

QED™ GAMSoft™

Installation & Operation Manual



GEM PRO

Operation Manual

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INTRODUCTION

This manual covers the installation of GAMSoft™ for use with the following instruments:



Pro Series

QED GAMSoft is the next release of software to support new portable gas analysers from QED. If you currently use any of our legacy products such as Gas Analyser Manager (GAM) or Landtec System Gas Analyzer Manager (LSGAM), this is the equivalent software application for the Pro Series.

Features include:

- Upload of Sites, Groups, IDs and Routes for daily monitoring requirements
- Download stored readings and data
- Web Service Hosting, allowing an organisation to manage multiple users who access a shared central database
- Supports secure user login and tiered permission levels
- Supports encrypted data transfer using HTTPS & Secure File Transfer Protocol (SFTP)
- Import data from previous software releases
- Export data in new formats: .json, .csv
- Customisable heading names for exported data
- Filter readings by date, Site, Group or ID
- Supports longer ID labels and increased number of questions
- Manage instrument gas mixtures for onsite calibration

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INSTALLATION

SYSTEM REQUIREMENTS

- Windows 10 or later (recommended)
- Minimum of 200MB of free space

For Local User (standalone) and Web Service IT Systems:

- Microsoft SQL Express 2014 or higher

Note: Administrator permissions will be required to install the software.

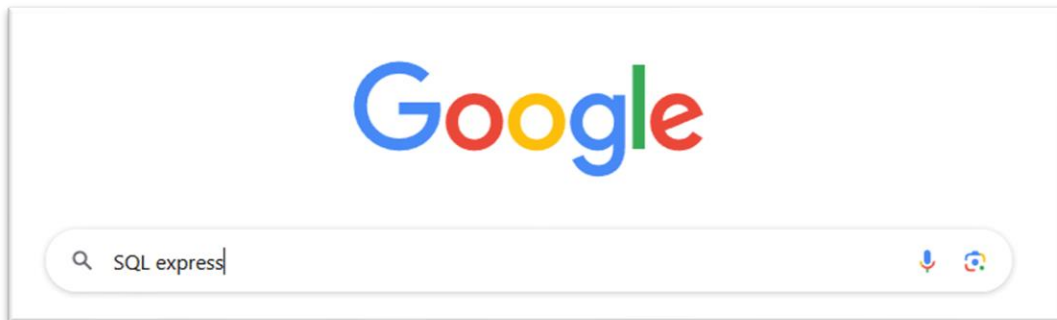
INSTALL MICROSOFT™ SQL EXPRESS

Download Microsoft™ SQL Server Express

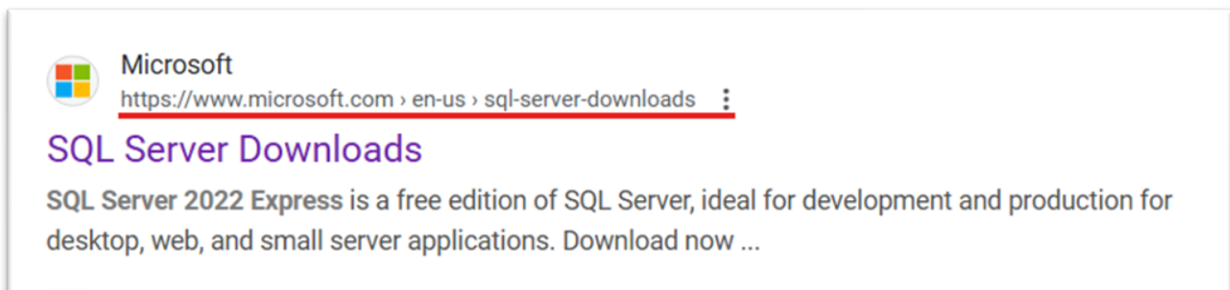
As part of installing GAMSsoft™, you must first install SQL EXPRESS, if it is not already installed on the end user's PC.

NOTE: You may require administrative access to install software on your device. Please follow the policies set forth by your companies IT department or published best practices.

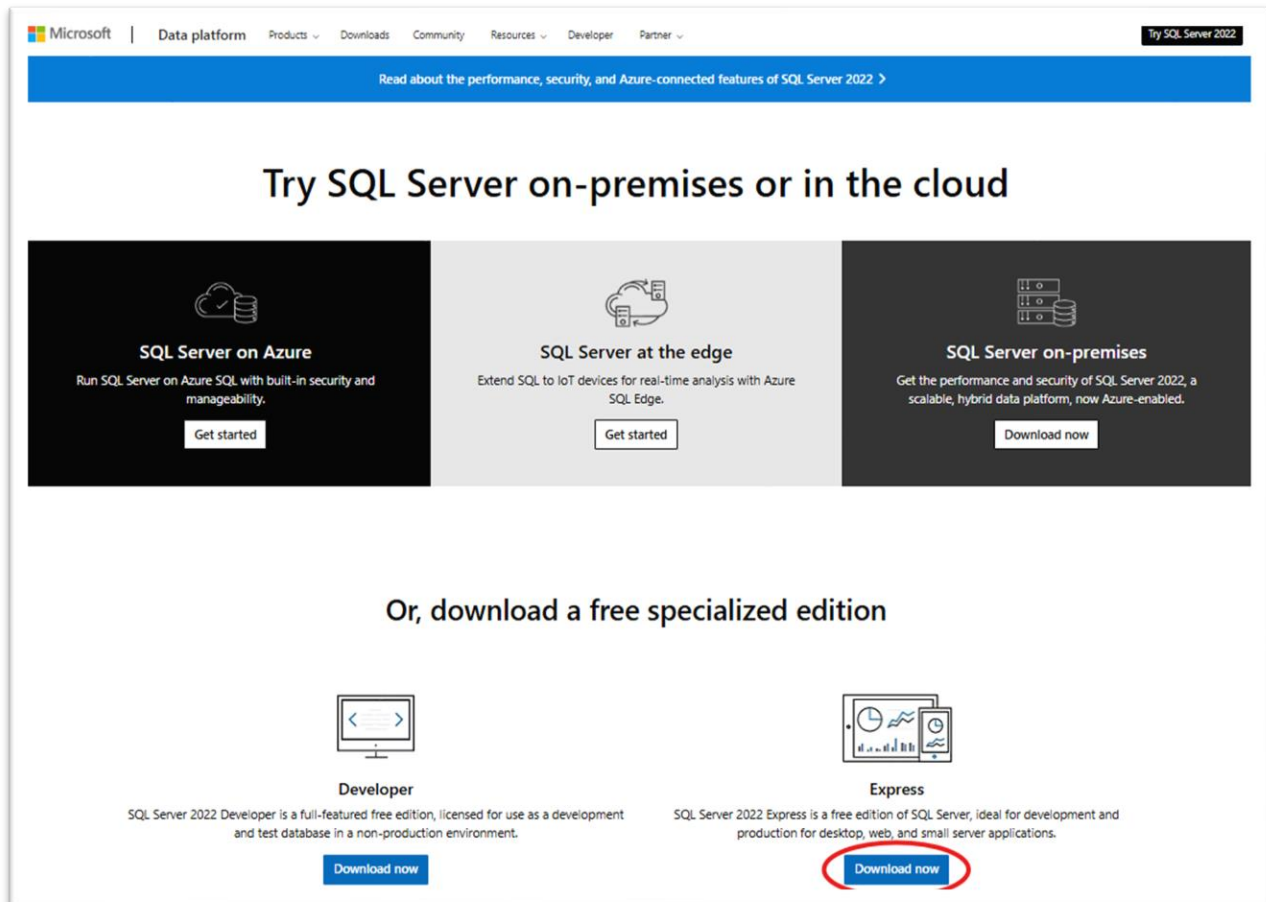
SQL EXPRESS can be found at the link here: [SQL Server Downloads](#), or with a simple search on your engine of choice:



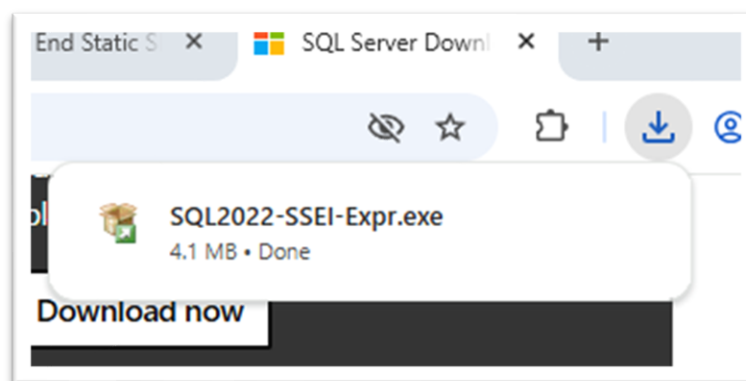
SQL EXPRESS is a Microsoft™ product. For the safety of your data, please ensure that you are downloading from the Microsoft website:



SQL EXPRESS is available for free from the Microsoft website. GAMSsoft required 2014 or later.



Clicking the 'Download now' button will immediately begin the download of the software.



Run the application and follow the prompts to complete installation.

Once SQL EXPRESS is installed on your device, you may continue to install GAMSoft™.

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INSTALL GAMSOFT™

- 1) Download and extract the installation files from: <https://www.qedenv.com/files/gamsoft-download/>
- 2) Run “QEDGasAnalyserManagerSetup.exe”, and select Install
- 3) Refer to [Figure 1 – User Types](#) to determine which features to install, based on the user.

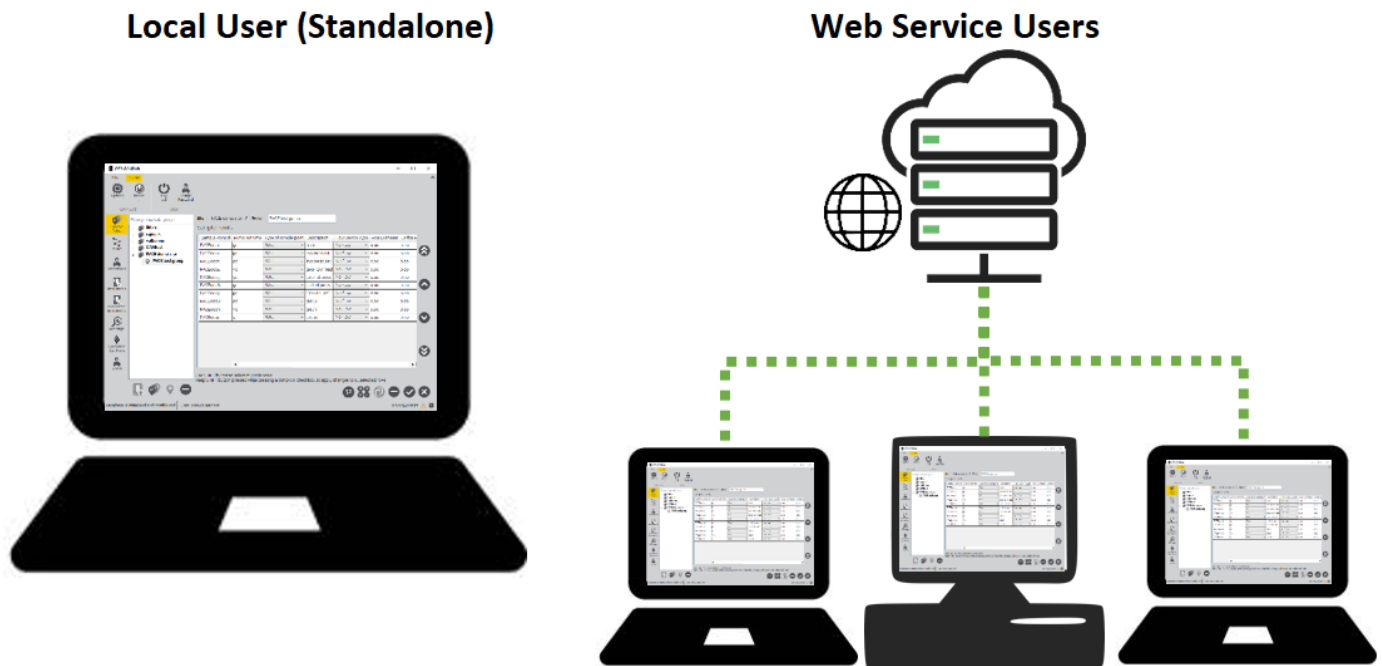
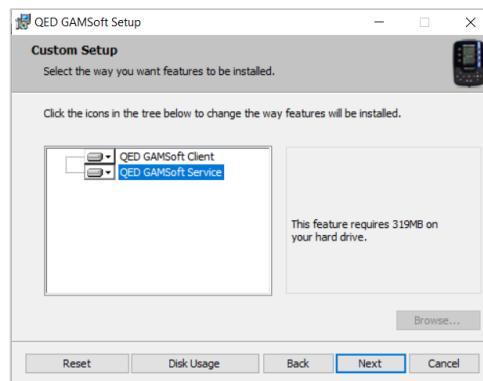


Figure 1 – User Types

USER TYPE

LOCAL USER (STANDALONE) AND WEB SERVICE IT SYSTEM ADMINISTRATOR INSTALLATION

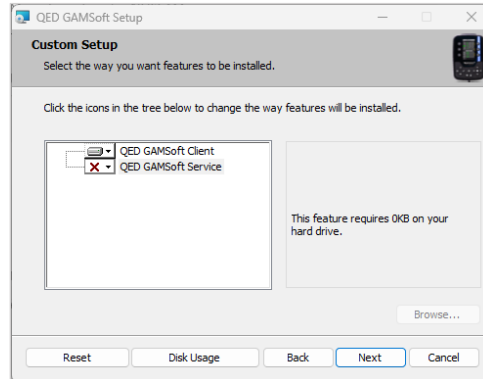
Note: Ensure “QED GAMSoft Client” and “QED GAMSoft Service” are enabled for installation.



When ready, click Install and proceed to [Configuring the Service](#).

WEB SERVICE CLIENT INSTALLATION

Note: Ensure “QED GAMSoft Client” is enabled for installation.



When ready, click Install.

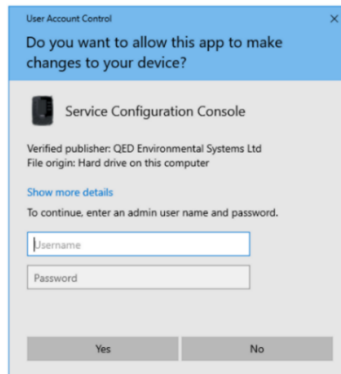
CONFIGURING THE SERVICE

LOCAL USER (STANDALONE) AND WEB SERVICE IT SYSTEM ADMINISTRATOR INSTALLATION

Note: Web Service Clients can skip to the section [First Time Server Connection Setup](#).

After installation, launch the “QED GAMSoft Admin Console” to configure the Service/Database.

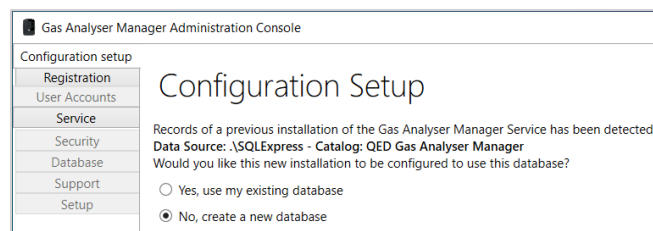
Note: Administrator permissions will be required.



Guidance on each stage of the configuration is displayed below.

CONFIGURATION SETUP

If an existing database is detected, the user will be prompted to either use the existing database or create a new one.



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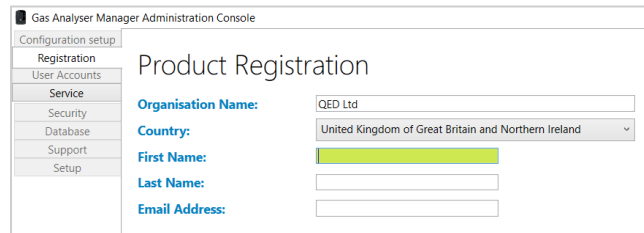
If 'Yes, use my existing database' is selected, the process will skip forward to the stage [Gas Analyser Manager Service](#).

For a first-time configuration or if 'No, create a new database' is selected, proceed to [Product Registration](#).

PRODUCT REGISTRATION

Note: Completion is mandatory.

Enter contact details for the organisation/user:

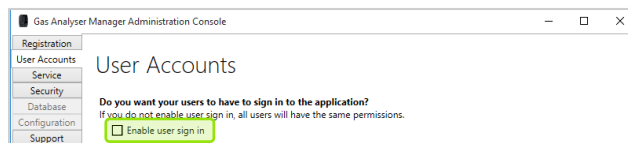


USER ACCOUNTS

Depending on how many users will be using the GAMSoft application, please select one of the following options:

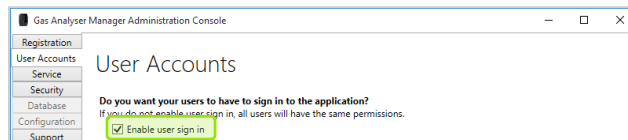
SINGLE USER (NO LOGIN REQUIRED)

Leave the "Enable user sign in" box unchecked and select next:



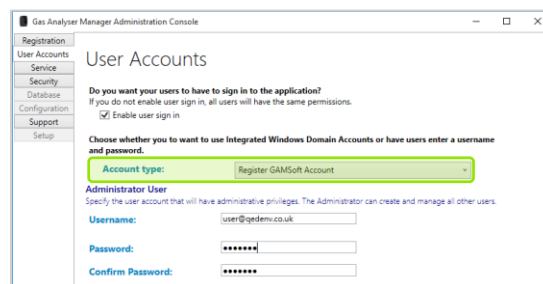
MULTIPLE USERS

1) Check the box "Enable user sign in":



2) Select an "Account type" and select next:

- "Register GAMSoft Account" creates a new login. Create a Username (email address) and Password.
- Use Windows Account credentials uses Windows login details.



Note: Keep your login username and password safe!

GAS ANALYSER MANAGER SERVICE

The screenshot shows the 'Gas Analyser Manager Service' configuration window. On the left is a sidebar with tabs: Registration, User Accounts, Service, Security, Database, Configuration, Support, and Setup. The 'Service' tab is selected. The main area contains the following text: 'This service is responsible for storage of configuration data and readings. It is required for Gas Analyser Manager to run correctly. You can leave the settings as their default values unless you have a specific requirement for custom settings. If Integrated Security is specified for the Database Runtime Account, this account specified must have write permissions to the TDS database used to store the data.' Below this are four input fields: 'Service domain:' with the value 'DESKTOP-LPFI1KB', 'Service port:' with the value '7064', 'Service account:' with the value 'GAMService', and 'Service password:' with a masked password '*****'. There is a 'Copy' button next to the password field and a 'Test' button below it. A 'Next' button is at the bottom right.

The default Service domain will be populated:

Service port = 7064

Service account = GAMService

Service password = A randomly generated password, unless manually changed by the user.

If updating an existing database, enter your GAMService password. If you do not know your password, see the [Troubleshooting](#) section.

Note: Please keep your Service password safe for future reference.

Select "Test" to ensure the validity of the credentials and select "Next":

This screenshot shows the same configuration window as before, but with the 'Test' button highlighted. Below the input fields, there is a green checkmark icon and the text 'The specified credentials are valid.'

NETWORK SECURITY

The screenshot shows the 'Network Security' configuration window. The sidebar has the same tabs as the previous window, with 'Security' now selected. The main area contains the text: 'Settings to define how data is secured when transmitted across a network. If you already have your own certificates installed choose "Provide my own certificate" and enter the Thumbprint. If you are planning to allow remote clients to connect to the Service you will need to install the Certificate on each remote computer.' There are two radio buttons: 'Provide my own certificate' (unselected) and 'Create certificate' (selected). Below the radio buttons are two input fields: 'Filename of Exported Certificate:' with the value 'GAMServiceCert.pfx' and a browse button, and 'Private Key password:' with the value 'HfP1CvUD'. A 'Test' button is at the bottom right.

If your organisation already has a preferred Network Security certificate select "Provide my own certificate", otherwise select "Create certificate".

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If using your certificate, enter the Thumbnail and press Next.

If creating a certificate, the default filename “**GAM2ClientCert.pfx**”, is saved here: “%ProgramFiles(x86)%\QED\QED GAMSoft\Console”.

Note: Web service IT system administrators: please provide all “Web Service Users” a copy of this certificate file, to enable them to connect to the service.

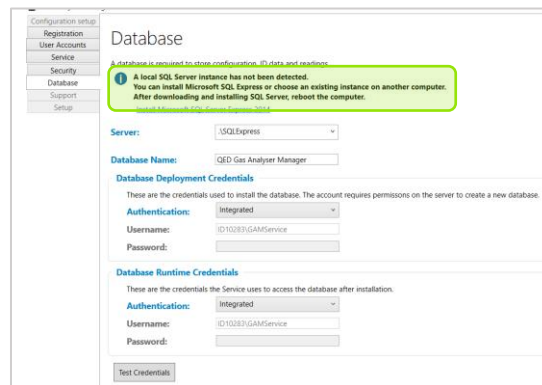
Private key password: A randomly generated password, unless manually changed by the user.

Note: Please keep your Private Key password safe for future reference.

If updating your existing database, skip to section [Ready to Set-Up Your System](#).

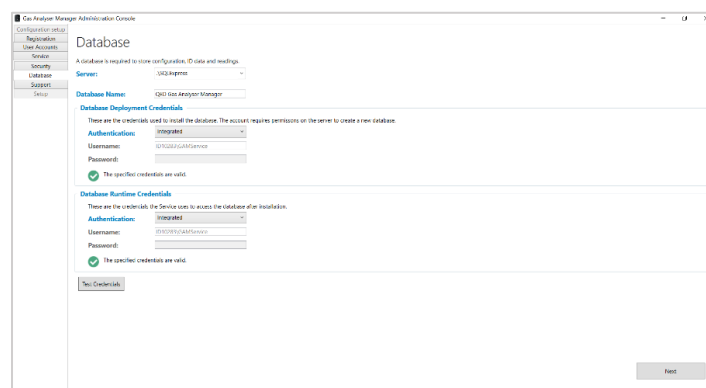
DATABASE

If your Microsoft SQL Express is not meeting the minimum system requirements, you’ll be prompted to update this before continuing ([Microsoft SQL Express](#)). For further guidance, see section [Troubleshooting](#).



SIMPLE

Leave as defaults and select “Test Credentials”. If valid, select “Next”.



ADVANCED

Manually set parameters to suit custom database:

Server = .\SQLExpress (default), or select the available option from dropdown

Database Name = QED Gas Analyser Manager (default).

Note: must be a unique name

Database Deployment Credentials: Authentication = Integrated, Username: GAMService, Password: <blank>

Database Runtime Credentials: Authentication = Integrated, Username: <PCName\GAMService>, Password: <blank>

Select “Test Credentials” to test, and if successful select “Next” to continue.

The screenshot shows the 'Database' configuration window in the QED Analyzer Manager Administration Console. The window has a sidebar with navigation links: Configuration, Registration, User Accounts, Console, Security, Database, Support, and Setup. The 'Database' section is active. The main area is titled 'Database' and contains the following fields and sections:

- Server:** A dropdown menu showing 'SQL Server'.
- Database Name:** A text field containing 'QED Analyzer Manager'.
- Database Deployment Credentials:** A section with a green checkmark icon and the text 'These are the credentials used to install the database. The account requires permissions on the server to create a new database.' It includes:
 - Authentication:** A dropdown menu set to 'Integrated'.
 - Username:** A text field containing 'DOMAIN\GAMService'.
 - Password:** A text field containing 'GAMService'.
 - A green checkmark icon and the text 'The specified credentials are valid.'
- Database Runtime Credentials:** A section with a green checkmark icon and the text 'These are the credentials the device uses to access the database after installation.' It includes:
 - Authentication:** A dropdown menu set to 'Integrated'.
 - Username:** A text field containing 'DOMAIN\GAMService'.
 - Password:** A text field containing 'GAMService'.
 - A green checkmark icon and the text 'The specified credentials are valid.'
- Test Credentials:** A button located below the runtime credentials section.
- Next:** A button located at the bottom right of the window.

Note: For further information please contact Technical Support at QED at:

QED Environmental Systems, Inc.

+1 (800) 624-2026

service@qedenv.com

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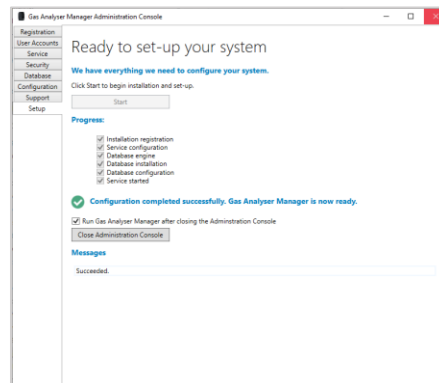
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TECHNICAL SUPPORT CONTACT INFORMATION

Enter technical support contact details (e.g. Your organisation's IT System Administrator).

Note: This section is optional.

READY TO SET-UP YOUR SYSTEM



- Click the “Start” button to configure your system.

Note: this can take several minutes.

- To run the application immediately after setting up the Service, tick the appropriate box “Run. Gas Analyser Manager...”.
- When all stages have been completed successfully, you may select “Close Administrator Console”.
- If the Service does not start automatically, please see section [Troubleshooting](#).

Note: Web service IT system administrators: please provide all “Web Service users” with the Service URI, which can also be found here: %appdata%\QED\GAM2\Settings.json

e.g. "ServerUrl":https://<hostname>:7064/

Note: For further information please contact Technical Support at QED at:

QED Environmental Systems, Inc.

+1 (800) 624-2026

service@gedenv.com

FIRST TIME SERVER CONNECTION SETUP

LOCAL USER (STANDALONE)

Open the application QED GAMSoft.

The application should automatically connect to the Service URI if this was unchanged during [Gas Analyser Manager Service](#). Once connected, GAMSoft will be running.

If the connection is not successful, please see section [Troubleshooting](#).

WEB SERVICE USERS

Your Web Service IT Systems Administrator should have provided you with the following:

- **Certificate file** (e.g.  GAM2ClientCert.pfx)

GAM2ClientCert.pfx

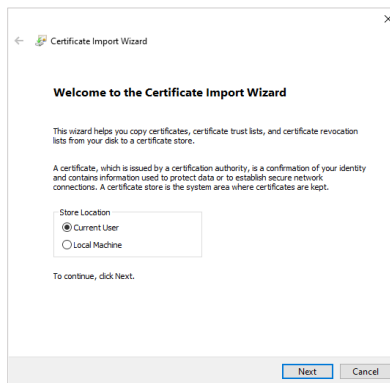
- **Service URI** (e.g. <https://<hostname>:7064/>)

Note: Only open files from a trustworthy source.

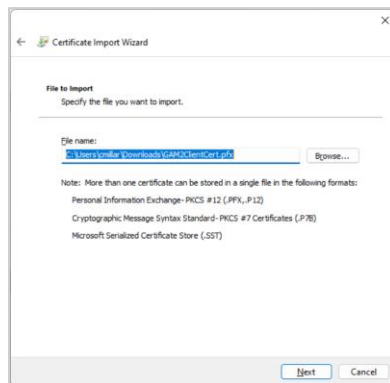
INSTALL CERTIFICATE

Double-click the certificate file to import. Use the default values during this process:

- 1) Ensure 'Current User' is selected and click Next:



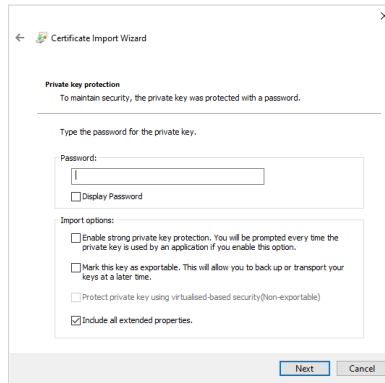
- 2) The file should automatically be loaded, click "Next":



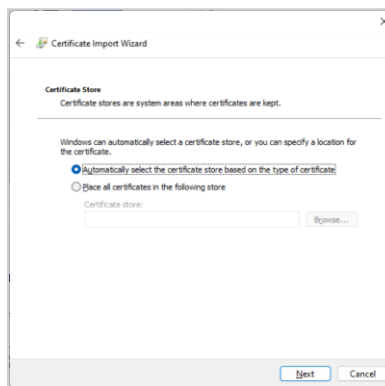
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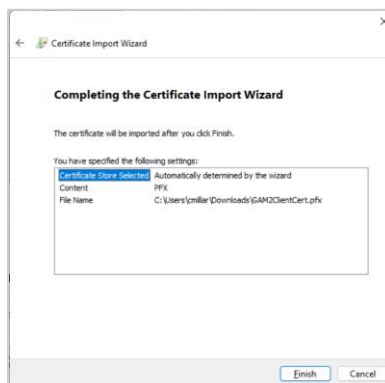
- 3) When requested for a password, please leave this <blank>, keep “Include all extended properties” checked, and press “Next”:



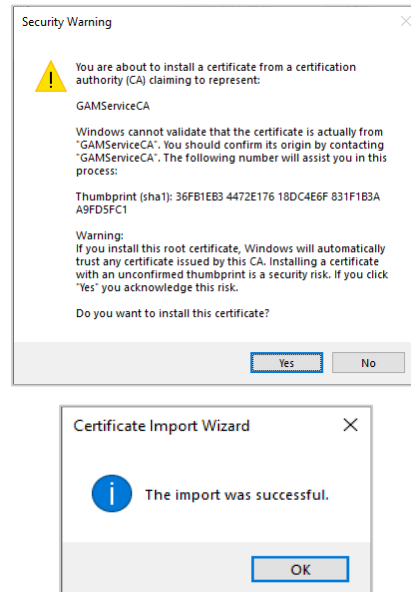
- 4) Select “Automatically select the certificate...” and press “Next”:



- 5) Click “Finish” to complete the certificate import:

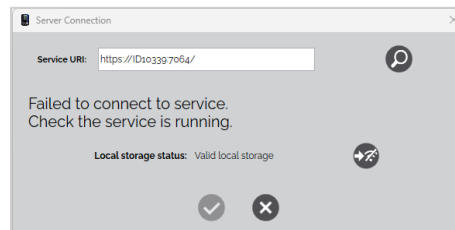


- 6) When prompted with a Security Warning, select “Yes” to install the certificate. A notification will indicate success:

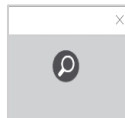


CONNECT TO WEB SERVICE

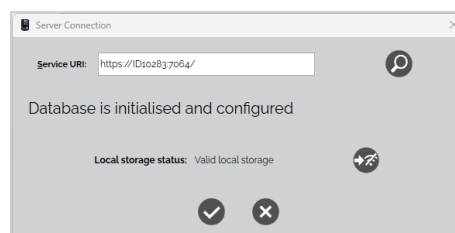
- 1) Open the application QED GAMSoft. Immediately, the Client will fail to connect to the Service:



- 2) Replace the current Service URI with the Service URI provided by your Web Service IT Systems Administrator and press the “Search” button:



- 3) If the connection is successful, you will see a message indicating the database is initialised and configured. Click the “tick” button to save changes and close:



Note: If the Client fails to connect to the Service, please contact your IT System Administrator and ensure the Service

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URI is correct. For further information and guidance, please see section [Troubleshooting](#).

4) The application should now be running

USING GAMSOFT

LOGIN

Note: If the service was configured to not require login (i.e. Single User), no login screen will be displayed.

If your System Administrator has provided you with login credentials, enter your “User Login” email address and password and press the “tick” button to start GAMSoft.

Note: Tick the “Remember Me” box to bypass this step on the next login.

To register a new account, select the “Register” tab at the top of the window. Complete all fields and press the “add” button.

New accounts will be activated once your System Administrator has enabled your account.

On the first login, you may be prompted to reset your password.

Note: Please keep your username and password safe for future reference

Once login is successful, GAMSoft will be running.

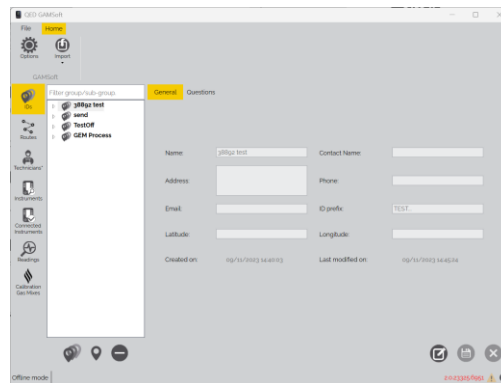
USERS

There are three tiers of GAMSoft User Groups which have different levels of permissions:

- System Administrators
- Configuration Administrators
- Instrument Users

Note: Depending on the level of permission, the “Users” tab may be hidden.

Note: To add/edit/delete Users, please refer to section [Users](#).



INSTRUMENT USERS

- Can only view Site, Group and ID data within “IDs”.
- Can import data from previous versions.
- Can only view and upload “Routes”, “Technicians”, and “Calibration Gas Mixtures”.
- Can download and export readings.

CONFIGURATION ADMINISTRATORS

Can perform all functions of Instrument Users, plus:

- Can add, remove, and edit Site, Group, and ID data within “IDs”.
- Can create “Routes”, “Technicians”, and “Calibration Gas Mixes”

SYSTEM ADMINISTRATORS

Can perform all functions of Configuration Administrators, plus:

- Can add, remove, edit and activate new users.
- Can assign and reassign user permission levels.
- Can manually reset user passwords or force password reset prompt.


GEM PRO

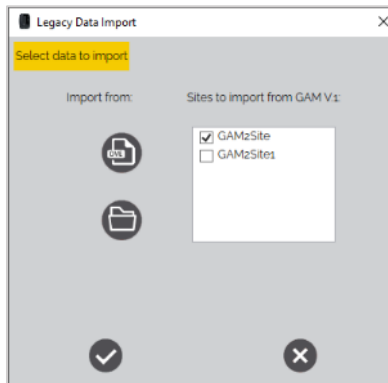
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IMPORTING DATA FROM PREVIOUS QED SOFTWARE

GAS ANALYSER MANAGER OR LANDTEC SYSTEMS GAS ANALYSER MANAGER IMPORT

To import data exported from GAM or LSGAM into GAMSoft, follow these steps:

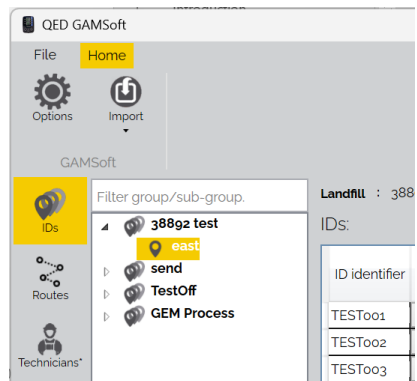
- 1) Select the Import icon from the top panel ribbon 
- 2) Select data type (e.g. GAMv1, LSGAM)
- 3) Select data format (e.g. DVE file, GAM file or Data folder)
- 4) Select file, Site(s) to import, and select Import button



Note: Invalid characters (e.g. # . @) will be automatically converted to “_”.

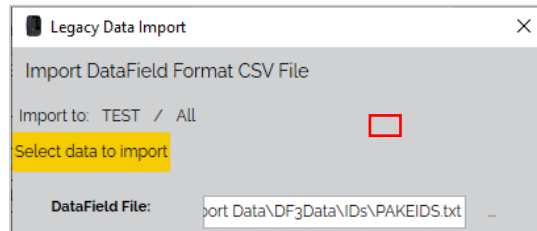
DATAFIELD IDs IMPORT

- 1) Select a target destination Group in the IDs tree for the imported IDs.

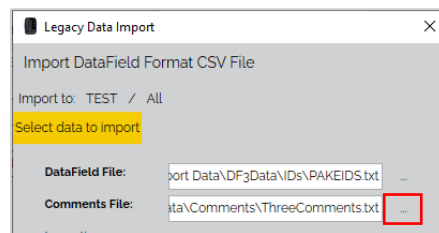


- 2) Select the “Import” icon from the top panel ribbon , and select ‘IDs from Datafield file’.

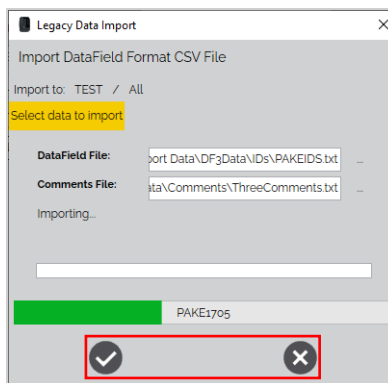
- 3) Select the DataField file by selecting the '...' icon to the right of the field, and select the .txt file, which may be in a folder labelled 'IDs'.



- 4) Select the Comments file by selecting the '...' icon to the right of the field. Select the .txt file, which may be in a folder labelled 'Comments'.



- 5) Select the "Import" icon to load the ID data, and the 'close' icon once the transfer is complete.



- 6) The imported IDs will appear at the bottom of the IDs table for the selected Group.

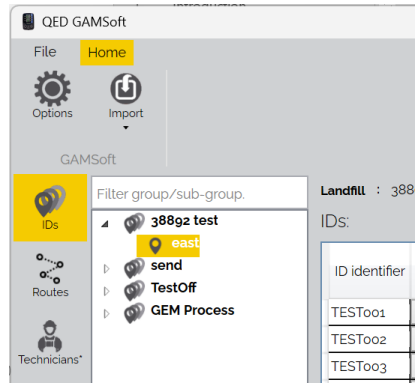
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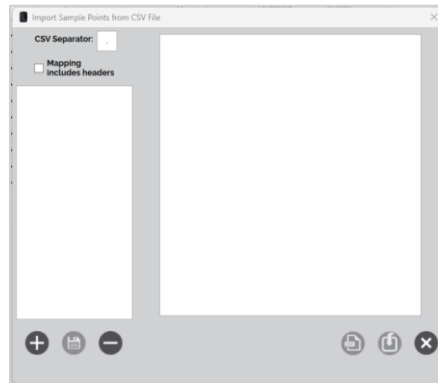
.CSV IDs IMPORT

IMPORTING FROM A NEW MAP

- 1) Select a Group to be the destination for the imported IDs in the IDs tree. The selected group will be highlighted.



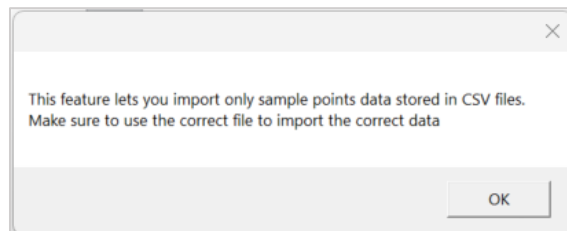
- 2) Select the Import icon from the top panel ribbon , and select 'IDs from CSV file':



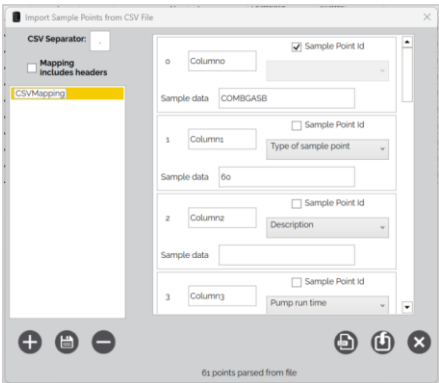
- 3) To import IDs, you will need to create a map that ports the existing data into a GAMSoft format. To create a new map, press the “Create new CSV mapping from existing file” icon:



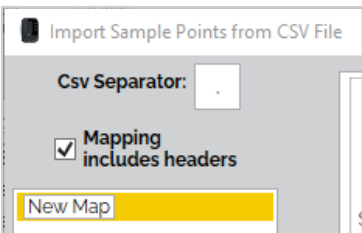
- 4) Acknowledge the message regarding importing only sample points by pressing “OK”:



5) Browse and select the IDs .csv file from your local computer and click open:



- 6) The left pane displays the maps, and the right pane displays the corresponding parameter columns for the imported IDs with example data.
- 7) **Note:** Maps define how the imported ID parameters are interpreted by the software. A map can be customised and saved, to standardise how future data is imported, and column data assigned.
- 8) Define the CSV Separator or “delimiter” (characters that separate each field: e.g. ‘,’). If the file contains headers, select the tickbox ‘Mapping includes headers’.



- 9) **Note:** A typical CSV will contain information that is separated by a demiliter, for example, a comma (,). The first part of the CSV will be defined as ‘0’ with each part incrementing by 1. In our example below, the first three parts of our CSV are ID (=0), Type (=1), and FlowDevice (=2).

	A	B	C	D	E	F	G	H
1	ID,Type,FlowDevice,Info,PumpRuntime,Orifice Dia,Pip Dia,Questions,Instrume							
2	GAM201,Well,None,,10,,5,,GA,No,Yes,No ,Yes,1,2							
3	GAM202,Probe,Accuflo 1V,,20,,10,,GA GEM,Yes,No,Yes,No,3,4							
4	GAM203,Sample Port,Accuflo 1.5V,,30,,15,,GA,No,Yes,No ,Yes,5,6							
5	GAM204,Horizontal Collector,Accuflo 1.5H,,40,,20,,GA GEM,Yes,No,Yes,No,7,8							
6	GAM205.Other.Accuflo 2V,,50,,25,,GA.No.Yes.No .Yes,9,10							

- 10) The map name can be changed by clicking into the name text box, highlighted yellow. Save the new name by pressing the “Save CSV Mapping” icon:

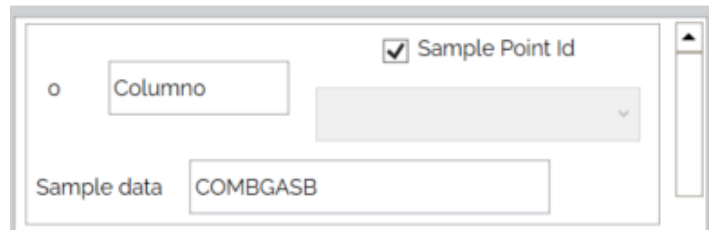


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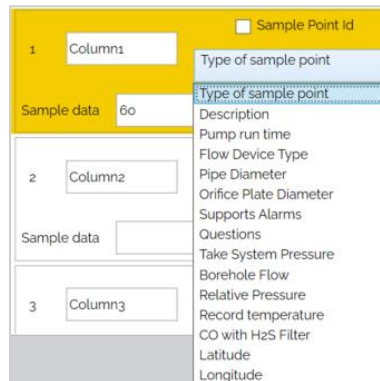
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- 11) From the imported data, identify the column which includes the Sample Point ID. Tick the Sample Point ID box for the relevant column in the dataset (0 in the example):

A screenshot of a software interface. It features a checkbox labeled 'Sample Point Id' which is checked. Below it, there is a text input field containing 'Column0'. To the left, there is a radio button labeled 'o'. At the bottom, there is a label 'Sample data' followed by a text input field containing 'COMBGASB'.

- 12) From the imported data, identify and select the correct data type for each column using the dropdown list for each parameter:

A screenshot of a software interface showing a list of columns and their corresponding data types. The columns are labeled 'Column1', 'Column2', and 'Column3'. The data types are listed in a dropdown menu: 'Type of sample point', 'Description', 'Pump run time', 'Flow Device Type', 'Pipe Diameter', 'Orifice Plate Diameter', 'Supports Alarms', 'Questions', 'Take System Pressure', 'Borehole Flow', 'Relative Pressure', 'Record temperature', 'CO with H2S Filter', 'Latitude', and 'Longitude'. The 'Type of sample point' option is selected for 'Column1'. The 'Sample data' field for 'Column1' contains the value '60'.

- 13) Once you are happy with the import mapping content, save the map:



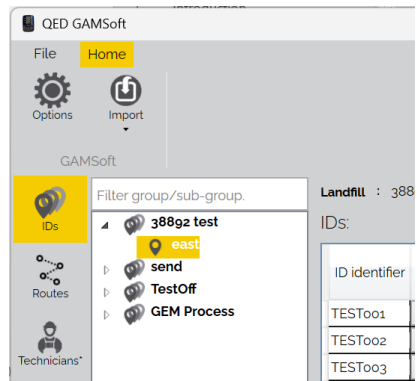
- 14) Click the “Import” icon to import the selected IDs:



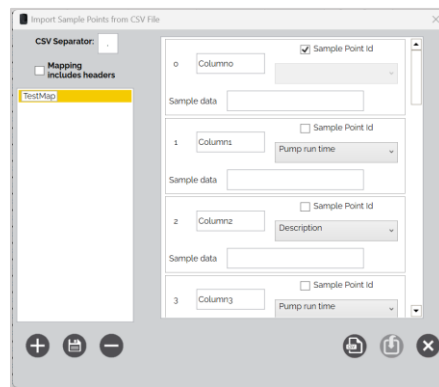
- 15) The IDs will be instantly visible in the IDs tree view.

IMPORTING USING AN EXISTING MAP

- 1) Select a Group to be the destination for the imported IDs in the IDs tree. The selected group will be highlighted.



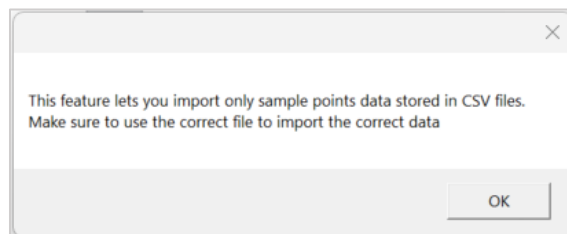
- 2) Select the Import icon from the top panel ribbon , and select 'IDs from CSV file':



- 3) Select the map you wish to use as your template and press the “Load CSV data using selected mapping” icon:

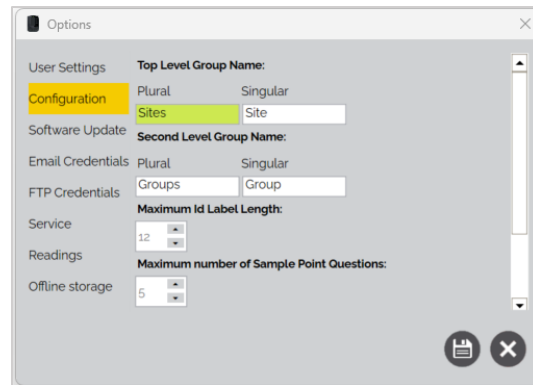


- 4) Acknowledge the message regarding importing only sample points by pressing “OK”:



CONFIGURATION

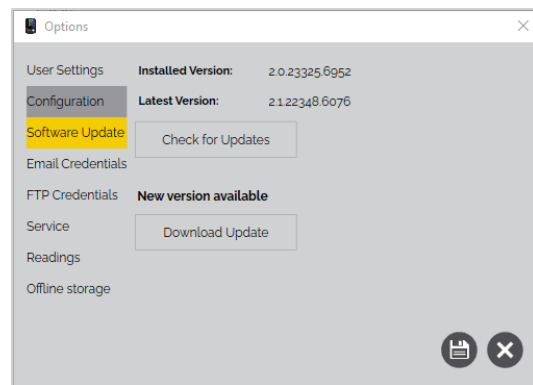
The configuration tab allows users to define their terminology for a Site or Group, set maximum ID character length, maximum ID questions, maximum site questions, and the permitted distance offset for [View Distance](#):



The screenshot shows the 'Options' dialog box with the 'Configuration' tab selected. The 'Top Level Group Name' section has 'Plural' and 'Singular' radio buttons, with 'Singular' selected and the text 'Site' in the adjacent field. The 'Second Level Group Name' section has 'Plural' and 'Singular' radio buttons, with 'Singular' selected and the text 'Group' in the adjacent field. The 'Maximum Id Label Length' is set to 12. The 'Maximum number of Sample Point Questions' is set to 5. The 'Configuration' tab is highlighted in yellow.

SOFTWARE UPDATE

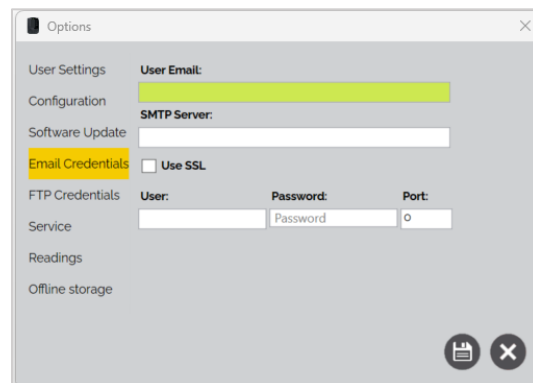
The software update tab allows you to check for the latest version of GAMSsoft. Click the “Check for Updates” button to run a system check and upgrade if applicable:



The screenshot shows the 'Options' dialog box with the 'Software Update' tab selected. The 'Installed Version' is 2.0.23325.6952 and the 'Latest Version' is 2.1.22348.6076. The 'Check for Updates' button is visible. The 'Software Update' tab is highlighted in yellow.

EMAIL CREDENTIALS

Set email credentials for exporting readings via email:



The screenshot shows the 'Options' dialog box with the 'Email Credentials' tab selected. The 'User Email' field is highlighted in yellow. The 'SMTP Server' field is empty. The 'Use SSL' checkbox is unchecked. The 'User', 'Password', and 'Port' fields are empty. The 'Email Credentials' tab is highlighted in yellow.

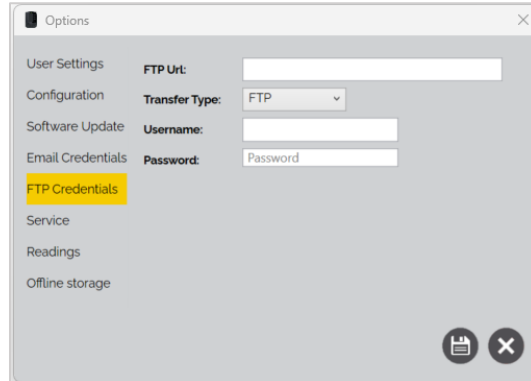
Note: You may require support from your IT Team to facilitate this.

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FTP CREDENTIALS

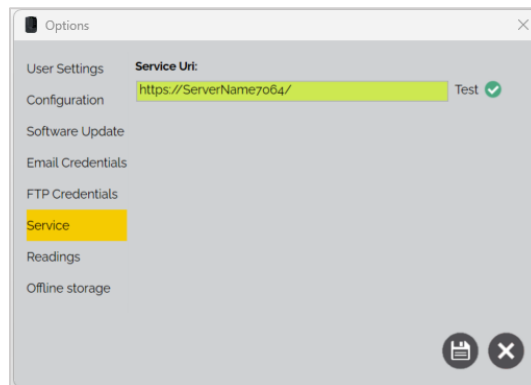
Set (Secure) File Transfer Protocol credentials for exporting reading data to a Cloud or Server via FTP or SFTP:



Note: You may require support from your IT Team to facilitate this.

SERVICE

Set the Service Uri for the GAMSoft application connection:



Note: You may require support from your IT Team to facilitate this.

READINGS

See [Reading Options](#).

OFFLINE STORAGE

See [Offline Mode](#).

SITES, GROUPS, AND IDS

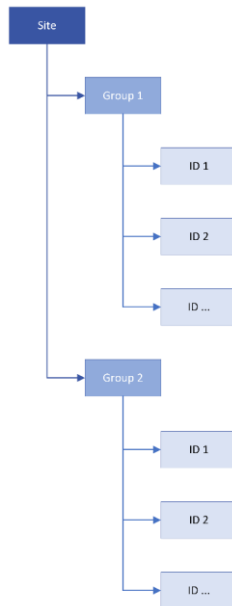
The “IDs” tab is where Sites, Groups, and IDs are created.

Sites: is the top-level name, for example, the name of a landfill site or biogas plant

Groups: is the mid-level name, for example, a specific area of a landfill site. A site can have multiple Groups.

IDs: is the low-level name for each unique monitoring location in the group. A group can have a large number of IDs.

All information in the “IDs” tab will be displayed in a tree structure:



To send IDs to the instrument, [Routes](#) will need to be created.

CREATING A NEW SITE

- 1) Select the “Add new site” icon:



- 2) Enter the relevant details for the site. Mandatory fields will have a red border and must be completed before saving:

Name:	<input type="text"/>	Contact Name:	<input type="text"/>
Address:	<input type="text"/>	Phone:	<input type="text"/>
Email:	<input type="text"/>	Sample point prefix:	<input type="text"/>
Latitude:	<input type="text"/>	Longitude:	<input type="text"/>
Created on:	24/05/2023 13:58:03	Last modified on:	

- 3) Define the ID name format by entering a “ID prefix” containing a mixture of fixed text and wildcard symbols ‘.’ (full stop/period).

ID prefix:	<input type="text" value="TEST..."/>
------------	--------------------------------------

- a. A “mask” or fixed format ID name can be defined for each Site. For example, the user may want to start each ID with the text “TEST” followed by three incrementing numbers (e.g. TEST001, TEST002, TEST003 etc.).
- b. When creating IDs, the wildcard symbol ‘.’ will be replaced with letters or numbers to create unique ID names.

Note: In the above example, the user would input a ID prefix = “TEST...”, which gives each ID name the prefix “TEST”

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and allows three spaces for numbers or letters to make each ID unique.

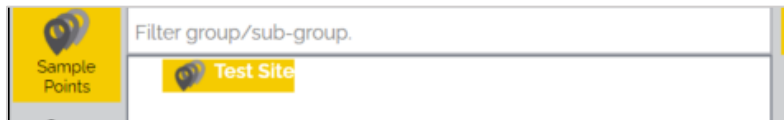
Note: The maximum ID length is 12 characters.

- 4) Once complete, press the save icon:



EDITING AN EXISTING SITE

- 1) Click the site which requires editing:



- 2) Click the “Edit” icon:



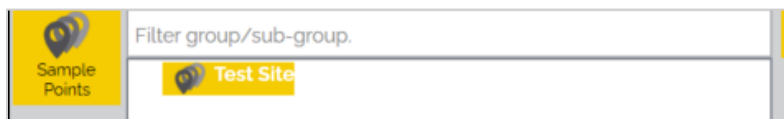
- 3) Make any changes required and once complete, press the “Save” icon:



CREATING SITE QUESTIONS

Site questions are questions related to the specific site. They can be answered on the instrument from any ID belonging to the site.

- 1) Click the site for which questions are required:



- 2) Click the “Questions” tab:



- 3) Click the “Edit” icon:



- 4) Click the “Add New” icon:



5) Define the type of question. There are four options:

Type of question: ☒ Alphanumeric ☐ Numeric ☐ Choice ☐ Multiple Choice

- Alphanumeric: An entry of alphanumeric characters, e.g. abc123
- Numeric: An entry of numbers with a defined format and range, e.g. XX.X, cm, 0.0, 25.5
- Choice: Single answer selection from a fixed list of possible answers
- Multiple-choice: Multiple answers from a fixed list of possible answers

Note: When creating a fixed list of answers, separate each item in the list with a carriage return / Enter (↵)

6) Enter the question in the “Prompt” text field:



Prompt:

7) Once complete, press the “Save” icon:



CREATING A NEW GROUP

1) Click the site for which a group is required:

 Filter group/sub-group.
 Test Site

2) Click the “Add new group” icon:



3) Enter a name for the Group:

: Test Site / Group :

4) Once complete, press the save icon:

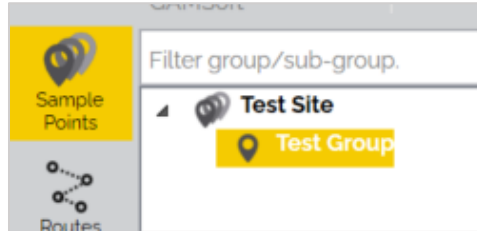


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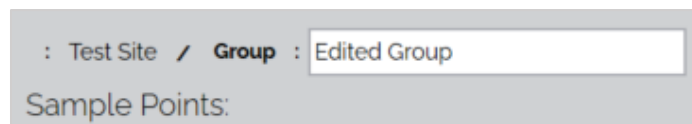
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EDITING AN EXISTING GROUP

1) Click the Group to edit:



2) The only parameter of a group that can be edited is the name. Change the Group Name in the top text box:



3) Once complete, press the “Save” icon:

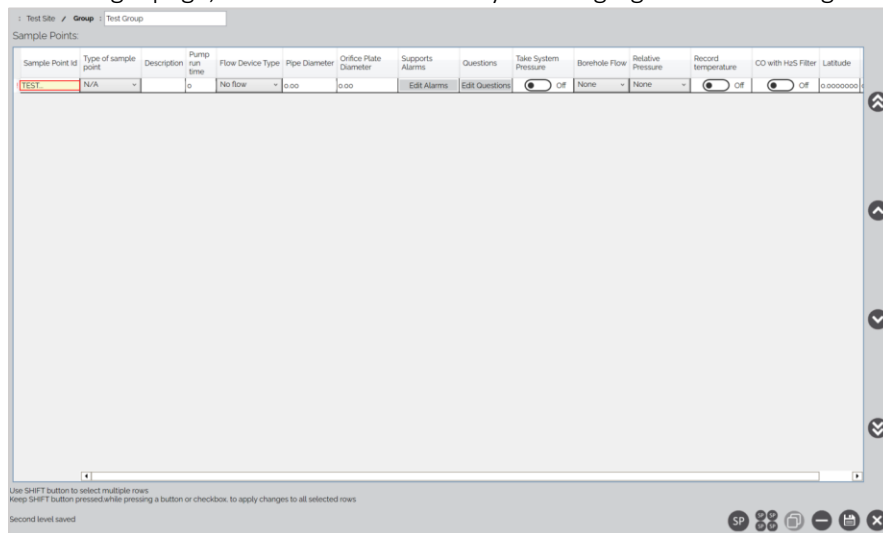


CREATING NEW IDS

There are three different methods for creating new IDs.

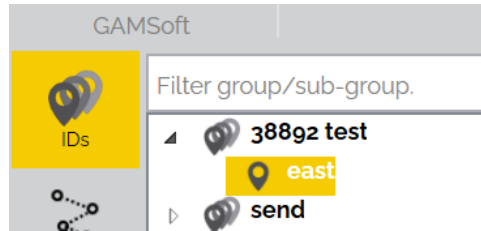
- Creating a single ID at a time,
- Creating a block of sequential IDs,
- Duplicating an existing ID.

All ID parameters are on a single page, which can be viewed by scrolling right and left using the horizontal scrollbar:



CREATING A SINGLE ID

- 1) Click the Group for which an ID is required:



- 2) Click the “New ID” icon:



- 3) Enter the name of the ID identifier:

Landfill : 388g2 test / Group : east

IDs:

ID identifier	Type of ID	Description	Pump run time	F
TEST001	Probe		10	C

- 4) Complete all relevant parameters for the instrument type by entering values, choosing from a dropdown list, or toggling options “on” or “off”:

Pipe Diameter	Orifice Plate Diameter
0.00	0.00

: Test Site / Group : Test Group

Sample Points:

Sample Point Id	Type of sample point	Description	Pump run time	Flow Device Type	Pip
TEST001	N/A		0	No flow	0.0

Flow Device Type dropdown list:

- No flow
- Accu-flo 1.5"V
- Accu-flo 1.5"H
- Accu-flo 2"V
- Accu-flo 2"H
- Accu-flo 3"V
- Accu-flo 3"H
- Orifice Plate
- Pilot Tube
- User Input
- O. Plate (WS)
- Anemometer
- Accu-flo 1.5"V
- BT TMFM
- OED Orifice Plate
- Venturi

Take System Pressure

☒ On

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Note: Mandatory fields will be bordered red.

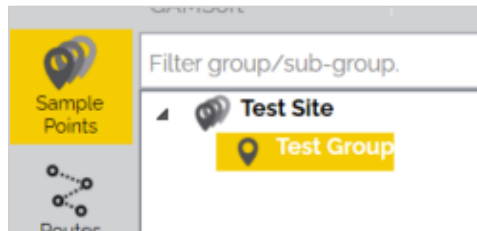
Note: For questions and alarms, see sections [ID Specific Questions](#) and [ID Specific Alarms and Targets](#).

5) Once complete, press the save icon:

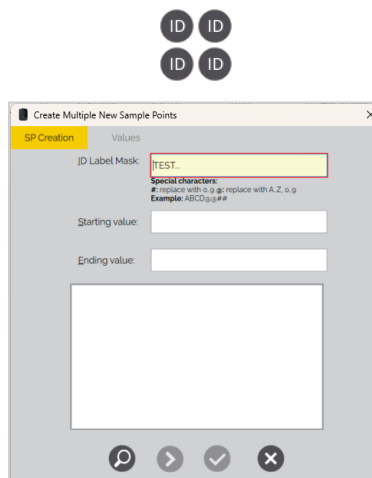


CREATING A SEQUENTIAL BLOCK OF IDs

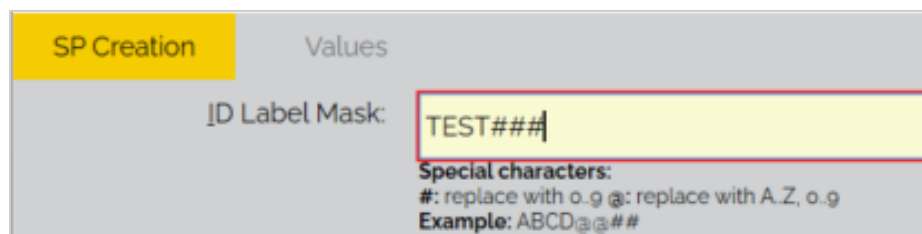
1) Click the Group for which an ID is required:



2) Click the “Create multiple IDs” icon and a new window will appear:



3) If already set, the ID Label Mask field will be populated. If not set, enter your ID prefix. To create the numeric or alphanumeric (0...9, A...Z) sequential list, replace the '.' Symbols with the '#' for numeric characters or an '@' for alphanumeric:



4) Enter the Starting and Ending value for the range of IDs and press the “Preview” icon:

SP Creation

Values

ID Label Mask: TEST###

Special characters:

: replace with 0-9 g: replace with A-Z o: g

Example: ABCDg##

Starting value: 001

Ending value: 010



SP Creation

Values

ID Label Mask: TEST###

Special characters:

: replace with 0-9 g: replace with A-Z o: g

Example: ABCDg##

Starting value: 001

Ending value: 010

TEST001	TEST002	TEST003	TEST004
TEST005	TEST006	TEST007	TEST008
TEST009	TEST010		

5) If you would like to apply common values on these IDs, click the “Values” tab. A single row will appear. Edit these parameters just like you would when [Creating a Single ID](#):

SP Creation

Values

Set the property values for all the sample points that will be created

Type of sample point	Description	Pump run time	Flow Device Type	Pipe Diameter	Orif Dia
N/A		0	No flow	0.00	0.00

6) Once applied, press the “Create” icon:



7) Once complete, press the “Save” icon:



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DUPLICATING AN EXISTING ID

- 1) Select the existing ID to be copied by clicking anywhere in the row. The row will be highlighted yellow:

: Test Site / Group : Test Group

Sample Points:

Sample Point Id	Type of sample point	Description	Pump run time	Flow Device Type	Pipe Diameter	Orifice Plate Diameter	Supports Alarms	Questions	Take System Pressure	Borehole Flow	Relative Pressure	Record temperature	CO with HzS Filter	Latitude
TEST001	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	On	None	None	Off	Off	0.00000000
TEST002	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off	None	None	Off	Off	0.00000000

- 2)

- a. Click the “Copy from selected” icon:



- b. Or right-click in the blank space directly underneath the existing IDs and click “Create new based on existing...”

: Test Site / Group : Test Group

Sample Points:

Sample Point Id	Type of sample point	Description	Pump run time	Flow Device Type
TEST001	N/A		0	No flow
TEST002	N/A		0	No flow
TEST003	N/A		0	No flow
TEST004	N/A		0	No flow
TEST005	N/A		0	No flow
TEST006	N/A		0	No flow
TEST007	N/A		0	No flow
TEST008	N/A		0	No flow
TEST009	N/A		0	No flow
TEST010	N/A		0	No flow

Create New Based On This...

- 3) The ID will be duplicated and added to the bottom of the list. You will need to give the ID a unique name and edit the parameters just like you would [Creating a Single ID](#):

: Test Site / Group : Test Group

Sample Points:

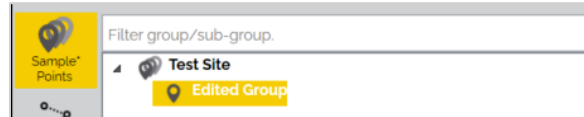
Sample Point Id	Type of sample point	Description	Pump run time	Flow Device Type
TEST001	N/A		0	No
TEST002	N/A		0	No
TEST003	N/A		0	No
TEST004	N/A		0	No
TEST005	N/A		0	No
TEST006	N/A		0	No
TEST007	N/A		0	No
TEST008	N/A		0	No
TEST009	N/A		0	No
TEST010	N/A		0	No
TEST011	N/A		0	No

- 4) Once complete, press the “Save” icon:



EDITING AN EXISTING ID (SINGLE)

- 1) Click the group which contains the ID to edit:



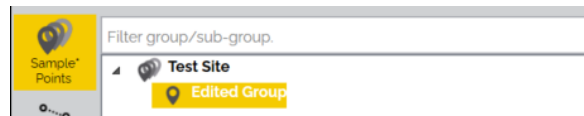
- 2) Identify the ID to edit and change the required value(s) by entering new values, choosing from a dropdown list, or toggling options “on” or “off”.
- 3) Once complete, press the “Save” icon:



Note: The save icon will only save changes in the currently selected group. When editing multiple Sites or Groups, the save icon will need to be pressed in each edited Site/Group. The save status is displayed below the table.

EDITING AN EXISTING ID (BLOCK)

- 1) Click the group which contains the ID to edit:



- 2) Edit multiple IDs at once by holding the ‘Ctrl’ keyboard key to individually select multiple ID rows or hold the SHIFT (⇧) key to select the start and end range of multiple ID rows before changing a value or selecting an option:

Sample Point Id	Type of sample point	Description	Pump run time	Flow Device Type	Pipe Diameter	Orifice Plate Diameter	Supports Alarms	Questions	Take System Pressure
TEST001	Well		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	On
TEST002	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off
TEST003	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off
TEST004	N/A		60	No flow	0.00	0.00	Edit Alarms	Edit Questions	On
TEST005	Well		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off
TEST006	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off
TEST007	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off

Figure 2 - Using 'Ctrl'

Sample Point Id	Type of sample point	Description	Pump run time	Flow Device Type	Pipe Diameter	Orifice Plate Diameter	Supports Alarms	Questions	Take System Pressure
TEST001	Well		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	On
TEST002	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off
TEST003	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off
TEST004	N/A		60	No flow	0.00	0.00	Edit Alarms	Edit Questions	On
TEST005	Well		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off
TEST006	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off
TEST007	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off

Figure 3 - Using '⇧'

- 3) Make a change on a single ID field and the change will automatically be applied to all selected IDs.
- 4) Once complete, press the “Save” icon:

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Note: The save icon will only save changes in the currently selected group. When editing multiple Sites or Groups, the save icon will need to be pressed in each edited Site/Group. The save status is displayed below the table.

ID SPECIFIC ALARMS AND TARGETS

- An alarm is a warning to a user that a defined value has been exceeded.
- A target is a notification to user that a defined value has been reached.

1) Select the ID to add an Alarm or Target to. The row(s) will become highlighted yellow:

Site : Test Site / Group : Edited Group															
Sample Points:															
Sample Point Id	Type of sample point	Description	Pump run time	Flow Device Type	Pipe Diameter	Orifice Plate Diameter	Supports Alarms	Questions	Take System Pressure	Borehole Flow	Relative Pressure	Record temperature	CO with H2S Filter	Latitude	Longitude
TEST002	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off	None	None	Off	Off	51.0000000	10.0000000
TEST004	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off	None	None	Off	Off	53.6400000	10.0000000
TEST005	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off	None	None	Off	Off	52.4177800	10.0000000
TEST007	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off	None	None	Off	Off	0.0000000	0.0000000
TEST001	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	On	None	None	Off	Off	0.0000000	0.0000000
TEST008	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	Off	None	None	Off	Off	0.0000000	0.0000000

2) Find the column “Supports Alarms” and click the “Edit Alarms” button on any highlighted row:



3) Click the “Add” icon:



4) Use the dropdown list to define the Channel, Type, and Condition and enter the Values for the trigger:

Channel	Type	Condition	Values
CH4	Alarm	Below	55
O2	Target	Below	1

- 5) An ID can have more than one Alarm or Target applied. If more are required, use the “Add” option to add more conditions.
- 6) Once complete, press the “Save” icon:



ID SPECIFIC QUESTIONS

- 1) Select the ID or Block of IDs to add a question to. The row(s) will become highlighted yellow:

Site : Test Site / Group : Edited Group

Sample Points:

Sample Point Id	Type of sample point	Description	Pump run time	Flow Device Type	Pipe Diameter	Orifice Plate Diameter	Supports Alarms	Questions	Take System Pressure	Borehole Flow	Relative Pressure	Record temperature	CO with HzS Filter	Latitude
TEST002	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	<input checked="" type="radio"/> Off	None	None	<input checked="" type="radio"/> Off	<input checked="" type="radio"/> Off	51.0000000
TEST004	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	<input type="radio"/> Off	None	None	<input type="radio"/> Off	<input type="radio"/> Off	53.6400000
TEST005	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	<input type="radio"/> Off	None	None	<input type="radio"/> Off	<input type="radio"/> Off	52.4377800
TEST007	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	<input checked="" type="radio"/> Off	None	None	<input checked="" type="radio"/> Off	<input checked="" type="radio"/> Off	0.0000000
TEST001	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	<input checked="" type="radio"/> On	None	None	<input type="radio"/> Off	<input type="radio"/> Off	0.0000000
TEST008	N/A		0	No flow	0.00	0.00	Edit Alarms	Edit Questions	<input type="radio"/> Off	None	None	<input type="radio"/> Off	<input type="radio"/> Off	0.0000000

- 2) Find the column “Questions” and click the “Edit Questions” button on any highlighted row:



- 3) Click the “Add” icon:



- 4) Define the type of question. There are four options:

Type of question: ☒ Alphanumeric ☐ Numeric ☐ Choice ☐ Multiple Choice

- Alphanumeric: An entry of alphanumeric characters, e.g. abc123
- Numeric: An entry of numbers with a defined format and range, e.g. XX.X, cm, 0.0, 25.5
- Choice: Single answer selection from a fixed list of possible answers
- Multiple-choice: Multiple answers from a fixed list if possible answers

Note: When creating a fixed list of answers, separate each item in the list with a carriage return / Enter (↵)

- 5) Enter the question in the “Prompt” text field:

Prompt:

- 6) Once complete, press the “Save” icon:



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EDITING ID VIEW PANE

The position of IDs can be changed by selecting an ID by using the “Arrow” icons on the right side of the ID data table.



will move the selected ID(s) to the top of the list



will move the selected ID(s) up one place




will move the selected ID(s) down one place



will move the selected ID(s) to the bottom of the list

The column positions can be changed by pressing and holding the left mouse button on the specific column and using the “drag and drop” motion to the desired location.

Note: The ID identifier column is fixed in the column 1 position.

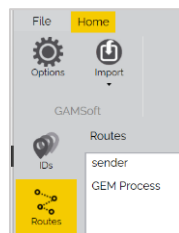
Once complete, press the “Save” icon 

ROUTES

CREATING ROUTES

A ‘Route’ is a collection of sites, borehole groups or individual boreholes programmed into the instrument in a single block organised in a way more suited to the technician’s method of monitoring. When uploading a route all existing IDs, questions and comments are first deleted from the instrument before being replaced. Multiple routes can be created and stored for later use in GAMSoft and you can create different routes to reflect your site monitoring requirements.

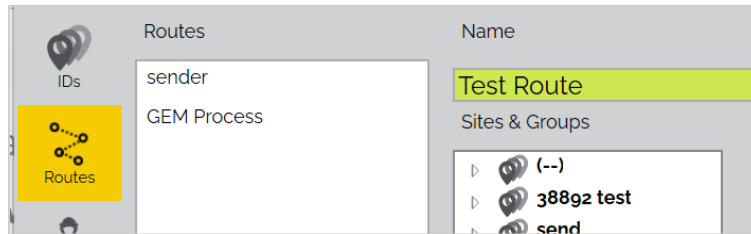
1) Select the “Routes” tab:



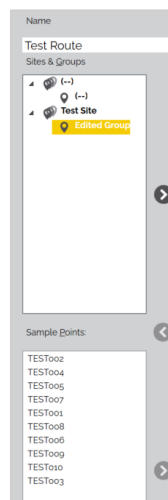
2) Click the “New” icon:



3) Enter a name for the route in the green text field:



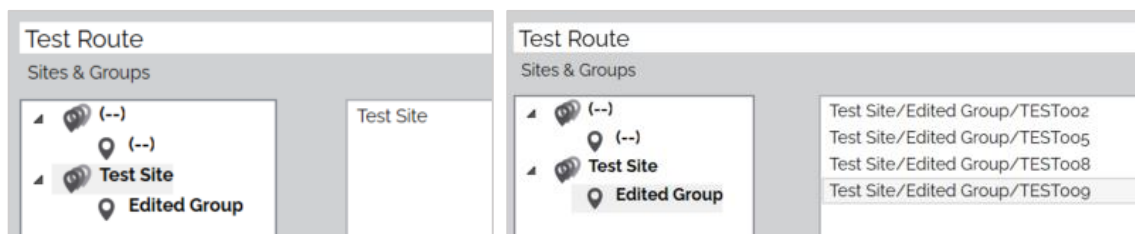
4) The top-middle pane will include all Sites and Groups and the bottom-middle pane will display the IDs for a selected Group:



5) Select items from the available Sites, Groups or IDs and add the highlighted item to the route using



the button in the centre pane. The top button will move the selected Site or Group. The bottom button will move the selected ID:



6) To remove a Site, Group, or ID from the Route, select the item in the Route and click the button.

7) To change the order of a Site, Group, or ID in the Route, select the item in the Route and position it in place



using the buttons.

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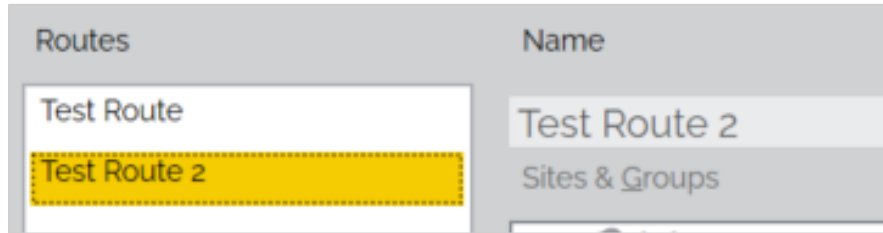
8) Once complete, press the “Save” icon:



Note: To send IDs to an instrument, please see [Creating Routes](#).

EDITING ROUTES

1) Click the Route which requires an edit:



2) The route can be completely deleted by pressing the “Delete” icon:



3) Alternatively, press the “Edit” button to make changes to the contents of the Route:



4) You can edit the Route name or Add/Remove Sites, Groups, or IDs in the same way as creating the Route.

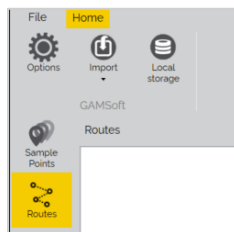
5) Once complete, press the “Save” icon:



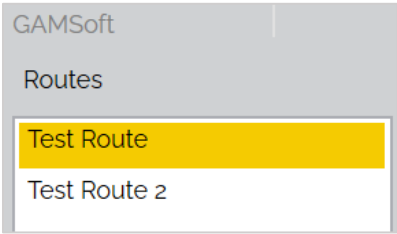
UPLOADING IDS AND ROUTES

To send IDs to the instrument:

- 1) Create a Route – see [Creating Routes](#).
- 2) Connect the instrument – see [Connecting and Disconnecting to an PRO SERIES Instrument](#).
- 3) Select the “Routes” tab:



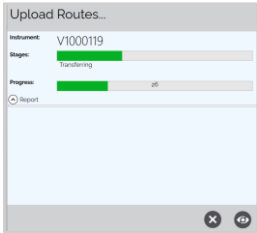
4) Select the Route(s) you want to send to the instrument:



5) Click the “Upload to instrument” icon:



6) A transfer will begin and a status box will appear:



7) Wait for the upload to complete and then press the close window or hide button:

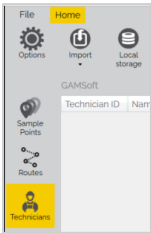


TECHNICIANS

A technician is the user of the equipment. When the instrument is started, a list of technicians is shown and the operator can select their name from a list and if necessary, enter a password to use the equipment. The technician will be recorded against actions taken, such as taking a reading or performing a user calibration. The ‘Technicians’ tab allows the user to create a list of ‘Technician IDs’ to be uploaded to the instrument.

CREATING TECHNICIANS

1) Select the “Technicians” tab:



2) Click the “New” icon:



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- 3) Enter the details for technician such as their ID, Name, Language preference, whether they have the permissions to Add/Edit IDs in the field, and an entry PIN:

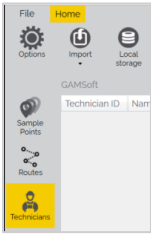
Technician ID	Name	Language	Can Add/Edit IDs	PIN
0001	Forename Surname	en-GB	<input checked="" type="checkbox"/>	1234

- 4) Once complete, press the “Save” icon:



EDITING TECHNICIANS

- 1) Select the “Technicians” tab:



- 2) Press the “Edit” button to make changes:



- 3) Click the Technician which requires an edit:

Technician ID	Name	Language	Can Add/Edit IDs	PIN
0001	Forename Surname	en-GB	<input checked="" type="checkbox"/>	1234
0002	Forename2 Surname2	en-GB	<input checked="" type="checkbox"/>	

- 4) The Technician can be completely deleted by pressing the “Delete” icon:



- 5) Alternatively, you can edit the Technician’s details in the same way as creating the Technician.

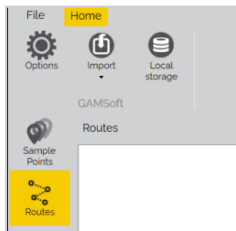
- 6) Once complete, press the “Save” icon:



UPLOADING TECHNICIANS

To send Technicians to the instrument:

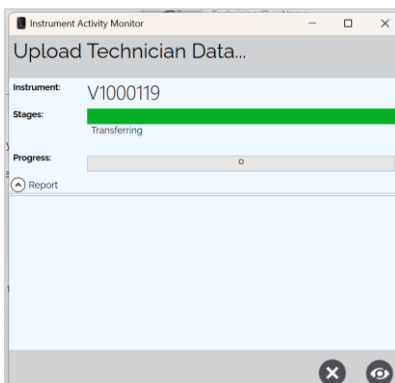
- 1) Create a Technician – see [Creating Technicians](#).
- 2) Connect the instrument – see [Connecting and Disconnecting to an PRO SERIES Instrument](#).
- 3) Select the “Technicians” tab:



- 4) Click the “Upload to instrument” icon:



- 5) A transfer will begin and a status box will appear:



- 6) Wait for the upload to complete and then press the close window or hide button:



CALIBRATION GAS MIXES

A calibration gas mix is specific gas bottle information that can be used by the instrument to perform a user calibration. For more information on a user calibration, please refer to the product operating manual. GAMSsoft allows you to create, delete, and edit gas mixes in order to keep your instrument reading accurately.

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CREATING A GAS MIX

- 1) Select the “Calibration Gas Mixes” tab:



- 2) Click the “New” icon:



- 3) Enter the details for the gas bottle such as a Name, Description, Serial Number (Cylinder Number), and an expiry date:

The screenshot shows a form for creating a new gas mix. It has four fields: 'Gas Mix Name: *' with the value 'Gas Mix Test', 'Description:' with the value '60% CH4 / 40% CO2', 'Serial Number: *' with the value '12345678', and 'Expiry Date:' with the value '25/05/2023' and a calendar icon.

Note: Mandatory fields are identified with an *.

- 4) The field “ID” allows you to store a user calibration with this gas mix against a ID so it can be downloaded as a reading. If you would like to use this feature, simply enter an ID name you would like to use:

The screenshot shows a form with a label 'ID:' and a text input field containing the value 'User Cal Reading'.

- 5) Depending on your gas bottle regulator type, you can control the instrument pump during a calibration. For example, a on-demand regulator would require the instrument pump turned ON. A fixed flow regulator would need to the pump turned OFF. Toggle the state of the pump:



- 6) Click the “Add Gas” icon to allow the gas mixture to be defined:



- 7) Use the dropdown list to select the gas name and unit of measurement, and enter the concentration of the gas in question. For example CH₄, 60.3, %. Use the “Add Gas” icon to add more gases until the mix is complete:

CH ₄ ▼	60.3	% ▼
CO ₂ ▼	39.7	% ▼

- 8) Once complete, press the “Save” icon:



EDITING A GAS MIX

- 1) Click the Gas Mix which requires an edit:

Gas Mixes	
Gas Mix Test	Gas Mix Name: * Gas Mix Test 2
Gas Mix Test 2	Description: Air

- 2) The Gas Mix can be completely deleted by pressing the “Delete” icon:



- 3) Alternatively, press the “Edit” button to make changes to the contents of the Gas Mix:



- 4) You can edit all parameters in the same way as creating the Gas Mix.
5) Once complete, press the “Save” icon:



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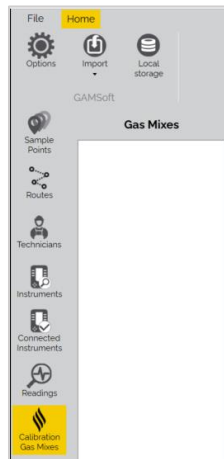
UPLOADING GAS MIXES

To send Gas Mixes to the instrument:

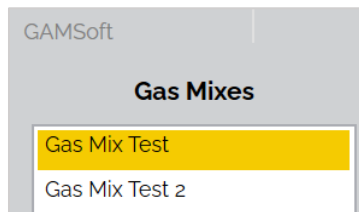
- 1) Create a Gas Mix – see [Creating a Gas Mix](#).

Connect the instrument – see [Connecting and Disconnecting to an PRO SERIES](#) Instrument.

- 2) Select the “Gas Mix” tab:



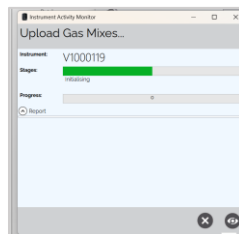
- 3) Select the Gas Mix(es) you want to send to the instrument:



- 4) Click the “Upload to instrument” icon:



- 5) A transfer will begin and a status box will appear:



- 6) Wait for the upload to complete and then press the close window or hide button:

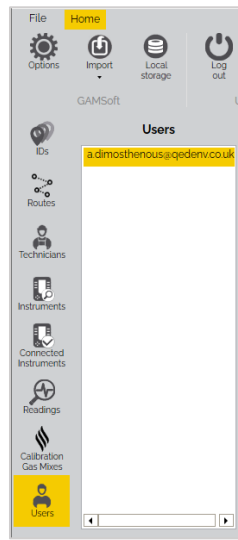


USERS

When using GAMSoft in Web Service mode, a system administrator has the permissions to add, edit, and delete users on the service.

ADDING A USER

- 1) Select the “Calibration Gas Mixes” tab:



- 2) Click the “New” icon:



- 3) Enter the details for the user such as the Account Type, User Login, Password Details, and Personal Details:

Account Type: GAMSoft Account
User login:
Password:
Confirm Password:
☐ Force password reset
First name:
Last name:
Mobile Phone:
User group:

Note: Using the Account Type “Windows” means using the Windows Domain or local SAM Account to login when starting the application.

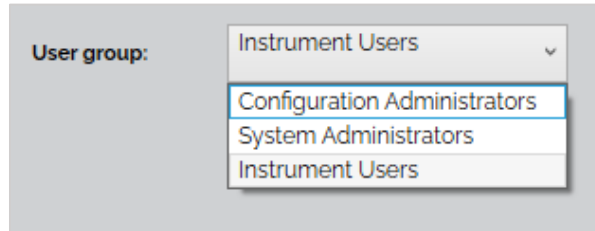
- 4) If required, clicking the checkbox will force the user to create a new password when first using the application:

☐ Force password reset

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- 5) Choose a “User Group” for the user from the dropdown list:



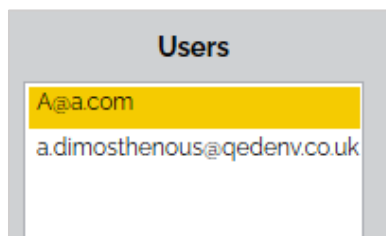
Note: For a definition of the different user groups, please refer to [Users](#).

- 6) Once complete, press the “Save” icon:



EDITING A USER

- 1) Click the User which requires an edit:



- 2) The User can be completely deleted by pressing the “Delete” icon:



- 3) Alternatively, press the “Edit” button to make changes to the contents of the User:



- 4) You can edit all parameters in the same way as creating the User.

- 5) Once complete, press the “Save” icon:



CONNECTING AND DISCONNECTING TO AN PRO SERIES INSTRUMENT

There are two ways to connect to an Pro Series instrument; via a WIFI network or Bluetooth.

Note: When connecting via WIFI both the Pro Series and GAMSoft must be on the same network.

Note: When connecting via WIFI, ensure the network does not have a Captive Portal for granting access, as the Pro Series does not support the displaying of web pages.

WIFI

- 1) Power on your Pro Series instrument, enable Wi-Fi and connect to the same network domain as the computer running GAMSsoft.

Note: For more information, refer to the product operating manual.

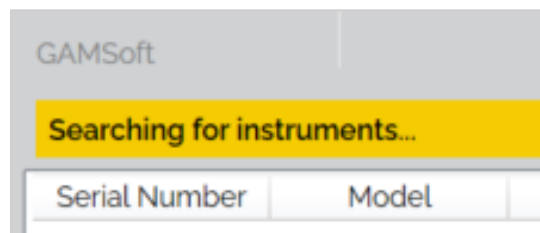
- 2) Select the “Instruments” tab:



- 3) Ensure method of discovery is set to WiFi:



- 4) Press the “Search” icon and the heading bar will indicate “Searching for instruments...”:



- 5) Available instruments will be highlighted green and the status column will update to “Visible”:

Searching for instruments...					
Serial Number	Model	Status	Last Connected	Service Date	Firmware Version
V1000048	GEM PRO	Visible	14/02/2022 10:19:29		

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- 6) Click on the instrument you wish to connect and the row will highlight yellow, then click the “Connect” icon:

Searching for instruments...						
Serial Number	Model	Status	Last Connected	Service Date	Firmware Version	
V1000048	GEM PRO	Visible	14/02/2022 10:19:29			
V1000042	GEM PRO	Visible	14/02/2022 10:19:29			
G501235	GA5000	Disconnected	08/02/2022 15:08:32	08 February 2022	1.10.1	
V1000002	GEM	Disconnected	08/02/2022 15:23:23			



- 7) Once connected, the view will automatically change to the ‘Connected Instruments’ tab, see [Connected Instruments](#).

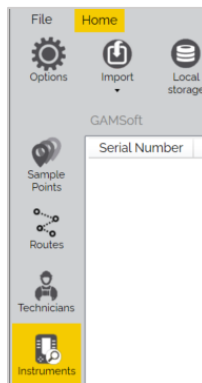
Note: Users can connect multiple Pro Series instruments at the same time.

BLUETOOTH

- 1) Power on your Pro Series instrument and enable Bluetooth.

Note: For more information, refer to the computer operating manual.

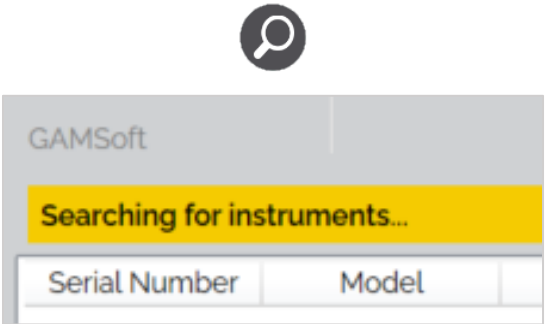
- 2) Select the “Instruments” tab:



- 3) Ensure method of discovery is set to Bluetooth (BT):



4) Press the “Search” icon and the heading bar will indicate “Searching for instruments...”:



5) Available instruments will be highlighted green and the status column will update to “Visible”:

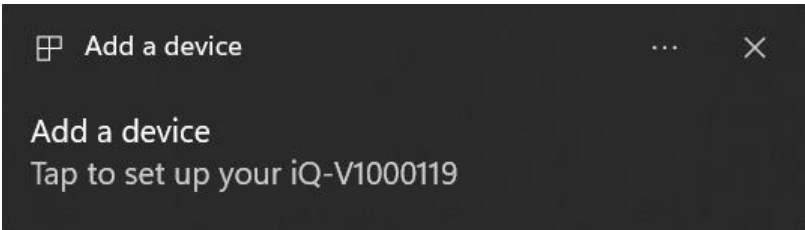
Searching for instruments...					
Serial Number	Model	Status	Last Connected	Service Date	Firmware Version
V1000048	GEM PRO	Visible	14/02/2022 10:19:29		

6) Click on the instrument you wish to connect and the row will highlight yellow, then click the “Connect” icon:

GAMSsoft					
Serial Number	Model	Status	Last Connected	Service Date	Firmware Version
V1000114	Volta Instrumen	Visible	26/05/2023 08:26:04		
V1000119	Volta Instrumen	ConnectionFaile	26/05/2023 08:26:04		
Q1000003	Volta Instrumen	Visible	26/05/2023 08:14:36		
Q1000002	Volta Instrumen	Visible	26/05/2023 08:14:36		
V1000048	Volta Instrumen	Visible	26/05/2023 08:14:36		



7) If it is the first time the instrument is connected to the PC by Bluetooth, the two devices will need to be paired. Your computer should prompt you for this to occur:



8) Once connected, the view will automatically change to the ‘Connected Instruments’ tab, see [Connected Instruments](#).

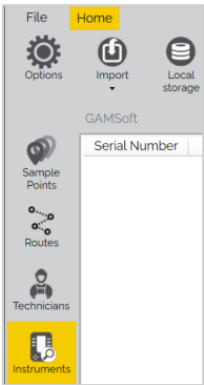
Note: Users can only connect a single Pro Series instrument at the same time.

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DISCONNECTING THE PRO SERIES INSTRUMENT

1) Select the “Instruments” tab:



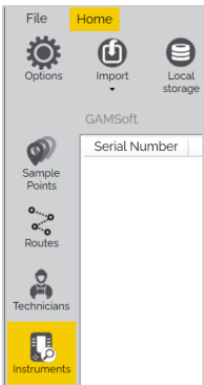
2) Click on the instrument you wish to disconnect and the row will highlight yellow, then click the “Disconnect” icon:

Searching for instruments...						
Serial Number	Model	Status	Last Connected	Service Date	Firmware Version	
V1000048	GEM PRO	Visible	14/02/2022 10:19:29			
V1000042	GEM PRO	Visible	14/02/2022 10:19:29			
G501235	GA5000	Disconnected	08/02/2022 15:08:32	08 February 2022	110.1	
V1000002	GEM	Disconnected	08/02/2022 15:23:23			



CLEAR HISTORY

1) Select the “Instruments” tab:

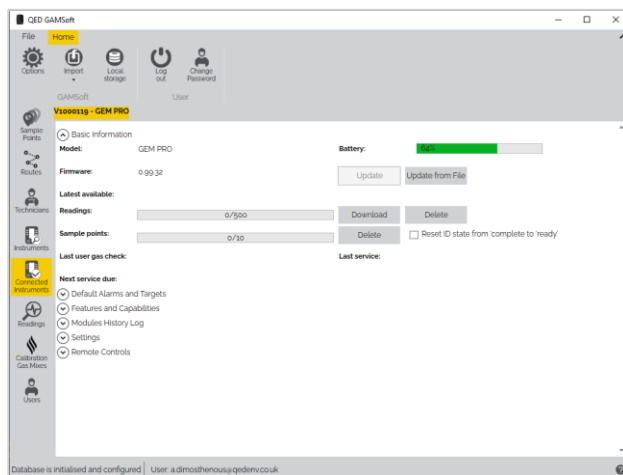


2) Click the “Delete Instrument History” icon:

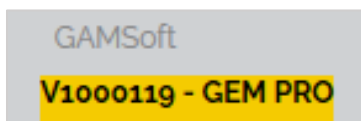


CONNECTED INSTRUMENTS

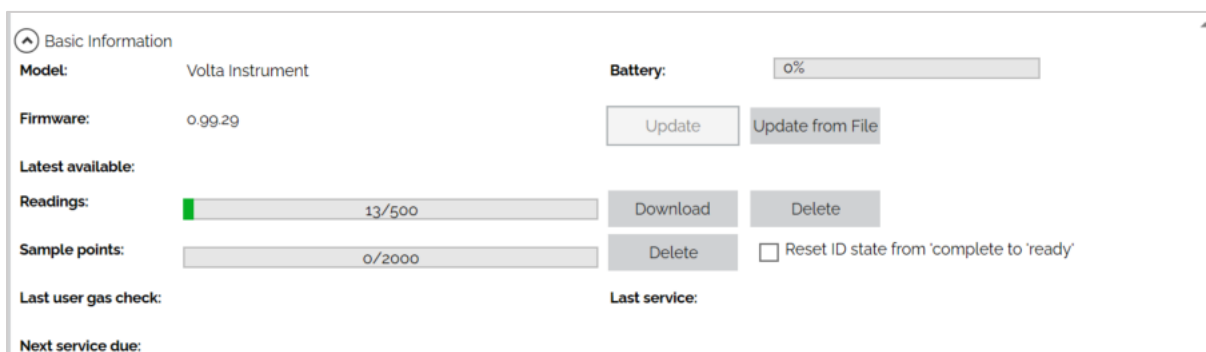
When connected to your instrument or multiple instruments, the 'Connected Instruments' tab will display the status information for your instrument with various options including updating firmware, downloading or deleting readings and changing settings.



The connected instrument is headed by its own tab displaying the serial number and model of the instrument highlighted in yellow:



BASIC INFORMATION



The basic information section will provide the following information and options:

- Model type
- Battery capacity
- Firmware version and update

Note: You can update firmware directly from the web if connected to the internet or from a downloaded file.

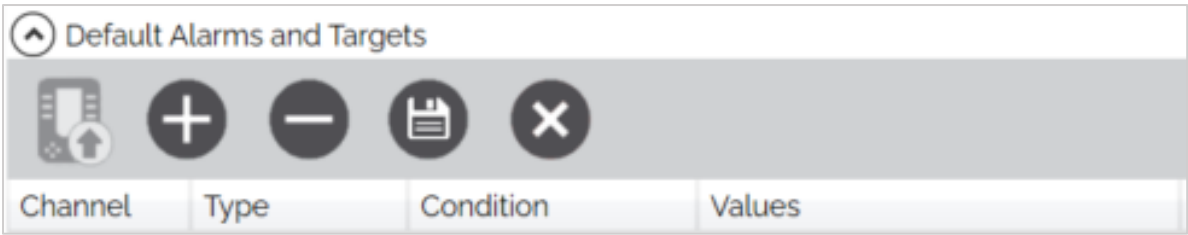
- Memory capacity with options to download and delete data
- Significant dates (e.g. last user gas check, service date)

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DEFAULT ALARMS AND TARGETS

If supported, default alarms and targets can be applied to channels when taking readings. If an ID has an alarm or target set, the ID settings will take precedence:

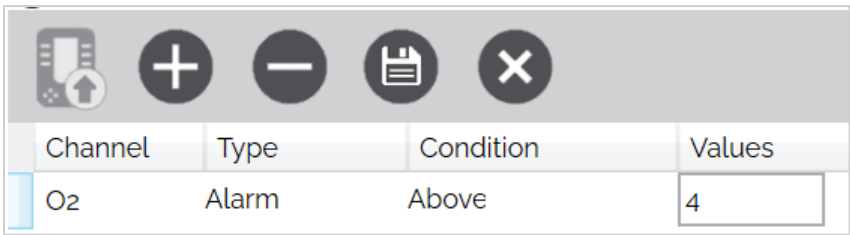


To set an Alarm or Target:

- 1) Press the “Add” icon:



- 2) Use the dropdown list to select the gas name (Channel), warning type (Alarm or Target), and Condition, and enter the value for the trigger. For example O2, Alarm, Above, 4. Use the “Add” icon to add more conditions until complete:



- 3) Once complete, press the “Save” icon:



- 4) To send the settings to the instrument, press the “Upload to instrument” icon:



FEATURES AND CAPABILITIES

Features and Capabilities
☒ GNSS
☒ Bluetooth
☒ Wi-Fi

Type:	Electrochemical	Type:	Electrochemical	Type:	Pressure
Serial Number:	V0999081	Serial Number:	V0000255	Serial Number:	V0000260
Parameters:	1000ppm CO	Parameters:	25% O2	Parameters:	100°C Board-Ter 1500mBar Gas-F 500mBar Inlet-Hi 500mBar Sys.P 500mBar Static.f 25mBar Diff.P
Calibration due:	23 May 2024	Calibration due:	23 May 2024	Calibration due:	23 May 2024

Instrument specific features and capabilities will be shown, such as:

- Fitted options (e.g. GNSS [location], Bluetooth, WIFI)
- Modules connected and their information (e.g. type, serial number, calibration due)

MODULES HISTORY LOG

Modules History Log				
InstrumentSerial	Position	ModuleSerial	CurrentlyFitted	TimeFitted
V1000119	3	V0999081	<input checked="" type="checkbox"/>	23/05/2023 00:00:00
V1000119	4	V0000255	<input checked="" type="checkbox"/>	23/05/2023 00:00:00
V1000119	8	V0000260	<input checked="" type="checkbox"/>	23/05/2023 00:00:00

The Modules History Log will show all modules transactions that have been made within the instrument, for example when a new module was fitted, or moved from one module bay to another. It will also detail which modules are currently fitted.

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SETTINGS

Settings

Flow fail sensitivity: Low ————— High
-110mb

Prompt for technician at start-up ☐ Off

When powering off, perform an air purge for seconds

Automatically switch off when idle ☐ Off
Wait for seconds

Dim the backlight when idle ☐ Off
Wait for seconds

Read Residual Nitrogen (replaces Balance when toggled on) ☒ On

Allow Add/Edit ID in the field ☒ On

Record temperature for 'No ID' (BIOGAS/GA only) ☒ On

Record pressure for 'No ID' ☒ On

Time and Date

Adjust clock for Daylight Savings Time ☐ Off

Automatically set clock to GNSS time ☐ Off

Time Zone:

[Set Instrument Clock to computer time now](#)

The following settings can be edited on the instrument, if supported:

- Flow fail sensitivity.
- Technician login at start-up.
- Timers (purging, auto-turn off, backlight auto-dim).
- Display residual nitrogen or balance.
- Allow IDs to be added or edited in the field.
- Record a temperature reading with No-ID.
- Record a pressure reading with No-ID.
- Time and Date settings.

REMOTE CONTROLS, RESTORE AND DELETE DATA

Remote Controls

Pump ☐ Off

Solenoid ☐ Off

Reset to Factory Settings

Restore Calibration to Factory

Data Storage

- ☐ Readings
- ☐ Groups
- ☐ Sample Points
- ☐ Routes
- ☐ Gas Mixes
- ☐ Calibration History
- ☐ Event Log
- ☐ Technicians

Delete

The following options are available:

- Pump and solenoid control – toggle on/off the pump and solenoid hardware
- Restore to Factory Settings – will restore all settings and preferences to the default factory settings
- Restore Calibration to Factory – will overwrite any user calibrations with the default factory calibration data
- Delete data (Readings, Routes, Groups, Gas Mixes, Technicians, IDs, Calibration History)

Note: The delete process cannot be undone. Please ensure you have downloaded all data first.

READINGS

DOWNLOADING READINGS

- 1) Connect to your instrument – see [Connecting and Disconnecting to an PRO SERIES Instrument](#).
- 2) The “Instrument” tab should automatically display:

QED GAMSoft

File Home

Options Import Local storage

GAMSoft

Volvo - Volta Instrument

Basic Information

Model: Volta Instrument

Firmware: 0.99.29

Battery: 0%

Update Update from File

Latest available:

Readings: 4/500

Sample points: 4/2000

Download Delete

Reset ID state from 'complete' to 'ready'

Last user gas check:

Next service due:

- ☒ Default Alarms and Targets
- ☒ Features and Capabilities
- ☒ Modules History Log
- ☒ Settings
- ☒ Remote Controls

Database is initialised and configured

- 3) Select the option for Download (Reading):

Readings: 4/500

Download

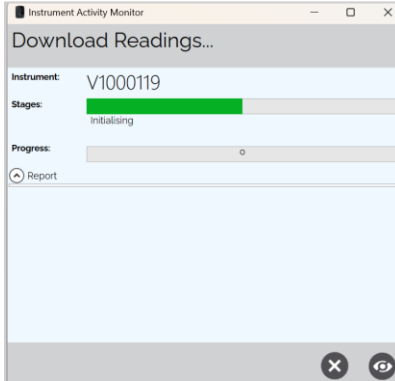
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Note: IDs in the instrument with readings associated will be striked through. Tick the checkbox “Reset ID state...” if you would like to clear this status on the Pro Series:

☐ Reset ID state from 'complete to 'ready'

4) A download will begin and a status box will appear:



5) Wait for the download to complete and then press the close window or hide button:



Note: Readings will now be available in the Readings tab, see [View Readings](#).

VIEW READINGS

1) Select the “Readings” tab:



- 2) Use the “Reading Filter Options” to filter by a date range or the “Group or ID” tree to filter by specific Sites, Groups, or IDs:

Reading Filter Options:

From:

16/11/2023

15

To:

23/11/2023

15

Group or ID:

Select all

- 3) Press the “Search Readings” icon to apply the filter and display readings. The right hand pane will populate:



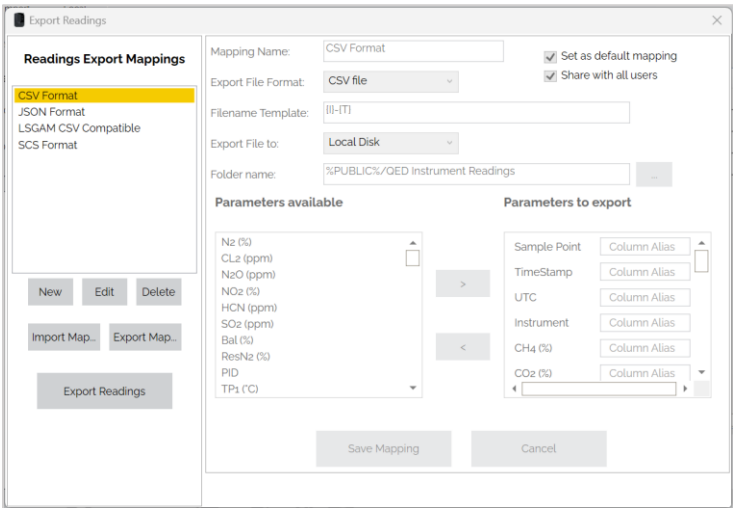
Sample Point	Time	O2(%)	CO(ppm)	Bal(%)	ResN2(%)	Gas-Temp(°C)	Flow-Vol(m³/h)	Latitude(°)	Longitude(°)
	26/05/2023 10:21:26	20.8	0.00	79.2	0.93	21.0	5.0	52.417660	
	26/05/2023 10:21:48	20.8	0.00	79.2	0.90	30.0	4.0	52.417690	
	26/05/2023 10:22:11	20.8	0.00	79.2	0.90	24.0	6.0	52.417679	
	26/05/2023 10:22:40	20.8	0.00	79.2	0.90	24.0	3.0	52.417606	

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EXPORT READINGS

Select the “Export Readings” icon to display the Export Readings window:

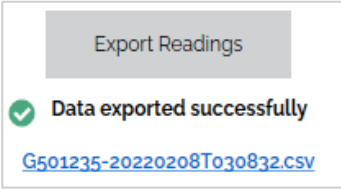


Choose from a standard template or create your own custom ‘map’ to standardise preferences like export method and readings format for future convenience.

Mappings can be selected in the top left pane. Readings can be exported in the following formats:

- CSV
- JSON
- LSGAM CSV Compatible
- SCS Format

Select the export type and then press the ‘Export Readings’ button to export readings. A status message and clickable hyperlink to the exported file will be displayed below the button.

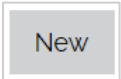


Existing maps can be Edited or Deleted by first selecting the map and then using the ‘Edit’ or ‘Delete’ buttons.

CREATING A NEW EXPORT MAP

To create a new map:

- 1) Select the ‘New’ button:



- 2) Enter a name for the Map in the green text field:

Mapping Name:

- 3) Choose your file format from the dropdown list:

Export File Format:

- 4) Define the filename format. Hovering over this field will provide a description of the placeholders:

{T} = Time downloaded
{C} = Name of computer used to download
{I} = Serial number of instrument
{F} = Time of first reading downloaded
{L} = Time of most recent reading downloaded
Example: {C}-{I}-{L} readings

- 5) Choose where to export the file to from the dropdown list:

Export File to:

- 6) Complete the relevant location depending on where the file is being exported:

- **Local Disk** – saved locally on the computer (default folder: “%PUBLIC%/QED Instrument Readings”)
- **FTP Server** – uploaded directly to a cloud or server using File Transfer Protocol (FTP) or Secure File Transfer Protocol (SFTP). SFTP uses secure shell (SSH) encryption to add an extra layer of security to the process.
- **Email** – email attachment sent to a dedicated email address

- 7) Define whether to set your new map as the default and/or to share with all users by ticking the boxes:

☒ Set as default mapping

☒ Share with all users

- **Set as default mapping** – the currently selected map will become the default selection when exporting readings
- **Share with all users** – the map will be available to all users. If disabled, the map will only be visible to the current user

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- 8) Select items from the 'Parameters available' pane and add the highlighted item to the 'Parameters to export' using the '>' button in the centre or by using the drag-and-drop gesture:

The top screenshot shows the 'Parameters available' list with 'Sample Point' selected. The '>' button is used to move it to the 'Parameters to export' list. The bottom screenshot shows a larger list of parameters in 'Parameters available', including 'OrificePlate-Diameter (mm)', 'Flow-Vol (m³/h)', 'GM-Flow (L/h)', 'Flow-Vel (m/s)', 'Power (KW)', 'Latitude (°)', 'Longitude (°)', 'Altitude (m)', 'Sats Used', and 'H.Error'. These are moved to 'Parameters to export' and then renamed with custom 'Column Alias' names: 'Sample Point' to 'Borehole', 'CH4 (%)' to 'Methane', and 'O2 (%)' to 'Oxygen'.

- 9) The channel names can be given a custom name or "Column Alias". For example, you might wish to rename "ID" to "Borehole", or "CH4" to "Methane". The updated Alias parameter names will be used for all exported readings data:

Sample Point	Borehole
CH4 (%)	Methane
O2 (%)	Oxygen

- 10) Once complete, press the "Save Mapping" button:

Save Mapping

IMPORTING AND EXPORTING MAPS

GAMSoft Web Service Users will already have a shared database with shared Readings Export Mappings; however, Local Users (standalone) can also share maps with other users, allowing them to standardise how data is exported.

A 'Readings Export Map' can be exported as a '.gsme' file. Select a Map to export, then select the "Export Map..." option in the left pane and select a save location. Share this file with other GAMSoft users.

To import a map, place the '.gsme' map file in an accessible folder. Select the "Import Map..." option in the left pane, locate the file and select 'Open'. The new map will appear in the left pane list, and will now be available for use.

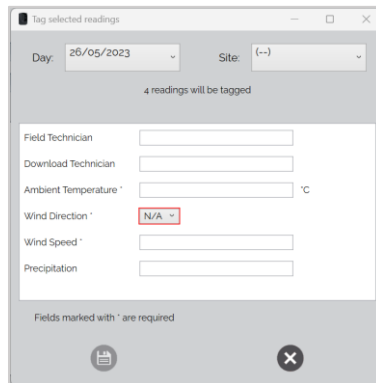
TAG READINGS

Readings can be tagged with additional information which may not have been obtainable at the time of monitoring.

- 1) Press the “Tag Readings” icon:



- 2) Populate the relevant fields with information:



- 3) Once complete, press the “Save” icon:



VIEW DISTANCE

If coordinates are defined for the ID, the distance between the expected reading location and actual reading location can be calculated:

- 1) Press the “View Distance” icon:



- 2) Find the column titled “Distance Error” and where both expected and actual coordinates are available, the distance will be calculated:

Distance Error
232979
146582
24

GEM PRO

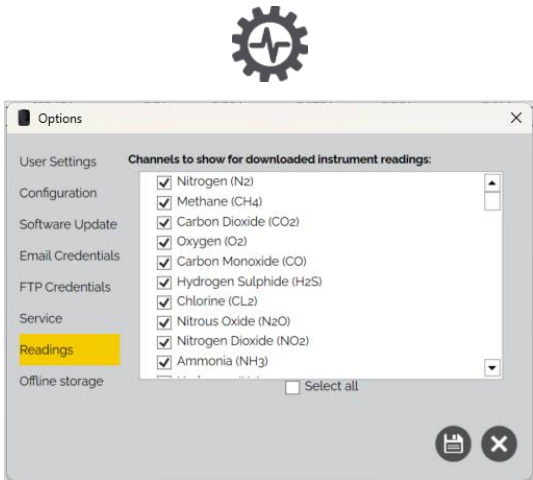
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READING OPTIONS

Data columns can be rearranged horizontally by selecting a column heading and performing a drag-and-drop gesture.

To configure which parameters are downloaded:

- 1) Select the “Reading Option” icon:



- 2) Tick or untick the parameters you wish to download and once complete, press the “Save” icon:

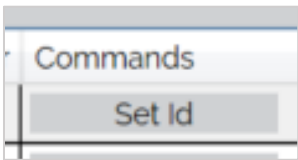


Readings not associated with a specific ID (no ID) are displayed as ‘.....’. To assign a reading to an existing ID:

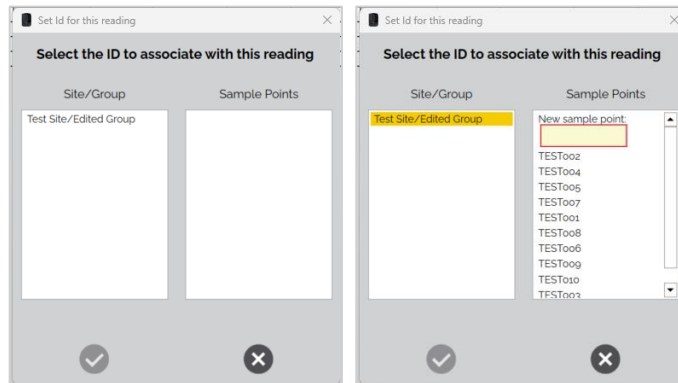
- 3) Click the reading with no ID assigned, the row will highlight yellow:

Sample Point	Time	O2(%)	CO(ppm)	Balt(%)	ResNat(%)	Gas-Temp(°C)	Flow-Vol(m³/h)	Latitude(°)	Longitude(°)	Altitude(m)	GNSS-Status(N/A)	Rel.Prm(Bari)	RH(%)	Power(KW)	OrificePlate-Diameter(mm)	Env rei humidity and temp(°C)	Baro(N/A)	Flow-Vol(m³/s)
	26/05/2023 10:21:26	20.8	0.00	79.2	0.90	21.0	5.0	52.417560	-1.484693	118.0	7.0	0.00						
	26/05/2023 10:21:48	20.8	0.00	79.2	0.90	30.0	4.0	52.417590	-1.484897	118.1	7.0	0.00						
	26/05/2023 10:22:11	20.8	0.00	79.2	0.90	24.0	6.0	52.417679	-1.484613	110.8	7.0	0.19						
	26/05/2023 10:22:40	20.8	0.00	79.2	0.90	24.0	3.0	52.417606	-1.484721	96.2	7.0	0.00						
TEST002	26/05/2023 12:28:58	20.8	0.00	79.2	0.88	0.0	3.0	52.417778	-1.484955	113.3	7.0	0.00	0.00	0.0	0	0.0	1023.5	0.0
TEST004	26/05/2023 12:29:15	20.8	0.00	79.2	0.77	0.0	6.0	52.417835	-1.484964	122.1	7.0	-0.63	0.00	0.0	0	0.0	1023.4	0.0
TEST005	26/05/2023 12:39:10	20.8	0.00	79.2	0.82	0.0	3.0	52.417770	-1.484594	67.2	7.0	0.00	0.00	0.0	0	0.0	1023.4	0.0
TEST005	26/05/2023 13:29:54	20.8	0.00	79.2	0.83	0.0	5.0				5.0	-43.48	0.00	0.0	0	0.0	1023.2	0.0
TEST005	26/05/2023 13:30:07	20.8	0.00	79.2	0.89	0.0	6.0				5.0	-41.57	0.00	0.0	0	0.0	1023.2	0.0

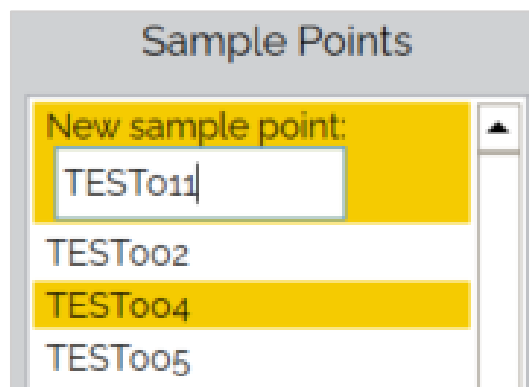
- 4) Select the ‘Set Id’ button in the ‘Commands’ column:



5) Select the 'Site/Group' you want to assign the ID too and a list of IDs will appear:



6) Either select the IDs you want to assign the reading to or create a new ID:



7) Once complete, press the "Update reading ID" icon:



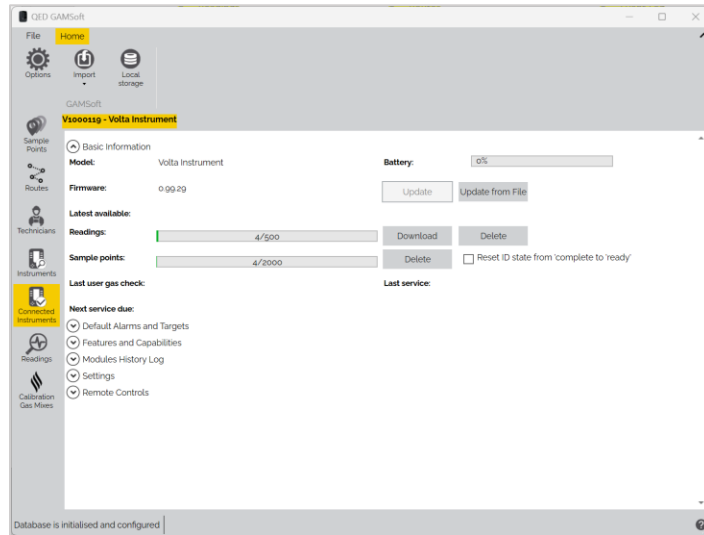
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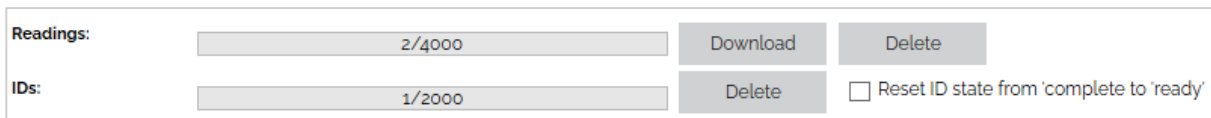
DELETE READINGS OR IDS

To delete readings from the instrument:

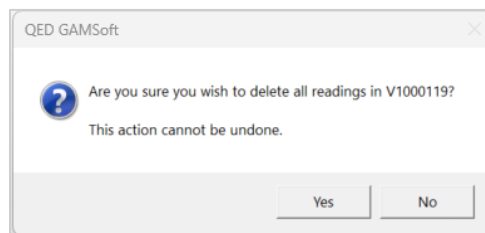
- 1) Connect to your instrument – see [Connecting and Disconnecting to an PRO SERIES](#) Instrument.
- 2) The “Instrument” tab should automatically display:



- 3) Select the option for Delete next to “Readings” or “ID” as appropriate:

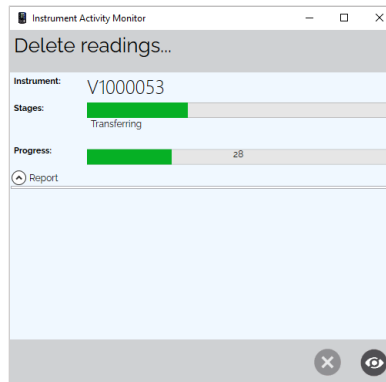


- 4) A pop-up window will ask you to confirm the delete action, click “Yes”:



Note: The delete process cannot be undone. Please ensure you have downloaded all data first.

5) Deletion will begin and a status box will appear:



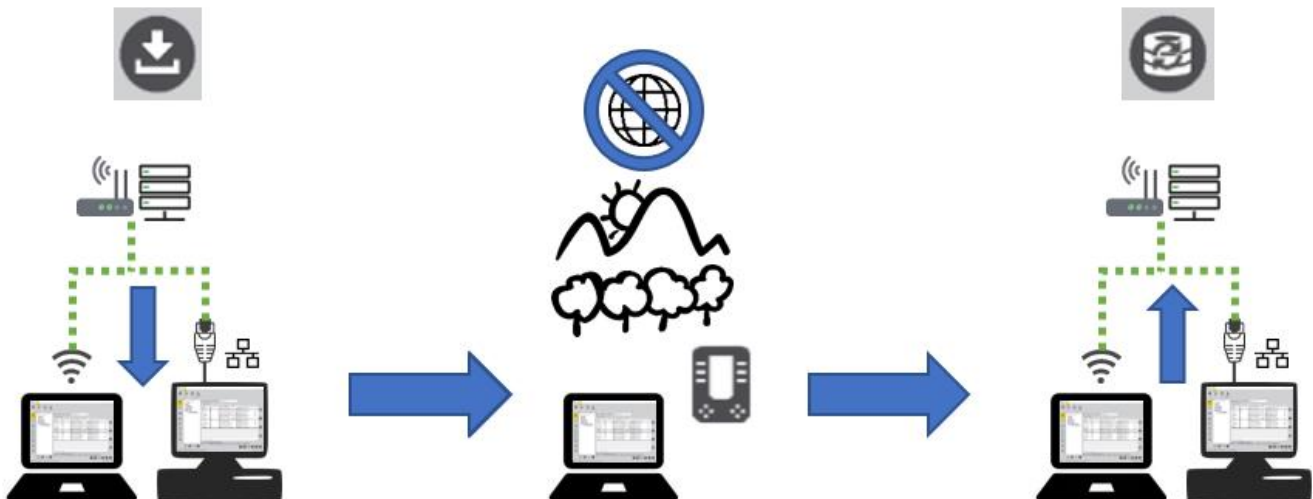
6) Wait for the deletion to complete and then press the close window or hide button:



OFFLINE MODE

Note: This section is only applicable to Web Service Users.

A Web Service User working in a location without internet access can still use GAMSsoft to access their data by using 'Offline Mode'. GAMSsoft can create a local copy of the relevant data stored in the service database for instrument upload and allow synchronisation of stored readings back to the service once internet is available.



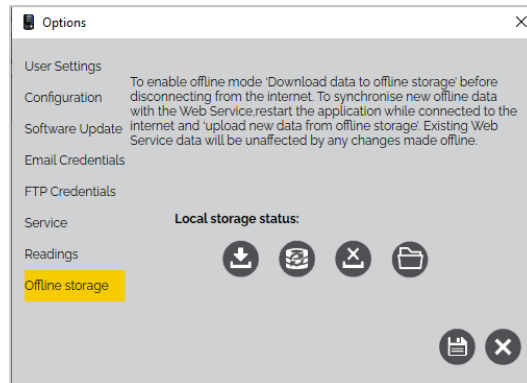
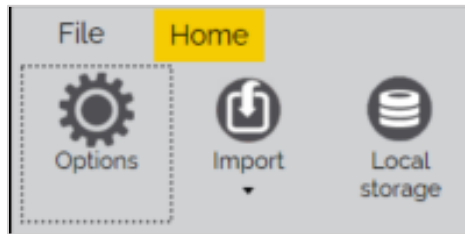
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OFFLINE STORAGE

To take a copy of the service database in preparation for using GAMSoft with no internet connectivity:

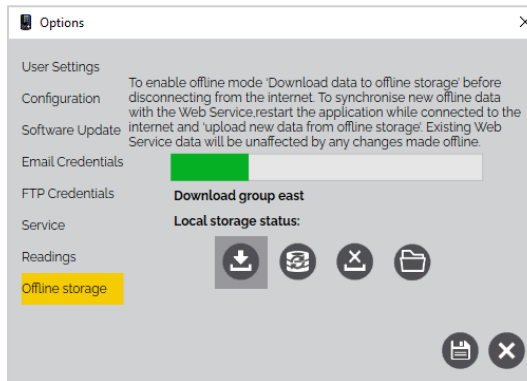
- 1) While connected to the internet, connect to the web service and login in as normal.
- 2) Select the “Local Storage” icon from the top panel ribbon:

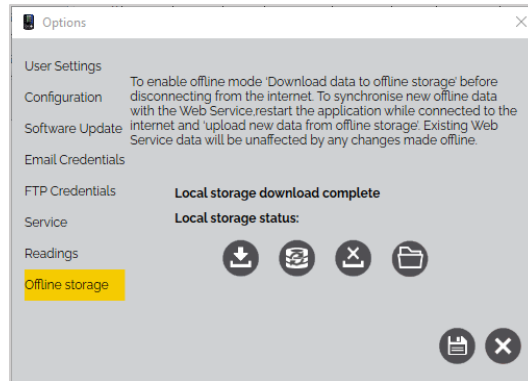


- 3) Select the “Download data to offline storage” icon to create a copy of the web service database on your local computer:



- 4) A progress bar will be displayed followed by a message “Local storage download complete”

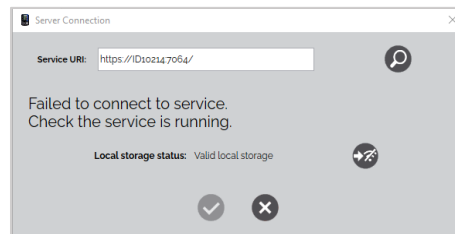




5) Close the window.

OFFLINE MODE USE

When attempting to open GAMSsoft with no internet connection, the user will be prompted with the following error message:



To enable offline mode, click the 'use GAMSsoft offline' icon:



- When in 'Offline Mode', the connection status will be displayed in the bottom left of the GAMSsoft window.
- The user will not be asked to login while in offline mode, as user management is not available when not connected to the internet or web service.
- Creation of new Sites, Groups, and IDs is permitted and will be merged into the web service database when returning online.
- Downloaded readings will be merged into the web service database when returning online.

Note: The ability to edit existing data, such as Sites, Groups, and IDs is possible but the changes will be discarded when returning online, as existing web service data takes precedence.

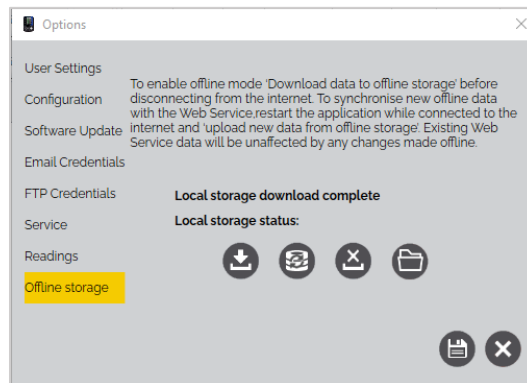
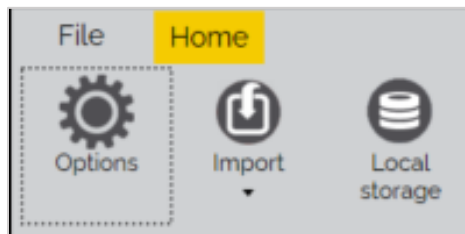
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SYNCHRONISING DATA

To synchronise data collected when offline back to the web service:

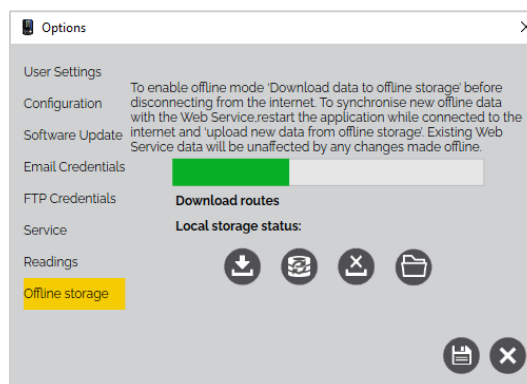
- 1) While connected to the internet, connect to the web service and login in as normal.
- 2) Select the “Local Storage” icon from the top panel ribbon:

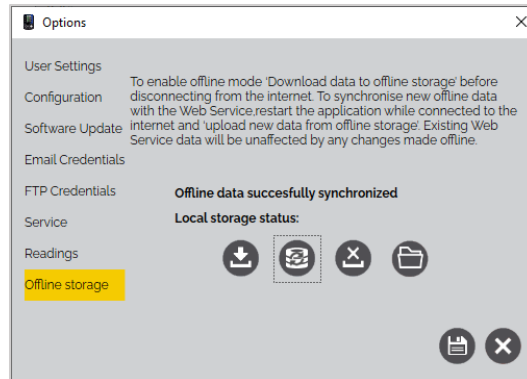


- 3) Select the “Upload new data from offline storage” icon to merge the collected data with the web service database on your computer:



- 4) A progress bar will be displayed followed by a message “Offline data successfully synchronized”:





- 5) Remove the copy of the local web service database from your local computer by selecting the “Delete offline storage” icon:



- 6) Once complete, you can close the window.

TROUBLESHOOTING

FAILED TO CONNECT TO SERVICE

If the message “Failed to connect to service” is observed when first starting the application, check that the Service URI has been entered correctly. The address should be in the following format: **<https://ServerName:7064/>**

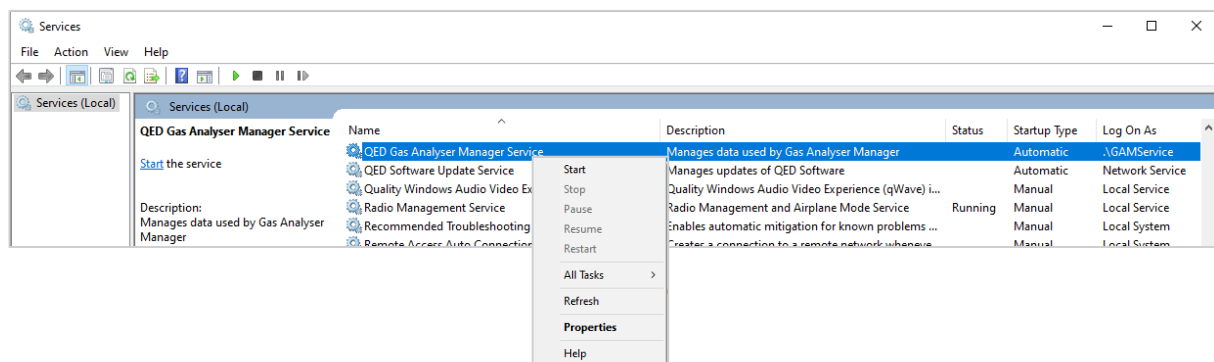
If the address is correct, ensure the Service is running correctly:

WEB SERVICE USERS

Please contact your IT System Administrator referencing ‘QED Gas Analyser Manager Service’.

LOCAL USER (STANDALONE)

- 1) Type “Services” into the Windows search bar and ‘Run as Administrator’
- 2) Search for Name ‘QED Gas Analyser Manager Service’. The ‘Status’ field should be “Running”.
- 3) If ‘Status’ is <blank>, select “Start the Service” in the left pane, or right click the row and select “Start”.
- 4) If this does not work, right click the row again and this time select the option “Restart”.



- 5) Retry the “Test Connection” icon in the GAMS Soft Application.

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Note: For further information please contact Technical Support at QED on:

QED Environmental Systems, Inc.

+1 (800) 624-2026

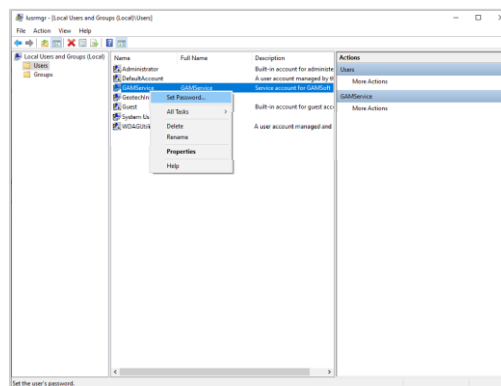
service@qedenv.com

FORGOT \GAMSERVICE PASSWORD

If the Local User or Web Service IT System Administrator is trying to create a new GAMSoft database via the 'QED GAMSoft Admin Console' but cannot remember their GAMService password, follow these steps to reset the password:

Note: Administrator permissions will be required.

- 1) Type `lusrmgr.msc` into the Windows search bar and select 'Run as Administrator'.
- 2) Enter Windows administrator username and password.
- 3) In the left pane, click on "Users" folder.
- 4) Right click on the row for "GAMService" and select "Set Password...":

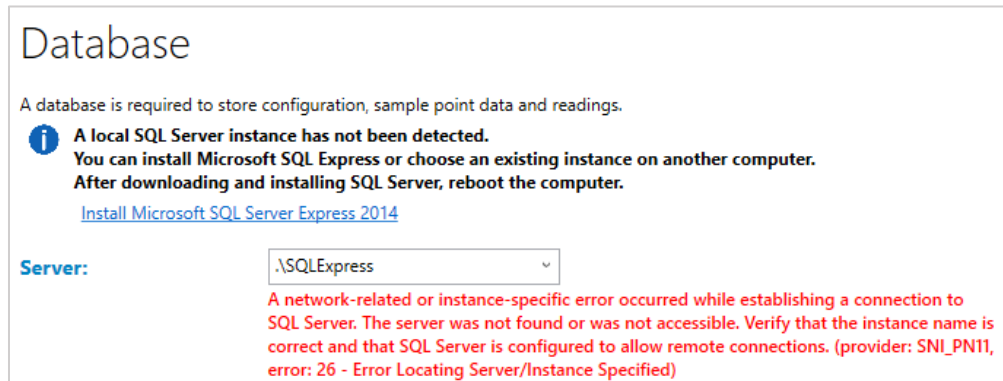


- 5) Read the disclaimer and select 'Proceed'.
- 6) Enter the new password, confirm with a re-entry and select OK. Now the GAMSoft database can be updated.
- 7) Run the "QED GAMSoft Admin Console" application and at the "Service" stage, enter the new service password and press "Test". The specified credentials will be valid and the database setup can progress.

QED GAMSOFT ADMIN CONSOLE - SQL SERVER INSTANCE ERROR

Web Service Client Users will not need to complete this step.

Local Users and Web Service IT System Administrators will need to ensure that supporting Microsoft software is up to date. The minimum requirement is Microsoft SQL Server 2014 or newer. At the 'Database' stage of the QED GAMSoft Admin Console, if an older version or no version is detected, the following error will be observed when selecting the 'Test Credentials' button:



DOWNLOAD SQL SERVER

Select the [Install Microsoft SQL Server Express 2014](#) hyperlink on this page to open a web browser link to Microsoft's download page for SQL Server 2014.

Download the install file relevant to your PC operating system, "Express **BIT\SQLEXPRESS_x**_ENU.exe", e.g.:

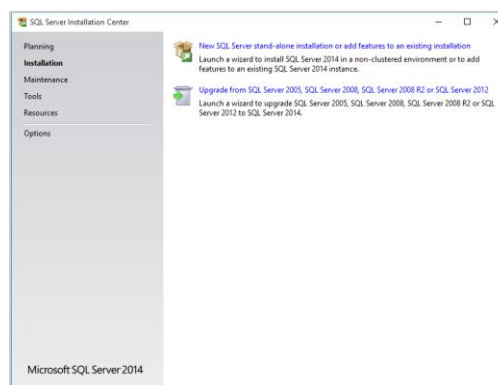
- 64-bit: Express 64BIT\SQLEXPRESS_x64_ENU.exe
- 32-bit: Express 32BIT\SQLEXPRESS_x86_ENU.exe

INSTALL SQL SERVER

This Local User (standalone) step-by-step example is for installing SQL Server 2014 with default settings, where no previous SQL Server exists:

Note: Administrator permissions will be required.

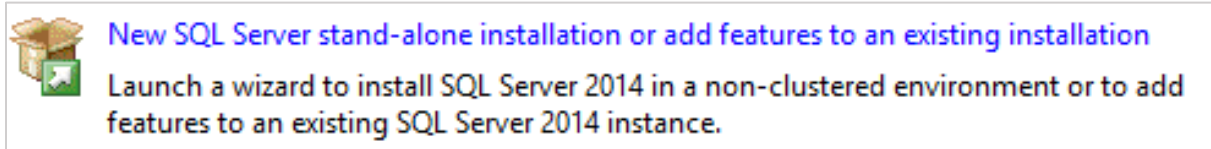
1) Run the downloaded installer file for SQL Server.



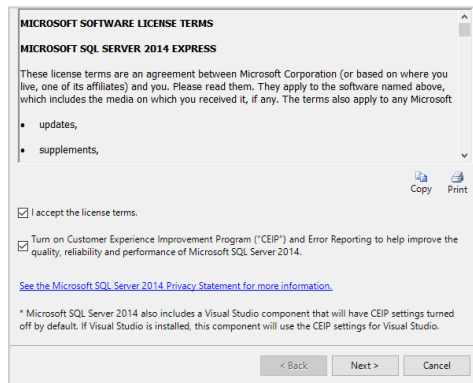
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- 2) Select the option “New SQL Server stand-alone installation or add features to an existing installation”

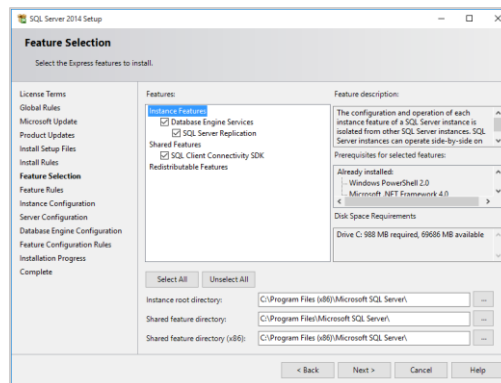


- 3) If you agree, tick the box to accept the license terms:

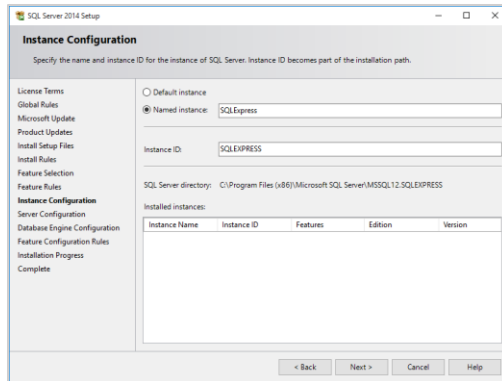


- 4) Select “Next” and wait for the various Install stages to complete.

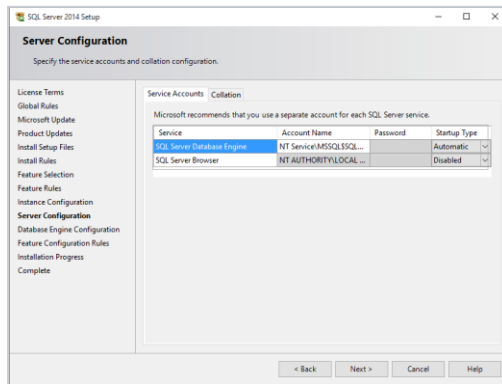
- 5) Under “Features” selection, tick boxes to select all features (default) and click Next:



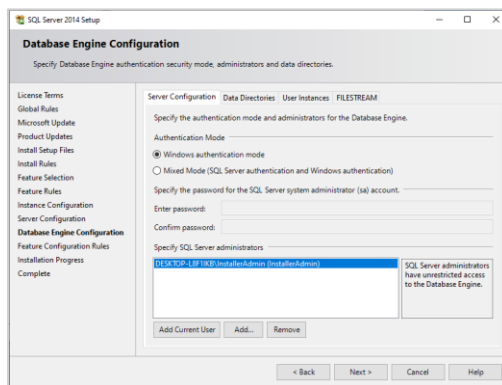
- 6) For “Instance Configuration”, leave as defaults (e.g. SQLEXPRESS) and click Next:



7) For “Server Configuration”, leave as defaults and click Next:



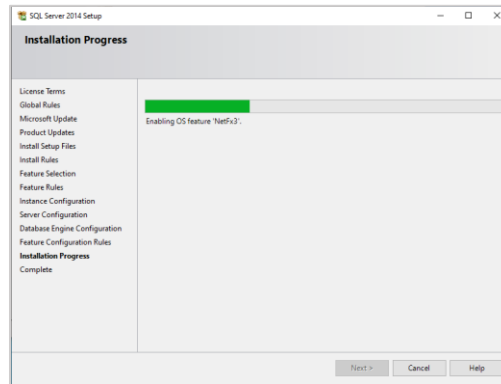
8) For “Database Engine Configuration”, leave as defaults (Server Configuration = Windows authentication mode) and click Next:



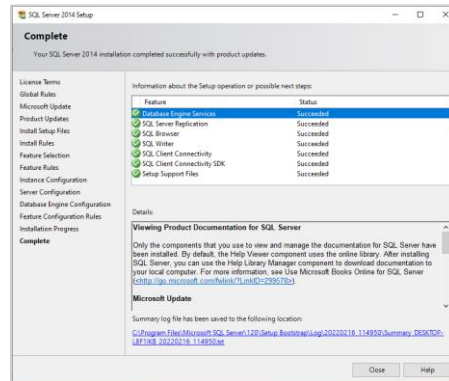
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9) Wait for the installation to complete, this may take longer than several minutes:



10) Once complete and the setup of all features has succeeded, close the setup window and continue with the QED GAMSoft Admin Console setup, see section [Database](#):



APPLICATION .NET CORE ERRORS

If problems still persist while attempting to run the QED GAMSoft Admin Console or GAMSoft application, ensure the computer is running Microsoft .NET Core platform 1.14 or higher, which can be downloaded from [Microsoft dotnet](#).

Note: For further information please contact Technical Support at QED on:

QED Environmental Systems, Inc.

+1 (800) 624-2026

service@qedenv.com

QUICK LINKS

PRO SERIES HELP

Scan the QR code with your mobile device to take you to the various videos related to the Pro Series devices.



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PATENT INFORMATION

The equipment in this manual is protected under U.S. and foreign patents issued and pending. For a complete list of patents visit www.graco.com/patents.

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