VIRTUES OF VIRTUALISATION

While virtualisation of servers, desktops and applications is not a novel concept, only recently has this trend begun to take hold in the Middle East market. We explore why the region is just now warming up to the idea of virtualisation and what the future holds for virtualised infrastructure in the Middle East.

Virtualisation isn't a new trend and these days it has become a crucial element of any IT infrastructure design and management. In tune with the global trend, virtualisation remains a top priority of CIOs in the region, and it has undoubtedly found its footing in businesses of all sizes. However, the technology is still catching on when it comes to the other elements of IT infrastructure as the focus so far has been on virtualising servers, applications and desktops. But, that's all set to change with CIOs throughout the region starting to implement virtualisation solutions that go beyond just servers.

There has been enormous progress in the field of virtualisation in the last 15 years. In a growing business where the bottom line is key, virtualisation is moving from an option to a business necessity. Virtualising IT infrastructure, from servers to networks, allows businesses to do more with less. As the virtualisation industry expands, major players like VMWare, Oracle, Citrix and Microsoft are providing CIOs with a wealth of virtualisation products from which to choose. The challenge in today's virtualisation landscape is determining which product is right for which system and business, and taking that giant leap into the world of virtual space.

Whichever product is used to implement a virtualisation project, one thing is clear—costly centres housing enormous machines that eat up bottom lines with cooling, electric and staffing

costs are going the way of the dinosaur. "No longer do businesses want to retain racks upon racks of under-utilised servers in a leviathan data centre, that consume huge resources to power and cool, and that require dozens of personnel to manage," says Samer Ismai, MEMA Network Consultant, Brocade Communications.

With large enterprises struggling to accommodate growing business demands within their existing budgets, virtualisation of IT systems, including network and storage, is the obvious way forward. "IT leaders can save enterprises 20 percent to 50 percent with virtualisation projects, providing increased flexibility and speed, and improved quality of service," says by Biswajeet Mahapatra, Research Director, Gartner.

In truth, until recently businesses in the Middle East were a few steps behind the US and European markets in terms of infrastructure. "Typically, the Middle East takes a cautious approach for any new technology adoption," says Swapnendu Mazumdar, Network Infrastructure Manager, eHosting, DataFort. "This could be attributed to the lack of awareness and shortage of skills. We have generally seen service providers and system integrators acquiring the skills first and slowly integrating virtualisation into corporate IT departments."

As the Middle East was a quickly growing, but underdeveloped market, there was little need to virtualise. Where the Middle East may have lacked in infrastructure, it has historically been flush with spare capacity, further negating the need

for virtualisation. However, times have changed. Businesses in the Middle East are now well on par with their global competition, companies are rapidly expanding, and the need for virtualisation is becoming apparent.

As such, many CIOs in the region are warming up to the virtues of virtualisation, but admittedly, a few are slow to jump on the bandwagon. "While ICT services such as server virtualisation, client virtualisation, public, private and hybrid clouds are gaining traction in the region, they are still relatively new concepts for Middle Eastern CIOs," says Amit Mathur, Senior IT Solutions Manager, Huawei. "However the benefits and efficiency gains of a virtualised network are beginning to influence decision makers to a steady increase in deployments. We believe that we will witness an increase in CIOs virtualising other elements of their networks in the near future."

Though perhaps slow, the shift toward virtualisation is inevitable. "Most organisations will adopt a virtualise-first approach to IT once the benefits become apparent," predicts Stephen Green, Executive, Next Generation Data Centre, Dimension Data. "Provided that the virtual environment is adequately managed and quality of services is maintained, the practice of virtualising workloads will snowball and continue to the point where only business-critical workloads remain physical."

Server virtualisation has certainly been the most ground-breaking step in virtualisation for its sheer impact on the IT industry. Whereas previously, every instance of a server OS required a physical server to be installed, server virtualisation has eliminated the need for bulky, maintenance heavy machines. Industry leaders agree that as CIOs see the real-world benefits to server virtualisation, they will be

encouraged to extend such projects to other areas such as storage, network and desktop clients. "Server virtualisation is prevalent among enterprises," says Abdualla Hashim, Senior Vice President of Digital Services, Etisalat. "However, network and storage virtualisation is at its infancy today. It's not adopted on a large scale, but I believe as server virtualisation picks up in the market, users will realise the benefits of network and storage virtualisation."

From servers, to storage, to networking and computing, virtualisation is taking hold from start to finish in enterprise IT processes – but how far across the infrastructure can virtualisation go? "Today, virtualisation has a broader prospective," says Ismai, "in which virtualisation is seen as a general approach to decouple logical resources from physical elements, so that those resources can be allocated quickly, more cost-effectively and more dynamically, wherever the business requires. This can all occur in real time to meet changing demand levels or business requirements."

Gartner's Mahapatra agrees, "You can theoretically virtualise anything which has a hardware with software running on top of it. As of now it is about network virtualisation, server

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virtualisation, desktop virtualisation and client virtualisation – however I will not be surprised as more and more are added." In short, so far, the only real limitation to the extent to which a business can virtualise is that enterprises' business needs and requirements.

With no real ceiling to hold it back, it seems that most network functions will soon be virtualised. As we approach that state, it is impossible to avoid a conversation about software-defined networking. "I don't buy into the notion of 'software-defined everything,' as we are still some distance away from this to take place in enterprises on a scale that actually impacts the business model. The technology is available, though at early stages, and every adoption has its own curve," says Hashim.

Though still in a very nascent stage, the idea of 'software-defined everything' is at the very least being researched and heavily considered by enterprises in the Middle East. "There are a variety of benefits enterprises can enjoy by adopting software-defined technologies. For example with an SDN architecture individual enterprises can develop tailored network operations that are flexible, cheaper and that can be rolled out quickly, improving capital efficiency and OPEX over the long term," says Omar Alsaied, Middle East Carriers Sales Director, Ciena.

Still, caution when it comes to adopting virtualised processes is not without cause. "Server virtualisation has created an on-demand expectation from the business that hasn't been fully vetted yet. Mobility, specifically the ability for a virtual machine workload to take on migratory attributes, creates massive performance problems, not only for that workload, but for all the other workloads on the same physical kit. Worse yet, you can't see it. You only know it when the phone rings and everyone is screaming at you," says Steve Duplessie, Founder and Senior Analyst, Enterprise Strategy Group. One of the great benefits of virtualisation is being able to separate services to an individual machine. However, managing VM sprawl is also one of its biggest problems. Enterprises exploring a virtualisation project need to keep in mind administrative overhead, licensing and other associated costs.

Though the road may be rocky, the path is clear—virtualisation of IT infrastructure will become the norm in the Middle East and globally. As businesses grow and innovate, and we all head into the clouds with virtualised computing and storage, the virtualisation of the IT landscape is inevitable. Though it will certainly be a learning curve for many enterprises, CIOs and IT professionals are sure to reap benefits to virtualisation of servers, storage, networking and computing in real time. "With virtualisation, the physical handling of resources and avoided," says GB Kumar, Vice President and Geo Head, Tech Mahindra, "And due to abstraction, one can perform all operations remotely. Soon everything will be defined and controlled through software." ■

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