



**Guide for configuring and working with the Modbus Slave
integration module**

Table of Contents

1	List of terms used in the Guide for configuring and working with the Modbus Slave integration module.....	4
2	Introduction into the Guide for configuring and working with the Modbus Slave integration module.....	5
2.1	Purpose of the document.....	5
2.2	General information about the Modbus Slave integration module.....	5
3	Supported hardware and licensing of the Modbus Slave integration module.....	6
4	Adding the Modbus Slave integration module.....	7
5	Configuration of the object of the Modbus Slave integration module	8
5.1	Configuration of the device of the Modbus Slave integration module.....	9
5.2	Configuration of the holding register of the Modbus Slave integration module	10
6	Working with the Modbus Slave integration module.....	12
6.1	General information about working with the Modbus Slave integration module.....	12
6.2	Configuration of macros when working with the Modbus Slave integration module.....	12
6.3	Managing the object of the Modbus Slave integration module.....	13
6.4	Managing the device of the Modbus Slave integration module	13
6.5	Managing the holding register of the Modbus Slave integration module	14

1 List of terms used in the Guide for configuring and working with the Modbus Slave integration module

Term	Description
Modbus Slave	Communication protocol that is based on the master-slave architecture. To transfer the data, it uses the following interfaces: • RS-485 • RS-422 • RS-232 (Modbus RTU protocol) • Ethernet TCP/IP network (Modbus TCP protocol)
Modbus Slave Holding Register	Area of a device's memory that stores data that can be read and written
Modbus Slave Device	Automation system device (controller, sensor, actuating mechanism)

2 Introduction into the Guide for configuring and working with the Modbus Slave integration module

On the page:

- [Purpose of the document](#)
- [General information about the Modbus Slave integration module](#)

2.1 Purpose of the document

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

The Guide has the following information:

1. General information about the **Modbus Slave** integration module.
2. Adding the **Modbus Slave** integration module.
3. Configuration of the **Modbus Slave** integration module.
4. Working with the **Modbus Slave** integration module.

2.2 General information about the Modbus Slave integration module

The **Modbus Slave** integration module can perform data exchange, receive events, and send commands via Modbus TCP or Modbus RTU protocols.

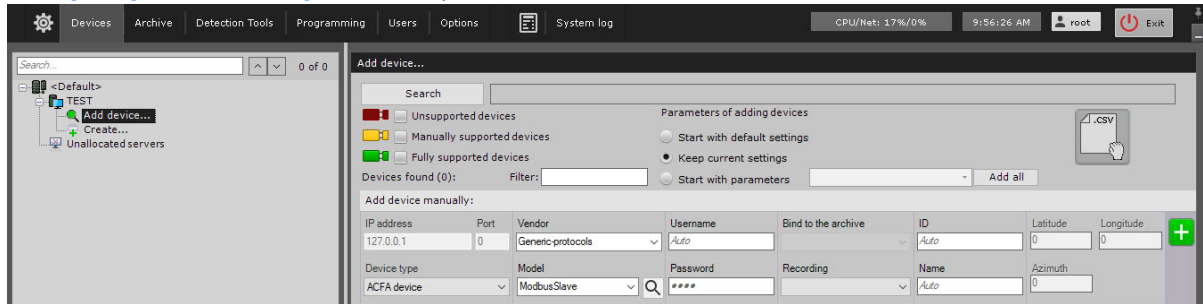
3 Supported hardware and licensing of the Modbus Slave integration module

Name of the integration module	Modbus Slave
Functionality	Module provides transmission of events and values of registers for polling the external Modbus master . Module can exchange data, receive events, and send commands via Modbus TCP or Modbus RTU protocols
Licensing	Per each register (ACFASensor)
Type of integration	Generic protocol (Modbus)
ACFA version	8.0

4 Adding the Modbus Slave integration module

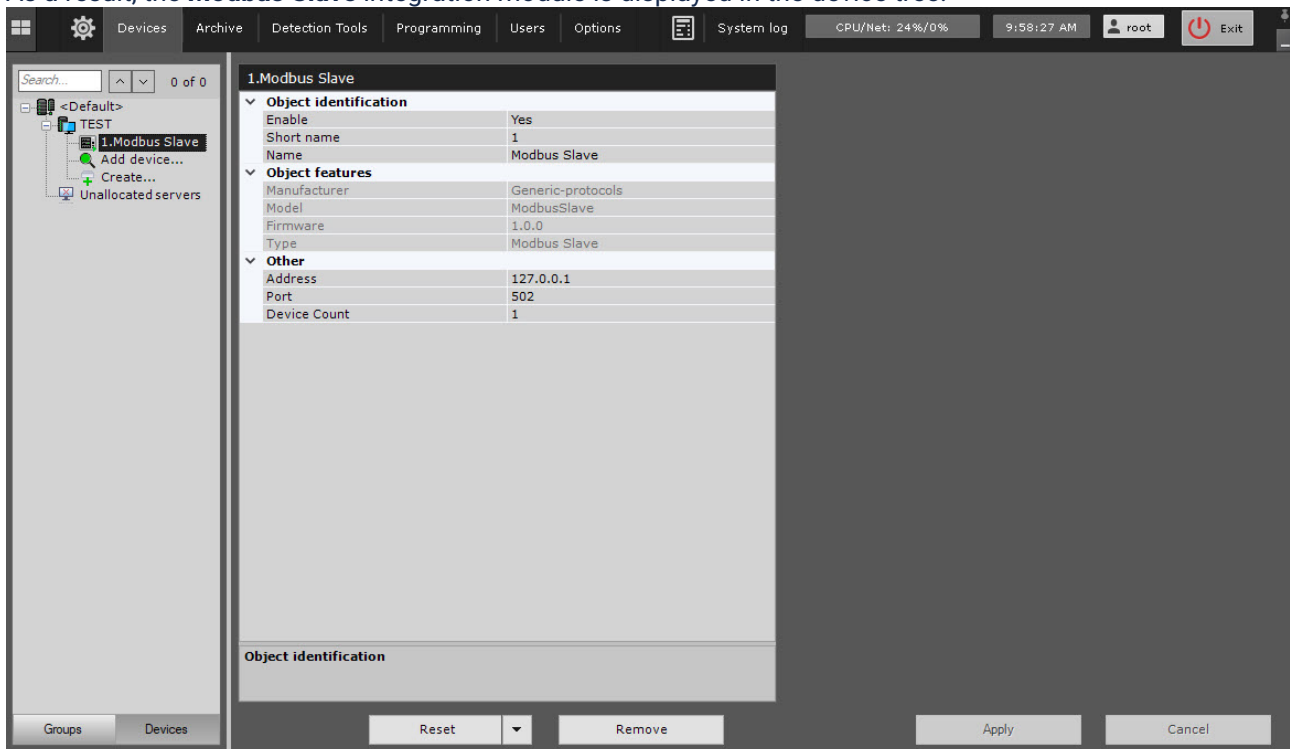
To add the **Modbus Slave** integration module to the system, do the following:

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



2. 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 **ModbusSlave**.
5. Click the  button.

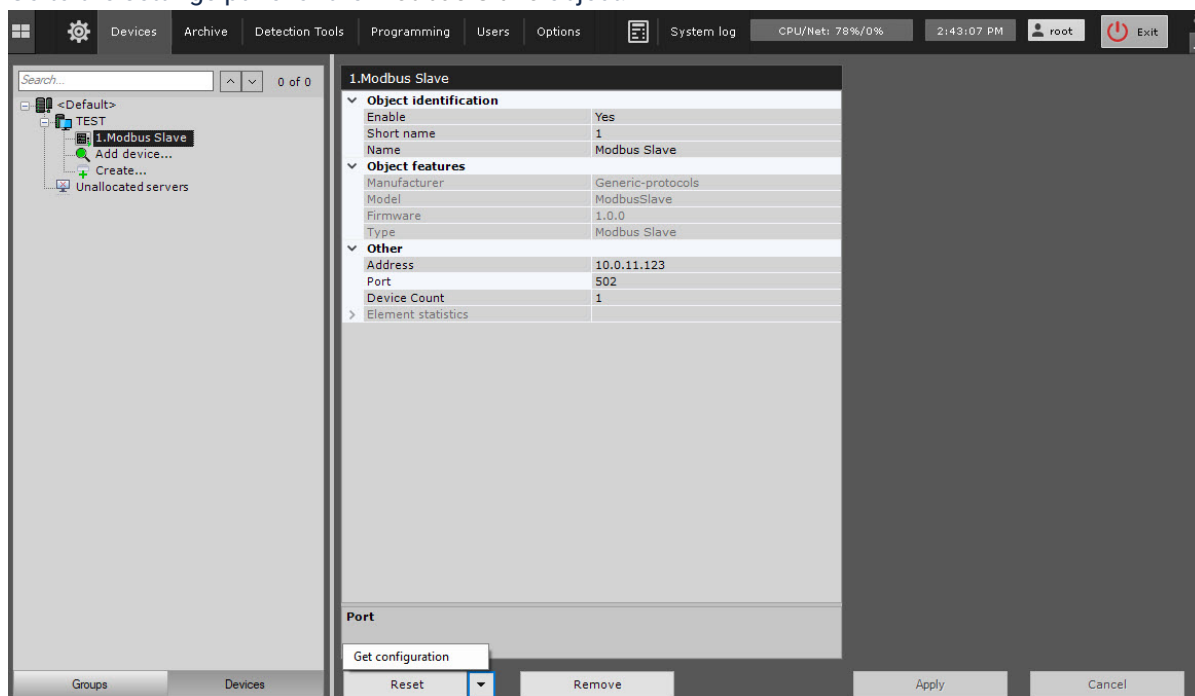
As a result, the **Modbus Slave** integration module is displayed in the device tree.



5 Configuration of the object of the Modbus Slave integration module

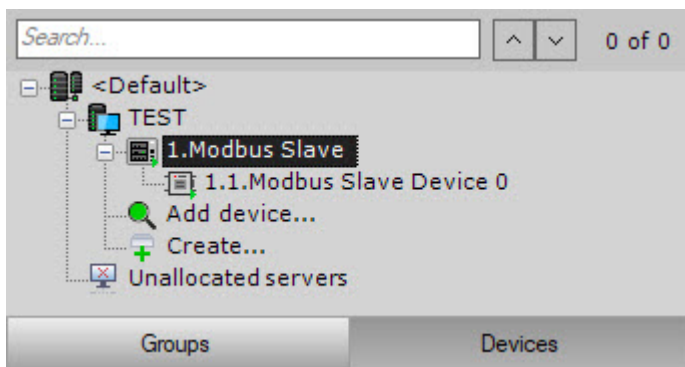
To configure the object of the **Modbus Slave** integration module, do the following:

1. Go to the settings panel of the **Modbus Slave** object.



2. In the **Address** field, specify the address of the destination (Slave device).
3. In the **Port** field, specify the user (Slave device) for listening. The default value is **502**.
4. In the **Device Count** field, specify the number of devices you want to create after downloading the configuration.
5. Click the **Apply** button to save the settings.
6. Click the  button and select **Get configuration** from the drop-down list.
7. Click the **Apply** button to save the settings.

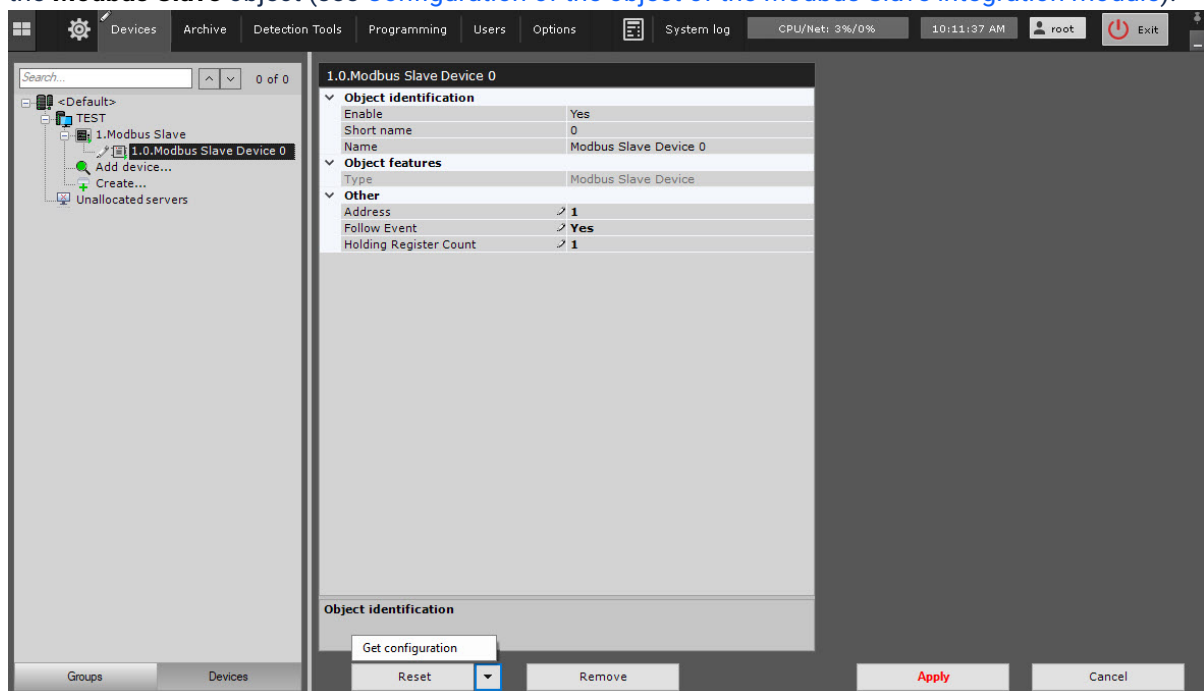
Configuration of the object of the **Modbus Slave** integration module is complete. As a result, a device tree is read:



5.1 Configuration of the device of the Modbus Slave integration module

To configure the **Modbus Slave Device** object of the **Modbus Slave** integration module, do the following:

1. Go to the settings panel of the **Modbus Slave Device** object that is created on the basis of the **Modbus Slave** object (see [Configuration of the object of the Modbus Slave integration module](#)).



2. In the **Address** field, specify the address of the device connected via the Modbus protocol. The default value is 1.

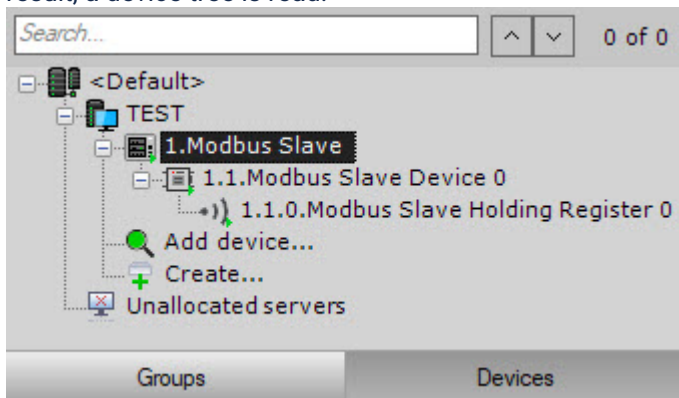


Note

For some devices that are connected via the Modbus protocol, you must forcibly specify the address that exceeds the current value by 1. This depends on the settings of the device (see the manufacturer's official documentation).

3. In the **Follow Event** field, select the **Yes** value from the drop-down list to monitor changes to the value of the holding register in the event viewer. The default value is **No**.
4. In the **Holding Register Count** field, enter the required number of holding registers. The default value is **0**.
5. Click the **Apply** button to save the settings.
6. Click the  button and select **Get configuration** from the drop-down list.
7. Click the **Apply** button to save the settings.

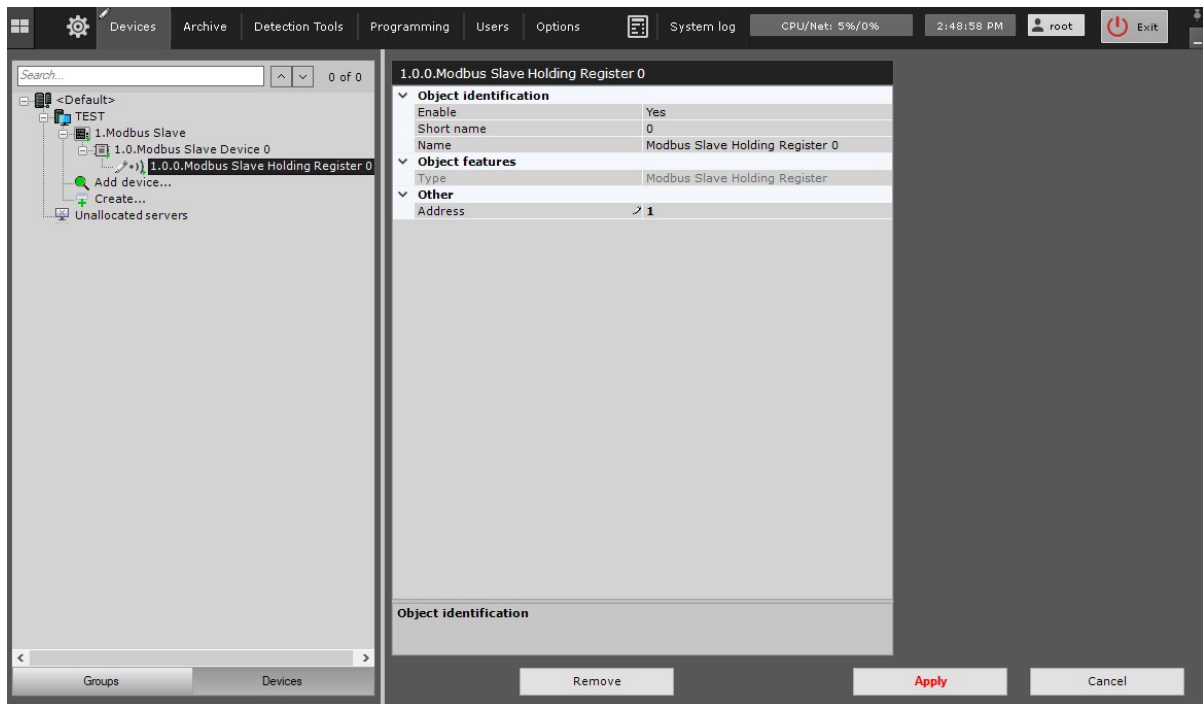
Configuration of the **Modbus Slave Device** object of the **Modbus Slave** integration module is complete. As a result, a device tree is read:



5.2 Configuration of the holding register of the Modbus Slave integration module

To configure the holding register of the **Modbus Slave** integration module, do the following:

1. Go to the settings panel of the **Modbus Slave Holding Register** object that is created on the basis of the **Modbus Slave Device** object.



2. In the **Address** field, enter the address of the holding register. The default value is **0**.
3. Click the **Apply** button to save the settings.

Configuration of the **Modbus Slave Holding Register** object of the **Modbus Slave** integration module is complete.

6 Working with the Modbus Slave integration module

6.1 General information about working with the Modbus Slave integration module

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

For the information on configuring these interface objects, see [Configuring the interactive map](#), [Configuring an Equipment Board](#), and [Programming](#).

For the information on working with these interface objects, see [Working with the interactive map](#), [Working with Equipment Board](#), and [Macros control](#).

6.2 Configuration of macros when working with the Modbus Slave integration module



[Programming](#)

[Macros control](#)

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

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

Example of a configured macro:

Name:

Working mode:

☒ Add to menu

Start conditions

Manual start

Start conditions + Add event filter

ACFA: Execute action

<Default>: 1.Modbus Slave: 1.0.Modbus Slave Device 0: 1.0.0.Modbus Slave Holding Register 0

Component

<Default>: 1.Modbus Slave: 1.0.Modbus Slave Device 0: 1.0.0.Modbus Slav

Action

Set Value

Value

15

6.3 Managing the object of the Modbus Slave integration module

You cannot manage the object of the **Modbus Slave** integration module in the **Map** and **Equipment Board** interface objects.

The following state of the object of the **Modbus Slave** integration module is possible:

	Obtained
---	----------

6.4 Managing the device of the Modbus Slave integration module

You cannot manage the **Modbus Slave Device** object of the **Modbus Slave** integration module in the **Map** and **Equipment Board** interface objects.

The following state of the **Modbus Slave Device** object of the **Modbus Slave** integration module is possible:

	Obtained
---	----------

6.5 Managing the holding register of the Modbus Slave integration module

You can manage the holding register of the **Modbus Slave** integration module in the **Map** and **Equipment Board** interface object using the function menu of the **Modbus Slave Holding Register** object. To open the menu of the **Modbus Slave Holding Register** object, right-click the corresponding object. Commands to manage the holding register of the **Modbus Slave** integration module are described in the table:

Menu command	Function
Set Value	Write a new numeric value to the Modbus Slave holding register
Get Value	Output a value written to the Modbus Slave holding register to the event viewer

The following states of the **Modbus Slave Holding Register** object of the **Modbus Slave** integration module are possible:

	Normal
	Alarm
	Unknown
	Value