



# Secure PI Data Transfer for University Campus Infrastructure

## Case Summary

**INDUSTRY**  
Facilities / Infrastructure

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**CHALLENGES**  
Securely transfer PI System data without exposing infrastructure networks

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**SOLUTION**  
OPDS-100 data diodes with OPTS software for PI System data transfer

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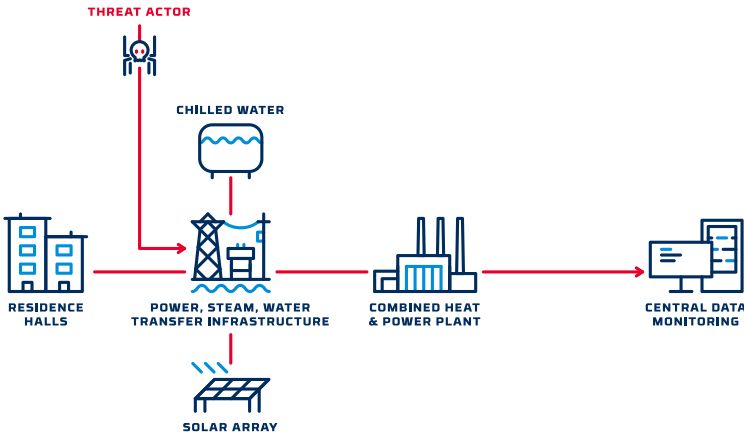
**BENEFITS**  
Secure connected infrastructure provided seamless facilities data aggregation for centralized analysis and performance improvements

## Cybersecurity Challenge

A university made significant, systematic advancements in its campus infrastructure management and 3rd-party services provider performance using the OSIsoft PI System. Access to new data and visualizations enabled the university's Facilities Management team to improve billing accuracy and reliability, multi-system integration, infrastructure monitoring, and outage alerts. However, the new connected systems now were potentially exposed to increased risk of cyberattacks. The university required a simple, reliable, and highly secure solution for gathering the facilities data without exposing the campus infrastructure to cyber threats.

### REQUIREMENTS

- Enable central data availability from five disparate facility sources
- Protect connected campus infrastructure systems from cyberattack
- Provide the capability to transfer or connect to OSIsoft PI System
- Low upkeep and maintenance requirements for limited cybersecurity staff



Before Architecture

## Solution

The university system identified the capability to segment and secure campus infrastructure facilities through unidirectional data transfers with data diodes. In evaluating available solutions, the OPDS-100 was deemed the simplest, most effective data diode solution to meet their needs. In combination with the Owl PI Transfer Service (OPTS) software module, the complete solution required only one 1U box to achieve reliable, secure PI System data transfers to the central data collection center.



### OPDS-100

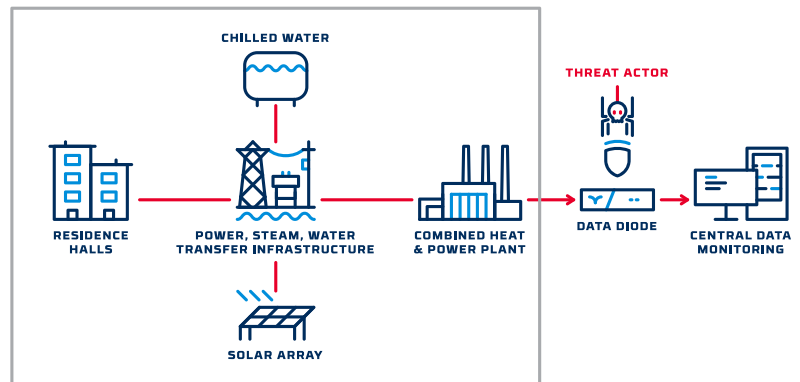
OPDS-100 is a single box, 19" 1U data diode, purpose-built for network segmentation and deterministic, one-way data transfer. It is an easy-to-use, highly reliable, and cost-effective solution for low to medium bandwidth unidirectional data transfers.

### OWL PI TRANSFER SERVICE (OPTS)

Proprietary Owl software for secure replication and one-way transfer of OSIsoft PI System historian data across network boundaries.

## Results

- Provided secure view of disparate infrastructure assets and systems across the central utility plant, building automation systems, metering systems, safety systems, and numerous other data sources
- Secure external availability of facilities data provided wide-ranging benefits for the entire university community
- Effective network segmentation at the university infrastructure facilities and IT network boundaries, helping to prevent cyber attacks, including malware and ransomware



*After Architecture*



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)