

IoT

Remote Ship Management

Data Logging for Sensors, ModBus, Controllers

Internet Gateway

Communication on CAN, MODBUS

Each Unit with Analog Sensors

Power Efficient, High Memory Density

Microcontroller

Intelligent and intuitive unit



Integra Micro Software Services



About Client

Customer provides comprehensive ship management services that include technical, commercial and crew management of modern ships. They offer following Technical, Commercial & Crew Management, New Ship Building, Pre Purchase Inspection, Training, Port Agency, Marine Travels etc.,

Existing Scenario

- Customer was facing major challenges in addressing the issue of malfunctioning machines/systems situated remotely on the ship.
- The existing system was capturing and storing data in respective module and the stored had to be collected manually for troubleshooting.
- The need was to build a IoT based system that should convert the standalone sensors to sensor based nodes which can capture the data from the sensors and send it to the remote back-end.

- The data captured from the various control systems on the ship need to be transported off-shore for further analysis, reporting, remote monitoring and ship management.

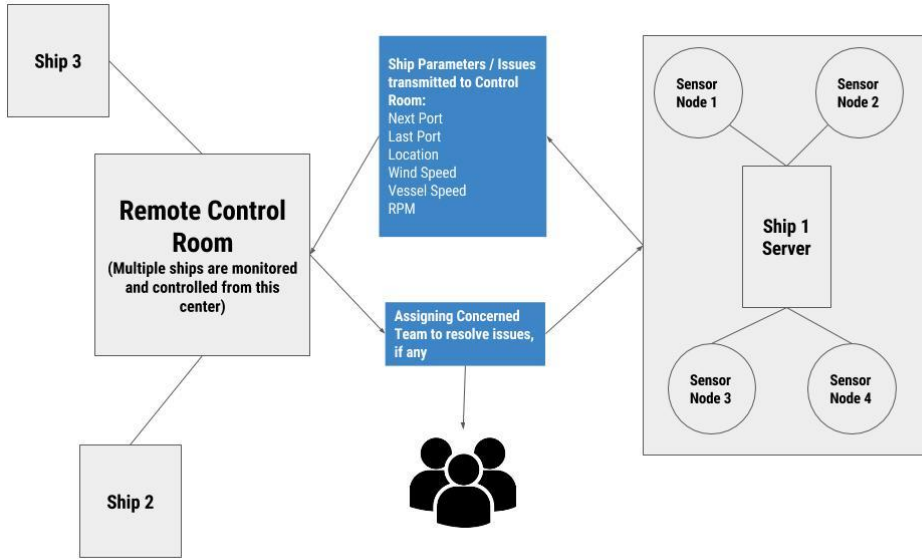
Delivered Solution

Final outcome was a single system that could support:

- Data Logging for Sensors, ModBus, Controllers
- Internet Gateway
- Communication on CAN, MODBUS
- Each unit with analog sensors
- Running on power efficient and high memory density Microcontroller
- Intelligent and intuitive unit - capable to run applications like apps download and run on phones

Solution Overview

- The system comprised of two major components with sensor based monitoring, local server and a comprehensive back-end remote system.
- The deployment consisted of multiple components connected and configured suitably.
- The individual module comprised of a single board computer along with the microcontroller board with embedded firmware interacting with different sensors and equipment (communicating on different protocols) which collate data and sends it to the backend server via the controller.
- The system was connected to backend server via web interfaces.
- The data communication between the sensors and the nodes was through ZigBee, MODBUS, MQTT protocols.



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Shorten the development life cycle

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Integra is a leading provider of software services specialising in BPM, FinTech, IoT, Mobile Communications and Enterprise Mobility. With a strong track record across these domains, proven expertise and knowledge, we are an ideal partner for technology and solutions development.

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