

Waterfall[®] for PI Servers and PI AF

Stronger Than Firewalls: Secure Integration with Server Replication



Features and Benefits

- Securely replicates PI Servers and PI Asset Framework to corporate networks
- Benchmarked together with OSIsoft
- Eliminates cyber threats and risks from online attacks and human errors
- Available 1Gbps connectivity and high availability
- Simplifies NERC-CIP, NRC, NIST, CFATS and other regulatory compliance
- Common Criteria EAL4+ certified. Assessed for security by Idaho National Labs

Overview

Waterfall for OSIsoft PI securely integrates OSIsoft systems on industrial networks with users and applications on corporate networks by unidirectionally replicating PI Asset Framework and PI Server systems.

Stronger than Firewalls: Secure Historian Replication

The Waterfall for OSIsoft PI System is part of the Waterfall Unidirectional Gateway family of products. The gateways are a combination of hardware and software. The transmit gateway hardware contains a laser, and the receive gateway hardware contains a photocell. A fiber-optic cable links the two hardware units. As a result, the transmit gateway can send data to the receive gateway, but the receive gateway cannot send anything back. No online attack originating on an external network can pass back into a protected network through the gateway hardware.

The Waterfall gateway software queries PI Servers and Asset Framework servers on an industrial network for data, sends that data across the Unidirectional Gateway hardware to a business network, and uses the data to populate a replica PI Servers and Asset Framework servers there. Business users and applications use to the replica servers exclusively. The replica servers are maintained as faithful, synchronized replicas of the original servers on the industrial network. The replicas are so faithful that corporate network users are often unaware that they are using replica servers.

In addition, business users can issue complex, costly queries against the replica database without fear of slowing down critical systems on the industrial control network.



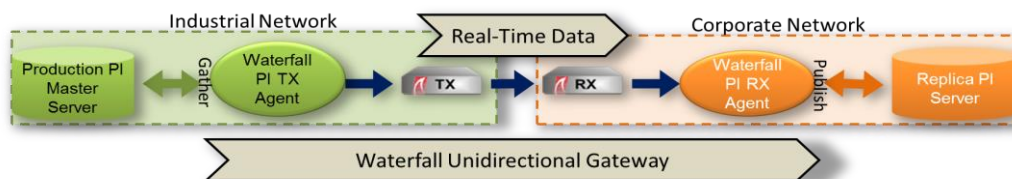
Available Features

- Real-time replication of tags, attributes, events, values, and alerts
- Automatic propagation of tag structure changes - addition, deletion or attribute changes
- Complete historian database replication, or selective replication
- Automatic Point Synchronization (APS) support
- High-availability options: any or all of: HA PI on industrial network, HA PI on corporate network, and HA Unidirectional Gateway solution
- PI Asset Framework (AF) replication: like-to-like replication and all-to-PI replication
- Unique "PI Backfill" capabilities for data retransmission
- Throughput options ranging from 100Mbps to multiple 1Gbps connections
- Support for numeric, digital, string and timestamp tag types.
- Optional aggregation of many industrial PI Servers into a single enterprise server.

Waterfall for OSIsoft PI Historian replicates both PI Servers and the PI Asset Framework. The Waterfall solution can replicate not only the Asset Framework naming database, but all of the data accessible via the framework from the various industrial data sources the Asset Framework supports. The data can be replicated in "like-to-like" fashion through the Asset Framework by establishing replicas of the industrial data sources on the corporate network, or the data can be replicated in an "any-to-PI" mode. In this latter mode, data can be gathered from many sources on the industrial network and replicated into a PI Server on the corporate network.

The Waterfall for OSIsoft PI System has been benchmarked by OSIsoft and Waterfall Security Solutions personnel to ensure product compatibility and superior performance. The Waterfall solution communicates directly with the OSIsoft PI Server to allow real-time streaming of PI information. This enables the Waterfall solution to support PI installations of any size, including large PI Servers, consisting of hundreds of thousands of tags.

Waterfall is the unidirectional vendor with the longest and most comprehensive relationship with OSIsoft, with successful installations of the Waterfall for OSIsoft PI Historian at major utilities worldwide



Regulatory Compliance and Certifications

No misconfiguration of Unidirectional Gateway replication software can impair the security provided by the gateway hardware. This results in dramatically reduced perimeter operating costs and costs of compliance with NERC-CIP, NRC, CFATS, NIST, ISA-SP99 and other standards, guidance, and regulations.

The gateway solution is certified Common Criteria EAL4+, resistant to high attack potential. Waterfall's Unidirectional Gateways are only unidirectional solution to pass a cyber-security assessment by Idaho National Labs.

For further information and quotes, please contact us or visit our website: www.waterfall-security.com

Specifications

Network Interfaces: 10/100 Base-T or 1000BaseT	Dimensions: 19"/ 482 mm (W), 1U/ 43.5mm (H), 10"/ 253 mm (D)	Temperature: Operating: 32°-122° F / 0°-50° C Storage: 14°-158° F / -10°-70° C	Humidity Range: 0-95% at 113° F/ 45° C, non-condensing
Weight: 3.86 lbs./ 1.75 Kg			

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