to the solutions being proposed by their current suppliers.
- A complex data migration project for a large European Bank was underpinned by detailed analytics, which allowed a large proportion of migration tasks including data volume mapping and replication to be automated. It also facilitated data transformation activities allowing re-tiering of storage volumes, and P2V of servers to further reduce costs. Critically, the solution also avoided the requirement to buy additional 'swing' equipment that was proposed as a pre-requisite by their disk vendor and was in excess of €1.1 million.
- Project for virtual desktop infrastructure for 13,000 desktops and laptops. A detailed file classification study was run using automated data collection and analysis of all clients including detailed analysis of storage requirements. Based on the initial guesstimates that were being made prior to the study, the analysis showed that in excess of £600,000 could be achieved once all data profiles and their access patterns for over 1 billion files was understood.

One of the key areas to driving down costs in any environment is a detailed understanding of your ICT infrastructure. This understanding then supports the decision making processes; should we migrate to the cloud, refresh the in-house infrastructure, outsource, or a combination of one or more? It's key that services are independent, and are not led by the vendors and suppliers of potential hardware, software and services. Huge benefits can be achieved by applying detailed analytical services and 'what if' modelling with the only agenda being to save an organisation money, find the best ways to optimise existing infrastructure, and design and migrate to new infrastructure. ■