

PROTECTING OPC OPERATED ICS ASSETS

Fox OPC Replicator (UA & Classic)

OPC systems have become a prime target for Cyber Attacks, for instance the APT HAVEX (Dragonfly) attacks. Fox DataDiode technology facilitates network separation and provides the highest security level to protect against cyber threats directed at production networks.

Using the Fox OPC Replicator, OPC Servers can be replicated through a Fox DataDiode Hardware unit, enabling corporate (IT) access to real-time and historical data without the possibility to gain access to the operational (OT) network in any way.

Replicating OPC Data with the Fox DataDiode ensures one-way network segregation while still providing access to operational data. Examples include a one-way information flow from devices to monitoring stations, input for historian databases or replication of historical values, so that data can be used for analysis, business logistics for maintenance, planning, modeling etc.

The Fox OPC Replicator features include:

- High-performance transfer of OPC Data
- Replication of OPC Classic (DA / HDA) and OPC UA
- Changes in structure and live data are automatically synchronized
- Historizing live data on the replicated server on the IT-side
- Backfilling of historical data from historians on request.
- Guaranteed one-way network connection.
- Windows and Linux are supported
- The Fox DataDiode is the highest evaluated and certified IT security product in the world.

Prerequisites

- Fox DataDiode solution (One Fox DataDiode and two proxy servers)

Technology

The Fox OPC Replicator uses the OPC Unified Architecture (UA). This innovative architecture enables platform independent exchange of control and data acquisition information. It integrates all the functionality of the individual OPC Classic or UA specifications and enables everything from small devices to large historians to interoperate using the same protocol.

Business Benefits

Production environments are usually contained within a physically restricted security zone. The impact is enormous when availability is compromised, whereas data consuming systems do not necessarily need this level of physical protection.

By replicating OPC data, there is no longer a need for a direct bidirectional network connection. Data can be collected from devices and OPC servers, without exposing critical control systems to digital threats from outside. Its operation enables (IT) systems in the organization to work with real-time and historical data without imposing security risks on production systems.

Information Flow

In order for the Fox DataDiode to replicate OPC data, specially developed OPC Replicator software is used. To enable communication, proxy servers are used to provide access on each side of the Fox DataDiode. The Proxy server on the production network gathers information from live OPC systems. The Proxy server on the IT (Corporate) side provides real-time and historical data.

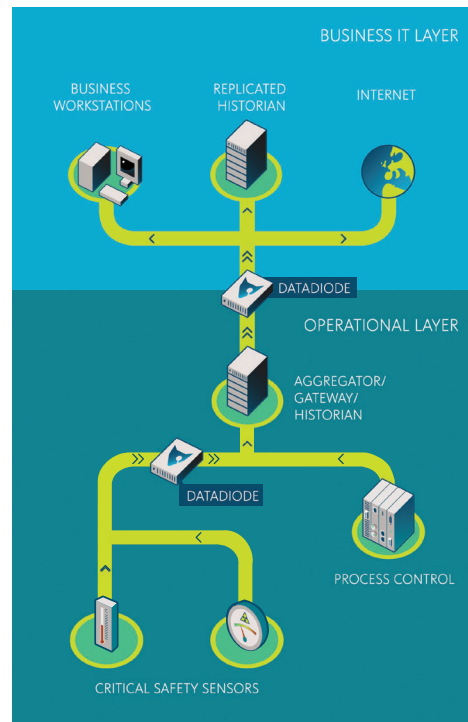
Source Server structure is automatically discovered and analyzed for replication. Replication of live data can be configured to be selective, avoiding that all data is replicated to the IT network.

The Fox OPC Replicator solution supports replication for OPC Classic Servers and Historians or multiple Devices and Servers exposing OPC UA.



Fox-IT prevents, solves and mitigates the most serious threats as a result of cyber-attacks, fraud and data breaches with innovative solutions for government, defense, law enforcement, critical infrastructure, banking, and commercial enterprise clients worldwide. Our approach combines human intelligence and technology into innovative solutions that ensure a more secure society. We develop custom and packaged solutions that maintain the security of sensitive government systems, protect industrial control networks, defend online banking systems, and secure highly confidential data and networks.

042-011-EN



for a more secure society