

The Waterfall Cybersecurity Solution Suite for OSIsoft PI System[®]

Preventing remote cyberattacks from entering your industrial controls

OSIsoft, a world leader in operational intelligence with its flagship PI System[®], enables businesses to capture and leverage sensor-based data across enterprises for improved efficiency. Since 2009, Waterfall Security has been a trusted partner of OSIsoft, securing the IT/OT connection in PI deployments for many mutual customers worldwide. **Waterfall's extensive portfolio of solutions for OSIsoft customers includes Waterfall for OSIsoft PI System[®], Waterfall for PI Asset Framework and Waterfall for PI Backfill.**

IT/OT integration is essential to making real-time operational data available to on-premise and remote personnel. However, this integration threatens all industrial networks by opening them to remote, online cyberattacks. Waterfall Security has addressed this issue by supporting OSIsoft PI System[®] in its portfolio of unidirectional security products, the Unidirectional Security Gateway, FLIP[®] and the Unidirectional CloudConnect[®], thereby protecting industrial control systems (ICS) from remote cyberattacks.

Waterfall's solution suite for the PI System[®] comprehensively addresses the needs of utilities, energy companies, manufacturing plants, transportation systems and many other industrial systems to achieve safe integration of operational technology (OT) and information technology (IT) networks, while maximizing the utilization of OSIsoft PI data sets and analytics capabilities across entire organizations. By deploying Waterfall for PI System[®], businesses eliminate the risk of remote cyberattacks entering their industrial control systems, while gathering critical operational data for improved efficiencies.



Benefits of using Waterfall for OSIsoft PI System[®]:



Secure, unidirectional replication of PI Servers, Collectives, and Asset Framework



Elimination of remote control cyberattacks and online malware propagation



Assists in achieving NERC, NIST, CFATS, DHS, ANSSI, DfT and other regulatory compliance



Benchmarked with OSIsoft for maximum utilization of all PI features



Fast, simple deployment, off-the-shelf solution ready for installation



Waterfall for OSIsoft PI System®

Waterfall for OSIsoft PI replicates an operational PI System® located in the industrial network, to a replica PI server located in the corporate network. Designed specifically for real-time, secure, unidirectional information flow, the Waterfall solution protects the industrial critical assets by eliminating any threats of cyberattack, incoming viruses, malware or human errors originating from external networks.

The replication process is transparent to PI System users. The replica PI System® is a faithful, real-time replica of the operational PI System®. With the Waterfall Gateway deployed, IT users and applications can access and use the replica PI System® in the same way they would have accessed the operational PI System®.



Waterfall for PI Asset Framework (PI AF)

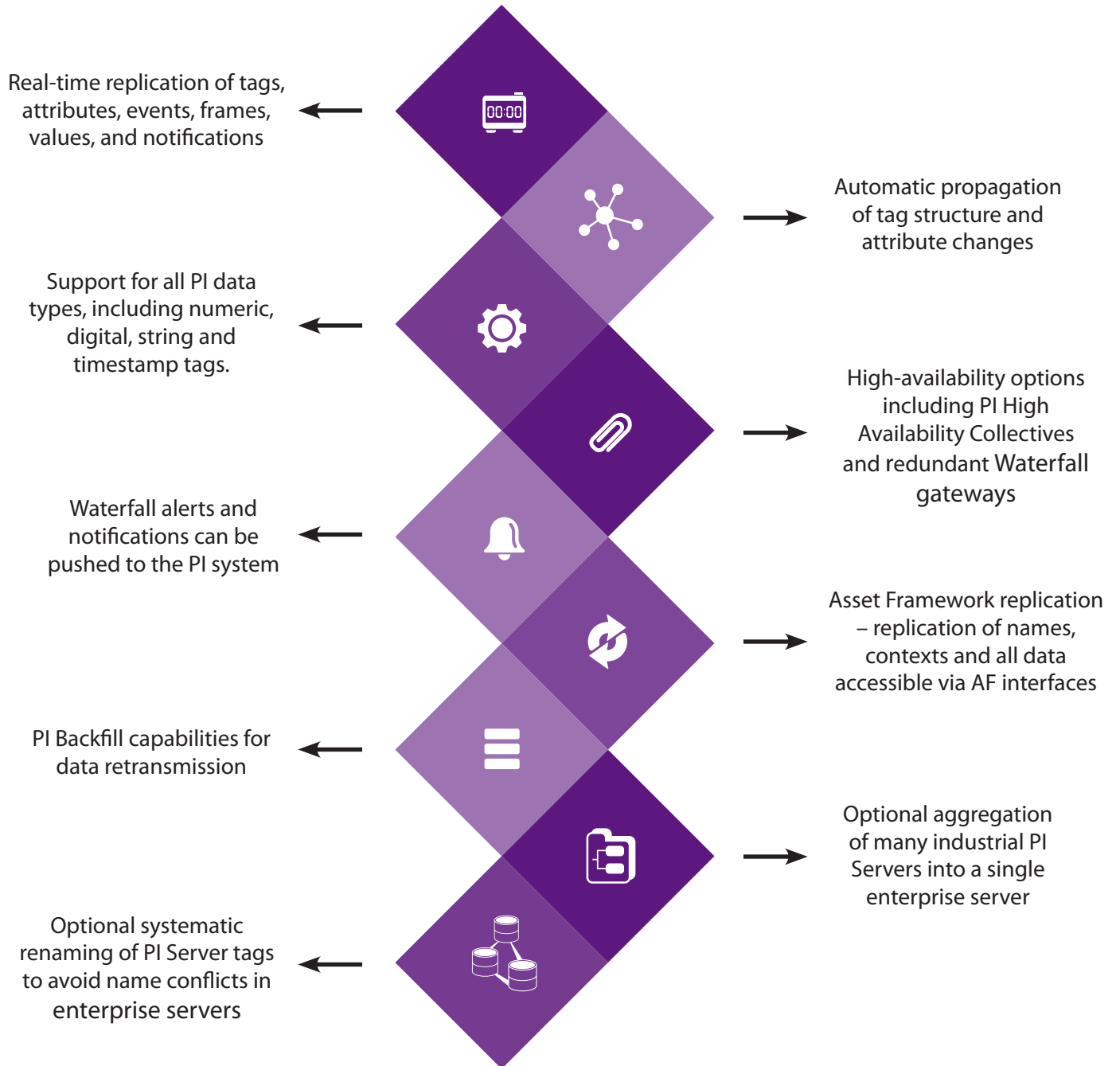
OSIsoft's PI Asset Framework is a single repository for asset-centric models, hierarchies, objects, and equipment with the goal of integrating better data analysis from multiple sources. The Waterfall Gateway software replicates Asset Framework's naming and contextualization system, as well as giving access to all data sources available via the AF system. Naming and data contextualization is sent across the Unidirectional Gateway (or FLIP or CloudConnect) to the replica PI AF Server on an IT network, while data gathered from the OT network via AF APIs is replicated in parallel through the Unidirectional Gateway to a replica PI server. All changes made to the source/OT Asset Framework system are replicated automatically to IT networks.



Waterfall for PI Backfill

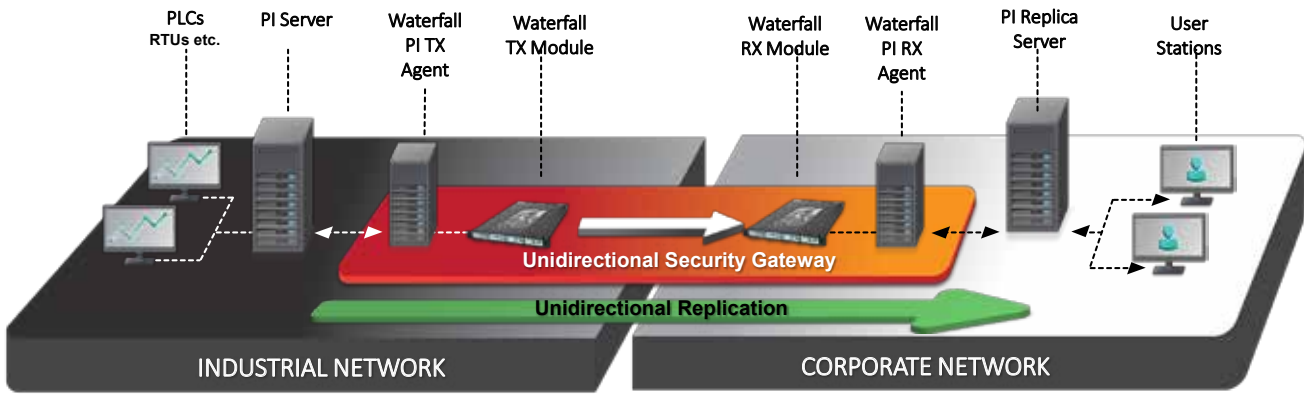
Waterfall for PI Backfill is a standard option for all Waterfall solutions for OSIsoft PI. PI Backfill is used to trigger retransmission of OSIsoft PI System data through a Unidirectional Security Gateway if gaps ever appear in the replica server, for example, when receiving hosts are rebooted to apply operating system security updates. Upon activation, Waterfall for PI Backfill streams historical PI data through the Waterfall Unidirectional Security Gateway (or FLIP or CloudConnect) to the replica PI server and fills the gaps. The process does not create any duplication of data.

The Waterfall solution for OSIsoft PI provides comprehensive, fully-featured and robust support for PI owners:



Waterfall's simple installation, configuration and monitoring tools make it easy for PI System users to deploy Waterfall solutions for PI. Comprehensive diagnostics include real-time alarms that alert the user of fault conditions via Syslog, Windows logs, electronic mail, SNMP traps, log files, PI system tags and Waterfall's monitoring console.

PI Replication



All Waterfall hardware platforms support PI replication:

Unidirectional Security Gateway

Creates an impassable, physical barrier that prevents remote attacks from entering ICS for safe IT/OT integration, remote monitoring and other business needs.

FLIP®

A Unidirectional Security Gateway with reversible orientation to enable scheduled remote updates: AV/patches, batch manufacturing, and other updates from business networks.

Unidirectional CloudConnect®

Uses unidirectional security technology to ensure seamless and safe connectivity of OT systems with cloud and other IT connections, gathering data from industrial sources and converting it to a unified cloud-friendly format, while preventing cyberattacks from entering the ICS.

About Waterfall Security Solutions

Waterfall Security Solutions is the global leader in industrial cybersecurity technology. Waterfall products, based on its innovative unidirectional security gateway technology, represent an evolutionary alternative to firewalls. The company's growing list of customers include national infrastructures, power plants, nuclear plants, on/off-shore platforms, refineries, manufacturing plants, utility companies, plus 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.

Waterfall's products are covered by U.S. Patents 7,649,452, 8,223,205, and by other pending patent applications in the US and other countries. "Waterfall", the Waterfall Logo, "Stronger than Firewalls", "In Logs We Trust", "Unidirectional CloudConnect", and "CloudConnect, and "One Way to Connect" are trademarks of Waterfall Security Solutions Ltd. All other trademarks mentioned above are the property of their respective owners. Waterfall Security reserves the right to change the content at any time without notice. Waterfall Security makes no commitment to update content and assumes no responsibility for any mistakes in this document.
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