

Data Center Power Company Upgraded Their Equipment to the Next Level, Without Facing Any Downtime

RESULTS

- The ability to rapidly upgrade programmable logic controller (PLC) technology without downtime saved money and time and eliminated potential points of failure
- High uptime for data center operations provided by comprehensive control system with resource management logic
- Upgrade path did not require any re-wiring of I/Os, saving significant cost and time

APPLICATION

Data center control and monitoring solution.

CUSTOMER

A data center redundant power and infrastructure company in the U.S.

CHALLENGE

A data center power and cooling company based in the eastern U.S. specializing in redundant, high-availability systems had long used Series 90-30 PLCs in its systems, but they were rapidly reaching end of life. Because of the critical nature of power, the need to upgrade the PLCs to new modern technology required rapid changeover with little to no shutdown – a virtually impossible challenge for most PLC systems.



"We just pop the PROFINET Scanner into the I/O rack and we're pretty much finished. The I/Os are already there and the points are the same, so nothing has to be rewired, and we just feed it into the PROFINET system. And then we can map the CRUs anywhere we want."

A senior power systems engineer

SOLUTION

The company chose PACSystems RX3i controllers for their high availability, built-in cybersecurity features and secure communication, and backward compatibility with existing I/Os. This eliminated the need for re-wiring and significant change in infrastructure. This unique capability allows for rapid upgrade without shutdown. In addition, the ability to use the same I/O configuration reduces potential errors and points of failure. Upgrading to the PACSystems RX3i controller not only reduced installation time, downtime and potential shutdown, but also cut costs over the need to install a complete I/O architecture, while increasing PLC capability dramatically.

Moving rapidly from a Series 90-30 PLC system to a PACSystems RX3i solution means very few logic changes, requiring less customer reconfiguration and testing. The upgrade of the system was accomplished over a weekend.

High availability and a cybersecure control system is essential for data center operations. The PACSystems RX3i controller doesn't require the same hardware or software revisions during a controller or firmware upgrade, thereby providing true high availability. The controller is Achilles Level 2 certified with encrypted communication, thereby preventing any unauthorized communication between PLCs and clients. In addition, configurable PACSystems RX3i controllers provide the company with complex resource management and custom processes, such as intelligent and live load shedding which would not be possible with standard PLCs. For example, if a PACSystems RX3i controller sees that the generator is approaching its maximum load, it can be programmed to send a signal that backs off the heating and air conditioning before the generator bus is affected. The system also connects to power management systems, building management systems and other subsystems and provides user-friendly HMI screens for quick operations and troubleshooting. The PACSystems RX3i controller solution makes the addition and configuration of redundant systems fast and easy, an essential for this high-availability provider.

RESOURCES

PACSystems

www.Emerson.com/PACSystems



The PACSystems RX3i controllers provide high availability and built-in cybersecurity and secure communication, essential for data center operations.

www.Emerson.com/contactus

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