Waterfall® for File Transfers

Cyber Security for File Transfers and Replication

- Hardware-enforced security for absolute protection

- Eliminates vulnerabilities inherent to all firewalls

- Dramatically reduced risk due to online attacks and human errors

- Robust configuration options

- Supports multiple file transfer applications and replication tools

- Simplifies NERC-CIP, ANSSI, NIST, and other regulatory compliance

- Supports Waterfall's FLIP® configuration

- Optional high availability (HA) configurations

- Full Gigabit throughput

Overview

File transfers are a necessity for today's industrial environments, and have traditionally been done through firewalls or by removable media, such as USB sticks; however, both are prone to security issues and put industrial environments at significant risk of being compromised jeopardizing the safety and reliability of the environment.

When permitted outbound through firewalls, a connection is made to an external system with no reliable way of knowing if it has been compromised. If it has, the firewall provides a direct path back to the industrial network regardless of whether the connection is encrypted or not. A similar threat exists using removable media as it is frequently passed from system to system including both on the industrial and business networks. Undetected malware on any one of the systems can propagate to the industrial network using the USB stick as an easy way to hop between networks - including those that are air-gapped.

Waterfall for File Transfers, part of the Waterfall Unidirectional Security Gateway family of products, provides a secure and reliable method of replicating files in real-time without the cyber-security risks that always accompany firewalls and removable media.

Stronger Than Firewalls: Waterfall for File Transfers

The Waterfall solution for file transfer is a combination of hardware and software where, unlike traditional security solutions, the security is enforced through the hardware. Waterfall's solution eliminates the possibility of a compromised business system taking advantage of the network connection back into the industrial environment. By enforcing the security through the hardware, all communications can only be unidirectional from the industrial network to the business network and thus two-way sessions, including any back channel attempts, are completely stopped at the perimeter of the industrial network eliminating externally connected networks as an attack vector. Likewise, stopping the use of removable media in the industrial environment also eliminates that attack vector.
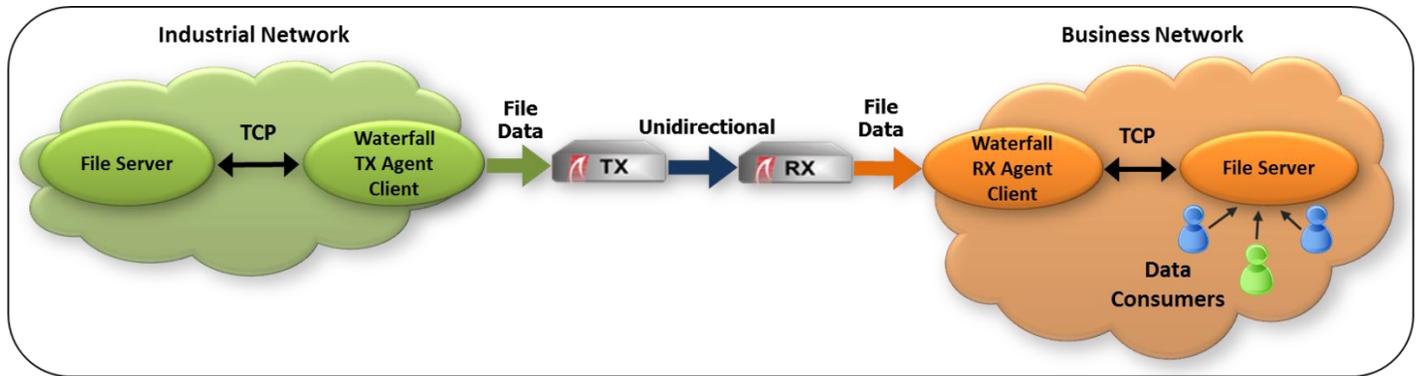
Waterfall for File Transfers Unidirectional Replication

Waterfall's solution for file transfers enables real-time replication of all file types to the business network eliminating the need for unsafe connections into the industrial network putting the safety and reliability of the environment at risk. On the industrial side, Waterfall software is a client of the file server and polls for files, folders, and sub-folders to be replicated. Similarly, on the business network, the Waterfall software is a client of the replica file server where it receives the replicated files through the unidirectional fiber optic link in real-time and populates the replica file server. Bi-directional communications still take place between the original industrial file server and the Waterfall software on the industrial network as well as between the Waterfall software on the business network and the replica file server; however, the unidirectional gateways physically only allow the data to flow in the outbound direction to the business network. Data consumers on the business network have immediate access to the replicated data with complete transparency. This solution supports the standard file transfer and replication tools including: FTP, SFTP (SSH FTP), FTP-S, CIFS, and RCP.

Highlighted Unique Features

Waterfall for File Transfers includes a wide variety of features, such as:

- Real-time replication all file types
- Support for most file transfer and replication tools
- Support for Active and Passive transfer modes
- Support for ASCII and Binary transfer types
- Selective folder and file replication
- Optional configuration to offload data to customer-defined antivirus scanners, such as OPSWAT

- Modular, scalable, and user-serviceable hardware
- Full Gigabit throughput
- Optional high-availability (HA) configurations
- Advanced content policy control with Waterfall's Application Data Control option for data filtering
- File retransmission capabilities
- Periodic file transfer reports

Regulatory Compliance and Certification

No misconfiguration of Unidirectional Gateway 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, ANSSI, 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 the 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

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