

Matrikon® OPC to UA Adapter (OPCtoUA MDBA)

Version 1.0

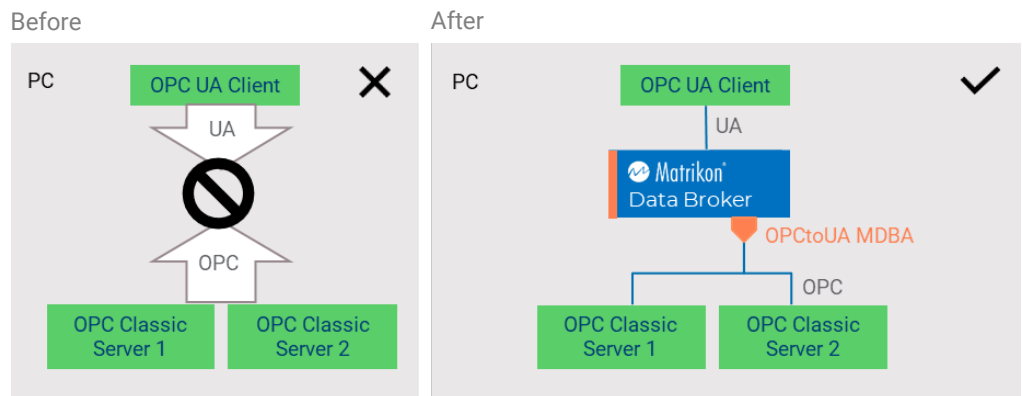
Modernize your OT infrastructure while preserving your legacy investments. The OPC to UA Matrikon Data Broker Adapter (OPCtoUA MDBA) enables communication between OPC UA clients and OPC Classic Servers.

Overview

In today's rapidly evolving industrial landscape, many organizations face the challenge of integrating legacy OPC Classic systems with modern OPC UA technologies. The Matrikon Data Broker OPC to UA Adapter (OPCtoUA MDBA) is your solution to this critical interoperability challenge.

The OPCtoUA MDBA makes your existing OPC Classic servers seamlessly accessible to OPC UA clients, providing:

- Real-time data access from multiple OPC Classic servers.
- Enhanced security features to protect your OPC Classic data.
- Selective exposure of OPC items to OPC UA clients.
- Write permission controls for added security.



Built on the powerful Matrikon Data Broker (MDB) platform, OPCtoUA MDBA delivers high performance, scalability, and advanced functionality for enterprise-wide OT data management.

Key Features at-a-glance:

- Native OPC communication with OPC Classic servers.
- Selective OPC Classic item exposure to OPC UA clients.*
- Enhanced write permission controls.*
- DCOM elimination for remote OPC servers.
- Support for DCOM if it is required in restricted environments.*
- Ability to access additional MDB functionality.

* Available with OPCtoUA MDBA *Plus* license

The OPCtoUA MDBA is the right tool for phased migration and digitalization projects where OPC Classic and OPC UA integration is a must!

Use Cases

Convert OPC Classic to OPC UA

Communicate natively with one or more OPC Classic servers on one side while selectively exposing all or part of their address space for use by OPC UA Clients on the other side.

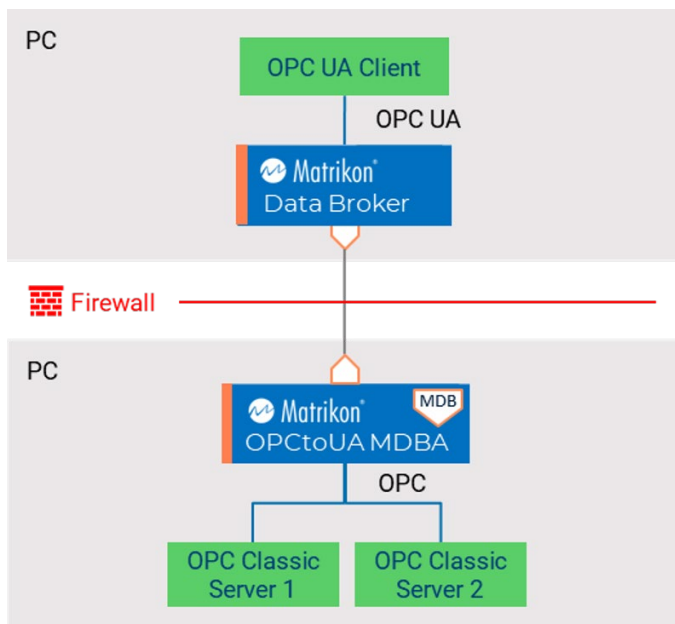
Enhance OPC item write security

The OPCtoUA MDBA's write-permission control allows users to restrict OPC UA client writes to underlying OPC Classic server items, even if the underlying OPC Servers are configured to allow writes to those items.

Eliminate remote OPC Server DCOM use

Use OPCtoUA MDBAs at remote locations, where OPC servers reside, to ensure all communications to and from those remote OPC servers happens over OPC UA instead of using DCOM. Using this architecture:

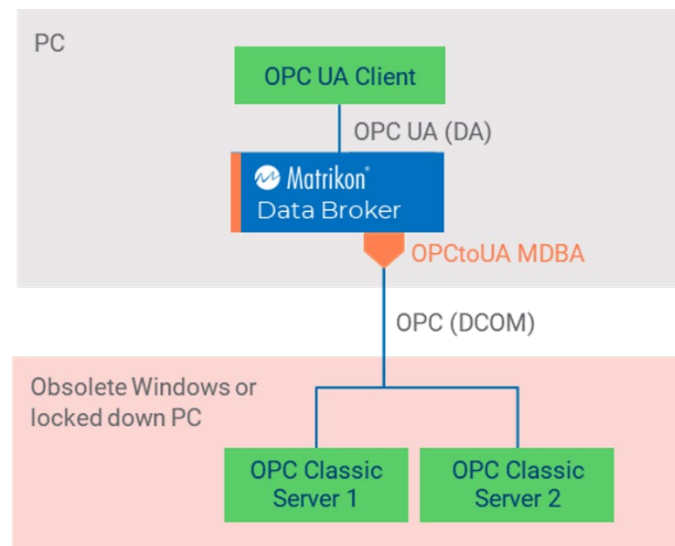
- Makes data from remote OPC servers only available to 3rd party OPC UA clients via MDB.
- Eliminates the need for DCOM communications with the remote OPC servers, a security best practice.
- Is firewall friendly because it only requires a single IP port if UA ReverseConnect is not used.



Access hard-to-reach OPC Servers

OPCtoUA MDBAs can optionally be used to enable OPC UA communications with remote OPC Classic servers running on:

- Locked-down PCs where 3rd party applications cannot be installed.
- PCs using obsolete Windows Operating System versions, such as Windows XP, which are not supported by modern applications.



In these scenarios, where other solutions are not feasible, the OPCtoUA MDBA optionally supports the use of DCOM to connect to the remote OPC servers, enabling OPC UA clients to also communicate with them via MDB.

Limit OPC Item exposure

Define a static list of OPC Items to control which items in the OPC Classic address space are exposed via the OPC UA interface.

Use Information Modeling functionality

Leverage MDB functionality to map OPC Classic items into OPC UA objects to better group and contextualize OT data for use throughout the shop floor and the enterprise.

Solution Benefits and Advantages

Extend OPC Classic Components' Functional Life

Modernize your existing infrastructure by incorporating the latest OPC UA technologies into your OT architectures while continuing to work with existing systems. OPCtoUA MDBA integrates older OPC Classic components, that still provide required functionality in your production environment, so they can be used with newer, OPC UA-based technologies.

Reduce OT Data Exposure

Use the OPCtoUA MDBA functionality to control what OT data in OPC Classic servers is exposed to the rest of the enterprise via OPC UA. This functionality allows you to make only selected OPC Classic items available via the OPC UA interface.

Control OPC Item Writes

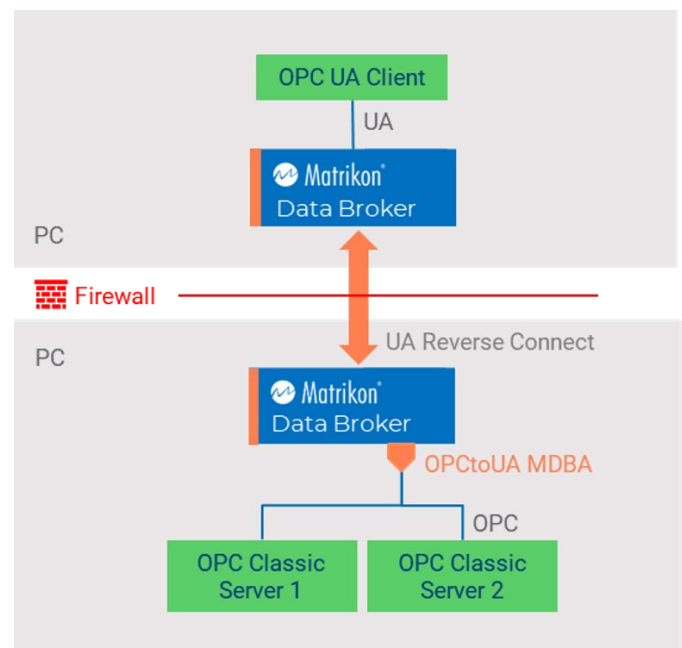
Use the OPCtoUA MDBA to maximize the security of your OPC Classic items via an added layer of security, which gives you full control of whether write-enabled OPC Classic items can be written to by 3rd party OPC UA clients. Effectively making the OPC UA interaction read-only. Where desired, this functionality prevents accidental and malicious writes to OPC classic items that need to have writes enabled but should not be written to by external OPC UA clients.

Maximize OT Data Privacy

Maximize the confidentiality and integrity of your OT data by leveraging the powerful security features built into OPC UA and made available to your OPC Classic servers via the OPCtoUA MDBA.

Enable Secure Cross-Firewall Connections

Leverage MDB Reverse Connect functionality to enable your OPC Classic servers to share data with OPC UA clients across OT firewalls without opening internal firewall ports.



Product Specifications

Licensing Options

Feature – License Mapping	Standard	Plus
Connect to OPC Classic servers installed on the same system as the OPCtoUA MDBA	✓	✓
Browse the entire address space of the OPC Classic server as presented by the server	✓	✓
Set user rights on UA nodes as represented in underlying OPC Classic items	✓	✓
Wild card-based OPC node-name filtering for easy import control	✓	✓
Connect to Classic OPC Servers in remote locations using DCOM		✓
Build the Adapter UA Address Space using an exported list of OPC Classic items		✓
Limit OPC UA access to read-only for all OPC items from a specific OPC Classic server, even if the OPC items have read and write permissions.		✓

System Requirements

Hardware Requirements

- RAM: 8GB
- CPU: 4-core i5 or later
- Storage: 1GB free space minimum

Software Requirements

- MDB v2.3.2
- Microsoft Visual C++ 2015-2022 Runtime
(Installed by the Adapter installation script)

Supported Operating Systems

- Microsoft Windows 10 (64-bit)
- Microsoft Windows 11
- Microsoft Windows Server 2016
- Microsoft Windows Server 2019
- Microsoft Windows Server 2022

Supported Standards

OPC Specifications

- OPC Data Access Specification 2.05a
- OPC Data Access Specification 3.00
- OPC UA Specification 1.04

Next Steps

Start Your Digital Transformation Today!

- Download a free 30-day trial of OPCtoUA MDBA at www.matrikonopc.com/opctoua
- Contact our sales team for a personalized demo at sales@matrikonopc.com
- Learn more about the MDB ecosystem at www.matrikonopc.com/mdb