THE PRESENT AND FUTURE OF INFORMATION TECHNOLOGY IN THE ENTERPRISE

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With a growing population and sound government practices, Macomb County offers extensive business opportunities, beautiful natural resources and a richly diverse culture

There is an exponential growth in demand for Information Technology (IT) to deliver quality solutions in an acceptable time-frame. This calls for a change in the strategic mindset of the IT decision makers.

The traditional KTLO (keep the lights on) philosophy needs to morph into a space where IT becomes an integral part of business improvements, through its application, to drive productivity and processes. This message is common today but many organizations lag behind, even though the industry has been moving in this direction for many years.

The hardware industry has led the way in laying the foundation for this transformation. We can honestly say that the industry has come a long way since around 2005 when desktop and server virtualization became popular. Issues from the early years such as latency on virtual servers for VoIP implementations, challenges with video and audio, and others, have been successfully addressed. Soon after hardware virtualization, application virtualization came to the forefront; it improved the overall ability of the industry to provision applications more swiftly.

The popularity of cloud computing has increased significantly over the last five years as it became a more viable option for the enterprise. The foundation has been laid by companies such as Amazon and Google but issues concerning security, bandwidth requirement and the maturity of the underlying hardware technologies have been a challenge. Progress in the hardware industry has led to very stable and agile hardware platforms, enabling cloud providers to address these concerns. Many organizations now rely not only on their own network, server and storage environments to provision applications, but also on hybrid and fully cloud-based solutions. Hardware virtualization is the major technology that enabled providers to introduce IaaS as a cost-effective, agile solution to the enterprise. In combination with application virtualization, it allows for the provisioning of PaaS and SaaS in the same way.

> **More security concerns are coming to the forefront as government adopts the cloud**

The introduction of cloud computing, in combination with the fact that hardware is becoming more of a commodity due to the ease of provisioning and monitoring, has yielded the most important and needed characteristic of a successful IT organization today: agility. A multitude of challenges has driven the industry to move in this direction, with the most important one being the ability to allow Information Technology providers to deliver quality solutions in more acceptable time frames.

As a CIO in the Government space, I recognize that the public sector traditionally lags behind the private sector as far as IT is concerned. I believe that it is now more important than ever that this does not remain the norm, but rather becomes the exception. The IT industry as a whole is converging in all aspects; interoperability is the key and we need to keep up with the times.

The future is very bright for the industry, but there are some areas for improvement. More security concerns are coming to the forefront as government adopts the cloud; the industry and government are addressing them via different initiatives. Although hardware provisioning is relatively easy, the unified monitoring of the infrastructure is still not fully addressed. Another area for improvement is chargeback models. Improving these items will go a long way in allowing the industry to be more pro-active in improving uptime and also more precise in how we build cost models around these services.