Omni-ID®

CUSTOMER SUCCESS STORY
IT Asset Management

Automating Large-Scale IT Asset Tracking and Data Center Management

The Challenge

A leading Fortune 100 tech company (that is also one of the largest global social media companies) is experiencing explosive growth, requiring them to increase the number of data center campuses necessary to manage their online site user traffic. This expansion has driven them to seek a more automated method of receiving goods into those data centers and tracking their current inventory.

The company currently has five data campuses, each housing an average of three data centers. Each data center contains eight data halls with each hall filled with hundreds of racks. This obviously makes equipment tracking very challenging.

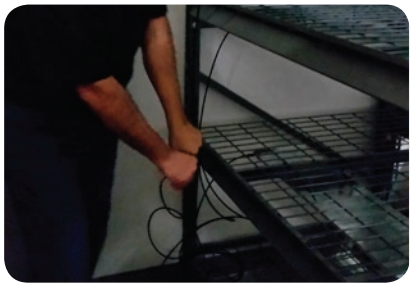
Three employees are dedicated to conducting inventory counts. Initially counts were reported on a quarterly basis but the desire to maintain a higher level of accuracy led the company to move to a monthly inventorying schedule. Barcodes were initially used to register incoming equipment and to conduct inventory counts. Since barcodes require a line of sight to be read they are inherently a very manual method for asset tracking. In fact, it was taking these three individuals three days per data center to count inventory. For the growth this company is experiencing and planning, this was not a scalable solution.

The Solution

Realizing the need to automate their asset tracking process, the company looked at numerous solutions before coming to the conclusion that RFID is the best and most cost-effective IoT solution to meet their requirements.

Omni-ID and technology partner Impinj were called upon to help define requirements and create a scope for a custom solution. Our field application engineers surveyed the process and made recommendations based on the customer's application and business requirements.

The goal was to develop a RFID solution that would automate the tracking of preconfigured racks and replacement inventory. Replacement inventory would need to be tracked at several key locations: entry to the data center upon receiving, into and out of the store rooms, and into the data halls. This would provide the customer with automated transitions of the assets and consumable parts, along with perpetual inventory status and process visibility for control.



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After careful analysis five key opportunities for tracking were identified:

1. Identify the location of specified data center assets by suite, row, and rack
2. Track movement of tagged assets between rooms
3. Detect tagged assets passing through the loading dock area
4. Track stocked inventory not in use
5. Detect specified components contained within other devices

To achieve complete asset tracking, the company utilizes a combination of Omni-ID's passive RFID tags and ProVIEW system components (View 3 tags and asset tracking software):

Receiving Dock: As product is received on the dock individual items are affixed with a passive Prox tag that stays with the asset during its entire lifecycle. Shipping boxes containing multiple items that are received at the data center are affixed with a RFID label printed and programmed within the receiving area. The less expensive labels are an ideal solution for the boxes, which are eventually discarded. Tags are read and associated with assets.

Asset Inventory and Hub Rooms: An Impinj xPortal Gateway, installed outside each doorway, tracks assets as they enter and leave the inventory and hub rooms. Each shelf in the inventory room is associated with a NeWave shelf antenna. Assets and boxes of parts will be added to inventory when their tags are seen by the appropriate shelf antenna. As products are placed into inventory they are pinged by shelf-level antennas and entered into the inventory database.

Bulk inventory is managed by Omni-ID's View 3 visual RFID tags. Each plastic bin is affixed with a View tag to measure the current quantity in the bulk bins and maintain minimum stock requirements. The call button feature on the View tag is utilized to signal for replenishment when the minimum threshold is reached.

Data Halls: Each doorway where racks and assets can enter the Data Hall are configured with an overhead Impinj xPortal Gateway system to read assets as they enter the hall.

Omni-ID's RFID expertise and broad tag portfolio were highly important to this customer. Additionally, the ability to add Omni-ID's Asset Tracking software as a simple overlay — to connect into the company's existing systems without a complete re-architecture — was essential. This customer develops their own software and thus had no need for a full software suite for inventorying.

Omni-ID's Asset Tracking software is extendable and retractable — allowing customers the flexibility to customize it to meet their needs. For this implementation, the customer simply needed our software to act as a device management layer to drive data back and forth between the tags and their database backbone.

The Results

Omni-ID's Enterprise Asset Management solution provides this customer with a number of critical efficiencies and operational improvements to meet — and in many cases exceed the goals of this program:

1. Receipt of stock from suppliers is autonomously read in and balanced against procurement receipts.
2. Stock is tagged and tracked to shelves in asset inventory and Hub storage rooms.
3. Transactions — such as receipt into the storage room as well as removal — occur autonomously and are reported into the Oracle system of record.
4. Highly accurate perpetual inventory levels are reported, which allows the customer to optimize inventory levels of safety stock.

To learn more about Omni-ID's IT asset management solutions, contact us today!