Data Center Asset Tracking Case Study

IT Asset Tracking Inventory and Control System Delivers Major Savings

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In association with

Omni-ID

RFIDglobal SOLUTION
**Case Study: Large Financial Services Company**

**Partner**  
RFID Global Solution, Inc.

**Industry**  
Financial Services

**Challenge**  
The rapid expansion through acquisition and subsequent consolidation of numerous data centers necessitated real-time visibility of IT assets to address:

- Accuracy and efficiency of data center asset inventories
- The high cost of manual and barcode-based Sarbanes Oxley audit processes
- Inability to locate data center assets quickly and efficiently
- Risk of non-compliance to U.S and U.K. tax laws and financial regulations
- Potential security risk resulting from lost or misplaced assets / data

**Solution**  
A comprehensive RFID-based IT asset inventory and control system initiated by a large financial services firm with the support of application software provider RFID Global Solution, Inc:

- Full implementation at data center sites in the U.S. and U.K.
- Deployment of passive UHF RFID tags, fixed reader portals and handheld readers
- Implementation of an enterprise software solution that enables rapid deployment and integration of scalable, real time visibility asset tracking
- Tracking servers and other IT assets in real-time
- Distribution of aggregated data enterprise-wide

**Results**  
Operational and Economic Benefits:

- The firm knows the IT assets it has and where they are located
- Significant reduction in manual business processes through automating inventory collection and management.
- Cost savings in the tens of millions of dollars over the next 5-10 years
- Automated audit trail for IT assets without touch labor
- Automated receipt notification of purchased equipment for improved supply chain and workflow management
ABOUT OUR CUSTOMER

The firm is a large financial services company. Among other services, it offers commercial, investment banking and investing services as well as services for asset, wealth and risk management.

The firm has experienced extensive growth over the past few years. It has added numerous data centers and thousands of servers, storage drives and other equipment to the organization’s IT holdings.

According to the Technical Project Team Manager responsible for the RFID deployment, “It reached the point where we needed to go out and do onsite physical inventories on all of our critical sites that were going to remain in our infrastructure footprint long-term.”

The firm is a member of the Financial Services Technology Consortium (FSTC) and as such was well aware of the potential benefits of RFID to automate IT asset tracking, reduce time and costs and provide real-time IT asset visibility to ensure security and compliance. “The logic followed that, if we were going to go out to do an inventory and touch every box, it simply made sense to put an RFID asset tag on it.”

PROJECT DRIVERS: COST, COMPLIANCE AND SECURITY

An accurate inventory of all business assets is required in order to comply with laws and regulations governing financial institutions (such as Sarbanes-Oxley in the U.S. and the Companies Bill in the U.K.). As a result, regulated institutions must audit IT assets regularly—no small feat considering the volume and frequent movement of servers and other equipment in and out of data centers.

“IT data centers are very fluid environments,” says Diana Hage, Chief Executive Officer at RFID Global Solution (RFIDGS). “One might think that servers get placed in racks and never move, but the reality is that modern data centers are always being reconfigured—for growth, power optimization, data availability and bandwidth, and to upgrade systems at regular intervals. IT assets are constantly on the move and all that movement needs to be tracked and flow into inventory and financial systems.”

In addition to compliance rules, a number of industry standards and laws require such firms to protect the sensitive personal data of its customers. This translates into the need to be able to account for the location and status of every IT asset that contains private information. To meet these regulations, inventory audits and asset tracking at the firm’s data center sites were previously accomplished through paper- or
barcode-based processes. “Those audits required an army of people, making them costly, labor-intensive undertakings,” says the firm’s project manager. In addition to creating ‘choke points,’ the manual methods were prone to an unacceptable number of data collection errors.

**IMPLEMENTATION PHASE I: CHOICES AND CHALLENGES**

The transformation of the firm’s asset tracking system to RFID began in mid-2008 at multiple data center sites in the U.S. Rather than conducting a months-long proof-of-concept of the technology, the firm invited RFID vendors into its data centers to evaluate prospective solutions in the real-world environment; the vendors demonstrating the most effective solutions were awarded contractual agreements.

Vital to the success of the project was the selection of a software solution that would scale to meet the firm’s global requirements and high quality, reliable RFID tags with a tight performance tolerance. Specific criteria for the software solution were ease of use, intuitive interface, scalability and ease of integration into the firm’s back end systems.

The RFID tags were required to operate reliably in the metal-rich environment of the data centers, fit easily within the minimal real estate available for tag placement, and provide precise tolerance levels to avoid cross-reads and missed data captures. In addition to the software solution and RFID tags, the firm required both fixed reader portals and handheld readers to track the physical movement of IT assets both within and between its data centers. The handheld readers are used for inventory and audit purposes.

The firm decided to use Visi-Trac, a web services-based application from RFID Global Solution that enables the firm to seamlessly aggregate data from each of its sites into a central database. The application’s distributed architecture provides data redundancy so that if land links go down, the collection and aggregation processes continue.

“A successful RFID deployment requires that all data capture elements perform in order for the customer to achieve success,” comments Joe White, Chief Operating Officer, RFID Global Solution. “It is absolutely essential to get the business logic right, so that the data you capture is meaningful.”

In addition to installing Visi-Trac, the implementation team reconfigured the existing RFID hardware to ensure the RF system architecture was optimized for their data collection processes.

This required benchmarking the infrastructure, then tuning and optimizing the performance of the fixed portals to increase signal capture rates. “While RFID technology is very reliable it is important to design a system which supports the application’s needs for data accuracy.”
IMPLEMENTATION PHASE II: EXTENDED AND EXPANDED

Once the original data center sites were upgraded to fully operational status, the firm deployed the RFID solution at additional data center locations in the U.S. and in the U.K. Omni-ID Prox® tags were specified for these new deployments, expanding the total RFID system to tens of thousands of tagged assets across data center sites globally. As such, it represents one of the financial services industry’s largest RFID-based IT asset-tracking implementations to date.

With the solution delivering meaningful data to the ViSi-Trac software platform, the next challenge for the firm’s project manager was the integration of RFID-collected data into the firm’s IT asset management system-of-record, and a new system for workflow management, including the monitoring of power, bandwidth and server traffic.

“You can imagine the complexity of implementing a system like this to manage such a massive infrastructure,” says Diana Hage. “It’s almost impossible if you’re using manual asset tracking methods, where the accuracy of the data relies on constant human interaction and oversight. But RFID enables automation of the entire process.”

The firm’s project manager concurs. “The ability to use the RFID information to seed our data center management efforts provides a level of insight we simply wouldn’t have had otherwise,” he says. “It actually allows us to extend real-time intelligence beyond asset tracking and into other areas. Soon, we will be at a point where the equipment arrives, the loading dock portals will read the tags and communicate to the system in real time. In other words, all these inefficient manual processes—literally folks running around on the floor finding stuff and sending emails—will be automated. We can even automate the notification of the receipt of new equipment so that the data center personnel responsible for rack-and-stack are made instantly aware that the equipment has arrived. So you start to see the power of all this.”

The firm is also planning to further leverage the RFID system by creating de-commissioned zones. In such zones, the status of IT assets would be automatically converted to ‘de-commissioned’ when wheeled through the portal, eliminating the need to manually change the status of assets with handheld readers.

RESULTS AND BENEFITS

Since its initial implementation in 2008, to the full installation at the new data center sites, the firm’s RFID based IT asset tracking system has delivered measurable benefits that have met or exceeded the firm’s early expectations.
Most notably, the automation of the inventory collection processes at all data center locations has resulted in significant improvement in business processes, as well as savings of time and money. “One of our sites was recently re-audited,” reports the project manager. “Paper- or barcode-based auditing would have required at least two weeks with half a dozen people. Our team completed the entire process in four days with two handheld RFID scanners.”

He predicts that the cost savings resulting from the deployment of the RFID system will exceed tens of millions of dollars over the next five to ten years. “But that’s just the tip of the iceberg. All this is going to build. Every year we anticipate greater and greater cost savings and I would expect us to continue to leverage the technology into other applications.

“The success of this project is really a tribute to the work of our vendors and the commitment of our senior management,” says the firm’s project manager. “Given the economic climate and the internal and external challenges we’ve encountered over the past couple of years, they showed extraordinary confidence in our team and in the promise of RFID. That commitment has paid off and we look forward to the technology delivering even more impressive gains in the months and years to come.”
ABOUT RFID GLOBAL SOLUTION

RFID Global Solution, Inc. is a leading provider of real-time visibility solutions to the aerospace and defense, federal and financial services markets. The company’s flagship software product, Visi-Trac, is modular software offering with multiple applications for asset tracking, inventory management, work-in-process and chain-of-custody. RFIDGS also provides its own line of SmartTrac™ read stations and provides design, deployment, integration and support services.

ABOUT OMNI-ID

Omni-ID is the leading supplier of passive UHF RFID tags. Omni-ID’s patent-pending technology overcomes the "traditional" problems of RFID, enabling a broad range of new applications to improve accuracy and efficiency in asset tracking, supply chain management and work-in-process. Omni-ID’s family of versatile RFID tags works reliably in the harshest environments including on, off, and near metal and liquids and excels in solving tracking and identification challenges with unprecedented accuracy. Omni-ID’s mission is to drive the widespread adoption of RFID technology as the optimal tracking and identification solution. For more information, visit www.Omni-ID.com.

CONTACT OMNI-ID

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