Cost Optimization and Technology
Software Metering as Part of
a Robust Implementation Program

Lean and IT Asset Management
Applying Lean Principles
to ITAM Process

Advanced Tech for Data Center ITAM

Things to Consider When Managing the Virtualized IBM Software Inventory

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Advanced Tech for Data Center ITAM

Unsolved Problems Being Addressed by Future Forward Technology

By: **Bob Cartwright**
*President, **Vizualiiz***

Every so often, we arrive at an intersection that occurs between emerging industry trends and advancing technologies that helps solve previously unsolvable problems. Today, data center asset managers are experiencing this type of phenomenon. If we tune in closely, we will have an opportunity to participate first-hand in using technology that will transform the way we manage assets. With the click of a mouse, we will know everything we need to know about them, when we need to know it. Better yet, we will be able to quickly, cost effectively and efficiently address the needs of others within our business in dynamic new ways.

Maturing Industry Trends Demand New Approaches

The world inside today's data center is changing dramatically. Today the business of managing assets is being reborn to address a new era of accountability.

- We've shifted from managing assets for uptime, to managing for performance. The must haves include ensuring reliable, secure and timely asset information to address a slew of demands from a variety of new constituents
- We are shifting to a service-centric IT delivery model. Today, asset managers are responding to requests from Legal, Regulatory, Compliance, Finance, Contract Management, Information Security, Facilities, Operations, HR and other stakeholders who need real time information from data center assets to their jobs effectively
- We are continually being asked to do more, with less; tight staffing conditions due to even tighter budgets.

These pressures are the new norm, constraining our teams and the options and approaches we have to solve our problems

We're managing more complexity than ever before. Data centers are becoming harder to manage because of increases in the number of data center applications and locations, more services level agreements, and rapid rate of change and growth. Additionally, the emergence of virtual server infrastructures and cloud computing have created an environment of less tangible assets that are more difficult to define and track.

These trends are having a profound impact on the traditional approaches commonly used to manage assets. The use of notes, labels, clipboards, spreadsheets and homegrown systems are unsustainable in this new environment. The high human interaction required is costly and unavailable to meet demands. Likewise, the inevitable inaccuracies and the static nature of manual systems inhibit the ability to achieve and manage new performance and service levels objectives.

Fortunately, these issues are converging with advanced new technologies that are rapidly making their way into the hands of asset managers.

Technology Converging with the Needs of Asset Managers

Today we're witnessing an explosion of change in the way technology is being used throughout organizations and these changes are having a direct impact on the expectations others have regarding what asset managers should be able to provide. For example, the ubiquitous use of the iPhone is a

big part of this revolution. Today, workers throughout the organization are untethered from their desk. With devices in hand and a quick flick of the finger, they access apps to help them complete their work activities, from anywhere, and in real time. Gigabytes of their personal and professional data are stored in the cloud. All they need to know is quickly accessible, filtered, sorted and downloaded as needed.

With these types of advancements, it's easy to understand why others outside of the data center who are dependent on that datacenter expect a data center manager to instantly answer straightforward questions such as:

- How many assets do we have?
- Where is a particular server located? On which rack?
- Which equipment is on which rack?
- How old are each of the servers?
- What are the lease and maintenance status of each?
- What is the weight and size and energy consumption of various types of assets? Is there sufficient, redundant power for the asset? Is there enough cooling to remove heat generated by the asset?
- Are we in compliance?
- Who owns which assets?
- Do we have enough space to add more assets? What is our capacity? Which can be retired?

At the same time that life within the data center is shifting, many things remain the same. Survey after survey confirms that asset managers continually worry about the same things year after year:

- Finding missing assets
- Underutilization of assets
- Excessive labor costs
- Costs and time of audits
- Cost of inventory
- Accuracy of inventories
- Excessive equipment rental / leasing costs
- Information to determine ROI on replacing older equipment
- High shipping / receiving errors
- Tracking equipment relationships to projects, owners, etc…
- Rack density
- Downtime-recovery planning
- Security and theft

Fortunately, we are on the cusp of being able to integrate a new wave of technologies that will solve our current problems and help us address the growing asset information needs of those we serve outside of the data center.

Change Drivers

A whitepaper written last year by Enterprise Management Associates, a leading industry analyst and consulting firm signals what is taking place. 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." (1)

Another key driver of change gaining traction is 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.

These two theories are fundamental drivers behind the new class of asset management tools coming to market.
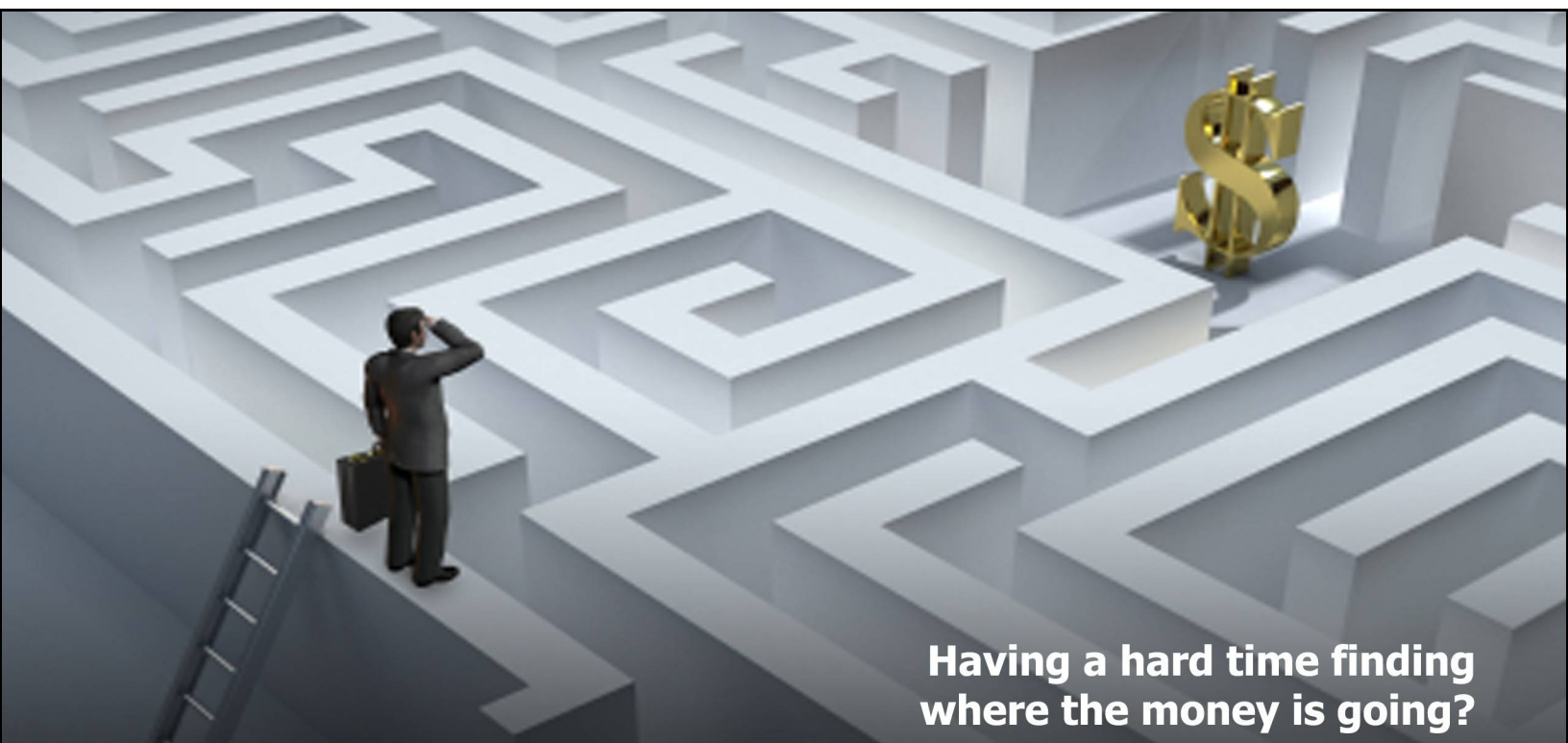
Inventory Management Advances

One of the most significant challenges for the data center manager has been the thorny aspects of inventory management. This often mind-numbing and time-consuming manual effort has historically taken weeks with staff, using clip boards and excel spreadsheets, walking from rack to rack to determine what asset are there, missing, or racked but not listed. Unfortunately, errors are inevitable, information is static and many reluctantly choose to skip the activity. Today's new tools directly address this issue.

Remote navigation: Beyond 2D, technology now exists to navigate a data center remotely in 3D. Regardless of whether a data center is located across town or in another country,

asset managers can now virtually walk down an aisle and right up to a rack to inspect and view specific asset details.

Mobile inventories: Flash forward to today. We now have 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. The

inventory management process is fully automated, taking a fraction of the time and is completely accurate. These systems can even verify and validate asset information during a routine walk through the data center, identifying, capturing and storing exceptions for immediate or later resolution.

Robotic inventories: Companies are also working with robotics to advance new and faster inventory management techniques. There are also specialized boutique firms focused on "green field-type projects" delivering breakthrough solutions.

Unified database access: 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.

Cloud applications and API software modules: As new technologies come to market, many are even more cost-effective than former proprietary and premise-only based solutions. Cloud-based SaaS options are becoming more commonplace and smart organizations are developing using open APIs.

As we move from tagging assets with barcodes towards RFID and RUBEE-type technologies, a Pandora's box opens to enable asset managers to 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 now has the tools needed to do the job.

Today, the solutions coming to the market 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.

Clearly, the future is bright. It has now garnered the strategic focus and attention of dedicated IT 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

Reference
- "Next-Generation Asset Management (NGAM): A Service-Centric Model for IT Financial Optimization," Enterprise Management, http://www.enterprisemanagement.com/research/asset-free.php/1684/pre/Next-Generation-Asset-Management-(NGAM):-A-Service-Centric-Model-for-IT-Financial-Optimization-pre

ITAM - More than 1s and 0s
Highlighted Speaker

Future Forward: How Asset Management Will Evolve out of the Dark Ages with Advancing Technologies

Bob Cartwright
President
Vizualiiz

Bob Cartwright is a serial entrepreneur that has focused on data centers and computer IT his entire career. 20 years ago, Bob co-founded Dimension Systems, a value-added reseller (VAR) for enterprise information technology (IT) manufacturers. Earlier, he held Industrial and Systems engineering positions at Boeing, where he also managed one of the largest data centers. Bob has worked in the storage vertical market, handling performance management, business analysis and training and sales engineering support for the US and Canada. In this position he traveled to many data centers and witnessed firsthand how hard it was for the smart data center teams he met with to efficiently manage IT assets. With this knowledge he set forth on a mission to find a new approach, which resulted in the 2010 launch of Vizualiiz. Education: Western Washington University, BA Industrial Technology.

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