

FORTECHO™ INDUSTRY: Case Study

Wireless Security and Audit for IT equipment at a Large European Telecomms Company.

The Problem

IT asset management is an important part of an organisation's strategy. Increasingly companies rely on 3rd party off-site co-location centres to manage their data and cloud computing. Increasingly stringent rules have been introduced for those companies that store personal data. This means that companies cannot move electronic data from one country to another, nor can they physically move the servers that contain this data. So an IT Inventory system is needed to ensure that servers are physically in the correct situ.

Electronic access control systems are normally used to monitor ingress/egress from data centres; also the IT rack doors themselves may have electronic locks. CCTV systems monitor the movement of engineers inside the space. RFID tag technology allows for wireless monitoring of individual IT assets and the micro-climate conditions inside the racks.

Fortecho Solutions was asked to provide a security and audit system for all the IT assets at the HQ of a large telecoms company. This included tracking laptops in and out of the building portals with their rightful owners, and managing the static IT assets – desktop PCs and servers. Servers were located in IT racks in a large data centre.

Business Challenge

- Data centres are huge rooms with aisle upon aisle of IT racks housing hundreds if not thousands of servers. This is a physically challenging environment to monitor footfall and is cost prohibitive to physically wire sensors to every server to monitor its presence.
- IT racks are normally "metal cages" but with perforated doors to allow cool air to flow through the rack from bottom to top to prevent over-heating. These perforations allow RF messages to escape an otherwise "hostile" radio environment. 433MHz operates in a range of the radio spectrum that lends itself to this type of application.
- The heat generated from so many servers in a concentrated space is immense. Air cooling systems ensure the servers do not overheat. The client also wanted a system that monitored the micro-climate inside each IT rack.
- Blade servers are thin with limited space to attach a tag to the front surface - so a small asset tag would be required.



The Solution

RFID readers were installed in every other aisle to provide good overall coverage of the data centre using existing Ethernet access points in the ceiling. The read range of the readers was reduced to provide greater accuracy when tracking the engineers.

- Small asset tags were installed with a unique ID for every server: these provided protection of the server, alerting when removed, and an automated audit every 30 seconds.
- Small environment monitoring tags were installed inside the top of the IT rack: these contain digital sensors that accurately measure temperature and humidity. This information is transmitted every minute to the Fortecho software that will alert if certain pre-set conditions are breached.
- The Fortecho software is on the network: alarms are monitored from numerous PCs, and those IT managers with privileges can swap and edit tag details and settings.

ROI

- The IT inventory process has been automated, saving costly human audits.
- The data centre complies with EU regulations regarding privacy laws and the ability to physically track assets regularly.
- Integration with existing building management systems for automated environmental control.



Customer Testimonial:

“My team are very impressed with the Fortecho Industry system - simple to use and easy to manage. The savings in staff time and climactic efficiency are impressive”.

- Anon. , Data Centre Manager.