Future Forward- Asset Management

Using Advanced Technology to Create the Data Center of the Future, Today

BY JEAN-PAUL BERGEAUX

It's the knock on the door we all dread. The CFO enters your office and asks "how many servers do we have?" Then there's the time of year when the battle of the annual budget takes place. Decisions need to be made about the company's capital expenditures for the coming year. This includes countless meetings with the CFO, CIO, facilities and of course data center managers. The scenario is so predictable; everyone comes to the table with their own spreadsheets, needs and priorities but they are never the same. "Let the battle commence".

Now, imagine a different scenario. Imagine what it would be like without these hostilities. What if there was no need to even meet. If everyone shared a common view of what's required in the data center every day of the year. If everyone knew exactly what they need to know; exactly how many assets are in the data center, what each asset is doing, exactly where it is located, the cost to maintain it, when it needs to be decommissioned, the replacement options and the impact on costs, not to mention performance, space and power. Better still, imagine if you could visualize your data center in 3D on a laptop, iPad or mobile phone? Imagine being able to monitor everything that's going on with every asset from anywhere in real time.

A pipe dream? It may seem a long way off to many, partly because in the real world data center operations and facilities managers are consumed with a bewildering array of challenges that grow exponentially with the size of the data center. Most data center managers struggle with trying to juggle the cost of supporting business users while optimizing space, achieving carbon footprint targets, maintaining compliance standards, trying to ensure that assets are secure from theft or misuse and maintaining the morale of understaffed teams. It's no wonder that answering the simple question "how many servers do we have" is anything but simple and often elusive.

WHY THESE ISSUES EXIST

With new advanced technologies being invented and used every day why hasn't technology solved this asset management dilemma? Why are so many people unhappy with their current systems? There are two primary reasons.

First, data center asset management has historically been a tactical activity and is now transitioning into a strategic priority. In the past, asset management was often considered a sub set of another function such as systems management or maintenance. As a result, asset management technology wasn't the primary focus of software developers. This resulted in many products being adapted from systems designed for general inventory management without consideration of the unique needs of the data center.

As time progressed, more modern solutions have been developed. Yet even these advances have typically been niche products designed to address one or more specialized functional areas in or surrounding the data center. Being unhappy with the alternatives, larger companies sometimes purchased narrowly-scoped, proprietary systems. Many of these systems, some more than 10 years old, are still in use today. The one consistent factor across these alternatives is that modifying them to create a total asset management solution is a massive undertaking, tough to implement and very expensive.

The second challenge in developing a modern asset management solution has been the data center itself. Due to increasing information demands from business users, new standards of compliance and most importantly, the dramatic advances in equipment technology over the past few years, the complexity of managing a data center has increased exponentially. Manufacturers are churning out new servers, storage devices and networks in rapid

succession. Add to that the permutations of virtual, cloud-based data centers and other service options. The irony is that technology has made so many positive strides in term of what's used in the data center and yet it hasn't been optimized yet to help managers control the data center.

A TECHNOLOGICAL REVOLUTION

Have hope. There is a very bright light at the end of the tunnel. A technological revolution is taking place in the management of data center assets that is poised to change everything. One signal of what is taking place was highlighted in a whitepaper written last year by a leading industry analyst and consulting firm Enterprise Management Associates. The report said, "IT Asset Management (ITAM) as an inventory tool is a thought for the past". It coined the term Next Generation Asset Management (NGAM), defining it as the merging of service, asset and financial management into one single entity. The report explained that "Managing data center assets in today's enterprise demands an understanding of assets in the context of a broader strategic viewpoint for IT".

Another key driver of change gaining traction is known as Operational Intelligence. This is a methodology based on new sources of information derived from and analyzed by new types of technology. Operational Intelligence is about understanding what is happening real-time in a business by integrating techniques and automated technologies that deliver new insights and transparency to business operations and enabling immediate positive action.

Whether the NGAM or Operational Intelligence labels stick is less relevant than the principles they stand for and the development of advanced software tools and technologies being spawned by a new breed of applications for data center asset management. Today there are ground breaking solutions coming to the market that provide a totally integrated, holistic view of the data center. The result is that key stakeholders in the company can collaborate, invest and understand what's going on in the data center from their own functional perspectives.

The coming advances can only be described as amazing. As we move inexorably from tagging assets with barcodes towards RFID and RUBEE-type technologies, a Pandora's box opens. We now have solu-

tions that can monitor everything about an asset in real-time; physical aspects such as heat output and power consumption, and where exactly the asset is located. Add to this the new smart rack technologies and suddenly the data center manager has the tools needed to do the job efficiently, effectively and intelligently.

Because these solutions can easily and seamlessly integrate data from other sources, critical asset details are instantly available, including: usage and performance information; what's running on the equipment; how it is optimized or utilized; who owns it; the projects it is associated with; and all financial information including depreciation, maintenance costs, lease and contracts details. A complete asset tracking picture that includes all of this information is available in one single application.

INVENTORY MANAGEMENT ADVANCES

Talking about pictures, gone are the days of floor diagrams or static 2D modeling applications. Technology now exists to navigate a data center remotely in 3D, enabling a virtual walk down an aisle, around corners, and right up to a rack so that a specific asset can be picked up and every detail can be inspected.

Perhaps one of the most significant challenges for the data center manager is in the thorny area of inventory management. Historically, this has been a mind-numbing, time consuming, manual effort with staff using clip boards and excel spreadsheet and walking from rack to rack to try and figure out what asset is there, what's missing, and what is racked but not listed. The permutations are endless and the pen and paper results, which can take weeks and sometime months to complete, are fraught with inevitable errors. So problematic has the inventory management process been that many data center managers reluctantly choose to skip the activity.

Now flash forward to today. Inventory management and data center audits have morphed into hi-tech applications on mobile devices using Bluetooth barcode and RFID readers linked to hand-held, tablet computers. Smart tablet-based applications written for mobility are wirelessly networked into a NGAM-type central asset management database. Everything is connected; all the asset information is available for the audit team.

(...Continued)

With these technology advances the inventory management process becomes fully automated. Audits take a fraction of the time and are completely accurate. The system verifies and validates asset information on-the-fly during a leisurely walk through the data center. All exceptions are identified and captured for immediate or later resolution.

This however is just the beginning. Hi-tech companies are already working with robotics to advance new and faster inventory management techniques. If that wasn't enough to create some excitement, there are also specialized boutique technology consulting firms springing up that are working in "green field-type projects" delivering breakthrough solutions.

Perhaps the most exciting impact is that with these new technology advances your CFO, CTO/CIO, Data Center Managers and Facility Operations team can all extract pertinent data from a unified database, based on real time accurate information so that they can make strategic financial and technical decisions.

Clearly the future of data center asset management is bright. It has now garnered the strategic focus and attention of dedicated I.T. and software companies committed to solving age-old challenges with groundbreaking new technology. Complexity is being eradicated in exchange for simplicity; manual processes are giving way to easy-to-use automated processes; information silos turning into unified information sharing and collaboration, and the guesswork of the past morphing into a new generation of operational intelligence.

Best of all, this will soon mean no more dreaded knocks on your office door from colleagues whose questions you can't answer.

About the Authors: Vizualiiz has created a new approach for asset management called LightsOn™. Bob Cartwright is the President and Craig Kelley is Chief Technology Officer. For more information visit Vizualiiz.com

Why Businesses Need Data Center Services?

BY POOJA CHOPRA

It has been reported by the U.S. Bureau of Labor Statistics that the majority of SMEs never recover from catastrophic data loss. In a recent research International Data Center reported that 58 percent of the companies are doing just a local back-up.

Local backups are good and beneficial considering the first step of protection they provide. These are very effective against initial errors such as manual intervention with data, software or hardware failures but these fail when it comes to protection against theft, disaster or multiple software/hardware failure due to voltage.

Seeing the day-to-day growing dependence, it may not be exaggerating that businesses thrive on data and Internet. Yet, it is surprising to see that how businesses are taking risks without thinking much to invest in a data protection plan. Enterprises need to understand that unlike physical assets such as buildings and equipments which can be resurrected quickly through insurance, data loss is practically incurable. It is the most determining factor for the existence of a business. Hence, the need of the hour is to think about enterprise data security plan.

Data security plan, in order to be completely fortified, should meet the three 'C's of safe and reliable data center:

1) **Comprehensive:** The data plan for enterprises should be universal and unique to fight the threats and challenges ahead. One data plan should be able to work against all the odds such as manual errors, application failures, natural and man-made disasters such as fire, theft, floods etc.

2) **Convenience:** It should be plug-n-play for your business and IT department. The maintenance of the servers and security of data should be the worry of Data Center Services providers and not yours. Without changing much into your existing IT architecture, they should be able to provide you the necessary or expanded bandwidth whenever necessary without nudging you for constant care.

3) **Costs:** This is the most crucial part. The data center services should fit into your budget. Your vendor should not be increasing the amount of the package or bandwidth costs on monthly basis. The SLA and contract should be with a focus on your business and computing needs.

So, to overcome the challenge of data protection, data center backups are the best method to retain your data and ensure its well being. The data center services providers are offering increasing bandwidth and ubiquity at any location. The data center is remotely monitored. Human involvement is limited to IT engineers and expert maintenance team. The geographical location of data centers also minimizes the risk of earthquake, floods and other natural calamities. They are often situated at low risk zones.

Most of companies and enterprises are opting for the data center solutions after imbibing the role of data in the growth of their ventures. India clearly emerges as the winner seeing the advancements in technology and cost effective trends in data center realms. Providers like Spectranet offer tier-3 infrastructure set up to equip the companies against any data threat. In the times of disasters, data center India provides quick recovery progress and help business continuity by retrieving the data in the shortest turnaround time. ■