

WATERFALL FOR MODBUS

SECURE ENTERPRISE MONITORING OF MODBUS DEVICES

Industrial enterprises frequently need enterprise-wide access to data from devices supporting the Modbus industrial communications protocol. Connecting enterprise networks to Modbus devices through firewalls is high risk. All software can be hacked and all firewalls and Modbus implementations are software.

The Waterfall for Modbus connector software supports Waterfall Unidirectional Security Gateway and Waterfall FLIP hardware. The connector gathers data from Modbus devices on industrial networks in real time, sends that data through the unidirectional hardware, and emulates the Modbus devices on the enterprise network. Enterprise users and applications can access the emulated devices bi-directionally, as if they were still communicating to the original Modbus devices. The Waterfall unidirectional hardware physically prevents any attack or malicious command from reaching the protected Modbus devices.



BENEFITS OF USING WATERFALL FOR MODBUS



Secure, real-time unidirectional emulation of Modbus devices to enterprise networks



Enterprise users and applications interact normally with accurate, timely replicas of Modbus devices on enterprise networks



Eliminates all remote attacks and malware propagation from external networks



Facilitates and simplifies compliance with NERC CIP, NIST, CFATS, ANSSI, UK DfT and more



Simple deployment, off-the-shelf solution



Rails



Oil & Gas



Manufacturing



Water



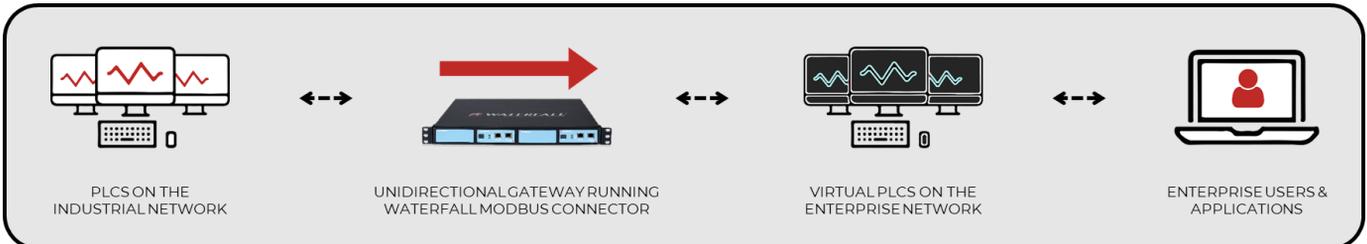
Power



Pharma

WATERFALL SOLUTION FOR MODBUS

Enterprises deploying the Waterfall for Modbus connector enjoy increased visibility for industrial data, reduced compliance costs and dramatically reduced cyber risk and cyber incident costs.



THEORY OF OPERATION

The Waterfall for Modbus connector has two software components: one runs on the Industrial network and the second on the enterprise network. On the ICS side, the connector polls the Modbus PLCs. On the enterprise side, the connector emulates the PLCs to enterprise users and applications. Enterprise applications poll the emulated PLCs to access industrial data in real time.

The Waterfall Unidirectional Gateway hardware deployed between both networks includes a TX Module containing a fiber-optic transmitter/laser, and an RX Module containing an optical receiver but no laser. The gateway hardware makes it physically impossible for attacks to flow from the corporate network towards the industrial network, eliminating any threats of online attacks, malware or human errors.

FULLY- FEATURED & ROBUST SUPPORT:

- » Supports large numbers of Modbus devices and scales to very large Modbus deployments
- » Supports both Modbus master and slave emulation
- » Fully compliant with the official Modbus over TCP/IP standard and the 32 bit extension
- » Supports all Modbus request types and data types
- » 1 Gbps throughput standard & High Availability option
- » Fully supported with Waterfall Unidirectional Security Gateway and FLIP

INFO@WATERFALL-SECURITY.COM

WWW.WATERFALL-SECURITY.COM

ABOUT WATERFALL SECURITY SOLUTIONS

Waterfall Security Solutions is the global leader in industrial cybersecurity technology. The company's expanding portfolio of customers includes national infrastructures, power plants, nuclear plants, offshore oil and gas facilities, rail transport, refineries, manufacturing plants, utility companies, and many more. Deployed throughout North America, Europe, the Middle East and Asia, Waterfall products support the widest range of leading industrial remote monitoring platforms, applications, databases and protocols in the market. Please contact: info@waterfall-security.com

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