An aerial photograph of a mountain range. The peaks are rugged and covered in snow, with some rocky outcrops visible. The valleys between the mountains are filled with dense, white snow. The sky is a clear, pale blue. The overall scene is bright and high-contrast.

Climsoft V4 – Backup and Restore Guide

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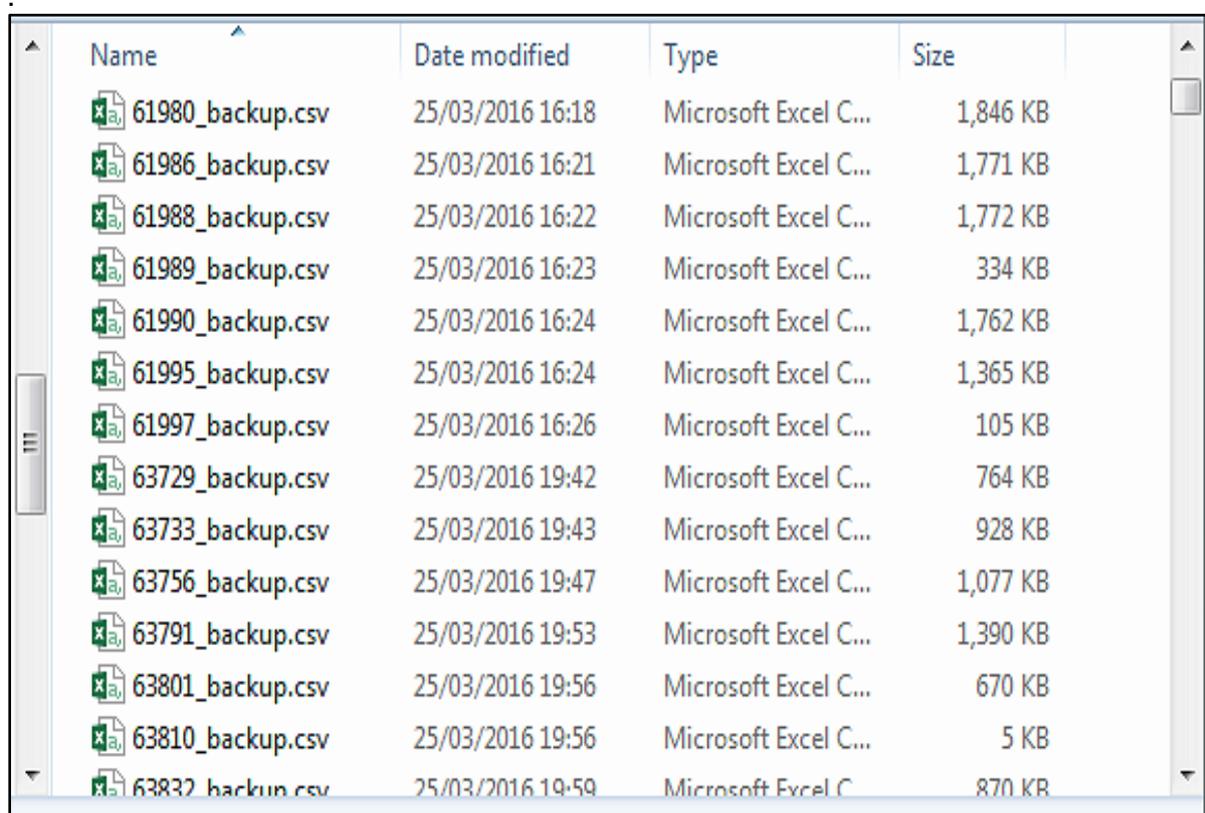
1. Introduction

Welcome to Climsoft version 4 Data Backup and Restore Guide. This guide is intended to teach administrators how to perform backup and restore of all the observation data and database. Data backup and restore are essential operations in data management.

2. Data Backup

2.1 Data Backup by Station

Climsoft Version 4 has a facility for a complete backup of all the observation data in the “**observationfinal**” table by making individual backup files for each station. This process is very fast and has minimum strain on the computer memory resources. There is an added advantage that one can have a quick view of the list of backup files in Windows File Explorer and have a quick idea of the relative amount of data for each station by looking at the file sizes, without the extra effort of doing a detailed inventory report (Figure 1)



Name	Date modified	Type	Size
61980_backup.csv	25/03/2016 16:18	Microsoft Excel C...	1,846 KB
61986_backup.csv	25/03/2016 16:21	Microsoft Excel C...	1,771 KB
61988_backup.csv	25/03/2016 16:22	Microsoft Excel C...	1,772 KB
61989_backup.csv	25/03/2016 16:23	Microsoft Excel C...	334 KB
61990_backup.csv	25/03/2016 16:24	Microsoft Excel C...	1,762 KB
61995_backup.csv	25/03/2016 16:24	Microsoft Excel C...	1,365 KB
61997_backup.csv	25/03/2016 16:26	Microsoft Excel C...	105 KB
63729_backup.csv	25/03/2016 19:42	Microsoft Excel C...	764 KB
63733_backup.csv	25/03/2016 19:43	Microsoft Excel C...	928 KB
63756_backup.csv	25/03/2016 19:47	Microsoft Excel C...	1,077 KB
63791_backup.csv	25/03/2016 19:53	Microsoft Excel C...	1,390 KB
63801_backup.csv	25/03/2016 19:56	Microsoft Excel C...	670 KB
63810_backup.csv	25/03/2016 19:56	Microsoft Excel C...	5 KB
63832_backup.csv	25/03/2016 19:59	Microsoft Excel C...	870 KB

Figure 1 - List of individual station backup files

Getting Started

Step 1: Sign into **Climsoft**;

Step 2: click on “**Data Transfer**” icon, located in the welcome window to open the database utilities dialog;

Step 3: select “**Backup**” to open the dialog box (Figure 2):

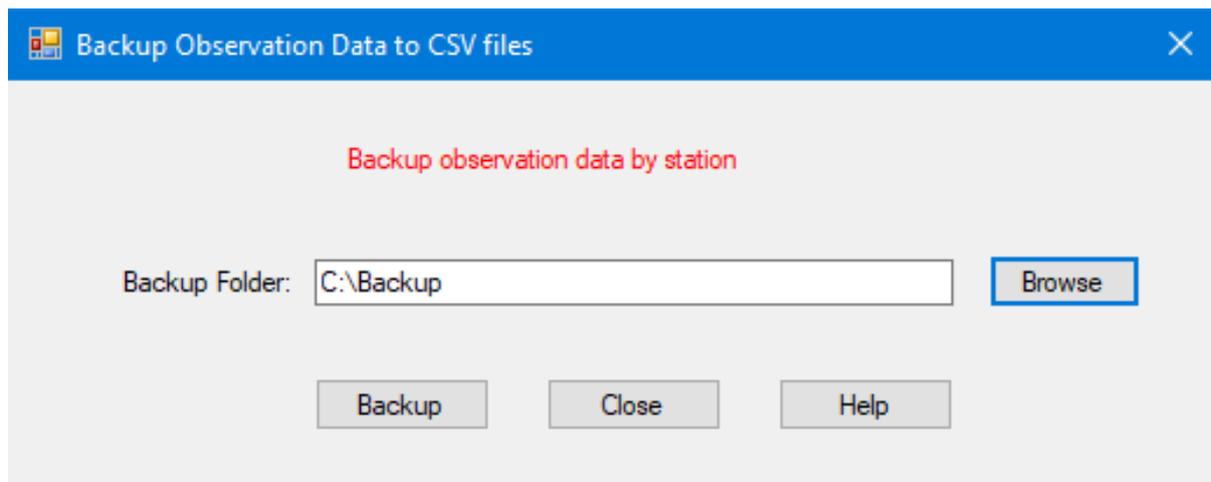


Figure 2 - Data backup

Step 4: After browsing for the backup folder where data files will be saved followed by clicking the “**Backup**” button, the backup process will start immediately, displaying the progress of the backup process.

2.2 Complete Database Backup

In Climsoft Version 4, the recommended tool for backing up the whole database is “HeidiSQL” which is a graphical interface for managing databases that comes bundled with MariaDB Database Management System (DBMS) installation. HeidiSQL is fairly easy to configure and use.

Follow the steps below to perform complete database backup

Step 1: Launch “HeidiSQL” either from the desktop shortcut or from the Windows Start menu under MariaDB program group. This will display the “**Session Manager**” as shown in Figure 4 below.

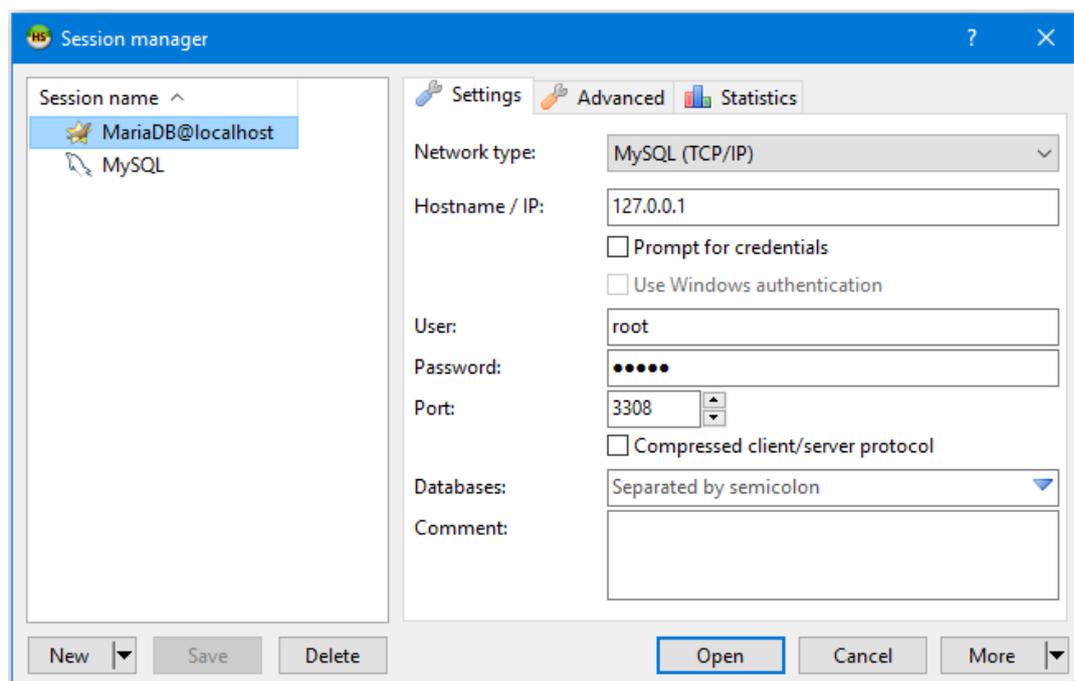


Figure 4 - HeidiSQL Session Manager

Step 2: Click the “Open” button to display the dialog below (Figure 5)

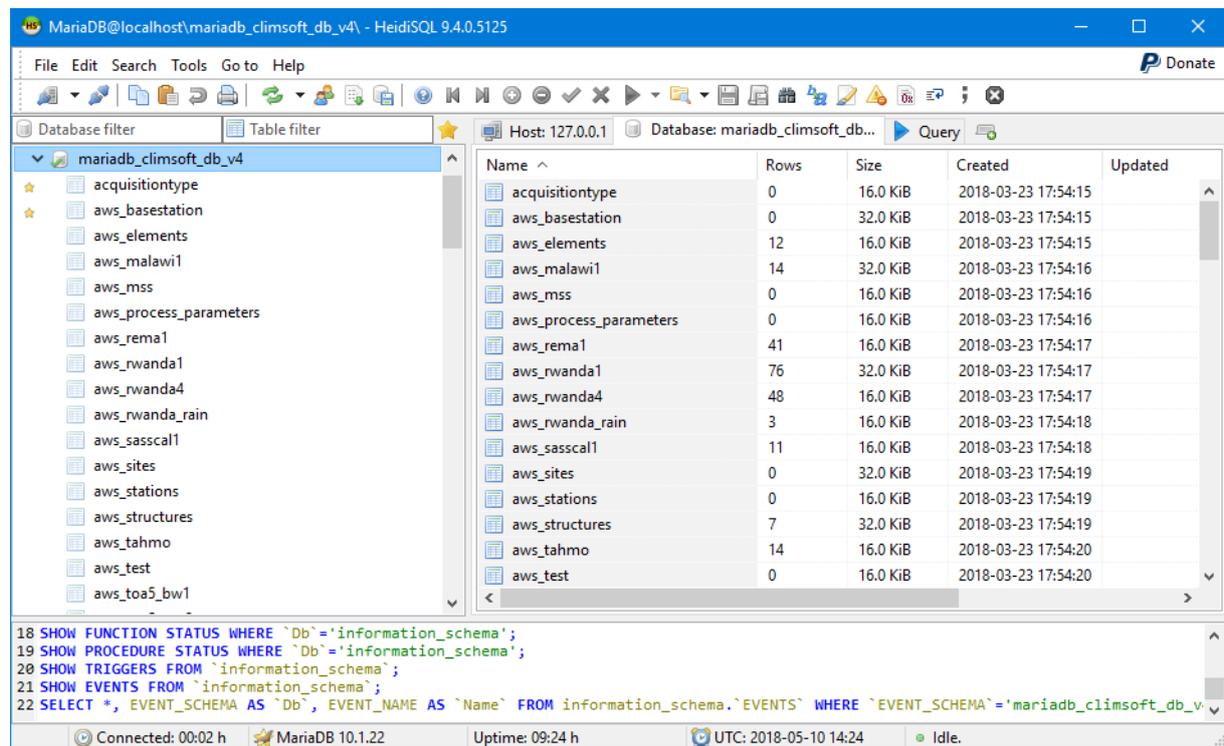


Fig 5 - HeidiSQL interface showing database information

Step 3: In order to carry out a complete backup of a required database, “Right click” on the database name on the left panel of the dialog;

Step 4: On the pop-up menu that will appear, “Click” on the menu item “Export database as SQL”. This will display a new dialog on which to specify details for the backup as shown on Figure 6 below;

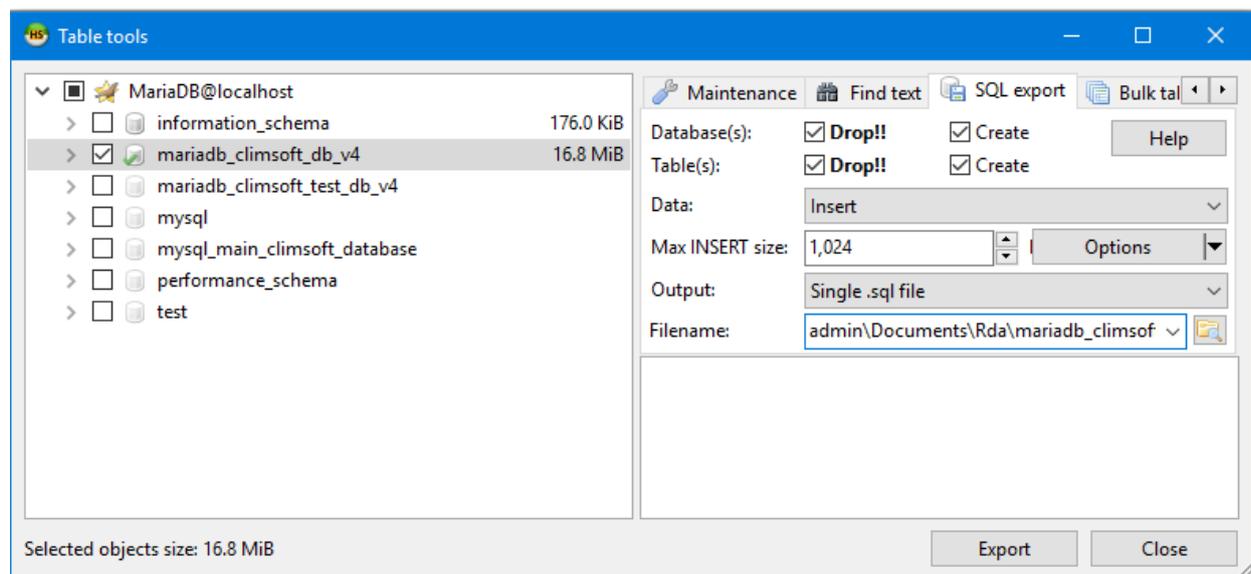


Figure 6 - HeidiSQL Dialog for database backup

Step 5: You will need to “Click” on the icon to the right of the “Filename” to browse for the location and specify the filename for the backup.

Step 6: In order to create a new database structure with all the tables and data, there is need to “check all the checkboxes” on the right panel and select “**INSERT**” on the “**Data**” dropdown list;

Step 7: Click the “**Export**” button, to start the backup process;

Step 8: Save the backup with the specified name (with extension **.sql**) and in the specified location.

3. Data Restore

3.1 Data Restore by Station

To restore data from individual station backup files, follow the steps below:

Step 1: Sign into **Climsoft**;

Step 2: click on “**Data Transfer**” icon, located in the welcome window to open the database utilities dialog;

Step 3: select “**Restore**” to open the dialog box shown below in Figure 7

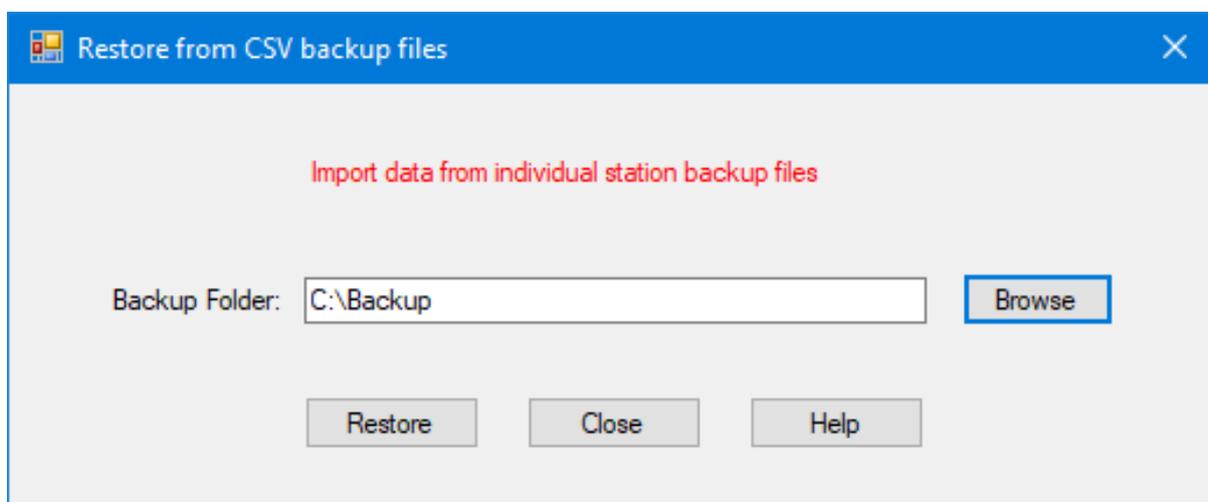


Figure 7 - Data restore by station

Step 4: After browsing for the right backup folder containing observation data to restore followed by selecting the “**Restore**” button, data restore process will start immediately, and the restore progress will be showed on the dialog.

3.2 Restoration of the Complete Database

To restore the entire database from a complete backup, “it is recommended to run the script of the backup file” following the steps below:

Step1: Launch MariaDB Prompt from your program “**Start Menu**” select and click on the “**MySQL Client (MariaDB 10.x)**” as shown below Figure 8:

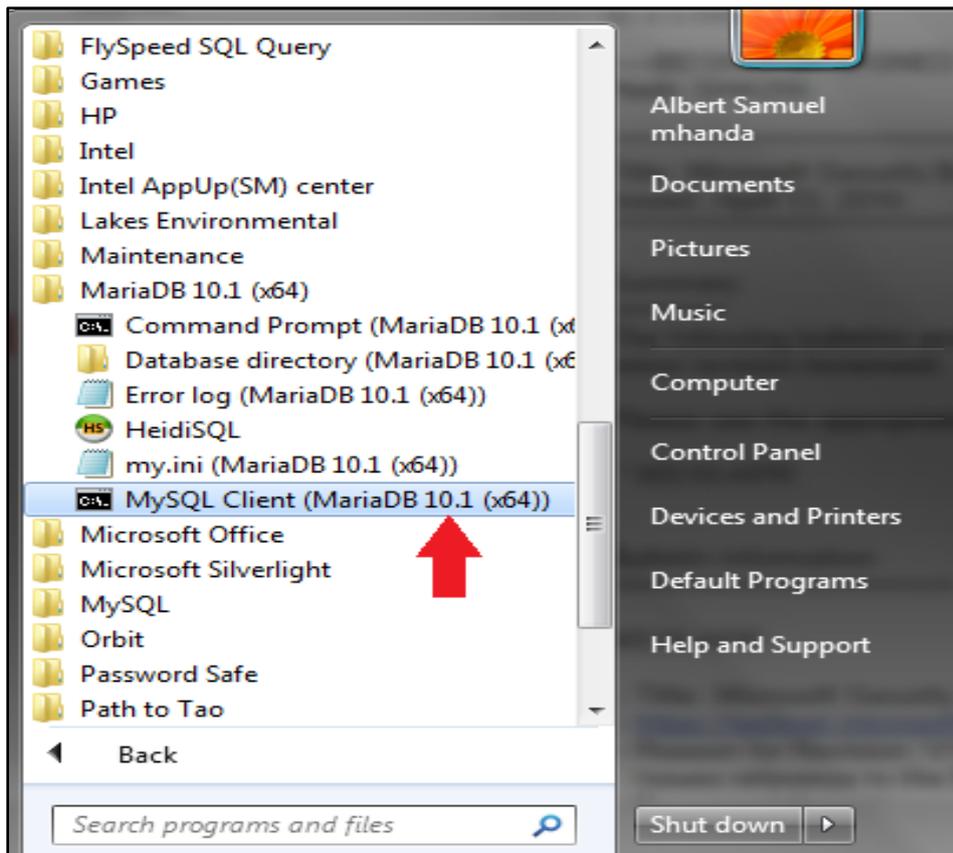


Figure 8 - Launching MariaDB Client

Step2: The dialog for entering the password should then appear as shown in Figure 9 below:

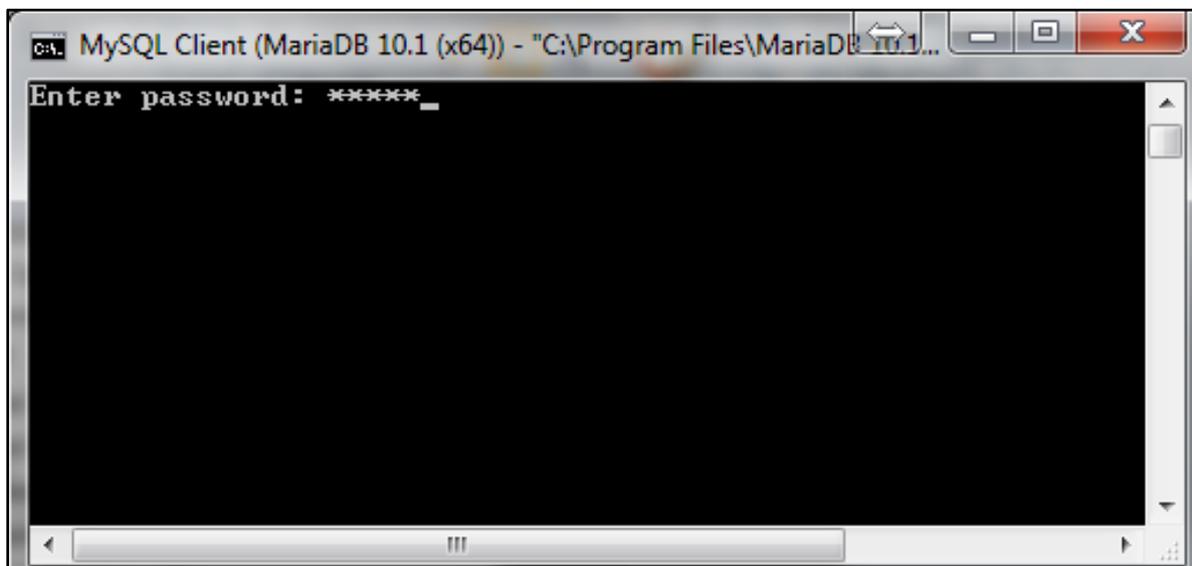


Figure 9 - Entering password on MariaDB Client Prompt

Please note that the username is assumed to be "root" and there is no provision for entering the username if you have launched the MariaDB Client Prompt as described above. Type correctly the password for "root". If you have entered the correct password i.e. the same password that you entered during the installation of MariaDB, the prompt should then appear as shown in Figure 10 below:

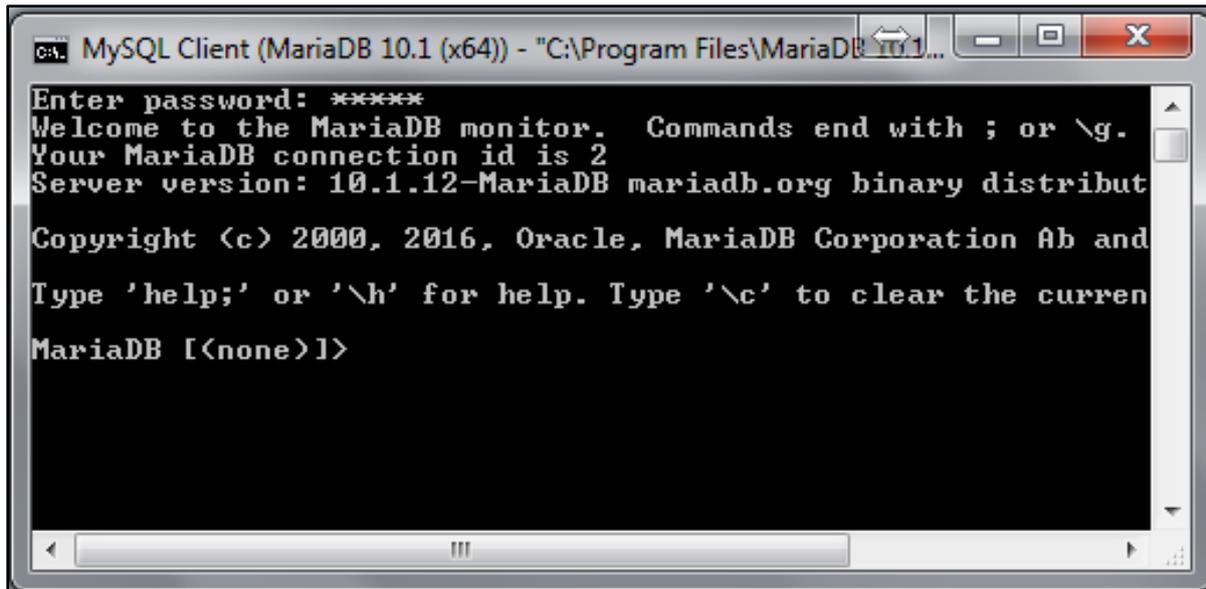


Figure 10 - MariaDB Prompt after entering correct password

How to Run the script:

Assuming the script file for database backup is in the Path “**C:\Program Files (x86)\climsoftv4\Dbase**”. To run the script, you should type the following command “**Source C:\Program Files (x86)\climsoftv4\Dbase\backup_climsoft_db_v4_all.sql**” on the above prompt interface (Figure 10) and press the “**Enter Key**”. If you have typed the command correctly, the script should run successfully and restore your climsoft version 4 database.

Type the following command on the MariaDB Client Prompt (Figure 10): “**Show databases;**” and press the “**Enter Key**” to verify that the backup database has been created successfully.

Important: it is important to specify the exact name of the backup file in place of the name of the script file used for creating the Climsoft Version 4 database in the first installation.

Note: For any question or further clarifications, contact the CLIMSOFTHelpdesk: support@climsoft.org