Modbus Transfer Service

Software Module

Features & Benefits

- → Secure transfer of modbus registers to business networks
- → Linux support
- → Concurrent masters support
- → Non-routable protocol separation of networks with embedded data diodes
- → Simple and speedy configuration and operation

Modbus Transfer Service

Modbus is a communications protocol and de facto standard developed for use with Programmable Logic Controllers (PLCs), SCADA systems and other industrial devices. Owl's Modbus Transfer Service (MBTS) is a software application that allows real-time data to be collected from industrial control systems within a plant and securely transfer it across the Owl data diode platforms to end-users (operations, production, maintenance, etc.) outside the security perimeter of the plant. The data diode protects the plant from cyber attacks while securely transferring data outside of the plant.

The Owl Solution

MBTS has two components, a "Master" and a "Slave". The Master runs on the send side of the Owl platform and interfaces with industrial control systems in the plant, collecting register data from them and transferring it across the data diode to the destination side. The Slave runs on the receive side of the Owl platform, receiving the register data and providing it to any "Masters" operating outside the security perimeter of the plant. MBTS is a nonintrusive solution working within the existing architecture, becoming an additional Master collecting data and a new Slave to collect register data from.

OMBI Monitor/Read

At the Owl/process control network interface, MBTS Send either directly communicates with, or "reads" register values from a Modbus enabled device, or monitors & intercepts existing Modbus master/slave communications. In either case, the polled Modbus data is collected in a secure environment, and is sent via UDP datagrams to customer client applications requiring Modbus data. Many Modbus-enabled devices support concurrent master access; operator configurations often exploit this feature. Multiple masters may request the same or different information from a common PLC, for example. MBTS supports such configurations, acting as a gateway between the masters and the physical device.

Standard Capabilities

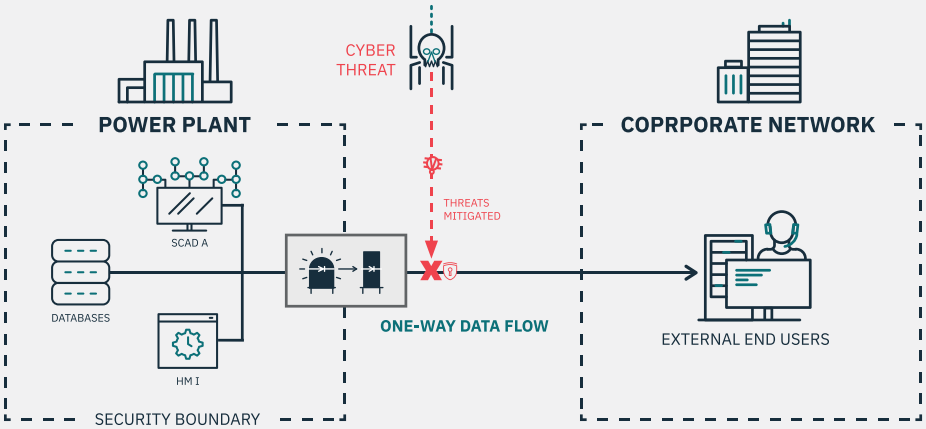
Standard units of the Owl Commercial Products family are configured to support the concurrent transfer of files, TCP packets and UDP datagram streams. These products also support file transfer via Owl RFTS (trusted file movement across shared networks) and via common FTP, along with secure transfer of syslog messages, e-mail, and SNMP traps.

The integrated servers within Owl products employ the CentOS Linux operating system, "locked down" from technical guidance taken from US government-formulated Security Technical Implementation Guides (STIGs) and satify the Center for Internet Security guidance.

USE CASE

MBTS Listen

At the Owl/business network interface, MBTS Receive "listens" for the transferred poll results from MBTS Send. Polled data is sent to MBTS Receive immediately, with all poll record data refreshed every 30 seconds. MBTS Receive provides business network modbus clients with the configured modbus register values.



DATA DIODE
OwlTalon®

Modbus Transfer Service (MBTS)

Modbus Transfer Service (MBTS) runs on Owl Talon®, Owl's adaptable data diode platform, purpose-built to move Modbus traffic across critical network boundaries with hardware-enforced, one-way security. With Owl Talon & MTBS, control system data can move out (or reference data in) without ever opening a path back into the protected network. Owl Talon supports multiple simultaneous protocols in a single devices at up to 100 Gbps throughput speeds and comes in multiple form factors and throughput levels so customers can choose what fits their environment now and scale up as needs grow.

OWL Cyber Defense™

Owl Cyber Defense Solutions, LLC, headquartered in Columbia, MD, leads the industry in data diode and cross-domain network cybersecurity solutions for faster, safer and smarter decision making. We create solutions tailored for high-risk sectors including the military, government and critical infrastructure. Our advanced technologies enable secure, near-instantaneous collaboration, bridging network barriers to protect critical missions. With a focus on scalability and interoperability, Owl ensures that organizations can maintain secure, reliable, and compliant communication channels against evolving cyber threats.

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

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