ELUTIONS
Automation Platforms

ControlMaestro 2018
Upgrade Guide v1.2

Table of Contents

• A guide to accompany you step by step in updating and migrating your Wizcon and ControlMaestro SCADA applications •

ControlMaestro 2018 1
1. Before upgrading the application 3
1.1. Versions 3
1.2. Application report 4
1.3. Prerequisites 6
2. Upgrading the application to ControlMaestro 2018 8
2.1. Overview 8
2.2. Backup files 8
2.3. Install ControlMaestro 2018 8
2.4. Upgrade the application 9
2.5. Upgrade historical data 13
• 2.5.1 Overview 13
• 2.5.2 Tags and alarms import through data management tool 13
2.6. WebScheduler 14
3. Check the application 15

3.1. Overview 15
3.2. Database (alarms and tags) 15
3.3. OPC 15
3.4. Application language 15
3.5. SoftPLC 15
3.6. Images 16
3.7. Macros 16
3.8. Addons 17

1. Before upgrading the application

1.1. Versions

A **Wizcon™** or **ControlMaestro™** application can be upgraded **from Wizcon 5 to ControlMaestro 2018** according to the following table:

From	Through	Through	Through	To
Wizcon 5	Wizcon 7.61	Wizcon 8.3.2.136	Wizcon 9.4	ControlMaestro 2018
Wizcon 7.0x/7.5x	Wizcon 7.61	Wizcon 8.3.2.136	Wizcon 9.4	ControlMaestro 2018
Wizcon 7.6x		Wizcon 8.3.2.136	Wizcon 9.4	ControlMaestro 2018
Wizcon8.0/8.1/8.2		Wizcon 8.3.2.136	Wizcon 9.4	ControlMaestro 2018
Wizcon 8.3/9.x			Wizcon 9.4	ControlMaestro 2018
ControlMaestro 2008.x/2010/2011/ 2013			ControlMaestro 2015	ControlMaestro 2018
ControlMaestro 2015/2017				ControlMaestro 2018

With version before Wizcon 9.4, the upgrade must be done by several steps using Wizcon 7.61, Wizcon 8.32 and Wizcon 9.4.

Wizcon versions can be downloaded from Wizcon support site to the following address http://support.wizcon.com (Internet explorer should be used).

Elutions' professional services team can upgrade applications running under Wizcon DOS or Wizcon OS2. For any information do not hesitate to contact us.

Please remind following important points:

- On a network, all the stations should have the same Wizcon or ControlMaestro version. Using several Wizcon or ControlMaestro versions over the same network can generate some problems.
- The upgrade process must not be mixed with additional modifications to the applications.

E.g.: If you need to modify the applications, don't do it at the same time you are upgrading. Upgrade first all the stations to the same version and test them.

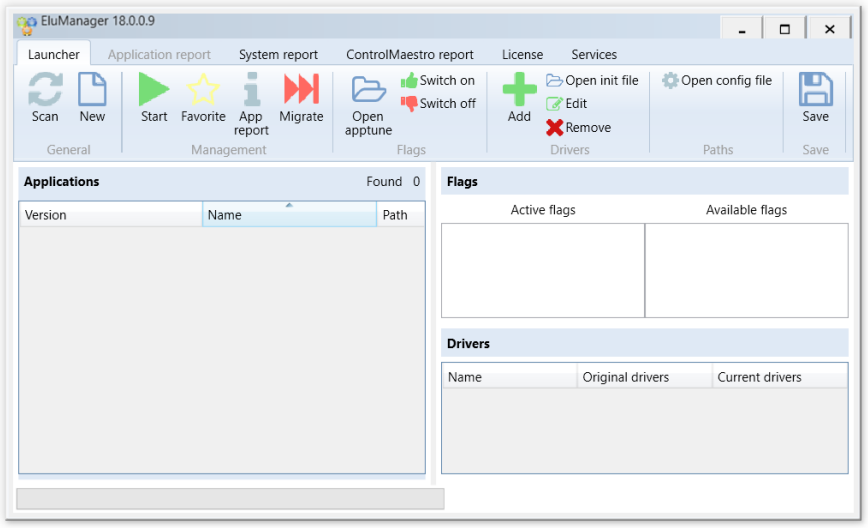
➢ Application can be modified after the full upgrade and testing process.

1.2. Application report

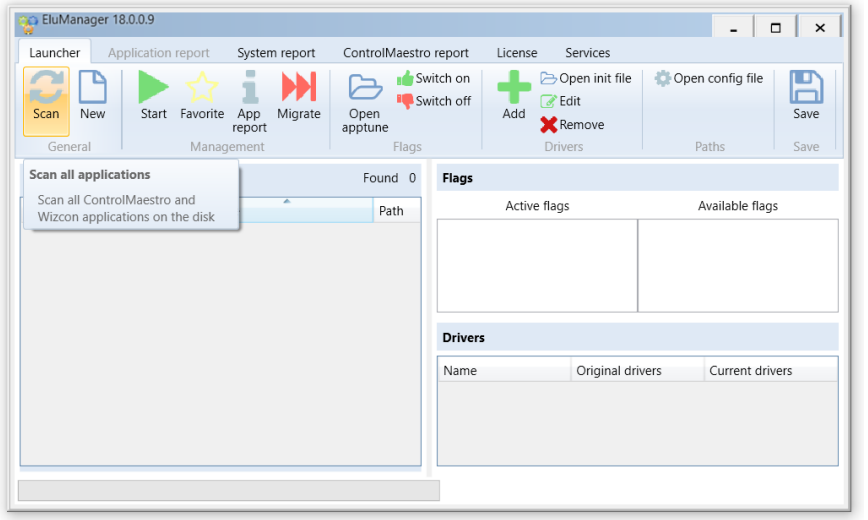
Before starting the upgrade, you can use the "**EluManager Application Report**". The **EluManager** can provide interesting information about the application to upgrade. This will allow you to have an overview of the application including information about critical issues for the upgrade.

To perform the report:

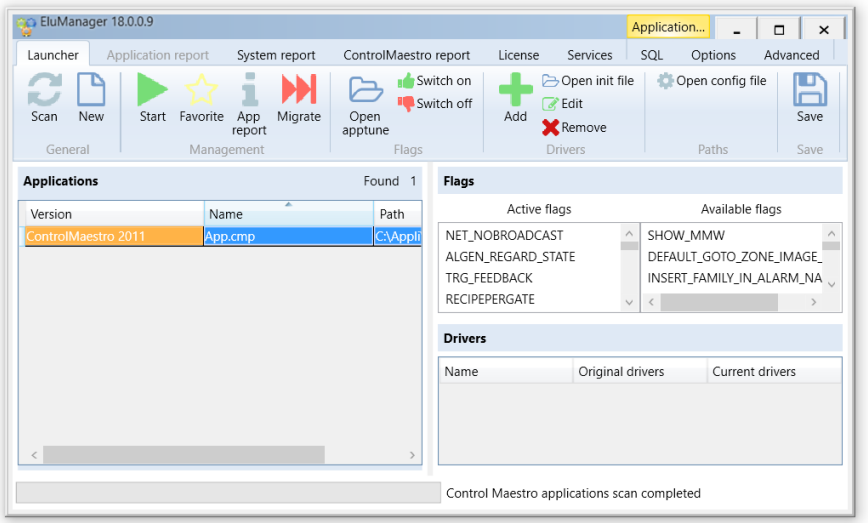
- Copy your application on the computer where CM2018 is installed
- On Wizcfg.dat (or Cmcfg.dat) file, check that all folders are existing
- Start the EluManager by clicking on icon



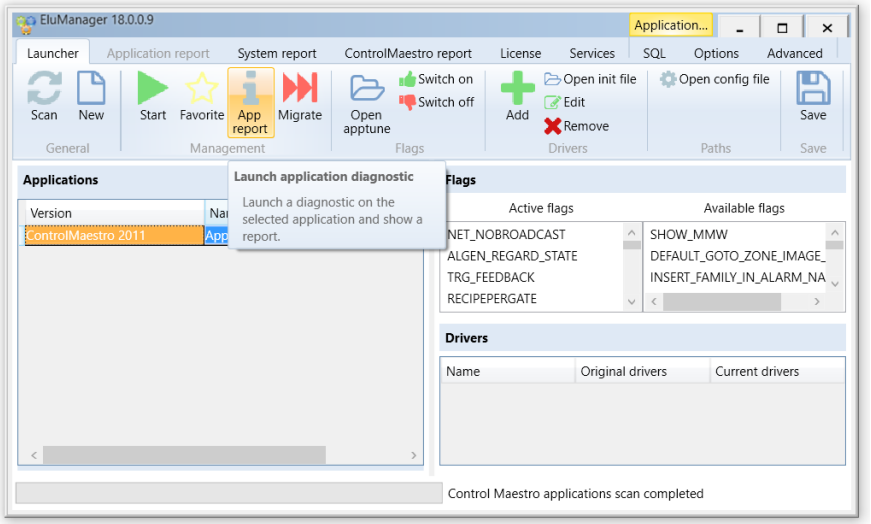
- Scan folders in order to add the application to the list



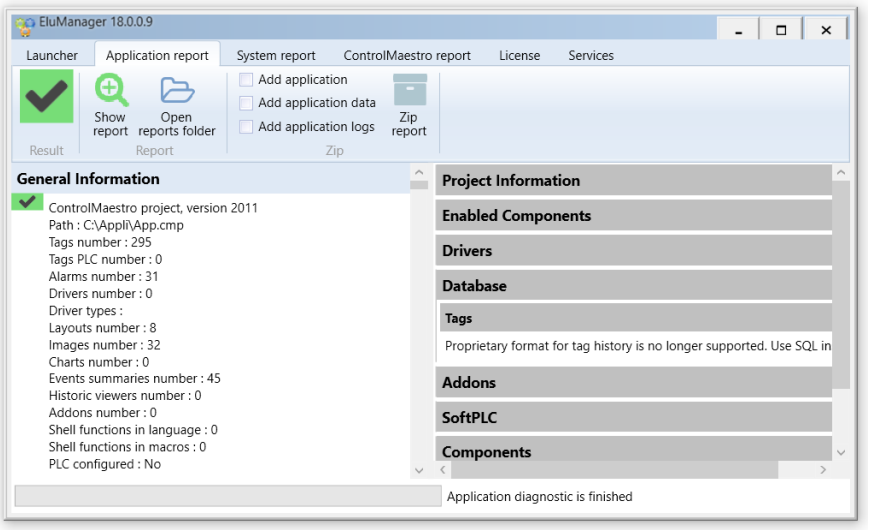
- Select your application



- Click on « App report »

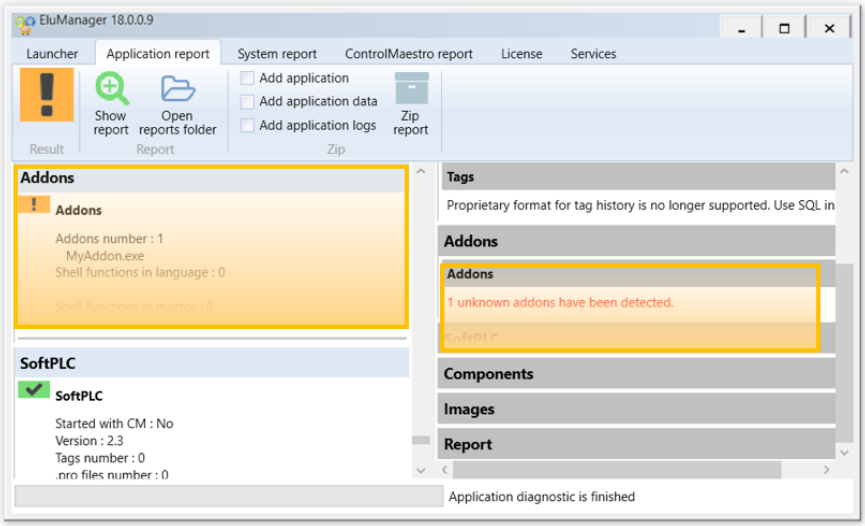


- Open the report thanks to the “application report” menu



A green , orange or red flag give some information about potential problems to upgrade the application.
Green : If the “result flag” is green, no know issue has been detected.
Orange or red : If the “result flag” is orange or red, potential problem has been detected.

More information has been provided inside the report.



1.3. Prerequisites

Before upgrading an application, it is important to take care about the following:

- ✓ Make sure that you have a **development plug**.
- ✓ Make sure that you have all **account information** (the username/password of the application, Windows administrator password…).
- ✓ Make sure that the system can support ControlMaestro 2018 (see **hardware and software requirements** inside ControlMaestro 2018 Release Notes.pdf).

Communication drivers

Custom drivers

If you are using a custom driver, please check if this driver is compatible with the hardware, the OS and ControlMaestro 2018. The driver provider must be able to give this information.
It is recommended to back up the vpiwnxx.dll file (and linked DLL). Driver and linked DLL should be put to the ControlMaestro 2018 system folder.

Other drivers

Drivers installed with CM2018 are following:

- BACnet driver (VPIWNBCN)*
- ELUTIONS Europe, Dummy Driver (VPIWNDUM)
- ELUTIONS Europe, Random Driver (VPIWNRAN)
- Modicon Modbus (VPIWNMR)
- Modicon Modbus TCP/IP (VPIWNMRP)
- OPC Data Access Client (VPIWNOPC)
- OPC UA (VPIWNOUA)
- SIEMENS, SIMATIC S5 & S7 family over TCP/IP (VPIWNSTP)*

*Drivers for sale, please contact your sales representative.

Other drivers can be purchased separately on demand.
Do not hesitate to contact our sales team in order to have more information.

The list of drivers that your application is using can be checked by opening the wizvpi.dat or CMvpi.dat file.

Add-ons

If you are using an addon based on Wizcon's Toolkit, please note that a message will sent to the errors.dat file in order to inform that you are using the old toolkit.

It is highly recommended to upgrade the addon using "CM??" function instead of "Wiz??" function. Addons can be also redesign with our Dotnet toolkit.

Yet, most of the C or VB "Wiz??" functions (Wizcon toolkit) are compatible with ControlMaestro. It is recommended to check if the used functions are still supported or have been changed.

In any case, make sure that the source code is available from add-ons that are used.
VB's addons has also to be recompiled with ControlMaestro compatibility toolkit.

Third party programs

Your application can use some third-party programs like Microsoft Access®, Microsoft Excel®, Micromedia Alert®…
If it is necessary, you can upgrade these programs. Beware about modifications you need in order to keep compatibility between ControlMaestro and these programs.

Plug

Upgrading an application will also need an upgrade of the plug. Elutions can provide upgrade codes (this upgrade is not free of charge). To perform the plug upgrade, the latest RUS utility needs to be used. You can download it from our Elutions web site at the following address: http://support.elutions-europe.com

History files

If history was activated but not in SQL format, you will need to convert your history into SQL. Do the history migration procedure after the end of the upgrade process.

Master/Backup

Previously, in Master/Backup architecture it was common to use the "Update history of primary" option for tags' history and the addon "mbas.exe" for alarms. We recommend with SQL format to use only one database and the "share history files" options.

Obsolete functions

Some function are now obsolete and are deactivated:

- Biometry
- DDE
- Multi Language
- ODBC connection
- PDA
- Replay

- Tag Mapper
- Text Table

Some of these functions could be re-enabled using following parameters into the APPTUNE.dat:

- SHOW_TAG_MAPPER= YES/NO
- SHOW_DDE=YES/NO
- SHOW_REPLAY=YES/NO
- SHOW_TEXT_TABLE=YES/NO
- SHOW_ODBC=YES/NO
- SHOW_MULTI_LANGUAGE=YES/NO
- SHOW_PDA=YES/NO
- SHOW_BIOMETRY=YES/NO

ExcelReporter

ExcelReporter with direct link to ControlMaestro is not supported anymore. Yet, you can use direct connexion to our SQL database.

2. Upgrading the application to ControlMaestro 2018

2.1. Overview

The application should be done with following process:

- Backup files
- Install ControlMaestro 2018
- Upgrade the application
- Upgrade Historical files
- Update Scheduler database
- Check the application.

2.2. Backup files

Backup original application

To back up the original application, you should make a copy of the application folders. To check the list of folders that have to be backup, you can open the wizcfg.dat or (cmcfg.dat) file with notepad.
We advise to keep this backup during the testing period, even if the upgrade seems to works well.

Backup the ControlMaestro system folder

This folder is generally under C:\Program Files(x86)\Elutions. There are several reasons to keep this folder:

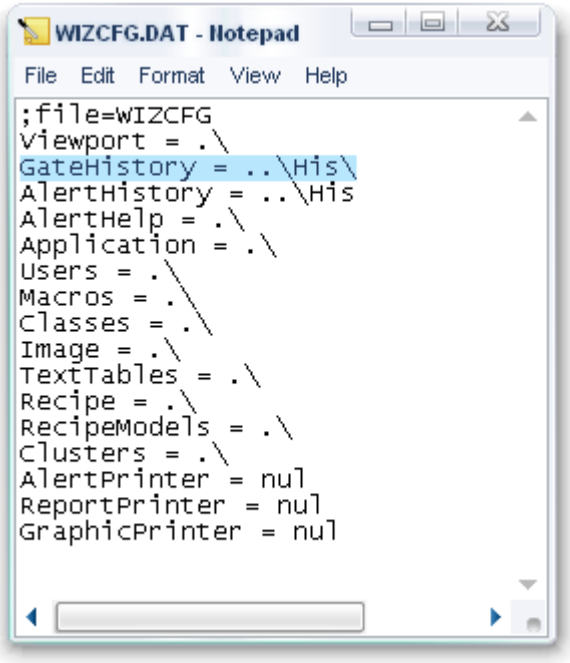
- Custom driver(s)
- Patches
- AAM configuration (email, sms, vocal alarms…)
- Problems during upgrade

2.3. Install ControlMaestro 2018

- Uninstall the old version
- Delete the ControlMaestro “system” folder (C:\Program Files(x86)\Elutions)
- Install ControlMaestro 2018 including SQL Server if needed.

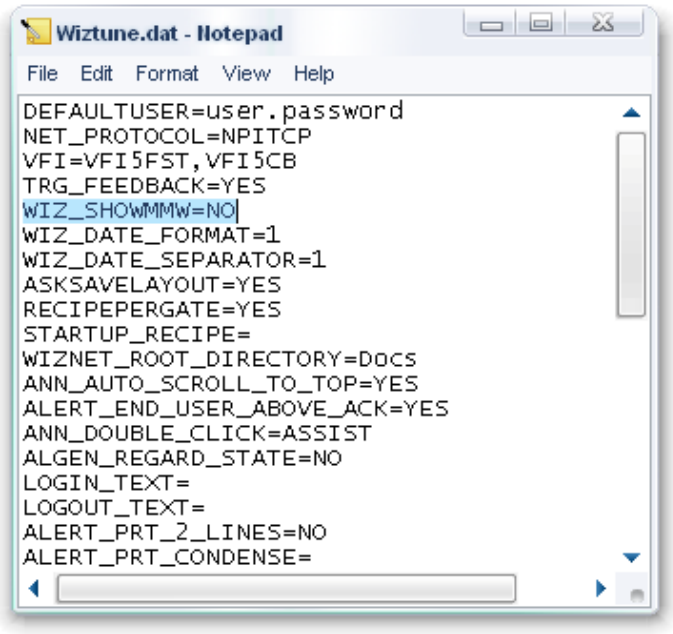
2.4. Upgrade the application

- Check into the wizcfg.dat (or cmcfg.dat) file folders to make sure that they are correct.
- Make sure that no upper level directory structure is used in the path configuration of the file wizcfg.dat (..\ ), see example:

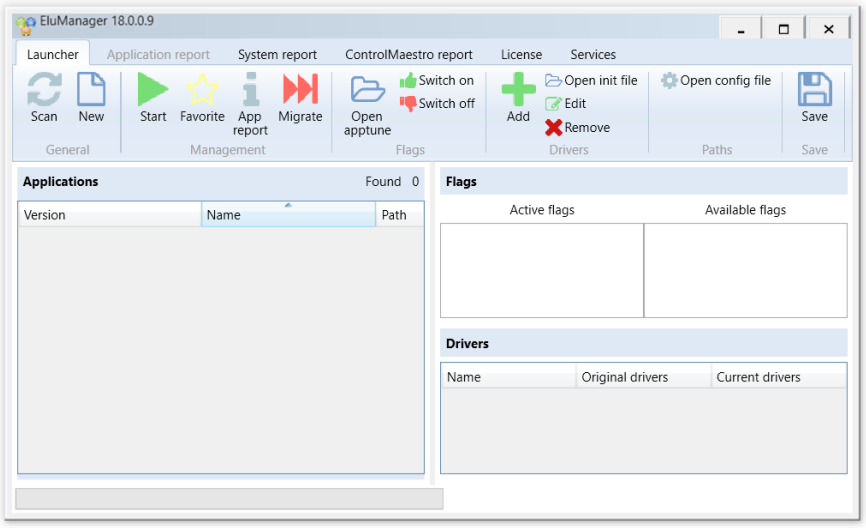


- Check if application has been packed for Runtime plugs. Delete the w2pack.dat/cm2pack.dat file (if it exists).
- Rename (if it exists) the file “wizmenu.dat” to “wizmenu.bak”.
- In order to increase the upgrade speed and in order to avoid serial port problems, you can use a dummy driver without serial port:

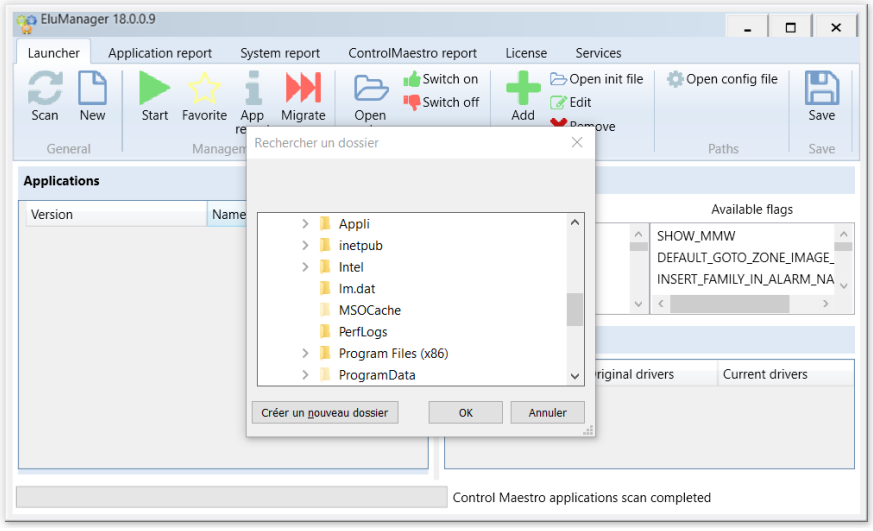
    - In Wizvpi.dat file, replace the G+ W+ A+ options by G- W- A-
    - In Wizvpi.dat file, replace COMx by NUL
    - In Wizvpi.dat file, replace VPIWNxx by VPIWNDUM
    - Backup the Wiztune.dat file
    - Check the Wiztune.dat (or apptune.dat) file (that paths used in there are correct and in case ODBC datasources are used that you can create them with the same name.
    - Open and check the wiztune.dat (or apptune.dat) file.
    - The option WIZ_SHOWMMW must be YES. If WIZ_SHOWMMW=NO, replace NO by YES:



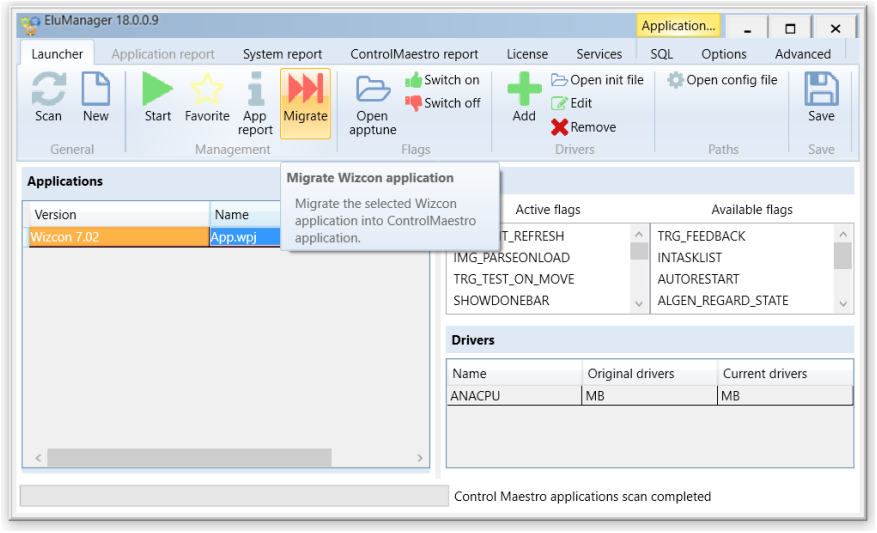
- Start ControlMaestro 2018



- Scan the folder where application (Wizcon 9.4 or higher) has been copied



- For Wizcon applications: Select the project line and click on the icon “Migrate”

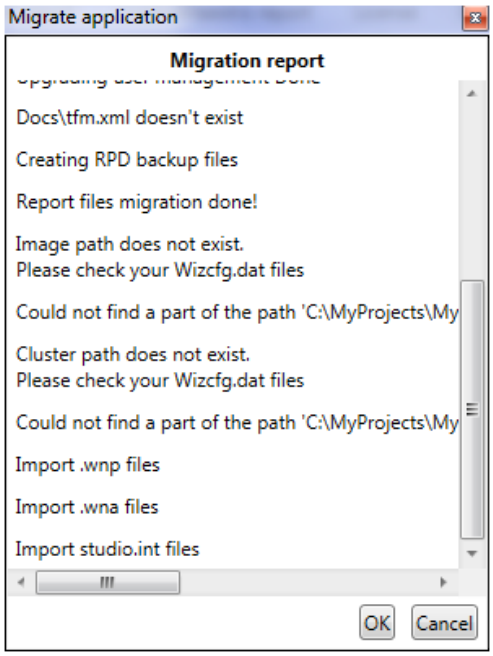


Do not stop the migration process!

In case of error, you can check:

- If the application folder or some application files are Read-only
- If Wizum.mdb and wizdata.mdb are stored in the right folder
- If folders in the wizcfg.dat are corrects

In any case, “App report” can help you to find where the problem is.
At the end of this first step of the upgrade, a migration report is displayed:



- You can now, select the ControlMaestro project and click on the icon “Start” to start the application.

Do not stop this migration process

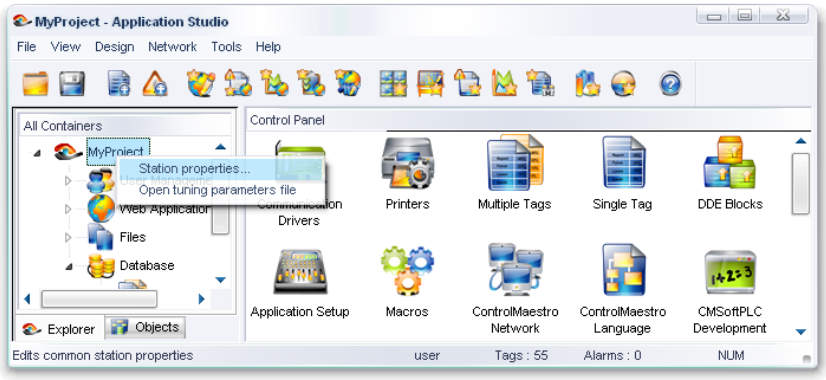
If there is a problem during this period and you need to interrupt the startup, you will experience problems with the application in a later stage. In case you need to start the upgrade process again using the backup, delete the application folder and restore the backup.

- Log the application as User (password).
  A new user named “user” (password =password) has been created if this user doesn’t exist. This user must belong to the administrators group.

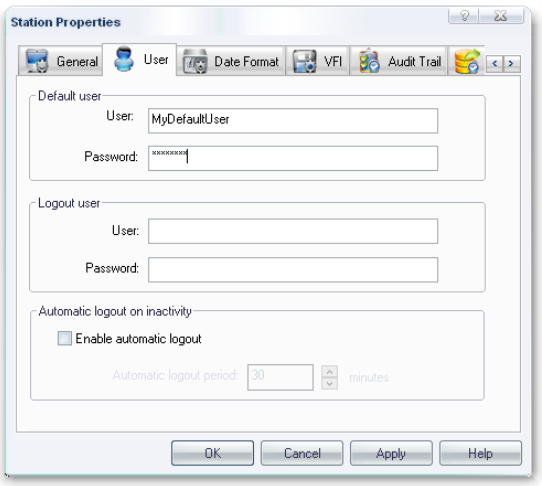
- Assign Administrator group to your application administrator.
  If the application administrator is not the user named ‘user”, you have to add this user to the ‘Administrator’ group, otherwise this user will not be able to access the user management.

- Define the default user.
  The default user password is sometimes now encrypted. You need to reinsert and ‘save’ again this password in order to be compliant with the new version.

  - Select Station properties:

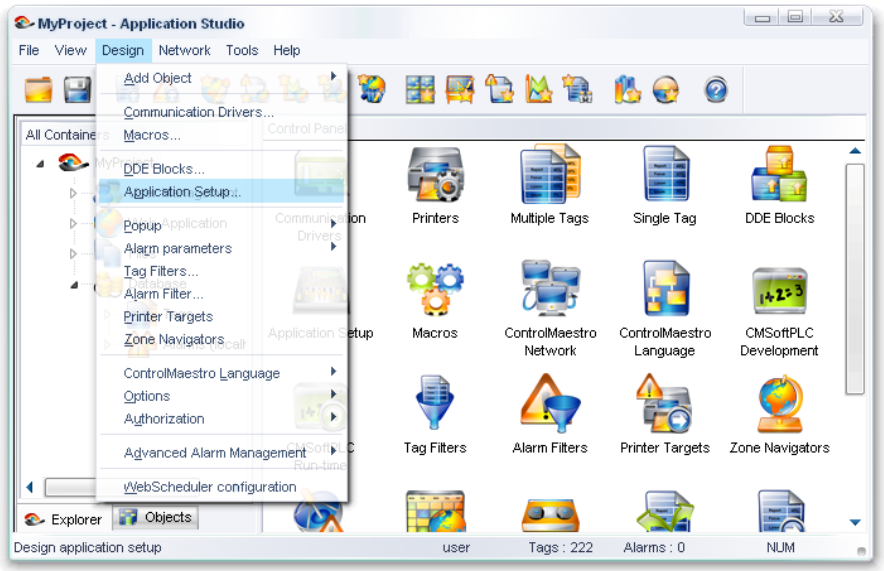


  - Write the password:



- Change the ‘Application setup’ settings if addons or CMLanguage, CMSoftPLC are used, for example:
  CMLanguage.exe (ControlMaestro language) and CMSoftPlcRt.exe (CMPLCruntime) are now stored (by default) in the x:\Program Files\Elutions\ControlMaestro\ControlMaestro\bin and ControlMaestro\cmSoftPLC\bin” folder.

- Check these filename and folders to Design/Application Setup dialog box:



- Stop the application.
- Restore communication parameters to CMVPI.DAT file (the new Wizvpi;dat file).
- Clean the application folder.
  Delete *.bak, errors, errors.dat, groups.dat, lrm.dat, Wizgates.dat, WizGates.mdb, users.dat, users.bak files if they exist.
- Printer definition.
  You need to define printers. The old system using direct LPT port is not supported.

2.5. Upgrade historical data

2.5.1 Overview

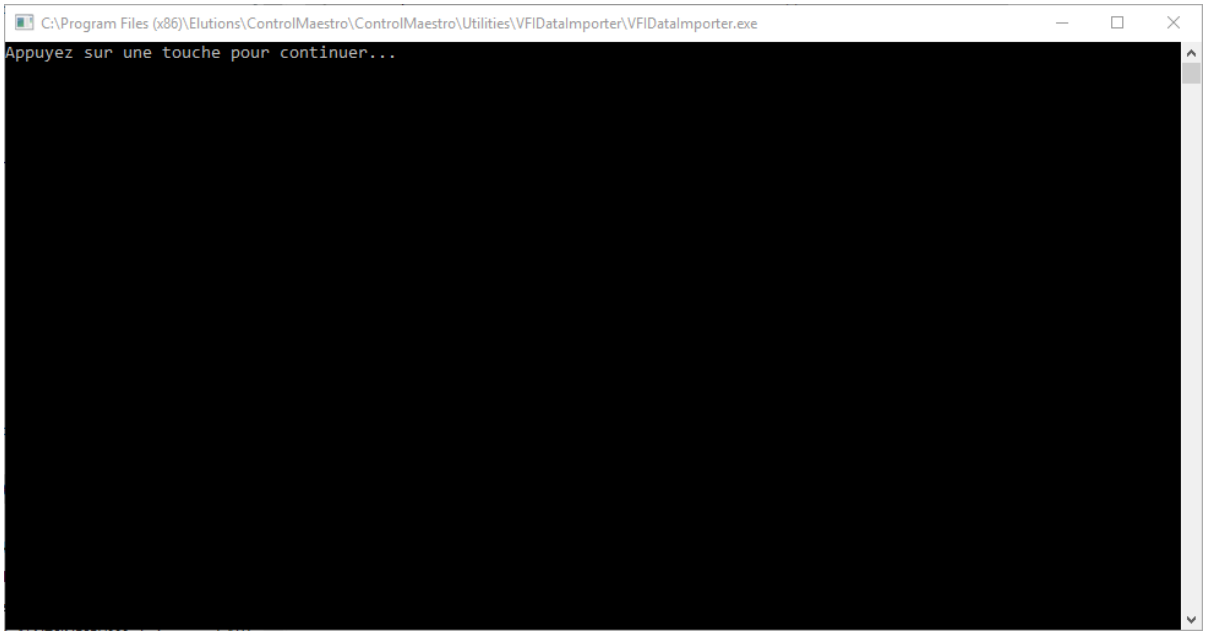
Since ControlMaestro 2015, alarms and tags have been recorded to SQL database, it is possible to import old historical data to SQL database.

2.5.2 Tags and alarms import through data management tool

When SQL format have been correctly setup to the application, the VfiDataImporter (C:\Program Files (x86)\Elutions\ControlMaestro\ControlMaestro\Utilities\VFIDataImporter) tool can be used to import old historical data as follow:

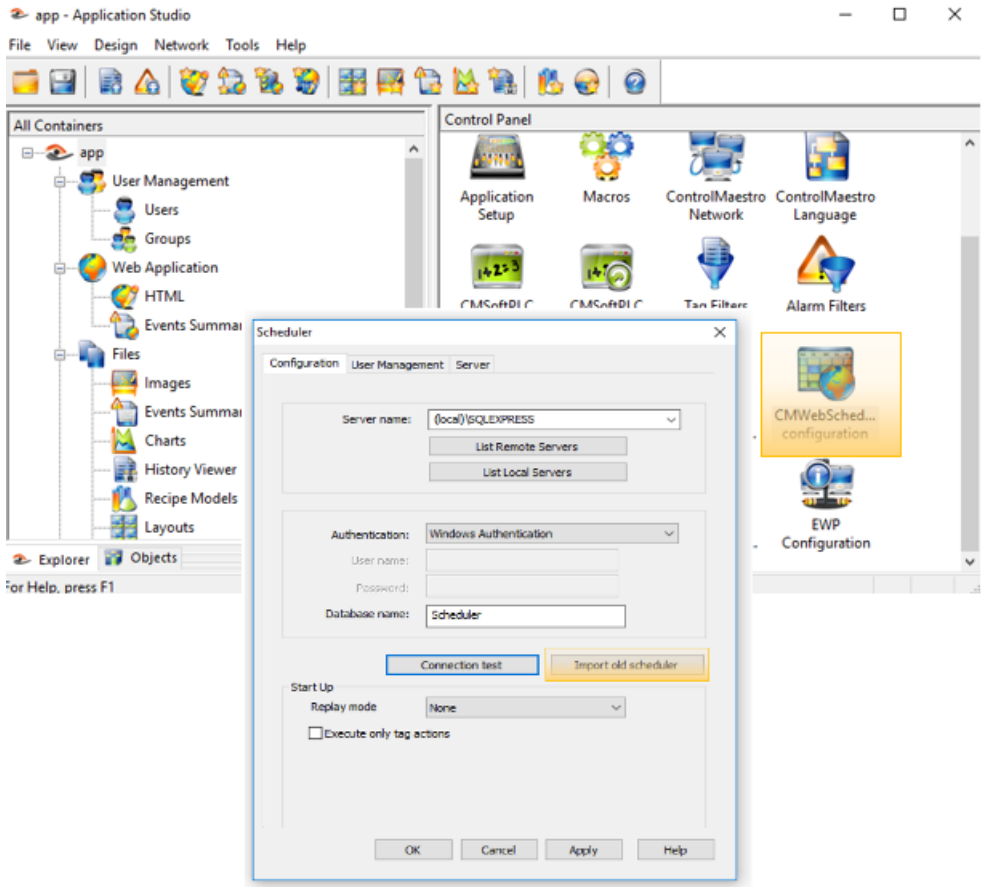
Copy all the history files you want to migrate on the computer where your SQL Server is configured.
Copy the VFIDataImporter.exe and VFIDataImporter_Conf.ini on the same computer.
If your SQL Server is distant to your application, copy the .dsn files situated in your application folder.

Open the VFIDataImporter_Conf.ini and configure it as describe in the file.
Run the VFIDataImporter.exe



2.6. WebScheduler

The WebScheduler should be upgraded to the new version.
To upgrade the database, open CMWebScheduler configuration dialog box, and click to “import old scheduler” button.



3. Check the application

3.1. Overview

After the upgrade, the application should be fully tested. Following chapters, highlight some important points that have been checked.

3.2. Database (alarms and tags)

- Check group definition
- Check alarm texts. If alarm texts are missing then do the upgrade process again from scratch.

3.3. OPC

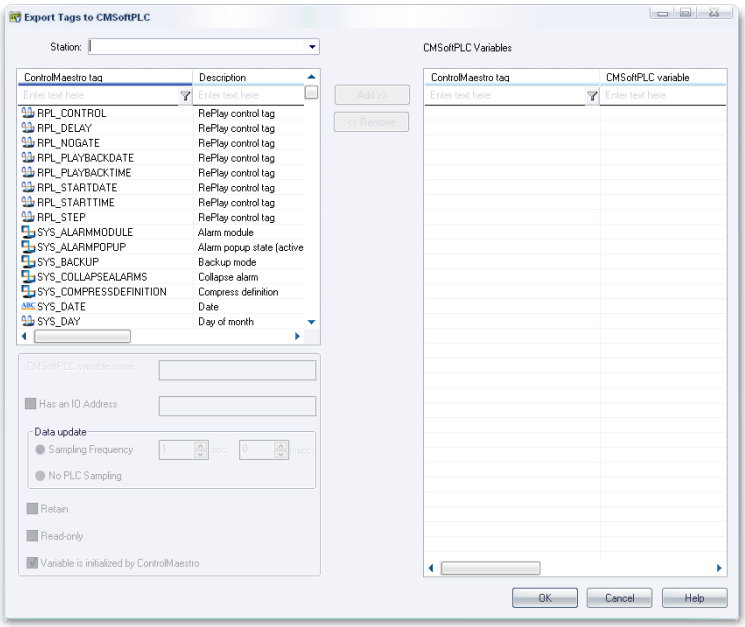
- Add .00002 at the end of the OPC tags as this is the item value in newer OPC version (as of OPC 2.0).
- Check if there are macro's used to replace long OPC addresses.
- Take care about the Wizcon OPC server name. The OPC server name has been changed.

3.4. Application language

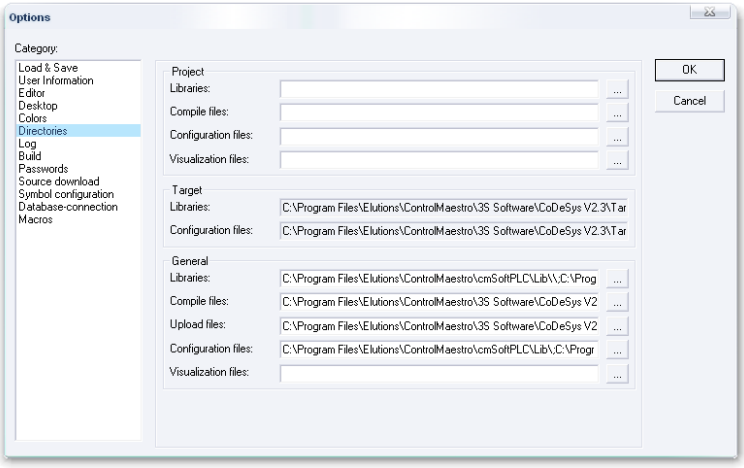
- $GROUPS is not yet supported.
- You need to take care about the path used in EXIST or SHELL functions.
- It is possible to replace system Tags like $DAY, $MINUTE… by @SYS_DAY, @SYS_MINUTE. "$" systems tags are still supported.

3.5. SoftPLC

- Convert to CMSoftPLC 3.0 version with the CMSoftPLC converter tool.
- Use the TagExport tool in the Studio to export the CMSoftPLC tags.



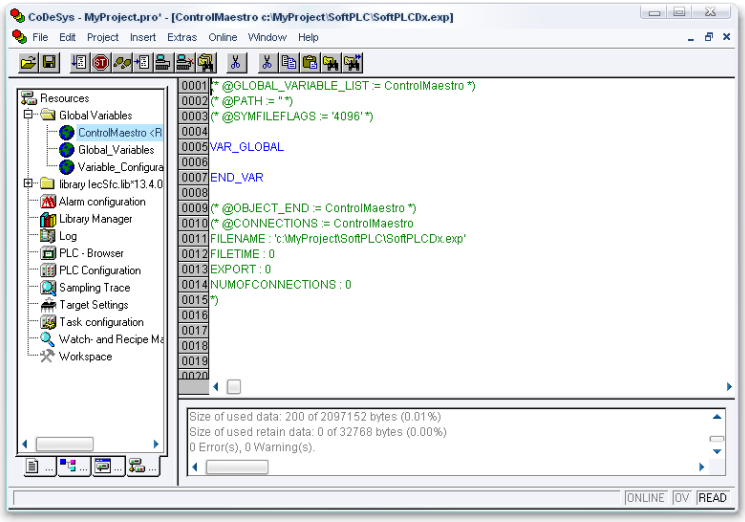
- Compile the project and change the Directories if necessary, which can be done from the Project -> Options:



- Create a new Bootproject.

- Keep in mind that in the New CMSoftPLC version some libraries are in a different location and that some FB's have been put in other libraries or are not used anymore.

- If CMSoftPLC was already used in Wizcon then the global variables "Wizcon(R) " need to be removed manually.



- Change the 'shutdown on ControlMaestro exit' mechanism if used.

3.6. Images

- In the Wizcon versions 8 and 9, layers have to be associated to groups. In case no objects are visible from an image after an upgrade then set the image in 'edit' mode and check in case layers are used that groups/users are assigned to the layer(s).
- The basket.dat file has to be deleted. Otherwise an image crash can happen.
- Check the text alignment. If this is not correct, use the ImageTextSettingsTool.exe.
- This tool can be found under the folder "ControlMaestro\Utilities\Image Tools" and has different settings to be checked which one works best.

3.7. Macros

- In the direct login macro, you need to define the password.
- You have to take care about the path folder in a macro command.

3.8. Addons

- Some old Wizcon API's are not supported anymore.
- According the add-on design, you can have some compatibility problems.
- This is the case if the add-on uses direct Wizcon file access, user management, printer management…

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Our solutions are scalable to any industry

Test **ControlMaestro** for free through our Demo version.
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