ALISED
URE

WE ATTEMPT TO LOGICALLY DETERMINE WHERE VIRTUALISATION WILL TAKE ENTERPRISE IT IN THE FUTURE, TOUCHING ON TOPICS FROM CLOUD TO THE SOFTWARE-DEFINED DATA CENTRE.

"While server consolidation is often enough to justify virtualisation, thanks in no small part to relatively low utilisation rates for physical servers, there are many other advantages that enterprises should consider in their calculations."

Such is the opinion of Sam Johnston, director of cloud and IT services at Equinix. His views are being echoed by IT professionals around the region, as more and more enterprises reach peak levels of virtualisation. Whereas before, the idea was simply to reduce the number of physical servers within the infrastructure, organisations are now looking at how to use virtualisation for other purposes — purposes that could drive greater business agility and smoother IT efficiency.

The Middle East boasts relatively high levels of virtualisation, at least when it comes to rudimentary virtualisation like deploying virtual servers. Indeed, speak to the IT directors of any large enterprise in this region, and you'd be hard-pressed to find someone who hasn't at least dabbled in virtualisation. And, depending on who you speak to, conversations have moved beyond which hypervisor suits the business best, and towards how to drive enhanced asset management and drive automation.

"The Middle East and Africa virtualisation rates are almost the same as Western Europe, as the region is known to take leaps to the latest technologies and catching up with latest trends, skipping many middle steps. Virtualisation is maturing as many organisations have already embraced these technologies within their data centres," says Zeeshan Gaya, research manager for servers, systems and infrastructure solutions at IDC Middle East and Africa.

The Middle East is now littered with large-scale organisations that have fully virtualised their infrastructures, mostly in order to keep the number of physical servers needed down to a minimum. It must be admitted that such firms are way ahead of the curve, with most having only virtualised parts of their infrastructure, but it is fair to say that some Middle Eastern enterprises are blazing trails through which others can follow.

> " Middle East virtualisation rates are almost the same as Western Europe, as the region is known to take leaps to the latest technologies."

Zeeshan Gaya, research manager at IDC MEA

↑ Eaton's Tatu Valjakka says that, once servers are virtualised, there are a lot of arguments in favour of virtualising other aspects of the infrastructure.

How companies can fully virtualise is well-documented, but what's less obvious is where these organisations can take virtualisation next. According to Brocade's Hesham El Komy, regional marketing manager, the first step to divining where virtualisation technologies will take the enterprise is to understand the technology as an approach to decouple logical resources from physical elements.

"Virtualisation can be extended to storage, desktop clients, applications and data centre networks. Virtual storage, for instance, helps by allowing the organisation to approach storage not as a fixed element tied to specific hardware, but as a fluid resource which can be allocated to any application or service that requires it, in real time. This results in fast availability of data to applications, regardless of a physical location," he explains.

"A virtual application infrastructure can also deliver powerful benefits. By virtualising the application infrastructure, application workloads can be dynamically assigned across clusters, ensuring that such spikes are quickly and effectively addressed via more processing power whenever and wherever it's required. Virtual networks can also play a major role in helping an infrastructure to become more dynamic. Multiple physical switches can be logically consolidated into one virtual switch, a single physical network node can be virtualised into several nodes and even network adapters can be virtualised."

The point is echoed by Tatu Valjakka, project manager for connectivity and software at Eaton. He says that, once servers are virtualised, there are a lot of arguments in favour of virtualising other things. He explains that the introduction of virtu-

alised server products has led to a massive change in the way that organisations use server hardware, and that Eaton is seeing similar changes taking place across the other three legs of data centre operations — storage, networking and power train.

THE NEXT STEP

According to Biswajeet Mahapatra, research director at Gartner, enterprises are looking in various directions when it comes to working out where to next take virtualisation. He says that, while many organisations in this region have done a great job in using virtualisation technologies, they have only just embarked on the path to increasing efficiencies, reducing costs and making IT smarter and greener.

"Stabilising a virtualised environment, having the right combination of workloads, automating a lot of processes in a virtualised environment, moving the more critical workloads onto a virtualised environment, improving the management of a virtualised environment, moving to a software-defined environment, and building a dynamic and agile IT infrastructure are the next steps," he says.

The network is a prime target for the next wave of virtualisation, as enterprises begin to work towards the software-defined network (SDN), as well as build out cloud environments. And while there has been little in the way of actual implementations, the very fact that SDN builds on the advantages gleaned from virtualisation means that some enterprises are entertaining the idea of dabbling in the trend.

"Software-defined solutions certainly hold a lot of promise offering an automated, dynamic infrastructure, business-aligned SLAs, simpler operations and lower costs. At the current time, SDN and SDDC (software-defined data centre) development is still in its early stages. Although traditional network device vendors, startup vendors and early adopters continue to launch SDN strategies and products, large-scale SDN commercialisation depends on the development of relevant technologies, standards and markets," says Sudheer Subramanian, IT solutions director at Huawei Middle East.

"The major driving forces behind this development are customer demands for the reconstruction or modernisation of existing networks. Customers are faced by multiple challenges in existing networks, such as isolation between the network and the service system, complex operation and maintenance and a lack of quality controls."

Dev Anand, director of product management at ManageEngine agrees that software-defined networks will eventually come to prominence in the future, but asserts that the technology has yet to gain the confidence of people operating enterprise data centres. That said, he advises experimenting with SDN and SDDC at the lab level. "There are lots of options available for getting your hands dirty," he says.

CHANCE OF CLOUD

However, there are also those who disagree that SDN and SDDC are the next logical steps to pursue when it comes to vir-

↑ According to Gartner's Biswajeet Mahapatra. enterprises are looking in various directions when it comes to working out where to next take virtualisation.

tualisation. While there is little doubt that telecoms providers and a couple of large enterprises are leading the charge in SDN development, some say that the majority of businesses cannot derive that much benefit out of the software-defined trends for now. Swapnendu Mazumdar, network infrastructure manager at eHosting DataFort, is one of those people. He says that the next logical step to virtualisation for most organisations would probably be cloud computing, though he advises that such a step won't be for everyone.

"Yes, there are signs that the next step a CIO would look at is the adoption of cloud computing and this shift is probably fundamental in delivering an advanced model of IT. It is known to improve business agility across industry sectors and enhance access to computing, storage and communications," he says.

Indeed, some people simply perceive cloud as a totally virtualised environment, because, technically speaking, this is what a private cloud is. What's more, cloud is a highly proven technological concept that many organisations around the Middle East have accepted. According to IDC's Gaya, then, the next steps will be focused on how companies use these trends.

"Technologies such as server virtualisation and cloud services, both private and public, have become both mainstream and a credible part of any data centre strategy and/or footprint. However, the use of both are evolving as more organisations adopt them and the need to operate on-premise infrastructure and cloud services, providing IaaS or PaaS capabilities, as one unified pool of IT resource is again applying pressure on the technologies of the data centre to evolve," he says. ●