Moving Intelligence to the Edge at Warehouse

Autonomous Mobile Robots with Edge IoT Technology

In Summary

➤ Third party warehouse provider wanted to automate the order fulfillment for their e-commerce customers.
➤ Netsis implemented warehouse robot automation and Edge IoT technology to scale capacity quicker and more efficiently while mitigating the challenges around labor availability, cost and IT platform flexibility.

Technical Overview

✓ Short deployment period with our unique warehouse mobile robots as IoT data collectors in the warehouse fulfillment process.
✓ Seamless integration of information technology and warehouse automation.
✓ Self-help portal allows anyone to easily design IT infrastructure at the IoT appliance.
✓ Contains compute, storage and network services in a single appliance.

THE RESULT

Increase in quality of service in warehouse. More advanced technology such as supply chain analytics and AI can be pushed to remote warehouses.
Deploying new IoT devices or another brand of mobile robots made easy: Customer just needed to upload their respective apps to the Netsis Edge IoT gateway.

Client Background

E-commerce warehouse storage is heating up in the supply chain industry especially with Singapore as a Logistics hub. Competitor is offering lower prices with faster last-mile delivery and same-day delivery. Customer decided to automate their warehouse order fulfillment operations.

The Challenges

The e-commerce customer needed to deal with surge periods. The challenge was maintaining a stable workforce in the day-to-day operations for non-peak hours, yet flexible enough to react to a sudden peak in demand.

Customer was facing operating and system maintenance challenges such as inventory accuracy, no real-time updates on inventory location or how much space was being used, and no expertise to implement complicated information system with different automation vendors on different IT platforms.

The Solution

Netsis team introduced our Edge IoT gateway appliance to bring the power of data processing, analytics and virtualization technology to the edge of the warehouse, reducing the time and cost associated with transferring non-essential data to the cloud or datacenter.

It offers cost-effective security and manageability tools, such as drag and drop virtual network design, download marketplace template, import VM templates that IT professionals require -- all in a box.

The intelligent warehouse solution facilitates intelligent inventory storage and logistics management. Based on robotic technology, Internet of Things technology and data analytics, multi-robots central control with Edge IoT intelligence is formed by combing together robot collaboration technology, real-time tracking technology, and remote monitoring technology.