Safer Construction Personnel & Efficient QSR Equipment Management Through Smart Edge Technologies

Solutions for streamlining processes and improving safety with Lenovo's ThinkCentre M90n Nano IoT Smart Edge, Mesh Systems and Microsoft Azure

Introduction

Mesh Systems, an IoT Solutions Innovator with over 15 years of experience deploying full-managed, end-to-end solutions, partnered with Lenovo to advance its solutions by ingesting and aggregating data at the edge. Integrating Lenovo's ThinkCentre M90n Nano IoT Smart Edge device with Microsoft's best-of-breed Azure Services, Mesh's solutions gather data from various IoT sensors that visualize insights through a custom dashboard experience on Azure IoT Central.

Single pane of glass viewing allows for ease of access on asset management or up-to-date information on personnel. Lenovo's ThinkCentre M90n Nano IoT Smart Edge device is central to both of Mesh's Personnel Tracking and Construction Worker Safety solution and its Connected Kitchen Equipment solutions.

Challenges

#1: Remote, real-time location tracking on construction sites to detect and alert Project Managers of unapproved personnel on-site or identify those in high-risk zones requires around the clock monitoring of the site.

#2: Quick service restaurants (QSR's) have various kinds of kitchen equipment from bespoke OEM's that require a single edge-to-cloud device for inter-equipment communication, predictive maintenance, and machine insights. Data insights and analysis are then delivered and visualized to glean operational efficiencies & protect food quality.

Solution

Lenovo's ThinkCentre M90n Nano IoT Smart Edge device, integrated with Microsoft Azure Services, such as Azure IoT Central, enable single pane of glass management of assets as well as data ingestion, aggregation, and visualization. BLE tags and sensors are integrated for both the on-site construction monitoring processes and QSR equipment management.

Features/Results

#1: Mesh's Personnel Tracking and Construction Worker Safety solution leverages the ThinkCentre M90n Nano IoT Smart Edge to process the location of unwanted personnel and detection of personnel in high-risk zones at the edge. Coupling these insights with Microsoft's security centric Azure services allows construction companies to reduce risk, increase savings on insurance claims, and ensure better management and profitability of every project.

#2: Mesh's Connected Kitchen Equipment solution connects all commercial appliances in a QSR through the use of IoT sensors and the same ThinkCentre M90n Nano IoT Smart Edge device. The edge device enables consumption metrics and waste reduction to drive down costs while also allowing predictive maintenance to reduce overall downtime of machines.