

Bently Nevada Enables Secure Remote Monitoring of Power Plant

Case Summary

INDUSTRY

Power Generation

CHALLENGES

Malware breach at a power plant destroyed data, which led to disconnecting their OT from external networks, ultimately violating the SLA in place

SOLUTION

Owl OPDS-100D and DiOTa data diodes deployed on plant OT network

BENEFITS

Remote turbine performance data and alarm data monitoring met SLA requirements via deterministic, one-way data transfer.

Company Overview



Bently Nevada provides solutions for asset protection and condition monitoring via hardware, software and services in industrial plant-wide operations.

Cybersecurity Challenge

Bently Nevada required remote monitoring capabilities on its equipment installed at a natural gas power plant, per a service level agreement (SLA). A malware breach destroyed data and servers at the plant, severely impacting daily operations, leading them to disconnect their operational technology (OT) from outside networks. While this prevented malware proliferation, it also disabled the remote monitoring due to the resulting eliminated electronic communications.

REQUIREMENTS

- Remote visibility (without access) to System 1 (S1) data
- Demonstratable, deterministic one-way outbound data flow
- Support for uni-directional TCP without acknowledgement errors
- Must be affordable, easy to install, deploy, and maintain



Bently Nevada before Owl

Solution

Owl data diodes (OPDS-100D) and (DiOTa) were selected for a deterministic, one-way data flow. The data stream required for S1 replication was small, making DiOTa the best match for Bently Nevada, due to low cost, definitive cybersecurity and quick deployment. These data diodes enable critical turbine performance and alarm data replication and transfer from the plant OT network to the turbine vendor global monitoring center. With Owl data diodes installed on their device, Bently Nevada now adheres to the power plant's SLA.



OPDS-100D OWL PERIMETER DEFENSE SOLUTION -100D

DIN rail mountable data diode, purposebuilt for network segmentation and deterministic, one-way data transfer.



DIOTA

Single-purpose data diode, purposebuilt for deterministic, one-way data transfer of low volume data streams.

Results

- Provided network cybersecurity with effective segmentation at the plant OT network boundary, helping to prevent malware breaches and proliferation
- Restored outbound turbine performance data flows from the plants to turbine vendor, meeting SLA requirements
- Enabled alarm data flow from plant assets to turbine vendor global monitoring facility
- Bently Nevada's data collection is modified to "push" data via TCP though the data diode to their monitoring center



Bently Nevada after Owl



With over 2000 deployments globally, Owl Computing Technologies is the leader in data diode cybersecurity solutions, enabling hardware-enforced network segmentation and deterministic, one-way transfer of all data types and file sizes. USA owned and operated, Owl offers validated and accredited products, servicing the intelligence, military, government, and critical infrastructure communities.

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