



# Install Guide

## Revision G

|                    |                      |
|--------------------|----------------------|
| <b>File:</b>       | Installguide_EN.docx |
| <b>last saved:</b> | 2014-10-02 09:34     |

## Change sheet

| Audit | Alteration   | Date      | Processor |
|-------|--|-----------|-----------|
| A     | First edition  | 4/20/2011 | TE        |
| B     | <ul style="list-style-type: none"><li>• Installation changes for MySQL Community Server 5.5.11:</li><li>• Uninstallation Instructions MySQL Community Server 5.5.11:</li></ul> | 5/18/2011 | TE        |
| C     | <ul style="list-style-type: none"><li>• Update minimum requirements</li><li>• Note: WIC required under Windows 2003 Server</li></ul>   | 5/19/2011 | TE        |
| D     | <ul style="list-style-type: none"><li>• Info for assigning the IP address</li></ul>  | 5/26/2011 | TE        |
| E     | <ul style="list-style-type: none"><li>• Welcome, Support</li></ul>   | 6/6/2011  | TE        |
| F     | <ul style="list-style-type: none"><li>• Settings DS400, DS500</li></ul>  | 2/22/2014 | TE        |
| G     | <ul style="list-style-type: none"><li>• Support and Service</li></ul>  | 10/2/2014 | TE        |

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With very good reason:

- Our products offer a very good price/performance ratio. Reliable quality at a fair price.
- With a professional experience of over 20 years, we are able to find the optimal solution for your measuring task.
- Our high quality standards.
- Of course, all of our equipment bears the CE mark required by the EU.
- Calibration certificates, seminars and consulting.
- After the purchase we will not leave you standing in the rain.

Our service ensures rapid assistance for you.

Table of contents

|  |           |
|--|-----------|
| <b>Change sheet</b> .....                | <b>2</b>  |
| <b>Illustration Index</b> .....          | <b>5</b>  |
| <b>Table Index</b> .....                 | <b>5</b>  |
| <b>1 Introduction</b> .....              | <b>6</b>  |
| 1.1 System Overview .....                | 6         |
| 1.1.1 Server Application.....            | 6         |
| 1.1.2 ServerGUI .....                    | 6         |
| 1.1.3 Client Application .....           | 7         |
| <b>2 Minimum Requirements</b> .....      | <b>8</b>  |
| 2.1 MySQL Community Server 5.5.11 .....  | 8         |
| 2.2 CS Soft OMServer + OMServerGUI ..... | 8         |
| 2.3 CS Soft OMClient.....                | 8         |
| <b>3 Device Settings</b> .....           | <b>9</b>  |
| 3.1 IP Address.....                      | 9         |
| 3.1.1 Configuration DS300 .....          | 9         |
| 3.1.2 Configuration DS400/DS500 .....    | 10        |
| <b>4 Installation</b> .....              | <b>11</b> |
| 4.1 General.....                         | 11        |
| 4.2 MySQL Community Server 5.5.11 .....  | 11        |
| 4.2.1 Installation.....                  | 11        |
| 4.2.2 Database Setup .....               | 16        |
| 4.2.3 Deinstallation .....               | 17        |
| 4.3 CS Soft Network Server .....         | 18        |
| 4.3.1 OMServer.....                      | 18        |
| 4.3.2 OMServerGUI .....                  | 18        |
| 4.4 CS Soft Network Client .....         | 18        |
| <b>5 Support and Service</b> .....       | <b>19</b> |

## Illustration Index

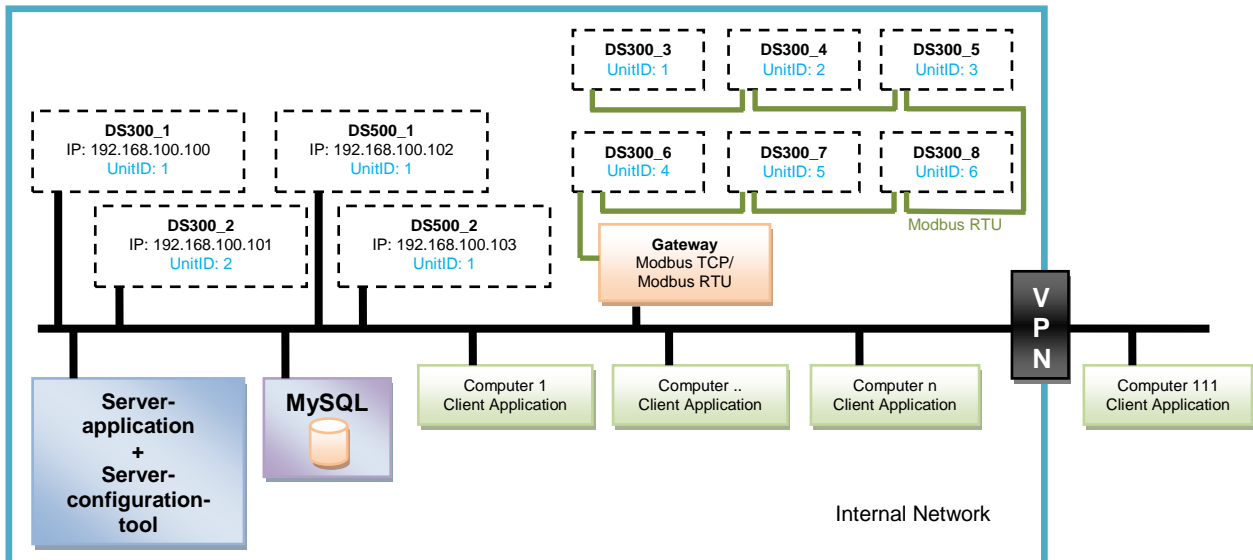
|   |    |
|---|----|
| Illustration 1: Setup Type.....               | 11 |
| Illustration 2: Configuration Wizard .....    | 12 |
| Illustration 3: Configuration.....            | 12 |
| Illustration 4: Server Type.....              | 13 |
| Illustration 5: Database Usage .....          | 13 |
| Illustration 6: Database Connections.....     | 14 |
| Illustration 7: Network Options.....          | 14 |
| Illustration 8: Character set.....            | 14 |
| Illustration 9: Windows options .....         | 15 |
| Illustration 10: Root Password.....           | 15 |
| Illustration 11: Status configuration .....   | 15 |
| Illustration 12: Stop the MySQL service ..... | 17 |

## Table Index

Es konnten keine Einträge für ein Abbildungsverzeichnis gefunden werden.

# 1 Introduction

## 1.1 System Overview



The DS300/DS500 with an integrated Ethernet port can be connected directly to the Ethernet. DS300 devices without an Ethernet connection can be networked via the RS485 port and a Modbus RTU / Modbus TCP Gateway connected to the Ethernet.

### 1.1.1 Server Application

The server application is a Windows service application. When starting the PC, the server application is started automatically. The server application can be run under every Windows operating system (starting from Windows XP SP2) and may only be operated once within the network.

The server application communicates with the individual devices using the Modbus TCP protocol. For the communication with clients WCF is used.

The server application performs any kind of administrative processing. This includes the following tasks:

- Cyclic storage of all measured values in a MySQL database
- Alarm generation and transmission via SMS and email
- Backup of the MySQL database

### 1.1.2 ServerGUI

The server application can be configured with the ServerGUI. The ServerGUI can be run under every Windows operating system (starting from Windows XP SP2) and is installed on the same machine as the server application.

With the help of the server configuration tool the following tasks can be performed:

- Configuration of the Modbus
- User administration
- Server parameterization (e.g. cycle time for the saving of the values into the database)
- STMP mail server configuration
- SMS gateway configuration
- Test functions for mail/SMS dispatch
- Backup configuration for MySQL

- Tool for calculating the maximum data volume in the mySQL database

### 1.1.3 Client Application

The client application can be run under every Windows operating system (starting from Windows XP SP2) and may be installed and operated within the network randomly.

#### Limitations:

Under Windows XP, a maximum of 10 network connections can be established. Windows 7 is limited to 20 network connections. If more clients than the ones mentioned above are operated in the network at the same time, the server application must be installed on a server operating system.

The client application provides the following functionalities:

- Loading/saving of a graphical file with freely placeable measuring devices
- Display of current measuring values
- Graphical display of current measuring values
- Graphical and tabular display of stored measured values
- Graphical display with zoom function and selection of the display area
- Navigation within the graphical display with a presetting for the step size
- Free formatting of the gradient within a diagram
- Saving/loading of diagrams and their measured values
- Statistical analysis of data within the selected period
- Consumption Analysis
- Printing/export of graphical display, reports, measured values
- Alarm definition
- Alarm display / alarm archive
- Parameterization mail recipient / SMS recipient

## 2 Minimum Requirements

### 2.1 MySQL Community Server 5.5.11

|                  |  |
|------------------|--|
| Hard disk space  | <p>For the storage of a measured value 26 bytes are required.<br/>If 5 measured values are to be stored for three years at a storage interval of 1 minute then the following storage space is required:</p> <p>5 measured values x 3 years x 365 days/year x 24 hours/day * 60 measured values/hour x 26 bytes = 204,980,000 bytes</p> <p>For a large amount of data, a fast MySQL database access requires the spanning of data across various hard disks. Please contact us when you plan your system.</p> |
| RAM              | At least 4 GB RAM  |
| Operating system | <p>The MySQL database 5.5.11 can be installed on the following operating systems:<br/>see <a href="http://dev.mysql.com/doc/refman/5.5/en/installing.html">http://dev.mysql.com/doc/refman/5.5/en/installing.html</a></p>  |

### 2.2 CS Soft OMServer + OMServerGUI

|                  |  |
|------------------|--|
| Hard disk space  | At least 1 GB (32-bit) / 3 GB (64-bit) |
| RAM              | At least 1 GB RAM                      |
| Operating system | Windows XP SP3 and higher              |

### 2.3 CS Soft OMClient

|                  |  |
|------------------|--|
| Hard disk space  | At least 2 GB (32-bit) / 4 GB (64-bit) |
| RAM              | At least 512 MB RAM                    |
| Operating system | Windows XP SP3 and higher              |



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## 3 Device Settings

### 3.1 IP Address

- Each device must have a static IP address.
- The assignment of a static IP address can be performed on the device or configured using the MAC-address through a DHCP server.
- Please observe the following points when assigning the IP address:
  1. The IP addresses may not be used by any other device.
  2. The IP address must be within the same subnet as your PC. In small networks, the IP address usually starts with 192.168...  
In this case, the IP address of the device must also start with 192.168. and may only differ only from the IP address of your PC in the last segment.

Example:

IP address of PC: 192 168 210 100

Possible IP addresses for the device: 192.168.210.x, e.g. 192.168.210.22

#### 3.1.1 Configuration DS300

- ZNetUtility must be used to configure the IP address of the DS300.
  1. Search
  2. Select device from list
  3. Code word: 88888
  4. IP Type: Static
  5. IP: <e.g.: 192.168.0.200>
  6. Mask: <e.g.: 255.255.255.0>
  7. Gateway: <e.g.: 192.168.0.1>
  8. Apply Change
- It must be checked with ZNetUtility if under the COM1 Settings the Frame Interval (ms) is set to 5.
  1. Search
  2. Select device from list
  3. Code word: 88888
  4. Frame Interval (ms): 5
  5. Apply Change
- The correct protocol must be selected on the DS300:
  1. Enter
  2. Communication setting
  3. Select protocol
  4. Modbus / TCP
- On the DS300 the ModbusID can be configured freely. If the DS300 is used with an Ethernet interface, the default Modbus ID 1 can be maintained.  
If the DS300 is networked with an RS485 interface and connected via a Modbus RTU / TCP Modbus, it must be ensured that the ModbusID's are unique within the RS485 network.
  1. Enter
  2. Communication setting
  3. Set communication settings
  4. Set Unit ID
  5. ModbusID: <1...247 e.g. 5>

### 3.1.2 Configuration DS400/DS500

#### Configuration IP-Adress

Main menu → Settings → Device settings → Network Settings

The screenshot shows the 'Network settings' configuration screen. At the top, there is a title bar with '\*\*\* Network settings \*\*\*'. Below it, there is a checkbox for 'IP address via DHCP' which is currently unchecked. The main area contains several fields for network configuration: 'IP address' (192.168.100.2), 'Subnet Mask' (255.255.255.0), 'Gateway address' (192.168.100.1), 'Host name' (DS400-1), and 'HTTP Port' (80). At the bottom, there are two buttons: 'Back' and 'Apply & Restart'.

#### Configuration Modbus

Main menu → Settings → Device settings → ModBus-settings

The screenshot shows the 'ModBus settings' configuration screen. At the top, there is a title bar with '\*\*\* ModBus settings \*\*\*'. Below it, there is a checkbox for 'Enable MB-RTU' which is currently unchecked, and a 'Modbus ID' field set to '1'. The 'Baudrate' section has a grid of buttons for 1200, 2400, 4800, 9600, 19.2, 38.4, 57.6, and 115.2. The 'Parity' section has buttons for 'none', 'even', and 'odd'. The 'Stopbits' section has buttons for '1' and '2'. The 'Term' section has a checked checkbox. The 'Bias' section has an unchecked checkbox. At the bottom, there is a 'Set to Default' button and a 'Back' button. On the right side, there is a 'Res. Drag' button. At the very bottom, there is a status bar with the following text: 'Rx: 1506060812 Crc-Err: 3698643975', 'Tx: 971041807 Par-Err: 708790593'.

## 4 Installation

### 4.1 General

Online monitoring requires the .NET Framework 4. The .NET Framework 4 is installed automatically during the installation.

#### **CAUTION:**

**For the successful installation of .NET Framework 4 under Windows Server 2003 the "Windows Imaging Component (WIC)" must be installed. You can find the English version in the WIC folder.**

Under

<http://www.microsoft.com/downloads/en/details.aspx?familyid=8e011506-6307-445b-b950-215def45ddd8&displaylang=en>

or under

<http://www.microsoft.com/downloads/en/details.aspx?familyid=F64654AC-6E26-41D9-A90A-0E7783B864EE&displaylang=en>

you can find the current version in every language.

### 4.2 MySQL Community Server 5.5.11

#### 4.2.1 Installation

- The installation of MySQL Community Server is not necessary if you already have a working installation of MySQL Community Server 5.5.11. In this case proceed directly to 4.2.2 Database Setup.
- Run the following from the installation CD:
  - a) mysql-5.5.11-win32.msi for Windows 32-bit systems
  - b) mysql-5.5.11-win64.msi for Windows 64-bit systems
  - c) If you want to install the MySQL community server under a different operating system, please download the corresponding file here <http://dev.mysql.com/downloads/>.
- Select "Typical":

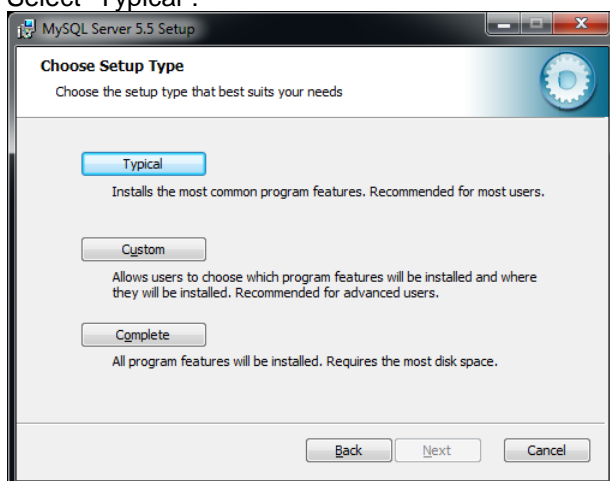


Illustration 1: Setup Type

- **IMPORTANT: The wizard must be started manually, otherwise the install will fail!**

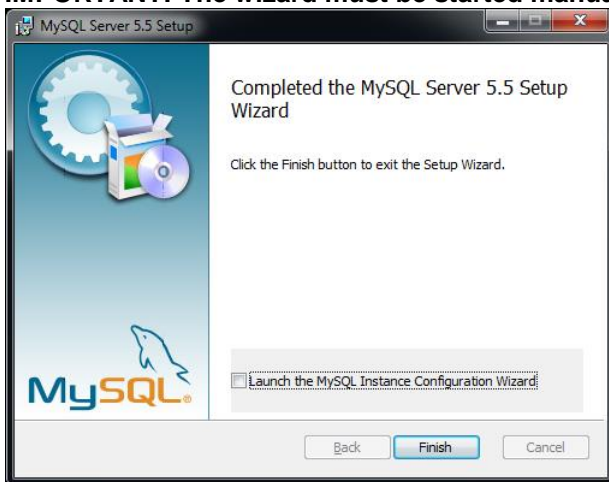


Illustration 2: Configuration Wizard

- Start the configuration wizard from %ProgramFiles%\MySQL\MySQL Server 5.5\bin\MySQLInstanceConfig.exe as the administrator!  
(example: C:\Programme\MySQL\MySQL Server 5.5\bin\MySQLInstanceConfig.exe)

Perform a detailed configuration:

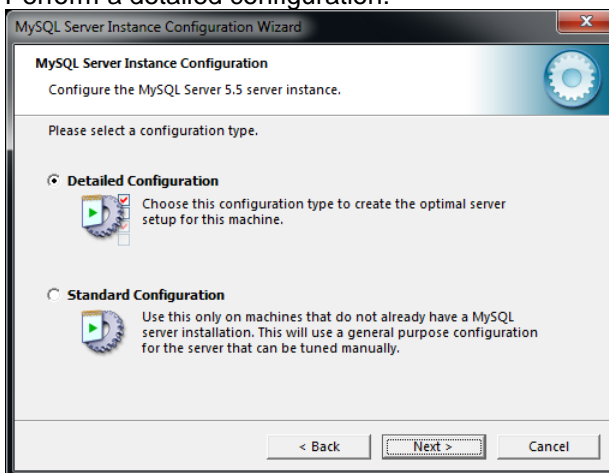


Illustration 3: Configuration

- Set server type to "Server Machine":

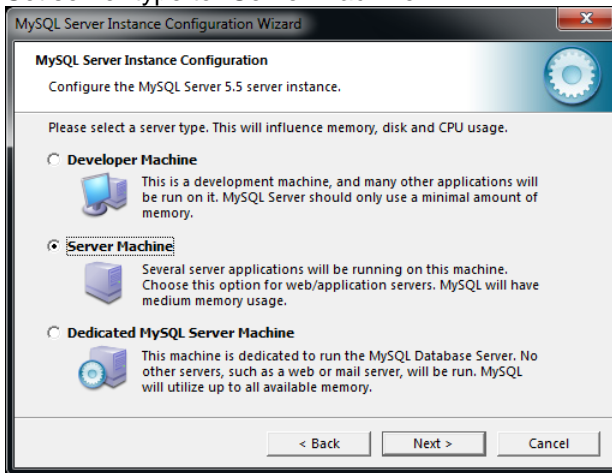


Illustration 4: Server Type

- Select "Multifunctional Database":

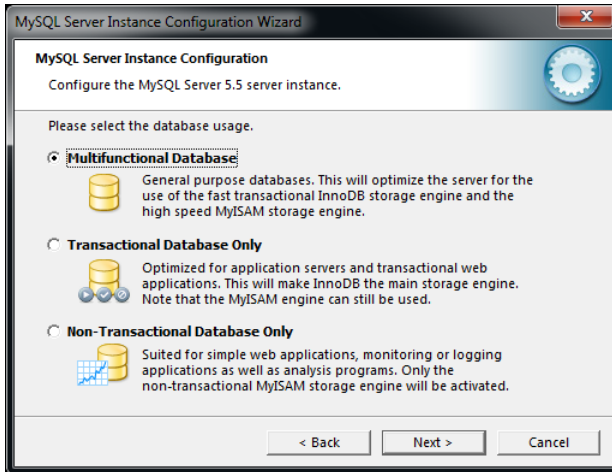


Illustration 5: Database Usage

- Use OLTP:

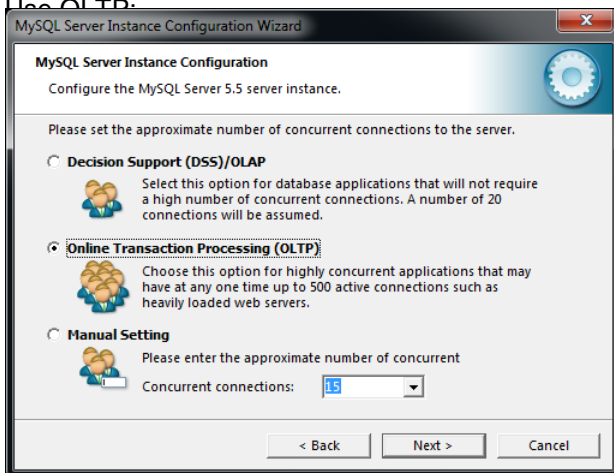


Illustration 6: Database Connections

- The port 3306 is used for the MySQL server by default:

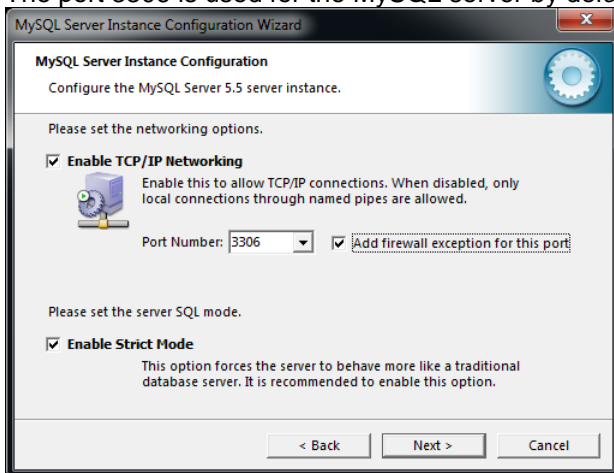


Illustration 7: Network Options

- Use "Standard Character Set":

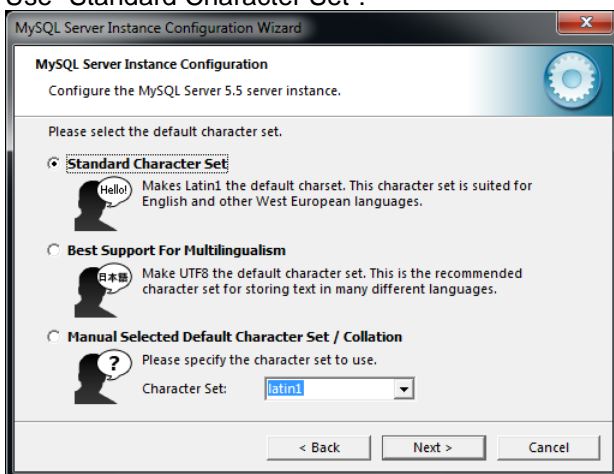


Illustration 8: Character set

- Use the following settings:

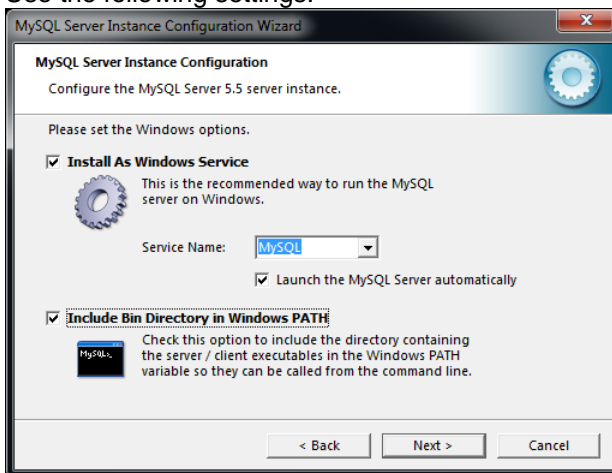


Illustration 9: Windows options

- Set password (e.g. CS\_DB) + allow Remote Access

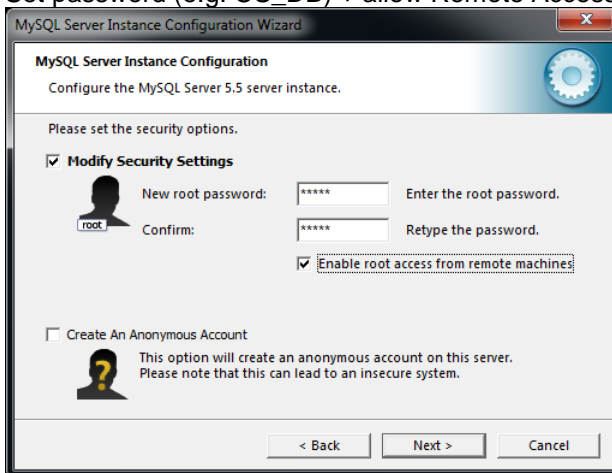


Illustration 10: Root Password

- After a successful installation the following dialog will appear (all check marks must be blue).

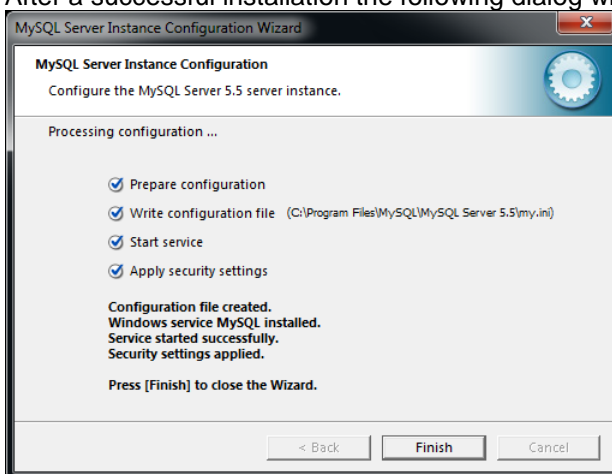
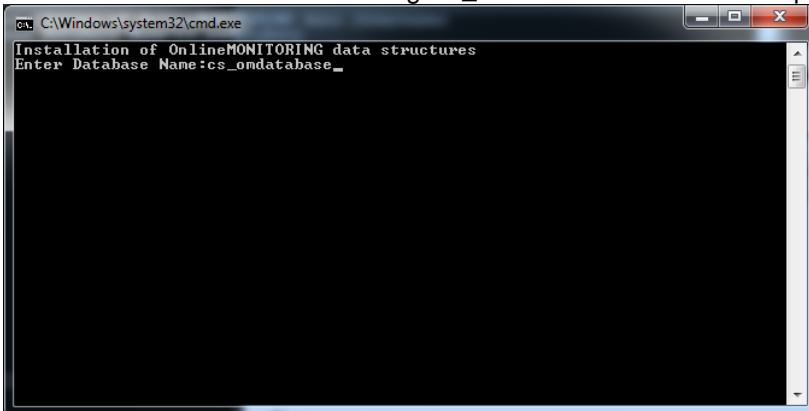


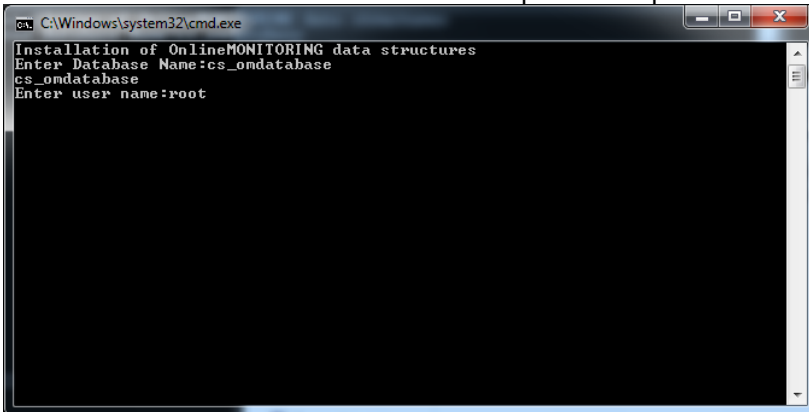
Illustration 11: Status configuration

#### 4.2.2 Database Setup

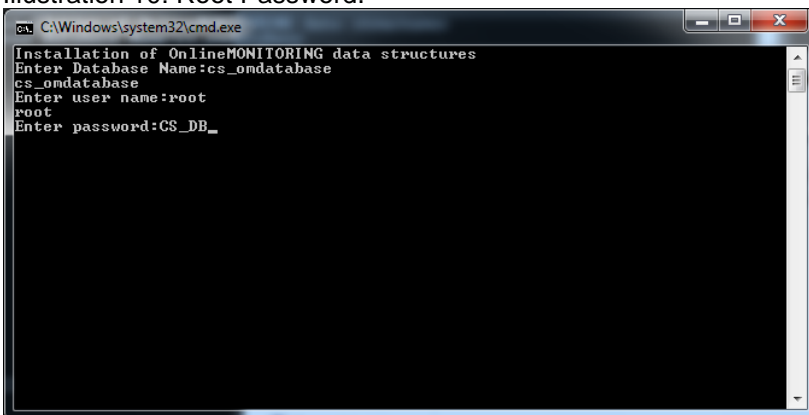
- Start the "CreateCSDatabase.bat" file in the folder "CreateCSDatabase" on the installation CD by double-clicking on it.
- Enter the name of the database e.g. cs\_omdatabase and then complete the input with Enter.



- As the user name enter "root" and then complete the input with Enter.

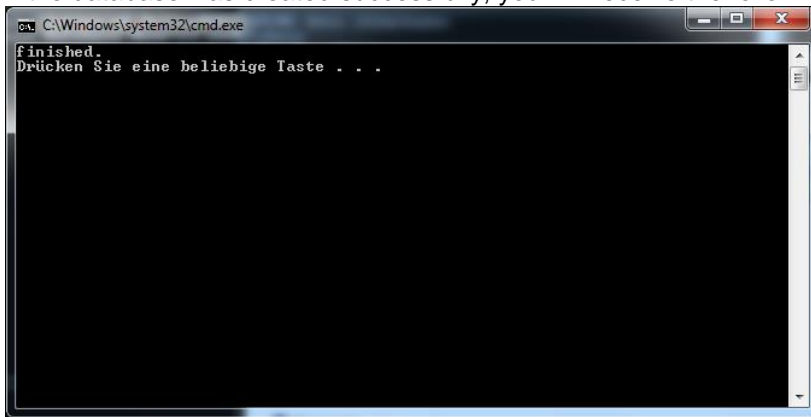


- Enter the password and complete the input with Enter. Here, the password must be entered under that was used in Illustration 10: Root Password.





- If the database was created successfully, you will receive the following message:



### 4.2.3 Deinstallation

If the installation was not performed according to 4.2.1 the MySQL server will not be installed correctly. In order to properly install the MySQL server, the MySQL server must be uninstalled as follows.

1. Stop the MySQL server (Control Panel-> Administration-> Services) under services.

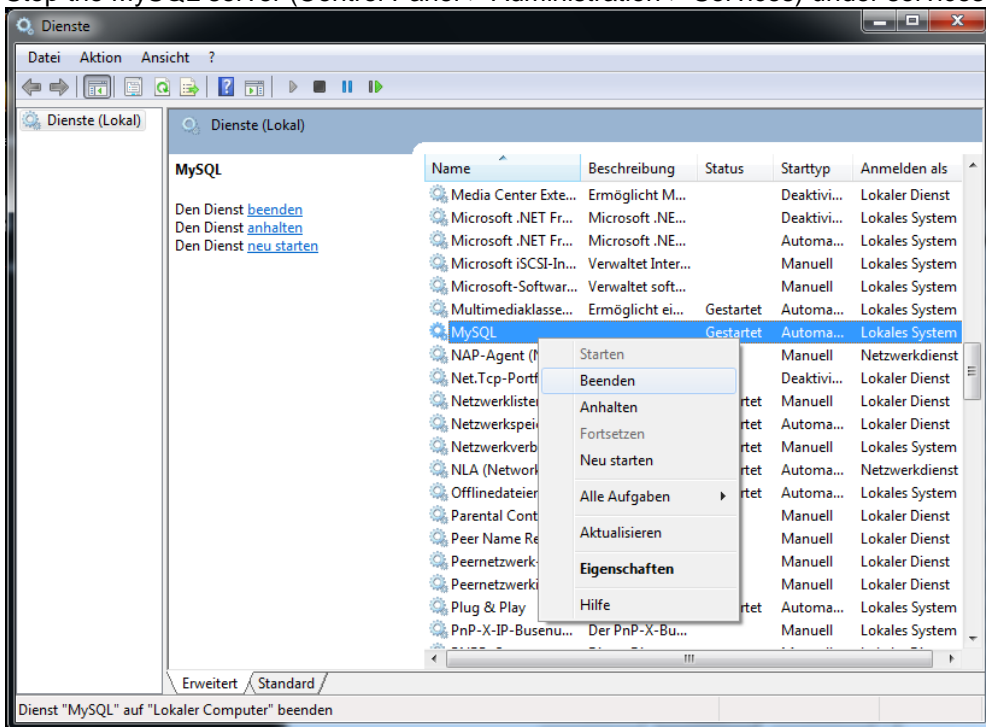


Illustration 12: Stop the MySQL service

2. Uninstall the MySQL Server 5.5 via the Control Panel.
3. Delete the following MySQL folders:
  - a. %ProgramFiles% (C:\Programme\MySQL)
  - b. as of WinVista: %ProgramData% (C:\ProgramData\MySQL)
  - WinXP: C:\Dokumente und Einstellungen\All users\Anwendungsdaten\MySQL

### 4.3 CS Soft Network Server

#### 4.3.1 OMServer

- The installation of online monitoring server is only allowed on one computer within the network.
- The Online Monitoring Server is automatically installed as a service and automatically starts with the computer.
- Please start the "setup.exe" in the folder "Setup\_OMServer" to install the OMServer.
- During installation, the default settings are maintained.

#### 4.3.2 OMServerGUI

- With the help of the OMServerGUI the Admin will receive a graphical interface for the configuration of the OMServer.
- OMServerGUI must be installed on the same computer as the OMServer.
- OMServerGUI may also only be installed once within the network.
- Please start the "setup.exe" in the folder "Setup\_OMServerGUI" to install the OMServerGUI.
- During installation, the default settings are maintained.

### 4.4 CS Soft Network Client

- The installation of the Online Monitoring Client can be performed repeatedly throughout the network.
- Please start the "setup.exe" in the folder "Setup\_OMViewer" to install the OMClient.
- During installation, the default settings are maintained.

## 5 Support and Service

If you have questions about our products or require technical support for the installation or use of our software, please contact us by e-mail:

[info@cs-instruments.com](mailto:info@cs-instruments.com)

or by phone call:

**+49 461 7002025**

Phone support and Teamviewer access  
(15 minutes = 30 Euro, minimum 45min)

We will answer all inquiries within 24-48 hours.