

NETWORK SECURITY SOLUTIONS

# Petrochemical Company Enables Secure, One-way Production Data Flow To Business IT

## Company Overview

### CASE SUMMARY:

Major petrochemical manufacturer with annual production over 2 million tons.



#### INDUSTRY:

Petrochemical Production



#### CHALLENGE:

Malware breach destroyed data, causing company to disconnect operational and business networks.



#### SOLUTION:

OPDS data diodes deployed along with OPTS PI System replication and OSTs OPC replication applications to re-establish business continuity.



#### BENEFITS:

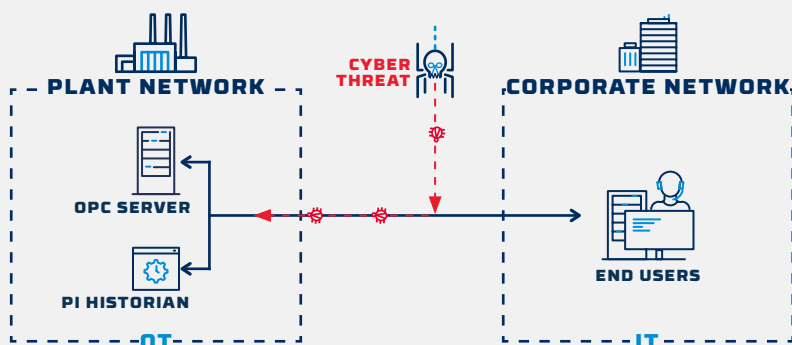
Deterministic, one-way data flow of PI System/OT data into HQ increased visibility without increasing risk. Enabled real-time OPC alarm monitoring at corporate HQ.

## Cybersecurity Challenge

A malware breach destroyed data and servers, severely impacting daily operations. In response, the company disconnected their operational technology (OT) network from their wide-area networks (WAN), and the WAN from their corporate IT network at HQ. While this prevented any future malware proliferation, it led to lack of visibility and business continuity, due to the severed electronic communications.

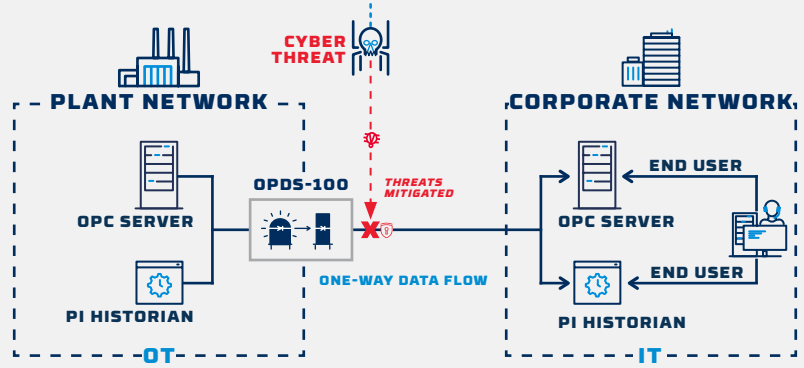
### REQUIREMENTS:

1. Maintain a “disconnected” or segmented cybersecurity architecture
2. Restore plant performance data to corporate IT networks via replication of Open Platform Communications (OPC) servers
3. Enable OSIsoft PI System historian replication from OT network to corporate IT network
4. Allow real-time OPC alarm monitoring at corporate HQ



**SOLUTION**

Owl data diodes utilizing patented technology (OPDS-100) were selected for effective network segmentation and deterministic, one-way data transfer from OT assets to the corporate network. PI System replication (OPTS) added to enable transfer of plant operations data to the business unit, as well as OPC server replication (OSTS).



**Deployment**



**OPDS-100**

**Owl Perimeter Defense Solution - 100**

Self-contained 1U data diode, purpose-built for data transfer.

**INTERFACE MODULES**

**Owl PI Transfer Service (OPTS)**



Specialized software developed specifically for secure replication and transfer of OSIsoft® PI System historian data across network boundaries.

**OPC Secure Transfer Service (OSTS)**

Specialized and certified application for secure, real-time OPC data and event monitoring across network boundaries.



**Results**

- 1 Preserved effective network segmentation at the plant OT network boundary helping to prevent malware breach and proliferation
- 2 Permitted deterministic outbound PI System/OT data flows from the plants to the corporate data stores for increased visibility and business continuity
- 3 Replicated real-time OPC data allowing full performance, alarm, and event data access by corporate end users



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](http://www.owlcyberdefense.com)