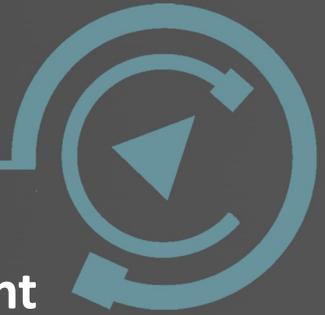


CASE STUDY



Specialty Manufacturer Minimizes Machine Downtime with Automation Change Management

Heat exchanger manufacturer, SWEP, installed the AutoSave Change Management solution in five production plants across three continents to minimize the risk of machine downtime, avoiding costly delays and disruption to customer delivery schedules.

The Background

Part of the Dover Corporation, SWEP is a leading supplier of compact brazed plate heat exchangers (BPHE), which are used in applications where heat needs to be transferred efficiently, for example, in air conditioning, refrigeration, heating, and industrial applications. SWEP has approximately 850 employees and is represented in more than 50 countries. The company's six production plants are located in Sweden, Switzerland, USA, Malaysia, Slovakia and China.

The SWEP plant in Slovakia manufactures BPHEs in high volumes across three continuous shifts. BPHEs are manufactured using high value, automated, PLC-controlled machines. Any unplanned stoppages to these machines must be avoided, as these can result in costly delays to production and disruption to deliveries.

Currently, SWEP has approximately 80 PLCs installed on machines that are located in different time zones across six production plants. These PLCs are manufactured by a variety of vendors, including Siemens and Allen-Bradley [Rockwell.] These PLCs are critical to SWEP's BPHE production processes.

The Challenge

With no formal system in place to manage PLC programs, backups were made manually. When incorrect code was uploaded to a machine it resulted in unplanned stoppage. With no recent backup, the plant lost a half day of production time.

The Solution

SWEP installed MDT's AutoSave software across three continents and five sites. SWEP now has a global change management and version control solution in place with scheduled tasks set up for PLC program backups .

The Result

Since implementation, SWEP has avoided downtime using AutoSave when operation parameters were accidentally deleted. AutoSave has become a key part of SWEPs business-wide Disaster Recovery Policy.



Challenge

Prior to 2015, SWEP had no formal system in place for managing version control or changes to PLC programs – backups were made manually, with each SWEP site having its own policy for managing this. There were no scheduled backups or version control of PLC programs, either within one site or across multiple sites.

This became apparent to Martin Figura, Team Leader Production IT at SWEP Slovakia s.r.o, who is responsible for managing all production automation across SWEP, when a supplier was called in to the Slovakia plant to fix a problem on a critical production machine. As Figura explains: “In order to resolve the issue, the supplier made some changes to the relevant PLC code and uploaded these changes to the machine, which fixed the problem, but also accidentally uploaded the same changes to an identical machine [from the same supplier] located elsewhere in the plant. This resulted in an unplanned stoppage to the second machine. We had no PLC backup in place, although, fortunately, I’d made a backup of the PLC program a few days before, which enabled us to get the second machine back online later that day. However, this stoppage resulted in the plant losing half a day of production time, which was simply unacceptable.”

“In my research, no other change management software provider could offer us a similar ‘open’ solution that enabled communication with multiple -vendor PLCs.”

“Now, with MDT Software’s AutoSave installed across three continents and five sites, we have a global change management and version control solution in place. We have scheduled tasks set up for PLC program backups”

- Martin Figura, Team Leader Production IT,
SWEP Slovakia s.r.o



Solution

Figura therefore looked for a suitable solution. “I came across the MDT Software website and read about MDT Software’s AutoSave Change Management Solution, which seemed to be what we needed. I then spoke to M.A.C. Solutions, the UK reseller for MDT Software, about the issues we had been having with PLC backups and version control, who recommended a multi-site implementation of the software across all of our six sites. This involved installing a single, secure data centre [server] in our headquarters in Sweden and five software ‘agents’, one for each of the other five sites.”

“In my research, no other change management software provider could offer us a similar ‘open’ solution that enabled communication with multiple-vendor PLCs. MDT Software’s AutoSave is also easy to set up and use. M.A.C. Solutions provided all the software training via online screen-sharing. Following installation of the main server in Sweden and the first software agent in Slovakia, I was then able to oversee the rest of the software implementations across our remaining sites.”

“Now, with MDT Software’s AutoSave installed across three Continents and five sites [the Switzerland plant will follow shortly], we have a global change management and version control solution in place. We have scheduled tasks set up for PLC program backups.”

Three Steps to Success

MDT Software’s AutoSave is an Enterprise Change Management Solution that provides a full suite of tools to protect, save, restore, discover and track changes for industrial programmable devices and documents. The system unifies plant automation software under one common user interface, resulting in a secure, well documented, controlled environment that significantly reduces the time and effort needed to manage a manual backup system.

The software enables administrators to automatically schedule ‘compare’ procedures. Automatically comparing the program in the device with a program stored in the AutoSave repository can detect and identify changes between the program that may have been unknown or unauthorized; protecting the company’s process, people and equipment.

When a change is made to a PLC program, the software can be set up so that designated users are immediately notified via email. Detailed, logic-to-logic and selected data table value comparison reports are generated and users are notified of differences via email. These mailed results, generated for schedule, program, or demand compares, are viewed via a web browser that features hypertext links to detailed logic and documentation differences.

In just three steps, users can ensure that any program changes are tracked, saved and protected. In the office, a field technician identifies programs of interest and AutoSave downloads copies to the engineer’s laptop using the AutoSave Program Manager tool. The AutoSave Client is then used for non-networked devices to make changes to the program. Changes are then synchronized across multiple sites by comparing local files with the server and sending/receiving updates.

Situation after Implementation of Solution

Figura was responsible for overseeing the implementation of the AutoSave Change Management Solution at SWEP and is now responsible for the day-to-day management of the software throughout the business. “Now, with MDT Software’s AutoSave installed across three Continents and five sites [the Switzerland plant will follow shortly], we have a global change management and version control solution in place. We have scheduled tasks set up for PLC program backups,” said Figura.

“At present, we are running back-ups for all our PLCs once a day, which is sufficient. The software takes one to two hours to complete the back up and comparison/synchronisation of PLC programs. Within this time, all PLC programs are compared and if any changes have occurred, I am notified via email. It’s an insurance policy for us as a business and guarantees that every operator, in the event of a problem with any machine located at any of our six sites, will always have access to the latest version of a PLC program.”



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- Martin Figura, SWEP



Since introducing MDT Software’s AutoSave in January 2015, we’ve had a couple of incidents where the system has really proven its worth. Recently, one of our new operators accidentally deleted some operational parameters on a production machine PLC. I simply downloaded the latest version of the PLC code from AutoSave and within a few minutes had uploaded this to the machine. Prior to AutoSave, this would have taken us at least two hours to rectify.

Another unexpected benefit of introducing the software is that it has become a key part of our business-wide Disaster Recovery Policy. We know that if an unforeseen disaster should occur, we will always have access to the latest version of a PLC program, wherever the machine is located in the world.

- Martin Figura, Team Leader Production IT at SWEP Slovakia s.r.o,



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About MAC Solutions

Founded in 1996, M.A.C. Solutions (www.mac-solutions.net) is a specialist provider of Industrial Data Communication, M2M (machine-to-machine) solutions, process automation solutions and alarm management systems.

M.A.C. Solutions provides a range of hardware, software and consulting services, which enable operators in the transportation, infrastructure, power/energy, marine, oil & gas, utilities, security & surveillance, packaging, pharmaceuticals, and automation industries to securely connect and manage their distributed assets. Productivity data from these assets can be monitored over time to enable high-end analytics and visualisation. M.A.C. Solutions is an ISO 9001 registered company and is certified to OHSAS 18001:2007.

About MDT Software, Inc.

MDT Software is a world leader in change management solutions for automated manufacturing devices. MDT’s flagship product, AutoSave, empowers users to protect, save, restore, discover, and track changes in industrial programmable devices and plant-floor documents. AutoSave supports the most comprehensive range of devices and editors in the industry from Schneider, Siemens, Mitsubishi, Indramat, GE, Rockwell Automation and others. For more information on MDT and AutoSave, visit www.MDT-Software.com.

