RFID Takes Time, Risk and Cost Out of Satisfying IT Asset Tracking Requirements

RFID is "the tool for the times" to efficiently meet today's IT asset tracking requirements. Manual and bar code-based asset tracking processes are no longer timely or accurate enough to mitigate the risks of non-compliance with SOX, HIPAA, PCI, the HITECH Act and the growing list of other regulations governing enterprise information and assets. RFID solutions are taking the time, cost and risk out of meeting IT asset tracking and reporting needs. Xerafy and its network of experienced partners are helping organizations solve IT asset challenges with an innovative line of read-on-metal RFID tags that are designed for identifying rack servers, storage devices and networking equipment, tracking PCs, laptops and smart phones, and even for embedding into blade servers, and by working with IT hardware suppliers to source tag equipment for their customers.

The numerous regulations for controlling enterprise data and IT assets essentially all require organizations to have more visibility into their equipment. Organizations need to know where all their IT assets are at all times, document that assets have remained under their control, and be prepared to provide this documentation on demand to meet audit requirements.

These requirements extend beyond the data center, and increasingly, beyond the four walls of the enterprise. Mobile devices are a major, expanding source of liability and are a leading cause of data breaches today. It is hard enough to track and manage servers, routers and other assets installed in locked data centers. Now these protections need to be extended and enhanced to include desktops, laptops, smart phones and other personal devices employees use to access enterprise information.

New Challenges Need New Solutions

With requirements becoming more complex, it is not surprising that data breaches continue to grow. Today it is impractical, if not impossible, to attain the necessary levels of visibility and responsiveness using traditional recording and reporting processes. It simply takes too long to locate and record assets manually — or even with bar code scanning. In 2011, 85 percent of data breaches took weeks or longer to discover.[i] The consequences of a data breach rise every hour it goes undetected.

> "There will be an increasing need for companies and, in particular government organizations, to be able to track and authenticate their in-house assets and equipment as well as items and products provided and sold...We expect to see increasing use of RFID ahead of alternative solutions to provide this audit trail."
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> John Devlin
> ABI Research

Besides the cost-prohibitive time requirements, bar code and manual IT asset tracking methods do not provide effective risk mitigation. Recording assets when they are placed into service and periodically conducting an inventory only provides a snapshot – the asset is either present or missing when the check is conducted. They don't prevent assets from being lost or stolen; they only help document that assets are missing.

Manual methods are also notoriously inaccurate. Information is often recorded incorrectly or not at all because the item was missed during the inventory. Lost and stolen assets already account for approximately 29 percent of data breaches[ii] and are a growing threat to the enterprise, especially as the use of mobile devices and removable storage grows.

RFID's Growing Role and Value

RFID overcomes the shortcomings that legacy IT asset management methods have in meeting today's more stringent documentation requirements. Attaching or embedding RFID tags on IT assets provides secure, lifetime identification, significantly reduces the time and labor requirements to take inventory and track assets, improves information accuracy and enables unattended, continuous monitoring to improve security.
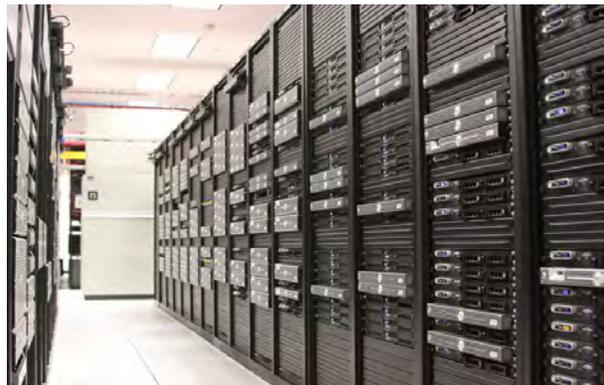
RFID readers do not require direct line of sight to identify tagged items and can simultaneously recognize hundreds of tags per second. These fundamental RFID characteristics are extremely valuable in data center environments, where blades and other assets are often hard to reach. It is time consuming for workers to locate bar code labels, aim the scanner and get a good read. Items may be skipped, either accidentally or because the asset was too inconvenient to scan the item. Contrast this with RFID systems, which read all items automatically and the operator if an item was missed. With RFID, you can identify every blade in a rack in less time than it takes to scan a single bar code. You can also set up unattended readers that will continually monitor assets and send alerts to system administrators if items are removed from the data center, a department or from the building.

Xerafy customers and various studies have documented 80 percent to 90 percent reductions in the labor required to complete an IT inventory and up to 15x increases in worker productivity. Additional time savings occur when enterprises need to locate a specific asset for maintenance or replacement, and when they need to prepare reports and documentation. The accuracy of these efforts also improves because RFID tracking is automatic and comprehensive. With better data and real-time visibility into asset locations and status, enterprises reduce their risks of data breaches and non-compliance with data privacy and security requirements.

The time and labor savings for inventory operations alone are usually enough to provide full return on investment (ROI) for an RFID asset management system. If the RFID solution prevents just one data breach, SOX violation or failed audit, the solution would pay for itself many times over.

Solutions Depend on Tags

RFID improves accuracy and efficiency in IT asset tracking – but only if the tags used are right for the job. Meeting Financial Services Technology Consortium (FSTC) and GS1 EPCglobal Gen 2 standards is not enough. The data center environment is challenging because of the high potential for interference from metal racks and equipment plus the density of hundreds or thousands of tagged items in a confined space. General-purpose RFID tags tend to perform poorly in the data center. Enterprises may need to use a range of tags to get the consistently

high performance that operations require. Key tag requirements for successful RFID IT asset tracking include:

- Cost effectiveness – The more assets an organization includes in its RFID tracking program, the larger ROI it will receive. Tags need to be cost effective to maximize the cost savings that RFID tracking provides by saving labor and enabling optimized asset utilization.
- Small size – Tags should be as small as possible without compromising performance. Approximately 10 percent of IT assets have been considered poor prospects for RFID tracking because they did not have enough space available for a tag. New RFID tag innovations are removing that obstacle and allowing entire new categories of RFID assets to be tagged, including mobile devices that have been especially hard to track, manage and secure. Today there are low-profile tags available that are thin and durable enough to attach to the side of a smart phone.
- Ability to embed – Source tagging IT equipment by placing a tag within the asset is extremely space efficient, but requires tags that are engineered to provide reliable reads when embedded in metal. Continued RFID innovation has made this possible, and options are rapidly expanding.
- Tuning – Reading an RFID tag on a desktop PC is much less challenging than reading blade server on a rack with dozens of other tagged assets. Tags need to be tuned for their specific use environment to provide reliable, consistent performance.

Note that range was not listed as an important tag requirement. When the Financial Services Technology Consortium (FSTC) established its industry-leading requirements for using RFID in data centers, it specified having read range of no longer than three feet. Tag quality, sensitivity and consistency are much more important than range because data centers typically have thousands of items that each need to be tagged and identified individually. Too much range results in stray reads that can overwhelm systems and actually slow down performance.

One of our customers put range in proper perspective when he said: "Getting 20-foot read range doesn't help me when I have 48 servers in a cabinet and 30

cabinets in a row. I don't want to be getting reads from four rows away."

Why Xerafy

Xerafy has a proven track record of supplying RFID tags to data centers of Fortune 500 companies worldwide, and understands the IT industry's needs to track large numbers of blade servers, networking and other equipment. We have a complete range of products to provide accurate, lifetime identification for different types of IT assets at all phases of the lifecycle, from provisioning to deployment to disposal.

Xerafy's innovations have changed the price-performance ratio for RFID tags and made it possible for customers to track more types assets in all types of environments. Our innovative products include tags that can be embedded directly in server blades, compact on-metal tags that can fit on blade faces, rack locations and mobile devices where others can't, plus numerous other tags with a range of memory, materials and mounting options that are smaller than the bar code labels commonly used to identify IT assets today.

Xerafy also makes it convenient for customers to deploy RFID in the asset tag through our source tagging and service bureau programs. Our service bureau will encode and commission tags for you, whether you want to use FSTC or other encoding standards or your own identification system. Xerafy also works with data center customers and their suppliers to create source tagging programs so when new IT equipment is tagged and encoded before it delivered to your facility.

Whether you need to track mobile devices, PCs, removable storage devices, servers, routers, network cards or other IT assets, Xerafy has tags that meet industry standards and are engineered for the job. Our tags have the performance and affordability so you can use RFID on all your data center assets.
You can learn more about the benefits of RFID asset tracking from the free white papers available at www.xerafy.com, which also has customer profiles, additional information and links to our expert partners for IT asset management solutions.

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[i] Verizon RISK Team, Australian Federal Police, Dutch National High Tech Crime Unit, Irish Reporting and Information Security Service, Police Central e-Crime Unit and United States Secret Service "2012 Data Breach Investigations Report"
[ii] Source: Open Security Foundation Data Loss Database. http://datalossdb.org/statistics

Xerafy Helps Leading IT Innovator Keep Its IT Assets Under Control

A $50 billion computer products developer relies on RFID tags from Xerafy to manage its data centers around the world. The company previously tracked IT assets with paper forms and bar code readers, depending on the facility. The processes were so time consuming that complete asset audits were impossible. Instead, the company would audit 10 percent of the assets in any given data center quarterly, and extrapolate an inventory report based on the results.

"We only had information for 70 to 80 percent of the fields we wanted to complete, and our location accuracy was even worse," said the program manager who led implementation of RFID tracking for 60,000 assets in more than 900 rooms throughout 17 data centers worldwide.

After thorough investigation the company selected Xerafy's Pico read-on-metal tags, which meet EPCglobal Gen 2 and FSTC standards and can be tuned for optimal performance in data centers all around the world. The tags have provided outstanding performance and accuracy, even when inventory is being taken in rooms with thousands of tagged assets with hardly any space between them.

"Some tags had larger antenna so you could read them from farther away. That's not what you need in a data center, because when you're reading a rack you don't want to get spillover from four racks away. The system is allowing me to have an accurate picture of where assets our in a room. I can isolate a server to a rack in a large data center in 77 seconds; it used to take 5 minutes."

The system also slashed the time needed to take inventory – so much that the company can now identify all of its assets, instead of a 10 percent sample, and perform audits more often to keep records up to date.

"Inventory is almost immediate. I can do a whole room with RFID in less time than it use to take to inventory 10 percent of the items manually. Plus, I have 99 percent accuracy in my asset database. We looked at a lot of RFID tags that didn't meet our needs. Size and sensitivity are what's most important. Xerafy had the smallest tags, and they were willing to work with us on tuning so we could get exactly what we needed. We needed that size and flexibility to make this work."

For more information on this application, product overview or any other questions, please contact Xerafy: www.xerafy.com.