

Waterfall for Oracle Databases

Secure Application Integration through Oracle Database Replication



- Hardware-enforced unidirectional replication of Oracle Database data to a corporate database server
- Eliminates cyber threats and risks from online attacks and human errors
- Fully transparent to Oracle database users
- High Availability and 1Gbps options
- Simplifies NERC-CIP, NRC, NIST, CFATS and other regulatory compliance
- Common Criteria EAL4+ certified. Assessed for security by Idaho National Labs.

Overview

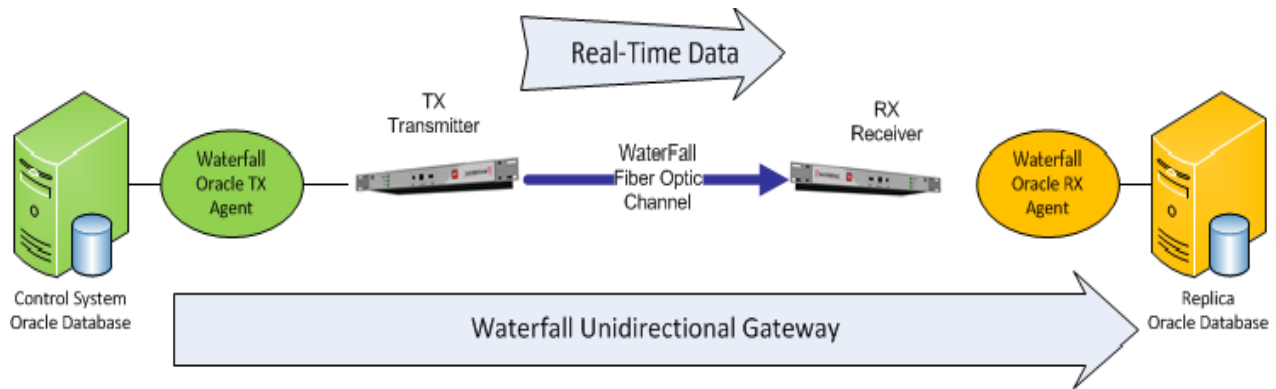
Waterfall for Oracle Databases integrates industrial networks with business networks and business applications without putting the safety and reliability of the industrial networks at risk.

Modern businesses rely on real-time access to real-time, industrial data for functions ranging from predictive maintenance planning and crew scheduling, to just-in-time inventory management and production visibility for end users. Waterfall for Oracle Databases provides access to real-time data, without introducing the threats to safe and reliable operations.

Stronger than Firewalls: Oracle Database Replication

Waterfall for Oracle Databases is part of the Waterfall Unidirectional Gateway family of products. The gateways are a combination of hardware and software. The transmit gateway hardware contains a laser, and the receiving gateway hardware contains a photocell. A fiber-optic cable links the two gateways. As a result, the transmitting gateway can send data to the receiving gateway, but the receiving gateway cannot send anything back. There is no laser in the receiving gateway that could send any signal, and there is no optical receiver in the transmitting gateway that could receive any signal. No online attack originating on an external network can pass back into a protected network through the gateway hardware.

The Oracle database replication software queries an Oracle database on an industrial network for data, sends that data across the Unidirectional Gateway hardware to a business network, and uses the data to populate a replica Oracle database there. Business users and applications use to the replica database exclusively.



The replica database is maintained as a faithful, synchronized replica of the original Oracle database on the industrial network. Users on the business network often report that they are unable to tell the difference between working on the replica database and working on the original industrial database server. In addition, business users are able to issue complex or costly queries against the replica database without fear of slowing down or impairing the operation of critical systems on the industrial control network. Server replication provides access to your industrial data, without the need to replicate your industrial applications.

Highlighted Unique Features

Waterfall for Oracle Databases supports a wide variety of features:

- Real-time replication of Oracle databases
- Complete database replication, or selective replication
- Replication of selected tables in a database
- High availability option
- Data retransmission capability
- Replication of table alternations
- Full support of Blob and Clob replication
- Support for all Oracle value types and attributes
- Optional aggregation of many industrial Oracle databases into a single enterprise database

Regulatory Compliance and Certifications

No misconfiguration of Unidirectional Gateway Oracle replication 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, 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 only unidirectional solution to pass a cyber-security assessment by Idaho National Labs.

Specifications			
Network Interfaces	Dimensions	Temperature	Humidity Range
10/100 Base-T or 1000BaseT	19"/ 482 mm (W), 1U/43.5mm	Operating: 32°-122°F / 0°- 50° C	0-95% at 113°F /45°C
Weight: 3.86 lbs./1.75 Kg	(H), 10"/253 mm (D)	Storage: 14°-158°F / -10°-70° C	Non-condensing

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