Astec

Carib Brewery

Case Study

When regional brewer Carib saw an increase in the risk of potential production interruption, Astec Solutions were awarded a SCADA manufacturing system update project, which resulted in a more reliable, supportable and secure production system.

GE
Partner
Digital

A Taste of the Carribean: SCADA Upgrade

Background

Headquartered in Trinidad and Tobago, Carib Brewery is best known for producing Carib and Stag beer and shandy beverages, as well as other well-known partner brands such as Smirnoff Ice and Heineken.

Astec Managing Director, Andy Tripp first travelled to the main Champs Fleurs site in Trinidad in September 2016.

Astec were invited to tender for the SCADA upgrade at the Carib Brewhouse production area in early 2015, as the legacy SCADA manufacturing system was running on outdated hardware and software. Although operations were still continuing, the site was starting to see an increase in the potential risk of production interruption.

Project Requirements

The production team at Carib were looking to invest in the latest versions of the various COTS software packages. However, following a number of system challenges over the last few years they recognised the opportunity for system improvement. It became clear a basic upgrade alone would not be sufficient to fulfil their requirements.

As well as upgrading the SCADA software to GE's latest version of iFIX, Astec recommended the use of standard Microsoft components. This was in contrast to the existing manufacturing system, which uses third party software to keep servers and databases in sync.

Astec were able to offer a highly resilient system, taking advantage of the latest server virtualisation and database mirroring techniques. Working alongside the SCADA system upgrade, the system utilises a number of high availability failover features, and is built on a modern, distributed server and network architecture.

The new system presented the absolute minimum of system or production downtime, and was installed on site in March 2017 over a two week period.

Installation

Astec sent two experienced system engineers across from the UK to install the new SCADA system on site at Trinidad. The first few days involved physical removal of the old servers and setting up Ethernet cables. To keep costs to a minimum, Carib's original system was licensed as a simulation rig which could be used to train new operators. Old obsolete hardware was taken from racks and replaced with new equipment, then servers were synchronised in preparation for testing the following day.

Sanel, one of the engineers responsible for the installation explained, "The hardware was split between two locations at the site, so accurate record-keeping, including a full inventory of shipped items and a fully detailed installation procedure was key to ensure a smooth transition. Towards the end of the first week the system installation and initial acceptance testing was complete, including the move from thick client HMI terminals to a Remote Desktop Services Thin Client infrastructure."

Sanel continued "We suggested removal of the existing KVM boxes (which link keyboards, screens, mice etc) as these tended to be unreliable. As thin clients could be physically linked to the table this presented a simpler solution. The system was then switched on and fully tested before brewing production began."

The second week of installation comprised of ironing out legacy system issues, including screen display errors and minor bug fixes, and training the Carib engineers involved in the day-to-day operations. Two large LCD screens were mounted to display overview data once the plant became operational, and final changes could be made remotely from Astec's UK office.

Outcome

By avoiding over-customisation, the software has greater reliability and supportability, significantly reducing operating costs for the client. In addition, licensing complexities were avoided and data is stored more securely.

The installation itself was completed successfully to agreed timescales and to original specification. Complications concerning cabling and hardware were quickly resolved, with opportunities for further improvements in the future. Carib's Project Manager, RamPaul Persad was pleased with the overall result, commenting, "Astec's engineers were technically competent, detail oriented and worked diligently throughout to ensure the success of the project. They have also been very supportive post-commissioning – overall an excellent service."

Below: Astec engineers with the Carib production and engineering team

Background

Astec Solutions uses best in class industrial software to deliver Smart Manufacturing Solutions into manufacturing and other industrial sectors.

The core capabilities of the business include provision of Industrial IoT, MES/MOM, SCADA, Batch Execution, Workflow and reporting solutions, supplemented by a dedicated support desk and field service team. Astec works seamlessly with clients' Engineering and IT departments to ensure all monitoring, control, visualisation and analytical systems make best use of existing infrastructure investments – while providing simple, effective and highly available solutions which can be used for many years.

Further Information

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