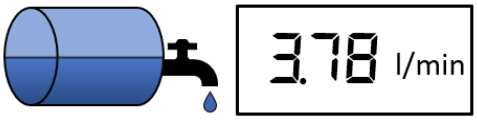
Argos Script Library

Consumption Rate Calculator

Calculate usage



APPLICATION NOTES

AN-NBAS-0005-EN

VERSION	LAST REVISION
1.0	"20220128"

Important User Information

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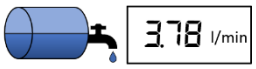
Argos Scripts – Consumption Rate Calculator



Pre-requisites

An EC300-Series Netbiter gateway is activated on an **Argos Manage & Analyze** account with minimum firmware version **2.04.02.**

Function Description

The consumption calculations are based on volume changes. The script supports up to **10** consumption rates to be calculated. The script performs multiple samples of the in-data to try to eliminate problems with unreliable sensor readings.

Applications - when to use this script

When one wants to monitor refill rates or consumption for in various level monitoring applications

Examples:
A common application for this script is monitor fuel consumption based on load.
Keep track of Refill of tank.

About Argos scripts

An Argos script is a piece of additional Lua code that can be downloaded from Argos, and which is executed in the Netbiter gateway. This script enables the Netbiter gateway to perform logical or mathematical functions/actions locally, based on normal configured (logging/visualization/alarm) parameter.

Argos provides a script library, which holds different types of script designed to solve both general and application specific problems. Scripts are used in conjunction with a its linked script template. The scripts reference the normal Netbiter logging, visualization or alarm parameters utilizing the **Tag** label for the configured device parameter. The Tag label can be applied to **any configured** parameter as an input or output to a script. Some generic scripts are to be used with preset Tag labels to be used.

Scripts can be included as part of a Netbiter profile. Scripts are free to use, and available are based on your service level. Multiple scripts can be assigned to one Netbiter device.

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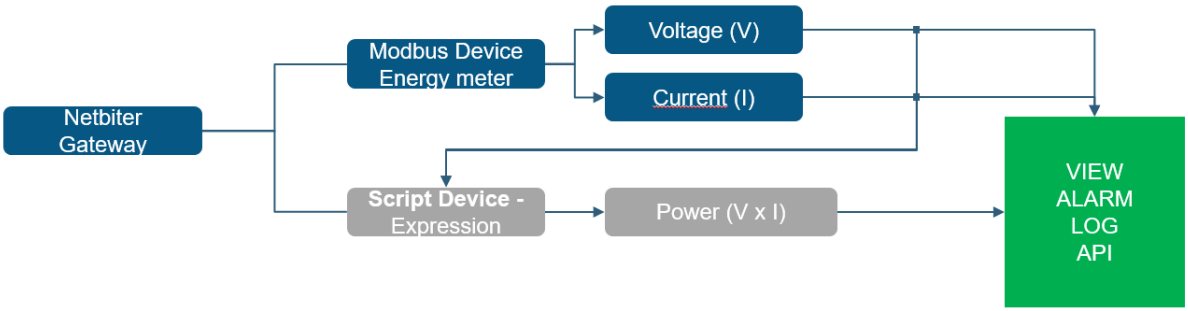

Figure 1 Script Overview

Virtual Device Type and Script Templates

A script is executed inside new device "script device" type named "Virtual EC300 series", like a Modbus, SNMP, J1939 or Ethernet/IP device.

A script templates are applied in the same way as any other Argos templates by selected when adding a device. The script templates contain setpoints, inputs or outputs associated with the script. These parameters within script template can then be used as inputs for alarms / logging or visualization in Argos dashboards or as input to another Argos script. All script templates contain two generic parameters, which can be found in the group General of the script template.

- **Information:** describes the version of the script
- **Running counter:** A continuous counter which can be used to verify that the script has been executed and running inside the gateway.

How to use this script

1 Add a device

(Management/<System>/Configuration/Device configuration) of Device type "Virtual EC300 series" and select the template "Consumption".

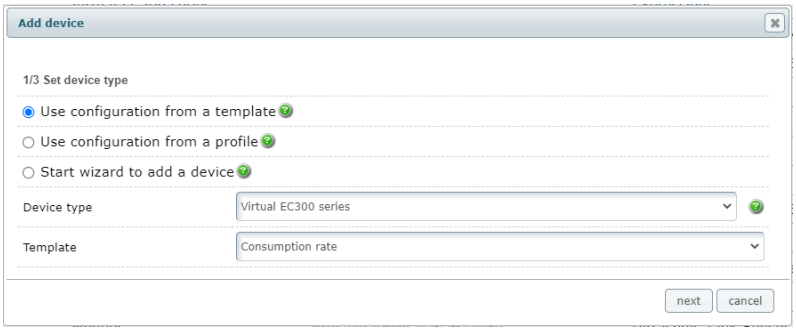

Figure 2 Add EC3XX Virtual Device

Give the Script Device a name so that you can configure it later – in this example called Fuel Consumption.

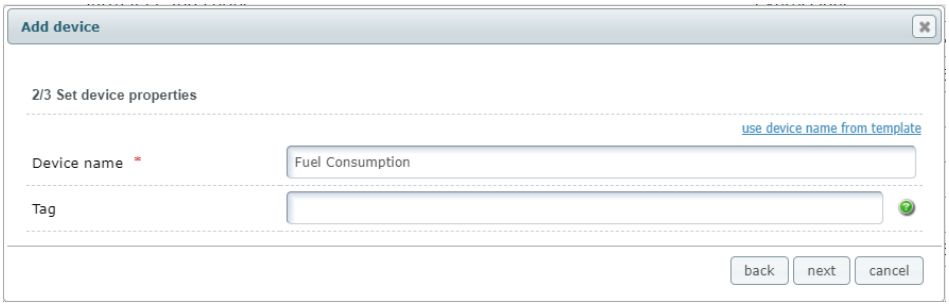

Figure 3 Name the Script Device

2 Add the related script to the system

Management/<System>/Configuration/Scripts
Select "Consumption Rate Calculator"

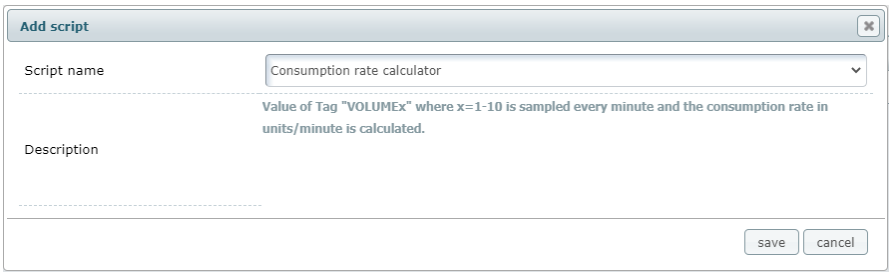

Figure 4 Add Script

3 Tag the Volume parameter

Tag a Visualization or logging parameter with the Label "**VOLUMEx**" which should be used as an In-parameter.
Please note the value must be of a volume type like liters, gallons or similar.

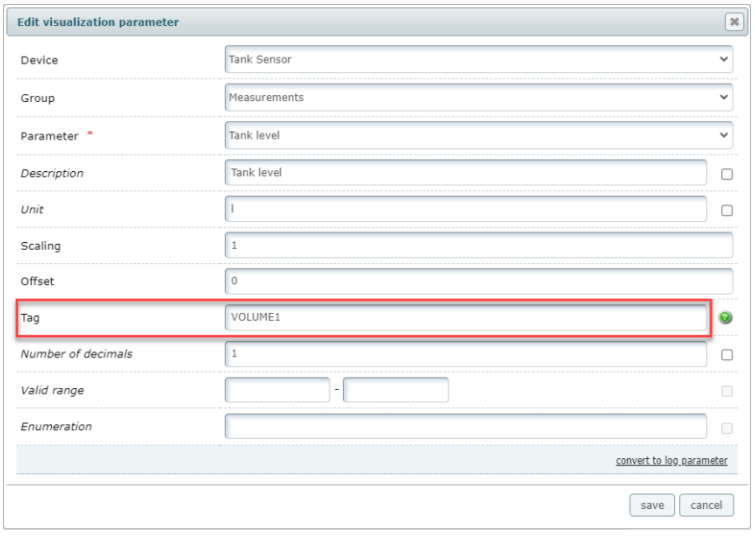

Figure 5 Tag Volume Parameter

4 Add consumption logging or alarm condition.

The consumption rate calculator holds the result values that are being performed in the gateway. Use these to monitor the consumption.

Add a consumption logging point

Here various types of logging types can be used or set a logging condition, i.e. when the consumption should be logged. (When a generator is running, when refueling is active).

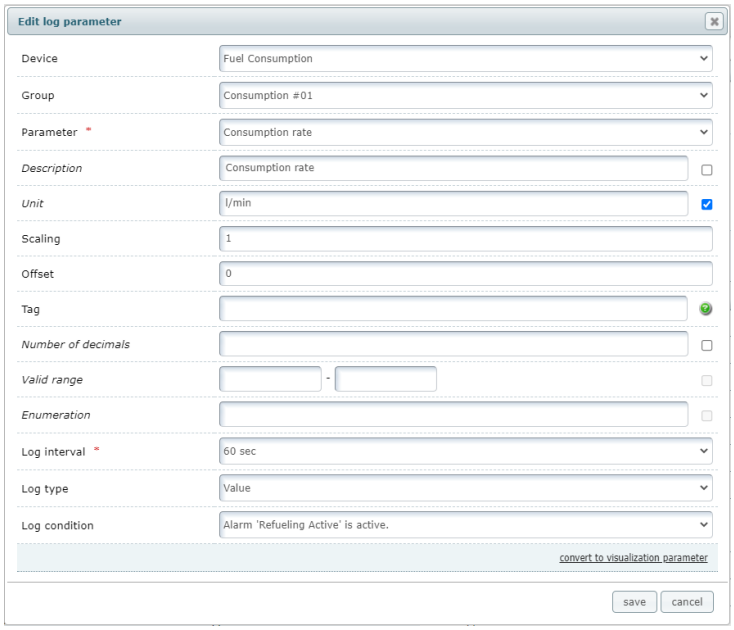

Figure 6 Monitor the consumption

Add an alarm condition

Example of adding a trigger to an alarm based on the consumption rate.

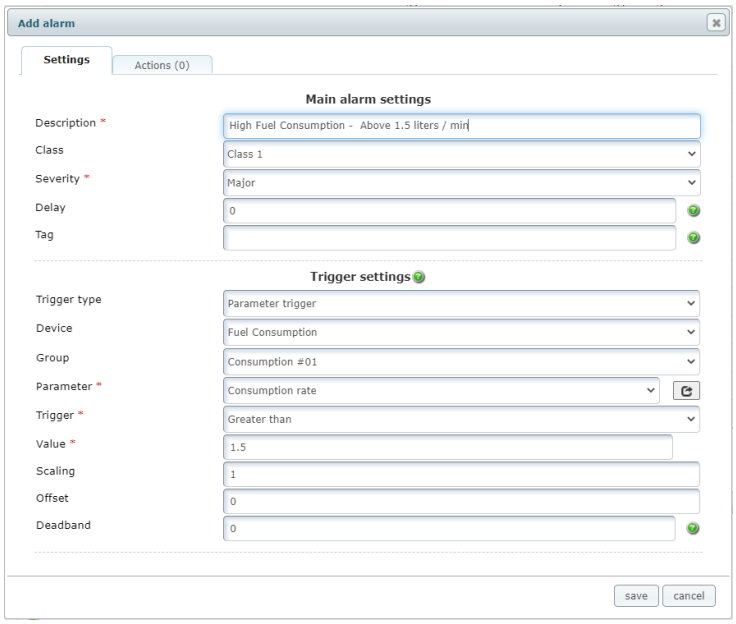

Figure 7 Add alarm based on consumption rate

5 Synchronize the Netbiter gateway

By performing a synchronization, we now inform the gateway which Volume parameter should be used when performing the consumption calculation as well as the logging and alarm points

Figure 8 Synchronize the configuration

6 See the result

Using *Presentation/<System>/Browse devices/<the Device added in step 1>*.
In the parameter group Status and overview can be seen and the value OK will be displayed if the consumption calculation has been successful.

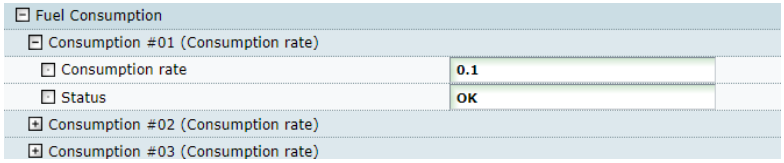

Figure 9 Verify the consumption

For more information about the scripts, please contact your local HMS support contact.