

Water/Wastewater System Enables Secure Emerson Ovation DCS Data Availability

Use Case Summary

INDUSTRY

Water/Wastewater

CHALLENGE

Enable unidirectional log file transfer and two UDP streams for operational data directly out of the OT environment from Emerson Ovation DCS for asset performance optimization.

SOLUTION

OPDS-1000 Data Diode

BENEFITS

Securely isolates OT assets and enables compatible one-way transfer of operational data streams and files.

Cybersecurity Challenge

A water and wastewater management system upgraded their control systems to the Emerson Ovation DCS and required a secure method to transfer the DCS data out of the OT environment to external IT users and the cloud. While the organization had firewalls in place, in the process of upgrading it was also determined that they required a more secure transfer method that would also be compatible with the Ovation DCS. Because the Ovation system normalizes the data streams to UDP, this would involve two simultaneous unidirectional UDP streams for operational data, as well as a nightly log file transfer. The system operator sought a single solution that could meet all of these requirements.

EMERSON OVATION™ DISTRIBUTED CONTROL SYSTEM (DCS)

Ovation gives power generation and water/wastewater treatment users optimized levels of plant availability, reliability and environmental compliance. Utilizes COTS technology to provide a powerful and secure architecture while allowing operators to easily progress with rapidly advancing computer technologies.

Before Architecture



Solution

OPDS-1000

OPDS-1000 is a single box, 19" 1U data diode, purpose-built for network segmentation and deterministic, one-way data transfer. It is an easy-to-use, highly reliable, and cost-effective solution for medium to high bandwidth unidirectional data transfers.



After Architecture



RESULTS

- Isolated the OT control network, eliminating external network-based attack vectors
- Augmented firewall security with unidirectional data flow to cloud and IT users
- Provided a single box solution to enable all data flows, seamlessly integrated with the Emerson Ovation DCS
- Enabled external in-depth plant and equipment monitoring through a single pane of glass
- Facilitated cloud operational and maintenance analytics for process optimization



Owl Cyber Defense cross domain, data diode, and portable media solutions provide hardened network security checkpoints for hardened threat prevention and secure data availability. For over 20 years, Owl's unmatched expertise, products, and services have been trusted by clients in government, defense, critical infrastructure, and commercial organizations around the world.

For more information on Owl, or to schedule a demo, visit www.owlcyberdefense.com