# Implementation guide - simple

Contents

1 Introduction

1.1 Merbon SCADA

Merbon SCADA is a server application used for process visualisation. The package is designed for creating monitor networks of various technologies through telemetric networks and different types of local communication. The system takes advantage of the most modern software tools and communication standards, but incorporates a great deal of verified "technically standard" solutions as well. The modularity of the system enables gradual construction of the dispatching sites from the simplest visualisation of metering data to distributed integrated systems. Particular emphasis is placed on high reliability, fast application engineering and easy settings even for less experienced users.

1.2 Project engineering

This manual is intended to describe the process of implementation and configuration of RcWare Vision project in a Merbon SCADA Server environment. In the first part it shows how to set up automatic project launching and periodic trend data saving in a Merbon DB from a PLC in RcWare Vision. The second part deals with user policies of Merbon SCADA server. The last part describes the export of SCADA project, upload of the project to Merbon SCADA Server, and remote project configuration at the Merbon SCADA Server. The last chapter, „Basic problem diagnostics", helps the user in case of troubles with implementation.
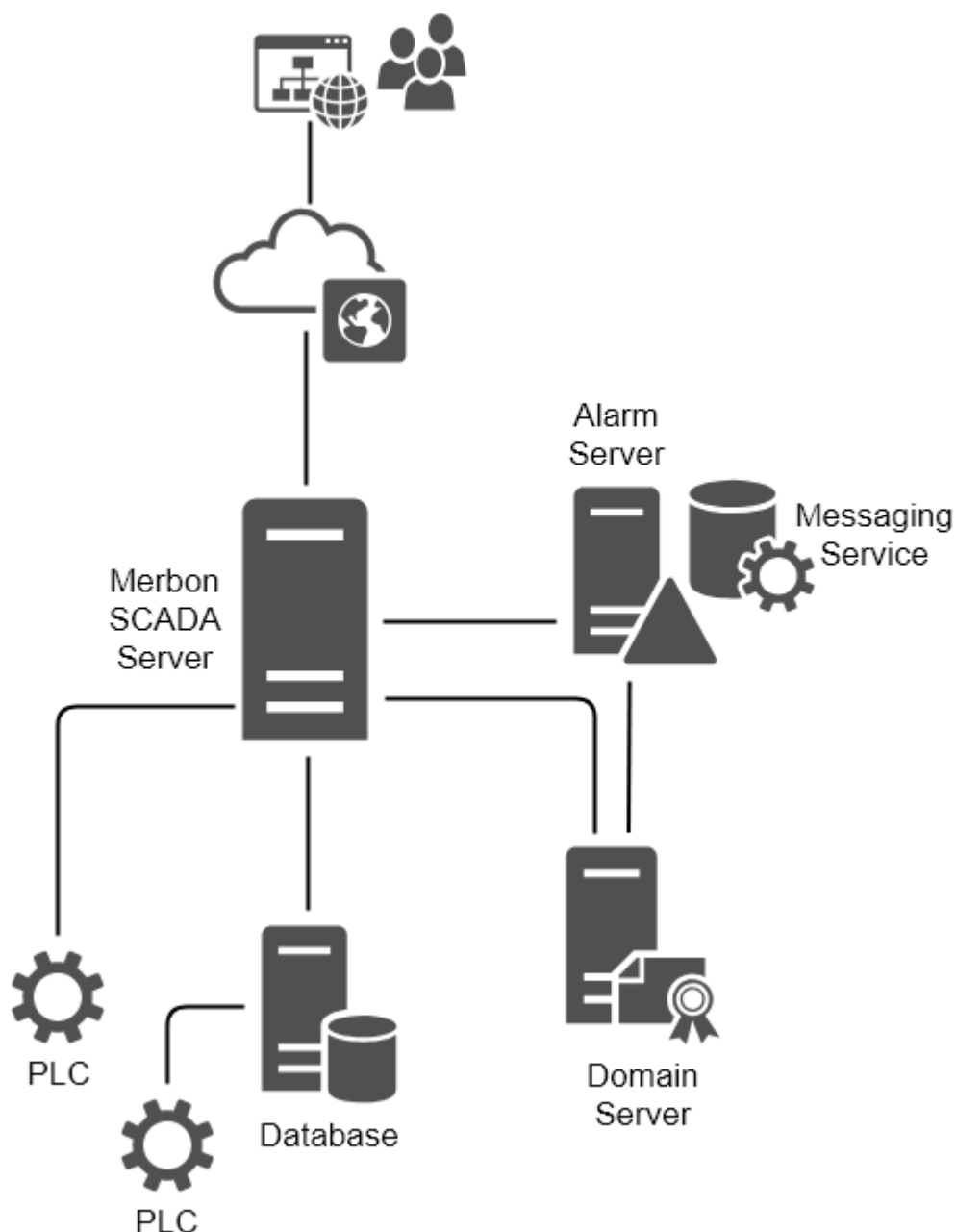
Merbon SCADA Server toplogy

Merbon SCADA Server manages communication with the PLCs. It establishes and checks the communication with PLCs and displays the current values on its web pages. The trend values may be optionally saved in a database: the data may be written directly by the PLCs, or by the Merbon SCADA Server.

The Domain Server is used for definition of users and user groups. The Alarm Server then controls alarm processing, alarm history saving, and sending of alarm messages.

2   RcWare Vision – The Editor

As a compatibility with RcWare Vision projects is required, projects may be exported to Merbon SCADA directly from RcWare Vision. What must be preserved are all principles of datapoint engineering, mapping to the PLC project data, plant graphics engineering, and communication channel definition (see the engineering notes at https://domat-int.com/en/downloads/technical-documentation , *RcWare Vision Function Overview*). This document supposes that the project is fully functional and communicative in the RcWare Vision environment.

There are also parameters which are specific for the RcWare Vision installation rather than for the project. Those parameters which are transferred to the Merbon SCADA Server XML definition files are described below.

2.1   Automatic project start on startup

When the project definition is exported, the *Settings – PC Resources – On* Startup configuration is included, namely *Stations for online communication on program start*. There is a list of all projects which are launched after the Merbon SCADA server service starts. Click the *Use parameters* button to save settings and apply changes after the RcWare Vision restarts.
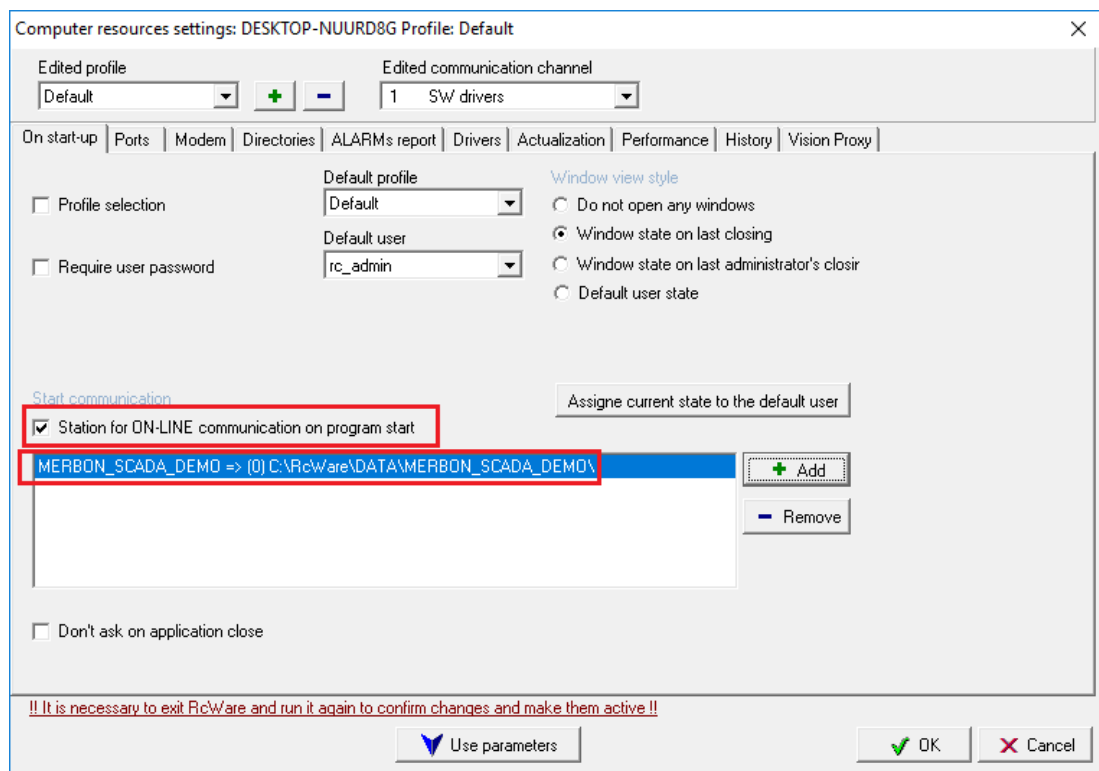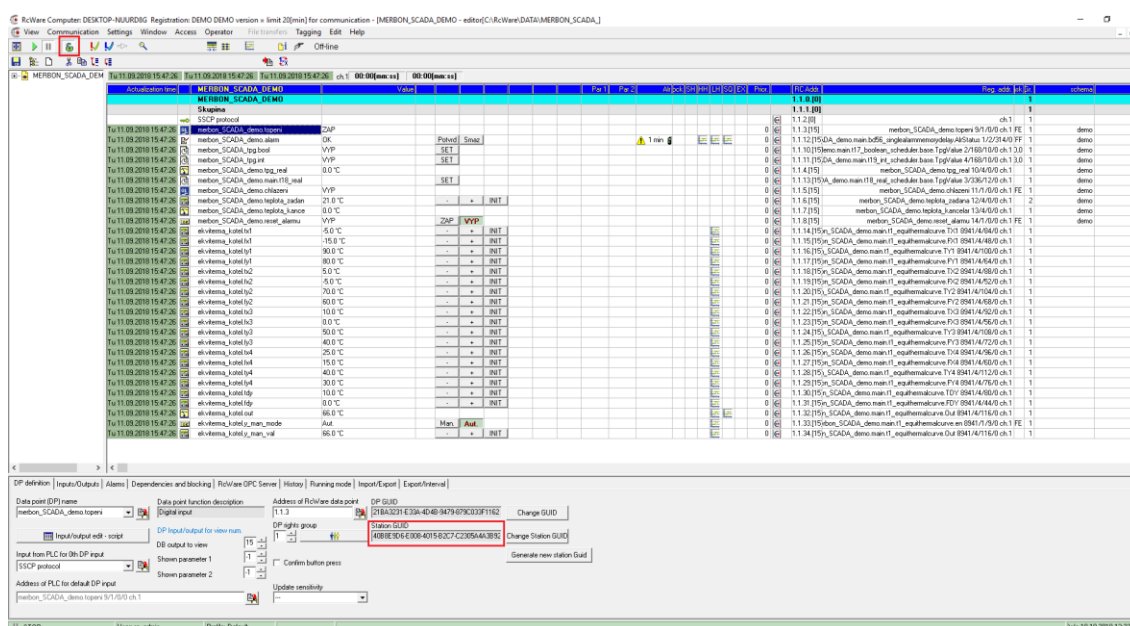

PC Resources settings

Check the exported configuration in the **scada\cfg\behaviours.config** file.
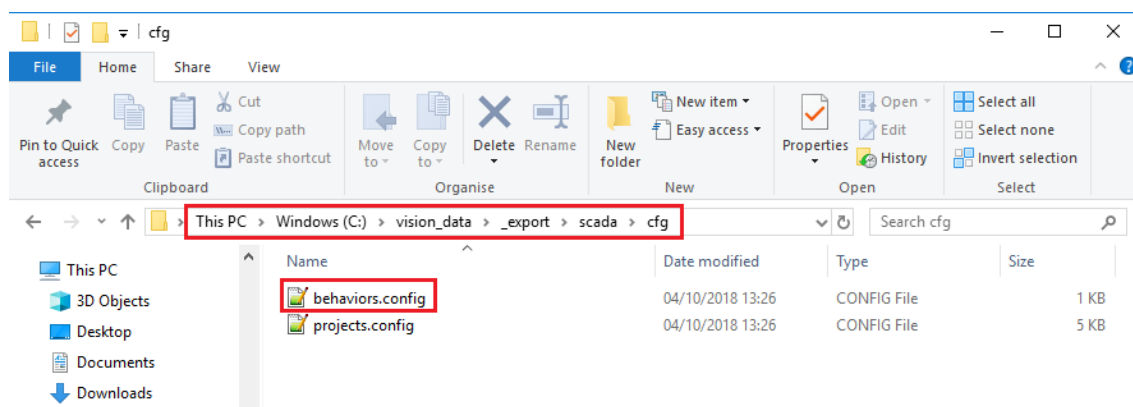
Exported behaviours.config file

The project GUID can be found in the data point editor when unlocked:

Project GUID

2.2 History

History data may be saved either as text files in the project folder (file history), or in an external database (Merbon DB). Depending on the preferred way, follow one of the configuration below.

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2.2.1 Merbon DB

If there is a Merbon DB installed in the Merbon SCADA site, the following configuration must be set up. Configure the parameters in the *Settings – SQL Server Settings* dialogue, see Merbon DB installation notes.

SQL Server settings

Writing to database from Merbon SCADA

The essential settings are marked red in the image above. This configuration allows Merbon SCADA Server to write to the database. Check the *Read data from RcWare DB server* option. Check also the *Save data to selected server* (which is the Merbon DB server) option if the Merbon SCADA server shall read data from PLCs and save them to the database. The projects concerned must be selected (only those projects are enabled which have at least one data point set as *History-> Long term – SQL database* or *Save on value change*) as well as the required data saving interval. **Every particular project must be selected and saved by the Set button separately.** Saving intervals on the individual datapoints are not taken into account. All history data points have a common saving interval set in the dialogue mentioned above.

Writing to database from PLC

Setting *Data from RT* and *Read-only* is used when the PLC itself writes data to the database directly, i.e. not using RcWare Vision. If PLCs write directly to the database at all projects, the *Save data to selected server* option may be unchecked. **Every particular project must be selected and saved by the Set button separately. The setting applies for this particular project.**

Computer name or IP address refers to the Merbon DB endpoint (= where the Merbon DB is installed). The username and password must be entered as well (default is admin/rw). If there are no special requirements regarding data saving and optimisation, click the *Set default* button and all parameters are automatically set to default values.

Click *Use parameters* to save the whole setting.

To write data to a database directly from a PLC, a Database Adapter has to be installed.

At http://localhost:11112/admin/#/login (login: admin, heslo: rw) create a user for saving data from the PLCs.

In IDE, PLC properties – Merbon DB Parameters set up the database adapter URL, TCP port, and credentials of the user which was created in the previous step. See also Merbon IDE Help (Database).
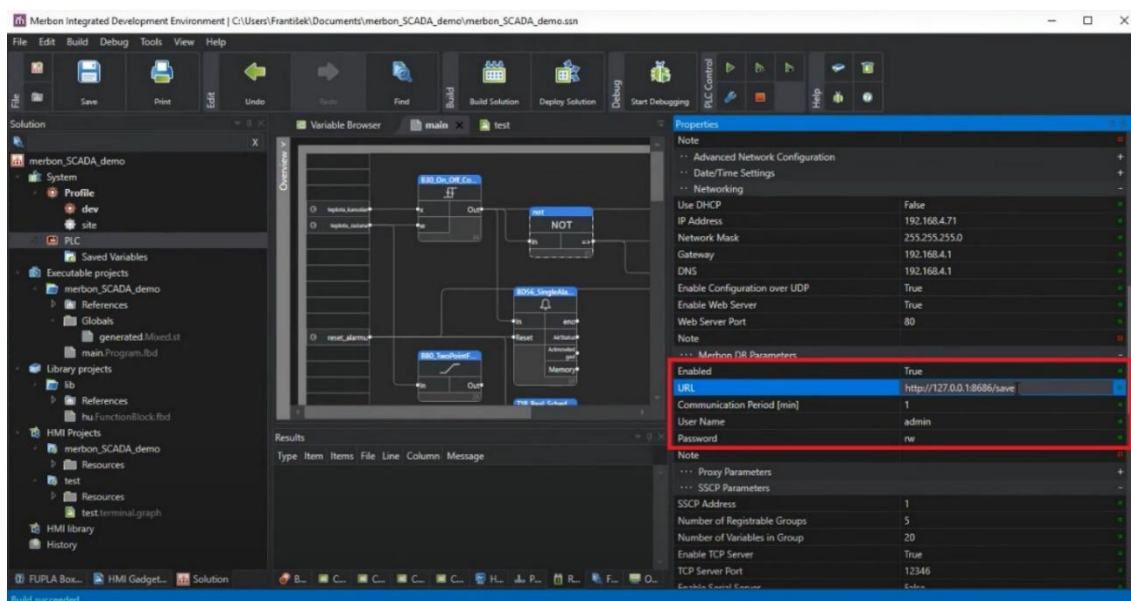

Setup of saving data from a PLC to a database

Then the variable saving must be set in IDE – see Merbon IDE help (press F1) – Process station... - Saving data in a database.

In the IDE, the variables to be written to history must be set. After this, the Solution must be compiled in order to update the .vlist file (the file which describes mapping of variables in IDE).

In RcWare, unlock the data file (padlock icon) and select the datapoints to be written to history. In the **Edit** menu select **Group functions**.
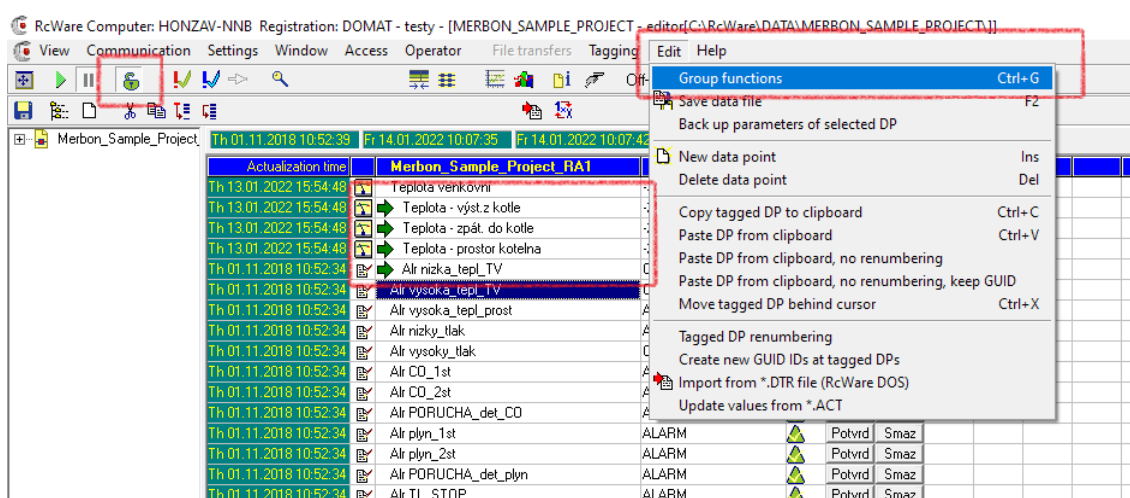

Group editing of data points

In the Group editing, select the **SSCP Driver** tab. Check the **Update from file** option, and optionally **Set CommUID to 0 for not foud variables** if there are some variables to be identified which do not exist in the IDE anymore. Then click the „...“ button and select the .vlist file (its name must **not** contain „ *utf8*“) from the Merbon IDE project folder. Finally, check the **RtID** checkbox, and fill in the history runtime identification string which must match with that defined in the IDE (in PLC properties). Check **Rt History** and **Use RT History**.
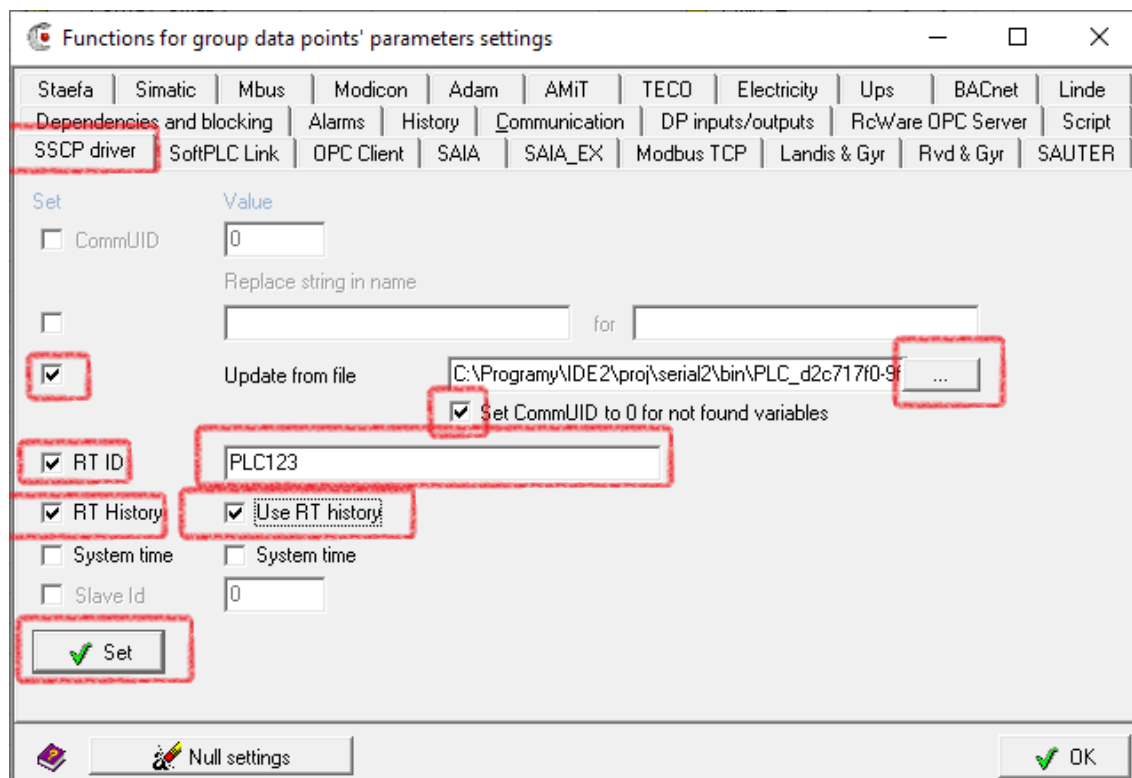
Setup of reading history from a database for RcWare data points

The last step is clicking the **Set** button.

After the definition is exported, the configuration can be checked in the file *projects\[project GUID]\[project GUID].rcwaredbconfig*:
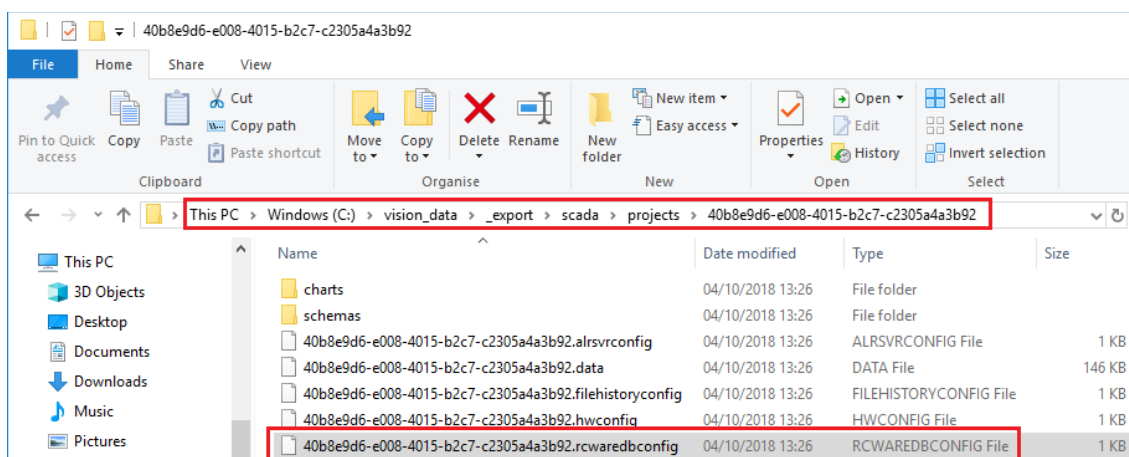
Exported rcwaredbconfig definition in a file explorer

2.1   File history

If the Merbon DB is not available at the Merbon SCADA installation, history is saved in files (similarly to RcWare Vision). All history data points shall

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have the *History -> Long term – monthly files* attribute and required sampling period set.

File history is the main, default way of a history data storage. It is powerful enough for projects sized about 5000…10000 data points and sampling period of 5 minutes and longer. For larger projects and / or more frequent sampling, where reading from files would lag the system, a powerful database is used. All data are saved to history files too by default. (Data may be copied from files to database at any time using a special utility called Data Pump.) If there is a requirement (e.g. to save disk space) not to save history to the history files anymore (so it would only be saved to the database), select *File history for reading only* in the export dialogue.

File history for reading only -> this option is set in the *Export for Merbon SCADA* dialogue. Consider if it is required to save data both to files and to the database.

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Setup of file history as read-only

Exported filehistoryconfig file in File explorer

After export, the settings can be checked in the file named *projects\[project GUID]\[project GUID.filehistoryconfig]*, which contains the path where history shall be saved. (It is defined at the Merbon SCADA export dialogue.)

3   User policy – schemas, editing

3.1   Extension of read / write rights

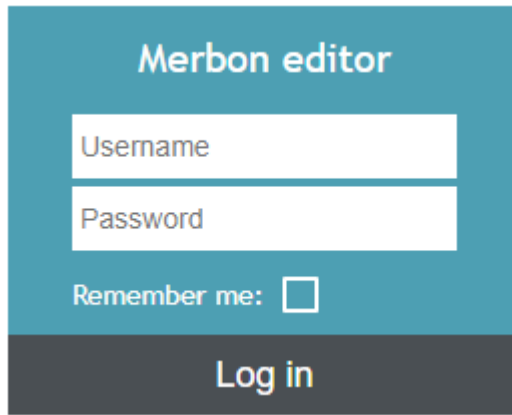Merbon User policy allows setup of user rights at several levels.

There are user rights to:

- Projects
- Schemas (plant graphics)
- Data point groups (as configured and seen in RcWare Vision)
- Read / write -> data points in a particular project
- Data point table / schemas / graphs view

To access projects and schemas, the user rights need not to be specified, as all users are allowed to access all schems and projects. The users only need to have granted rights to read, or to read and write.

All projects are exported and uploaded to the server using the standard way of engineering, see below. Users and groups are defined at the domain server which can be accessed from a web browser at http://localhost:9696. This port number can be changed if necessary.

Enter the credentials which have been entered at the Merbon SCADA installation procedure, and connect to the Domain server.
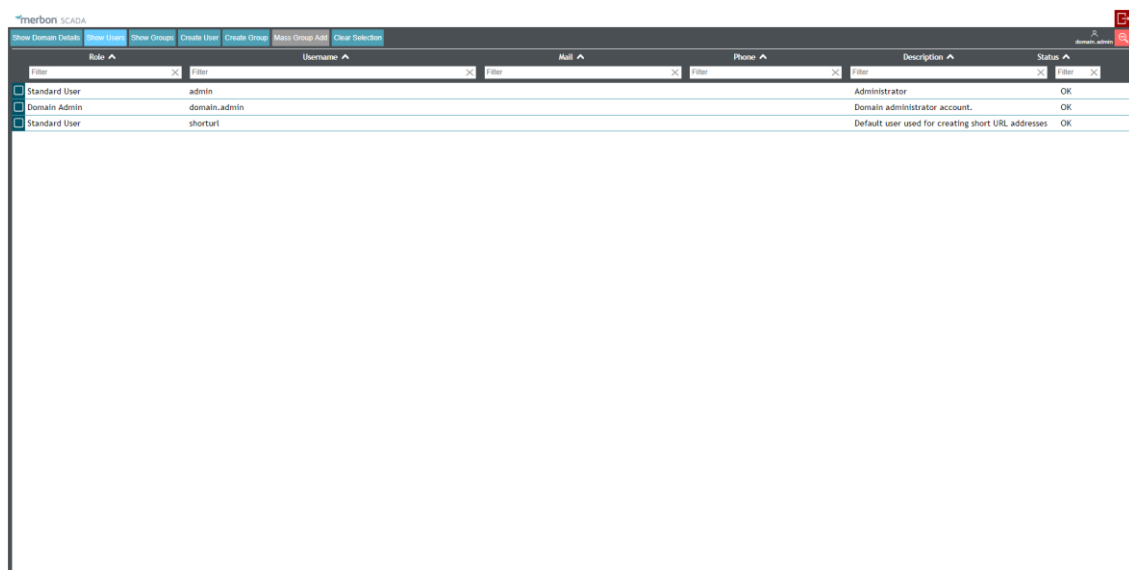
Domain server login

Domain server main page

The exported projects have two groups predefined: *ScadaAdmins* and *AllUsers*.

ScadaAdmins:

- Projects – all
- Schemas – all
- Data point groups – all
- Read / write -> data points in a particular project – **read and write**
- Data point table / schemas / graphs view – all options

AllUsers:

- Projects – all
- Schemas – all
- Data point groups – all
- Read / write -> data points in a particular project – **read only**
- Data point table / schemas / graphs view – all options

New users can be defined by clicking the **Create User** button and attaching them to *ScadaAdmins* and *AllUsers* groups.

A new user must have his user name defined (*Login*), and password (*Password*). The password must have at least 5 characters, containing at least one small character and one numeral. Items *Name, Surname* and *Description* are optional and are used to specify the user in more detail if required.

Definition of a new user in the Domain Server
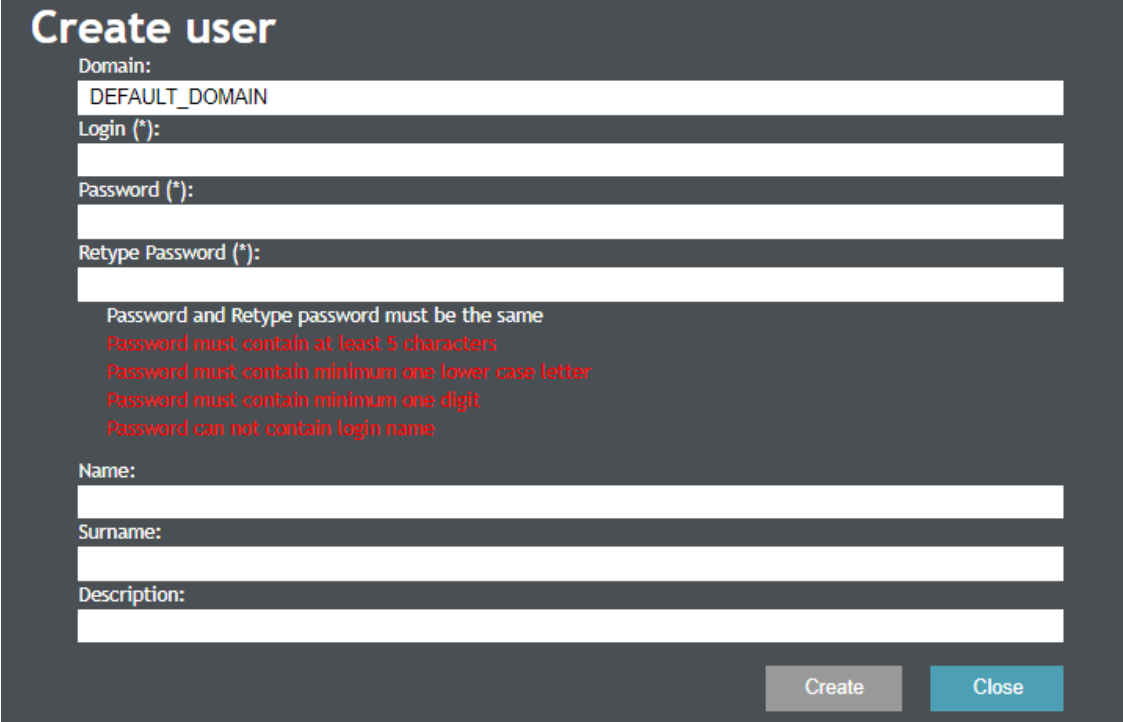
After a new user is defined, it must be assigned to a group to acquire his access rights. This can be done by two ways:

- Add a user to group using the tool panel which is in the *Show users* tab. Go to *Groups* and click *Name* to selct a group. The group will be added by clicking *Add*. All changes must be confirmed by the *Save* button.
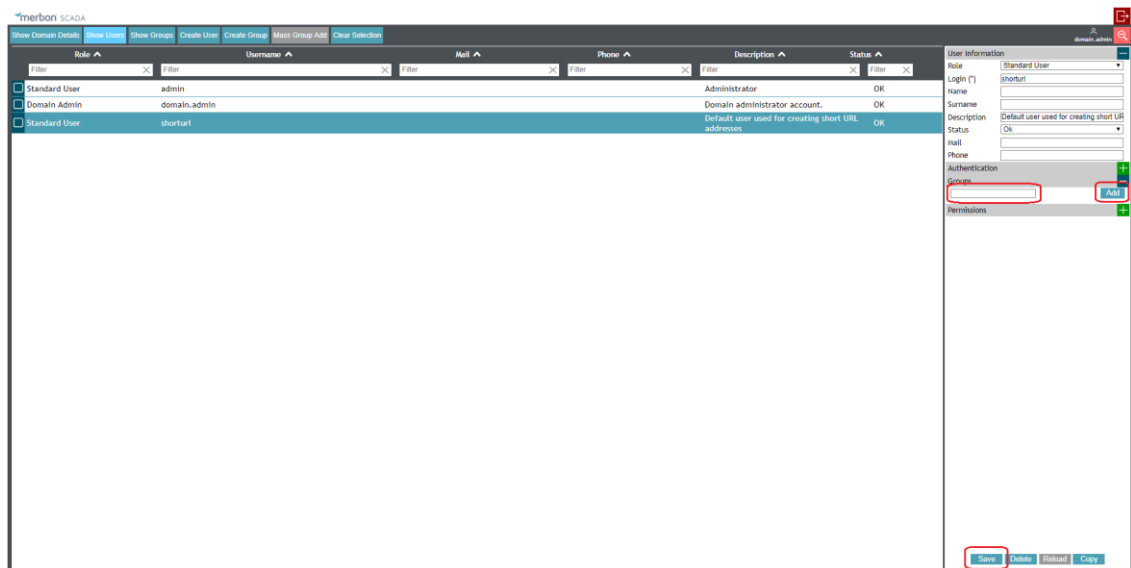
Adding a user in a group in User editor

or

- go to *Show groups* **Show groups**, and click the group the user shall be added to. In the tool panel in *Users* click the *Name* field to select a user. Click *Add* to add the user to group. Confirm all changes by clicking *Save*.
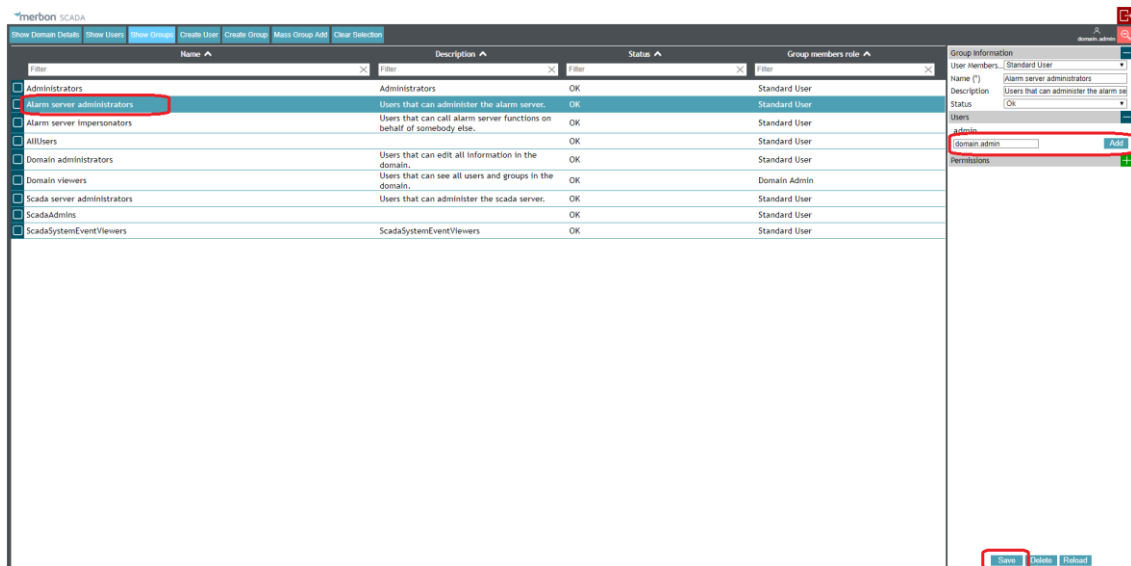
Adding a user in a group in Group editor

Then log in to the Merbon SCADA server to check that the rights were applied correctly.

Login to the Merbon SCADA server

3.2 Export of the definition

After all project parameters have been set in RcWare Vision, the definition for Merbon SCADA must be exported. The export dialogue is in *Settings -> Export to SCADA2*.
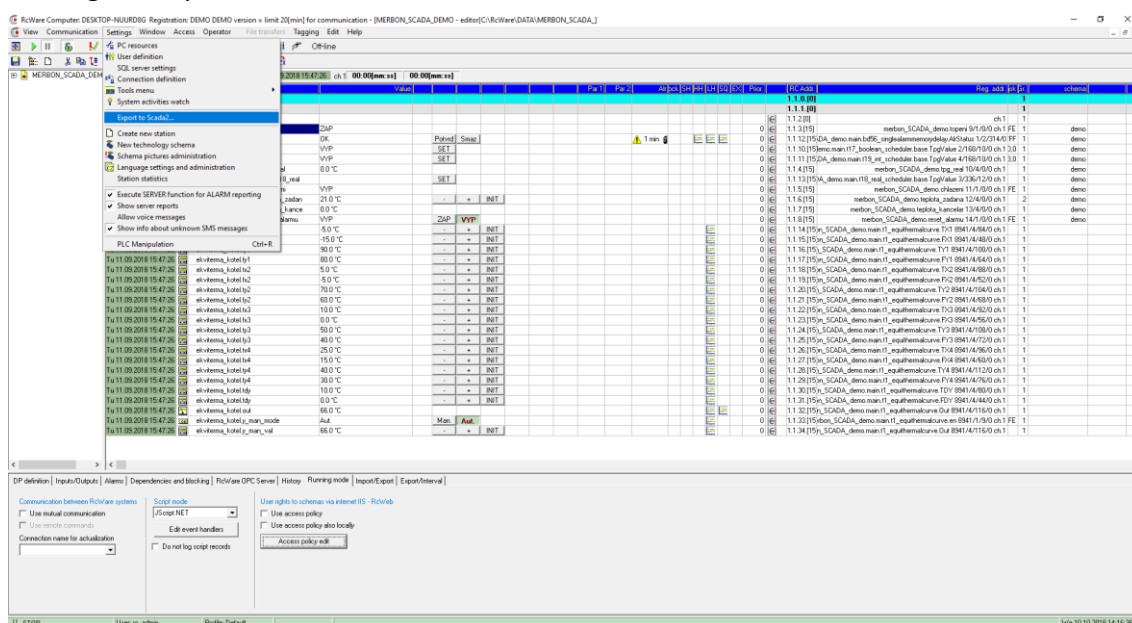
Export to Scada2

3.3 Export dialogue and settings

The Export to Merbon SCADA dialogue is displayed:

Dialogue for Merbon SCADA export

If a project is exported after all necessary parameters have been set up, the dialogue setting is saved for all following exports. The setting also ccan be saved in profiles – use the „Save profile" button in the lower part of the dialogue. A profile can be read and activated using the „Load profile" button.

Dialogue – Basic settings:

- **Path to create SCADA project** – folder where files with Merbon SCADA projects will be exported (folders *cfg* and *projects*)
- **Root alarm path in AlarmServer** – root folder for tree structure of alarm server in a particular project
- **Path for saving text history files** – in case database is not used for history storage. This path is saved in the config file at every project -> projects\(project GUID)\(project GUID).FILEHISTORYCONFIG
- **Leave out check before export** – check of incompatible settings. If you are sure that it is not necessary, it can be left out. Checking of large project takes more time. If there is incompatibility and the project is not checked, the conversion process returns errors and terminates.
  Note: Leaving out check before export can also be useful for more exact specification of an error in the Merbon SCADA server log when attempting to start the service.
- **Create new Station GUID on duplicity (saves file)** – on duplicity, the GUID in the RcWare Vision project is changed as well.

- **Create new schema GUID on duplicity (saves file)** – on duplicity, the schema GUID in the RcWare Vision project is changed as well.
- **Create rights:**
    - Full control [project_name_RIZENI]
    - Alarm operation [project_name_UDRZBA]
    - Read only [project_name_DOZOR]

User groups are created (see 8.2) and exported as far as to the project (*cfg\projects.config*) and schema (*projects\project GUID\schemas\schemas.config*) level and data points.

- **Project domain name** – Domain name at the Domain server. Must be kept as is - „DEFAULT_DOMAIN".
- **Set projects access user rights in projects.config** – this options allows creation of user groups Full control, Alarm operation and Read only in exported projects.
- **Export access policy rights** - Export of rights to schemas and graph templates (predefined view in RcWare Vision).projects\project GUID \schemas\schemas.config
- **Set run for exported projects on SCADA server startup** – always let active. After SCADA server (re)start, projects will start communication to PLCs, which is required in 99 % of installations.
- **Do not export schemas and graph templates** – only the datapoint table will be exported. This is useful if only the datapoint table shall be updated and there are big schemas (plant graphics, floor plans) in the project, which would slow down the export.
- **Export stations separately** – at sites with large number of projects (100+) the projects can not be exported all at once. (RcWare Vision would consume too much resources and Windows would shut it down.) Check this to export projects one after another and save Windows resources.
  Note that if there are projects exported which contain schemas with references to other projects, this option must be NOT checked for successfull export. (= All projects must be exported together.)
- **Export all…** - all projects contained in the DATA folder in the RcWare Vision installation will be exported
- **Export selected stations** – only projects selected by user will be exported.

Dialogue – Communication:
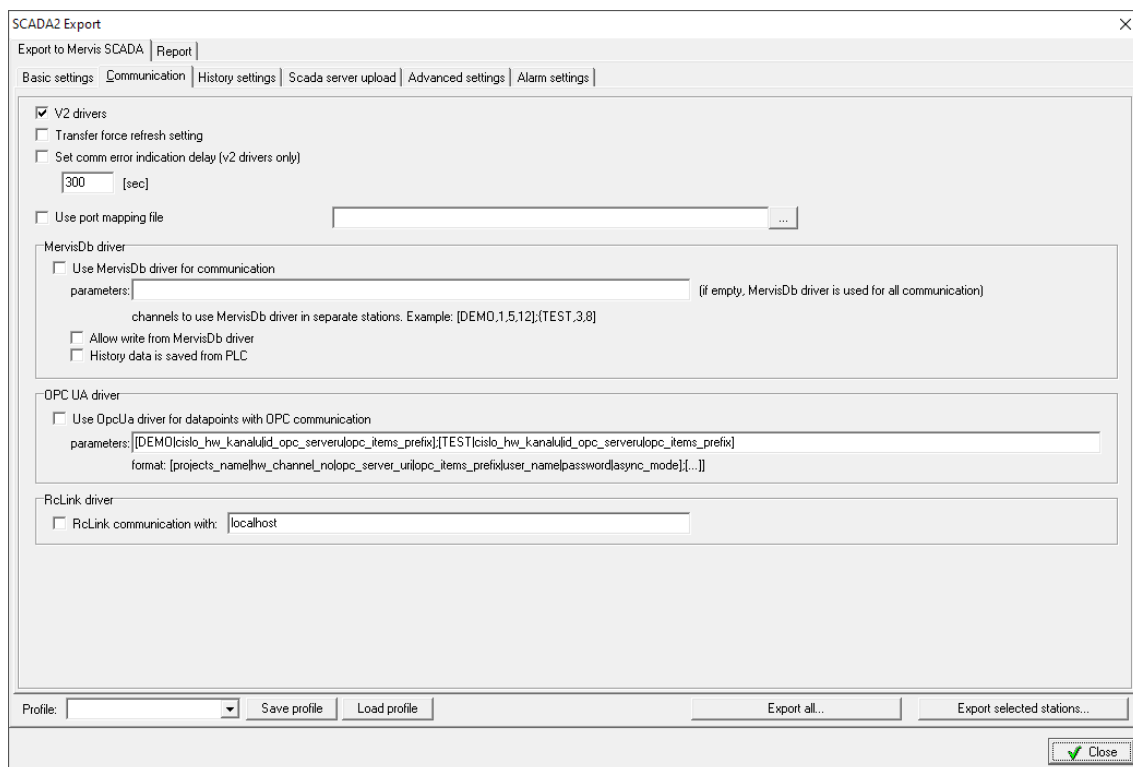
Communication settings

- **V2 drivers** - SCADA used different versions of communication drivers (SSCP, SoftPLC link …) in the past. Now, V2 drivers are used as a standard. For new projects, this option should be checked.
- **Transfer force refresh setting** - For SoftPLC Link: If the driver should take the PC time rather than PLC time for datapoint refresh, this is defined in the communication definition data point in RcWare Vision (Force refresh). Check this to take over this setting from the RcWare Vision data file.
- **Set comm error indication delay (V2 drivers only)** – time delay to indicate communication failure at a data point (caused e.g. by a bad communication line)
- **Use port mapping file**
- **Use Mervis DB driver for all communication** – if the data source for the complete project is a database (the communication with PLCs will not be established at all). SCADA only communicates with the database rather than with PLCs.
  - o Allow writing from Mervis DB driver
  - o History data is saved from PLC: PC actively pushes data to the database
- **Use OpcUa driver for datapoints with OPC communication –** this setting is used for internal testing purposes only.
  Merbon SCADA does not support OPC communication in the current version.

- **RcLink communication with**: SCADA communicates to a running instance of RcWare Vision rather than direct to PLCs. Here, enter the IP address of the server where RcWare Vision is running.

Dialogue – History settings

History settings dialogue

- **Use DB profiles** - use more databases from a single project. Now not definable in RcWare Vision.
- **Force DB saving setting** – check to overwrite the *Save data to selected server* in the *SQL Server setting* dialogue. At the selected points, data will be saved to database.
- **Use datapoint timestamp for saving** – normally, the SCADA server timestamp is used when saving data to database. If this setting is enabled, the datapoint timestamp is used instead.
- **Do not set SQL history when only hysteresis selected** - if there is hysteresis history set in the data file, these data points are saved in database automatically (even if the SQL history tag is not set). To prevent this, check this feature, and only the SQL history tagged data points will be saved to database.
- **File history read-only** - History files can be read, yet not written. Old RcWare Vision history files can be used and copied to the respective Merbon SCADA folder to display trends recorded in RcWare Vision.

- **Use own DB server settings** – overrides the DB server settings as in RcWare Vision. Use this when the database settings should not be configured in RcWare.

Upload to SCADA server dialogue

Scada server upload dialogue

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- **Upload project to SCADA server** – Fill in URL and credentials to Scada server, and upload projects to this server after conversion. The projects must exist on the SCADA server already (= be defined in projects.config), otherwise the upload fails (see chapter 4).
  - **Force project start after upload** – after project upload the project is launched (LocalRun) regardless of its previous state. If unchecked, the project is set to its previous state.
  - **Delete current values files (.datax) on project start** – the .datax file is deleted when restarting. Not necessary to use at version 1.6.6 and later. This option may be useful at older SCADA versions, where the .datax file may contain out-of-date values, and the changes initiated by user would not be reflected in the datapoint table or schemas after the project is overwritten.
    !!!Note!!! If there are user-edited texts in the schemas, the .datax file must NOT be deleted. Otherwise all changes in values made by users during the SCADA project operation would be lost.

Dialogue description – Extended settings (only those settings which now affect the exported project properties are described here)
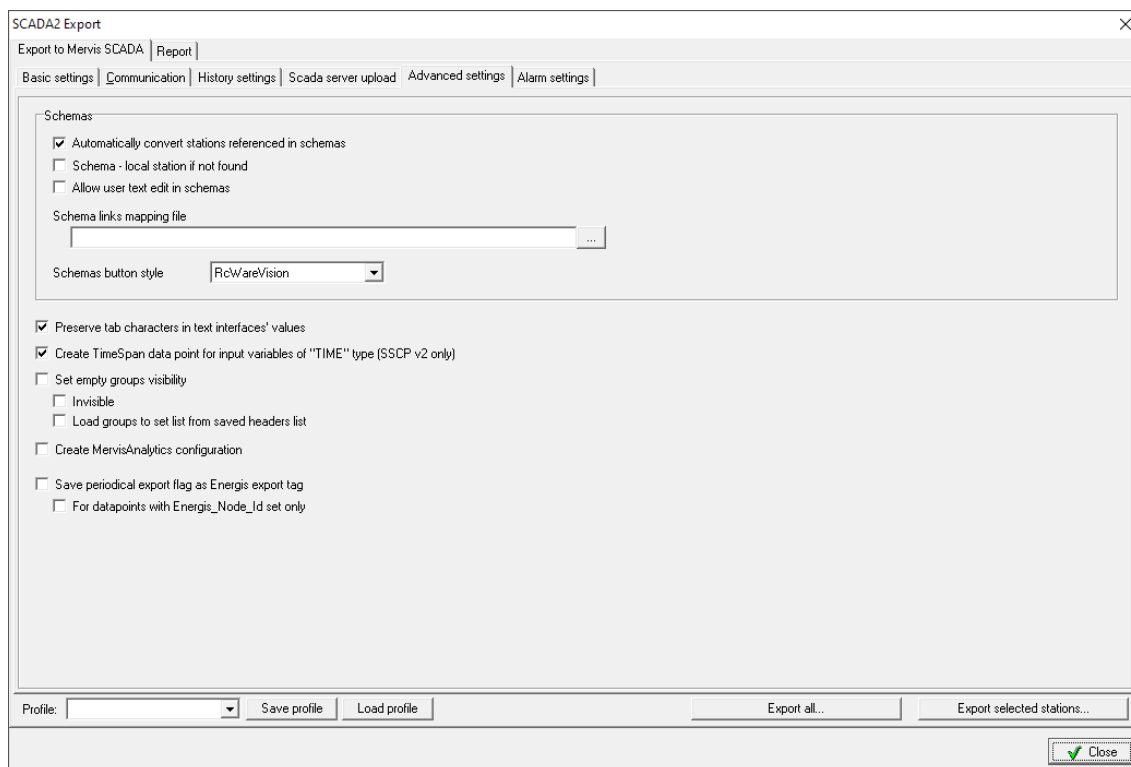

Advanced settings

- **Automatically convert stations referenced in schemas** – this setting is to be let active. If there are references to data points outside of the exported projects in the schemas, connections will be created by exporting .data files from the referenced projects.
- **Schema – local station if not found**: this setting needs not to be enabled at this moment. If a schema contains references to other projects which are not available, the export process tries to find the datapoint in the currently exported project.
- **Enable user text editing in schema** – must be enabled if schemas contain texts to be edited by users when the SCADA service is running (**note** that the .datax files must NOT be deleted when copying the exported SCADA projects to SCADA server).
- **Schema links mapping file**
- **Schemas button style** – style of the default look of buttons in the schemas. There are two options:
  - RcWare Vision – standard look with a 3D effect
  - Mervis – button is displayed as a square which takes over the colours set up in the schema, which indicates if the button is pressed or not.

- **Preserve tab character in text interfaces values** - Fix for a particular case where Tab characters were replaced by space characters unitentionally.
- **Create TimeSpan data point for input variables of TIME type (SSCP v2 only)** – If a TIME value is on a data point input, it will create a TimeSpan data point type rather than take over the RcWare Vision data type
- **Set visibility of empty groups**:
  - **Invisible** – the groups are not displayed in the datapoint table
  - **Load groups to set list from saved header list** – the saved header list to display is loaded.

**Dialogue description – Alarm settings**
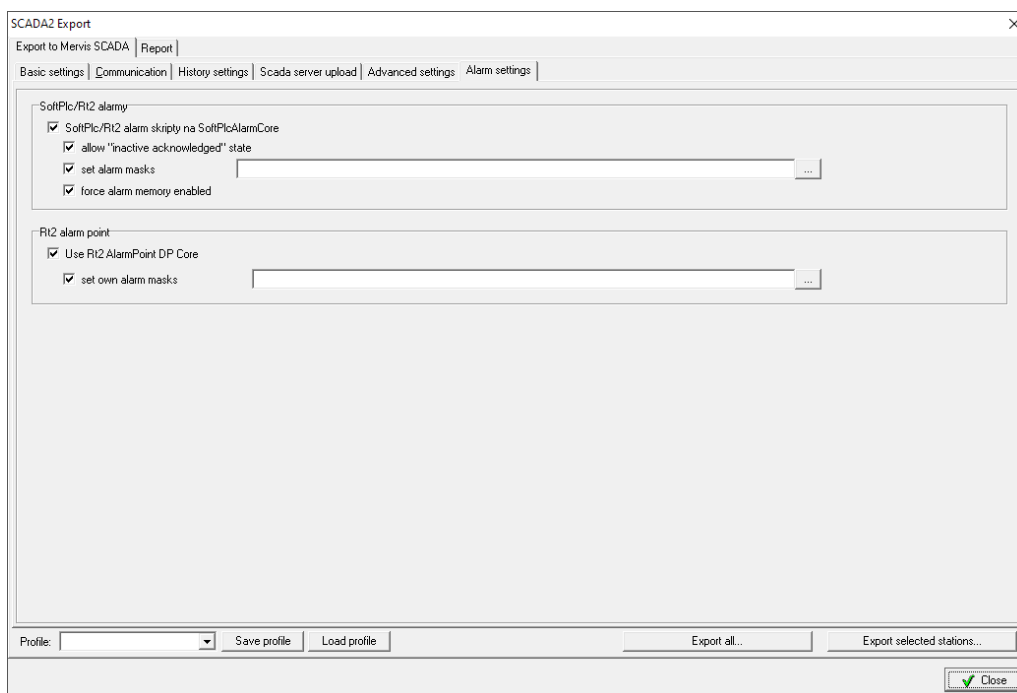
Alarm settings

- **SoftPLC alarm scripts to SoftPLC AlarmCore** - check to use alarm scripts with SoftPLC RT or Merbon RT alarms.
- **Allow „inactive acknowledge" state** check this option so this state (responding Merbon IDE alarm behaviour) will be included in SCADA export.
- **Set alarm masks –** select a file which contains alarms´ state text values. RcWare Vision includes two files with CZ/EN text values responding Merbon IDE alarm settings in folder on path RcWare\Utilities\ScadaConverter\Resources by default. The texts can be customized and translated.
- **Force alarm memory enabled:** „Active alarms" bookmark will include all alarms. This is important setting for correct alarms state icons behaviour as well.

4 Export of SCADA project and upload to Merbon SCADA

If a previous version of a project had been uploaded to the SCADA server before, it is recommended to back it up. See „C:\vision_data\scada\projects".
In the „vision_data" folder there are already uploaded projects.
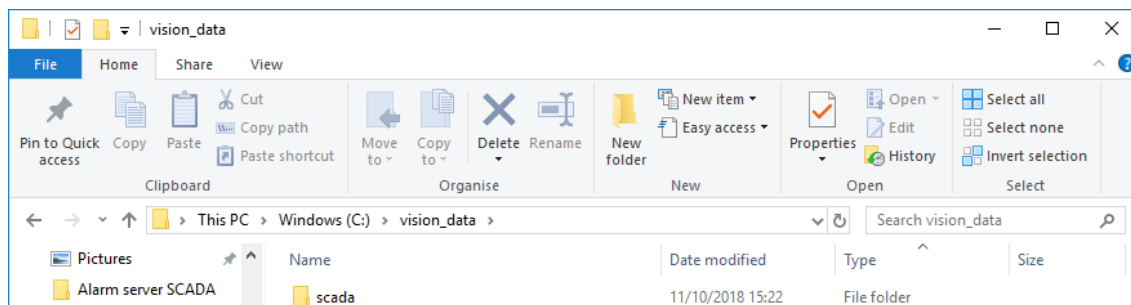

The vision_data folder

Next, open *Settings -> Export to Scada2* in RcWare Vision. In the SCADA2 Export dialog enter the path for project, history files, and access policies, as described above. The export may be executed for selected projects only, or for all projects in the DATA folder. The export process reports the progress in a text window.

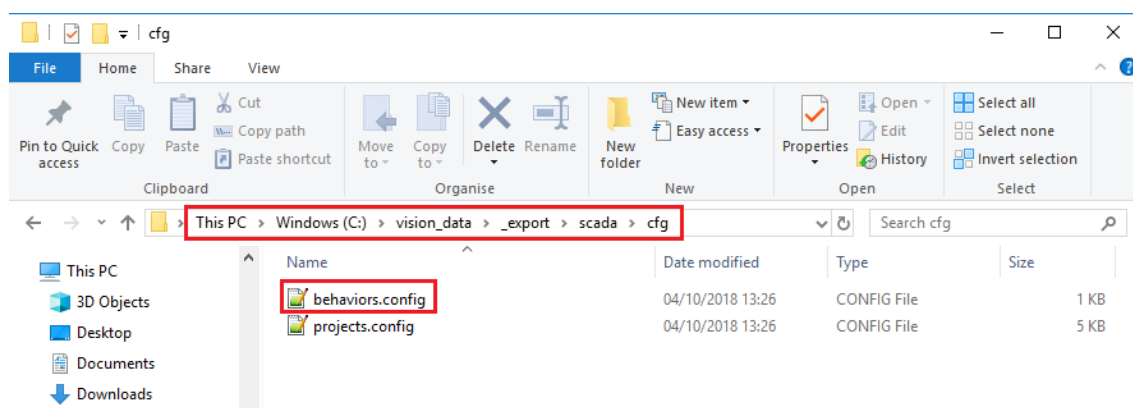*Exported SCADA projekt*

If the export has been executed successfully, the dialogue returns message „*Data exported*". Press Enter to complete the export process.
In the exported folder, the project is in two folders: „*projects*" and „*cfg*". If there have been other projects exported into the same folder before, they can be identified by their unique GUIDs (see 2.5.2) or folder creation date.
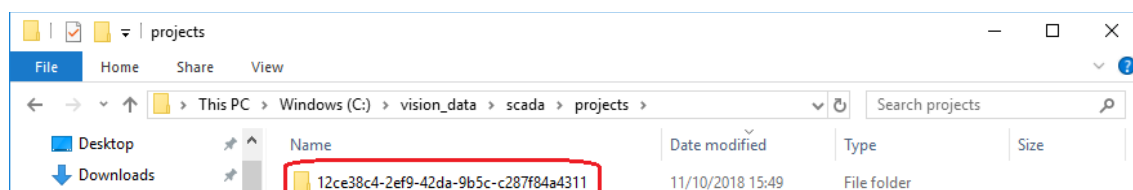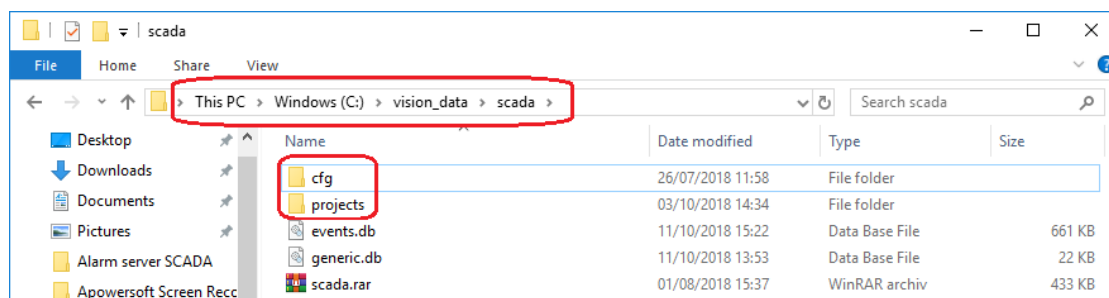
Exported SCADA project

Exported config files

Copy the project folder (*Exported SCADA project* image) to „C:\vision_data\scada\projects" and the configuration files (*Exported config files*) to „C:\vision_data\scada\cfg". The result should be similar to the screenshot below.

cfg and projects folders in vision_data

Then restart the Merbon SCADA service „*Merbon SCADA # MerbonSCADAServer*".

The service can be restarted from the Merbon SCADA installer in the Services panel by clicking the Restart button [ ], or the Stop button [ ] and then the Start button [ ] at the *Merbon SCADA # MerbonSCADAServer* service.

Merbon SCADA # MerbonSCADAServer service in the installer

Another way to restart the service is to open the PC application *Services* and locate the *Merbon SCADA # MerbonSCADAServer* service. Right click the service and select *Restart*.
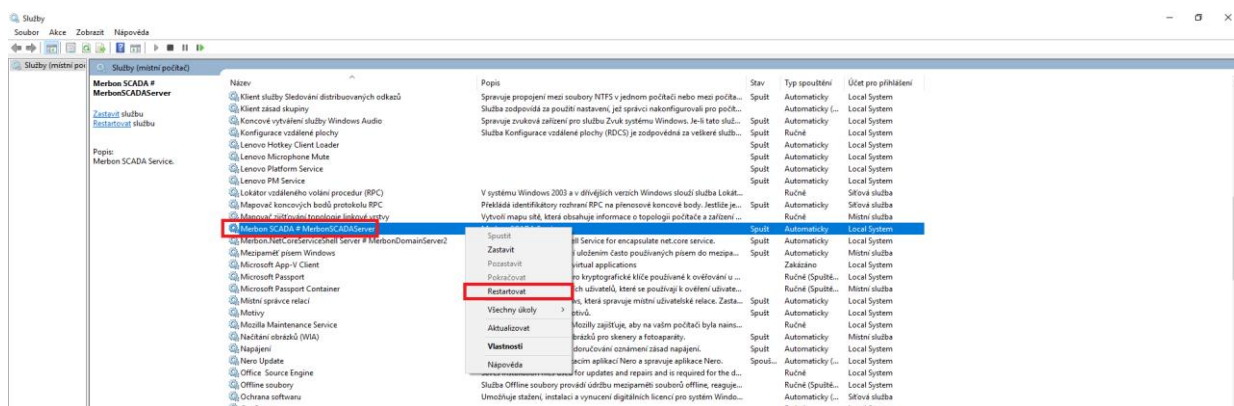
Merbon SCADA # MerbonSCADAServer service in the Services application

Log in to Merbon SCADA to check the user rights policy for every user.

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5 Basic problem diagnostics

- **Service – running/stopped** (list of all Domain Server/SCADA Server services)
  - **Reasons why the SCADA Server service does not start**:
    - Licence problem – listed in the SCADA server log together with the particular problem description (bad HW imprint, licence timeout, maximum datapoint number exceeded)
    - XML error (list in a log where the service is installed or in the command line if launched from a command line)
    - Check the service settings so that it starts automatically after crashing
    - Duplicate project GUID (in case not all projects have been exported or checked)
  - **Service is running, login not possible** – the login attribute is displayed, but login is not possible
    - SCADA server is not responding: big size or number of projects; large projects take more time to start (very big projects take minutes)
    - Wrong username or password: definitely check if the name and password are correct. If you are 100 % sure, try Ctrl-F5 at the login page. If the page contents disappears, maybe the SCADA web server is not running (check in the IIS).
  - **Duplicate binding of TCP port :80 on the SCADA Server web in IIS:**
    - After Windows upgrade, it may happen tat a duplicate binding to port 80 is created in the SCADA server web in IIS. The duplicate binding mist be removed for the SCADA server to work correctly:
    - Start **the IIS Manager**. A shortcut can also be found here: *C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Administrative Tools*
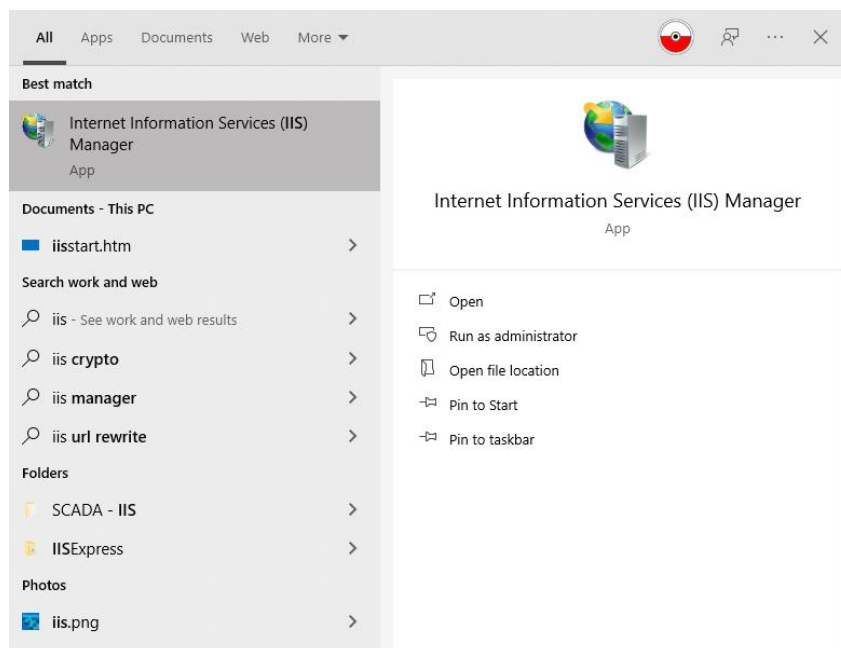
Searching the IIS

- If there is a black square at the web icon, the web is stopped.
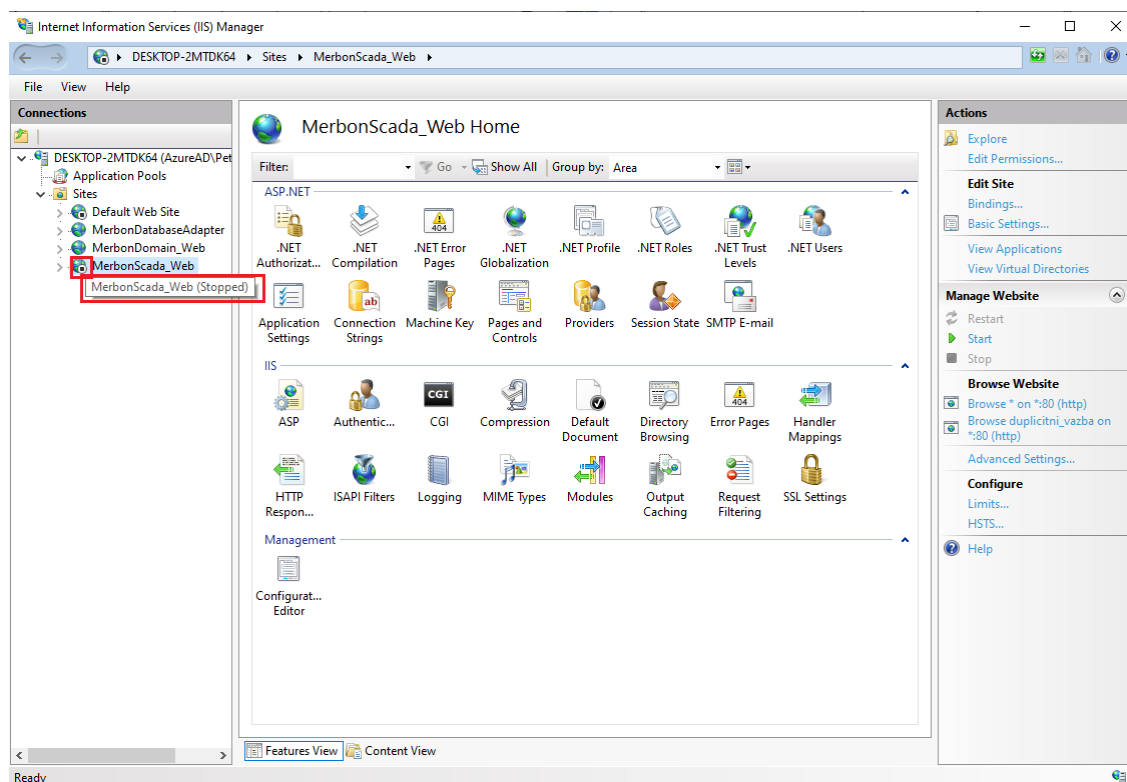
The IIS dialogue

In the *Connections* section, select the MerbonScada_Web, and in the right part select *Bindings*.

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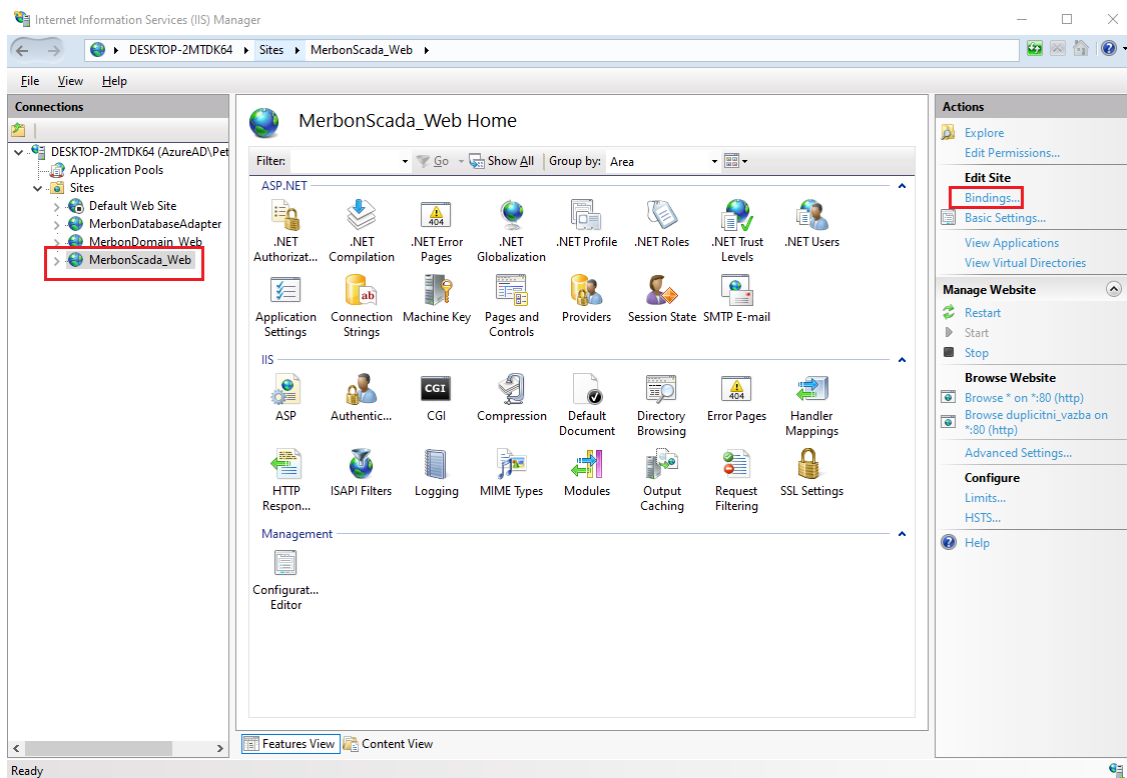
- Now select the duplicate binding and click *Remove*.
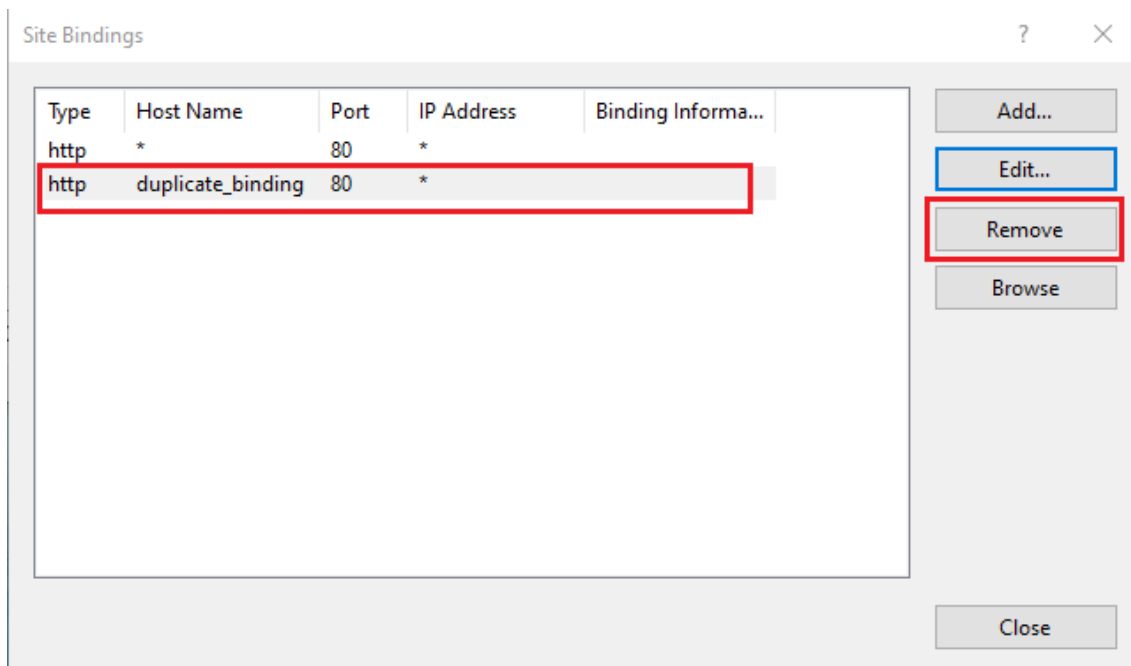
The bindings management dialogue

- The last step is to start the web – *Start*.

07/2022 This document is current for version Merbon SCADA installer 1.8.1.
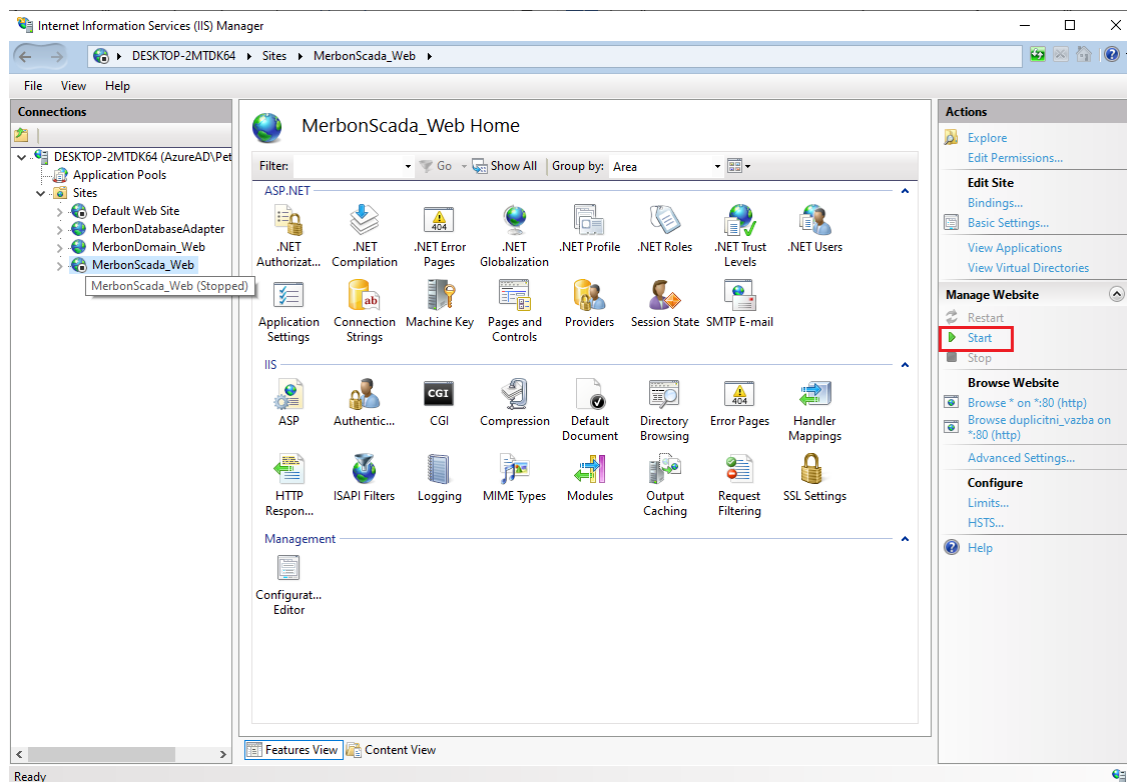
Starting the web service

- **Domain Server not started – user can not log in**
- **A project is not communicating**:
  - ○ Always check if all projects are running in Merbon SCADA after upload: Project statistics (find the projects which need further examination)
  - ○ Check the cfg->behaviors file, if the project with the particular GUID is in the list of projects to start automatically
  - ○ Check of connection – channel +
  - ○ Check in the project statistics the total number of data points, and compare them with licenced datapoints (in RcWare Ctrl-T / Ctrl-U or in the Stations statistics) and learn for how many datapoints the Merbon SCADA licence is installed. The last project which exceeds the datapoint limit is not started. The „number of licensed data points exceeded" message is displayed in log / command line.
- **Some schemas are not visible**:
  - ○ Possible duplicate schems GUIDs - schemas not exported (the project was not checked or warning was ignored). To be checked in the project export folder - have all schemas been exported?
  - ○ User policy set incorrectly (if „Export user policy" checked at export) Check in RcWare Vision for every project concerned.
- **A group of data points is not communicating in Merbon SCADA, while everything is OK in RcWare Vision:**
  - ○ The reason may be that Merbon SCADA communicates using groups. If any data point has a configuration error, the whole group containing

this data point has a communication error. Please check if all data points are really communicating in RcWare Vision even if the group reading is off (setup in the communication data point – the key icon). Only data points which are set up incorrectly should display as in comm failure.

- o Mostly, special data point types show problems, such as TPG, scripts, PLC time setup, etc. A data point may contain a script which is not supported in Merbon SCADA, a TPG may contain invalid exceptions, or the data type may overflow if its value is too high.

- **When exporting alarms from RcWare there is a dialogue „Error during retrieving configuration":**
    - o Check if the alarm export form really contains the correct user name and password. Next, check in Domain server if the user is assigned to the *Alarm server administrators* group (see the Implementation manual).
    - o If the problem persists, stop the *Merbon Alarm server* service and open the folder C:\Apps\Merbon\Alarm Server Warehouse. Open folders *cfg* and *history* and delete all files they contain. Next, start the *Merbon Alarm server* service, restart RcWare Vision and try if the alarm export is working properly.
    - o If the above steps do not help and the export still does not work, reinstall the Merbon Alarm server. Use Merbon SCADA installer to uninstall the Merbon Alarm server service. Then open C:\Apps\Merbon\ and delete all folders which were created by the Alarm server installer:
        - ▪ Merbon Alarm Server,
        - ▪ Merbon Messaging,
        - ▪ Alarm Server Bridge,
        - ▪ Alarm Server Bridge Logs,
        - ▪ Alarm Server Warehouse.
    - o Then reinstall the service and proceed again with the export.

The most frequent errors that can be found in the SCADA server log (*C:\Apps\Merbon\Merbon SCADA Server Logs*):

- **HW fingerprint in the licence does not fit the hardware where SCADA runs** – SCADA server service impossible to start

[Critical] - No valid license found
[Critical] - License module checks: ESG.SCADA.Server.Host ->
System.UnauthorizedAccessException: Incorrect HW Win32_NetworkAdapterConfiguration-MACAddress …

This happens then the hardware information read from the machine does not match the information contained in the activated licence file. The reasons may be as follows:

1) The .licact file used when installing the software was activated with a hardware fingerprint created on another machine than the SCADA server is running.
2) One or more parameters in the system had changed, or a piece of hardware was replaced (processor, network card, motherboard, etc.)

3) SCADA is operated in a virtual OS whose configuration had changed – see above. A MAC address may change when Windows are upgraded, it is recommended to configure a fixed MAC address in the virtual system.

Solution: If you encounter this type of error, please contact Domat technical support. Your licence will be reactivated.

- **Maximum data point number exceeded** – some of the projects are stopped

[Critical] - Data point count limit exceeded.
[Critical] - Cannot load data of project 'MERBON_SCADA_DEMO'. Error: System.UnauthorizedAccessException: Data point count limit exceeded. …

This error appears mostly when the SCADA server wa expanded by one or more new projects, or added extra datapoints to one or more of projects. This resulted in exceeding the maximum number of licensed data points in the system. Check the number of employed datapoints in RcWare or in the project overview in the Merbon SCADA menu (*Statistics*).

Solution: Remove some unnecessary data points from your projects. Remove unnecessary projects. If another system expansion is necessary, contact Domat sales and buy extra datapoints for your licence.

- **Errors in projects.config**

[Error]   - DIAG (SCADA start error) SCADA-service - StartFailed (Error: Loading Projects failed.
| Hodnota GGGroup není platnou hodnotou pro parametr PermissionOwnerType.
| Požadovaná hodnota GGGroup nebyla nalezena)
[Critical] - Merbon SCADA server cannot be started: System.AggregateException: Došlo k jedné nebo více chybám. ---> System.Exception: Loading Projects failed. ---> System.FormatException: Hodnota GGGroup není platnou hodnotou pro parametr PermissionOwnerType. ---> System.ArgumentException: Požadovaná hodnota GGGroup nebyla nalezena. …

[Error]   - DIAG (SCADA after init) SCADA-service - StartFailed (Message: Initialization of Scada server has failed) (Duration: 00:00:09.0870046)
[Error]   - DIAG (SCADA start error) SCADA-service - StartFailed (Error: Loading Projects failed.
| Znak < (šestnáctková hodnota 0x3C) nelze použít jako první znak názvu.: řádek 18, pozice 18)
[Critical] - Merbon SCADA server cannot be started: System.AggregateException: Došlo k jedné nebo více chybám. ---> System.Exception: Loading Projects failed. ---> System.Xml.XmlException: Znak < (šestnáctková hodnota 0x3C) nelze použít jako první znak názvu.: řádek 18, pozice 18 v System.Xml.XmlTextReaderImpl.Throw(Exception e) …

Syntax error in the projects.config file. Most probably caused by manual editing of the file.

Solution: Loading Projects failed – search the mentioned value in the file (here GGGroup) and correct it to a valid value. Initialization of Scada server has failed – the line and position of the error is specified, go to the projects.config file and fix the error. Mostly it is a syntax error.

- **Error in behaviors.config**

[Error]   - DIAG (SCADA after init) SCADA-service - StartFailed (Message: Initialization of Scada server has failed) (Duration: 00:00:09.5008805)

[Error]   - DIAG (SCADA start error) SCADA-service - StartFailed (Error: Loading Behaviors failed. | Znak < (šestnáctková hodnota 0x3C) nelze použít jako první znak názvu.: řádek 4, pozice 6)

[Critical] - Merbon SCADA server cannot be started: System.AggregateException: Došlo k jedné nebo více chybám. ---> System.Exception: Loading Behaviors failed. ---> System.Xml.XmlException: Znak < (šestnáctková hodnota 0x3C) nelze použít jako první znak názvu.: řádek 4, pozice 6 v System.Xml.XmlTextReaderImpl.Throw(Exception e) …

Syntax error in the *projects.config* file. Mostly caused when editing the file manually.

Solution: The error type and position is specified here. Go to the file and fix the syntax error..

- **Error in the project – setting of a particular data point or more data points (wrong channel, misassigned .vlist, etc.)**

[Error]   - Data of MERBON_SCADA_DEMO cannot be loaded: ArgumentException: Unknown Serialization type id 28bbfc1d-9f90-4339-9f9a-8b3ebd3488cd …

The problem originated when editing the project in RcWare.

Solution: Search for the datapoint GUID in the log („28bbfc1d-9f90-4339-9f9a-8b3ebd3488cd" in the example above) in the .data file in the exported project (open in notepad++ or similar editor). This shows the datapoint concerned. Then search this point in RcWare, check and fix possible problems.

If the error in the datapoint is not apparent, contact Domat technical support please.

6 Unsupported scripts in RcWare Vision

Full compatibility of scripts can not be maintained due to different architecture against RcWare Vision. Scripts must be considered individually for each project.

RcWare Vision evaluates scripts in the application GUI. The Merbon SCADA components are running on a server. This means that any interactivity, 3rd parties code integration, etc. are not supported.

RcWare Vision is tolerant to script errors. Components do have more strict supervision, and if a script error appears, the result is undefinable.

Script functions which are not supported in Merbon SCADA:

GetValueFromDialog()

GetParticularData() and other database read functions

GetLoggedUserName()

TimeProgFunc()

SetParameter()

SendSMS()

RunRCInternalFunction()

GetConnectionStatus()

SetUserButtonPressed()

InterfaceAlarmEnabled()

Time functions in scripts now work in the UTC time zone (rather than following the local time). This is because they are processed on the server, and the time zone of the client platform is thus unknown.