

Installation and configuration guide

CS Network for Windows

**Geschäftsstelle Süd/ Sales office South**

Zindelsteiner Straße 15
D-78052 VS-Tannheim
Tel.: +49(0)7705 97899-0
Fax: +49(0)7705 97899-20
Mail: info@cs-instruments.com
Web: <http://www.cs-instruments.com/de>

Geschäftsstelle Nord/ Sales office North

Gewerbehof 14
D-24955 Harrislee
Tel.: +49(0)461 807150-0
Fax: +49(0)461 807150-15
Mail: info@cs-instruments.com
Web: <http://www.cs-instruments.com/de>

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2 Change sheet

Revision	Change	Date	Editor	Version
1	First edition	2022-04-23	TE	V.01
2	Name change	2022-04-29	TE	V.01
3	Titel changed	2022-05-05	TE	V.01
4	Configure E-Mail server	2022-11-10	TE	V.02
5	.NETCore 6.0 + ASP.NETCore.App 6.0	2023-02-23	TE	V.03

3 Prologue

Dear customer,

if you use the CS Network software, you can read out our sensors directly or save several measured values from our data recorders in a central database. You can then access these data from several clients and evaluate or display them via a user authorization concept. You can also send alarms and evaluations automatically by e-mail to the users via push message.

This documentation describes the installation and initial configuration for running the solution on a server. Several virtual platforms can be used.

4 Notes

4.1 About this document

- Read this documentation carefully.
- Keep this documentation handy for reference when needed.
- Pass this documentation on to subsequent users of the product.

CS Instruments GmbH & Co.KG makes no warranty as to the suitability for any particular purpose and assumes no liability for errors printed in these instructions for use. Nor for consequential damages in connection with the delivery, performance, or use of this software.

5 System requirements

Hardware Server Platforms	Windows Server 2016 64bit Windows Server 2019 64bit Windows Server 2022 64bit
Virtualisation platforms	Vmware, Hyper-V, virtualBox
Main memory requirement	min. 8 GB RAM - recommended 16 GB
Hard disk space	min. 100 GB SSD (also depends on the measured values and log times)
Processors	4 CPUvCore
Windows-Clients	ab Win10 64bit

The following ports must be enabled on the network for proper communication and operation of the software:

Port 50051 is used for communication between the Windows client and the Ubuntu server via gRPC.

The server needs port 502 for communication with the devices/sensors via ModbusTCP.

For the broadcast for automatic device detection the port 8800 (server - devices/sensors) is used.

6 Installation / Application CS Network

There is an installation package for Windows server from version 2016 64bit.

The data storage is based on a MySQL database version 5.7.34. This is then installed with the installation package if there is no installation.

For the Windows clients an installation package "CS Network setup.exe" is available.

For mobile devices there is also a MobileApp, which will be available for Android and iOS.

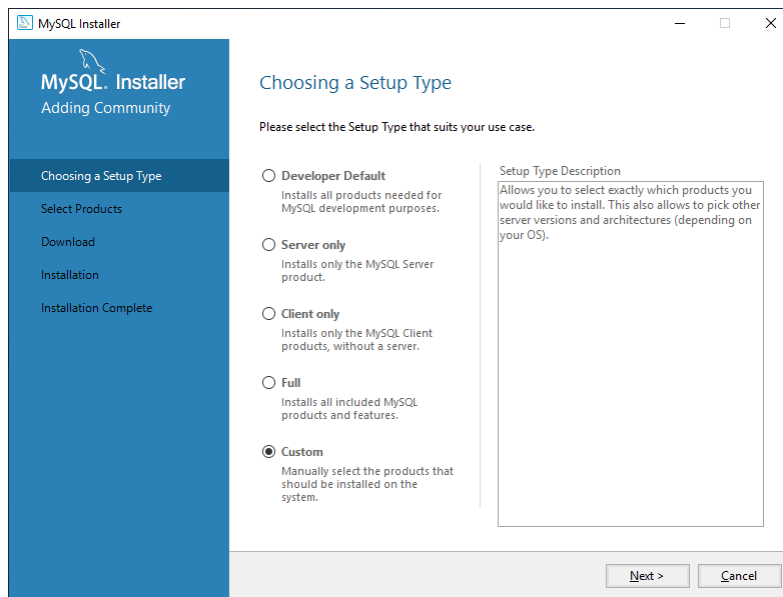
All packages can be download from our Website.

7 MySQL 8.0

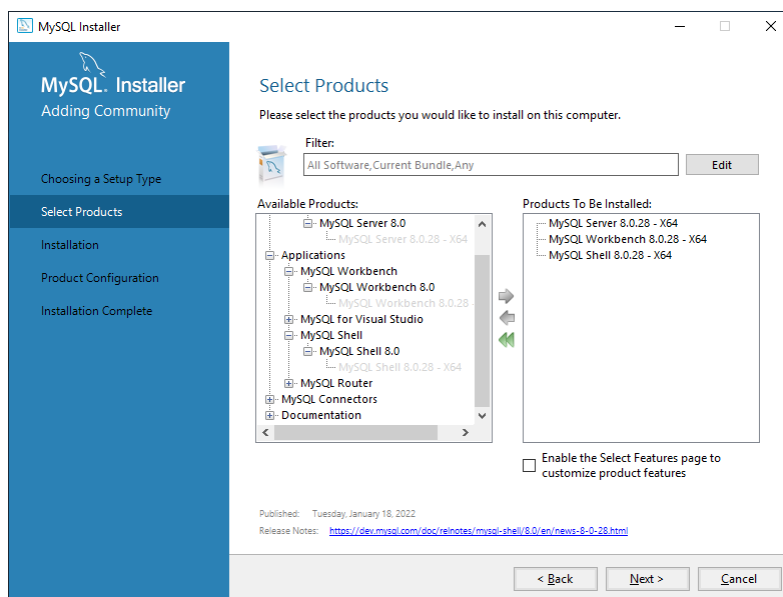
The MySQL database only needs to be installed if a MySQL database is not already installed on the PC/server.

7.1 New installation of the MySQL database

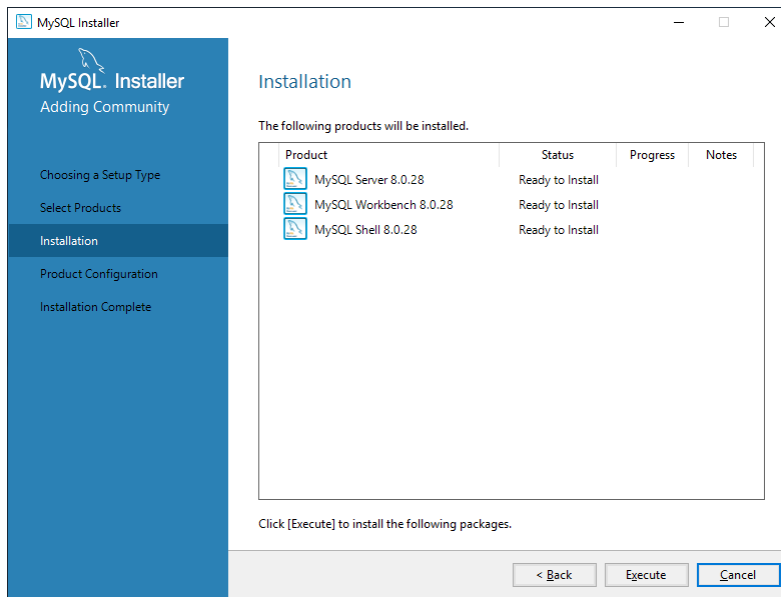
1. Start MSI installer (mysql-installer-community-8.0.28.0.msi)
2. „Custom“



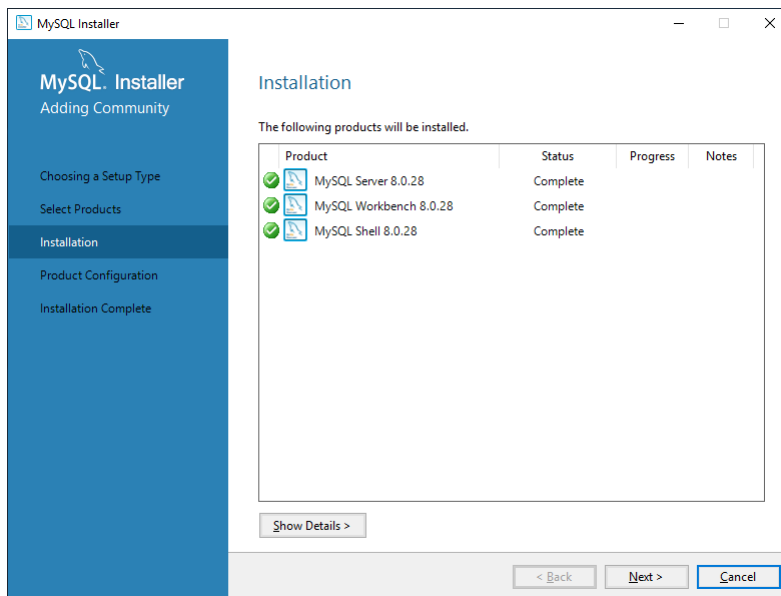
3. Install MySQL Server, MySQL Workbench and MySQL Shell
 - a) Select products + "Next



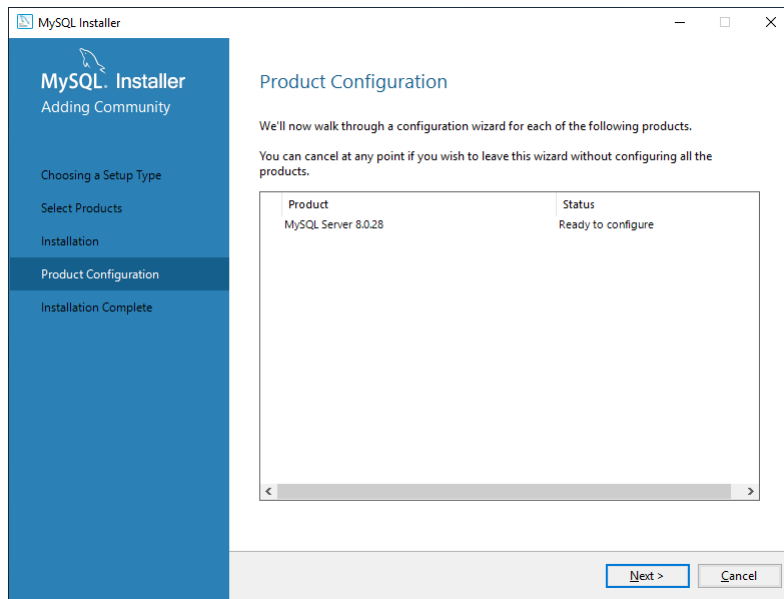
b) „Execute“



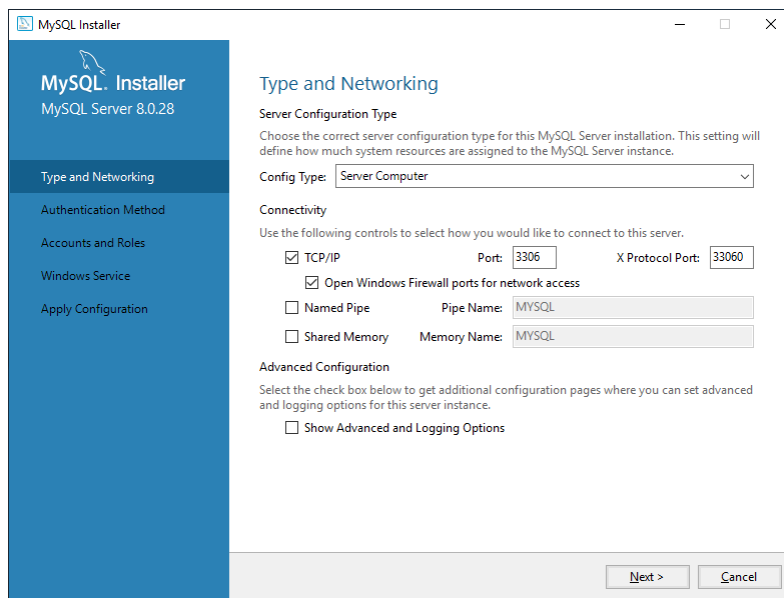
c) „Next“



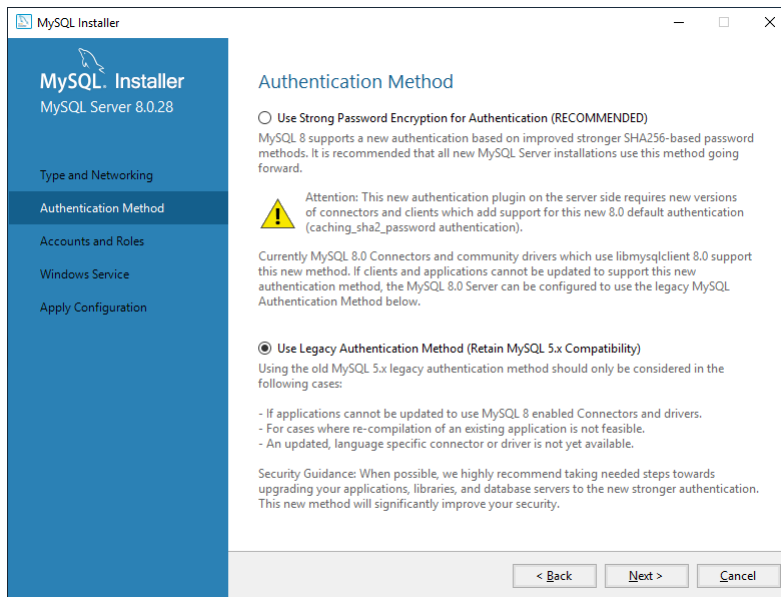
d) „Next“



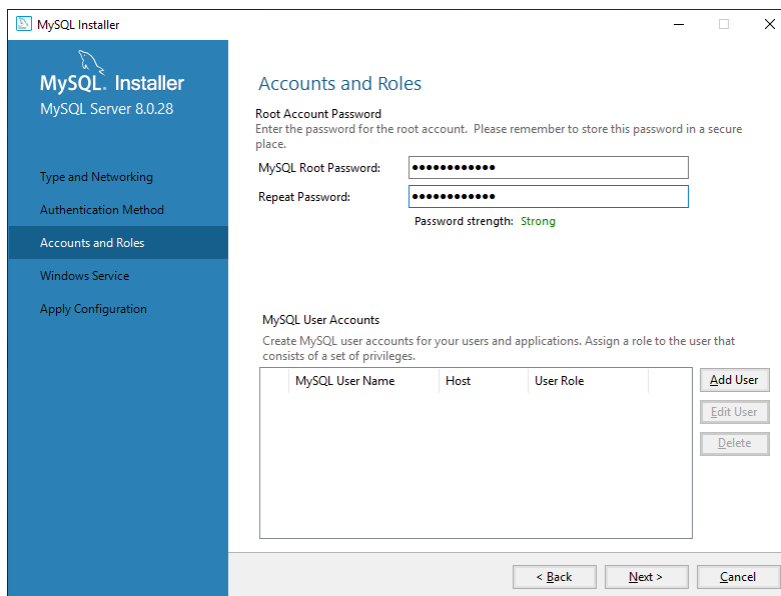
e) Select "Server Computer" + "Next":



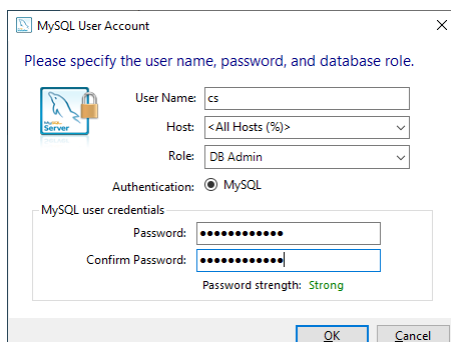
f) Authentication MySQL 5.X use + "Next".



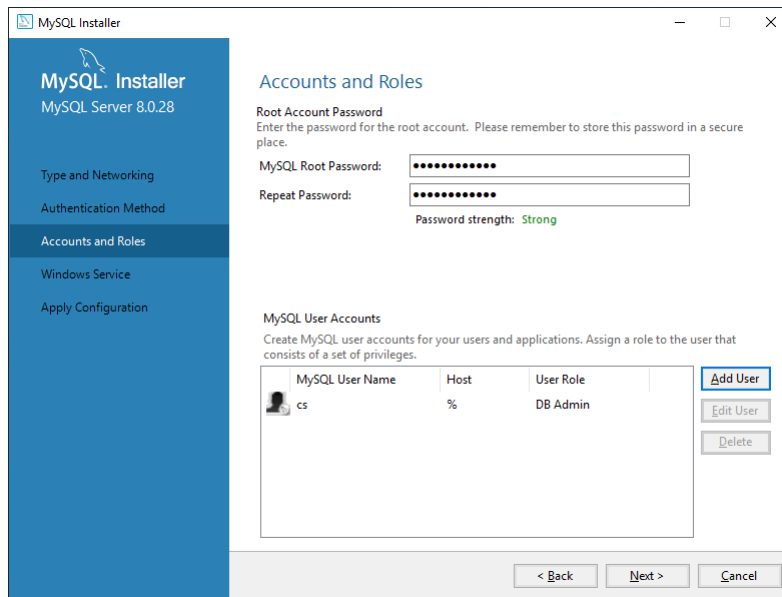
g) Set ROOT password (default: 20DidnCSN!02)



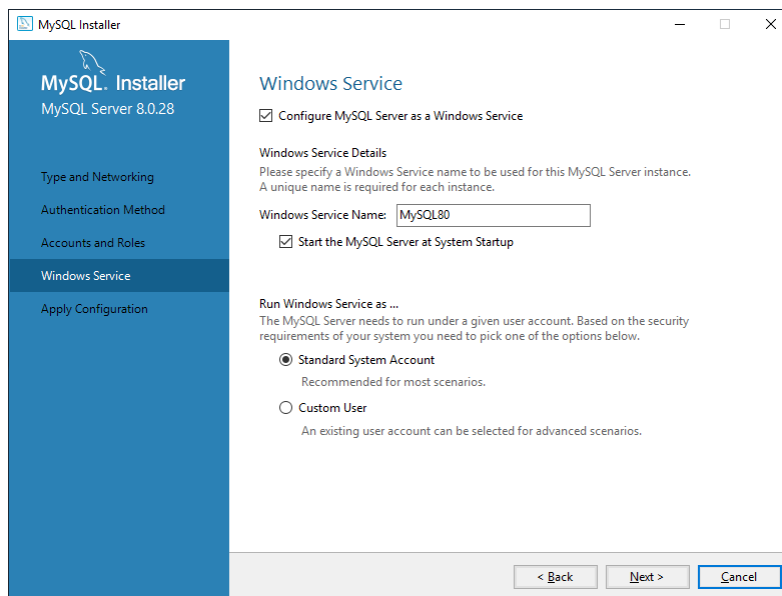
h) Create user „cs“ (Default password: 2020DidnCSC!)



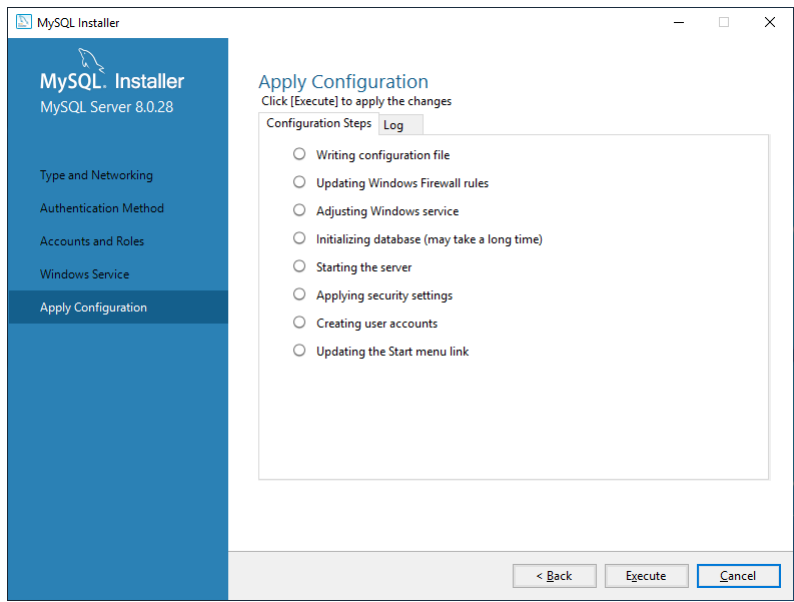
i) „Next“



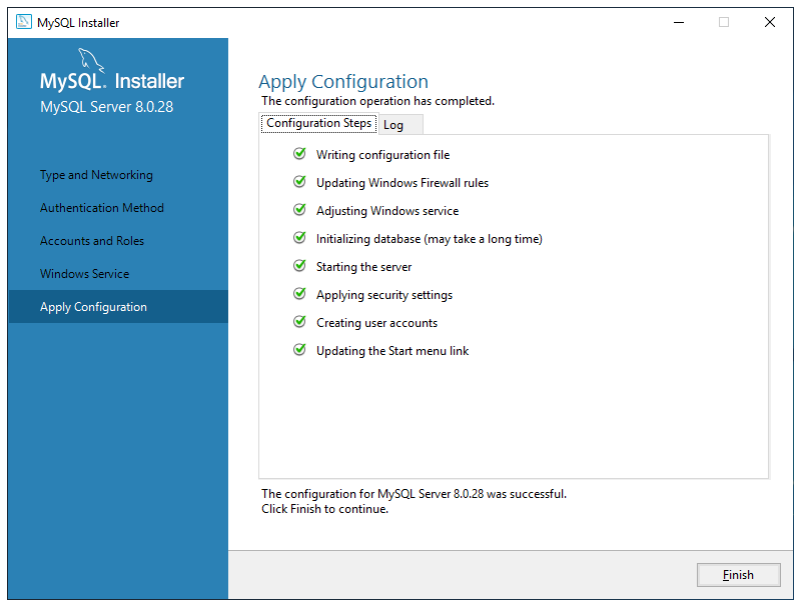
j) „Next“

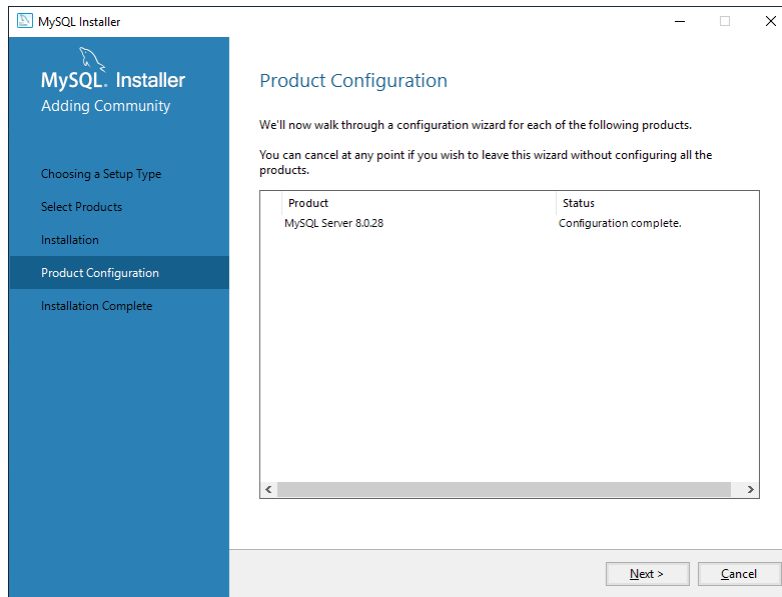


k) „Execute“

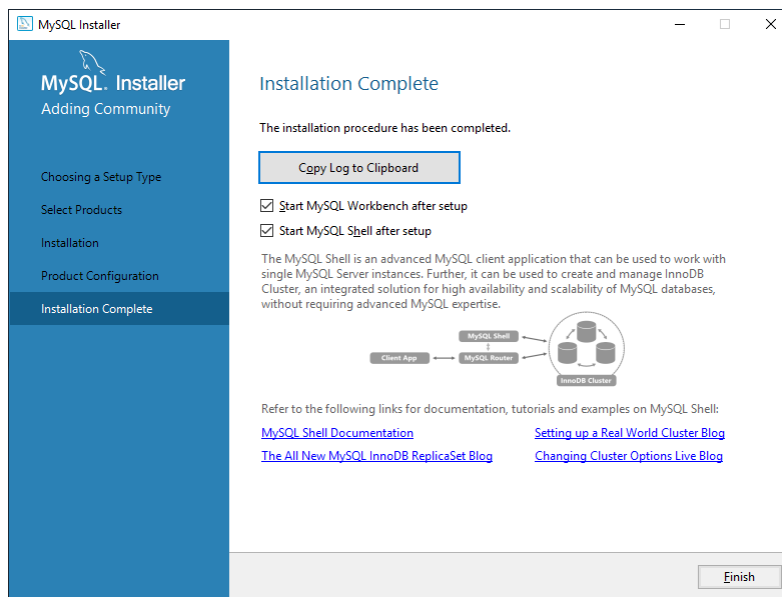


l) Installation was performed successfully:



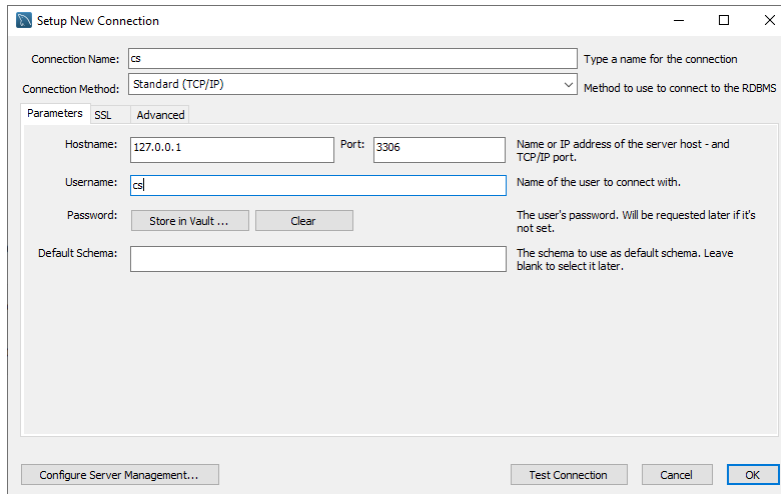


m) „Finish“



7.2 Create database

1. Start MySQL-Workbench
2. Create connection for user "cs":



Setup New Connection

Connection Name: cs Type a name for the connection

Connection Method: Standard (TCP/IP) Method to use to connect to the RDBMS

Parameters **SSL** Advanced

Hostname: 127.0.0.1 Name or IP address of the server host - and TCP/IP part. Port: 3306

Username: cs Name of the user to connect with.

Password: The user's password. Will be requested later if it's not set.

Default Schema: The schema to use as default schema. Leave blank to select it later.

Configure Server Management... Test Connection Cancel OK

3. Connect with Connection "cs".
4. File -> Open SQL Script -> CreateCloudPrjDb.sql
5. Execute

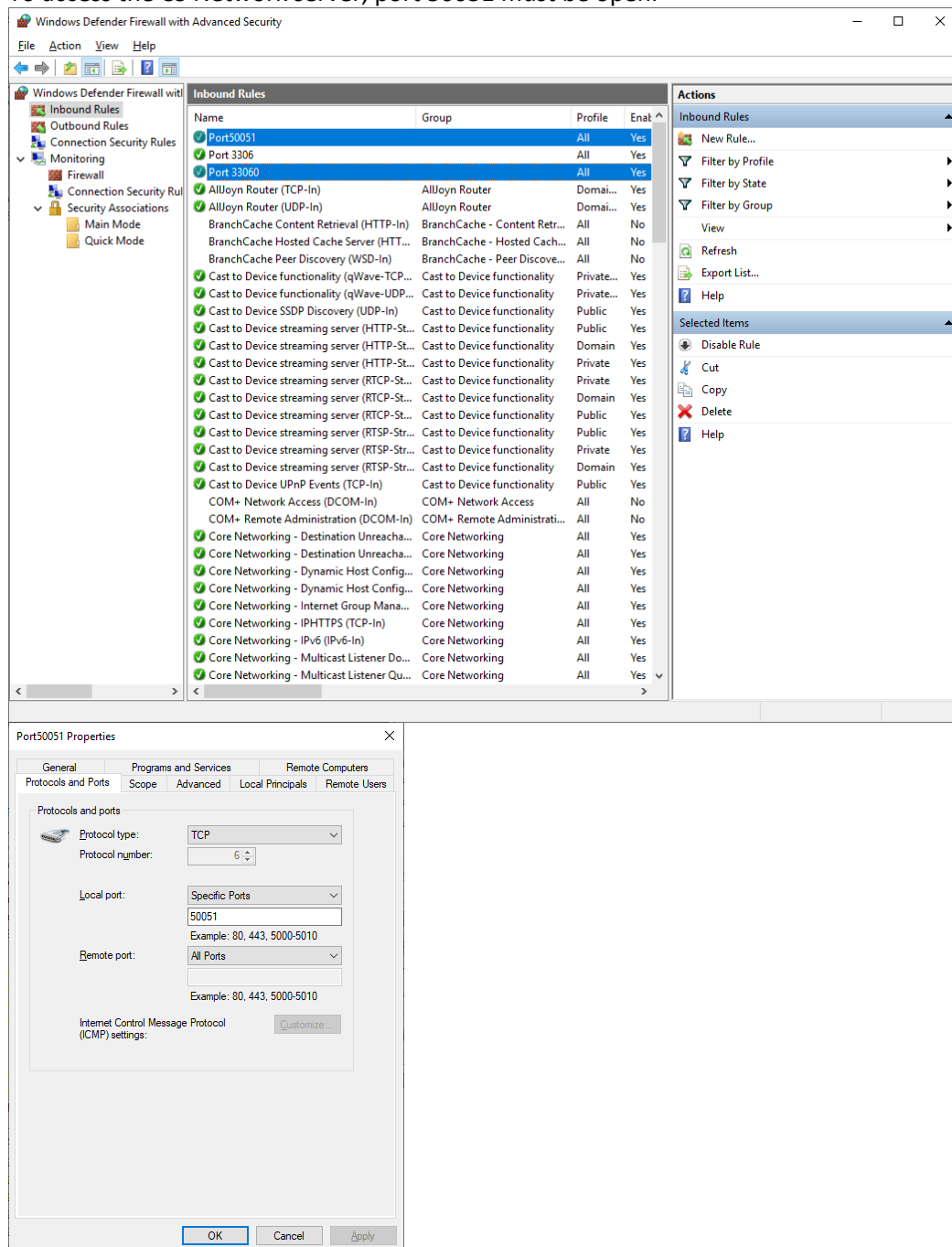
8 CS-Network

8.1 Installation

1. Install .NET-Core Runtime: dotnet-runtime-6.0.14-win-x64.exe
2. Install ASP.NET Core Runtime: aspnetcore-runtime-6.0.14-win-x64.exe
3. Install Soft2GrpcServer: Soft2GrpcServer Setup.exe
4. Install Soft2ModbusReader: ModbusReaderService Setup.exe

8.2 Port

To access the CS Network server, port 50051 must be open.



The screenshot shows the Windows Defender Firewall with Advanced Security console. The 'Inbound Rules' list is visible, with 'Port50051' selected. The 'Port50051 Properties' dialog box is open, showing the 'Protocols and Ports' tab. The 'Protocol type' is set to 'TCP' and the 'Local port' is set to 'Specific Ports' with '50051' entered in the text box. The 'Remote port' is set to 'All Ports'.

Name	Group	Profile	Enabled
Port50051		All	Yes
Port 3306		All	Yes
Port 33060		All	Yes
AllJoyn Router (TCP-In)	AllJoyn Router	Domain...	Yes
AllJoyn Router (UDP-In)	AllJoyn Router	Domain...	Yes
BranchCache Content Retrieval (HTTP-In)	BranchCache - Content Retr...	All	No
BranchCache Hosted Cache Server (HTT...	BranchCache - Hosted Cach...	All	No
BranchCache Peer Discovery (WSD-In)	BranchCache - Peer Discove...	All	No
Cast to Device functionality (qWave-TCP...	Cast to Device functionality	Private...	Yes
Cast to Device functionality (qWave-UDP...	Cast to Device functionality	Private...	Yes
Cast to Device SSDP Discovery (UDP-In)	Cast to Device functionality	Public	Yes
Cast to Device streaming server (HTTP-St...	Cast to Device functionality	Public	Yes
Cast to Device streaming server (HTTP-St...	Cast to Device functionality	Domain	Yes
Cast to Device streaming server (HTTP-St...	Cast to Device functionality	Private	Yes
Cast to Device streaming server (RTCP-St...	Cast to Device functionality	Private	Yes
Cast to Device streaming server (RTCP-St...	Cast to Device functionality	Domain	Yes
Cast to Device streaming server (RTCP-St...	Cast to Device functionality	Public	Yes
Cast to Device streaming server (RTSP-Str...	Cast to Device functionality	Public	Yes
Cast to Device streaming server (RTSP-Str...	Cast to Device functionality	Private	Yes
Cast to Device streaming server (RTSP-Str...	Cast to Device functionality	Domain	Yes
Cast to Device UPnP Events (TCP-In)	Cast to Device functionality	Public	Yes
COM+ Network Access (DCOM-In)	COM+ Network Access	All	No
COM+ Remote Administration (DCOM-In)	COM+ Remote Administrati...	All	No
Core Networking - Destination Unreach...	Core Networking	All	Yes
Core Networking - Destination Unreach...	Core Networking	All	Yes
Core Networking - Dynamic Host Config...	Core Networking	All	Yes
Core Networking - Dynamic Host Config...	Core Networking	All	Yes
Core Networking - Internet Group Mana...	Core Networking	All	Yes
Core Networking - IPHTTPS (TCP-In)	Core Networking	All	Yes
Core Networking - IPv6 (IPv6-In)	Core Networking	All	Yes
Core Networking - Multicast Listener Do...	Core Networking	All	Yes
Core Networking - Multicast Listener Qu...	Core Networking	All	Yes

8.3 E-Mail-Server Configuration

An e-mail server can be configured for sending alarms and reporting.

1. Open the JSON configuration file with an editor

%ProgramFiles%\CS Instruments\Soft2GrpcServer\appsettings.json

```

appsettings - Notepad
File Edit Format View Help
  "Default": "Warning",
  "Microsoft.Hosting.Lifetime": "Warning"
}
},
"AllowedHosts": "*",
"Kestrel": {
  "EndpointDefaults": {
    "Protocols": "Http2"
  }
},
"DbSettings": {
  "Host": "127.0.0.1",
  "Port": 3306,
  "User": [REDACTED],
  "Password": [REDACTED]
},
"MailkitSmtpSettings": {
  "Host": "mail.gmx.net",
  "Port": 465,
  "User": [REDACTED],
  "WithAuthentication": true,
  "Password": [REDACTED],
  "secureSocketOptions": "Auto",
  "SenderEmail": [REDACTED],
  "SenderName": "Soft2 Software"
},
"RootPath": "Soft2CloudData"
}

```

2. In the MailkitSmtpSettings parameter, enter the data as follows:

Host: IP address of the SMTP server for sending emails

Port: SMTP Port

User: Username to send the email via this SMTP server

WithAuthentication: With or without authentication

true with authentication

false without authentication

Password: User password

secureSocketOptions: Security socket options

None no encryption

Auto Automatic recognition (SSL/TLS/none)

SslOnConnect SSL/TLS

StartTls STARTTLS

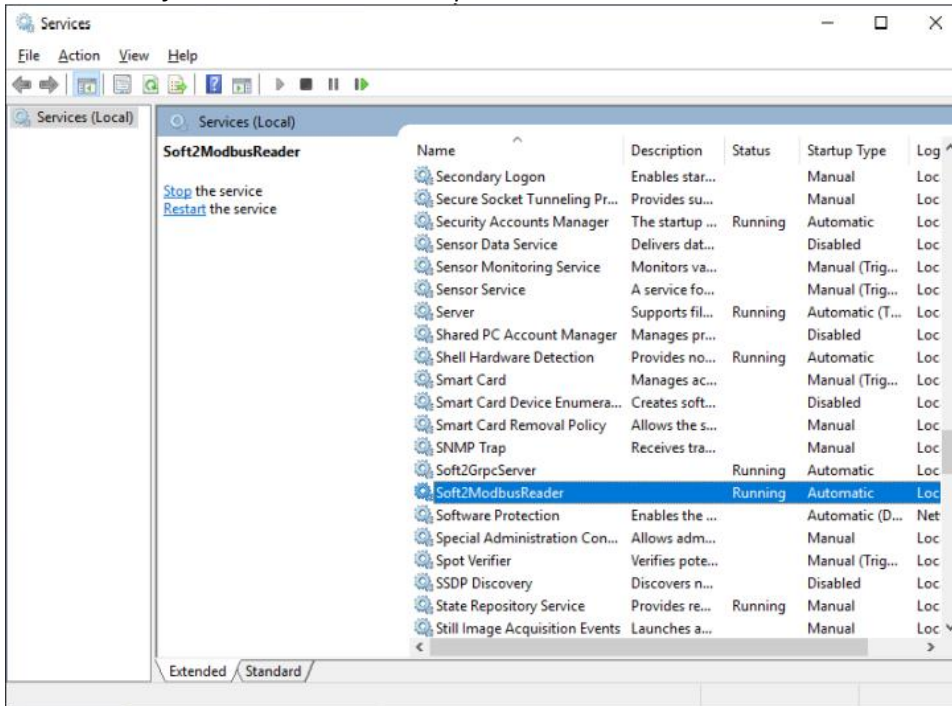
StartTlsWhenAvailable STARTTLS/SSL

SenderEmail: Sender email address

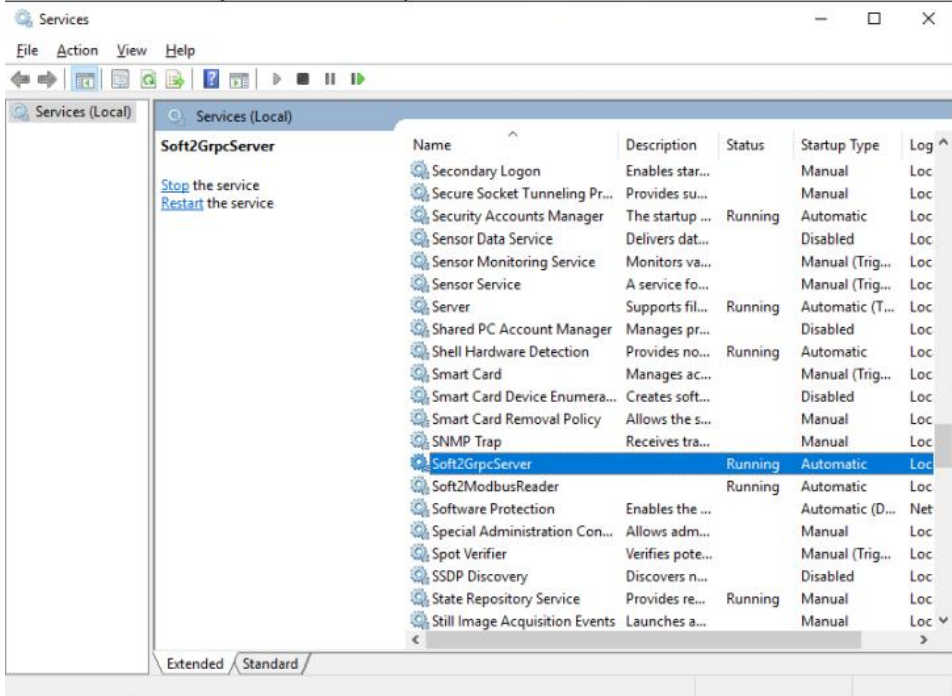
SenderName: Plain text for the sender address

3. Stop server: **IMPORTANT: note the order!**

Services -> Soft2ModbusReader -> Stop



Services -> Soft2GrpcServer -> Stop



4. Start server:

Services -> Soft2GrpcServer -> Start

Services -> Soft2ModbusReader -> Start