GASERA ONE Data Server Installation and usage instructions

Purpose

GASERA ONE Data Server is an application for acquiring and storing measurement results from GASERA ONE analyzers.

GASERA ONE Data Server uses the WebSocket protocol to collect measurement data from the connected GASERA ONE and writes result data to a MariaDB (MySQL) database running on user's computer. The program also includes a graphical user interface, allowing user to check latest result data in real-time as well as export history measurement data from the MariaDB database to CSV format while a measurement is running on GASERA ONE.

GASERA ONE Data Server is intended mainly for demonstration purposes, and it is not tested for production use.

Requirements

- *ONE Data Server application (GaseraONEDataServer.exe)*
- *MariaDB database server, with installed **onedata** database (onedata.sql) running on localhost.*

Installation

- *MariaDB can be downloaded from https://downloads.mariadb.org/ (current stable version recommended).*
    - *Accept default settings during installation (Figure 1). When asked for password for root user, set **gasera123**.*
    - *Install the **onedata** database using the included HeidiSQL utility that comes with MariaDB (create new session and login to MariaDB server on localhost using user root and associated password as shown in Figure 2).*
    - *From HeidiSQL run the included onedata.sql script using **File->Run SQL file**. This will install the required database and tables needed by the ONE Data Server application.*
- *Copy GaseraONEDataServer.exe to a desired location. This is a portable application, so no installation is required.*
- *Create folder: C:\temp\ (to enable automatic restart of data collection after power cut)*
- *Start GaseraONEDataServer.exe.*

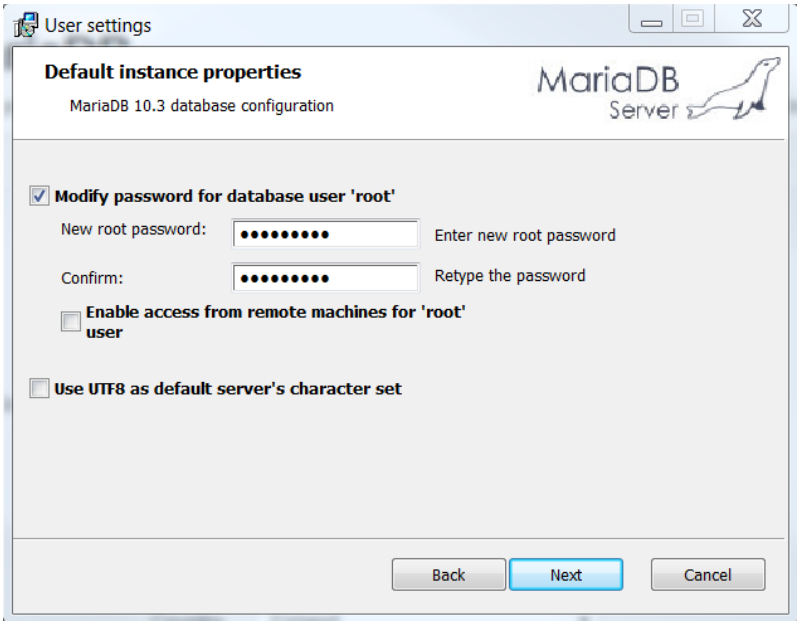

Figure 1. Use defaults when installing MariaDB. Enter the password for root user.

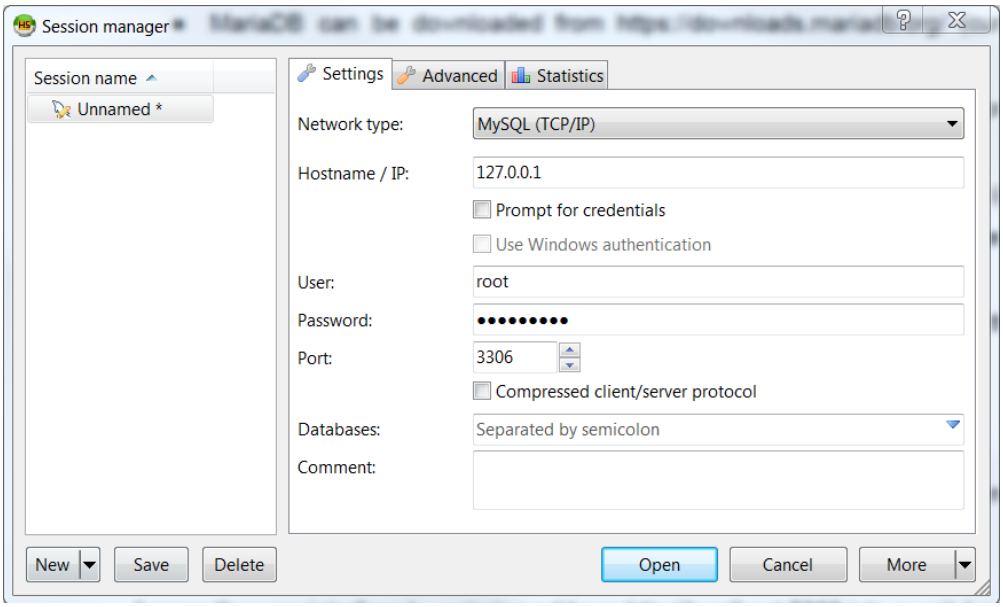

Figure 2. Creating a session and logging into MariaDB (MySQL) with HeidiSQL

User Interface

The user interface is divided into four sections: **Connection**, **Status**, **Results** and **Export**.

Connection section

On the **Connection section** you can see the current status of the MySQL database server and GASERA ONE connections, as well as the IP address of the Gasera ONE that is currently connected. If no connection to a GASERA ONE is established, a connection form is shown (see Figure 3). To establish a connection to a GASERA ONE, enter the IP address of the ONE and press **Connect**. If an established connection to a ONE is lost, the application will automatically attempt to reconnect.

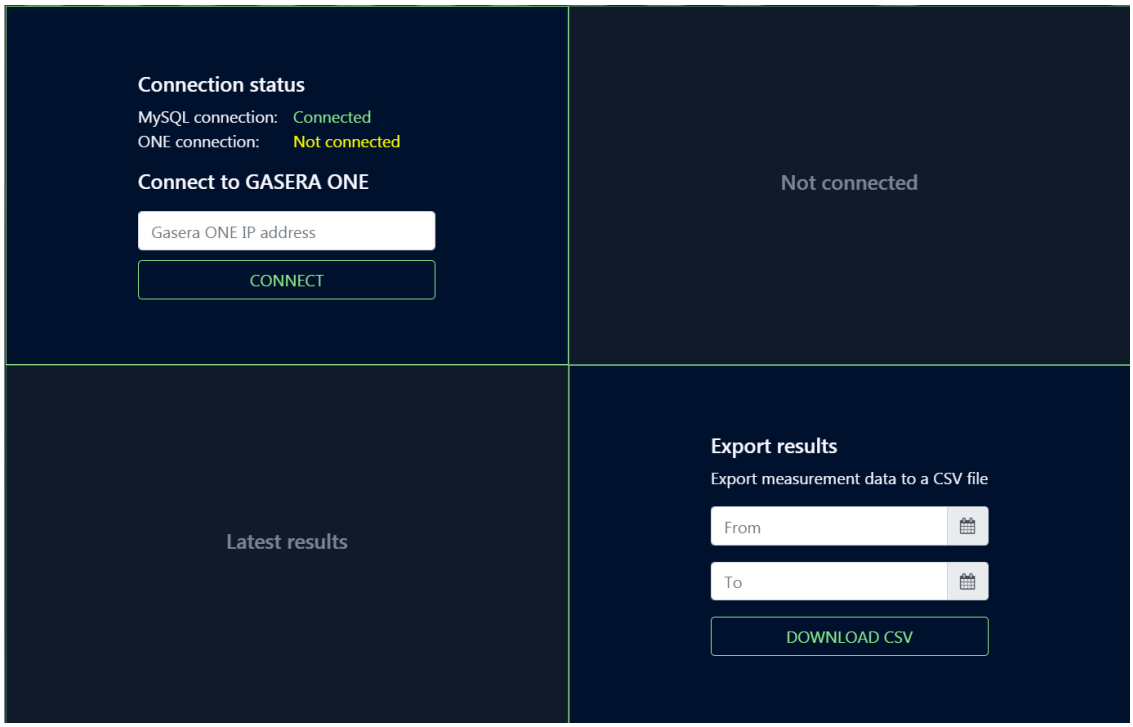

Figure 3. Connection section (top left)

Status section

The **Status section** shows the current status of the Gasera ONE. The analyzer can be in the following states:

- *Not connected*
- *Initializing*
- *Idle*
- *Measuring*

If the unit is measuring, the status section will show the current progress and sample inlet of the running measurement.

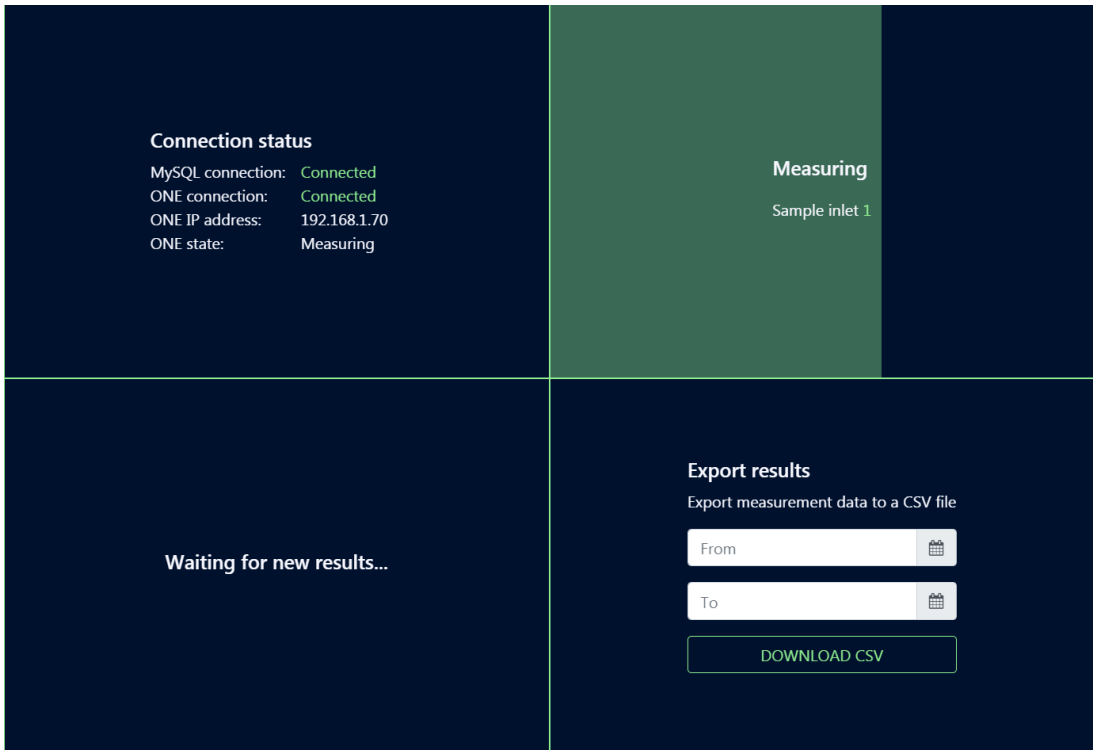

Figure 4. Status section shows the current status of the Gasera ONE (top right)

Results section

The **Results section** shows the latest analysis results (concentrations) that have been retrieved from the GASERA ONE.

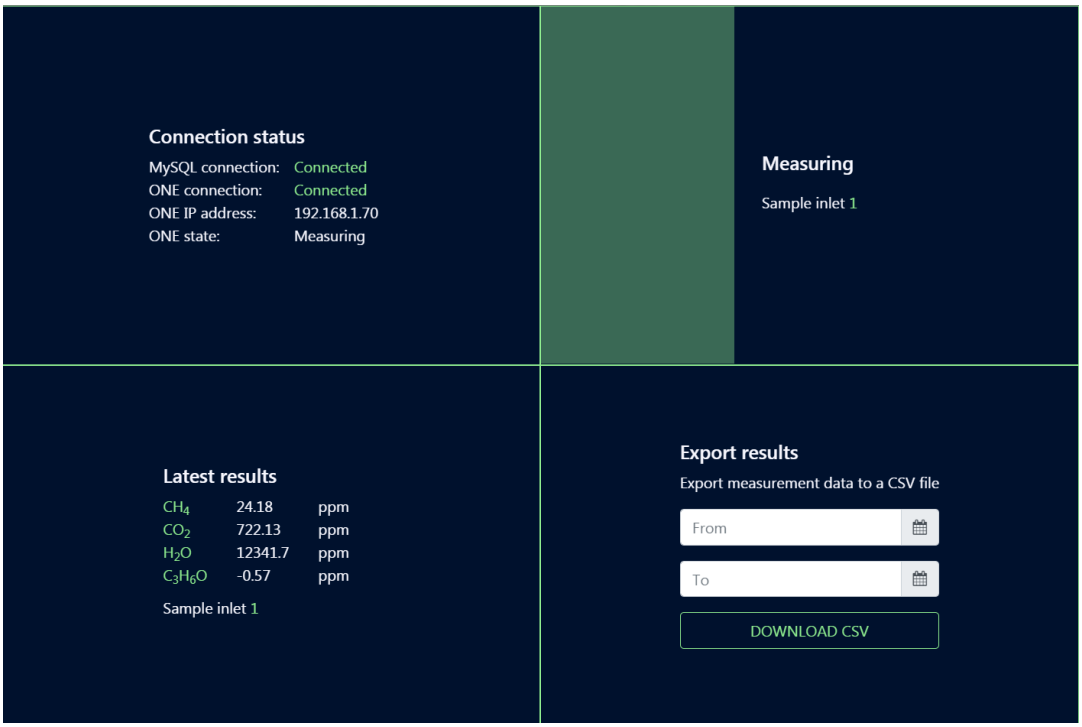

Figure 5. Results section shows the latest analysis results (bottom left)

Export section

The **Export section** allows the user to export measurement results from the MariaDB (MySQL) database to a CSV file. Simply select a time range and press **Download CSV**. Please note that the application does not need to be connected to a GASERA ONE to export measurement results. Measurement data can also be exported while a measurement is in progress.

Notes

Automatic reconnection

If the connection to the GASERA ONE analyzer breaks, GASERA ONE Data Server will automatically reconnect to the latest IP address and continue data acquisition and storing to the local MariaDB database.

Automatic reconnection after power cut

Since version 1.0.1, GASERA ONE Data Server will automatically reconnect to the latest IP address and continue data acquisition and storing to the local MariaDB database. This enables user to setup GASERA ONE Data Server to startup with Windows system after, for example, a power cut.
This automatic reconnection feature will work only if GASERA ONE Data Server application has been terminated or otherwise forced to close. Reconnection feature requires that there exists folder: C:\temp\

Emptying the database

When the database connects to an instrument for the first time, it makes some permanent settings. When SW updates, DB updates or even the instrument changes are done, there may be some incompatibility issues. For this reason, the database should be emptied always before a new session if any changes are done for the instrument.

Exit from the “GaseraONEDataServer” application.

Start the HeidiSQL session manger.

Choose “Open” in the HeidiSQL session manager as shown in the Figure 6. Then choose “one_data” database, choose “component” table and right click and choose “Empty table(s)…” as shown in the Figure 7. Do the same for the table “meas_results”.

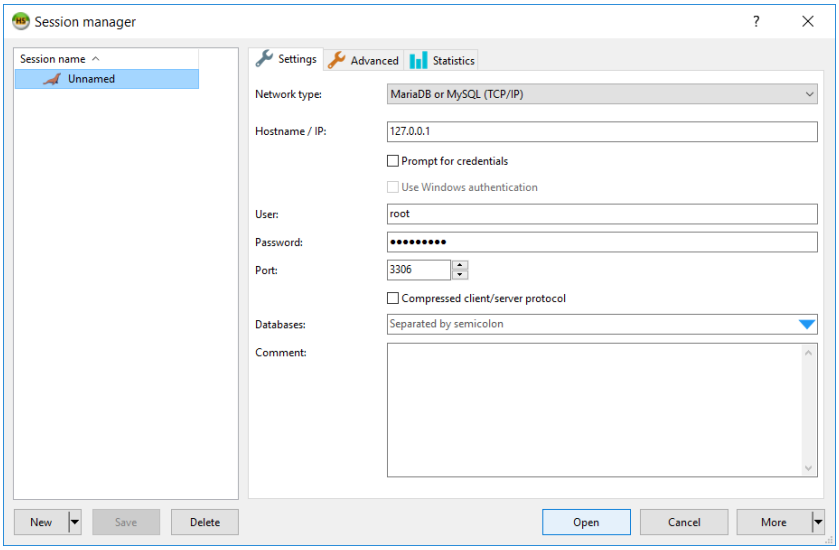

Figure 6. Choose “Open” to access database.

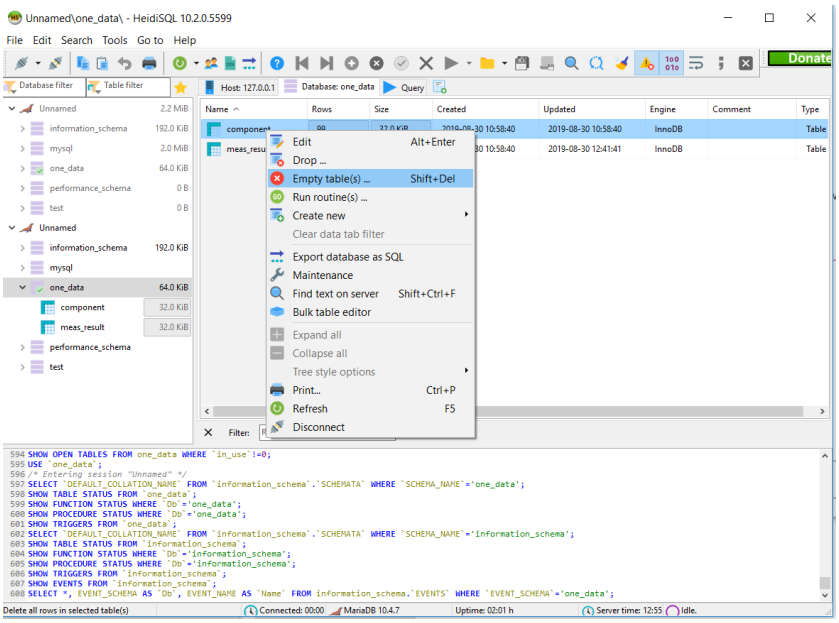

Figure 7. Choose "one_data" and right click on top of the "component" and choose "Empty table(s)…". Do the same for the "meas_results".

After the DB is emptied, start the "GaseraONEDataServer" again.