

PROTECTING MODBUS OPERATED ICS ASSETS

Fox DataDiode Modbus Replicator

Modbus data can be transparently replicated through the Fox DataDiode. In this way, the integrity of devices in critical production environments is protected.

By using this solution, data from devices using the Modbus protocol is replicated from within an industrial control environment to another network. This way, data is unidirectionally transferred between either devices connected by a serial link or devices connected to Ethernet networks. Examples include a one-way information flow from devices to monitoring stations or as input for historian databases.

The Fox DataDiode is the highest certified IT security product in the world. Using the Fox DataDiode Modbus Replicator one can establish the most secure and safe production facility possible.



DATADIODE
BY FOX IT

The Fox DataDiode Modbus Replicator features include:

- High-performance transfer of data
- Autodiscovery of data to be replicated
- Replicate multiple channels of Modbus devices using one setup
- Provides for a true one-way connection by using the Fox DataDiode that has numerous certifications
- Works with Modbus capable devices, using either Modbus RTU/ASCII over serial links (RS232/422/485) or Modbus TCP over Ethernet networks

Prerequisites:

- Fox DataDiode solution (consisting of two proxy servers and one hardware Fox DataDiode)

Business Benefits

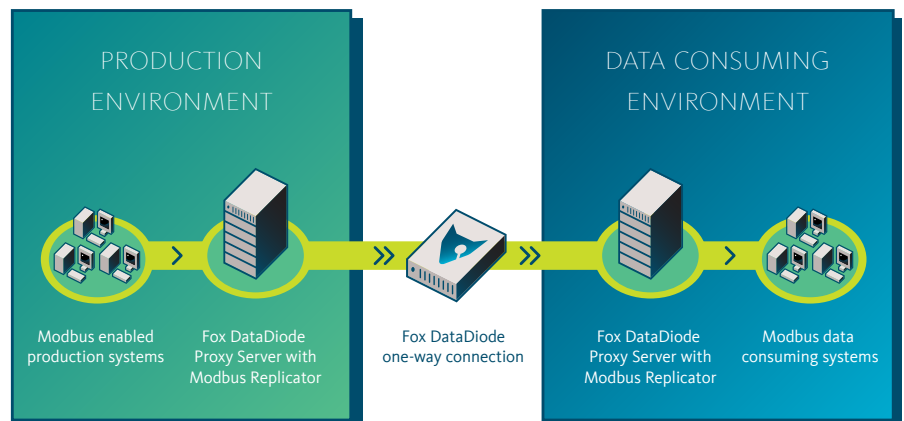
Production environments are usually contained in a high physical security zone and the impact is high when availability is harmed, whereas data consuming systems do not inherently need this level of physical protection.

By replicating data from devices using Modbus in production environments to data consuming systems using a Fox DataDiode to make a one-way connection, one no longer has to make a direct bidirectional network connection. This way, data can be collected from devices, without exposing control systems to digital threats from the outside. Its use enables systems in the organization to work with data from devices without imposing a risk on those devices.

Information Flow

To enable the Fox DataDiode to replicate Modbus data, the Modbus Replicator software is used. This software runs on both proxy servers. It reads data from devices in the production environment, sends it through the Fox DataDiode to the other environment and the Modbus Replicator on that side makes it available for the data consuming systems.

To know what data should be replicated, the software can either read a configuration file, or use an autodiscovery mechanism to detect data required data flows.



Next steps

A wealth of information is available on the different applications and scenarios for the Fox DataDiode. The DataDiode is delivered through a global network of partners who are knowledgeable in handling confidential information. For more information, including partner details, please visit www.datadiode.eu.

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.

for a more secure society