

How VBR Turbine Partners Secured and Simplified Turbine Data Collection with an Owl Data Diode

CASE SUMMARY

INDUSTRY

- Power Generation/Industrial Automation

CHALLENGES

- Provide a means to securely collect and aggregate turbine remote performance monitoring data
- Meet complex operational requirements – supporting multiple protocols from numerous devices
- Maintain “air-gapped” security architecture with the operational environment

SOLUTION

After many competing solutions failed, the company was guided to the OPDS-5D data diode solution to transfer turbine performance data back to its centralized monitoring facility. The OPDS-5D provides effective network segmentation and deterministic, one-way data transfer. It is capable of supporting a variety of data types simultaneously in use cases with lower, fixed bandwidth requirements of 5 Mbps or less.

Company Overview



VBR Turbine Partners (VBR) are independent ISO 9001:2015 certified maintenance improvement experts for GE LM aero-derivative gas turbines and their auxiliary systems, control systems & packages: LM6000, LM2500(+) and LM1600.

Cybersecurity Challenge

VBR required a secure data transfer solution to collect remote operational and sensor data from customer-owned turbine locations and transfer that data to their centralized monitoring facility. They also required a hardware-enforced solution that could ensure no external access to the customer-owned networks and equipment. The decision was made to avoid a cloud/internet facing portal and facilitate the transfer with a direct VPN connection. VBR had previously attempted to employ other data diode devices but all had failed, for various reasons.

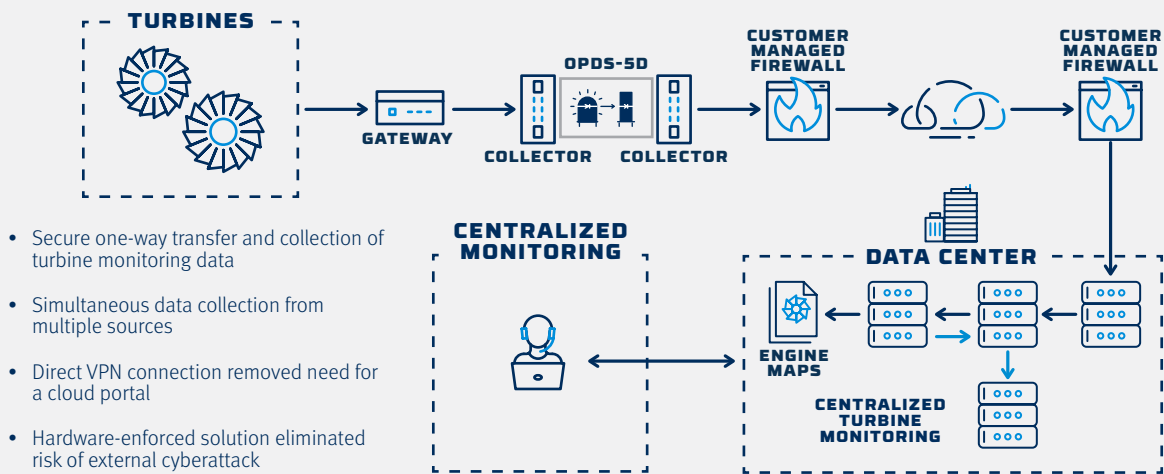
REQUIREMENTS

- Hardware-enforced cybersecurity
- Single device capable of collecting multiple data streams
- Native OPC support
- Compatible with GE Historian
- Direct VPN connection – not a cloud portal
- Highly-trusted references
- Certifications by major quality standards

Solution

After many failed attempts with various data diode products on the market, VBR turned to technology consultant 4Secure, Owl's regional partner in Europe, for guidance. 4Secure conducted a thorough, two-day on-site consultation, demonstrating Owl technology, and assisting VBR to successfully deploy a test OPDS-5D data diode solution in their laboratory environment. The OPDS-5D demonstrated stable transfer of the OPC data, with no data loss and absolute security. As a NATO-trusted vendor with an elite customer base, VBR was assured of Owl's product quality, and the OPDS-5D was selected as the ideal solution for VBR's DECIDE product.

"The Owl solution was selected for a number of technical reasons, including the native OPC support, integration possibilities with the GE historian, and the fact that a single OPDS-5D can be used to collect data from multiple other devices," said Jan Slagter, Technical Director at VBR. "Owl devices are also certified by major quality standards including EAL and ISO 9001, and used by the U.S. government, which was reassuring for the asset owner that the solution is very secure."



OWL Cyber Defense

Owl Cyber Defense Solutions, LLC leads the world in data diode and cross domain network cybersecurity. With a constant focus on customers in the military, government, critical infrastructure, and commercial communities, Owl develops market-first, one-way data transfer products to meet a variety of operational needs, from entry level to enterprise.

About VBR Turbine Partners

VBR Turbine Partners is an independent operation and maintenance provider and an established spare parts supplier for GE LM engines, control systems, auxiliary systems, and packages. VBR enables gas turbine operators to significantly increase engine uptime and reduce maintenance costs on their gas turbine operations.

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



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