

# MICROS Materials Control

## Changes in Version 8.8.30.4.1550

**micros®**  
Materials Control

Product version **8.8.30.4.1550**

Document Title:	<b>Changes in 8.8.30.4.1550</b>
Author:	Joerg Trommeschlaeger
Department:	Materials Control
Date:	31.03.2015
Version No. of Document:	1.1

## Table of Contents

<b>INTRODUCTION</b>	<b>3</b>
BEFORE INSTALLING .....	3
DEVELOPMENT ENVIRONMENT.....	3
<b>INSTALLATION.....</b>	<b>4</b>
1) <b>CUSTOMIZED FILES.....</b>	<b>6</b>
2) <b>NEW CLIENT 8.8.30 INSTALLATION .....</b>	<b>8</b>
3) <b>UPDATE CLIENT &gt; 8.6.6.10 INSTALLATION .....</b>	<b>13</b>
4) <b>UPDATE CLIENT &lt; 8.6.6.10 INSTALLATION .....</b>	<b>14</b>
<b>CHANGES:</b>	<b>16</b>
I. <b>LICENSE MANAGEMENT.....</b>	<b>17</b>
5) <b>LICENSE DEFINITION .....</b>	<b>17</b>
II. <b>GENERAL CHANGES.....</b>	<b>22</b>
6) <b>NUTRIENTS &gt; CATALOGUE LICENSING .....</b>	<b>22</b>
7) <b>USER &gt; PASSWORD ENCRYPTION.....</b>	<b>24</b>
8) <b>DB UPDATE &gt; LANGUAGE IMPORT.....</b>	<b>25</b>
9) <b>SCHEDULER &gt; WINDOWS SERVICE RIGHTS .....</b>	<b>26</b>
10) <b>REPLICATION &gt; SUBSIDIARY PASSWORDS.....</b>	<b>27</b>
11) <b>SOFTWARE REQUIREMENTS .....</b>	<b>27</b>
12) <b>HHT DEVICES &gt; PPT 88XX.....</b>	<b>27</b>
13) <b>MCWEB V8.30.XX.....</b>	<b>28</b>
14) <b>POSWEBSERVICE.....</b>	<b>28</b>
15) <b>REPORT BUILDER .....</b>	<b>28</b>
16) <b>CRYSTAL REPORTS 2008.....</b>	<b>28</b>
17) <b>LONG FIELDS REPLACEMENT .....</b>	<b>29</b>
18) <b>ORACLE PRIVILEGES .....</b>	<b>29</b>
19) <b>ORACLE 10G .....</b>	<b>30</b>
20) <b>ORACLE 11G &gt; VARIOUS.....</b>	<b>30</b>
21) <b>64-BIT OPERATING SYSTEMS .....</b>	<b>30</b>
22) <b>MICROSOFT OFFICE 64-BIT .....</b>	<b>31</b>
23) <b>MICROSOFT WINDOWS XP .....</b>	<b>31</b>
24) <b>MS .NET FRAMEWORK.....</b>	<b>32</b>
25) <b>CENTURA SQLBASE END OF SALES 12/2011 .....</b>	<b>32</b>

# Introduction

This document will describe the changes implemented in the version 8.8.30.4.1550 of Oracle's Materials Control.

- All new installations of Materials Control must be done using this or any later version.
- New installations using older versions are no longer supported.
- The Order Entry department in Neuss is no longer able to generate new license code files (ETC.DLL) for new customers, but still the software needs to be ordered at OE in Neuss.
- Existing license code files (ETC.DLL) can be extended.
- Fixes and patches will be delivered for the version 8.8.30.4.1550 and higher only.

This version contains minor adjustments and fixes in various areas as well as the removal of the dependency on ETC.DLL carrying the license information.

Please read this document carefully and follow the described steps.

There is no "undo" for this update!

## Before installing:

Please ensure that there are no more open inventories before starting the update!

All Shipment Invoices must be closed and booked before starting the update. The old Shipment Control module no longer available after this update!

Make a backup of the Client Installation Master. Please make a backup of all customized files (e.g. reports, SQL.INI, FMLOGIN.INI, C\_\*.QRP, etc.).

## Development Environment:

With version 8.6.6.30 the entire development environment was upgraded. Materials Control is using Gupta (former Unify) Team Developer 6.0.

As a result of that some points should be considered:

- a) Install Routine:  
The entire install routine has changed. This will be explained in detail [below](#).
- b) Report Writer:  
This version requires a newer version of the Report Writer. Please see the details in the related [chapter](#).

## Installation:

**Ensure that you have all rights (read/write/delete/create) on the PC's directory structure.**

The application will be delivered in one single package.

How to install the new release?

Unzip the 150330\_MC\_Full 8.8.30.4.1550 package. When using WINZIP (or similar) select the option "Extract to here"

1. A new folder "150330\_MC\_Full 8.8.30.4.1550" will be created
2. Run SETUP.EXE to update the existing application. The details of the installation process are explained in the manual "MC Application Installation 8.7.20"  
Please read this document carefully in order to ensure a proper installation.
3. After installing the first client start the application
4. Go to System > Database Update
5. Run Database Update (will be updated to DB version 15.50)
6. Run Reorganization
7. Run SETUP.EXE for all other clients

**NOTE 1:** When starting the installation process, the application will check for the correct MICROSOFT .NET version.

In order to run Materials Control at least version 3.5 of .NET Framework is required. The installation cannot be finalized if this could not be located on the PC.

**NOTE 2:** In certain cases the SETUP.EXE asks for a reboot of the PC after installation/update. This is a controlled message and the reboot is absolutely required then.

This chapter will explain in detail ...

- How to install an application client for Materials Control Version 8.8.30.xx
- How to update an existing application client of Materials Control Version 8.6.6.10.xx to a higher patch level
- How to update an existing application client of Materials Control < Version 8.6.6.10.xx to the current version
- Handling of customized files like e.g. SQL.INI, FMLOGIN.INI, customized QRP templates, etc.

The installation routines for Materials Control version 8.6.6.10.xx and higher have been adjusted. The application is delivered in one single package. Patches within the actual version will be delivered in one single package which can be installed upon the matching release version.

These packages will be named like shown below:

- 150330\_MC\_Full 8.8.30.4.1550

Explanation of the naming:

- 150330 This is the creation date of the build, here March 30<sup>st</sup> 2015
- MC\_Full This shows the type of the package.
- 8.8.30.4.1550 This is the exact version of the package.
  - Main Version 8.8
  - Sub Version 30
    - Patch level 4
  - Database Version 1550

The installation / update process will be started by executing SETUP.EXE.

This is a complete installation package for new client installations.

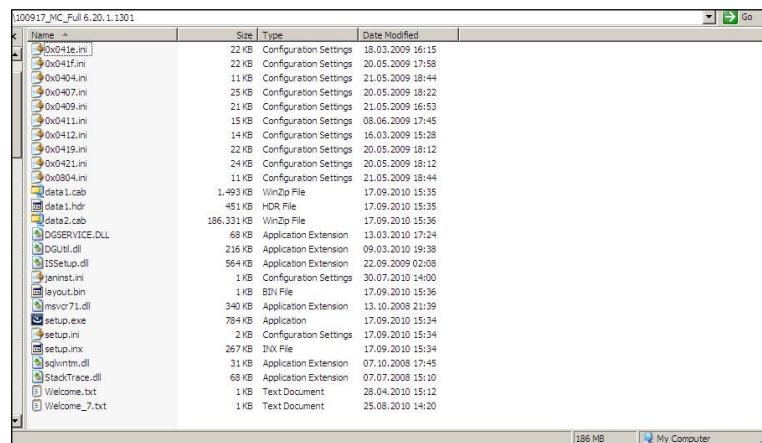
- ⇒ E.g. 150330\_MC\_Full 8.8.30.4.1550
- Must be used whenever installing a new client
- Must be used to update to a new main version (e.g. 8.6.6.10 > 8.8.30)
- Can be used to update any version or as patch update regardless of the version of the installed application client

## 1) Customized Files:

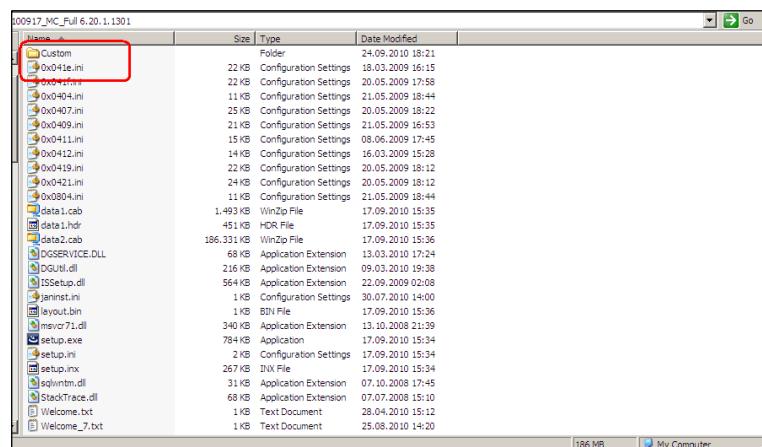
For every installation or update there are usually several customized files which should be copied to the client application during the installation process automatically. The install / update routine is using compressed CAB archives. These will be extracted during the install shield process.

In order to include customized files into the installation process the following is required:

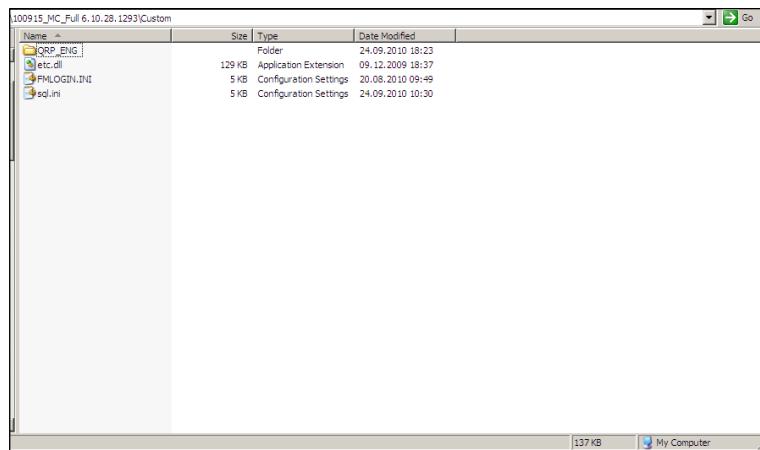
- Open the directory where the install routine was extracted to:



- Create a new subfolder named “Custom”



- All customized files should now be copied into this folder:



Make sure that you use the same directory structure as in the normal client installation directory.

- QRP files must be copied into the QRP folder inside the Custom folder.
- RPT files must be copied into the RPT folder inside the Custom folder.
- FMLOGININI, SQL.INI must be copied to the root of the Custom folder.

During the install / update process the install shield will copy the content of the custom folder into the client application directory.

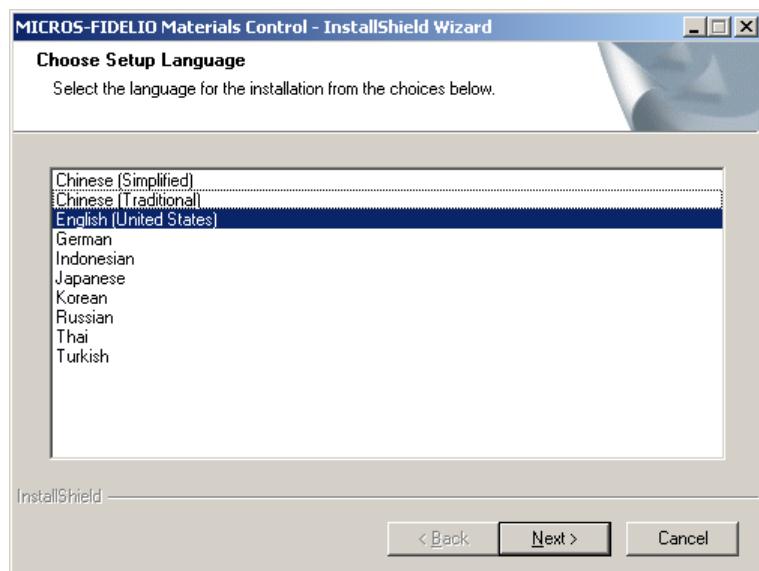
## 2) New Client 8.8.30 Installation:

This chapter will explain the installation of a new client application version 8.8.30.xx.

How to install the new release?

1. Unzip the installation package, e.g. 150330\_MC\_Full 8.8.30.4.1550. When using WINZIP (or similar) select the option "Extract to here"
2. A new folder "150330\_MC\_Full 8.8.30.4.1550" will be created
3. Run SETUP.EXE to start the installation process.

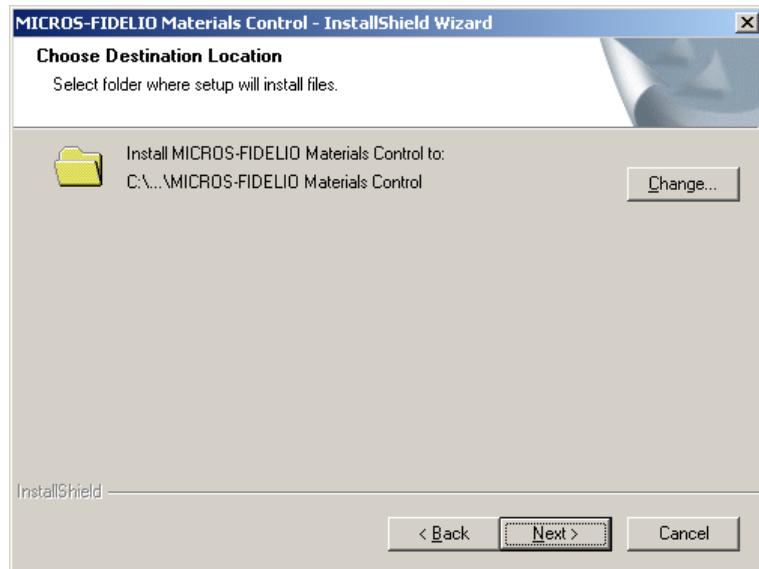
First select your preferred installation language please:



Click "Next" to continue:

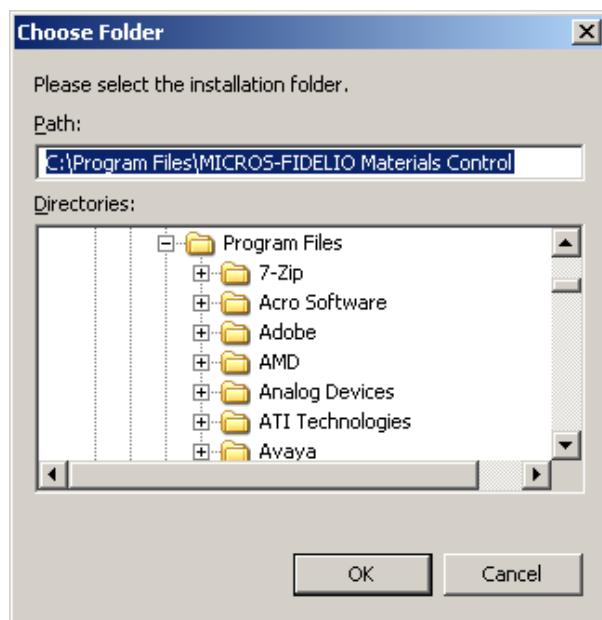


Click "Next" to continue:



Here the installation directory could be adjusted. By default the install shield will offer to install in:  
 C:\Program Files\MICROS-FIDELIO Materials Control\

This could be adjusted to the local needs by click on the button “Change”:



Define the required path and click on “OK” to continue:

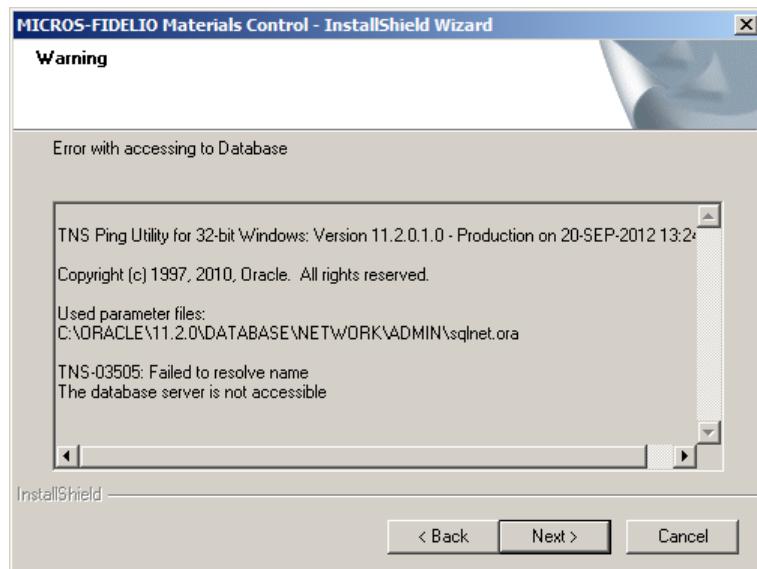
Now the SQLNet connection name must be entered:



This name can be found in the TNSNames.ORA / SQLNet.ORA file of the Oracle client installation, defined as e.g. SERVICE\_NAME / SID.

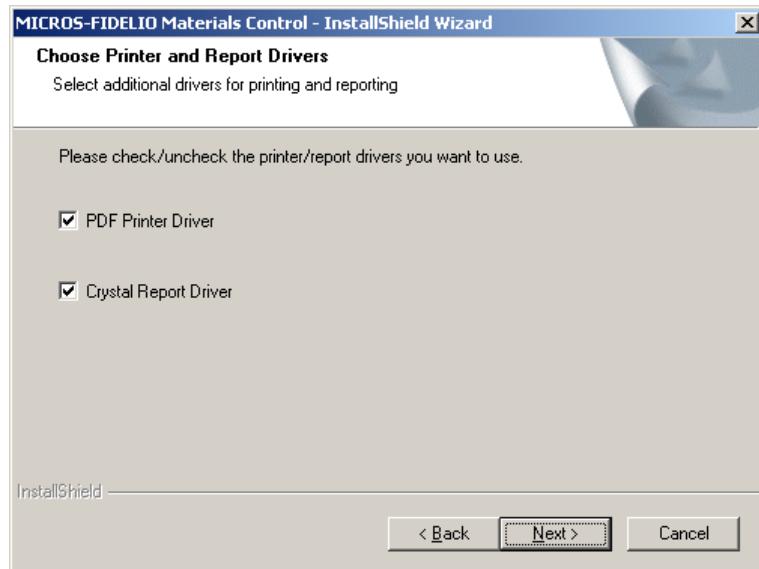
Enter the RDBMS connection information and click “Next”. The system will now test the connection.

In case incorrect connection parameters or unavailable database system the install shield will show a message like below:



Check the connection and the database availability and repeat the process.

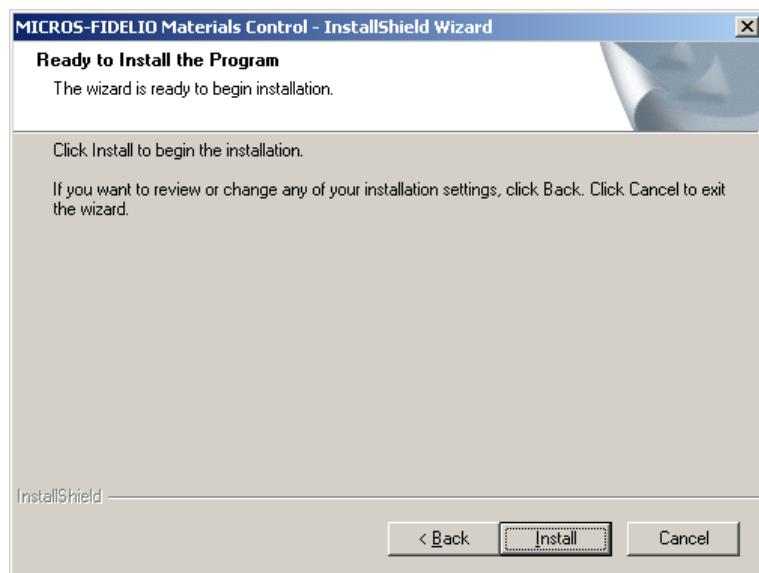
Once the connectivity test was successful please click “Next” to continue.



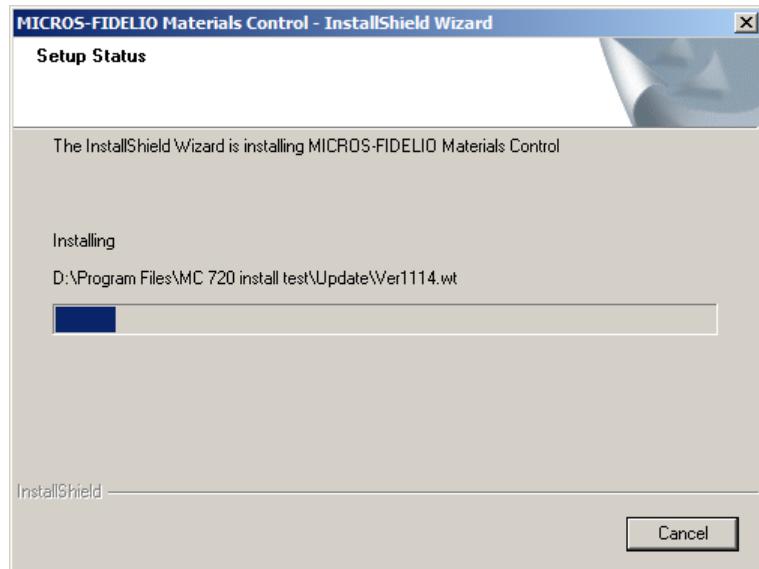
The next screen offers to install the PDF Printer Driver and Crystal Reports Driver. Both are selected by default and should be installed.

Click "Next" to continue:

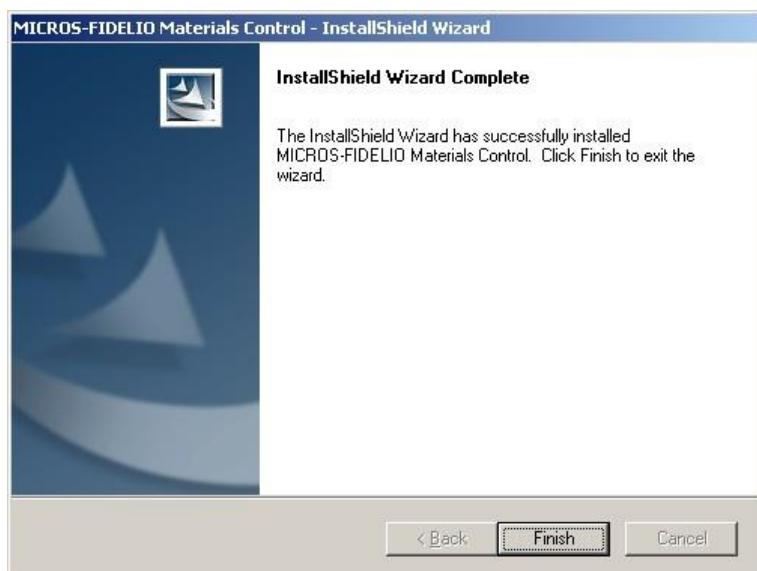
Now the required installation parameters are defined and the main process could be started.



Click now "Install" to start the process or "< Back" to return to the previous screens.



The install shield shows the installation progress on screen. It will take 3 - 5 minutes. Once completed the following message shows the successful installation of the Materials Control Client installation.



Click "Finish" to finalize the process. The install shield will now remove temporary used files and close the screen.

Depending on certain parameters and conditions it may be required that the PC is restarted. The system will show the following message if required.



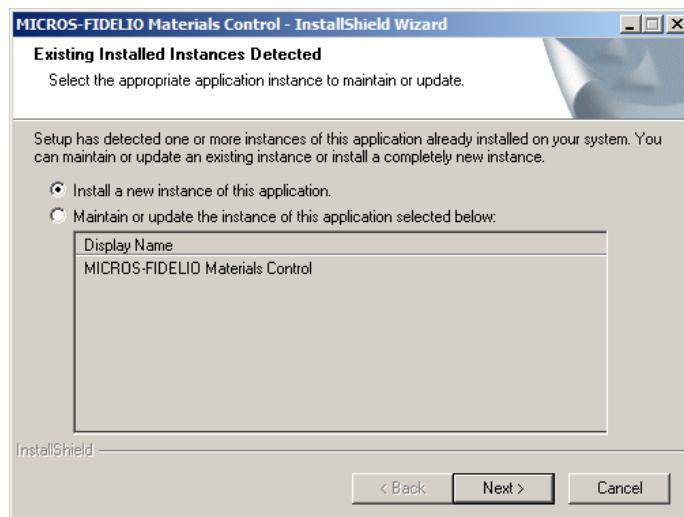
Once the 1<sup>st</sup> client application was installed the usual Database Update and Reorganization must be executed.

### 3) Update Client > 8.6.6.10 Installation:

This chapter will explain the required steps to update a Materials Control Client installation from versions 8.6.6.10 and higher, e.g. 8.8.10.42.1525, to 8.8.30.4.1550 or higher.

#### Update using Full Installer Package:

After starting the SETUP.EXE the install shield checks for already installed versions. If found the following screen is shown:



Here the user can select either to install a new application client or to update the existing application.

Select “Maintain or update the instance of this application selected below”, select the installation to update in the grid and click on “Next”. The system will now start the application update process.

Once the 1<sup>st</sup> client application was updated the usual Database Update and Reorganization must be executed.

#### **4) Update Client < 8.6.6.10 Installation:**

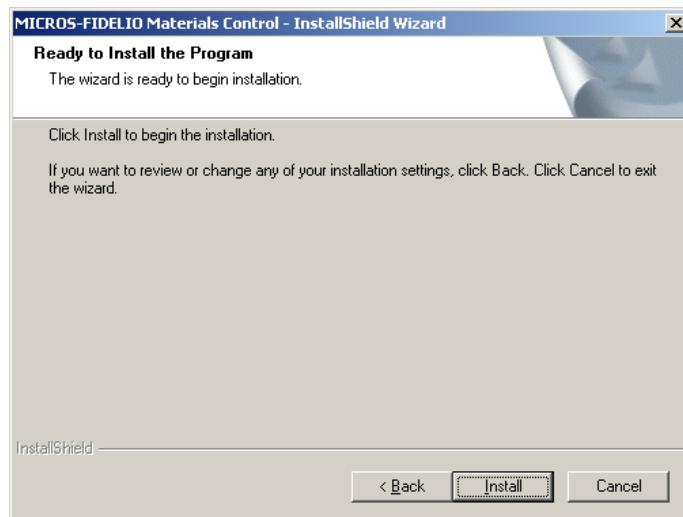
This chapter will explain the required steps to update a client installation from older versions, e.g. 8.6.5.10.xx to the current version. This can be done with the Full Install Package only.

After starting the SETUP.EXE the install shield checks for already installed versions. If found the following screen is shown:



Click "Yes" to proceed or "No" to cancel the install shield.

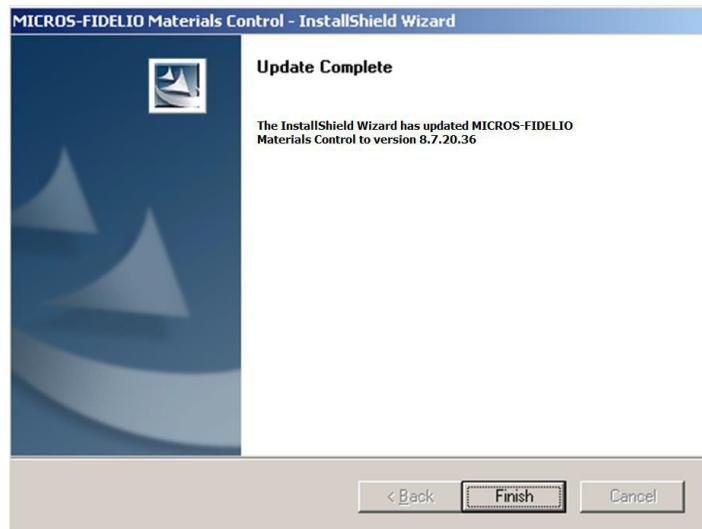
Even if the option is available it is strongly recommended to uninstall the previous version first and then do a fresh install of the application.



Click "Install" to start the process.

The install shield will show the status of the upgrade on screen.

Once the system has finished the process of copying files the following screen is shown:



Click “Finish” to finalize the process. The install shield will now remove temporary used files and close the screen.

Depending on certain parameters and conditions it may be required that the PC is restarted. The system will show the following message if required.



Once the 1<sup>st</sup> client application was updated the usual Database Update and Reorganization must be executed.

## Changes:

This version is based on the previous release Materials Control 8.8.10.44.1528 and does not contain any change of functionality or new feature compared to the previous version.

The only change is the license management.

In order to be able to read this document correctly, please load the KEYCAPS font in your word-processing application. The necessary files can be found on the FTP server in the documentation directory.

Please read all chapters of this document carefully. Especially the section [General Changes](#) contains details that may affect all customers.

Besides the changes described in this document, also several separate documentations have been updated. Please check the usual repository for updated files.

## I. License Management:

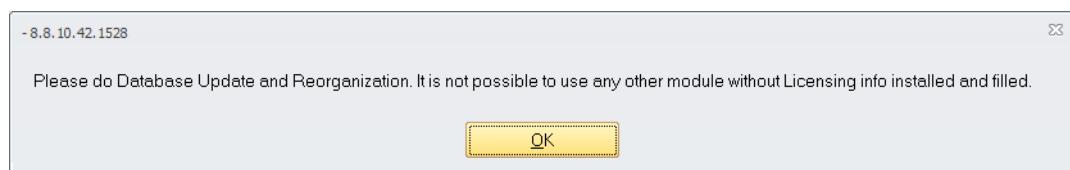
### 5) License Definition

This version of Materials Control does no longer require a license file (ETC.DLL).

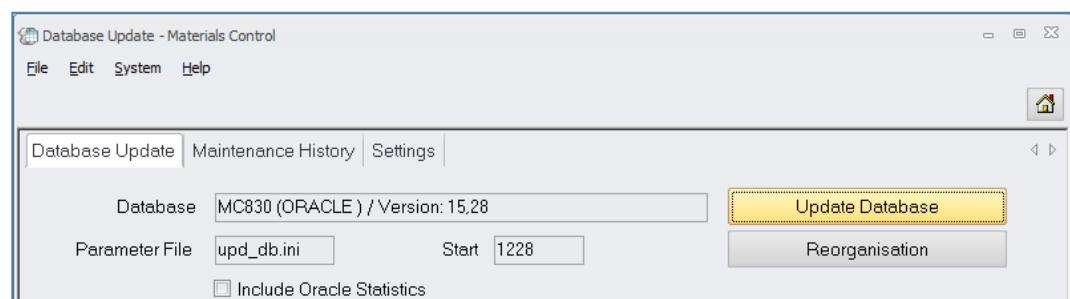
But still the software needs to be ordered at OE in Neuss!

The customer has to confirm that he owns the proper licenses to operate this installation of Materials Control including activated add-on modules.

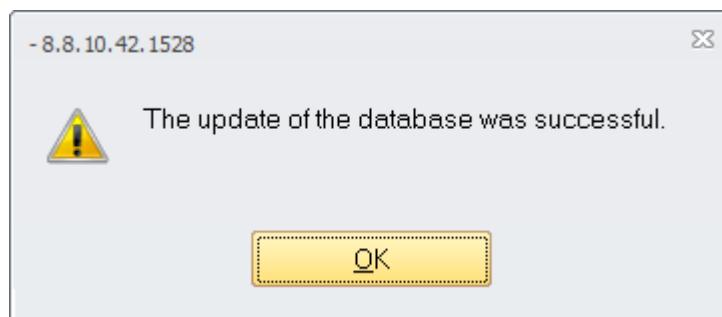
- After starting the application the first time the module “Database Update” will be called automatically and the following message is shown:



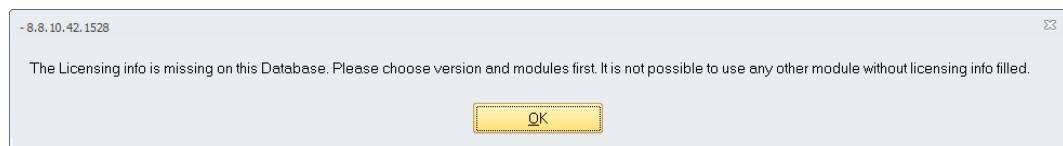
- Confirm with “OK” to close the dialog.
- As first step the database must be updated to the required version.



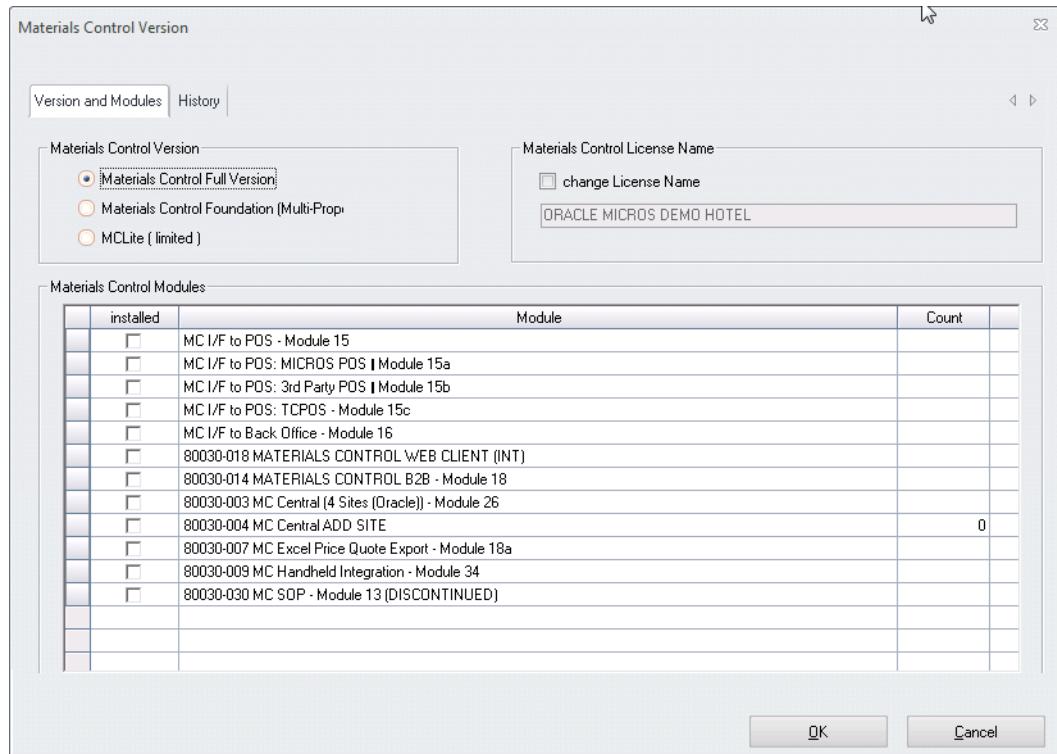
- Click the button “Update Database” to start the procedure.



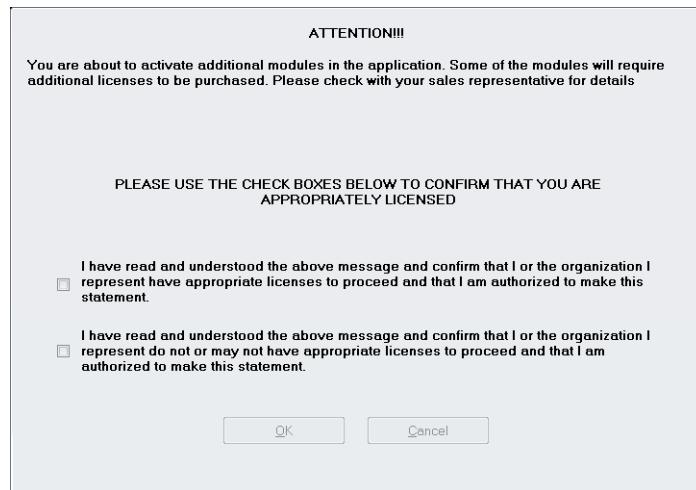
- Click “OK” to confirm and close the dialog.



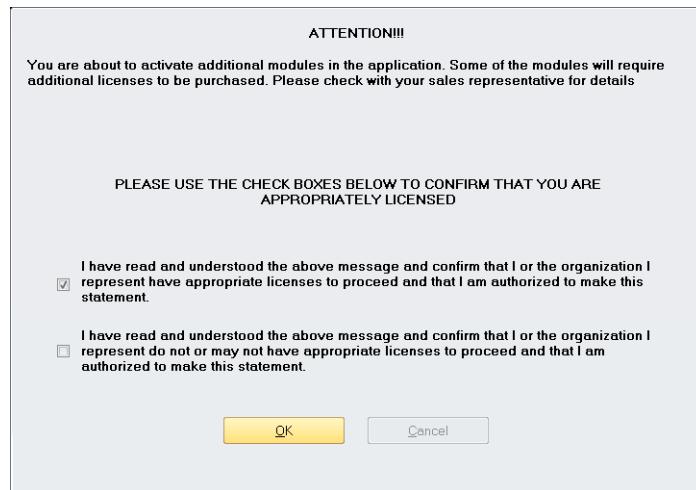
- As next step the license details must be entered. Confirm the message with “OK” and enter the details in the following screen.



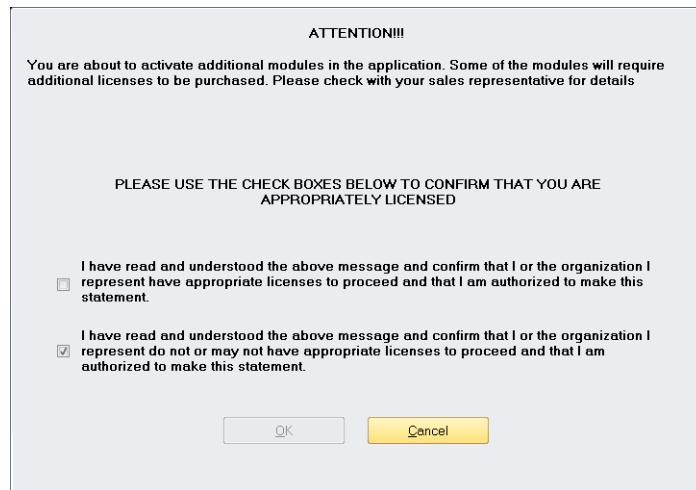
- Left top section “Materials Control Version”:  
Here the customer needs to select between a full version, a foundation or a limited version.
  - For standard installations at single properties please select “Materials Control Full Version”  
(Part number 80030-002)
  - For multi-property installations the option “Materials Control Webfoundation” must be selected”.  
(Part number 80070-011 + 80070-012 + 80030-017 and 80070-011 + 80070-012 + 80030-019)  
NOTE: Please keep in mind that the number of connected properties must be entered as well!
  - For the limited version “MCLite” must be selected.  
(Part number 80030-006)
- Right top section “Materials Control License Name”:  
Activate the check box and enter the license name.
- Bottom section “Materials Control Modules”:  
Here the add-on modules must be selected. Also the Replication Add-Sites as well as the properties for Webfoundation installations must be entered.
- Once finished the license confirmation dialog is shown:



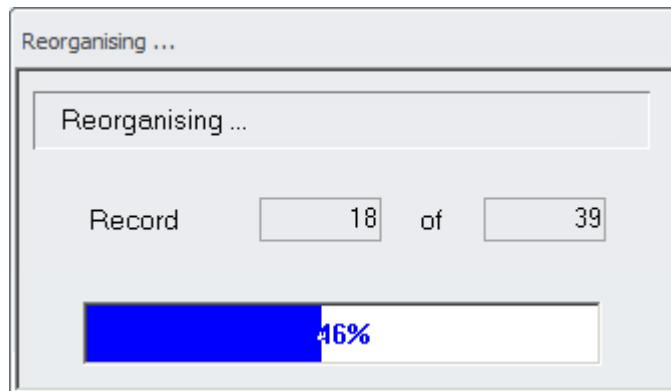
- After selection of the check box the related button will become active:



- With marking the first checkbox the user confirms that he or the organization he represents owns all required licenses. The button "OK" is active and the user can proceed.



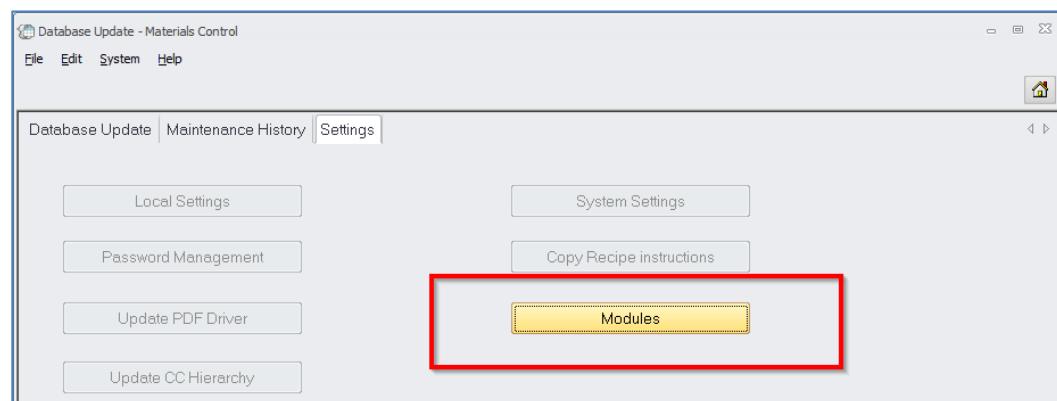
- With marking the second checkbox the user confirms that he or the organization he represents does not own all required licenses. The button “Cancel” is active and the user can return to the previous screen.
- Once confirmed with “OK” the application will start the missing reorganization immediately:



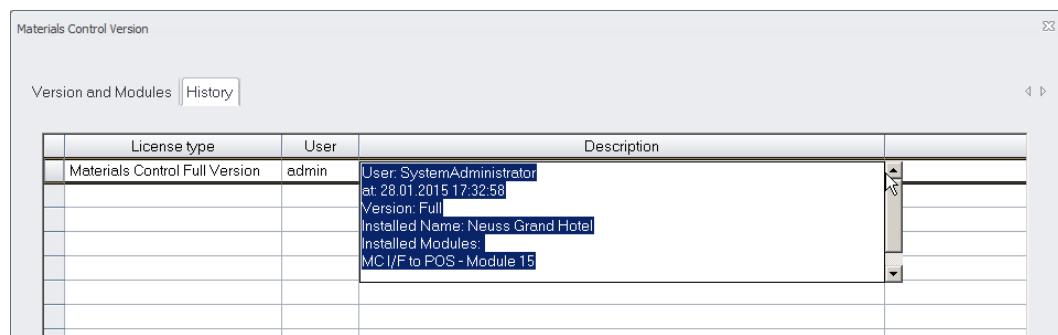
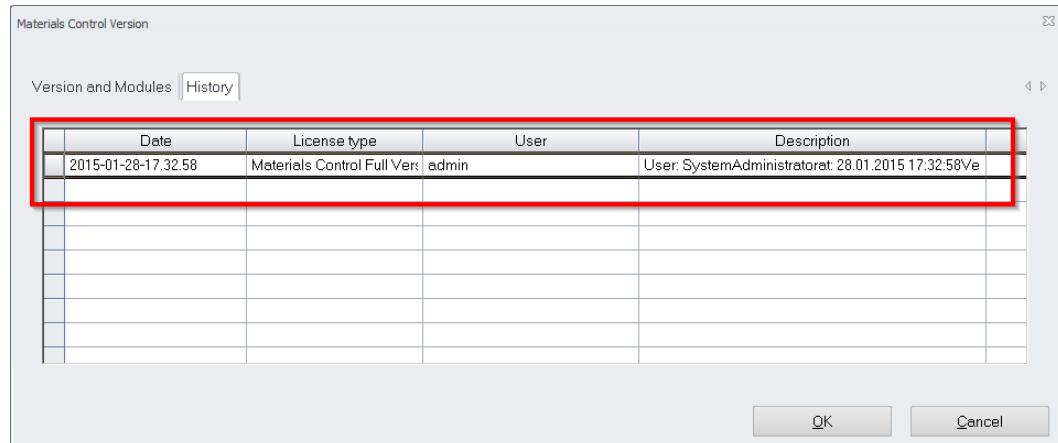
- Confirm with “OK”:



Now the application is ready to use. Reopen the modules screen:



On the second tab “History” all license related changes will be tracked.



The information shown here cannot be edited.

## II. General Changes:

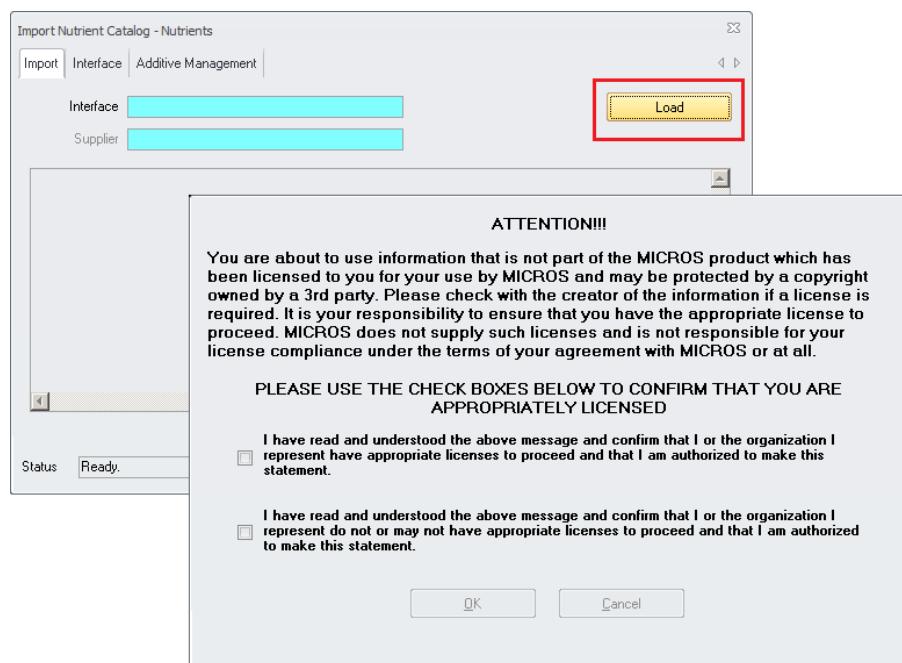
### 6) Nutrients > Catalogue Licensing

Due to copy rights and ownership restrictions of the catalogues, it might be required that the customer (Hotel, Restaurant, etc.) has to purchase a license for the used catalogue at the local authority.

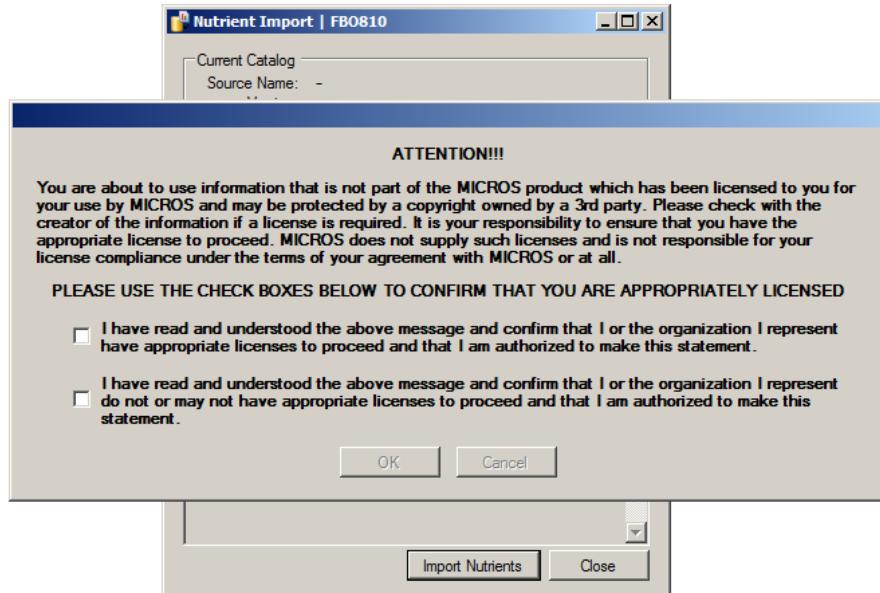
Since the handling is different in each country, **MICROS does not deliver** such licenses with the application.

When using the first time any function related to Nutrients ...

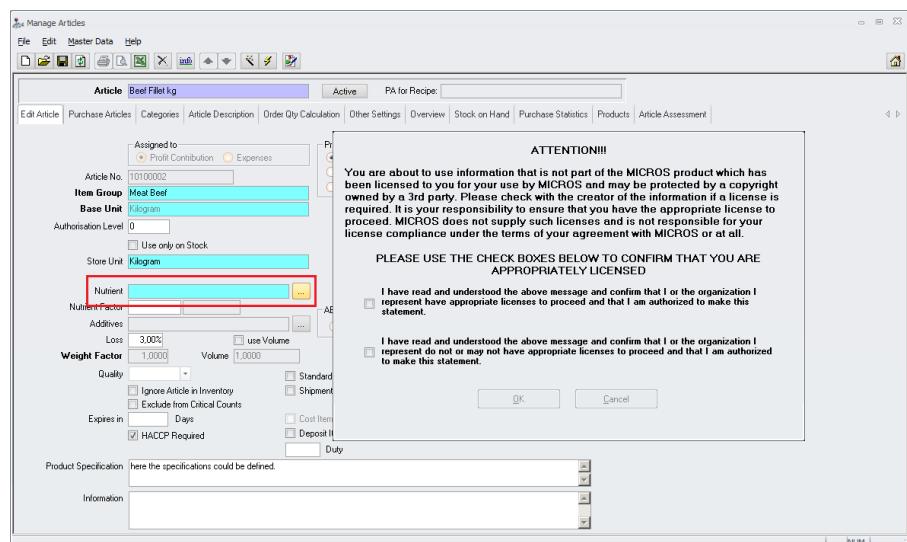
- ... importing Nutrients using the thick client module



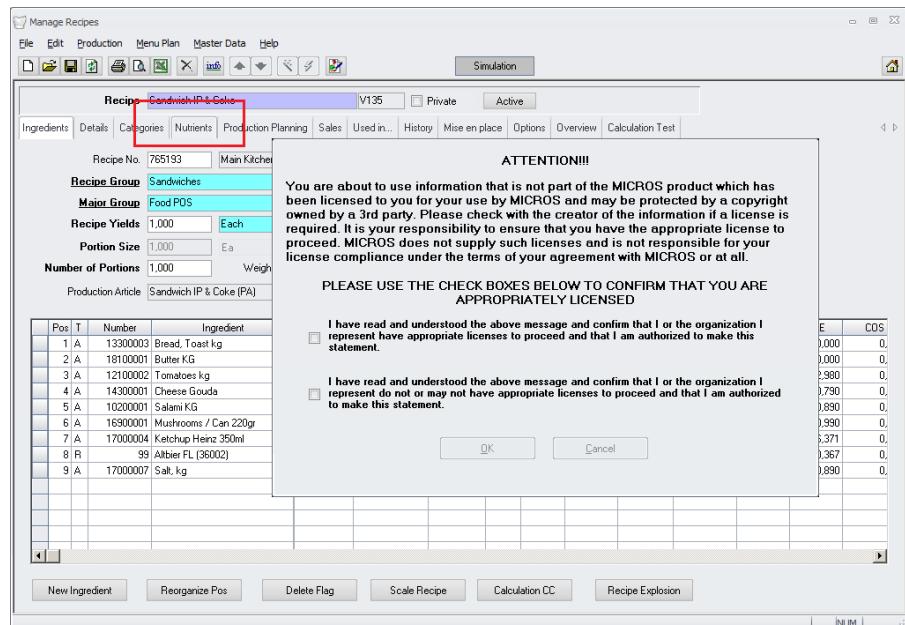
- ... importing Nutrients using the stand-alone tool



➤ ... adding Nutrients to Articles



➤ ... showing Nutrients in Recipes



... the application now shows a dialog where the user needs to confirm that he understood that Materials Control does not contain any Nutrient Catalogue licenses and he has to take care about the potentially required licenses for the used catalogue.

The positive confirmation will be stored in the database. Once the application could read this, the dialog will no longer be shown.

## 7) User > Password Encryption

Since our customers are looking more on data security the user passwords are stored in the database as encrypted strings.

They cannot be viewed in clear text with any tool:

BST_ID	BST_NAME	BST_PASSWD
1	Admin	4GK7zKF7n5/GgeVYb1z57ueMhoc=
1000001	albecig	e6FxuY/0jGP5T+2mAW82LU3Ceig=
1000002	angegas	BX5WJcRLL93cNgeCai8wUUvyT+0=
1000003	danigra	U+V1Bcqh8FEm182GI8dKCzG4b8=
1000004	gianmas	1eDjgumP+D9qTfgwZAYC5/bFjkw=
1000005	maurdej	Slit5Pm1T8BkaiHjY10cYsH0Xes=

The encryption algorithm used by the application also incorporates the user name as well. As a result of this a change of the user name always requires the change of the password as well:



**NOTE: There is no secret backdoor entry!  
If the passwords are lost the database is unusable!**

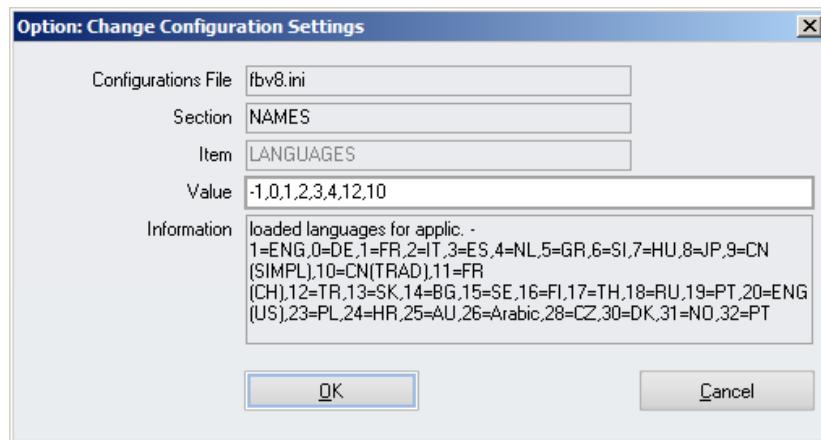
## 8) DB Update > Language Import

In previous versions all defined languages had to be imported manually one after the other.

From this version onwards the system will automatically import all languages defined in the database already during the update.

It is strongly recommended to check the language definitions before the update:

System > Configuration > [NAMES] > Languages:



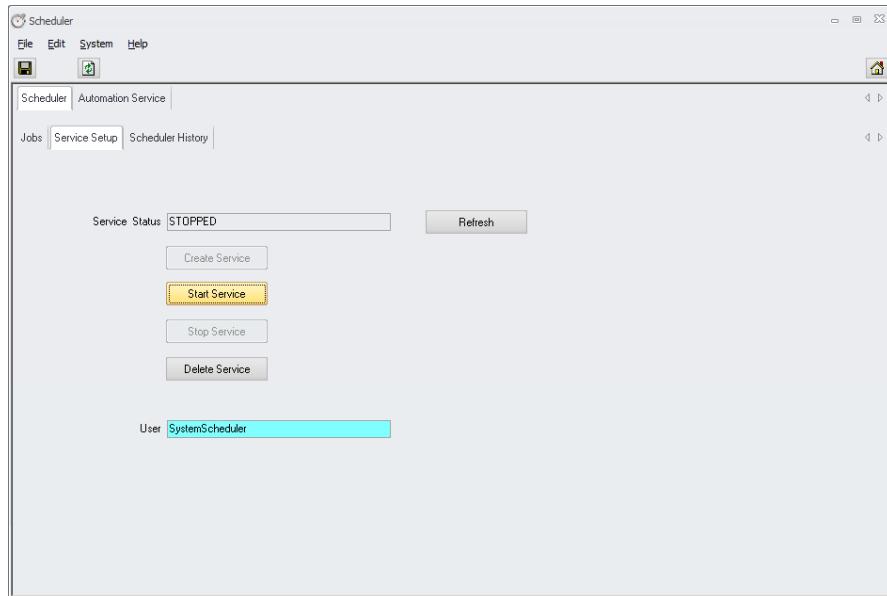
Here only the really required languages should be defined.

Depending on the hardware the DB update will need additional 10 - 15 seconds per language for the import.

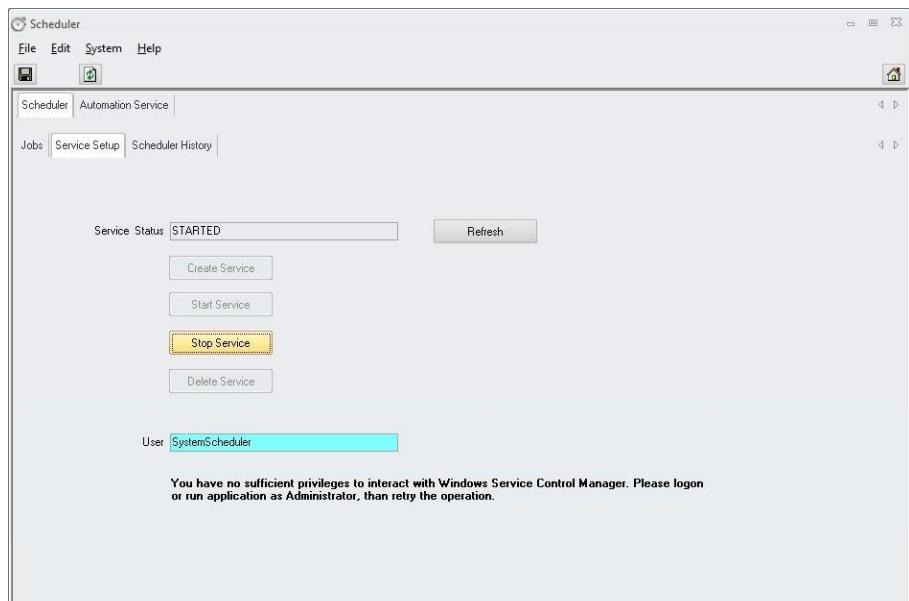
## 9) Scheduler > Windows Service Rights

The application now properly checks for the windows user access rights.

- In case a user has some kind of administrative rights allowing him to access the Windows Services Control Manager, he will be able to maintain the service as usual.



- In case a user does not have sufficient rights to access the Windows Services Control Manager, the status is now displayed properly, but a message is showing that maintenance is not possible.



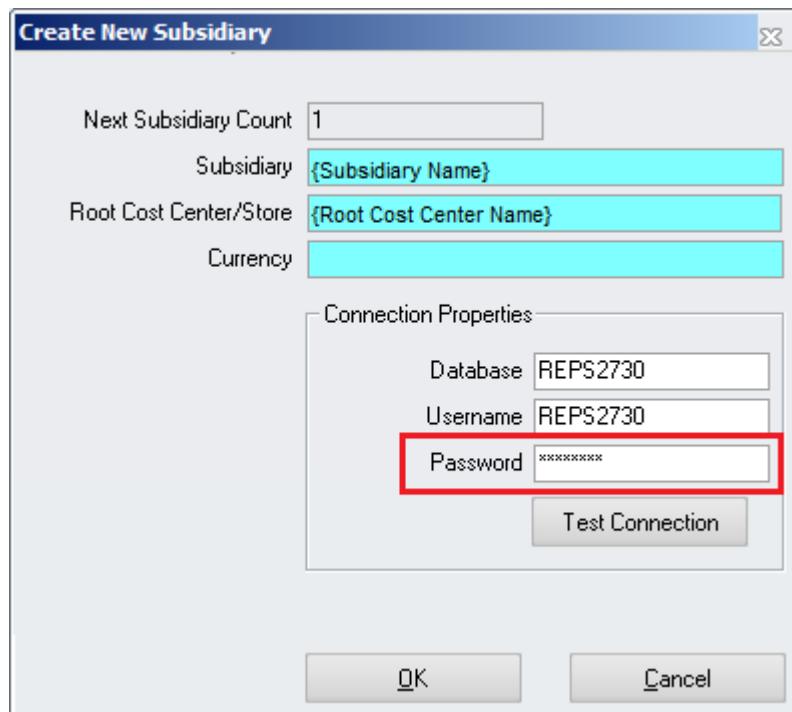
If the user tries to use e.g. the button “Stop Service”, the system will show a message:



Unfortunately the button cannot be disabled here since the Windows privileges could have changed after opening the Scheduler module.

## 10) Replication > Subsidiary Passwords

In order to follow the general security standards the database password used in the module Replication is now encrypted.



In former versions this was stored in clear type in the database. Now this is stored as an encrypted string in the tables.

Please note that there is no rollback or backdoor!

## 11) Software Requirements

If the customer is using Mobile Solutions 2010, MICROSOFT .NET 3.5 Framework + .NET Framework 4.x (including all service packs and hot fixes) must be installed on all PC's connecting to the mobile devices.

## 12) HHT Devices > PPT 88xx

With version 8.7.30.xx and higher the PPT 88xx are no longer supported. The application may work without any issue for some time and/or at smaller installations, but due to the added features and functions the available memory is insufficient.

### **13) MCweb v8.30.xx**

A new version of MCweb is available for Materials Control 8.8.30.4.1550.

This version does not contain any changes compared to the latest 8.10.xx build.

This application must be used instead of the legacy version MCweb v2.12.

The installation documentation can be downloaded from the usual FTP location:

50.4\_MC\_Manual\_Installation\_WebServer\_MCwebv3.zip

50.5\_MC\_Manual\_Installation\_WebServer\_MCwebv3\_add\_on.zip

**NOTE:** The Materials Control MCweb version needs to match the Materials Control thick client version. Otherwise the system will not allow logging in.

The latest version for this application can be found at the same location as latest patch for Materials Control.

### **14) POSWebService**

Materials Control offers a web service to be used for communication with some MICROS POS systems as well as several 3<sup>rd</sup> party applications. For details please see the updated documentation "50.9\_MC\_Manual\_Installation\_POSWebService".

### **15) Report Builder**

The Gupta Report Builder 2.1 cannot be used anymore for this version.

In order to edit QRP reports in Materials Control 8.6.6.30.xx or higher now the Gupta Report Builder 6.0 must be used.

<http://www.guptatechnologies.com/Services/productDownloads.aspx>

Materials Control will convert the current QRP templates automatically to the new format when used in the application.

Once a template was opened by Materials Control 8.6.6.30 or higher or Gupta Report Builder 6.0...

- it cannot be used anymore in older versions of Materials Control
- it cannot be opened anymore with the Centura Report Builder 2.1

**NOTE:** The manufacturer of this software, Unify (a division of Daegis Inc.), was rebranded to Gupta Technologies in November 2012.

<http://www.guptatechnologies.com/News-Events/pressReleases.aspx?ReleaseID=212613>

### **16) Crystal Reports 2008**

With version 8.6.6.30 the application was changed to use Crystal Reports 2008 for the Custom Reports.

- The Crystal Reports 2008 SP3 Runtime will require 200MB additional disk space on the c:\ drive of each client PC and will be installed automatically.
- The installation of the new Crystal Reports Runtime SP3 takes several minutes.
- The older report files do not need to be converted, but after editing with the Crystal Reports 2008 Designer they cannot be used with older versions anymore.
- There is no difference visible for the end user.

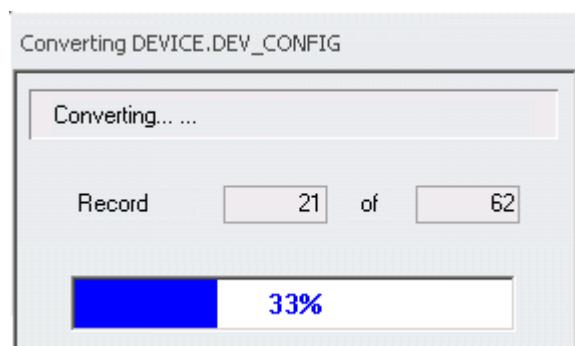
- With version 8.7.10.xx also support for Unicode parameter names was added to the runtime routines.

**NOTE:** The application cannot support mandatory parameters when using immediately print from Edit Report Parameters" dialog. Such parameters must be filled first in grid behind "Show Parameters"!  
Also, report with (not filled) mandatory parameters cannot be used in Report Batches. In both cases no GUI would be available and the report viewer will fail!

## 17) Long fields replacement

All fields in the database of data type LONG were replaced with data type varchar2(8000). This change was required since the data field type LONG was a relic from Oracle 7 & 8, in current versions data field types as varchar2 should be used.

The field replacement is executed during the DB Update to 8.7.30.xx



## 18) Oracle Privileges

Since Materials Control will also use database views in the future for more and more features it may be required that the Oracle user privileges must be updated to allow the maintenance of views as well.

This could be done in the following ways:

- Modify the default values in the Oracle setup files:

The origin user privileges may be defined like this:

***grant connect,resource to {Oracle User} identified by {Password};***

This must be adjusted to:

***grant connect,resource, create view to {Oracle User} identified by {Password};***

... where the **{Oracle User}** and **{Password}** must be replaced with the correct Oracle user assigned for Materials Control and his credentials.

- Adjust privileges for existing Oracle users:

For all existing installations the privileges must be adjusted manually. This cannot be done by the Materials Control Installer or the Update, the current Oracle user cannot adjust his own privileges.

Start SQLPlus (or any other SQL editor) and connect as SYSTEM user with the required password.

Execute the following statement for all Oracle users defined for Materials Control:

```
grant create view to {Oracle User};
```

... where the **{Oracle User}** must be replaced with the correct Oracle user assigned for Materials Control.

## 19) Oracle 10g

Oracle 10g (and older) is no longer supported with this version. Oracle database and clients must be updated to Oracle 11g

## 20) Oracle 11g > Various

This chapter will show some specific topics related to Oracle 11g only.

- When installing Oracle 11g using the default configuration settings, the password of the ORACLE USER will expire after 180 days. Usually these Oracle accounts are not monitored. It is recommended to execute a SQL statement as shown below to avoid this:

```
ALTER PROFILE DEFAULT LIMIT PASSWORD_LIFE_TIME UNLIMITED;
```

In addition to this it strongly recommended to encrypt the password in the connection configuration as described in the related manuals for MC thick client and MCweb!

Materials Control Thick Client:

The configuration for using encrypted DB schema passwords is described in "39\_MC\_Manual\_FMLOGIN\_INI".

Materials Control MCweb Client:

The configuration for using encrypted DB schema passwords is described in "140\_MCweb\_Password\_Encryption".

## 21) 64-bit Operating Systems

Materials Control 8.6.6.10.xx and higher can be installed on 64-bit operating systems considering the following rules:

- The Oracle database can be installed in 32-bit or 64-bit version. Materials Control can work with both of them.
- The Oracle client for the Materials Control thick client must be installed in a 32-bit version on the 64-bit operating system.
- The Materials Control thick client is a pure 32-bit application. During the installation a Windows 64-bit operating system will detect it as such and install it in \Program Files (x86)\ directory. The application itself will operate as usual.
- MCweb can be installed on a 64-bit machine and use a 64-bit Oracle client. But on this machine the Materials Control thick client cannot be installed, since that again requires a 32-bit Oracle client.

**Summary:**

- Oracle database Server:
  - 32-bit Operating System with 32-bit Oracle Version,
    - **Materials Control client possible**
  - 64-bit Operating System with 64-bit Oracle Version,
    - **no Materials Control client possible**
  - 64-bit Operating System with 64-bit Oracle Version and 32-bit Oracle client
    - **Materials Control client possible**
- MCweb Server:
  - 32-bit Operating System with 32-bit Oracle client, MS IIS and .NET Framework in 32-bit
    - **Materials Control client possible**
  - 64-bit Operating System with 64-bit Oracle client, MS IIS and .NET Framework in 64-bit
    - **no Materials Control client possible**
  - 64-bit Operating System with 32-bit Oracle client, MS IIS and .NET Framework in 32-bit
    - **Materials Control client possible**
- MC Client PC:
  - 32-bit Operating System with 32-bit Oracle client
    - **Materials Control client possible**
  - 64-bit Operating System with 32-bit Oracle client
    - **Materials Control client possible**
    - No 64-bit applications will be able to connect to Oracle using the 32-bit Oracle client!
  - 64-bit Operating System with 64-bit Oracle client and 32-bit Oracle client
    - **Materials Control client possible**

## **22) Microsoft Office 64-bit**

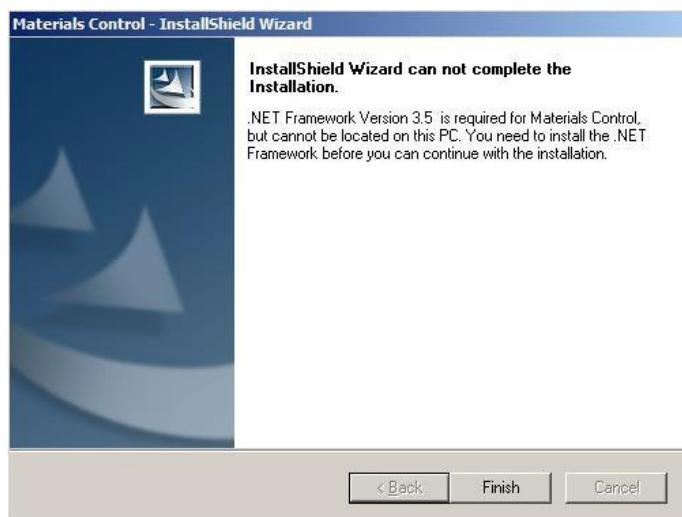
Materials Control is a 32-bit application, which could be installed on a 64-bit operating system. But there it still works in the 32-bit mode. As a result of this it does not support Microsoft Office in 64-bit version. Sending Emails from Materials Control using Outlook (or any other native 64-bit mail application) and MAPI does not work.

## **23) Microsoft Windows XP**

Microsoft has announced the end of its extended support for the Windows XP operating system effective April 8, 2014. On this date, security updates for the Windows XP operating system will no longer be provided by Microsoft. Therefore, to facilitate ongoing operating system security and compliance with applicable industry standards, MICROS strongly recommends that its customers using the Microsoft Windows XP operating system upgrade to a more contemporary and supported operating system, such as Microsoft Windows 7, prior to April 8, 2014.

## 24) MS .NET Framework

Materials Control requires MICROSOFT .NET Framework at least in version 3.5. If this cannot be located on the client PC, the installation will be stopped.



In addition for any workstation performing extended and high-end activities it is strongly recommended to install the following components:

- MICROSOFT .NET Framework 4 Client Profile
- MICROSOFT .NET Framework 4 Extended

This is recommended for all PCs running POS Interfaces, MC Web Services, Mobile Solution Clients, Scheduler Jobs, etc.

## 25) Centura SQLBase End of Sales 12/2011

Due to several reasons it was decided to stop the sales/support for Materials Control on Centura SQLBase.

- The sales of Centura SQLBase licenses was discontinued End 2011.
- The installation & use of Materials Control on Centura SQLBase is no longer supported with any version.
- The support for Materials Control using Centura SQLBase was discontinued End 2012.
- We strongly recommend converting the Centura based systems to Oracle databases as soon as possible.

Please see the separate PMA for more details.