

WATERFALL FOR APACHE KAFKA

SECURE REPLICATION OF APACHE KAFKA CLUSTERS

Apache Kafka is a power, unified, real-time, high-throughput and low-latency platform for large scale message and event streaming data feeds. Sending Kafka network traffic through industrial firewalls introduces significant risks, however, as all connections through firewalls introduce attack opportunities. Waterfall for Apache Kafka enables industrial networks to replicate Kafka clusters and event streams to enterprise networks, without risk to safe and continuous operation of industrial networks.

The Waterfall for Apache Kafka connector software securely replicates Kafka clusters and event streams to enterprise networks. Enterprise users access the replicas normally and bidirectionally without risk to the original OT network. The Waterfall for Apache Kafka connector enables businesses to leverage operations data throughout their enterprises without exposing operations networks to cyber risk.

Waterfall for Apache Kafka is simple to install, with user-friendly, web-based configuration and monitoring tools. Comprehensive diagnostics include real-time alarms that alert the user of fault conditions via Syslog, Windows logs, email, SNMP traps, log files, and Waterfall's monitoring console.

BENEFITS OF USING WATERFALL FOR APACHE KAFKA



Secure replication of Apache Kafka clusters for distributed event streaming



Simple deployment – the connector runs entirely in the Unidirectional Gateway with a simple web user interface



Eliminates remote-control cyber attacks and online malware propagation



Facilitates compliance with NERC CIP, NIST 800-82, ANSSI, IEC 62443 and more



Maximum utilization of Kafka real-time data feed features and capabilities



Power



Pipelines



Rail



Water

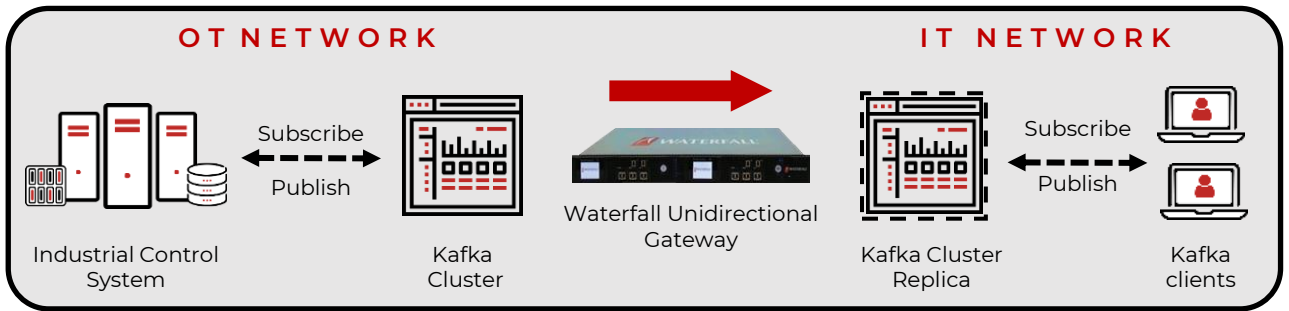


Facilities



Manufacturing

WATERFALL FOR APACHE KAFKA



The Waterfall for Apache Kafka software connector replicates a Kafka cluster located in the OT network, to a replica Kafka cluster located on the IT network. On the OT network, the connector first acts as a consumer, gathering all event streams from the OT Kafka cluster. Then the connector pushes all event streams securely across the unidirectional gateway hardware. Finally, the connector creates a replica Kafka cluster on the IT network, where the cluster acts as a producer and serves up all event streams, with optional topic remapping. Waterfall for Apache Kafka communicates directly with the Kafka cluster, ensuring the faithful, real-time replication of event streams and topics.

Designed specifically for OT network environments, Waterfall for Apache Kafka makes inbound data flows from enterprise business to industrial operations networks physically impossible. Critical operations assets are now absolutely protected against any threats of remote cyber-attack, incoming viruses, or human errors originating on external networks. Users can continue to access and utilize the Apache Kafka information originating in the industrial network while supporting business and operational objectives enterprise-wide, without cyber risk to operations.

FULLY- FEATURED & ROBUST SUPPORT:

- » Real-time, transparent and low-latency replication of large, distributed Apache Kafka event-streams and data sets
- » Optional support for topic remapping in the connector software, with a simple web user interface
- » Supports an unlimited number of event stream producers, consumers, topics, and partitions
- » Fully transparent to Apache Kafka users
- » Standard 1-10Gbps connectivity

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ABOUT WATERFALL

Waterfall Security Solutions' unbreachable OT cybersecurity technologies keep the world running. For more than 15 years, the most important industries and infrastructure have trusted Waterfall to guarantee safe, secure, and reliable operations. The company's growing list of global customers includes national infrastructures, power plants, nuclear generators, onshore and offshore oil and gas facilities, refineries, manufacturing plants, utility companies, and more. Waterfall's patented Unidirectional Gateways and other solutions combine the benefits of impenetrable hardware with unlimited software-based connectivity, enabling 100% safe visibility into industrial operations and automation systems.

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