Guide for configuring and working with the OPC DA Wrapper integration module

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1 Introduction into the Guide for configuring and working with the Opc DA integration module

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1.1 Purpose of the document

The *Guide for configuring and working with the Opc Da* integration module is a reference and information manual and is intended for configuration specialists and operators of the **Opc Da** integration module.

The Guide has the following information:

1. General information about the **Opc Da** integration module.
2. Adding the **Opc Da** integration module.
3. Configuring the **Opc Da** integration module.
4. Working with the **Opc Da** integration module.

1.2 General information about the Opc Da integration module

The **Opc Da** integration module is part of *ACFA* and is used to connect devices that use it for operation. OPC is a set of software technologies that provide a common interface for controlling various devices and exchanging data. OPC DA (Data Access) is a standard that describes a set of functions for real-time data exchange with programmable logic controllers (PLC), distributed control systems (DCS), human-machine interfaces (HMI), numerical control (NC), and other devices.

2 Supported software and licensing of the Opc Da integration module

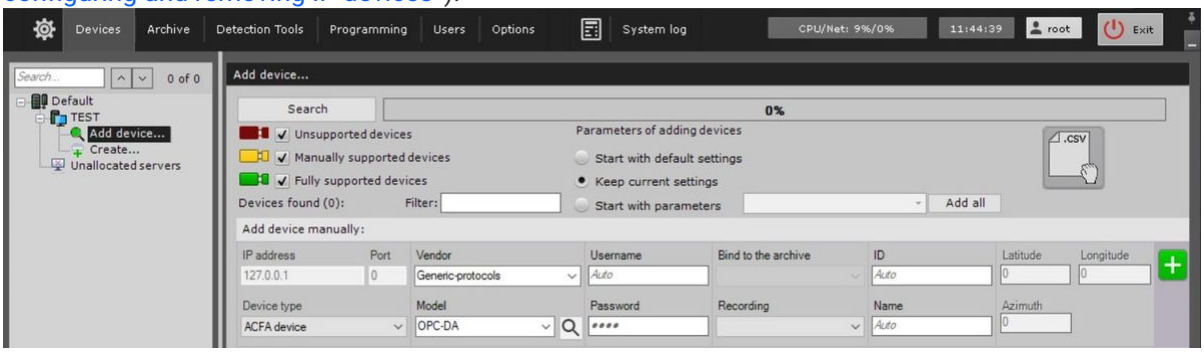
Name of the integration module	OPC DA Wrapper (see page 4)
Functionality	Module can transfer data in real time and integrate systems with different interfaces, providing centralized monitoring and process control
Licensing	Per each variable (**ACFASensor**)
Type of integration	**OPC**
ACFA version	1.0[1]

1 https://docs.axxonsoft.com/confluence/display/AxACFA10EN/ACFA+1.0+Release+Notes

3 Adding the Opc Da integration module

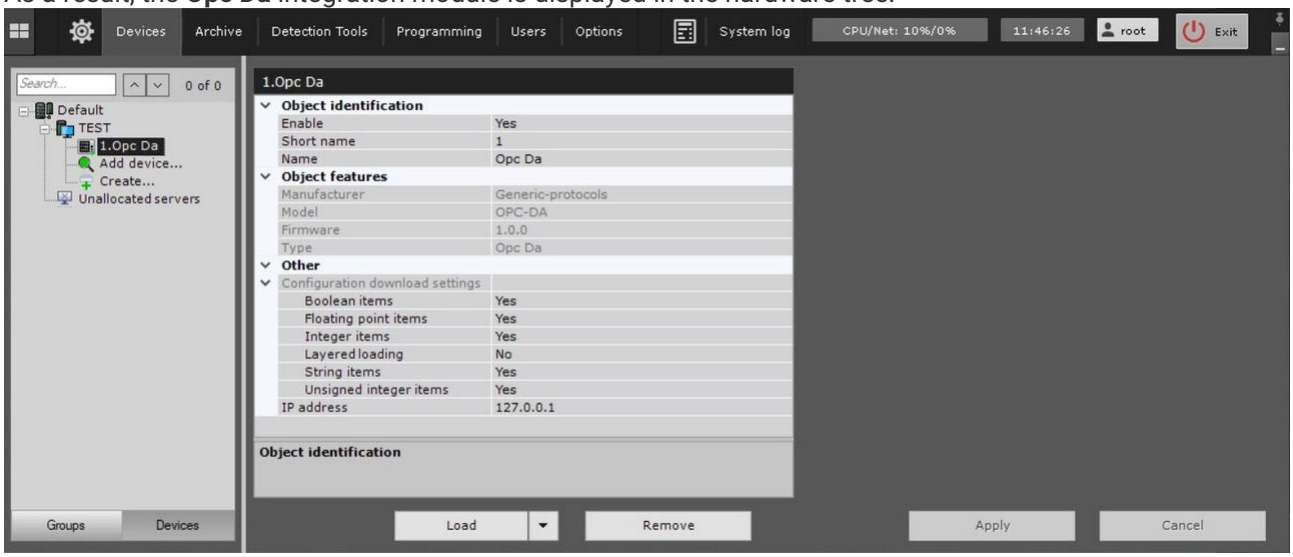
To add the **Opc Da** integration module to the system, do the following:

1. Add the device to the system manually using the IP Device Discovery Wizard (see Searching, adding, configuring and removing IP devices[2]).



2. From the **Device type** drop-down list, select the **ACFA device**.
3. From the **Vendor** drop-down list, select **Generic-protocols**.
4. From the **Model** drop-down list, select **OPC-DA**.
5. Click the  button.

As a result, the **Opc Da** integration module is displayed in the hardware tree.

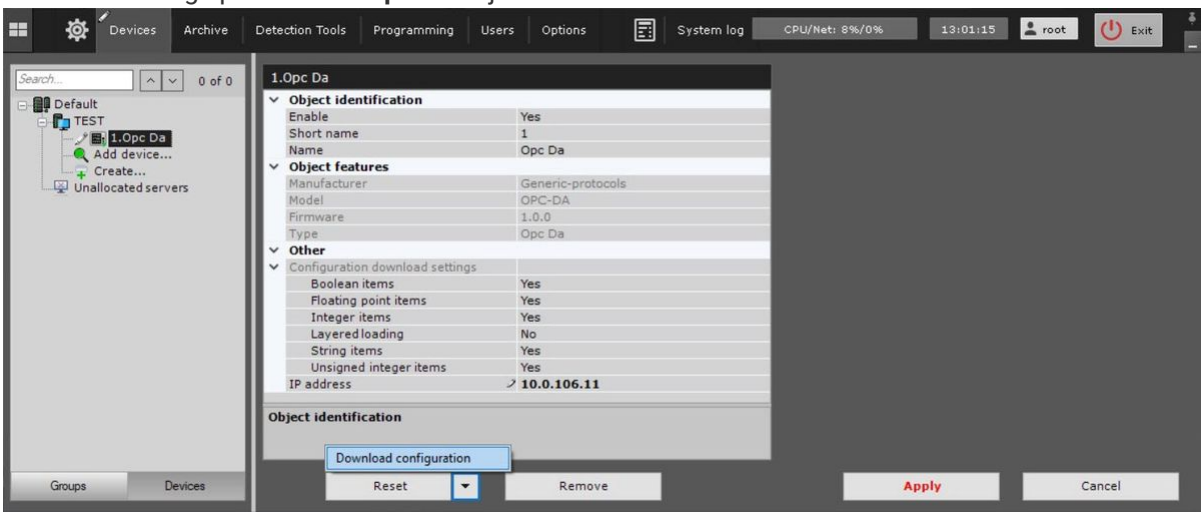


2 https://docs.axxonsoft.com/confluence/spaces/one20en/pages/246484249/Searching+adding+configuring+and+removing+IP+devices

4 Configuring the Opc Da integration module

To configure the **Opc Da** integration module, do the following:

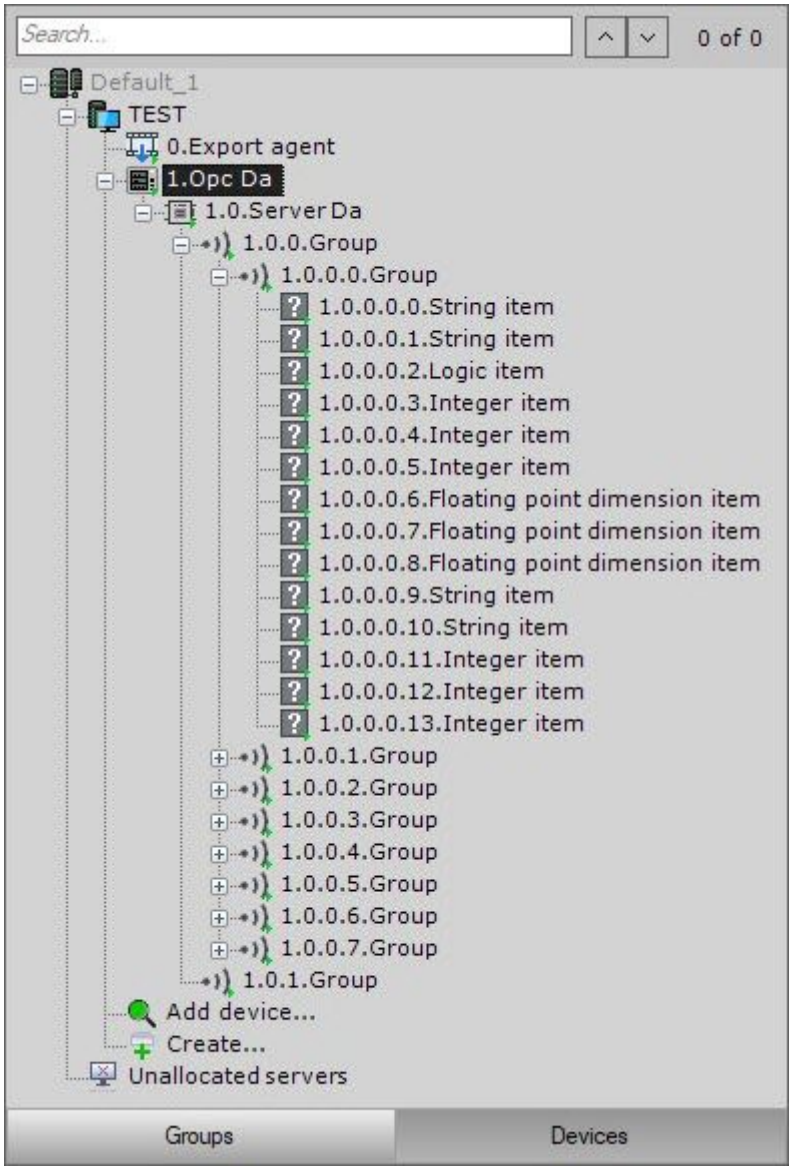
1. Download and install the OPC Core Components.
2. Go to the settings panel of the **Opc Da** object.



3. In the **IP address** field, specify the IP address of the **Opc Da** Server.
4. In the **Configuration download settings** section:
    a. In the **Layered loading** field, select the following value from the drop-down list:
        i. **Yes**, if you need to download configuration by layer, that allows you to manage the data flexibly and reduce the load on the system
        ii. **No** (default value), if it is necessary to download configuration at the same time, that can increase the processing time and the load on the system.
    b. In the **Unsigned integer items** field, select the following value from the drop-down list:
        i. **Yes** (default value), if you need to download the unsigned integer items.
        ii. **No**, if you don't need to download the unsigned integer items.
    c. In the **Floating point items** field, select the following value from the drop-down list:
        i. **Yes** (default value), if you need to download the floating point items.
        ii. **No**, if you don't need to download the floating point items.
    d. In the **Boolean items** field, select the following value from the drop-down list:
        i. **Yes** (default value), if you need to download the boolean items.
        ii. **No**, if you don't need to download the boolean items.
    e. In the **String items** field, select the following value from the drop-down list:
        i. **Yes** (default value), if you need to download the string items.
        ii. **No**, if you don't need to download the string items.
    f. In the **Integer items** field, select the following value from the drop-down list:
        i. **Yes** (default value), if you need to download the integer items.
        ii. **No**, if you don't need to download the integer items.

5. Click the **Apply** button to save the settings.
6. Click the  button and from the drop-down list, select **Download configuration**.
7. Click the **Apply** button to save the settings.

The configuration of the **Opc Da** integration module is complete. As a result of the connection, the hardware tree of the OPC Server is read:



Attention!

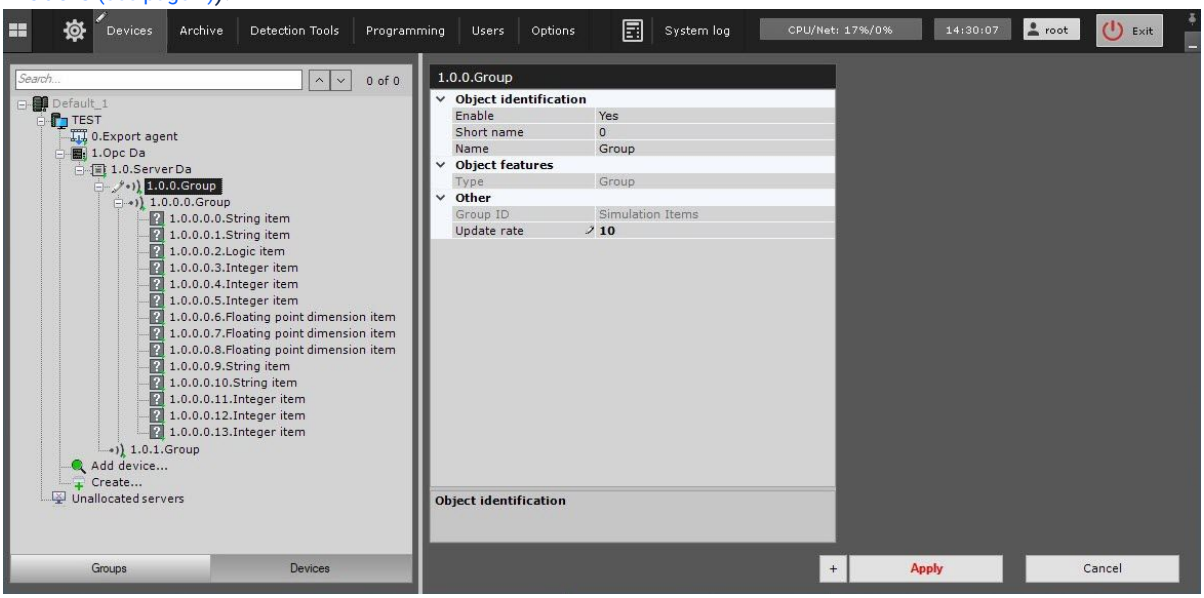
- All OPC Servers at the specified **IP address** will be read.

- If in the OPC Server, there are elements that aren't required for *Axxon One* operation, you must manually delete or deactivate them after reading.

4.1 Configuring a group of the Opc Da integration module

To configure a group of the **Opc Da** integration module, do the following:

1. Go to the settings panel of the **Group** object that is created automatically after you download the configuration on the basis of the **Server Da** object (see Configuring the Opc Da integration module (see page 7)).



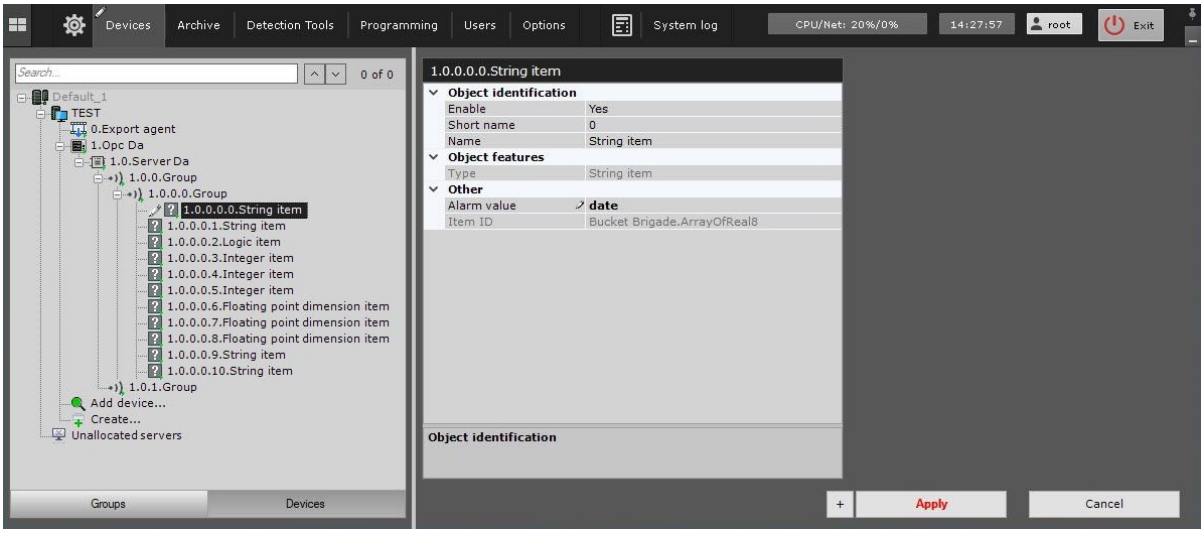
2. In the **Update rate** field, specify the value in seconds, after which the statuses of the items of the **Opc Da** integration module will be updated.
3. Click the **Apply** button to save the changes.

The configuration of a group of the **Opc Da** integration module is complete.

4.1.1 Configuring the string and logic items of the Opc Da integration module

To configure the string and logic items of the **Opc Da** integration module, do the following:

1. Go to the settings panel of the **String item/Logic item** object that is created automatically after you download the configuration on the basis of the **Group** object (see Configuring the Opc Da integration module (see page 7)).



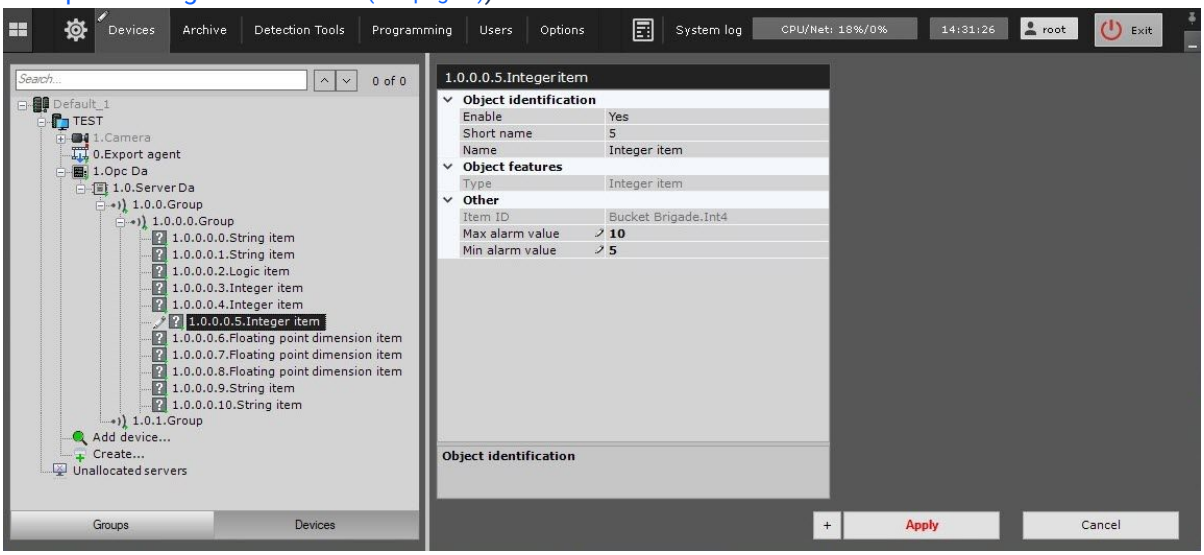
2. In the **Alarm value** field, specify the required value at which the item will go into the alarm state. The list of values for each item is specified in the manufacturer's software documentation.
3. Click the **Apply** button to save the changes.

The configuration of the string and logic items of the **Opc Da** integration module is complete.

4.1.2 Configuring the integer items and floating point dimension items of the Opc Da integration module

To configure the integer items and floating point dimension items of the **Opc Da** integration module, do the following:

1. Go to the settings panel of the **Integer item/Floating point dimension item** object that is created automatically after you download the configuration on the basis of the **Group** object (see Configuring the Opc Da integration module (see page 7)).



2. In the **Max alarm value** field, specify the maximum value at which the item will go into the alarm state. Value range for each item is specified in the manufacturer's software documentation.
3. In the **Min alarm value** field, specify the minimum value at which the item will go into the alarm state. Value range for each item is specified in the manufacturer's software documentation.
4. Click the **Apply** button to save the changes.

The configuration of the integer items and floating point dimension items of the **Opc Da** integration module is complete.

5 Working with the Opc Da integration module

5.1 General information about working with the Opc Da integration module

The **Map**, **Equipment Board** and **Macro** interface objects are used to work with the **Opc Da** integration module.

For the information on configuring these interface objects, see Configuring the interactive map[3], Configuring an Equipment Board[4] and Programming[5].

For the information on working with these interface objects, see Working with the interactive map[6], Working with Equipment Board[7] and Macros control[8].

5.2 Configuring macros when working with the Opc Da integration module

Programming[9]

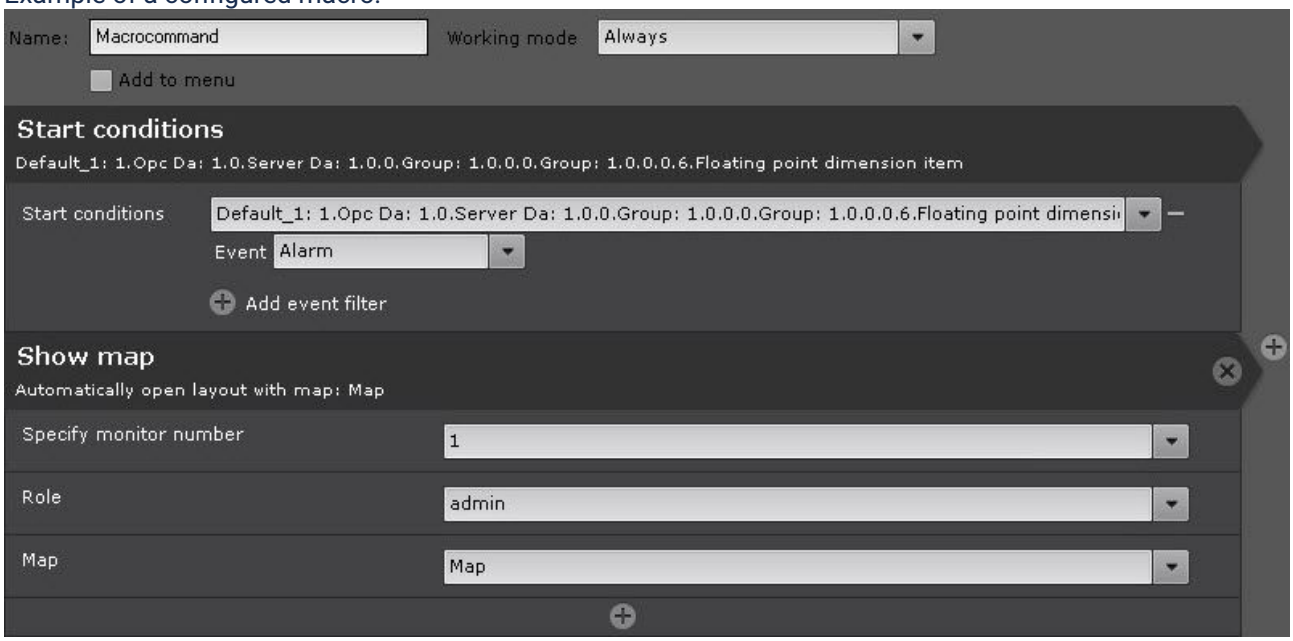
Macros control[10]

When working with the **Opc Da** integration module, you can configure a macro that will trigger when an event is received from **Opc Da**.

When configuring a macro, you must select a specific object of the **Opc Da** integration module.

3 https://docs.axxonsoft.com/confluence/spaces/one20en/pages/246485351/Configuring+the+interactive+map
4 https://docs.axxonsoft.com/confluence/spaces/one20en/pages/260925539/Configuring+an+Equipment+Board
5 https://docs.axxonsoft.com/confluence/spaces/one20en/pages/246485013/Programming
6 https://docs.axxonsoft.com/confluence/spaces/one20en/pages/246486362/Working+with+the+interactive+map
7 https://docs.axxonsoft.com/confluence/spaces/one20en/pages/260925544/Working+with+Equipment+Board
8 https://docs.axxonsoft.com/confluence/spaces/one20en/pages/246486481/Macros+control
9 https://docs.axxonsoft.com/confluence/spaces/one20en/pages/246485013/Programming
10 https://docs.axxonsoft.com/confluence/spaces/one20en/pages/246486481/Macros+control

Example of a configured macro:



5.3 Managing an object of the Opc Da integration module

You cannot manage an object of the **Opc Da** integration module in the **Map** and **Equipment Board** interface objects.

The following state of an object of the **Opc Da** integration module is possible:

	Added

5.4 Managing the items of the Opc Da integration module

You cannot manage the items of the **Opc Da** integration module in the **Map** and **Equipment Board** interface objects.

The following states of the items of the **Opc Da** integration module are possible:

	Enabled
	Normalized

	Alarm