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Special Documentation
Proline Promag 800

OPC UA Connectivity Server

Endress+Hauser
People for Process Automation

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1 General information

1.1 Purpose of the document

This document is part of the Operating Instructions and serves as a reference for the installation and commissioning of the OPC UA Connectivity Server.

1.2 Conventions used in this manual

No special PC knowledge is required to put the OPC UA Connectivity Server into operation.

1.3 Information and use of the OPC UA Connectivity Server

The OPC UA Connectivity Server enables a data connection to be established to selected Endress+Hauser products.

Information is provided in a structured format via OPC UA. The OPC UA Connectivity Server is freeware.

1.4 Supported operating systems

- Windows 10 (32 bit and 64 bit)
- Windows server 2016 (64 bit)

1.5 System requirements

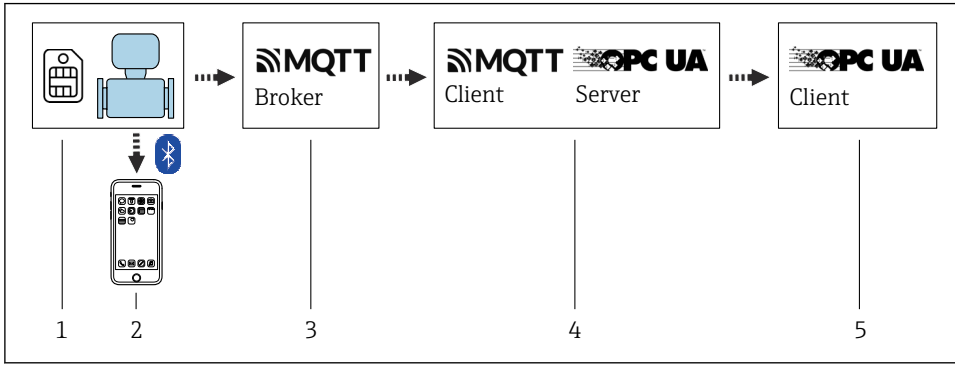
The system requirements are in line with those of the Windows operating system. The following system requirements are recommended:

- Processor:
  1 GHz or faster
- RAM:
  At least 4 GB
- Free hard disk memory:
  At least 1 GB

1.6 Supported devices

Promag 800 with cellular radio module

1.7 Architecture



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1 SIM card, provided by the customer
2 SmartBlue App via Bluetooth
3 MQTT broker, provided by the customer
4 OPC UA Connectivity Server, provided by Endress+Hauser
5 OPC UA client, provided by the customer

2 Installation

2.1 Introduction

The Installation Manager manages the installation of all OPC UA components contained in the installation package.

Administrator rights are needed to perform the installation.

2.2 Installation considerations

Follow the instructions provided during the installation process.
- Select **Next >** (or Yes) to continue the installation.
- Select **< Back** to go back to the previous step.
- Select **Cancel** (or No) to cancel the installation.

2.3 Steps to install the OPC UA Connectivity Server

Administrator rights are required to install and configure the OPC UA Connectivity Server.

1. Start the **OPC UA Connectivity Server.exe**.
2. Select the language.

3. Confirm the licensing agreement (EULA) for Endress+Hauser and third-party components and the installation path.
   ↳ A system check is performed.
   The communication packages to be installed are displayed.
   Overview of the components to be installed.
4. Start the installation process.
   ↳ The installation is completed.

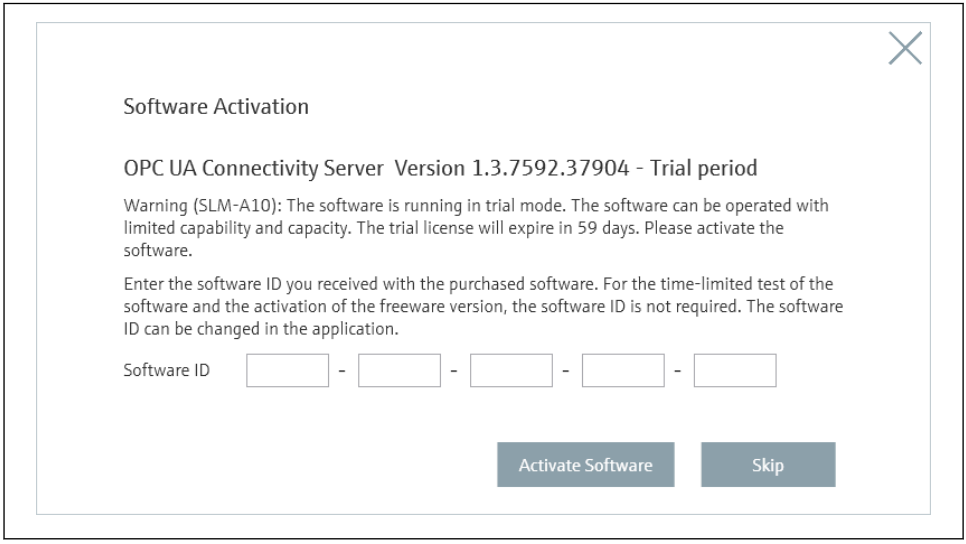
3 Software licensing

3.1 License activation

A connection to the Internet is required to activate the license.

Administrator rights are required under Windows.

When the OPC UA Connectivity Server is started, a prompt to activate the software license is displayed automatically. During the trial period, the OPC UA Connectivity Server can be used without registering by selecting the **Skip** option; after the trial period, the software must first be activated before the OPC UA Connectivity Server can be used. The software can be activated directly by selecting **Activate Software**.



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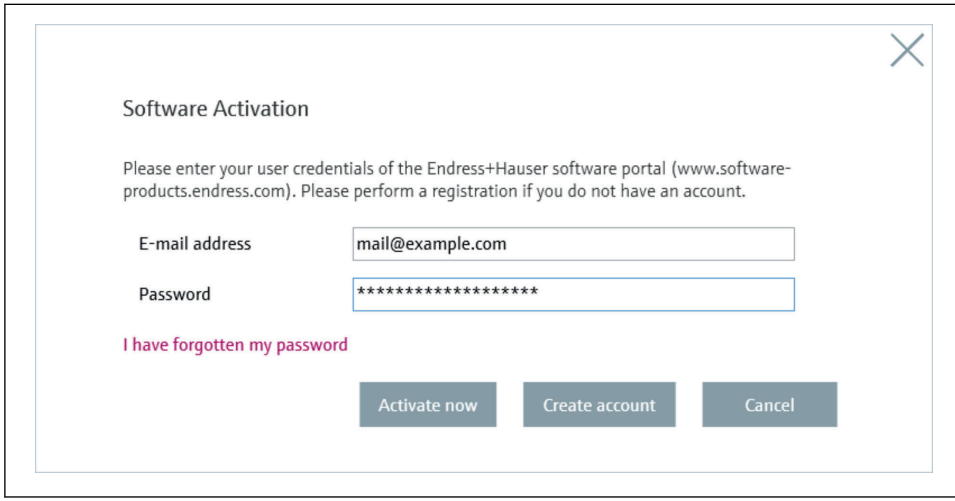
It is not necessary to enter the software ID to activate the freeware version.

A valid account in the Endress+Hauser software portal is required for the activation. You can create an account by clicking the **Create Account** button.

The software is activated online with the **Activate** button.



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Changes to license management must be accepted by restarting the **OPC UA Connectivity Server** service. This service can be found under **Computer Management** --> **Services**.

3.2 License information

Information about the licensing status can be accessed under **Help --> License Information**. It is also possible to activate the software here.

Users who already have an account at **www.portal.endress.com** and are registered with a specific e-mail address can start synchronization between the user account and **https://www.software-products.endress.com** with the same address.

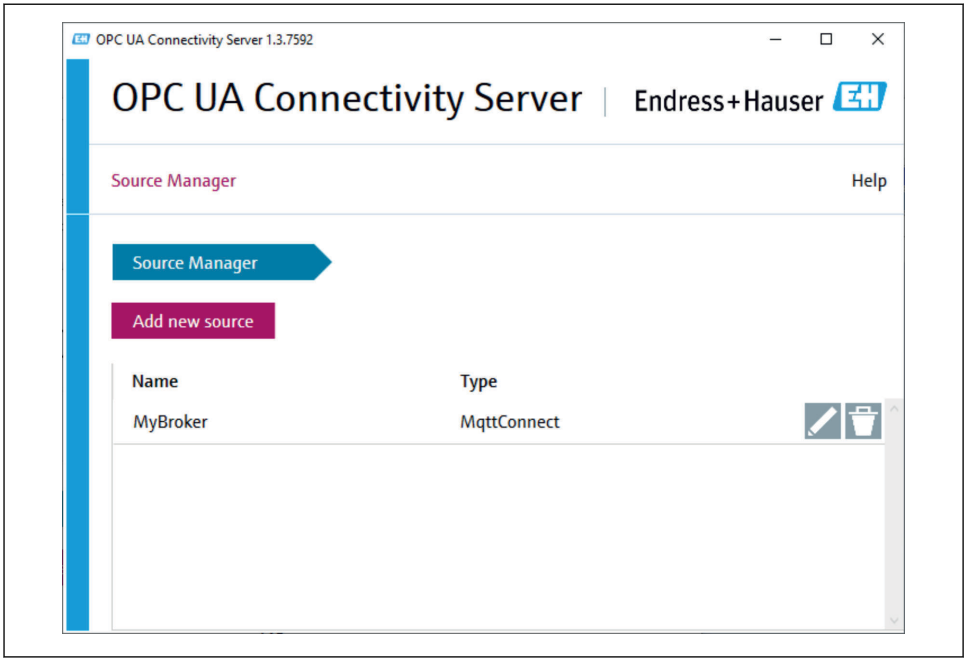
Register with an e-mail address that is already known and the corresponding password.

4 Configuration of the OPC UA Connectivity Server

Administrator rights are required under Windows.

4.1 Starting the configuration

The OPC UA Connectivity Server is configured from the start screen using wizards.



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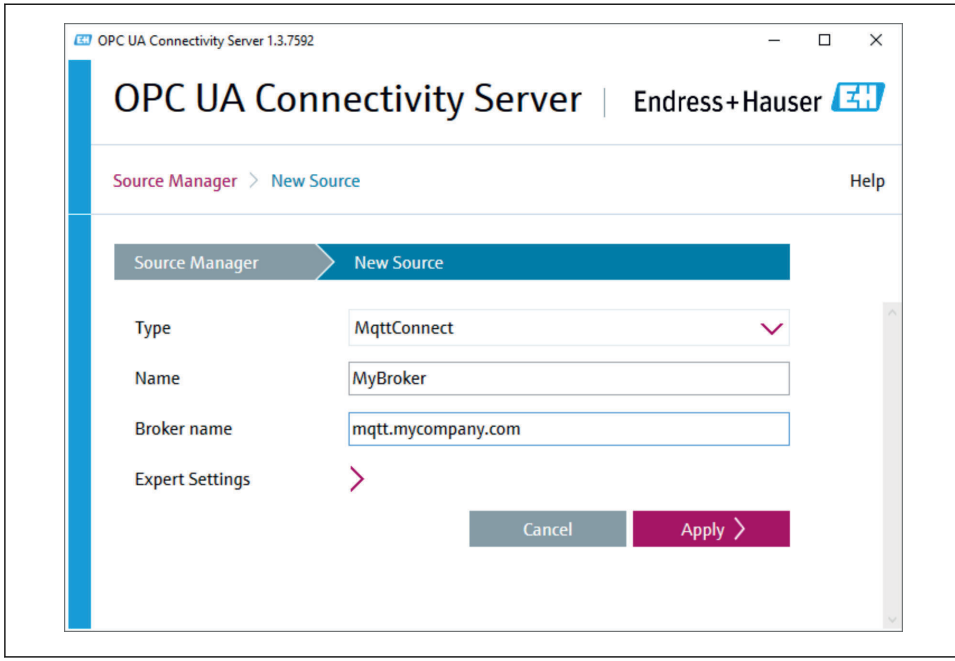
- **Help** → 🖹 11
- delete data sources created
- edit data sources created
- **Add New Source**, generate a new data source connection

Once changes have been made to the data source, the **OPC UA Connectivity Server** service must be restarted to accept the changes. This service can be found under **Computer Management** --> **Services**.

4.2 Adding new data sources

To add a new data source, click **Add New Source**. The new data source is created in a wizard.



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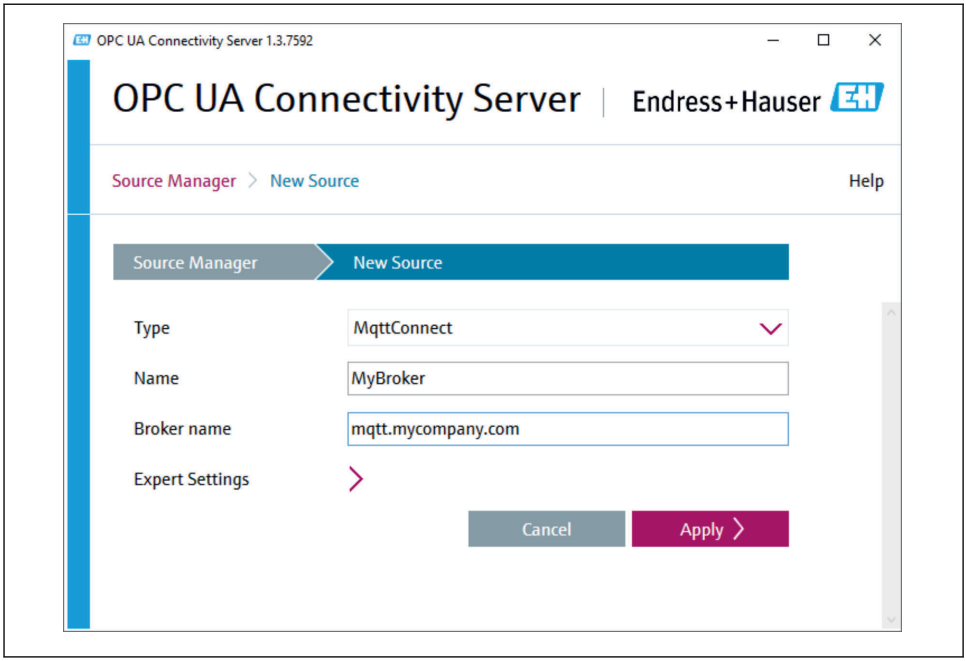
1. Select the **Type** of source.
2. Assign a **Broker Name**.
3. If necessary, make additional **Expert Settings**.
4. Select **Apply** to create the new data source.
   ↳ The new data source that has been created is displayed in the overview.
5. Restart the **OPC UA Connectivity Server** service. (**Computer Management --> Services**)

4.3 Expert settings

Existing data sources can be edited by clicking the pen symbol .

Interface-specific settings can be made by clicking the **Expert Settings** drop-down menu.



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1. Change the data.
2. Select **Apply** to confirm the changes.
   ↳ The modified data source is displayed in the overview.
3. Restart the **OPC UA Connectivity Server**.

4.4 Configuration of expert settings

Port

Port of the MQTT broker

Ensure that the firewall allows access to the port.

Timeout

Repeat interval to re-establish the broker connection.

User Name

User name for the authentication of the user by the MQTT broker.

Password

Password for the authentication of the user by the MQTT broker.

TLS Encryption

Activation of TLS encryption.

PFX File

The PFX file contains the client key in addition to the client certificate. Therefore, access to the PFX file is password-protected. The password is assigned when the PFX file is generated.

CA File

CA certificate for the verification of the MQTT broker.

The broker CA certificate must be installed on the OPC UA Connectivity Server host system under **System --> Trusted Root Certification Authorities**. Double-click the CA file to start the Windows certificate import wizard.

5 Settings

The server settings can be accessed via **Help** in the menu bar.

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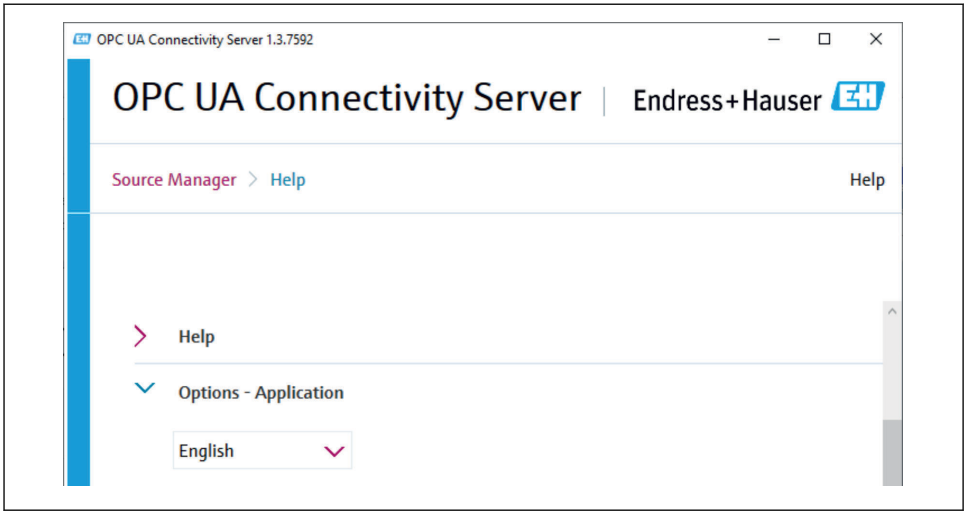
5.1 Language settings

The language can be changed under **Help --> Options - Application**. Users can choose either English or German as the language.



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5.2 Software licensing

Information about the licensing status can be accessed under **Help --> License Information**. The software can be licensed via the **Activate Software** button.

6 OPC UA client

OPC UA clients enable access to data of the OPC UA Connectivity Server.

6.1 OPC UA client configuration

1. Install an OPC UA client and start the application
2. Enter the server endpoint URL: «opc.tcp://**Host:Port**/Server»
   - ↳ **Host**
     DNS name or IP address of the host system, **localhost** for OPC UA clients installed locally
     Port
     Port of the OPC UA Connectivity Server; the default port is **62541**. Ensure that the firewall allows access to the port.
     Example: opc.tcp://**localhost:62541**/Server
3. Connect the client to the server.
4. Search the address tree of the server.

www.addresses.endress.com

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