WaveAccess
We Make IT Easy

SyncIT

Integration challenge in industrial monitoring system

About

WaveAccess is a results focused software development company that provides high quality software outsourcing services to hundreds of emerging and established companies globally. We use our technical expertise to increase business efficiencies, optimize slow or unreliable systems, recover projects that have gone off track and bring ambitious ideas to life.

22

years of delivering successful outcomes for customers

800+

talented and passionate professionals

8

R&D centers and regional offices

17+

industry verticals from banking to healthcare

500+

successful projects delivered and counting

96%

customer satisfaction index

Awards and Recognitions

Microsoft Partner | Microsoft
2017 Partner of the year Business Analytics Award

Microsoft Partner | Microsoft
2018 Partner of the year Artificial Intelligence Award

Microsoft Partner | Microsoft
2019 Partner of the year Media & Communications Award

Microsoft Partner Network
WORLDWIDE
DYNAMICS PARTNER OF THE YEAR
2009, 2010, 2011 & 2016

GDPR

Information Security
ISO/IEC 27001

SCI-TECH AWARDS
(ACADEMY OF MOTION PICTURE ARTS AND SCIENCES)

Project overview

The Client

Client is major engineering and water treatment company based in the US.

Prerequisites

For about 20 years, our client has been providing water treatment solutions to HVAC, industrial and construction industries. Each of their devices has controllers to monitor corrosion, biological fouling, temperature, and over 30 other types of data. It was the time to move forward following the path of Industry 4.0, and to automate most of the processes for the company's clients.

Lots of systems are involved, so a specialist should walk from one boiler room to another, examining controllers on cooling towers, coils, etc. This job is often performed manually, and only actual data can be checked (no data is stored). Our customer is the big US based company which decided to improve its services and to fully automate data delivery from industrial systems to engineers.

The company's clients are system engineers who continuously monitor and maintain buildings' life systems and take measures if needed. The process was performed manually: specialists got data in a form of plain tables, without visualization. Neither export opportunity was provided, nor statistical data. So the automation was the vital part of the business.

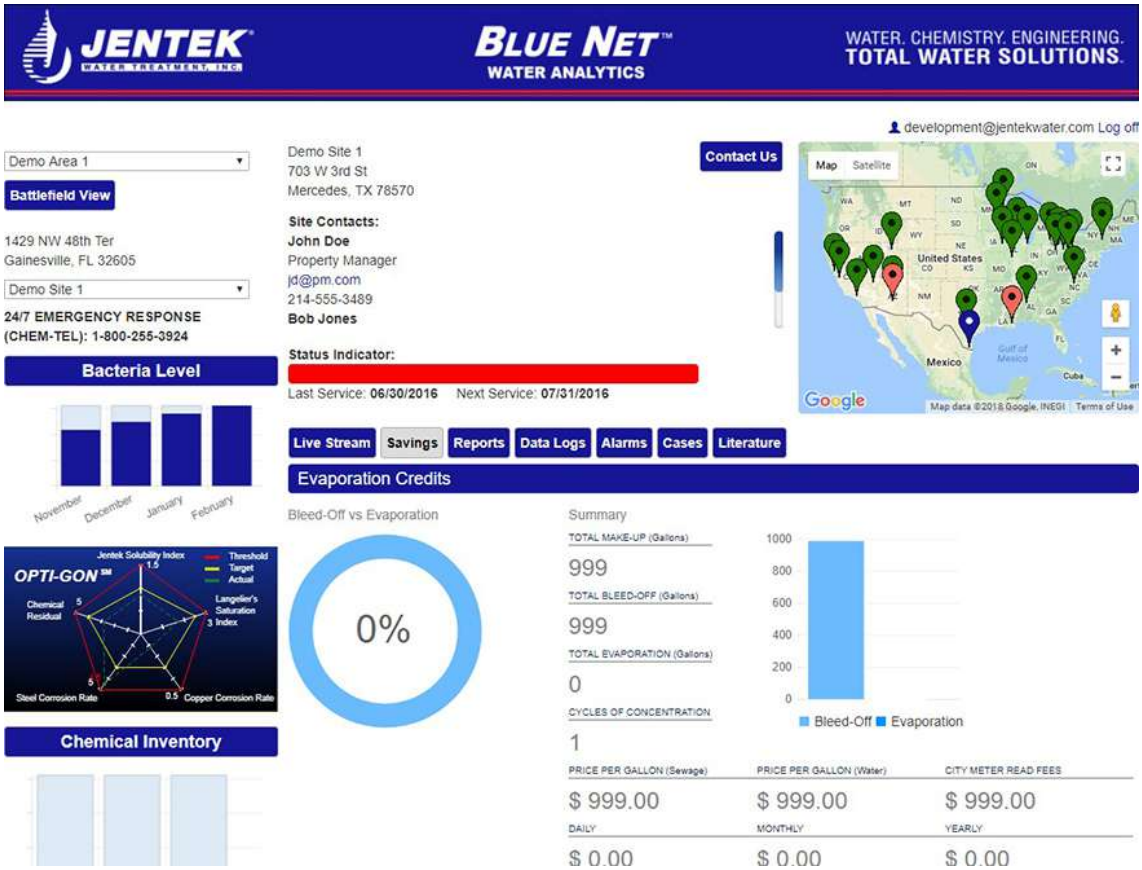
Business goal

To collect data from controllers and make them available online. The controllers are installed on boilers and air conditioning units of high-rise buildings, industrial objects and other hard-to-reach locations.

Solution

In order to enable historical data gathering and to provide convenient visualization of every device's stats, we have built a **.NET portal** for engineers. **CRM Dynamics 365 Online** empowers synchronization with all the devices

Microcontrollers are always online. To get their readings, we used our **SyncIT Integration Platform**. SyncIT connects to the CRM to get the list of controllers, then reads their data and saves all readings into the CRM. To host the web service and to deploy SyncIT, we used **Microsoft Azure** virtual workstation.



Solution features

- **Logging by object**. A single sign-on solution to monitor an array of objects.
- **Two types of UI** to visualize data in a readable, understandable way: butterfly view with pie charts and the buildings list, and the battlefield view with standard diagrams, tables and building list. There's an online map in the both UIs. By clicking on a map, engineers can choose a building and check its details.
- **Fast objects addition**. When a new physical device is connected to a system, it is immediately displayed on a map (after adding its IP via the configuration process).
- Configuring of **specific reports** (bacterial analysis, chemical analysis, etc.), export and publishing.
- **One-click repair order**: a user create a repair order by just clicking on an object to repair.
- **Smart warning system**: in case of signal loss, the alarm goes off and then turns off in case of positive answer in 5 minutes (can be adjusted) & real-time emergency notification.
- Soon: **corrosion monitoring**, equipment anomaly detection.
- **Proof for false warnings:** a notification only becomes an alarm according to specific rules. For example, an alarm can be displayed if the voltage changes, but returns to a normal state. If so, the alarm will disappear within five minutes of continuous positive response.
- **The monitoring solution doesn't require refreshing a webpage.** An engineer just displays it on a primary monitor in the office, and objects change their state automatically. The billboard is updated every 5 seconds. All new controllers are added to the CRM. If a new device is added to an engineering system (say, a new boiler was bought), it is just needed to get the device's IP and add it via our custom-made configuration. The synchronization process will add it into the CRM. The device will be displayed immediately, while its readings will start being transmitted into the CRM.

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Does your business require a personalized solution
that integrates a range of systems?

Contact us and get a free discovery session and a project quote.

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