

Waterfall[®] for OPC-HDA

Cyber Security for OPC Historical Data Access (HDA)



- Hardware-enforced security for absolute protection
- Eliminates vulnerabilities inherent to all firewall deployments
- Dramatically reduced risk due to online attacks and human errors
- Fully transparent to OPC-HDA system users
- Simplifies NERC-CIP, ANSSI, NIST, and other regulatory compliance
- Supports Waterfall's Unidirectional Security Gateway and FLIP[®] configurations
- Optional high availability (HA) configurations

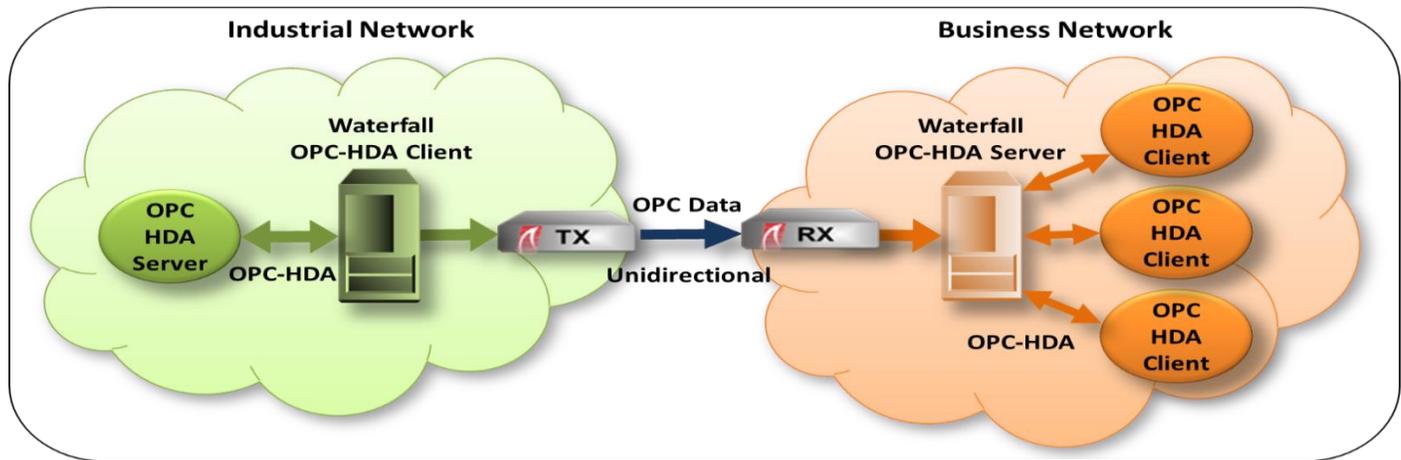
Overview

OPC-HDA clients, such as trending applications or reporting tools, need to retrieve historical data from industrial data sources such as historians, databases, and Remote Terminal Units (RTUs). Often, these clients are found on the business network where they may also frequently use applications that are pathways for compromise, such as Internet web browsing and corporate email systems. Allowing connections into the industrial network to retrieve historical data puts the entire facility at significant risk and jeopardizes the safety and reliability of the environment. Additionally, OPC is an intensely bi-directional communication and, when traversing a firewall, can require opening several ports into the environment, often in the range of thousands to tens of thousands of ports.

OPC Historical Data Access, or HDA, is a common OPC standard for accessing historical process data and is found in many industrial environments today. Waterfall for OPC-HA is part of the Waterfall Unidirectional Security Gateway family of products, provides reliable OPC data replication making it securely available in real-time without the cyber-security risks that always accompany firewalls.

Stronger Than Firewalls: Waterfall for OPC-HDA

Waterfall for OPC-HDA is a combination of hardware and software where, unlike traditional security solutions, the security is enforced through the hardware. Waterfall's solution completely eliminates the possibility of OPC-HDA clients, as well as attackers, on the business side compromising, intentionally or unintentionally, the data source in the industrial environment over the network. By enforcing the security through the hardware, all communications can only be unidirectional from the industrial data sources to the business network and thus two-way sessions are completely stopped at the perimeter of the industrial network eliminating externally connected networks as an attack vector.



OPC-HDA Unidirectional Replication

Waterfall's solution for OPC-HDA enables real-time replication of historical data from the industrial network 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 emulates a true OPC-HDA client that queries the industrial OPC-HDA server for data to be published on the business network. Similarly, on the business network, Waterfall software becomes a true replica of the industrial OPC-HDA server where it receives the OPC data in real-time through the unidirectional fiber optic link. Bi-directional OPC communications still take place between the original industrial OPC-HDA server and the Waterfall software on the industrial network as well as between the OPC-HDA clients and the Waterfall software emulating the OPC-HDA server on the business network; however, the unidirectional gateways physically only allow the flow of the collected OPC data in the outbound direction to the business network. OPC-HDA clients residing on the business network are served by the replica OPC-HDA server in real-time and with complete transparency.

Highlighted Unique Features

Waterfall for OPC-HDA supports a wide variety of features, including:

- Real-time replication of OPC historical process data including all tag changes and updates
- Configurable OPC branches and tags to be replicated
- Compatibility with OPC-DA, OPC-UA, and OPC-A&E
- Support for 'many-to-one' tiered architectures
- 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

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

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