

NETWORK SECURITY SOLUTIONS

National Commuter Rail Transportation Company Secures Remote Monitoring of Railcars and Track

Company Overview

CASE SUMMARY:

A national commuter rail transportation company operating over 15,000 trains daily.

INDUSTRY:
Transportation Rail

CHALLENGE:
Isolation and security of rail sensor network while preserving remote monitoring capabilities.

SOLUTION:
OPDS-100 data diodes deployed to transfer sensor data.

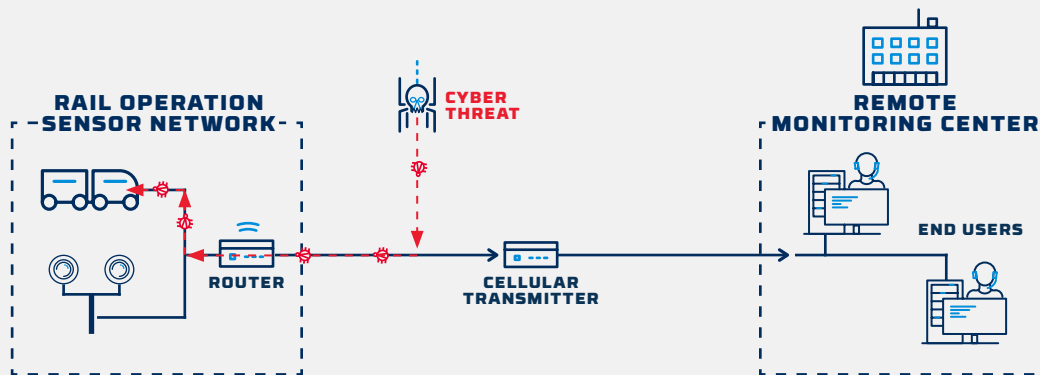
BENEFITS:
One-way data flow ensures rail monitoring network is secure from external cyber threats. Preserved remote monitoring capability from central monitoring operations center.

Cybersecurity Challenge

To collect both performance and safety metrics, the rail company installed sensors on its railcars and tracks. The sensors allow remote monitoring from a centralized facility, but they also created the potential for cyber threats. Recognizing a need for cybersecurity, the company required a solution that could both isolate the sensor monitoring and data aggregation system from external network access, while allowing sensor data to continue being sent to the central monitoring operations center, via wireless transmission.

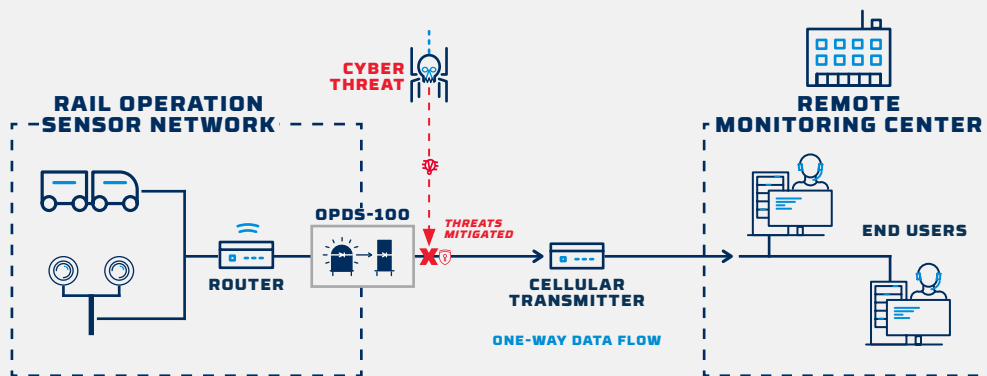
REQUIREMENTS:

1. Create a “disconnected” architecture for rail monitoring network, with no incoming connections from external networks
2. Enable secure transfer of rail performance and safety data to central monitoring center via wireless transmission



SOLUTION

OPDS-100 was selected to isolate the rail monitoring and aggregation network from external access. Data diodes also enabled deterministic, one-way data transfer of performance and safety sensor data for transmission to remote monitoring operations center.



Deployment



OPDS-100

Owl Perimeter Defense Solution - 100

Self-contained 1U data diode, purpose-built for network segmentation and deterministic, one-way data transfer.

Results

- 1 Created secure, hardware-enforced boundary around the rail monitoring network
- 2 Rail sensor and monitoring network cannot be accessed via any external network connection
- 3 Enabled deterministic outbound flow of performance and safety sensor data to monitoring center via wireless transmission system
- 4 Preserved remote monitoring of rail and track sensor data from central monitoring operations center

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.

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



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