Remote Monitoring for Environmental Compliance

Emerson Process Management
Remote Monitoring of Industrial Stack Emissions and Waste Water

Project Summary:
Customer: Emerson Process Management
Industry: Process Management
Location: Multiple
Solution Provided: ioEYE™ by SenseGrow™

Background
Emerson Process Management is a Fortune 500 corporation headquartered in Missouri, United States. Emerson manufactures products and provides engineering services for a wide range of industrial and consumer markets. Emerson’s goal with this project was to make their environmental analyzers smart and connected. These analyzers are then deployed for monitoring industrial stack emissions and wastewater at Emerson’s customer sites.
Goals
Emerson wanted to provide a connected environmental analyzer to their customers. They wanted to leverage IoT technologies to provide a software solution that was easy to use, real-time and centralized. Compliance with pollution control board guidelines and the ability to remotely calibrate and troubleshoot these devices was the primary objective.

Requirements
- Centralized Remote Monitoring.
- IoT Based Smart Environmental Analyzers.
- Remote Calibration and Troubleshooting.
- User Friendly Application.
- Reporting & Dashboards.
- Compliance with pollution control board guidelines.

Key Challenges
- **Support for Legacy Analyzers:**
  Desired solution was required to work with all existing models of analyzers, both digital and analog.

- **Support Multiple Compliance Regulations:**
  Compliance reporting as per Federal and State directives is complex and varies from state to state.

- **Highly Secure Communications:**
  Missing or tampered compliance data could potentially lead to penalties for the customer.

- **Expensive & Frequent Field Visits:**
  Lack of diagnostic data and no way to access it remotely, was leading to frequent field visits.

- **Support Multi-Tenancy:**
  Existing SCADA systems could not be used enterprise wide to serve needs of different users.
**Solution**

**SenseGrow** team worked with their Application Partner, **LogicLadder™**, to understand the requirements related to all the legacy hardware. Leveraging the unique architecture of **ioEYE™**, SenseGrow supported these legacy devices on their Cloud Platform, thereby making them plug-n-play. This enabled LogicLadder to focus on Emerson’s business requirements, without spending time or energy on the underlying core IoT infrastructure.

LogicLadder used ioEYE to build a custom white-labeled solution for Emerson. Using ioEYE’s drivers-on-the-cloud technology, SenseGrow provided support for all the devices that needed to be in the solution. By building their application on top of ioEYE platform, LogicLadder is able to provide intelligent insights about stack emissions and wastewater. This helps Emerson’s customers to take corrective actions remotely and in real-time.

Emerson Process Management today has a major footprint in India, offering **Smart IoT Analyzers** for monitoring **industrial stack emissions and wastewater**. All stakeholders are aware of what is happening in real-time, and have insights for better collaboration between teams and pollution control boards. Advanced analytics and machine learning provide information that lets them identify anomalies, act in time and take corrective actions remotely. This helps them lower their operational, support and maintenance costs.