Data centres of the future - backups in a flash

By Anthea Nadin   19 Oct 2016

IT managers today are under increasing pressure to deliver value and drive businesses forward. The data centre is an essential part of enabling such agility, but many data centres are still plagued by such time consuming complexity that IT professionals continue to struggle to deliver services in a timely fashion, without overcapitalising or overspending.

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With technology changing as quickly as it does, an IT professional needs to be a Jack-of-all-trades. And with the sheer variety of organisations out there, each with unique requirements, specialisation and complexity in data centre management are set to only increase. Luckily though, the trends driving modern data centres today are promising some much needed relief over the next few years and into the future. Here are just three that are driving the data centre forward in leaps and bounds:

Strategic management

Gone are the days when IT managers were able to get away with putting together a 'one-size-fits-all' data centre and letting it run. The data centres of the future have leanness and agility in mind, and to this end, they will be built in a strategically thought out manner with the ability to be highly customised without compromising on agility and adaptability. This all comes down to understanding the needs of the organisation and those who work within it. With the sophisticated mapping and analytics tools available today, data centre managers are better able to understand their clients' or colleagues' needs, and accurately fulfil them in terms of storage resources, computing power and workload allocation.

It is also expected that levels of visibility and ICT equipment utilisation will drastically improve in the near future, through advanced data centre management systems, better resource allocation, and higher levels of automation and self-optimisation than were previously thought possible.

Software-defined networking

A software-defined data centre is one in which all the infrastructure is virtualised and delivered 'as-a-service'. This enables increased levels of automation and flexibility that will underpin business agility, through the increased adoption of cloud services, empowering modern IT approaches.

IT professionals are increasingly finding that software-defined networking (SDN) is a more efficient way to contain costs, manage virtualisations and accelerate service delivery. It also frees up time for data managers, by giving them the control they need to manage all aspects of their data centres through IT-as-a-service – a far cry from the data centres of yesteryear.

Software-defined data centres will be crucial to the long-term evolution of the data centre, but may not currently be the best option for all organisations. It is essential to first engage with infrastructure and operations specialists and business decision makers to understand the individual needs of the organisation on a case-by-case basis.

SDN is still in its infancy and in the South African context particularly, many hurdles to software-defined networking still exist, including:

• Being unable to find a reliable service provider to support a smooth transition
• Difficulties adapting hardware for SDN deployment
• Not having a fully SDN ready infrastructure across the board

It is still highly recommended to at least be moving toward full SDN readiness in anticipation for making the leap, but many businesses still have some time to wait before the possibility becomes a reality.

Automation

Automated tools are becoming more and more indispensable in the data centre, and any forward-thinking organisation has automation in mind when creating a plan for their future IT requirements. If current trends are anything to go by, automation in the data centre will only accelerate, with fully automated data centres becoming a real possibility in the not-too-distant future. Going hand in hand with software defined networking, automation can be employed in a multitude of ways. It helps IT managers to do better provisioning, configuration management, patching and much more, helping to free up time for IT administrators to perform other critical tasks.

Importantly, automation also enhances an organisation's security by reducing the need for human intervention and the potential vulnerabilities it can create.

When all is said and done, there is no one-size-fits-all solution to fulfilling what organisations need from their data centres. The nature of the organisation, the resources they require, the level of security needed, and many other factors will decide on how each business will respond to shifting trends in the future.

One thing is certain – all data centres will need to be modernised to accommodate more and more specialised demands, and those efforts must begin today if the organisation is to remain competitive in a digital era. Your data is the lifeblood of your business.

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