

## 1 Minimum system requirements

<b>Operating system</b>	32 bit version of: <ul style="list-style-type: none"><li>▪ Windows 2000 SP4</li><li>▪ Windows XP Professional SP2</li><li>▪ Windows Vista Business / Enterprise / Ultimate</li><li>▪ Windows 7 Professional / Ultimate / Enterprise</li></ul> 64 bit version of: <ul style="list-style-type: none"><li>▪ Windows 7 Professional / Ultimate / Enterprise</li></ul>
<b>RAM</b>	Windows 2000, Windows XP: 1 GB Windows Vista, Windows 7: 2 GB
<b>Memory</b>	Program: 1 GB Data: 2 GB
<b>Serial ports</b>	for devices with RS-232 interface
<b>USB ports</b>	for devices with USB interface
<b>Screen</b>	Resolution 1024 x 768

The windows user must have administrator rights in order to be able to install the **tiamo** software.

Additional requirements for the **tiamo server**:

<b>Operating system</b>	32 bit version of: <ul style="list-style-type: none"><li>▪ Windows 2000 Server</li><li>▪ Windows Server 2003</li><li>▪ Windows Server 2008</li><li>▪ Windows Server 2008 R2</li></ul> 64 bit version of: <ul style="list-style-type: none"><li>▪ Windows Server 2008 R2</li></ul>
<b>Network</b>	10 Mbit/s, stable and permanent Communication via TCP/IP



### Caution

During a determination data loss may occur when the PC switches over to the standby mode. In the energy settings of the operating system the **standby mode** should therefore be **deactivated**.

## 2 Single workplace installation

With the single workplace version **tiamo light** or **tiamo full** the workplace and database will be installed on your computer.

- 1 On inserting the CD into the drive of your computer the installation will be started automatically. If this option is deactivated on your computer, double click the file **setup.exe**.

If the minimum system requirements are not met (see above) a message appears. Click on **[Yes]** if you like to install the program nevertheless.

Afterwards, click on **[Next >]**.

- 2 After having read the license agreement for **tiamo** and accepting it with **[Yes]** a window will appear where you can enter the license code.

- 3 Enter your license code and click on **[Next >]**.

Metrohm Tiamo 2.0 Setup

License code  
Please type in your license code.

Metrohm

License code T120 - - - - -

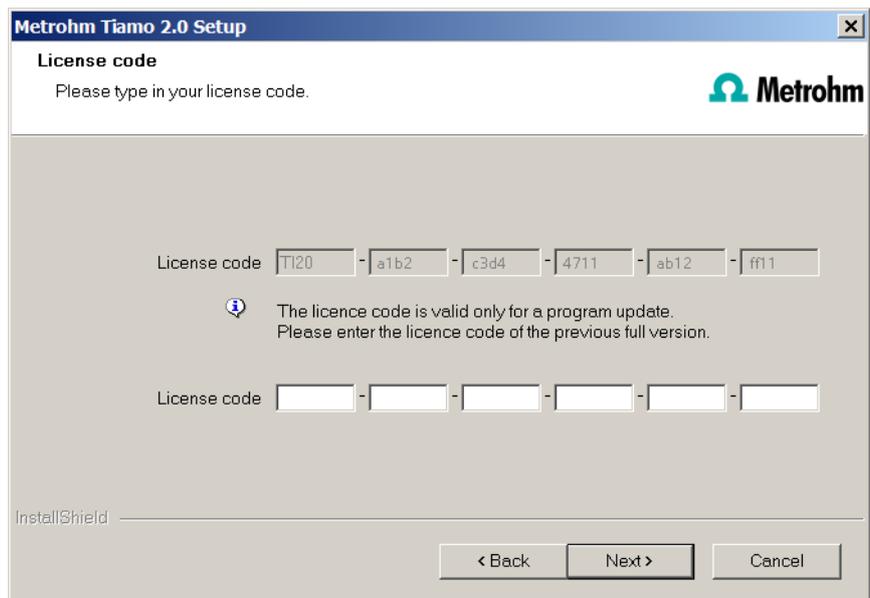
InstallShield

< Back Next > Cancel

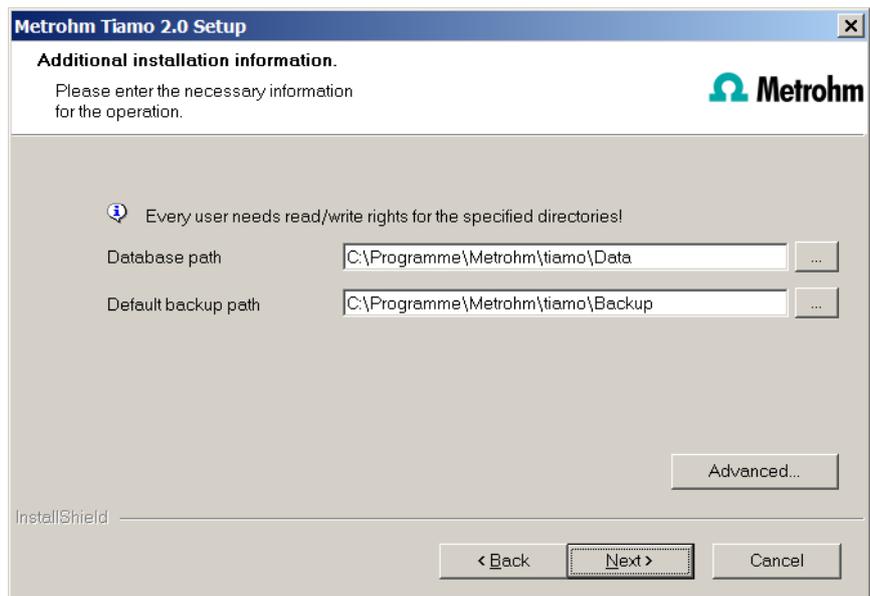


### Note

If you have entered the license code of an update license, then the license code of the previous full version will additionally be requested.



- 4 Now enter the target folder for the **tiamo** installation and confirm with **[Next >]**.
- 5 In the dialog window **Additional installation information** you can define the paths for the databases and backups:

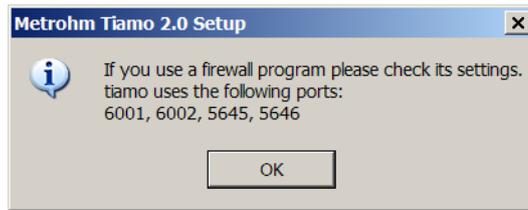


### Note

The default paths differ in the different Windows versions.

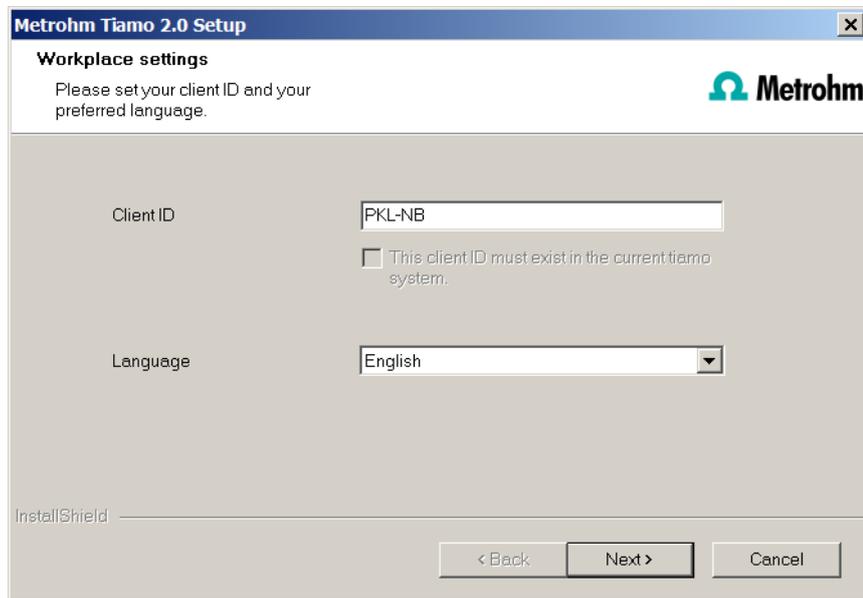
Under **[Advanced...]** it is possible to change the ports **tiamo** uses to communicate with the database and administration server. If the ports are used already, an appropriate error message will appear. Ask your system administrator for more information about this. Continue with **[Next >]**.

- 6 Follow the installation instructions until the following message appears:



This message points out which ports **tiamo** uses. Write down these ports and inform your system administrator in case **tiamo** is not able to connect to the database. Confirm the message with **[OK]**.

- 7 As soon as the copying procedure has been finished you can set further workplace settings:



The option "**The client ID must exist in the current tiamo system.**" is only selectable if a database from a previous installation already exists on your computer or if you want to connect to a database server which has been installed on another computer.

If you activate this option **tiamo** checks whether the identifier you have entered exists in the database. If this is true the identifier and all associated settings will be adopted. With this option a renewed installation of a client is much easier.

Click on **[Next >]**. If the database ports are not available, an appropriate error message will appear and the installation will be canceled. In this case, check your server and firewall settings before installing the program again.

- 8 At the end of the installation the file **info.txt** will be created which contains all relevant information concerning your current **tiamo** installation. Save this file on your hard disk in case of need in future and print it (add to IQ). Complete the installation with **[Finish]**.

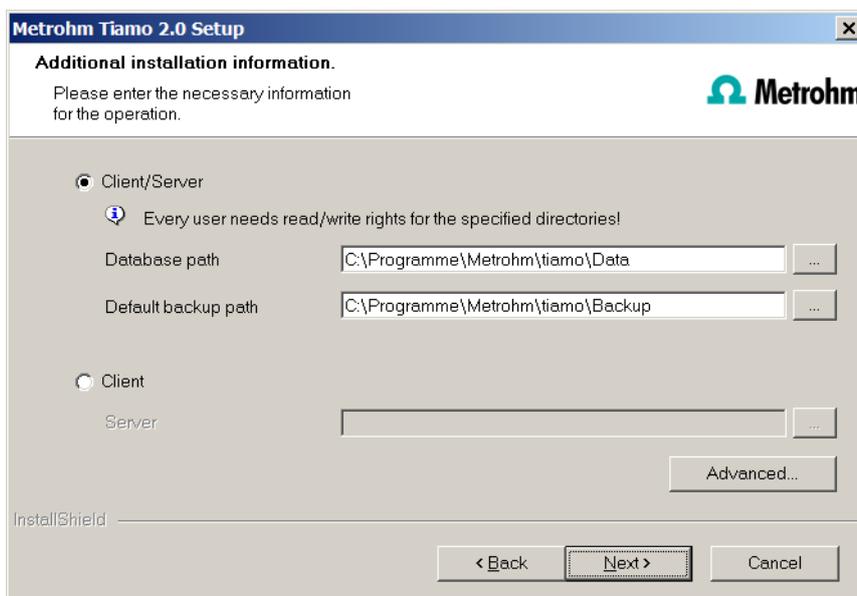
An **InstallLog** file with a list of all files having been copied to your computer and with a confirmation for a successful installation is saved in the **tiamo** installation folder (default: C:\Program Files\Metrohm\tiamo) under bin\InstallLog.

### 3 Client/Server installation

With the **tiamo multi** version (multiple workplace version with 3 licenses) you can select during the installation whether you want to install a **client** (workplace) or the **server** (incl. client) on your computer.

If you only want to install a client on your computer, in advance the server the client will be connected to must have been installed on another computer.

- 1 Carry out steps **1** to **4** of the *Single workplace installation*.
- 2 The dialog window **Additional installation information** appears where you can select whether you want to install a **client** or the **server**:



The option **workplace** installs the client and the **database server** on your computer. Select this option if your computer will be used as server.

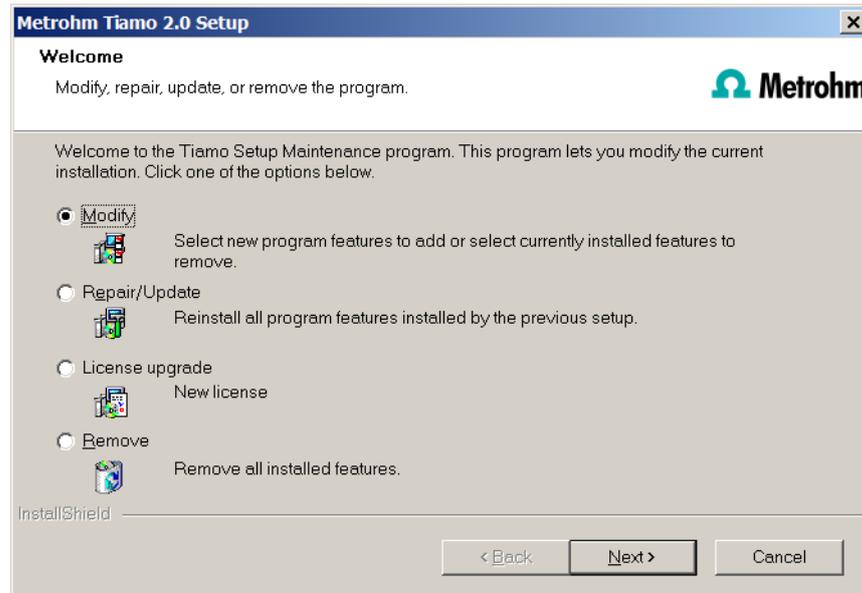
With **workplace** only the **client** will be installed and with  you have to select the database server (has to be installed in advance!) to which you want to connect. The network server name or the IP address are accepted.

Under **[Advanced...]** it is possible to change the ports **tiamo** uses to communicate with the database and administration server. If the ports are used already, an appropriate error message will appear. Ask your system administrator for more information about this. Continue with **[Next >]**.

- 3 Carry out steps **6** to **8** of the *Single workplace installation*.

## 4 Modify / repair / remove installation and upgrade license

In order to carry out modifications on the current **tiamo** installation, start the file **setup.exe** on the installation CD or click on **Metrohm tiamo** under **Control Panel ▶ Software**.



### Modify

With this option you can change the paths to the database and backup files and set the ports which **tiamo** uses for communication. With the **tiamo multi** version you can additionally change the path to the database server.

If the database path is changed, the existing databases are automatically copied to the new location.

### Repair/Update the program

With this option you can **repair** an existing defective installation or **update** an older installation.

- **Repair installation**

In case of a defective **tiamo** installation because e.g. a DLL file is missing or a program file has been deleted by mistake **tiamo** can be repaired with this option.

- **Update installation**

In case an older version of **tiamo** is installed, it will be updated to the new version of **tiamo**, see *Program update with tiamo light/full* or *Program update with tiamo multi*.



### Caution

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During updating older tiamo versions (1.x) to tiamo 2.x the databases will be converted to the new version. Depending on the size of the database, this can take some time. For each database a progress bar is displayed which informs about the status of the conversion.

The computer or Windows must not be restarted or shut down as long as the conversion runs!

## License upgrade

A direct upgrade of your current installation to a **tiamo** version with additional features is possible:

- **tiamo light** to **tiamo full** or **tiamo multi**
- **tiamo full** to **tiamo multi**

In order to do this enter your new license code in the next dialog window.

## Remove

This option removes your **tiamo** installation. Data which has been generated after the installation (e.g. database entries, log files, exported data etc.) will remain on your hard disk.

# 5 Program update with tiamo light/full

During the program update, the configuration database (system configuration, methods, templates) and the determination databases are automatically updated for further use.



### Note

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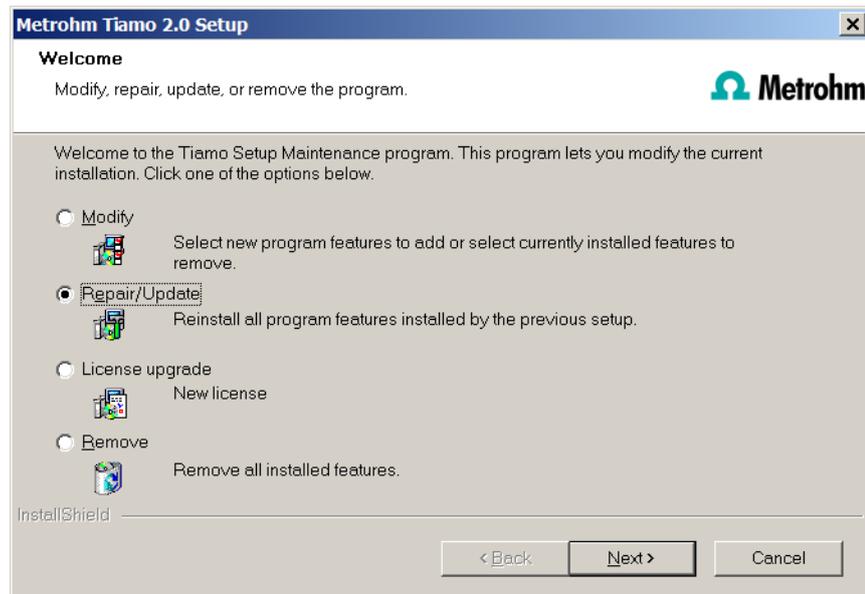
The files in the database and backup directory will be retained when updating the program.

Files in the subdirectories **bin**, **jre**, **lib**, **res**, **doc** and **examples** will be overwritten by the update. The files in these directories not having been overwritten by the update will be deleted. The deleted files are listed in the **InstallLog**.

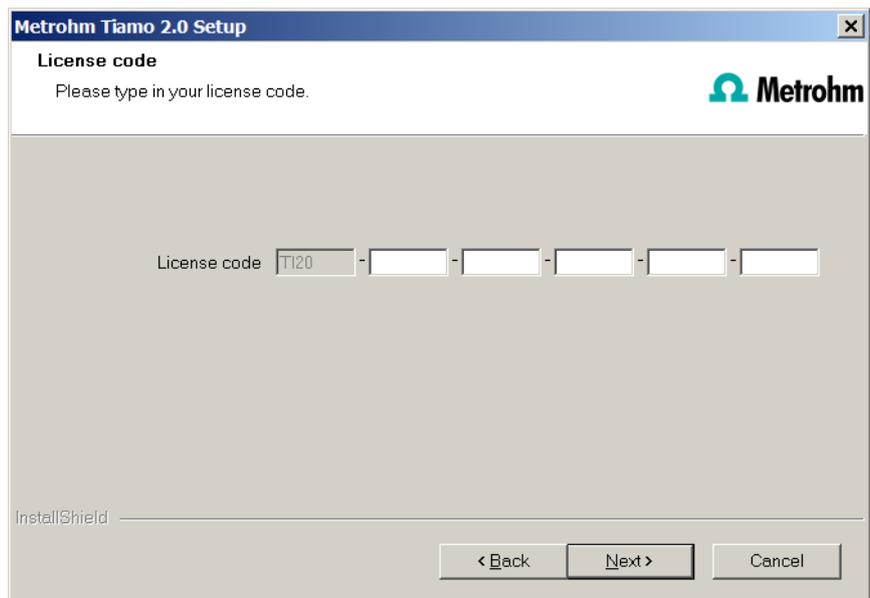
- 1** Save the configuration database into an external directory using the backup function of **tiamo**. In the program part **Configuration**, select the menu item **File ► Save ► Manually**. Select the **Backup directory**, enter a name for the backup file and click on **[Start]**. The backup is carried out. It is recommended to copy the backup file to CD/DVD.
- 2** If desired, export the methods in addition to the backup with the configuration database (see above) into an external directory. In the program part

**Method**, select the menu item **File ► Method manager....** Select the desired **Method group**, mark all methods to be exported and click on **[Edit] ► Export....** Select the desired export directory and click on **[OK]**. The methods are exported into the desired directory. It is recommended to copy the exported methods to CD/DVD.

- 3 Save all determination databases created by yourself into an external directory using the backup function of **tiamo**. In the program part **Database**, select the menu item **File ► Database manager....** Select the desired database and click on **[Backup.]** Select the **Backup directory**, enter a name for the backup file and click on **[Start.]** The backup is carried out. It is recommended to copy the backup file to CD/DVD.
- 4 Save further files created by yourself in the installation directory (e.g. export files) into an external directory or to CD/DVD.
- 5 Close **tiamo**. Insert the installation CD and double click the file **setup.exe**. Then select **Repair/Update** and click on **[Next >]**.



- 6 Enter your update license code and click on **[Next >]**.



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### Caution

During updating older tiamo versions (1.x) to tiamo 2.x the databases will be converted to the new version. Depending on the size of the database, this can take some time. For each database a progress bar is displayed which informs about the status of the conversion.

The computer or Windows must not be restarted or shut down as long as the conversion runs!

Complete the installation with **[Finish]**.

An **UpdateLog** file with a list of all files having been copied to your computer and with a confirmation for a successful installation is saved in the **tiamo** installation folder (default: C:\Program Files\Metrohm\tiamo) under bin\InstallLog.

## 6 Program update with tiamo multi

During the program update, the configuration database (system configuration, methods, templates, user-specific data for all clients) and the determination databases on the sever are automatically updated for further use with **tiamo multi**.



## Note

The files in the database and backup directory will be retained when updating the program.

Files in the subdirectories **bin**, **jre**, **lib**, **res**, **doc** and **examples** will be overwritten by the update. The files in these directories not having been overwritten by the update will be deleted. The deleted files are listed in the **InstallLog**.

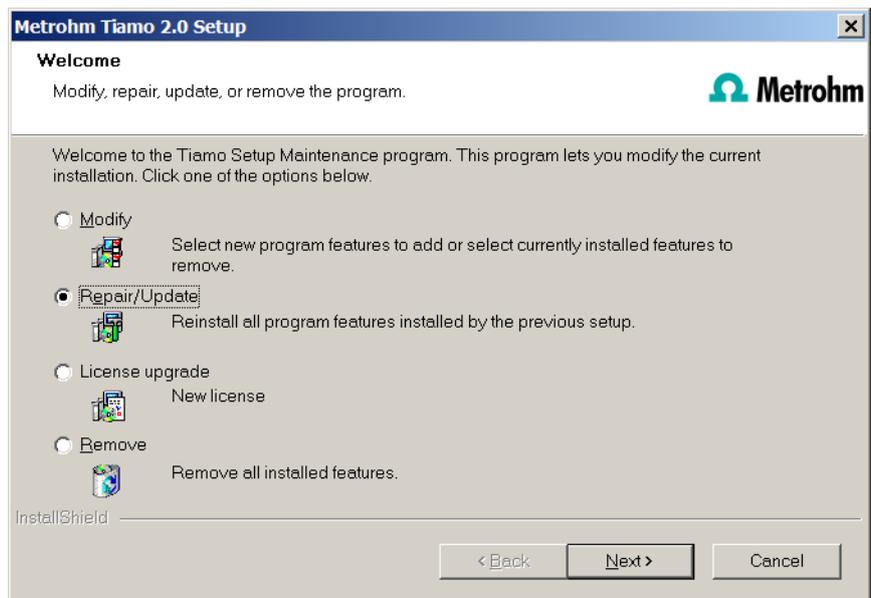
- 1 Make sure **tiamo multi** is closed on all clients.



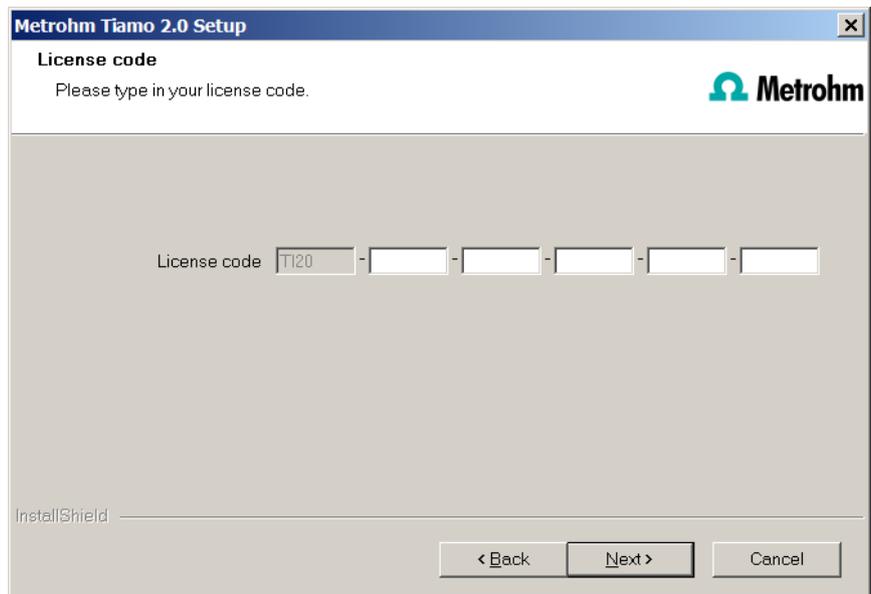
## Note

In the subdirectory **bin** of the **tiamo** installation there is the application **Clients.exe** with which all clients and their status can be displayed.

- 2 Open **tiamo multi** on the server and save the configuration database into an external directory using the backup function of **tiamo**. In the program part **Configuration**, select the menu item **File ► Save ► Manually**. Select the **Backup directory**, enter a name for the backup file and click on **[Start]**. The backup is carried out. It is recommended to copy the backup file to CD/DVD.
- 3 If desired, export the methods in addition to the backup with the configuration database (see above) into an external directory. In the program part **Method**, select the menu item **File ► Method manager....** Select the desired **Method group**, mark all methods to be exported and click on **[Edit] ► Export....** Select the desired export directory and click on **[OK]**. The methods are exported into the desired directory. It is recommended to copy the exported methods to CD/DVD.
- 4 Save all determination databases on the server into an external directory using the backup function of **tiamo**. In the program part **Database**, select the menu item **File ► Database manager....** Select the desired database and click on **[Backup]**. Select the **Backup directory**, enter a name for the backup file and click on **[Start]**. The backup is carried out. It is recommended to copy the backup file to CD/DVD.
- 5 Save further files in the installation directory (e.g. export files) into an external directory or to CD/DVD.
- 6 **Update server**  
Close **tiamo multi** on the server and on all clients. Insert the installation CD on the **server** and double click the file **setup.exe**. Then select **Repair/Update** and click on **[Next >]**.



7 Enter the update license code for **tiamo multi** and click on **[Next >]**.



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### Note

The update of **tiamo multi** consists of the server license and three client licenses. If an existing installation contains additional licenses, these will be deleted.

Click on **[OK]** in the corresponding message in order to continue the installation.

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### Caution

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During updating older tiamo versions (1.x) to tiamo 2.x the databases will be converted to the new version. Depending on the size of the database, this can take some time. For each database a progress bar is displayed which informs about the status of the conversion.

The computer or Windows must not be restarted or shut down as long as the conversion runs!

Complete the installation with **[Finish]**.

An **UpdateLog** file with a list of all files having been copied to the server and with a confirmation for a successful installation is saved on the server in the **tiamo** installation folder (default: C:\Program Files\Metrohm\tiamo) under bin\InstallLog.

- 10** In case additional licenses have been removed during the server update, or if further additional licenses are to be added, the **Administrator** can enter them in **tiamo** (dialog: **Configuration ▶ Tools ▶ Program administration ▶ Licenses ▶ Add licenses**).

### 11 Update clients

For each client, insert the installation CD and double click the file **setup.exe**. Then select **Repair/Update** and click on **[Next >]**. Complete the installation with **[Finish]**.



### Note

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In order to facilitate updating many clients, the installation can be copied from the CD to a writeable medium and the file **tiamo\_init.ini** can be modified. There, user-defined parameters (license code, installation path, server name, ...) for the installation can be set in order one will only have to click through the installation.

An **UpdateLog** file with a list of all files having been copied to the client computer and with a confirmation for a successful installation is saved on the client in the **tiamo** installation folder (default: C:\Program Files\Metrohm\tiamo) under bin\InstallLog.

## 7 Adding additional licenses with Windows Vista or newer

### General

Since Windows Vista, Microsoft has introduced the UAC (User Account Control), which permits running tasks either as non-administrator or as administrator (without changes of user, switching off or similar).

<http://technet.microsoft.com/en-us/library/cc709691%28WS.10%29.aspx>

<http://technet.microsoft.com/en-us/magazine/2007.06.uac.aspx>

This function can however cause difficulties with client/server installations for **tiamo**.

### Problem description

One would like to add additional licenses for the program; the license code for an additional 5 licenses, for example, is added (on the server) in the program part **Configuration** in the dialog window **Program administration** (accessible via menu item **Tools ▶ Program administration**, tab **Licenses**).

The file **license.mlic**, which contains the standard license code and the additional license codes, is stored in the bin directory of the program installation (**C:\Program Files\Metrohm\tiamo\bin**).

If one adds the 5 licenses and then looks at this file **license.mlic**, only the standard license code will be listed (for 3 licenses).

If one highlights the file **license.mlic** and presses **Compatibility files** in the bar, then one will arrive in the directory, **C:\Users\User\AppData\Local\VirtualStore\Program Files\Metrohm\tiamo\bin** ('User' being the abbreviation (UID) for the user logged in on the operating system). The file **license.mlic** with the license codes for the standard licenses and the 5 newly added licenses is to be found here, i.e. the additional licenses are stored in the **VirtualStore** of the Windows user who was logged in on the PC at the time the additional licenses were added, only.

On the server, the program recognizes all of the licenses; the operating system adds the file **license.mlic** from the directory **C:\Users\User\AppData\Local\VirtualStore\Program Files\tiamo\bin** to the detail list of the directory **C:\Program Files\Metrohm\tiamo\bin**.

For the Client/Server functionality of the database server, however, the file **license.mlic** in the directory **C:\Program Files\Metrohm\tiamo\bin** is relevant, and here only the basic license is listed. Therefore problems are to be anticipated when adding additional clients (more than the 3 clients present in the default settings).

## Remedy

### ■ For new installations

To enter additional licenses, the program must be started as administrator (position the mouse on the Program icon press down the right-hand mouse button – select **Run as administrator** there). If one then adds the license code for additional licenses in the usual way, then the file **license.mlic** in the directory **C:\Program Files\Metrohm\tiamo\bin** will contain both license codes.

### ■ For existing installations

First of all, the file **license.mlic** in the directory **C:\Users\User\AppData\Local\VirtualStore\Program Files\Metrohm\tiamo\bin** must be deleted. This file must not be present in the **VirtualStore** of any user – a check must be made to make sure of this, and any such files which may be found must be deleted.

Afterwards, the program must be started as administrator (position the mouse on the Program icon and click the right mouse button – select **Run as administrator**). If one then adds the license code for additional licenses in the usual way, then the file **license.mlic** in the directory **C:\Program Files\Metrohm\tiamo\bin** will contain both license codes.

## 8 User rights for tiamo

In order that the logged in user be able to access all functions with **tiamo**, the windows system administrator must ensure that the permissions are set for the directories as listed below:

Directory	Permission	Group name or user name
<b>Database directory</b> Directory where the databases will be saved (...Data)	<b>Modify</b>	<b>SYSTEM</b> <b>User*</b>
<b>Backup directory</b> Directory where the backups will be stored (...Backup)	<b>Modify</b>	<b>User*</b>
<b>%ALLUSERSPROFILE%\Application Data\Metrohm</b> (Windows 2000, Windows XP)**	<b>Modify</b>	<b>User*</b>
<b>%PROGRAMDATA%\Metrohm</b> (Windows Vista, Windows 7) **	<b>Modify</b>	<b>User*</b>
<b>Export directories</b> Directories where the exported files are to be saved.	<b>Modify</b>	<b>User*</b>
<b>PDF directories</b> Directories where the PDF files are to be saved.	<b>Modify</b>	<b>User*</b>
<b>Desktop</b>	<b>Modify</b>	<b>User*</b>
<b>%PROGRAMFILES%\Metrohm\tiamo</b>	<b>Read Execute</b>	<b>User*</b>

- \* **User** = name of the user who is logged in
- \*\* During installation of **tiamo** the permission **Full Control** is set for the following groups: **SYSTEM, Administrators, User, Guests, Main users**.