Extending Your Connected Enterprise

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Whether you have one plant or hundreds, chances are you have a lot of Rockwell Automation® products. Given the scope, stature, and longevity of Rockwell Automation products, your operation is likely teeming with the company's equipment.

But you also have a variety of control devices from other manufacturers, regardless of your industry. These products are being used for controlling everything from motors to the lights your personnel need to see what they're doing to the air conditioning needed to keep systems (and your workers) cool during sweltering summers. Your Rockwell Automation control system may already be connected to a few of these products, but incorporating in-chassis or gateway communications can offer benefits on two levels: By allowing your Rockwell Automation PACs to control the devices and getting you access to additional data from the devices to analyze and optimize your operations.

Extending the Connected Enterprise…

If you haven't heard of the Connected Enterprise, here's a CliffsNotes version: It's all about making sure the right people have the right data when they need it so information can be analyzed and acted upon to make informed business decisions. Rockwell Automation coined the phrase to represent the combination of information technology and operations technology as a way to improve performance throughout your organization.

In practice, this technique allows Rockwell Automation users to reduce maintenance costs, improve productivity, reduce inventory, and overall, optimize resources more effectively from the plant floor to the enterprise level to the C suite. The availability of this type of real-time communication and data cannot be overstated: This type of information could save a company millions of dollars per year.

To create a fully inclusive Connected Enterprise, though, you'd need data from the aforementioned non-Rockwell Automation systems. By using a gateway or in-chassis module that fits right into your PAC/PLC, you will have access to data that can increase your energy efficiency; help you identify inefficiencies in your production processes; determine if machines are operating at optimum levels; and more. You can also extend your Connected Enterprise with wireless solutions that get the data where you need it without having to install a hardwired network infrastructure, or monitor your equipment from around the world via a secure cloud-native platform and cellular gateways.

… through your PAC/PLC

Let's say you have a device that can get you information about the power usage on a piece of equipment – but it doesn't speak a Rockwell Automation protocol. This is essential information that can be used to help you root out inefficiencies – for instance, it could reveal that the energy being consumed by a machine is higher than another. Depending on your operation, solving this sort of discrepancy could net you a significant return annually.

Concerned about how much effort it is going to take to integrate this type of interface? If the modules takes advantage of Rockwell Automation's Add-On Profiles and Add-On Instructions, you can get the information flowing very quickly.

… through gateways

Increasing energy efficiency has become an objective for many companies, and this priority's importance will likely rise even more in the next few years. Monitoring and coordinating your building automation systems with your operation's production needs might seem daunting, but gateways communicating the BACnet®, LonWorks®, or Metasys® protocols can help you get the information directly into your Rockwell Automation PAC.

You may be wondering how – after all, none of those protocols are designed to communicate with your PLC. What you can use is an EtherNet/IP™ gateway connecting those devices to your Rockwell Automation controller. This allows the collected data regarding energy usage to be sent from the device to your PLC, which can centralize the data before sending it to the enterprise level. There, the information can be analyzed and acted upon. You could then program your PLC to coordinate the systems to increase your energy efficiency. This type of automatic analysis can allow your company to reduce its carbon footprint and increase its profit margin.

… through modernization

You may have legacy Allen-Bradley® Remote I/O™ or Data Highway Plus™-based systems and know you need to modernize your facility, but the scheduled downtime could be a deterrent. The good news is that you can go with a Phased Modernization approach, enabling you to take care of the updates on your timetable, minimizing scheduled downtime. By upgrading parts of your system to EtherNet/IP devices, you can take advantage of the additional data these devices provide. This data could be used to help you develop a predictive maintenance schedule. The use of a modernization gateway can help you accomplish all of this.

In addition to getting a less stressful modernization process through these solutions, you'll benefit from their streamlined integration. The faster the update goes, the sooner you'll be switched over completely to a newer system that's typically better all-around – with more features that help you get the data you need when you need it. By performing a necessary upgrade, you can automatically extend your Connected Enterprise.

… through your wireless network

As part of your Connected Enterprise, you need data from devices all over your operations. Getting that data to where you need it using traditional hardwired networks can be cost-prohibitive. By using industrial wireless Ethernet radios, you can be sure to get the data that you need when you need it cost-effectively. If your devices are moving between access points, 802.11n radios with Ultra-Fast roaming will ensure that your critical I/O data is delivered with no measurable interruption.

By extending your Connected Enterprise with radios that support an EtherNet/IP embedded object, you enable your OT and IT personnel to work together in solving wireless network issues, such as an unauthorized vehicle blocking your wireless signal. Your OT personnel can identify the specific radio having the problem, and direct the IT person to it. When they're able to troubleshoot problems with a quick turnaround, you can avoid extended downtime and increase your productivity and profit margin.

… through a secure cloud-native platform

Getting the right data to the right person could be a challenge if the person who needs the data is in a coffee shop in Seattle, and the data is in a PLC halfway across the world. You could have them hop on a plane each time there's an issue, accepting the delays and costs associated with this method. Or

you could use a cellular solution that supports cloud services to do this, but that can require the person to remember the remote control system's IP address. That can be a real hassle if you can't remember or swap one of the digits of the IP address you need.

What if you could use your EtherNet/IP driver in RSLinx® and do an RSWho browse of your remote network? You wouldn't need to try to recall IP addresses since they'd show up in your browser automatically. Essentially, your remote PC would be working as if it was plugged into the remote Ethernet switch.

This type of technology is at your fingertips through ProSoft Connect, ProSoft Technology's new secure, cloud-native platform, in the ultimate example of the extension of your Connected Enterprise globally. By incorporating a platform meant to help you reap the benefits of the Connected Enterprise for now and years to come, you can take a proactive approach toward managing the assets of your company, increasing efficiency, and optimizing your productivity.

Find out more about ProSoft Connect at http://psft.com/BTZ.