

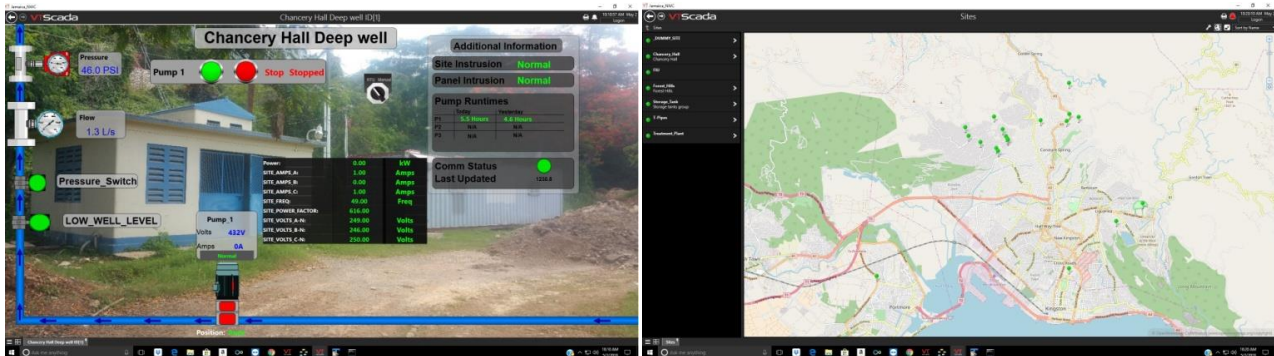
From Zero to SCADA

VTScada software helps Jamaica National Water Commission adopt world-class monitoring and control system.

The Jamaica National Water Commission (NWC) supplies 190 million gallons of potable water a day to its more than 400,000 registered accounts representing about two million people across Jamaica. Steady growth in the industrial sector has led to new residential communities in St. Andrew, St. Catherine, and other parishes across Jamaica. As a result, demand for potable water began to overmatch the nation's simple PLC-based monitoring and control system. In mid-2017, Star Controls was tasked to implement a full Supervisory Control and Data Acquisition (SCADA) system that would eliminate the need for operators to travel to each site to ensure readings and visually inspect equipment. The initial project, commissioned in 2018, uses Trihedral's VTScada software to monitor Motorola ACE3600 units at 19 remote sites. This phase was so successful that the Commission plans to significantly expand the system in the near future.

The Need for Monitoring and Control - Diego Pinto is an Application Engineer with Star Controls. He is responsible for internal development as well as working with their Miya Water group, the engineering partner that led the NRW project. "Within Jamaica, they have never had a SCADA control system to which they would be able to autonomously run pumps, see current issues, and have a telemetric view of their water system," says Pinto. Previously, remote sites used Schneider Electric PLCs for simple process control. "This meant that crew members had to go site to site to ensure readings and to visually inspect if there was flow of water at sites that reported issues."

The SCADA Software Solution - Star Controls selected VTScada based on their long experience with the platform. "When I joined the company three years ago, my first project with VTScada was to develop screens for Mount Pleasant Water Works in South Carolina," continues Pinto. VTScada's built-in driver library allowed their application to communicate with the existing Schneider PLCs and the new Motorola devices. This process data is logged to VTScada's integrated Historian and made available to operators via reports, trends and custom display pages. "With VTScada, they now have the means to view city-wide information at a glance with accurate representation as well as having an immediate display if any issues arise."



Automatic Failover and Synchronization - The system is running on redundant servers at two remote locations. Up to the second synchronization of historical, alarm, and configuration data provides a complete off-site disaster backup of the application and history. VTScada's driver Multiplexer tag also allows the application to seamlessly failover to redundant Motorola ACE3600 units at each remote site.

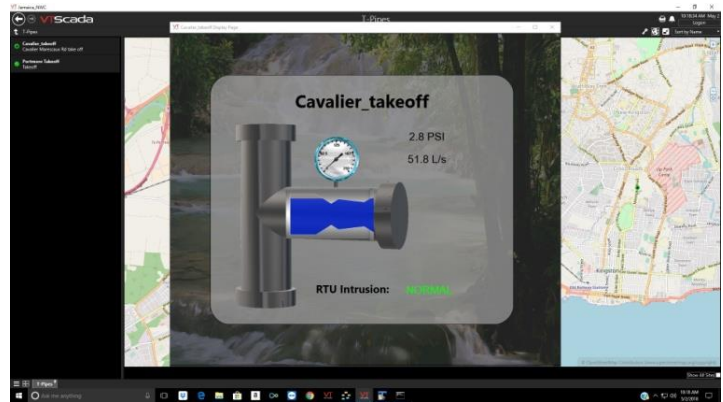
Mobile Connectivity - VTScada Thin Clients allow authorized users to access the system in the field from networked PCs, or mobile devices. This is great for security reasons as well as allowing those who need a quick view to access the information at a glance.

Software Support - "Trihedral support is phenomenal as usual," says Pinto. "Doug and Jennifer are always great to work with and are knowledgeable about all questions that I would have during the development process."

Testing and Commissioning - Since commissioning in May of 2018, the new system has been a success with both the Commission and their customers. Testing was done in the field and at the local lab. "Since this is a real system with real-life consequences, everything was done meticulously to avoid any issues with NWC Customers," says Pinto.

Building Self Sufficiency for the End User - VTScada's user-friendly graphic development tools and included image and widget libraries make custom screen development easy. "This has allowed [end users] to manage and adapt their own screens to their liking which helps to make them independent from us which is the epitome of what we want to accomplish."

"[Operators] now have the ability to remotely run pumps that need to be activated during key hours," continues Pinto. "They can ensure the system is running at optimal efficiency with the use of SCADA that provides important information like pressure, flow, site power, and other key telemetry readings. This has also brought happier citizens, since they now know that someone is on the case before they even make the call to report the problem. Also, the SCADA system has a critical role in the large scale Non-Revenue-Water (NRW) project. VTScada provides critical information to NetBase, hydrology analytics that serves the NRW."



Advice - Pinto offers this advice for other utilities choosing HMI/SCADA software "Have complete mastery over VTScada Templates, Custom Tag types, and the usage of parameterized pages. This will reduce development time immensely."

About Star Controls - Star Controls, Inc., is a leading provider of comprehensive SCADA, remote monitoring and control, and communications system solutions for water and electric utilities, oil & gas, network fault management, public safety systems and other markets. Star Controls is recognized as a Trihedral Advanced Systems Integrator. www.star-controls.com

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