CASE STUDY

SWISS INTERNATIONAL SCHOOL

Swiss International School in Dubai turns to Netix iIBMS powered by Niagara

CHALLENGE

One of the world's leading schools of the future, Swiss International School in Dubai (SISD) is known for its eco-friendly campus, meeting the highest standards of energy consumption, state-of-the-art sporting facilities and has one of the best boarding houses there is in the region. Swiss International School has a capacity of 2,000 students and is a 70,000 square meter campus designed and engineered to meet the highest expectations. Energy usage in the UAE has grown at an annual average of 5 percent over the past six years, and 70 percent of the peak electricity load in the UAE & GCC is due to the cooling of buildings. To keep in line with its eco-friendly infrastructure design and cater to its occupants' requirements to deliver a safe and healthy environment, the end-user was looking for a solution that could integrate multiple vendor/protocol equipment offering advanced graphical UI with high processing capabilities and minimized latency.

SOLUTION

Keeping the above challenge in mind, a holistic approach was taken where an intelligent solution was designed to gather and integrate data on the front end from 9 FAHUs/AHUs, 363 FCUs/thermostats, 25 Exhaust/Make-Up Air Fans, Chilled water Systems Central Battery System, Fire Alarm Panel and Power Monitoring Units across phase 1 and 2 buildings, all in real-time. An open-protocol intelligent building management system was implemented for centralization, normalization, and integration of the data streams from equipment and system-level building services across diverse legacy OEM systems - Trend and Centraline. Parameters were mapped from 50 controllers and gateways and data was exposed in a unified BACnet protocol format. This was done without disturbing the existing data interface points. To ensure smooth operations, the BMS server was optimized with high-level processing capabilities and the latest IT infrastructure such that the system functioned without any form of latency. With the Netix user interface powered by Niagara, Swiss International School in Dubai was able to deliver a safe, healthy, and comfortable environment that supports learning and helps students achieve their full potential.

TESTIMONIAL

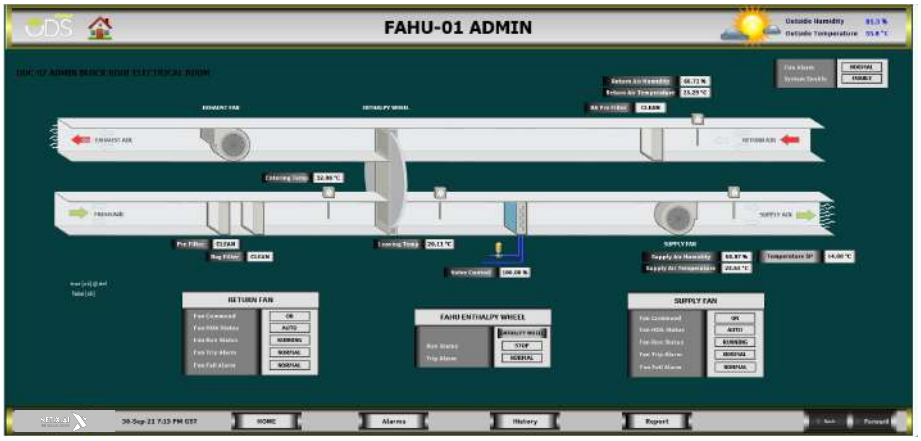
"The Netix intelligent GUI is the android solution which has transformed our locked BMS into an open, scalable and brand agnostic system. With minimal manpower we can oversee the entirety of our systems through an advanced user- friendly graphical interface. It's truly amazing and commendable that Netix and Tridium's Niagara Framework has made it possible to optimize operations and enhance energy savings through an open-source intelligent platform."
Carrel Rayes, FM Engineer, Swiss School

CASE STUDY

SWISS INTERNATIONAL SCHOOL

Swiss International School in Dubai turns to Netix iIBMS powered by Niagara

SOLUTION



ENERGY SAVINGS AND ASSET OPTIMIZATION

As a result of the UAE's climate and regulatory environment, certain energy-saving HVAC design and data collection and reporting approaches must be used. In the Fresh Air Handling Unit (FAHU) seen here, for instance, the quantity of supply/exhaust air can be controlled, heat recovery is monitored, and the temperature and time of day can be accounted for when scheduling and adjusting operation. Furthermore, "Trends" are available that provide insight into operations over different time periods. Additionally, alarms are configured for when an asset fails to operate as per the SOP.

Property: Primary and Secondary phase – G+2 structure

Facility Type: Education buildings and sports facilities

Systems Integrated: HVAC, CHWS, Fire Alarm, CBS, PMU, Ventilation Fans

Number of Control Points: 5,000 data points have been integrated through the Niagara Framework

THE RESULT

With the Niagara framework, building engineers have a single centralized supervisory console to control and monitor each parameter of the primary and sports block operations in real-time. The advanced frontend integration has proven to assist in energy savings by up to 8% at no negative effect to comfort level. Various levels of alarms, notifications, event logs, and trend analysis were configured that enabled the end-user to optimize their operations with early detection of equipment failures and thus minimize the energy profile of the two buildings. Netix iIBMS transforms the school environment to be energy-efficient, 'smart', catering to the health and well-being of the students through improved air-quality and analytical based automation.