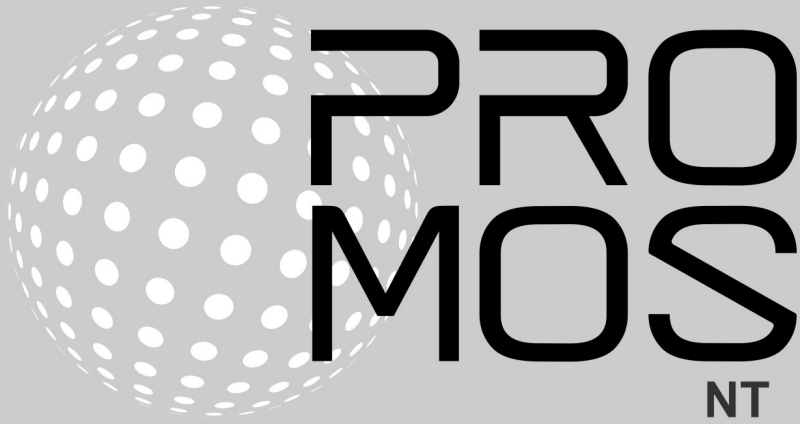


Update



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1 Introduction

Versions 2.22.110.14 to 2.22.110.16 contain mainly corrections and small improvements (service pack).

The update for all versions from 2.0 is currently free of charge (from April 1, 2023 chargeable - 15% of the license cost if older than 12 months).

2 License management

Today we are pleased to present our new software extensions in the license server (update approx. February 2023).

With these enhancements, users can now be grouped into companies, so that each user of a company can see all licenses of the company. This makes it possible to manage licenses better and to keep track of them.

We have also introduced an update option for old ProMoS key files to make it easier to update from older versions.

3 ProMoS Prices

Prices will not be increased until mid 2023. We may have to adjust prices slightly later (e.g. for modules that are rarely licensed).

4 Corrections

This chapter lists individual corrections and improvements.

The first modules of ProMoS NG have already been introduced in the last versions. Corrections in these modules are also listed here.

4.1 Version 2.22.110.14

Version from 26. October 2022

General

- Keyboard dialog (touch) always in foreground

AlmMng

- Unused hotkeys removed
- Disabling of alarms (System:ALM:Enable) is now logged by default

BacConfig / BacDriver

- The Device object is also added to the DMS
- Description/NAME are taken over for object type Device and Program
- Regular reading of the objects is prevented if a device is not reached
- Help system can be called directly

DMS

- Search for license file optimized
- Function for saving DMS data newly implemented (refactoring)

GE

- Control of layer definitions now only in edit mode
- Cursor shape when starting the GE corrected
- Correction for Unicode translations
- Incorrect text initializations are reported (error message)
- Incorrect icon initializations are reported (error message)
- Incorrect trend display initializations are reported (error message)
- Character objects with no extension are automatically deleted (e.g. X1=X2 and Y1=Y2)

KNX driver

- Restructuring: Unnecessary names removed from AKS

ModbusDriver

- Number of sent requests reduced if problems with accessibility of station
- Writing of large amounts of data corrected
- Modbus server implemented
- Multiple read for Serial ASCII implemented
- dumpMeterData implemented (for debugging purposes)

pAlmText

- The connection of an intervention text can be deleted from the datapoint

pBackup

- Problems with creating/opening files fixed

pChart

- Ruler date/time display error corrected

PDBS

- Error when deleting historical data fixed
- Alarm and log data can now also be deleted automatically
- Reorganization of historical data revised. New warnings implemented

PET

- Correction for alarm image assignment
- The connection of an intervention text can be deleted from the data point
- Correction when reading PET files (>80 characters allowed)

pList

- Selection DMS and BMO added

PCDDriver

- Control empty IP address added

ProjectCfg

- Display licenses corrected
- Search order license file optimized

Setup

- SSL libraries added
- Uninstall no longer deletes promos.cfg and promos.ini files

4.2 Version 2.22.110.15

Version from 2. December 2022

General

- The log directory is created automatically, if it is not available

BACDriver

- Error generation if a number of events is exceeded (in statistics)

pBackup

- Correction for network drives (message: not enough disk space)

DMS

- One time login was corrected

MBusDriver

- New device (SON Supercalc 5)
- New standard from 2018 implemented (previously 2008). Device configurations are stored with V2.

ModbusDriver

- Default communication for server and client set to TCP.
- For server, coils and registers can be set to ReadOnly

PDBS

- DMS variables no longer needed have been removed
- Information about network drives corrected

PET

- Copy&Paste function for analog and digital values corrected.
- Preparation for VLO import for structured text templates

pList

- Selection extended (BMO, DMS and system). This also allows to display only system data points or template data points.

pUser

- One-time passwords are interpreted correctly

pWA

- Fixed problems with iOS devices (http keep alive)
- added translations to setup
- added evaluation header (operating system identifier)
- position of input field can be predefined (so that it is not covered by on-screen keyboard)

NG - api-Broker

- extension for EDLPortalAlarmSender (alarm forwarding EDL portal)

4.3 Version 2.22.110.16

Version from 12 December 2022

AlmMng

- Fixed a rare bug where alarms were triggered without text (Unicode characters only).

BACDriver

- Error generation if the BACstac is no longer accessible

DMS

- A crash on socket connections is caught

PDBS

- In isolated cases, post-delivered data sent via email was not added to the EDL portal.
- A rare bug where alarms were triggered without text (Unicode characters only) has been corrected.

pRestore

- Fixed an error with empty projects

5 Important changes and new functions

5.1 Remote alerting in case of redundancy

To ensure that alerts are not duplicated in redundant systems, we have implemented automatic switching. This means that alerting in the backup system (MalmMng) is automatically activated when updates or maintenance is performed on the main system. In this way we can ensure that the remote alarming always works optimally.

In the slave installation the file `..\cfg\malm.cfg` must be extended:

```
[MasterMalm]
CheckMasterMalm=1    (Check or not the master; default 0)
MasterIP=10.0.10.55  (IP addresses of the master PC)
MasterPort=9020      (JSON port of the dms; 9020 - default)
CheckInterval=30     (how often should the master be checked, in seconds; 60 - default)
```

Master DMS configuration (`...\cfg\DMS_JSON_IPS.cfg`, `whitelist`) must also be adjusted to allow remote/slave Malm to fetch current status:

```
[nonSSL_Allowed]
# Any connection from local host
127.0.0.1
10.0.1.112 ( IP address of the "slave" PC)
```

OR/AND to prevent the remote DMS/remote machine from writing anything to DMS (the corresponding IP must also be entered in the general IP white list)

```
[10.0.1.112_read]
System:Prog:MALM_UP
```

5.2 MalmCfg authentication methods

Much more authentication methods are now supported for remote alerting via email.

The screenshot shows a configuration window with the following fields and options:

- Mailadresse Absender**: Text input field.
- Mail-Host (SMTP-Server)**: Text input field.
- Kontoname**: Text input field.
- Kennwort**: Text input field.
- Authentifizierung Methode**: Dropdown menu with the following options: AUTH_NONE, AUTH_CRAM_MD5, AUTH_CRAM_SHA1, AUTH_LOGIN (selected), AUTH_PLAIN, AUTH_XOAUTH2, AUTH_NTLM.
- LAN-Einstellungen**: Section header.
- SMTP-Port (25/465/587)**: Text input field with the value 25.
- DFÜ-Einstellungen**: Section header.
- Diese Verbindung wählen**: Radio button.

Encryption methods can already be configured for some time.

The screenshot shows the **LAN-Einstellungen** section with the following options:

- SMTP-Port (25/465/587)**: Text input field with the value 25.
- Encryption options**: Radio buttons for None, SSL (selected), and TLS.

Remote alerting has been rebuilt internally (refactoring).

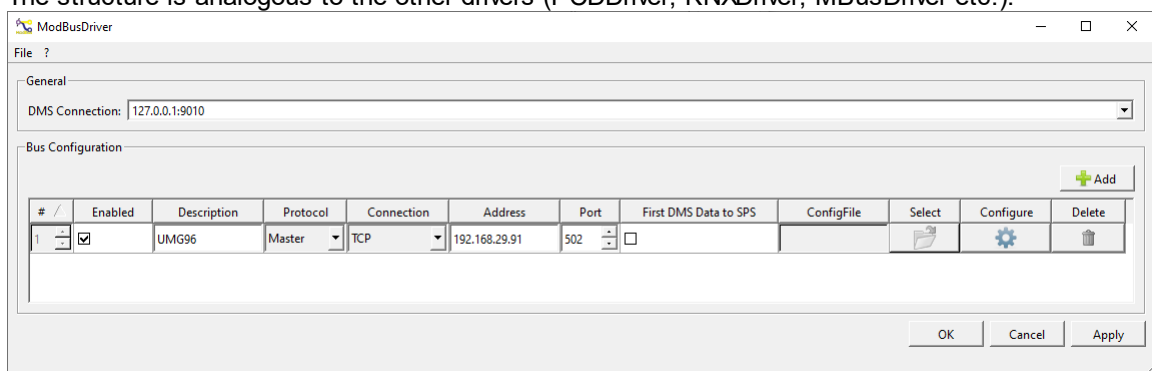
5.3 ModbusDriver

Modbus is an industry standard protocol for communication between automation devices. It is widely used in industry and power distribution to transfer data and execute control commands.

The existing MDriver is replaced by the **ModbusDriver**. The driver can also be operated headless (ProMoS NG).

The configurations are compatible, so that the new driver can be started instead of the MDriver (basic configurations must be made).

The structure is analogous to the other drivers (PCDDriver, KNXDriver, MBusDriver etc.):



The data monitor is also implemented:

Timestamp	Bus	Address	BMO	AKS Name	Value	DMS ↔ Modbus
2022-12-21T20:04:37	1	192.168.29.91:502	ZE001->Harmonic, THD,I L3	ELEKTRO:UMG96:Harmonic, THD,I L3	62.01138687133789	←
2022-12-21T20:04:37	1	192.168.29.91:502	ZE001->Harmonic, THD,I L2	ELEKTRO:UMG96:Harmonic, THD,I L2	103.99010467529297	←
2022-12-21T20:04:37	1	192.168.29.91:502	ZE001->Harmonic, THD,I L1	ELEKTRO:UMG96:Harmonic, THD,I L1	70.9928588671875	←
2022-12-21T20:04:37	1	192.168.29.91:502	ZE001->Harmonic, THD,U L3-N	ELEKTRO:UMG96:Harmonic, THD,U L3-N	1.8188916444778442	←
2022-12-21T20:04:37	1	192.168.29.91:502	ZE001->Harmonic, THD,U L2-N	ELEKTRO:UMG96:Harmonic, THD,U L2-N	1.8566540479660034	←
2022-12-21T20:04:37	1	192.168.29.91:502	ZE001->Harmonic, THD,U L1-N	ELEKTRO:UMG96:Harmonic, THD,U L1-N	2.015493392944336	←
2022-12-21T20:04:37	1	192.168.29.91:502	ZE001->Reactive energy L3 capacitive	ELEKTRO:UMG96:Reactive energy L3 capacitive	4367143.5	←
2022-12-21T20:04:37	1	192.168.29.91:502	ZE001->Reactive energy L3	ELEKTRO:UMG96:Reactive energy L3	-4106643.25	←
2022-12-21T20:04:37	1	192.168.29.91:502	ZE001->Real energy L1 obtained	ELEKTRO:UMG96:Real energy L1 obtained	1005238.6875	←

☒ Monitoring enabled Maximum lines: 500

Data types:

Modbus_Type (ProMoS Nx)	Modbus communication
Coil	Coil
Input	DiscreteInputs
Register16	HoldingRegister
InputRegister16	InputRegister
Register16usg	HoldingRegister
Input register16usg	Input register
Register32	HoldingRegister
Input register32	Input register
RegisterFloat	HoldingRegister

Modbus_Type (ProMoS Nx)	Modbus communication
InputRegisterFloat	InputRegister
Register32dec	HoldingRegisters
InputRegister32dez	Input Register
Register32usg	HoldingRegister
Input register32usg	Input register
Register64	HoldingRegister
Input register64	Input register
RegisterDouble	HoldingRegister
InputRegisterDouble	InputRegister

Exchange

Possible settings (combinations are also possible)

- Integer values
 - SwapNumberByte
 - SwapNumberWord
 - SwapNumberLong
- Floating point values
 - SwapFltByte
 - SwapFltWord
 - SwapFltLong

Byte order on communication level:

(example for value 0x1122, 0x11223344, 0x1122334455667788, * most used).

SwapXxxLong	SwapXxxWord	SwapXxxByte	Byte order 16	Byte order 32	Byte order 64	Remark
false	wrong	wrong	1122	11223344	1122334455667788	Big Endian*
false	false	true	2211	22114433	2211443366558877	
false	true	false	1122	33441122	3344112277885566	
false	true	true	2211	44332211	4433221188776655	
true	false	false	1122	11223344	5566778811223344	
true	false	true	2211	22114433	6655887722114433	
true	true	false	1122	33441122	7788556633441122	
true	true	true	2211	44332211	8877665544332211	Little Endian

5.3.1 Modbus server

A Modbus server is a device or system that receives and responds to Modbus requests from a Modbus client. The client can read data in the DMS (Data Management System) by sending Modbus requests to the server and receiving responses from the server.

Supported data types:

- BOOL (DMS: ID_BIT)
- UINT16 (DMS: ID_WOU)
- INT16 (DMS: ID_WOS)
- UINT32 (DMS: ID_DWU)
- INT32 (DMS: ID_DWS)
- FLOAT (DMS: ID_FLT)
- FLOAT64 (DMS: ID_FLT)

Configuration files:

The driver supports configuration files in the following formats: .csv (';-separated), .json, and .xml.

The files must contain information about which DMS names should be subscribed, Modbus types of the values and their register addresses.

The specification "ReadOnly" in all configuration files (.csv, .json, .xml) is an optional parameter. The default value is "true" if it is not defined. The type of the value is a string: "true"/"false" or "1"/"0".

The parameter is used to indicate whether the specified DMS name is read-only or not - whether its value can be changed from "outside".

Building a server configuration file (can be uploaded to the Modbus driver):

```
Register;Type;DmsName;Factor;ReadOnly
```

The factor is used to convert e.g. units (e.g. factor 10 to transmit a temperature of 21.4 as UINT with value 214).

Examples of a server configuration (base addresses Coils: 0..9999, HoldingRegister: 40000..49999):

CSV format:

```
#comment
1000;BOOL;UST1:Logic:H01:PID:RL_Beg:InEnable;1;1
1002;BOOL;UST1t:Logic:H01:BV:Anf_Las_Beg:Value;1;0
1004;BOOL;UST1:Logic:H01:PID:BV>LastZentrAkt:Value;1;1
40000;INT16;UST1:H01:MT002:OutValue;10;1
40002;INT16;UST1:H01:MT003:OutValue;10;1
40004;INT16;UST1:Logik:H01:SW:RL_Temp_Vert:Wert;10;1
40006;UINT16;UST1:H01:VS001:CurrentPosition;10;1
```

JSON format:

```
{
  "ModbusDefinitions":
  [
    {
      "AKS": "BN028:H02:MT:500:IstwertDWSAsINT32",
      "register": "40000",
      "type": "INT32",
      "ReadOnly": "false"
    },
    ...

    ...
    {
      "AKS": "BN028:H02:MT:500:IstwertWOUAsUINT16",
      "register": "40009",
      "type": "UINT16",
      "ReadOnly": "1"
    }
  ]
}
```

5.4 OPC UA

Currently we are developing the OPC UA driver. The driver will be available in the 2nd quarter of 2023. The driver will also support the security modes and will be available for ProMoS NT and ProMoS NG (service).

6 API interfaces to other systems

Currently, data can be exchanged from (almost) any source using API interfaces (JSON/REST) via the NG modules already included in NT.

The following API interface communication has already been implemented:

- eSMART
- SmartMe
- DormaKaba
- Technische Alternative
- Qivalo

The configuration of API interfaces currently requires programming skills. Supported accordingly, an integrator can also implement API interfaces himself.

7 What is the next step with ProMoS?

We have commissioned the first 10 plants with ProMoS NG. Also larger installations (in hybrid mode: DMS etc. from ProMoS NG and GE, AlmViewer from NT) are already in operation. All projects were still configured using PET.

By means of code generator the PLC programs for Beckhoff and Wago controllers were generated. Except for a few minor details, which we are currently still working on, the systems are working as expected.

We currently expect to be able to release the first beta versions of ProMoS NG (incl. basic template objects, code generator for Codesys, Beckhoff, Wago, Logicals and possibly Weidmüller and Cronox) to integrators from around mid-2023.

7.1 Designer

The successor of GE we will call "Designer".



This is not yet the final user interface. Adjustments will certainly be made.

Currently we are implementing the following functions:

- User rights
- Integration of web content from any source (e.g. web interfaces of a web-enabled controller as an object directly in the image)
- Color gradients (e.g. tank in 3D view)
- Simple linking of images (Drag&Drop)
- etc.

Also the designer runs on all supported platforms (also Raspberry Pi) and runs pleasantly fast even on not very performant systems.

8 Support

Support for ProMoS NT and Visi.Plus can be requested through the following channels:

Switzerland, Luxembourg, Belgium, France, Italy:

E-mail: support@mst.ch

Telephone: +41 31 810 15 10

Germany, Netherlands, Austria, Scandinavia

E-mail: support@mst-solutions.de

Phone: +49 40 999 99 4210

Support > 15 minutes will be charged (project specific clarifications, training by phone, etc.) if it is not ProMoS errors or improvement suggestions.

Support packages can also be purchased (starting at 25 hours).

Current prices can be requested at <https://license.promosnt.com>.

Current information and registration for the newsletter can be found at www.promosnt.ch or promosnt.com (English).