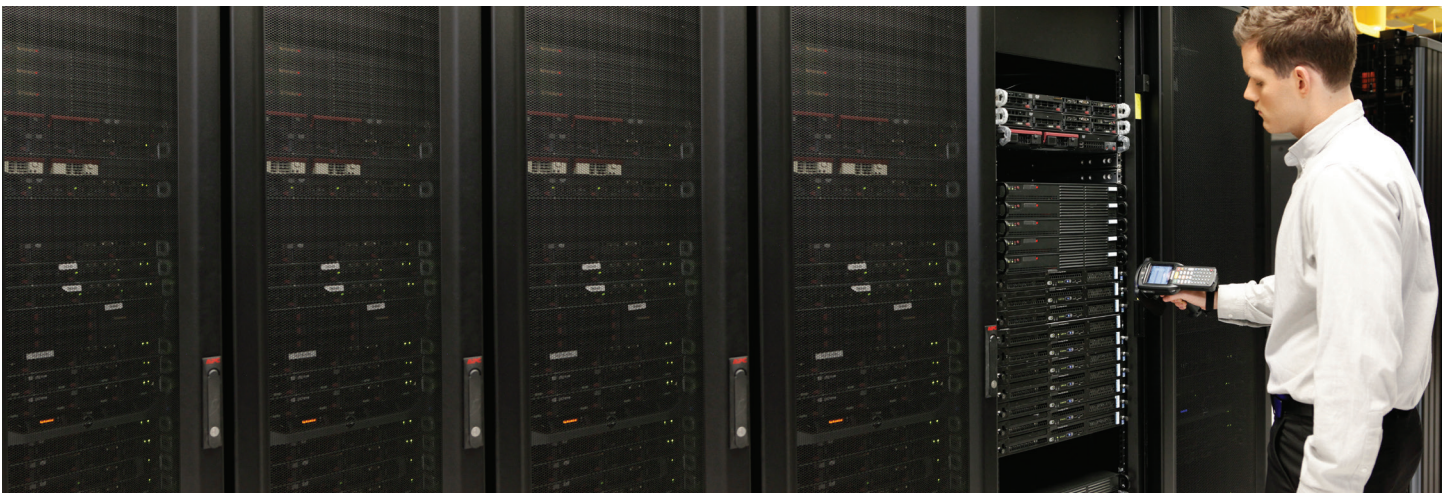# REDUCE THE COST AND COMPLEXITY OF IT ASSET MANAGEMENT WITH RFID

Improve accountability while you reduce risk

Servers, hard drives and external media are on the move in and out of the data center for routine maintenance, repairs and upgrading. Backup tapes are on the move into and out of the tape libraries as needed throughout the day. And end user devices such as laptops and handheld mobile computers are on the move inside the four walls — and out in the field.

Legally, you have to keep track of it all to be sure sensitive data is secure. But how can you do that efficiently, affordably and responsibly? RFID can help.

THE CHALLENGE

Inefficient manual IT asset tracking increases your cost — and your risk

In large enterprises, IT data centers can contain hundreds of thousands of IT assets. Tracking these highly mobile assets can be a daunting task. According to an Aberdeen survey of lost IT assets[1], roughly 50% of all companies utilize manual labor for intensive and error-prone processes to conduct inventory and track IT assets — a less than prudent use of this highly skilled staff. IT personnel are required to physically handle each asset and note asset information, typically via pen and paper — from serial numbers to configuration specifications. The information is then manually compiled into a spreadsheet, greatly increasing the opportunity for error regardless of whether that information is handwritten and later entered in the computer, or keyed directly into a laptop or handheld mobile computer.

KEY BENEFITS

- Automate and dramatically reduce the cost of inventory management of your IT assets such as computers, servers and data tapes

- Enables highly cost-effective and automated real-time IT asset tracking with a full audit trail — from 'cradle to grave'

- Improve your IT staff productivity and overall utilization of IT assets

- Proactively protect your enterprise against the loss of IT assets, the data resident on those assets — and the potentially devastating cost of a data breach

- Demonstrate and document compliance with government and industry regulations regarding the security of consumer data

- Improve accountability for IT asset management

- Reduce capital equipment purchases

Placing a bar code label on IT assets can greatly improve the data capture accuracy of serial numbers and other identifying data. However, bar code technology has one major drawback – it requires a clear line of sight from a scanner to the bar code label on the asset. As a result, the efficiency gains with bar coding are minimized by the fact that IT personnel are still required to not only physically locate assets, but then also locate the bar code tag on the asset – an overwhelming task when bar codes are inconveniently located, for example, on the backs of rack-mounted servers. With or without bar code scanning, the result is still a phenomenally manual, time consuming and expensive effort – all contributing to infrequent inventory takes.

The link between IT asset management and data security

While enterprises can meet tax laws by conducting quarterly audits – or even a single annual audit – complying with today's security laws is much more complex. Enterprises must be able to provide a complete audit trail of the movement of any and every asset that contains personal consumer information throughout the entire lifecycle of the asset – from the time it is placed into service to the time it is retired. Paper-based or bar code tracking systems are typically utilized at key entry and exit areas to satisfy track and trace requirements. However, in addition to creating 'choke points', these tracking methods still generate higher-than-acceptable data errors. And the lack of real-time visibility can prevent an enterprise from discovering a missing asset, increasing the risk of a data breach – an extremely expensive event that can result in heavy fines and brand damage, a significant liability for customer-facing enterprises.

To address security, some companies have deployed security cameras in the IT data centers. While cameras may help identify the person who removed an asset, cameras do not prevent the unauthorized movement or theft of IT assets – including the personal consumer data that is resident on those devices. Even more sobering, the 2011 report on data breaches conducted by the Verizon RISK Team[2] reported that 93% of data breaches by internal agents are not accidental, but intentional. Too often, the enemy is within and "… it is regular employees and end-users – not highly trusted ones – who are behind the majority of data compromises. This is a good time to remember that users need not be super users to make off with sensitive and/or valuable data."

Government compliance mandates

An accurate inventory of all business assets is required in order to comply with tax laws (such as Sarbanes-Oxley in the U.S.) that govern the accurate accounting and depreciation of all business assets. As a result, IT assets must be accounted for regularly – no small feat considering the volume and mobile nature of these assets.

In addition, a number of industry standards and laws require enterprises to protect the sensitive personal data of its customers. For example, the Payment Card Industry (PCI) has established security standards for any company that maintains credit card information on file for customers. The Gramm-Leach-Bliley Act requires financial institutions to protect non-public consumer information. And the Health Insurance Portability and Accountability Act (HIPAA) provides security standards for health-related data. This translates into the need for companies to be able to account for every movement of every IT asset that contains sensitive data – from servers and hard drives to laptops and backup tapes.

KEY APPLICATIONS

- Receiving and commissioning
- Real-time tracking and tracing
- Locating for scheduled maintenance
- Shipping and deployment
- Inventory and audit
- Compliance monitoring and reporting

TARGET IT ASSETS:

- Data center servers
- Personal computers, laptops
- Handheld mobile computers
- Media, hard drives, data tapes
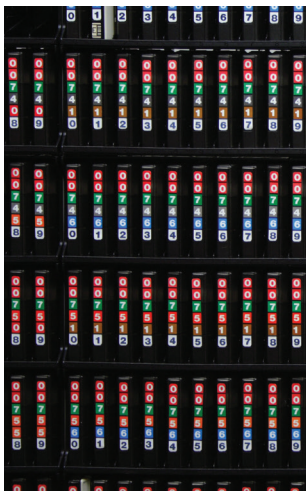
"Technology assets are the life blood of today's data centers. Maximizing these critical investments requires an effective IT Asset Management (ITAM) system. RFID can enable highly automated real-time tracking of IT assets, bringing a new level of cost-efficiency to the ITAM process. The resulting real-time asset visualization ensures the security and timely maintenance of IT assets — as well as compliance with government regulations. And the ability to eliminate the need for human resources allows IT to devote more time to enterprise innovations that will help hone a company's competitive edge."
Frank Lanza, Worldwide Director, HP RFID Program Office

Whether a hard drive requires regularly scheduled maintenance or is due to be retired, IT personnel armed with a handheld RFID reader can locate the right drive in minutes.

THE SOLUTION

Fully automate and error-proof IT asset tracking with RFID

RFID can address each of these issues by enabling the real-time tracking of every IT asset – from the moment the asset enters your facility to the moment it is retired. And unlike bar code scanning, RFID does not require line of sight, can read multiple tags simultaneously and does not require any human intervention.

When RFID tags are placed on IT assets, the information on the RFID tags that are within the read range of a given RFID reader is automatically captured. Error-prone paper processes are replaced with highly accurate real-time IT asset visibility – including a complete audit trail – enabling compliance with government and industry regulations and the ability to proactively protect the enterprise and its customers from the devastating impact of the loss of personal consumer data and intellectual property. When this information is coupled with employee identity, the result is a major improvement in accountability and security – as well as a major deterrent to theft. With RFID-enabled employee badges, RFID readers at check points can automatically capture the identity of the asset that is being moved, as well as the identity of the employee who is moving it.

The RFID toolset to deploy this increasingly automated and beneficial IT asset monitoring environment has also significantly matured. Look for RFID readers that are easy to deploy and manage, and are designed specifically for indoor or customer-facing applications. Fixed readers should be plenum-rated and certified safe to install in walls and ceilings. Zebra's FX7400 low-profile RFID fixed reader and the MC3190-Z lightweight RFID handheld reader are two such readers, both designed specifically for offices and other associate-facing and business environments. That makes them ideal for applications like enterprise inventory/asset management and enterprise IT asset management.

RFID APPLICATIONS FOR IT ASSET MANAGEMENT

Cost-effective real-time track and trace

When fixed RFID readers, such as Zebra's FX series of readers – are installed at the entrance and exit points in various facility zones, RFID-tagged IT assets can be automatically tracked from the moment they are received at the dock and as they move through the facility to the data center, the lab for repair or regularly scheduled maintenance or the warehouse for shipping to a different facility. In addition, the many mobile devices deployed throughout the enterprise workforce can also be tracked as workers enter and exit the building, from laptops to handheld mobile computers, mobile printers and more.

New enterprise-appropriate RFID readers reduce complexity and increase usability.

> "Large enterprise data centers can easily contain thousands of servers and tens of thousands of data tapes in geographically dispersed locations. The advancement of mature RFID platforms paves the way for highly scaleable RFID applications that can virtually automate IT asset management tracking, dramatically reducing IT time and costs as well as providing the real-time IT asset visibility required to ensure security and compliance."
>
> **Sudhir Hasbe, Sr. Product Manager, BizTalk RFID for Microsoft Corporation**

The granular tracking data can be automatically filtered and analyzed to identify any potential security issues and help prevent security breaches. For example, if a server is on the way to the lab for routine maintenance, an alarm can be sent to appropriate personnel if the device does not reach the lab within a designated period of time. Supervisors can see what time the server left and who was in possession of the server, allowing a pinpoint search to begin immediately. Whether the server was inadvertently left in a hallway, or an unscrupulous employee is seeking an opportunity to copy the data on the server or even remove the server from the premises, the enterprise has the real-time visibility required to increase IT asset security – substantially reducing the risk of asset loss or a data breach.

Cost-effective inventory

Compared to manual inventory procedures, RFID enables significantly faster inventory takes – in record time, with record accuracy. Inventory takes are not only simpler to execute, but also much more cost-effective, enabling inventories to be taken more frequently. Now, IT personnel can simply push a cart with a mobile reader, such as the Zebra RD5000, up and down the aisles of the data center, automatically capturing the information on the RFID tag on each asset. Since RFID does not require line of sight, there is no need for employees to climb ladders to audit servers and other inventory on the top of racks and storage shelves. The need to physically handle each device is completely eliminated, along with the need to manually collect asset data. Thanks to the automation of RFID, inventory information is virtually error-free – and a complete and accurate inventory of even massive data centers with hundreds of thousands of square feet of space can be conducted in just hours instead of weeks – by just one person.

The cost of an inventory take drops to practically zero – instead of salaries for a dozen or more workers for weeks at a time, the only cost is a few hours of time for a single worker. As a result, inventory can be taken whenever it best benefits the business – quarterly, monthly or even weekly. The accurate and timely inventory data provides the information enterprises need to properly account for and depreciate IT assets on tax returns, maximizing tax savings, preventing the inadvertent overpayment of taxes and ensuring compliance with financial business reporting laws. And more frequent inventory takes provide the visibility required to improve IT asset utilization – for example, before purchasing new servers or hard drives, a quick scan of a recent inventory report might reveal that there are unused devices in a closet that can be utilized.

Real-time search

In addition to inventory and real-time track and trace, RFID can also enable the rapid location of a specific asset. For example, the audit trail on a specific backup tape might show that the tape was placed in the library, but is not on the appropriate shelf. A server may be due for reconfiguration or an operating system upgrade – while a tape drive that has reached the end of its lifecycle must be destroyed. The routine location of these items without RFID is typically time consuming, often taking many hours or even days. But with an RFID handheld reader, such as the Zebra MC9190-Z RFID, or a mobile reader such as the Zebra RD5000, a missing tape can be found in minutes in even the largest of media libraries, and a specific server or hard drive located just as rapidly, all with very little effort – and very little cost.

Real-time file tracking

While maintenance records for IT assets are available electronically, many assets, such as servers and hard drives, also have associated physical files that contain

maintenance history, user manuals, warranty papers and more. The paperwork must remain with those devices, never farther away than an adjacent room. Compliance requires the ability to track those files in real time. When an RFID tag is placed on the associated physical files, the enterprise can see not only where an IT asset is at any point in time, but also where its file is located as well. Time spent hunting for files is eliminated, freeing workers to focus on more crucial business tasks.

THE ROI OF RFID FOR IT ASSET MANAGEMENT

The benefits of RFID combine to provide a strong return on investment (ROI) that easily justifies the expense of deploying an automated RFID IT asset management solution. Benefits include:

- **Increased IT staff productivity.** The ability to virtually automate IT asset management practically eliminates the need for IT staff to spend time inventorying assets and tracking down specific assets that are lost or misplaced, or require maintenance, repair or destroying. Some customers have reported as much as a 95% reduction in asset tracking time. Now, your high-dollar IT staff can remain focused on more crucial business tasks, improving staff utilization and enabling the deployment of technology initiatives that can improve the overall health of the business.

- **Cost-effective compliance with government and industry regulations.** While compliance with regulations is mandatory, without RFID, that compliance can come at a high cost that can affect the profitability of the business. RFID enables compliance with IT asset tracking-related regulations with virtually no human resources, protecting the company's bottom line.

- **Reduced capital equipment costs — and improved IT asset utilization.** RFID provides the real-time IT asset visibility required to prevent the loss of leased equipment — and the subsequent need to repurchase that lost equipment. In addition, since all assets are always visible, redundant equipment purchases are also eliminated. For example, since regular and frequent inventories are now a cost-effective reality, IT can spot any new servers that have not been deployed or available space on deployed servers to accommodate new applications and increased data storage requirements, preventing the unnecessary purchase of additional equipment — and improving the utilization of existing IT assets.

- **Risk reduction.** RFID can ensure that only authorized personnel have access to and can remove IT assets. Whenever a preset threshold or rule is breached, RFID, coupled with appropriate software, provides the real-time alerts that enable proactive action. In addition, the ability to track laptops, handheld mobile computers and more as your mobile workforce enters and leaves the building increases accountability, incenting employees to better care for company IT assets.

- **Protects profitability and the health of the business.** By improving the security of your IT assets and the information on those assets, RFID helps protect against the devastating loss of intellectual property and sensitive customer data — which can include enormous financial damages in the form of fines, as well as a staggering loss of brand equity and consumer confidence.

RFID solutions in the datacenter offer significant labor savings and provide a cost-effective means to address government consumer information protection regulations such as PCI and HIPAA. The stakes are high. The costs of lost or stolen hardware are significant, but can't compare to the direct and indirect costs of lost data — including damage to a company's reputation, brand, and shareholder value.
Jim Caudill, SVP Marketing and Strategy, Xterprise

FOR MORE INFORMATION ABOUT HOW ZEBRA CAN HELP YOU IMPROVE THE EFFICIENCY AND REDUCE THE COSTS ASSOCIATED WITH IT ASSET MANAGEMENT IN YOUR AGENCY, VISIT US AT WWW.ZEBRA.COM/RFID OR ACCESS OUR GLOBAL DIRECTORY AT WWW.ZEBRA.COM/CONTACT

Aberdeen Group, Inc. 2004, RFID-Enabled Logistics Asset Management. Improving Capital Utilisation, Increasing Availability, and Lowering Total Operational Costs, June 2004, Boston, Massachusetts. http://www.ht2.org/conference/pdf/84.pdf
2011 Data Breach Investigations Report; Verizon RISK Team; 2011