

Publish Tags in OPCUA

1. Introduction

The goal of the OPC UA server running on Flexy, when enabled, is to serve the list of eWON Tags from one or more groups to an OPC UA compliant client.

This document describes how to use the OPC UA server functionality on Flexy, how to configure it and the limitations thereof.

- Note -

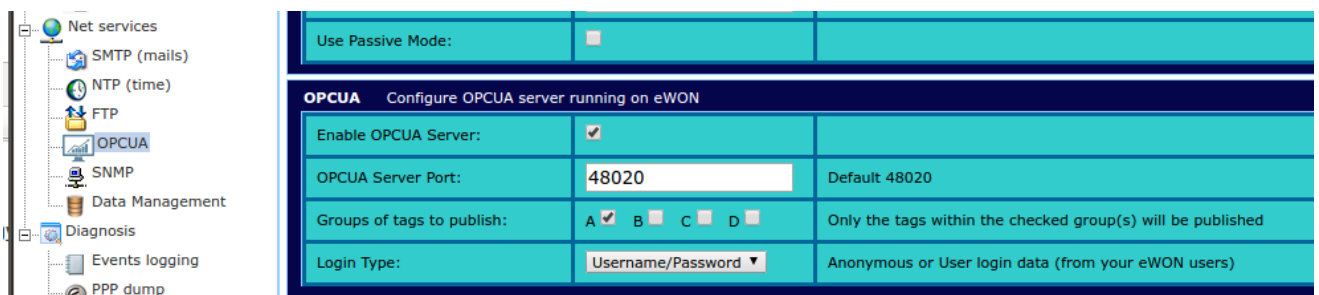
The OPC UA server functionality is introduced in firmware release 11.2s0

2. Configuration

2.1. Configuring the OPC UA server

To enable the functionality, browse to:

Configuration > System Setup > General > Net services > OPC UA



Multiple parameters are listed:

- Check/uncheck the “Enable OPCUA server” to enable/disable the server.
- Select the groups of tags to publish. Multiple choices are allowed. These groups refer to the Instant Value property which is located in the Tag Visibility from the Tag Setup panel.
- Choose the Login Type (cf infra)
- Choose the port (default is 48020)
The server listens on all network interfaces (LAN, WAN and VPN).

Click on “Update” to validate the parameters.

The service will be restarted if needed and new parameters will be applied. It is **not** necessary to restart any service or reboot the eWON after changing any OPC UA parameter.

2.2. Configuring the Tags for the OPC UA server

By creating/modifying the eWON Tags as usual, you will be able to configure the OCP UA side of the tags.

| Identification | | | |
|--|----------------------------------|---|--|
| Tag Name: | Tag01 | Page: | Default ▼ |
| Tag Description: | | | |
| I/O Server Setup | | | |
| Server Name: | MEM ▼ | Topic Name: | ▼ |
| Address: | | | No Help |
| Type: | Floating point ▼ | Force Read Only: | <input type="checkbox"/> |
| eWON value = IO Server Value * 1 | | + 0 | |
| Tag Visibility | | | |
| Global settings | | | |
| Published value: | eWON value * 1 | + 0 | REMARK: Value published is unsigned 16Bits for ModbusTCP and signed 32 bits for SNMP |
| Modbus TCP | <input type="checkbox"/> Enabled | | |
| Register | 1 | <input type="checkbox"/> Use 32-bit format (not available for booleans) | |
| SNMP | <input type="checkbox"/> Enabled | | |
| OID | 1 | Value published: .1.3.6.1.4.1.8284.2.1.3.1.11.1.4.OID (Max value 32767) | |
| Instant Value | | | |
| <input checked="" type="checkbox"/> Group A <input type="checkbox"/> Group B <input type="checkbox"/> Group C <input type="checkbox"/> Group D | | | |

Choose an Instant Value Group that matches the selected group to publish (cf supra, in the Configuration panel).

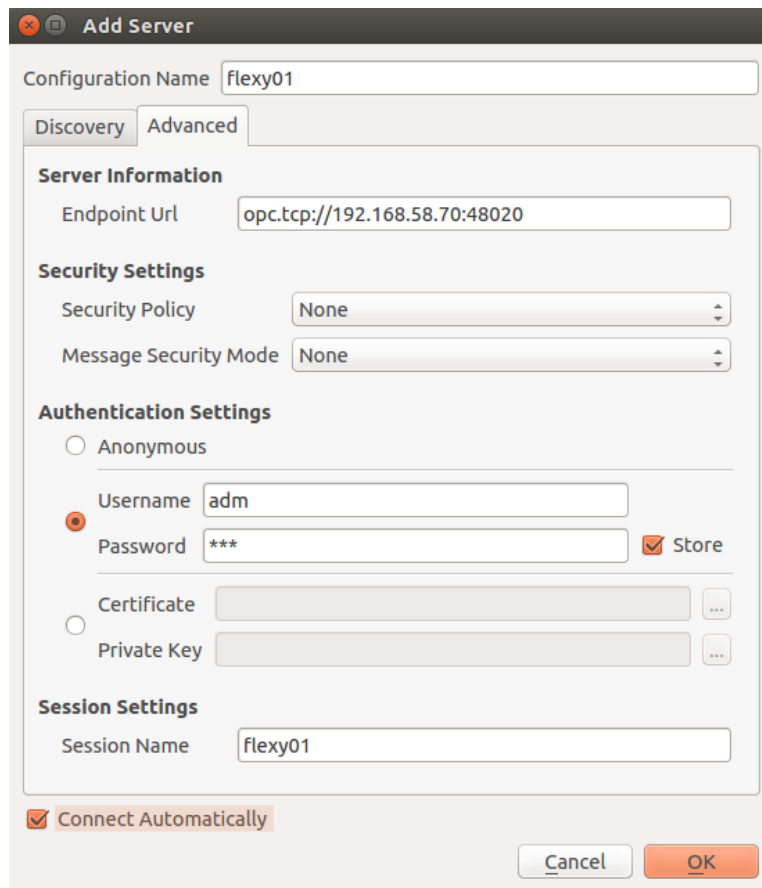
2.3. Configuring an OPC UA client

- Note -

Here we show the configuration for UaExpert from Unified Automation¹.

To get the OPC UA up&running, follow the steps:

- Launch UaExpert
- Click on Server > Add Server
- Click on Advanced
- Fill in the fields according to your configuration:

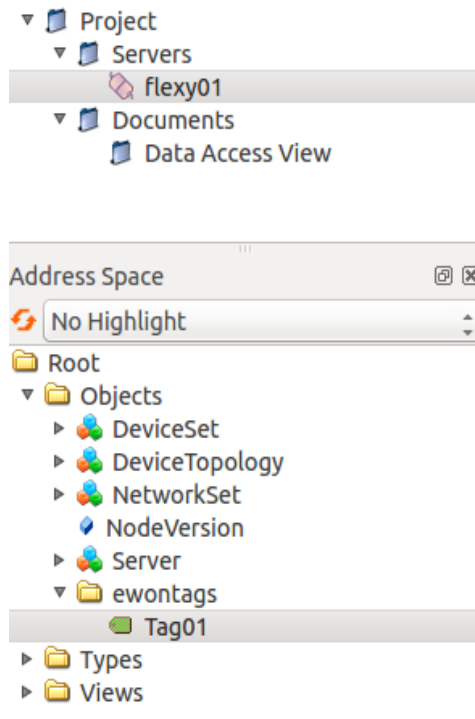


The endpoint URL should be in the form "opc.tcp://EWON_IP_ADDRESS:PORT"

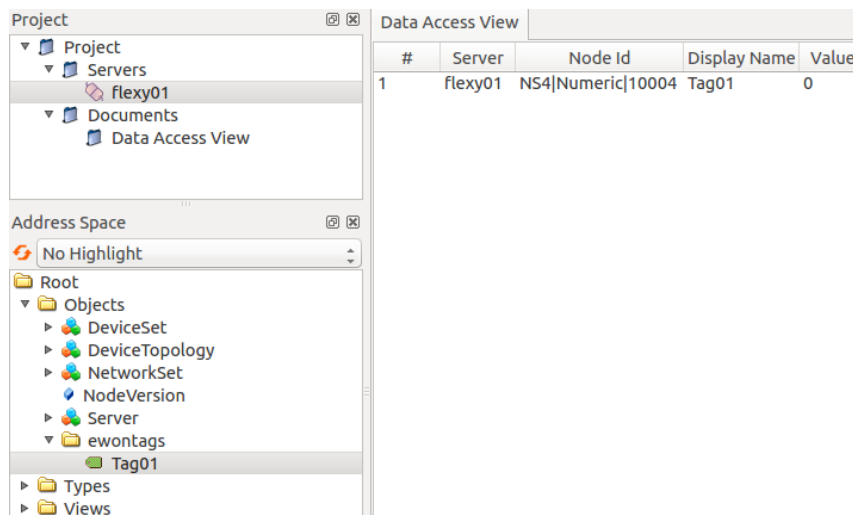
- Save the server configuration with File > Save.

¹ <https://www.unified-automation.com/products/development-tools/uaexpert.html>

Choose the server in the Project>Servers list
The published tags are under Root > Objects > ewontags



Drag and drop the Tags to monitor from the tag list to the Data Access View panel.
The values are refreshed automatically



The list in Root > Objects > ewontags is automatically updated when a tag is added or removed in the groups of published tags in the eWON configuration.
The value (or type) of a published tag is automatically updated in the Data Access View when it changes.



3. Compatibilities

3.1. Tested clients

The OPC UA server has been tested with three concurrent connections.

4. Authentication

Two modes of authentication are supported:

4.1.1. Anonymous:

Everyone with an access to any network interface of the Flexy will be able to see and manipulate the Tags.

4.1.2. Username + password:

This mode accepts the users defined on the eWON. Only users that have the permission "FORCE OUTPUT" will be able to see and manipulate the tags

5. Recommendations

5.1. Timezone

The OPC UA server sends the data with an UTC timestamp. It is recommended to set the time of your Flexy to UTC.

5.2. Security

Be aware that the OPC UA service can be accessed from all network interfaces. Using "Anonymous" authentication is not recommended if your eWON is accessible from an untrusted network.

Revision

Revision History

| Revision Level | Date | Description |
|----------------|------------|-------------------|
| 1.0 | 10/06/2016 | Original document |

Document build number: 9

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