GARLAND
TECHNOLOGY
See every bit, byte, and packet®

Enhancing Security and Visibility for Offshore Wind Farms: A Future Ready Solution

Challenge

As new NIS2 regulations take place, the renewable energy industry is at the forefront of security as it scales in both size and significance. With new requirements for operators to implement cybersecurity measures and undergo risk assessments, offshore wind farms must proactively address security challenges in their IT and OT networks as part of design and implementation. The key challenge they must solve is how to ensure comprehensive network visibility across mixed environments to support effective monitoring and threat detection.

The TAP to Tool™ Solution

1. Garland Technology proposed a comprehensive solution to enhance network visibility and security regardless of what the offshore or onshore environment contains. This solution combines TAPs, Span Aggregation, Data Diode and Traffic Filtering in a seamless integration with monitoring and analysis tools.

2. The design strategically places Network Packet Brokers within the onshore data center to optimize visibility for IT environments. Copper and single-mode fiber TAPS, capable of supporting long-range traffic delivery, connect telecommunications cabinets to the onshore data center via the Network Packet Broker. Traffic is then aggregated efficiently between the telecom cabinets and the IDS platform, ensuring complete visibility across the network.

3. This architecture not only delivers full scalability to accommodate the evolving needs of the wind farm but also guarantees uninterrupted traffic flow to the IDS. By combining Network Packet Brokers and Network TAPs, Garland Technology delivers a robust and future-proof solution tailored to the unique challenges of offshore energy infrastructure.

Benefits

• Traffic aggregation without interference in data operations.

• Modular architecture allows for future adaptations to take place.

• Smooth traffic delivery to OT and IT sides of the network.

• Full network visibility into offshore OT environments.

Onshore Data Cabinets Site

<IDS/>

Onshore Data Center Site

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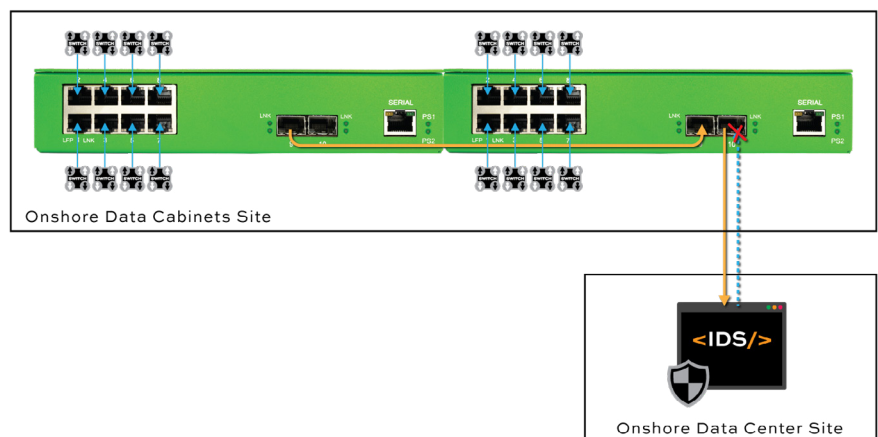
Have Questions?

sales@garlandtechnology.com | +1 716.242.8500 | GarlandTechnology.com

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