

Securing Simultaneous One-Way & Bidirectional Data Transfers

Use Case Summary

INDUSTRY

Power Transmission & Distribution

CHALLENGES

To improve their NERC CIP security posture, an energy provider required secure, simultaneous, one-way and bidirectional data transfers. Firewalls do not provide hardware-enforced separation, exposing the network to unwanted threats.

SOLUTION

IXD, Owl's Industrial Cross Domain Solution, enabled secure transfers of multiple protocols and data types simultaneously on a single, 1U appliance in a high availability architecture.

BENEFITS

IXD supports multiple data types and data flows, one-way and bidirectional transfers, and content inspection, with fewer devices and a simpler architecture, at a lower overall cost than other alternatives. IXD provided the customer with a scalable security platform, flexible enough to address future needs with unmatched industrial protocol support.

Cybersecurity Challenge

In their efforts to improve their NERC CIP security posture, an energy provider needed to securely transfer files (SFTP) and OSIsoft PI System data, one-way, from eight production high availability clusters to two geographically-separated data centers. In addition, they needed to secure several bidirectional database and HTTPS communications that could not be converted to one-way. Their previous approach, firewalls, did not provide hardware-enforced separation, exposing the network to unwanted threats. Threats inside the data were also a major concern.

Solution

IXD, Owl's Industrial Cross Domain Solution, was selected by the energy provider due to its unmatched capabilities in handling multiple data types and data flows, one-way and bidirectional data transfers, and content inspection, all on a 1U, rack-mountable appliance in a high availability architecture.

USE CASE REQUIREMENTS

- Enterprise, high-performance cross domain solution with the flexibility to handle a wide variety of use cases
- A wide range of common ICS protocol support
- Support for multiple protocols on a single appliance
- Support for both one-way and bidirectional data transfers on single appliance
- Content examination and filtering
- High availability
- 1 Gbps to 10 Gbps throughput performance

Solution

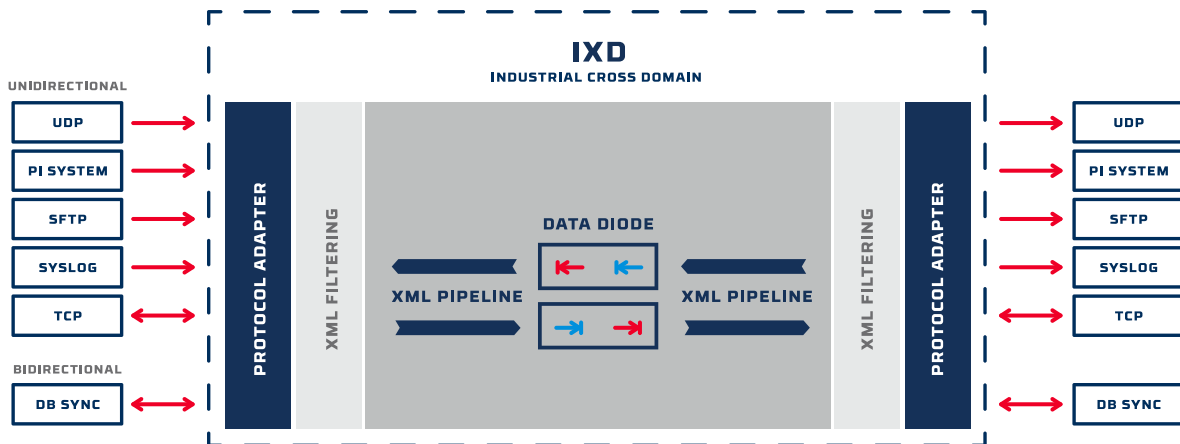
IXD

Developed specifically for critical infrastructure, IXD (Industrial Cross Domain) is a high availability, hardware-enforced cross domain solution that controls, restricts, and/or filters the flow of information both to and from trusted and untrusted domains, based on an organization's security policies.



Secure One-Way & Bidirectional Use Cases

An energy provider wanted to securely transfer files (SFTP) and OSIsoft PI System data, one-way, from eight production high availability (HA) clusters to two geographically separated data centers. In addition, they needed to secure several bidirectional database and HTTPS communications that could not be converted to one-way. IXD enabled the energy provider to securely transfer multiple protocols and data types on a single, 1U appliance in a high availability architecture. Data content is thoroughly vetted via the XML Linear Assured Pipeline, a series of non-bypassable filters that are repeated in both the sending and receiving directions. Data is normalized into XML and filtered against schemas and other criteria, guarding against threats within the data, both malicious and accidental. Owl's IXD was selected for its unmatched capabilities in handling multiple data types and data flows, simultaneous one-way and bidirectional transfers, and content inspection, with fewer devices and a simpler architecture, at a lower overall cost than other alternatives. This solution provided the customer with a scalable security platform, flexible enough to address future needs with unmatched industrial protocol support.



Owl Cyber Defense cross domain, data diode, and portable media solutions provide hardened network security checkpoints for hardened threat prevention and secure data availability. For over 20 years, Owl's unmatched expertise, products, and services have been trusted by clients in government, defense, critical infrastructure, and commercial organizations around the world.

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