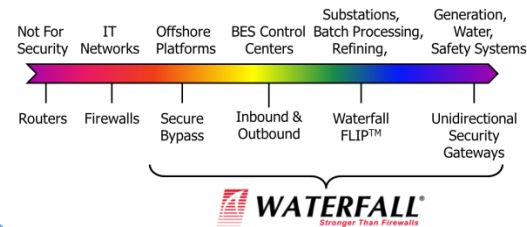


Waterfall Software Data Sheet

Stronger-Than-Firewall Perimeter Protections for Control System Networks



- Safe IT/OT Integration through industrial server replication
- Flexible hardware configurations
- Unidirectional Security Gateways
- Largest offering of COTS replications
- Market leader for unidirectional server replication

Server Replication Software Solutions

Waterfall Security Solutions produces a wide spectrum of solutions based on and complementing Waterfall's world-leading Unidirectional Security Gateways. Industrial Control System sites world-wide increasingly deal with cyber attacks ranging from disgruntled insiders, to pervasive viruses and botnets, to advanced remote control attacks. These attacks routinely defeat firewalls and other IT-focused protections. Every element of the Waterfall Security Solutions suite is a hardware-enforced solution, is stronger than firewalls, and is designed to defeat even advanced online attacks.

Waterfall's products are a combination of hardware and software. The software products represent the world's largest set of commercial-off-the-shelf industrial interfaces and server replications for Waterfall's market leading hardware-enforced Unidirectional Security Gateways.

Server replication software consists of TX and RX Agent components. The TX Agent gathers data from source servers, usually on the industrial or operations network, and transfers the data across a hardware-enforced Unidirectional Security Gateway or a Waterfall FLIP™ to the RX agent. The RX Agent either populates a replica server, such as a relational database server, with the data, or holds the data. When the RX Agent holds the data, it emulates the original server, responding to requests from clients over conventional communication channels.

Waterfall Security Solutions Software

Product Code	Product Name	Description
WF-ACTMQ	Waterfall for Active Message Queue	Replicates a single Active MQ publisher
WF-ACRS	Waterfall for ArcSight SIEM	Replicates data feeds to a single ArcSight SIEM
WF-ASPT	Waterfall for AspenTech	Replicates a single AspenTech historian server
WF-AVS	Waterfall for IP Video & Audio	Replicates a single video/audio
WF-CLR	Waterfall for ClearSCADA	Replicates a single ClearSCADA server
WF-CSIM	Waterfall for CA SIM	Replicates a single CA SIM server
WF-DNP3	Waterfall for DNP3	Replicates a single DNP3 slave / server
WF-EDNA	Waterfall for eDNA	Replicates a single eDNA historian server
WF-EDS	Waterfall for EDS	Replicates a single Emerson EDS server
WF-EEMS	Waterfall for Emerson EMS	Replicates a single Emerson Energy Management Server (EMS)
WF-ETHM	Waterfall for Ethernet Multicast	Replicates a single Ethernet Multicast publisher
WF-FILE-LFL	Waterfall Local Folder Transfer	Replicates any number of folders local to TX Agent Host
WF-FILE-CIFS	Waterfall Remote Folder Transfer (CIFS)	Replicates any number of remote folders over Common Internet File System / Windows Samba (SMB)
WF-FILE-FTP	Waterfall for FTP	Replicates any number of remote folders over FTP
WF-FILE-FTPS	Waterfall for FTPS	Replicates any number of remote folders over secure FTP
WF-FILE-TFTP	Waterfall for TFTP	Replicates any number of remote folders over Trivial FTP
WF-FILE-RCP	Waterfall for RCP	Replicates any number of remote folders over Remote Copy
WF-FILE-RSYN	Waterfall for Rsync	Replicates any number of remote folders over Rsync
WF-FILE-MIR	Waterfall for Folder Mirroring	Mirrors any number of folders local to TX Agent Host
WF-GES1	Waterfall for Bently-Nevada System1	Replicates a single System1 turbine vibration server
WF-HPOV	Waterfall for HP OpenView	Replicates data feeds for a single HP OpenView server
WF-HTTP	Waterfall for Web Servers	Replicates a single web server
WF-ICCP	Waterfall for ICCP	Replicates a single ICCP-protocol slave/server
WF-IEC104	Waterfall for IEC 60870-5-104	Replicates a single IEC 60870-5-104 slave/server
WF-IHIS	Waterfall for GE iHistorian	Replicates a single GE iHistorian server
WF-MBP	Waterfall for Modbus-Plus	Replicates a single Modbus-Plus slave/server
WF-MBP5	Waterfall for Modbus-Plus 5-Pack	Additional 5-pack of Modbus-Plus replication licenses
WF-MDBS	Waterfall for Modbus	Replicates a single Modbus slave/server
WF-MDBS5	Waterfall for Modbus 5-pack	Additional 5-pack of Modbus replication licenses
WF-ESM	Waterfall for Intel ESM SIEM	Replicates a single Intel Enterprise Security Manager SIEM
WF-MSMQ	Waterfall for Microsoft MQ	Replicates a single Microsoft Message-Queue (MQ) publisher
WF-MTAM	Waterfall for Matrikon Alarm Manager	Replicates a single SQL-Server-based Alarm Manager
WF-NETFLOW	Waterfall for Netflow	Replicates any number of Netflow devices
WF-NTP	Waterfall for Network Time Protocol	Replicates a single Network Time Protocol master
WF-OPCA	Waterfall for OPC Alarms & Events	Replicates a single OPC Alarms & Events server
WF-OPCD	Waterfall for OPC Data Acquisition	Replicate a single OPC-DA server
WF-OPCD5	Waterfall for OPC-DA 5-pack	Additional 5-pack of OPC-DA replication licenses
WF-OPCH	Waterfall for OPC Historical Data Access	Replicates a single OPC-HDA server

Product Code	Product Name	Description
WF-OPCUA	Waterfall for OPC Unified Access	Replicates a single OPC-UA server
WF-OPCUA5	Waterfall for OPC-UA 5-Pack	Additional 5-pack of OPC-UA replication licenses
WF-OPSW	Waterfall for OPSWAT	Replicates anti-virus updates for a single OPSWAT server
WF-ORA	Waterfall for Oracle	Replicates a single Oracle relational database server
WF-OSM	Waterfall for GE OSM	Replicates a single GE OSM turbine vibration server
WF-PGR	Waterfall for Postgres Databases	Replicates a single Postgres relational database server
WF-PI	Waterfall for OSIsoft PI	Replicates a single OSIsoft PI Historian server
WF-PIAF	Waterfall for OSIsoft PI Asset Framework	Replicates a single OSIsoft PI Asset Framework server
WF-PIHB	Waterfall for OSIsoft PI Historian Backfill	Activates backfill functionality for a single OSIsoft PI Historian server replication
WF-PWRP	Waterfall for Areva PowerPlex	Replicates a single Areva PowerPlex turbine vibration server
WF-PWRT	Waterfall for Areva PowerTrax	Replicates a single Areva PowerTrax turbine vibration server
WF-RMPT	Waterfall for Remote Printing	Replicates up to 5 remote print servers
WF-RMP5	Waterfall for Remote Printing 5-Pack	Additional 5-pack of remote print servers replicated
WF-RSV	Waterfall for Remote Screen View	Replicates one screen
WF-RSV5	Waterfall for Remote Screen View 5-Pack	Additional 5-pack of remote screen view replication sessions
WF-RTM	Waterfall for Scientech R*Time	Replicates one Scientech R*Time historian server
WF-SAP	Waterfall for SAP	Replicates any number of SAP login sessions. Not supported for Waterfall FLIP™
WF-SMTP	Waterfall for SMTP	Replicates any number of email clients
WF-SNMP	Waterfall for SNMP	Replicates any number of SNMP devices
WF-SNTP	Waterfall for Secure NTP	Replicates a single secure network time protocol master station
WF-SQL	Waterfall for Microsoft SQLServer	Replicates a single Microsoft SQLServer database server
WF-SYSLG	Waterfall for Syslog	Replicates any number of Syslog devices
WF-TCP	Waterfall for TCP	Replicates any number of send-only TCP clients or servers
WF-TIBC	Waterfall for TIBCO	Replicates a single TIBCO publisher
WF-UDP	Waterfall for UDP	Replicates any number of send-only UDP clients
WF-UNIC	Waterfall for CA Unicenter	Replicates any number of Syslog devices to CA Unicenter
WF-UPAV	Waterfall Updater for Anti-Virus	Replicates anti-virus updates to a single vendor's AV server
WF-UPWS	Waterfall Updater for WSUS	Replicates Windows updates to a single WSUS server
WF-WINTS	Waterfall for Siemens WinTS	Replicates a single turbine vibration server
WF-WND	Waterfall for Wonderware	Replicates a single Wonderware server
WF-WNDH	Waterfall for Wonderware Historian	Replicates a single Wonderware or Archestra Historian server
WF-WSMQ	Waterfall for IBM Websphere MQ	Replicates a single WebSphere MQ publisher

Standard Software Features

Not only is Waterfall Security Solutions' collection of industrial server replication software components the world's largest, Waterfall's software components have the richest set of features available in the industry. Waterfall software features and options include:

- **Throughput tuning**, to ensure Wide Area Network connections and other bandwidth-constrained resources are not over-taxed,
- **Multiple transmissions** of all data elements a configurable number of times, to dramatically reduce the probability of a bit error on unidirectional media,
- **Multiple Heartbeat channels**, to for prompt diagnosis and reporting of transmission errors,
- **Archive storage**, so that a configurable quantity of recently-transmitted data is available for examination and potential retransmission,
- **Database backfill user interfaces**, to fill in gaps in historical databases and relational databases due to scheduled downtime of RX agent host equipment,
- **Automatic backfill retransmission**, to reduce manual intervention during security update installation,
- **High availability**, to tolerate any single point of failure,
- **Compact** 1u rack-mount deployment models, to minimize the physical footprint of a Waterfall solution,
- **Split** deployment models, when physical separation is required between sending and receiving gateway components,
- **Customer-supplied** agent hosts, as large as customers require, for maximum scalability and for compatibility with standard corporate purchasing programs,
- **Unlimited** numbers and kinds of server replications over a single set of TX and RX Modules, throughput and latency requirements permitting,
- **Several versions of Linux and Windows** as choices for TX Agent Host and RX Agent Host operating systems,
- **Up to 1 Gbps transfer** capability per TX/RX Module pair,
- **The ability to run agents** anywhere there is sufficient computing capacity, including on TX and RX agent Modules, as well as on virtual machines, industrial application servers and corporate application servers,
- **Status and error logging** via local files, Windows logging, Syslog, SNMP Traps, electronic mail, and writing logs directly into OSISOFT PI historian databases,
- **Filtering and star-name matching** to specify which data resident in the source server should be queried and transmitted across the unidirectional medium,
- **Anti-virus** scanning of all data passing through the unidirectional equipment,
- **Support for many application control / whitelisting** on TX and RX agent hosts, and
- **Active Directory/Domain support** for all hosts running Waterfall software.

These features and many others ensure that projects deploying Waterfall's stronger-than-firewall solutions can meet the most demanding requirements and can be installed quickly and painlessly.

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

USA V: +1 (212) 714-6058
F: +1 (212) 465-3497

International V: +972 3-900-3700
F: +972 3-900-3707

Information: info@waterfall-security.com
Sales: sales@waterfall-security.com