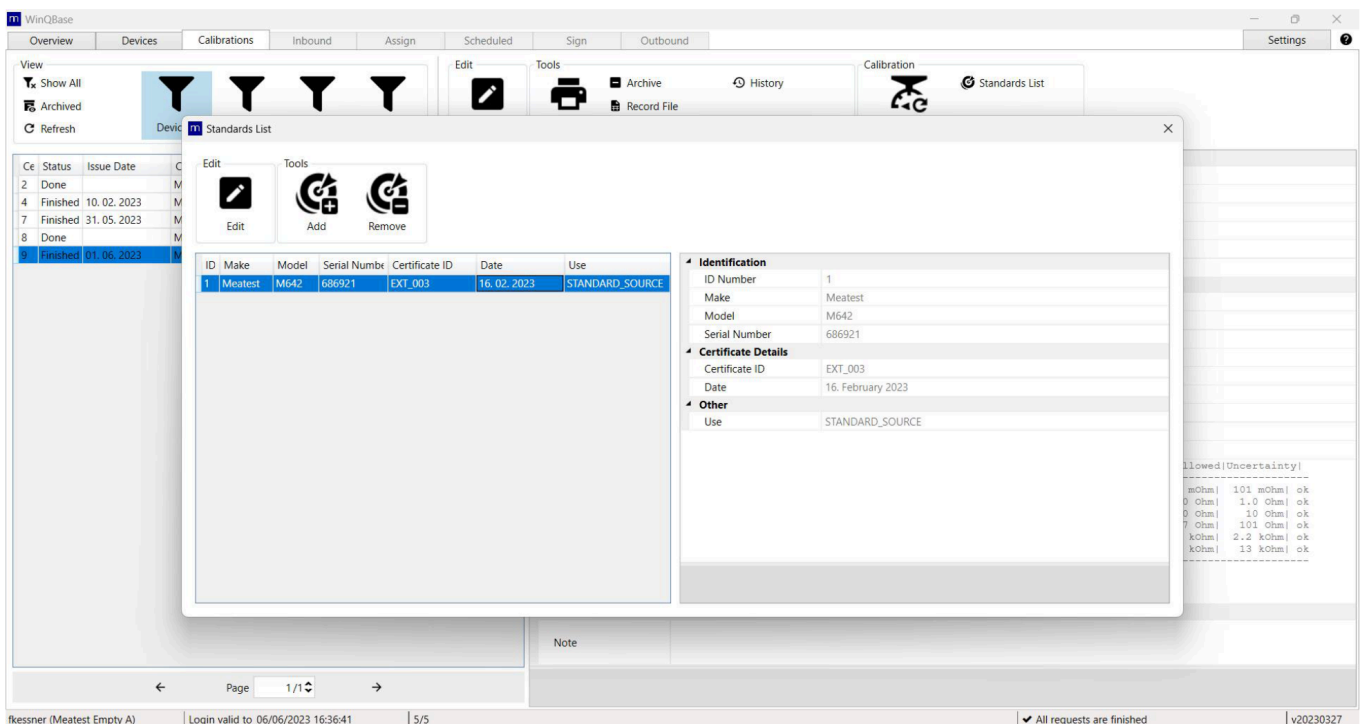


# WinQBase – Database software for calibration laboratories

## User manual



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# WinQBase Help

## Client

WinQBase client application is the main tool of the WinQBase system. Installed on each user PC, the client app provides interface for each user to perform tasks according to his role in calibration laboratory.

### WinQBase

- **Introduction**
  - [System description](#)
  - [Login screen](#)
- **Online mode**
  - [Overview \[Dashboard\]](#)
  - [Devices](#)
  - [Calibrations](#)
  - [Settings](#)
    - [Client](#)
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- **Offline mode**
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  - [Single record overview](#)
    - [Toolbar - Add group](#)
    - [Toolbar - Edit group](#)
    - [Toolbar - Tools group](#)
    - [Toolbar - Calibration group](#)
    - [Toolbar - Service events group](#)

## Server

Server station with the WinQServer application manages local database and provides data access for client stations. Server station is supposed to be managed by system administrator only.

### WinQServer

- **Introduction**
  - [System description](#)
  - [System requirements](#)
- **Configuration files**
  - [Config.ini](#)
  - [ConfigXFilters.json](#)
  - [ConfigFieldValues.json](#)
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### WinQMonitor

- **Basic information**
  - [Introduction](#)
- **Forms**
  - [Today](#)
  - [Yesterday](#)
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# Basic Information

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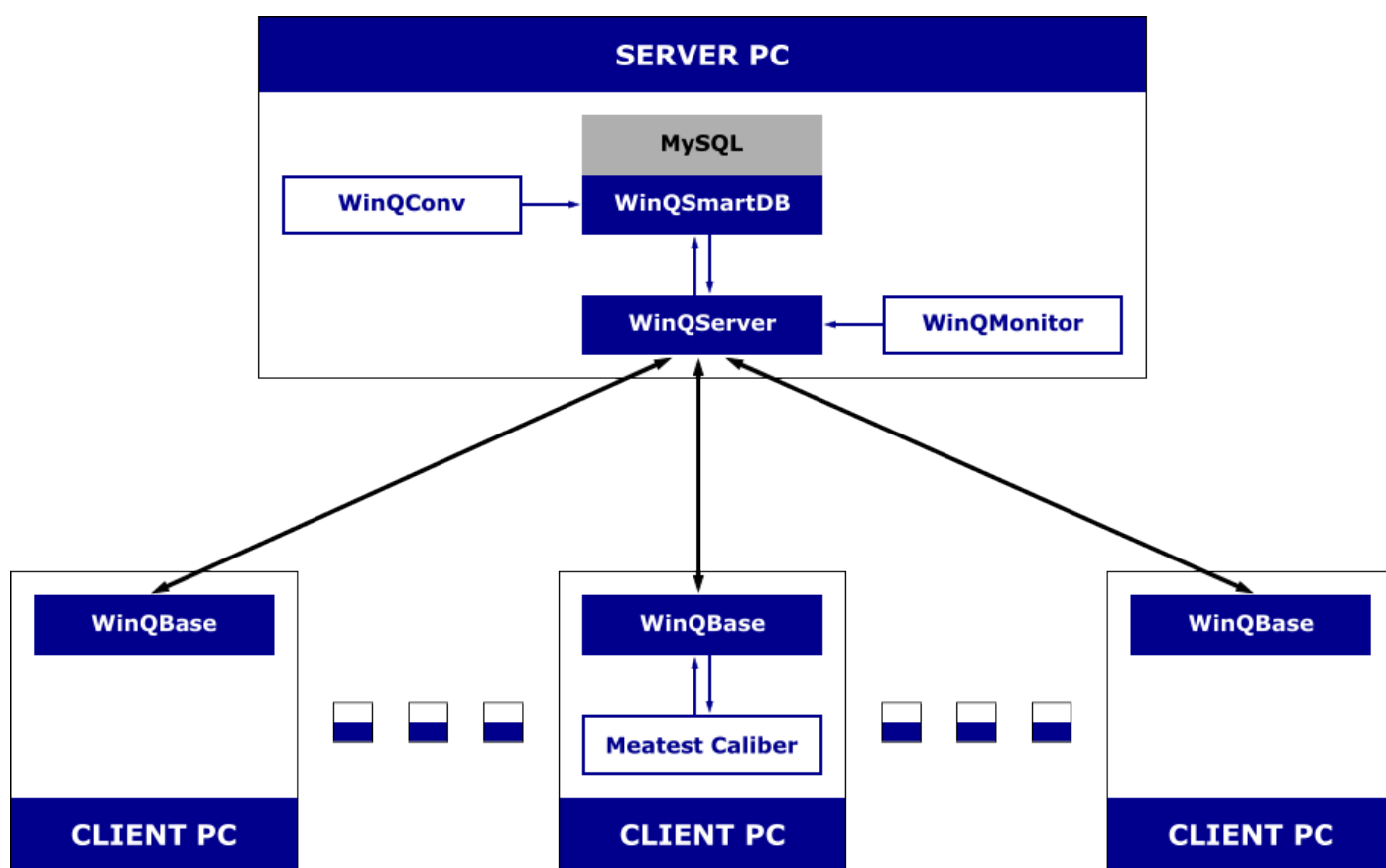
    Server.....9

# Introduction

WinQBase is database software for calibration laboratories that keeps track of laboratory resources as well as its customers, equipment provided for calibrations and other essentials. Client app interacts with calibration software Caliber to create, manage and run calibration procedures. Calibration results are processed by WinQbase again to provide calibration certificates and keep records in central database.

The system holds history of changes that is easy to browse through and can recall past records if needed. The central database that stores all WinQBase as well as all Caliber resources can be backed-up using native MySQL or MSSQL tools.

WinQBase is based on client – server topology consisting of one central database server and several client PCs that access the data over local area network. Diagram chart below shows an example of such system and its interactions:

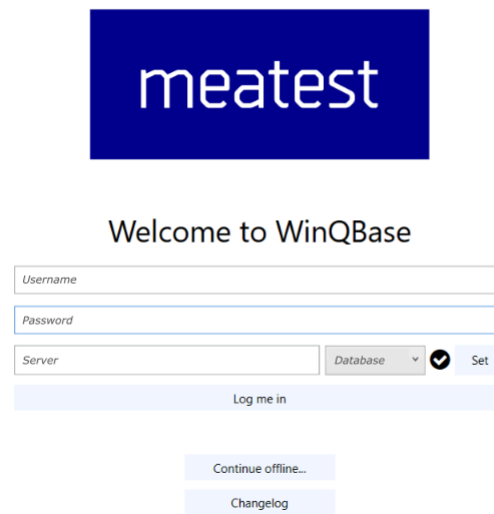


WinQServer is the backbone of WinQbase system, managing its central database and providing data access to users via client applications (WinQBase) installed on their local PCs. This concept allows simultaneous work of multiple client stations within WinQBase system all while maintaining database integrity.

The server side includes two utilities: WinQConv and WinQMonitor. WinQConv is used to migrate data from previous versions of WinQBase. WinQMonitor is graphical user interface for server setup, management and monitoring. Both tools as well as the entire server side of WinQbase system shall be managed by system administrators only.

# Login screen

Login screen is the user's entry point into the system.



On each WinQBase startup, the user may choose to either log in online to access the central database or run the app in offline mode. It's recommended to use online mode at all times. Login form keeps username and server setup from last successful login.

## Online mode (default)

Online mode connects the user to local database (or one of local databases if the calibration lab runs multiple databases on a single server), providing up-to-date data in real time. Status icon next to **Set** button indicates availability of selected server.

Users can log in online by clicking on **Log me in**. The app will then contact selected server, identify the user through login and password, load necessary data and display [Dashboard](#).

[SEE MORE](#)

## Offline mode

Offline mode is designed for scheduled calibrations at customer sites where VPN connection to central server cannot be established.

This mode provides limited set of tools and access to locally stored procedures, allowing the user to run calibrations offline and later import the calibration data into the database.

Users can enter offline mode by clicking **Continue offline**. Offline mode requires offline data to be stored in local client app and will only run if offline data have been previously downloaded.

[SEE MORE](#)

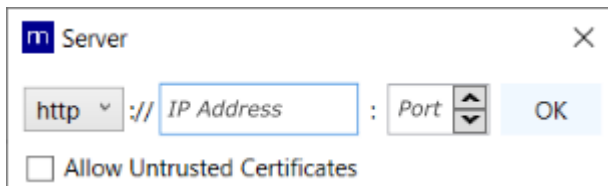
[Go back to Home page.](#)



# Login - Online mode setup

Online mode requires proper server connection setup. You should see check icon next to **Set** button if that's the case. Contact your system administrator if the icon turns into exclamation mark instead.

Server parameters can be edited through **Set** button:



The screenshot shows a dialog box titled "Server" with a close button (X) in the top right corner. Inside the dialog, there is a dropdown menu currently showing "http", followed by "://", a text input field containing the placeholder text "IP Address", a colon separator, a spinner box labeled "Port", and an "OK" button. Below these fields is a checkbox labeled "Allow Untrusted Certificates".

Here, the system administrator needs to set IP address of the WinQServer and communication port of at least one database running on that server. Client will automatically discover all other databases available on that server and offer them to the user in dropdown menu next to **Set** button. **Database** dropdown remains hidden if the server only uses one database. System security might be further enhanced by allowing use of trusted certificates only.

[Go back to Login page.](#)

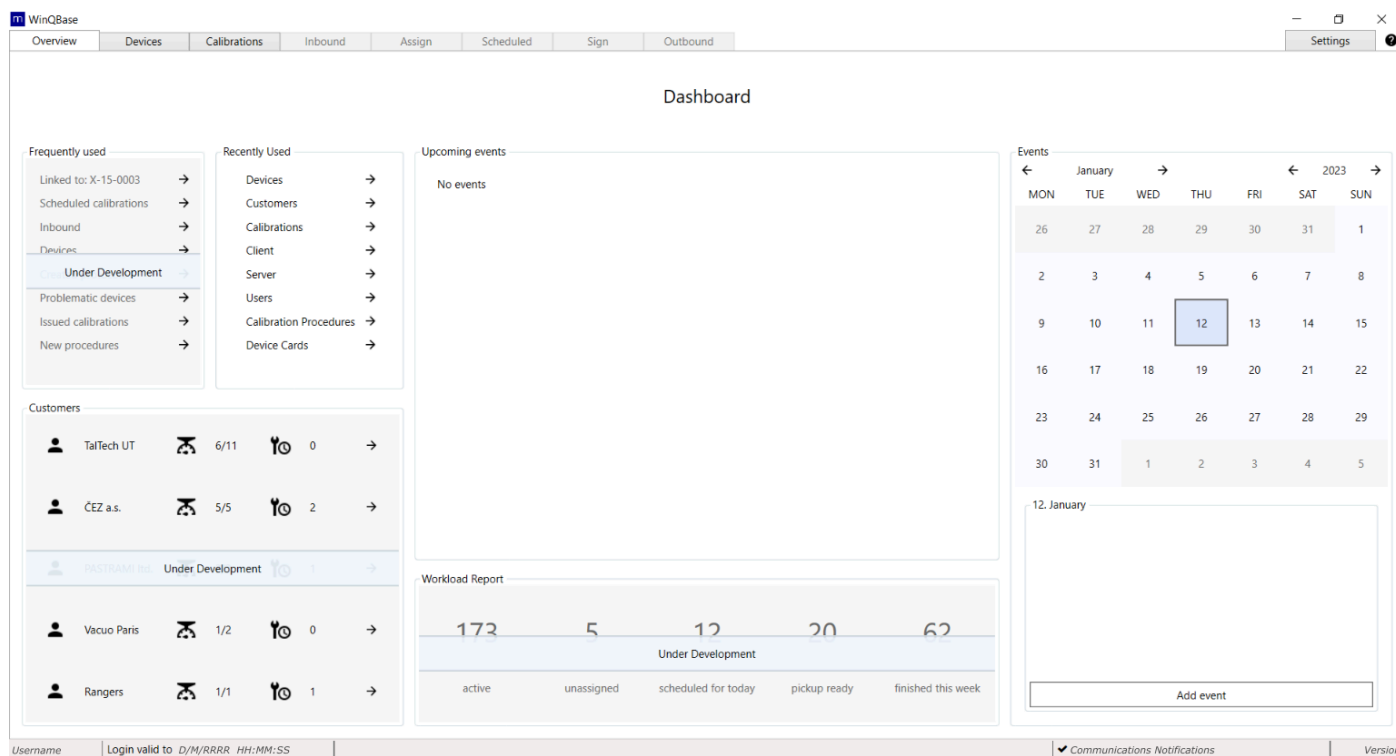
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# Dashboard tab

Dashboard tab is the first to show up once the user successfully logs in and the client app downloads initial data from database. The tab includes shortcuts to tabs and filtered views **Recently used** by current user and **Events** calendar to manage the user's agenda.

User may also click on **Devices** or **Calibrations** tab to browse database records or manage application and system settings in **Settings** tab on the far right.



# Devices tab

Devices tab shows records of all instruments in the database, ie. both laboratory standards and customer assets. Devices tab is divided into three sections: list of records on the left, single record overview on the right and toolbar on top.

The screenshot shows the WinQBase 'Devices' tab. At the top is a navigation bar with tabs: Overview, Devices (selected), Calibrations, Inbound, Assign, Scheduled, Sign, and Outbound. Below this is a toolbar with various icons for actions like 'Add New Device', 'Edit', 'Tools' (Print, Decommission, Record File, History), 'Calibration' (Calibrate, Import Calibration, Show Calibrations), and 'Service Events' (Report failure, Mark as repaired, History). On the left, there's a 'View' section with filters for 'Show All', 'Decommissioned', and 'Refresh', and a 'Model' dropdown. The main area contains a table of device records with columns: ID Number, Etalon, Customer, Workplace, Owner Info, Device Group, Make, and Model. A record is selected, and its details are shown on the right in a 'Single record overview' panel, including Identification, Status, Calibration, and Other information.

By default, the **list of records** shows all active (ie. not decommissioned) devices. The list can be filtered out using predefined filters in **View** section of the toolbar, sorted by clicking on individual columns of the list, reorganized and listed through using navigation panel below. The rest of the toolbar as well as **single record overview** are related to- and interact with the record selected in the list of records.

## Toolbar groups' help

[View](#)

[Add](#)

[Edit](#)

[Tools](#)

[Calibration](#)

[Service events](#)

# Calibrations tab

Shows calibrations and prints **calibration certificates**. Calibration tab can be accessed directly or through [Calibration group](#) tools on [Devices tab](#). The former is recommended when searching all calibrations of certain type (fe. expired calibrations), the latter is recommended when looking up calibration of a particular device or group of devices. Calibrations tab is divided into three sections: list of records on the left, single record overview on the right and toolbar on top.

WinQBase

Overview Devices Calibrations Inbound Assign Scheduled Sign Outbound

View

- Show All
- Archived
- Refresh

Invalid Today

Edit

- Edit
- Print
- Archive
- Record File
- Protocol File
- History

Calibration

- Redo Calibration
- Standards List

Certificate ID	Status	Issue Date	Valid To	Customer	Unit Under Test	Result	Date
9001	Done	24.03.2023	24.03.2023	Meatest	Meatest 101	Pass	24.03.2023
9002	Done	24.03.2023	24.03.2023	Meatest	Meatest 102	Pass	24.03.2023
9003	Expired	01.03.2023	01.03.2023	Meatest	Meatest 103	Fail	01.03.2023
9004	Done	01.03.2023	01.03.2023	Meatest	Meatest 104	Pass	01.03.2023
9005	Expired	01.03.2023	01.03.2023	Meatest	Meatest 105	Fail	01.03.2023
9006	Done	27.02.2024	27.02.2024	Meatest	Meatest 106	Pass	27.02.2024
9007	Done	27.02.2024	27.02.2024	Meatest	Meatest 107	Pass	27.02.2024
9008	Done	27.02.2024	27.02.2024	Meatest	Meatest 108	Pass	27.02.2024
9009	Done	27.02.2024	27.02.2024	Meatest	Meatest 109	Pass	27.02.2024
9010	Done	27.02.2024	27.02.2024	Meatest	Meatest 110	Pass	27.02.2024
9011	Done	27.02.2024	27.02.2024	Meatest	Meatest 111	Pass	27.02.2024
9012	Done	27.02.2024	27.02.2024	Meatest	Meatest 112	Pass	27.02.2024
9013	Done	27.02.2024	27.02.2024	Meatest	Meatest 113	Pass	27.02.2024
9014	Done	27.02.2024	27.02.2024	Meatest	Meatest 114	Pass	27.02.2024
9015	Done	27.02.2024	27.02.2024	Meatest	Meatest 115	Pass	27.02.2024
9016	Done	27.02.2024	27.02.2024	Meatest	Meatest 116	Pass	27.02.2024
9017	Done	27.02.2024	27.02.2024	Meatest	Meatest 117	Pass	27.02.2024
9018	Done	27.02.2024	27.02.2024	Meatest	Meatest 118	Pass	27.02.2024
9019	Done	27.02.2024	27.02.2024	Meatest	Meatest 119	Pass	27.02.2024
9020	Done	27.02.2024	27.02.2024	Meatest	Meatest 120	Pass	27.02.2024
9021	Expired	17.02.2023	17.02.2023	Meatest	Meatest 121	Fail	17.02.2023
9022	Expired	06.01.2023	06.01.2023	Meatest	Meatest 122	Fail	06.01.2023
9023	Expired	06.01.2023	06.01.2023	Meatest	Meatest 123	Fail	06.01.2023
9024	Expired	18.12.2022	18.12.2022	Meatest	Meatest 124	Fail	18.12.2022
9025	Expired	18.12.2022	18.12.2022	Meatest	Meatest 125	Fail	18.12.2022
9026	Expired	18.12.2022	18.12.2022	Meatest	Meatest 126	Fail	18.12.2022
9027	Expired	18.12.2022	18.12.2022	Meatest	Meatest 127	Fail	18.12.2022
9028	Expired	18.12.2022	18.12.2022	Meatest	Meatest 128	Fail	18.12.2022
9029	Expired	18.12.2022	18.12.2022	Meatest	Meatest 129	Fail	18.12.2022
9030	Expired	18.12.2022	18.12.2022	Meatest	Meatest 130	Fail	18.12.2022
9031	Expired	18.12.2022	18.12.2022	Meatest	Meatest 131	Fail	18.12.2022
9032	Expired	18.12.2022	18.12.2022	Meatest	Meatest 132	Fail	18.12.2022
9033	Expired	18.12.2022	18.12.2022	Meatest	Meatest 133	Fail	18.12.2022
9034	Expired	18.12.2022	18.12.2022	Meatest	Meatest 134	Fail	18.12.2022
9035	Expired	18.12.2022	18.12.2022	Meatest	Meatest 135	Fail	18.12.2022
9036	Expired	18.12.2022	18.12.2022	Meatest	Meatest 136	Fail	18.12.2022
9037	Expired	18.12.2022	18.12.2022	Meatest	Meatest 137	Fail	18.12.2022
9038	Expired	18.12.2022	18.12.2022	Meatest	Meatest 138	Fail	18.12.2022
9039	Expired	18.12.2022	18.12.2022	Meatest	Meatest 139	Fail	18.12.2022
9040	Expired	18.12.2022	18.12.2022	Meatest	Meatest 140	Fail	18.12.2022

Page 1/120

Username | Login valid to D/M/RRRR HH:MM:SS | 1/3214 | Communications Notifications | Version

The [list of records](#) can be filtered out using predefined filters in [View](#) section of the toolbar, sorted by clicking on individual columns of the list, reorganized and listed through using navigation panel below. The rest of the toolbar as well as [single record overview](#) are related to- and interact with the record selected in the list of records.

## Toolbar groups' help

[View](#)

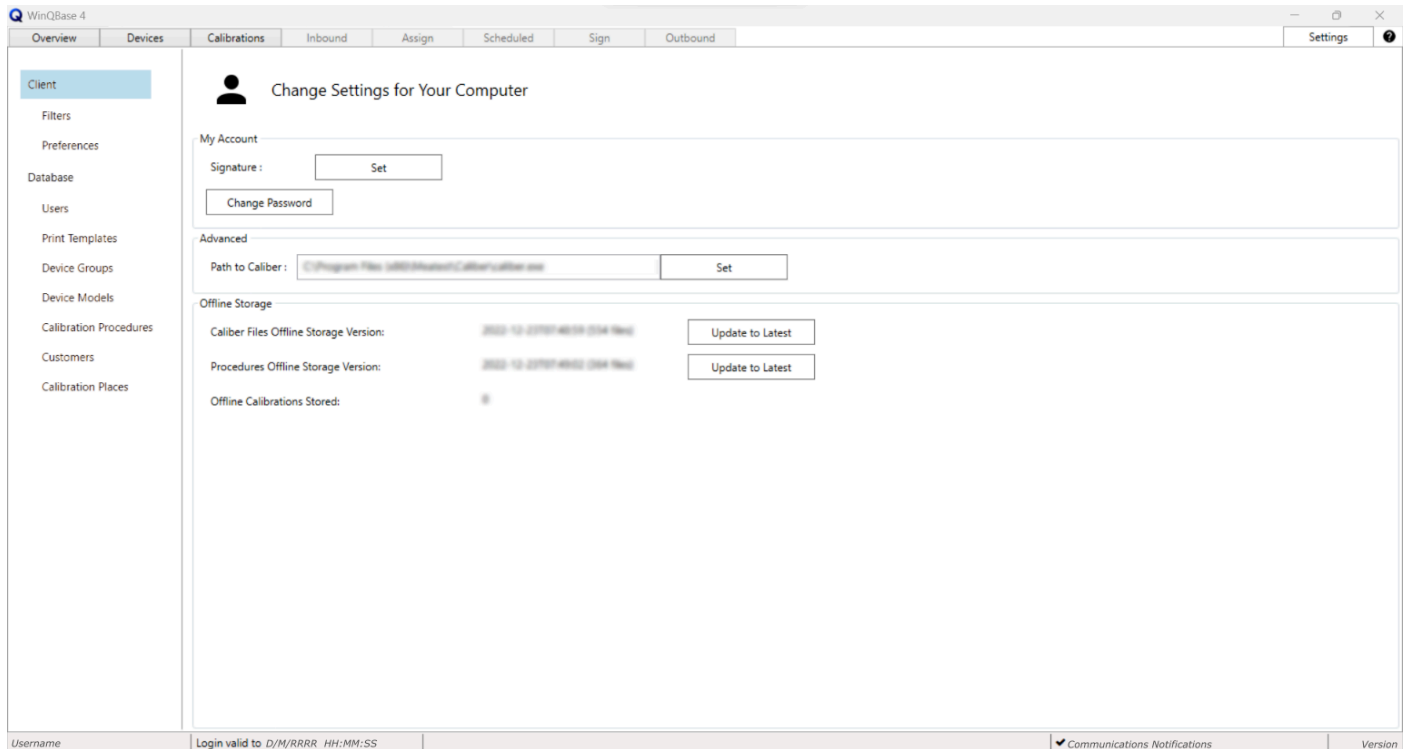
[Edit](#)

[Tools](#)

[Calibration](#)

# Settings tab

Manages client application and certain system settings, divided into individual categories on the left. See category descriptions below for more details.



## Settings category

**[Client](#)**

**[Filters](#)**

**[Preferences](#)**

**[Database](#)**

**[Users](#)**

**[Print Templates](#)**

**[Device Groups](#)**

**[Device Cards](#)**

**[Calibration Procedures](#)**

**[Customers](#)**

**[Calibration Places](#)**

# Settings - Client

**Access level:** everyone

Personal settings of client application. My Account settings affect current user across the entire network, all other settings on this page affect this PC only. Setting up **Path to Caliber** is required to run calibrations, manage Device Cards and Calibration Procedures using Caliber as external program.

WinQBase 4

Overview Devices Calibrations Inbound Assign Scheduled Sign Outbound Settings

Client

Filters

Preferences

Database

Users

Print Templates

Device Groups

Device Models

Calibration Procedures

Customers

Calibration Places

Change Settings for Your Computer

My Account

Signature :  Set

Change Password

Advanced

Path to Caliber : C:\Program Files (x86)\Meatest\Caliber\caliber.exe Set

Offline Storage

Caliber Files Offline Storage Version: 2022-12-27 09:46:02 (GMT+05:30) Update to Latest

Procedures Offline Storage Version: 2022-12-27 09:46:02 (GMT+05:30) Update to Latest

Offline Calibrations Stored: 0

Username Login valid to D/M/RRRR HH:MM:SS Communications Notifications Version

## My Account

- **Signature** Sets user signature in JPG, JPEG, PNG or BMP format to be used in calibration certificates and other client-generated documents.
- **Change password** Changes current user password. Minimum length is 6 characters.

## Advanced

- **Path to Caliber** Used by WinQBase client to call Caliber on current PC to run calibrations, edit **Instrument Cards** or **Procedures**. Default Caliber location is C:\Program Files (x86)\Meatest\Caliber\caliber.exe

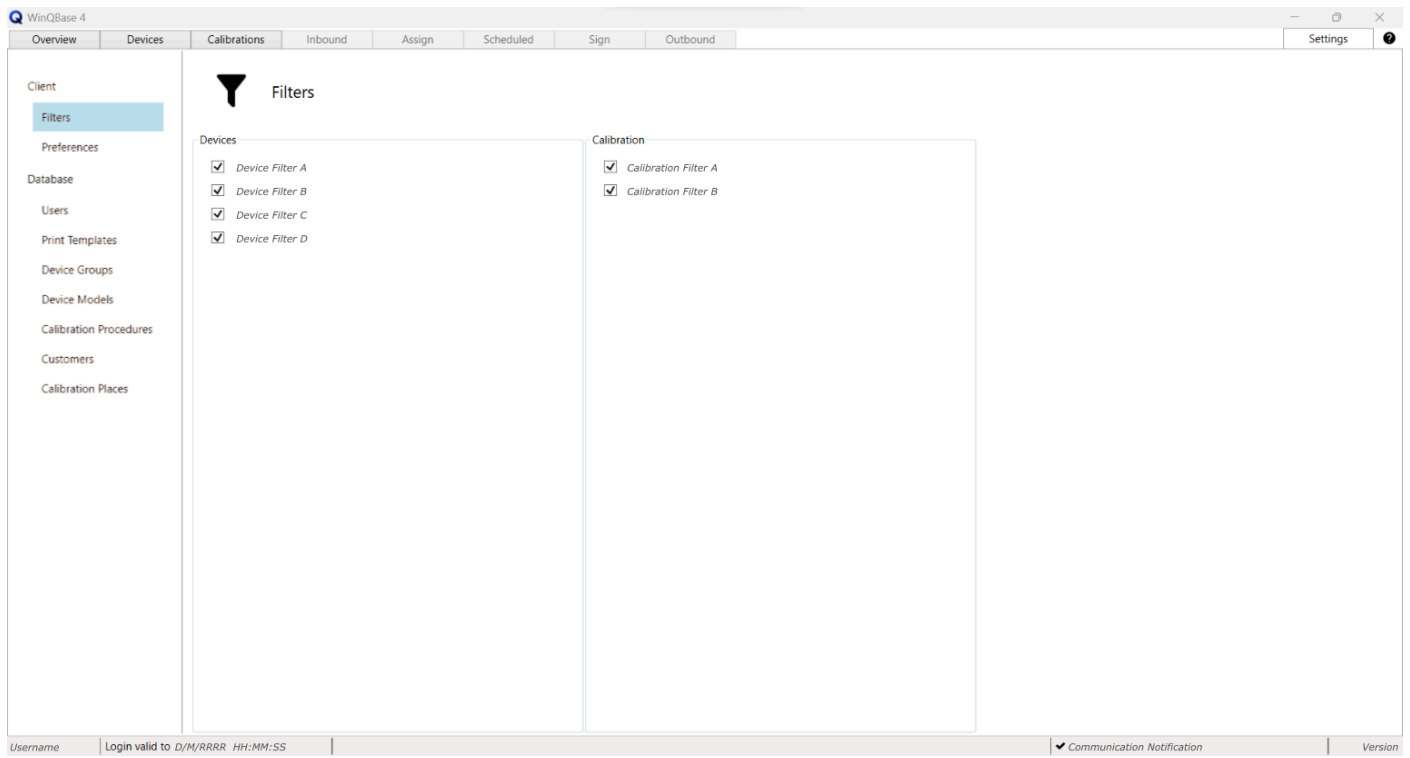
## Offline Storage

- **Caliber Files** and **Procedures** Allow user to update local data storage to be used later in [offline mode](#). Both items show date of the last update (if any).
- **Offline calibrations stored** Shows the number of offline calibrations saved on current PC. Offline calibrations can imported into online database using [Import Calibration](#) tool on **Devices** tab.

# Settings - Filters

**Access level:** everyone

Each user can individually pick filters to be shown in their **View** group on **Devices** and **Calibrations** tabs.



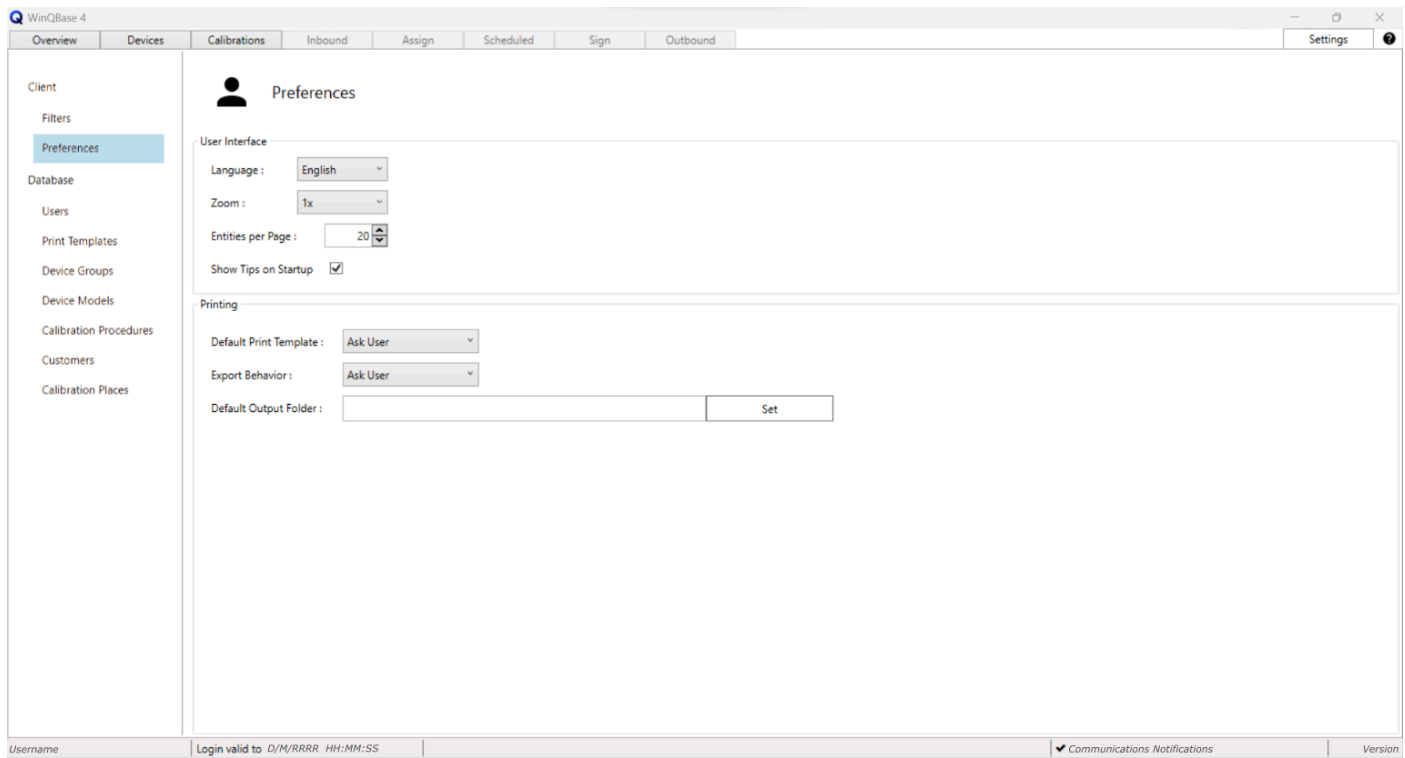
The list of available filters here can be managed and expanded by system administrators only. See [this page](#) in server manual for more details.



# Settings - Preferences

**Access level:** everyone

Additional user interface preferences of client application. Settings on this page affect this PC only.



## User interface

- **Language** Sets client application language (changing the language requires restarting the application)
- **Zoom** Magnifies text and on-page elements of client application. Useful for extra large or extra small displays.
- **Entries per page** Sets the number of records shown per page in [List of Records](#) on Devices and Calibrations tabs.
- **Show Tips on Startup** Shows tutorial info-bubbles on client startup when turned on.
- **Default Code Page** Changes character encoding for all the text files. Always match the Code Page with your OS.

## Printing

There are several options to choose from when printing calibration certificate on Calibrations tab. Selecting default options here will suppress user prompt pop-ups that normally show up when printing a calibration certificate and use selected defaults instead. User may select **Default Print Template**, **Default Output Folder** and whether the certificate shall be exported in original format or printed on a printer under **Export Behavior**. There is no option to preselect a specific printer.

# Settings - Database

**Access level:** Administrator only

This page includes basic database management tools for system administrators. See [WinQServer manual](#) for more database setup tools. Tools on this page **may cause irreversible data loss**, make sure to read page element descriptions below thoroughly before taking any action.

WinQBase 4

Overview Devices Calibrations Inbound Assign Scheduled Sign Outbound Settings

Client  
Filters  
Preferences  
**Database**  
Users  
Print Templates  
Device Groups  
Device Models  
Calibration Procedures  
Customers  
Calibration Places

Manage Global Settings for All Users of This Database (*Database name; Server version*)

Active Users

user	Kick
administrator	Kick

Custom Attributes

Devices	Calibration
custom_attribute_2 Remove	custom_attribute Remove
Add Value	Add Value

Indexers (ConfigFieldValues.json)

manufacturer
Meatest
Fluke
Keysight
-
Gossen Metrawatt
Keithley
Metex
Metrix
Peaktech

Username (Database name) Login valid to D/M/RRRR HH:MM:SS ✓ Network traffic notifications Client version

## Active Users

Shows active users on the server. **Kick** button will force selected client app to shut down and disconnect from the server.

## Custom Attributes

Adds and removes custom attributes to/from **Device** and **Calibration** records. Type in a unique attribute name and click **Add value** to add new custom attribute or click **Remove** to remove the selected attribute.

**Warning: Remove button permanently deletes the attribute and its data in all records! Custom attributes' names cannot be renamed once created. Any operation with Custom attributes may take seconds or even minutes to complete.**

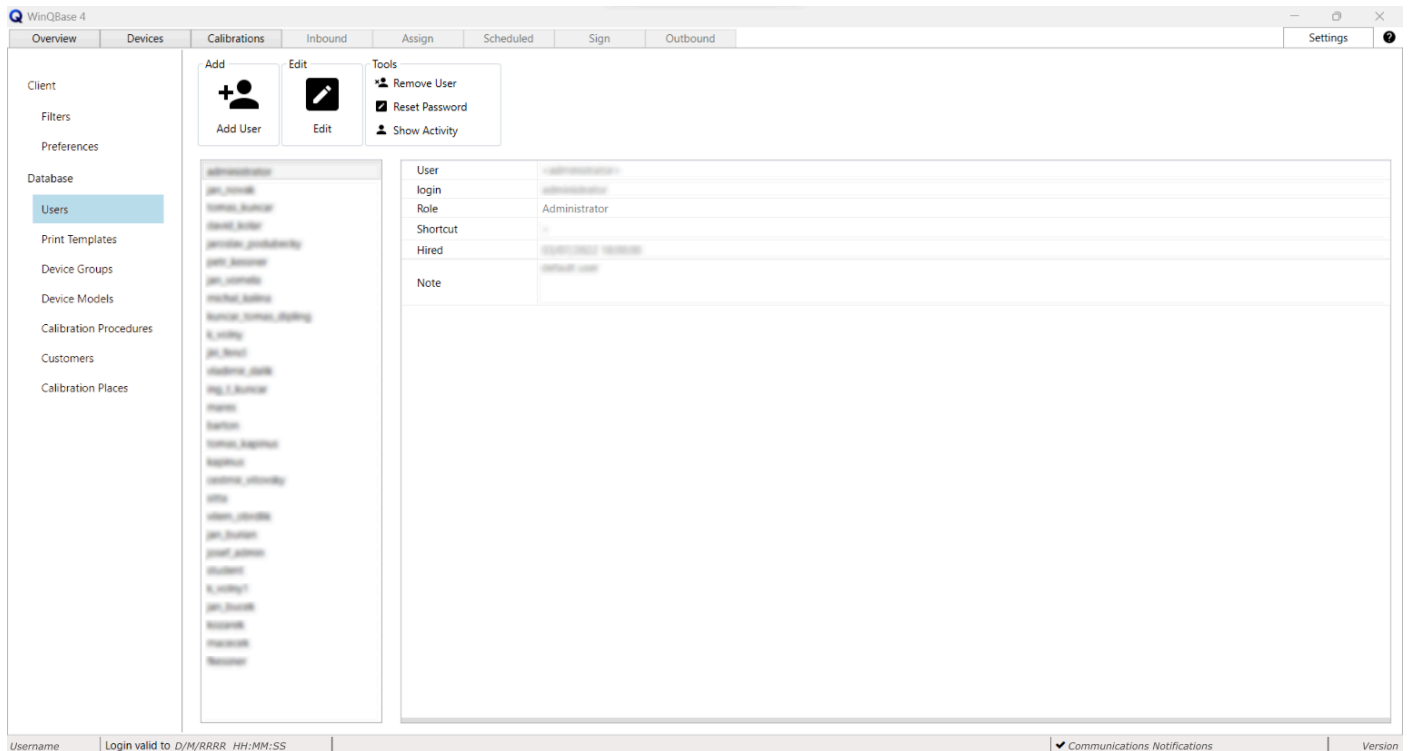
## Indexers

System administrators may define a list of selectable Indexers for each text attribute to unify the responses provided by users. This page just shows Indexer lists associated with defined attributes. For more information about adding, editing and managing Indexer lists, see [Indexer configuration](#) page in server manual.

## Settings - Users

**Access level:** Administrator, Head of Laboratory

Manages user accounts and their access to the database. Note: **Login** is generated automatically from User name when the user gets added and **cannot be changed later**. **Remove user** permanently removes user from the database rather than archiving its data and therefore **cannot be undone**. Click the Access level link above to see permissions associated with user **Roles**.



## Toolbar controls

**Add**

Edit

## Tools

# Roles

WinQBase system allows a hierarchy of users using roles that have defined levels of permission to access forms and controls. Table below shows an overview of roles and their permissions.

Setting a role for user is done through the [Users](#) form which is accessible by settings menu tabs on sidebar. Menu **Settings** is accessible by main menu tabs on top bar.

CLIENT TAB	SECTION / TOOL		ACCESS GRANTED TO			
			Administrator	Head of laboratory	Calibration technician	Logistic
DASHBOARD	Recently used		✓	✓	✓	✓
	Events		✓	✓	✓	✓
	Upcoming events		✓	✓	✓	✓
DEVICES	View	Show all	✓	✓	✓	✓
		Decommisioned				
		Refresh				
		Filter				
	Add	New device	✓	✓	✓	✓
		New from this				
	Edit	Edit	✓	✓	✓	✓
	Tools	Print	✓	✓	✓	✓
		Decommission			⊘	⊘
		History			✓	✓
	Calibration	Calibrate	✓	✓	✓	✓
		Import calibration				
		Show calibration				
	Service Events	History	✓	✓	✓	⊘
		Report failure				
		Mark as repaired				
CALIBRATIONS	View	Show all	✓	✓	✓	✓
		Archived				

			Refresh					
			Filter					
		Edit	Edit	✓	✓	✓	⊘	
		Tools	Print			✓	✓	
			Archive	✓	✓	⊘	⊘	
			Protocol file			✓	✓	
			History			✓	✓	
		Calibration	Redo calibration	✓	✓	✓	⊘	
			Standards list					
SETTINGS	CLIENT	My account		✓	✓	✓	✓	
		Advanced		✓	✓	✓	⊘	
		Offline storage		✓	✓	✓	⊘	
	FILTERS	Devices		✓	✓	✓	✓	
		Calibration		✓	✓	✓	✓	
	PREFERENCES	User interface		✓	✓	✓	✓	
		Printing		✓	✓	✓	✓	
	DATABASE	Active users		✓	⊘	⊘	⊘	
		Custom attributes		✓	⊘	⊘	⊘	
		Indexers		✓	⊘	⊘	⊘	
	USERS	Add	Create user	✓	✓	⊘	⊘	
		Edit	Edit	✓	✓	⊘	⊘	
		Tools	Delete user					
			Reset password	✓	✓	⊘	⊘	
			Show activity					
	PRINT TEMPLATES	Print templates		✓	✓	✓	⊘	
Data linkages (view only)		✓	✓	✓	⊘			
DEVICE GROUPS	View	Search	✓	✓	✓	⊘		

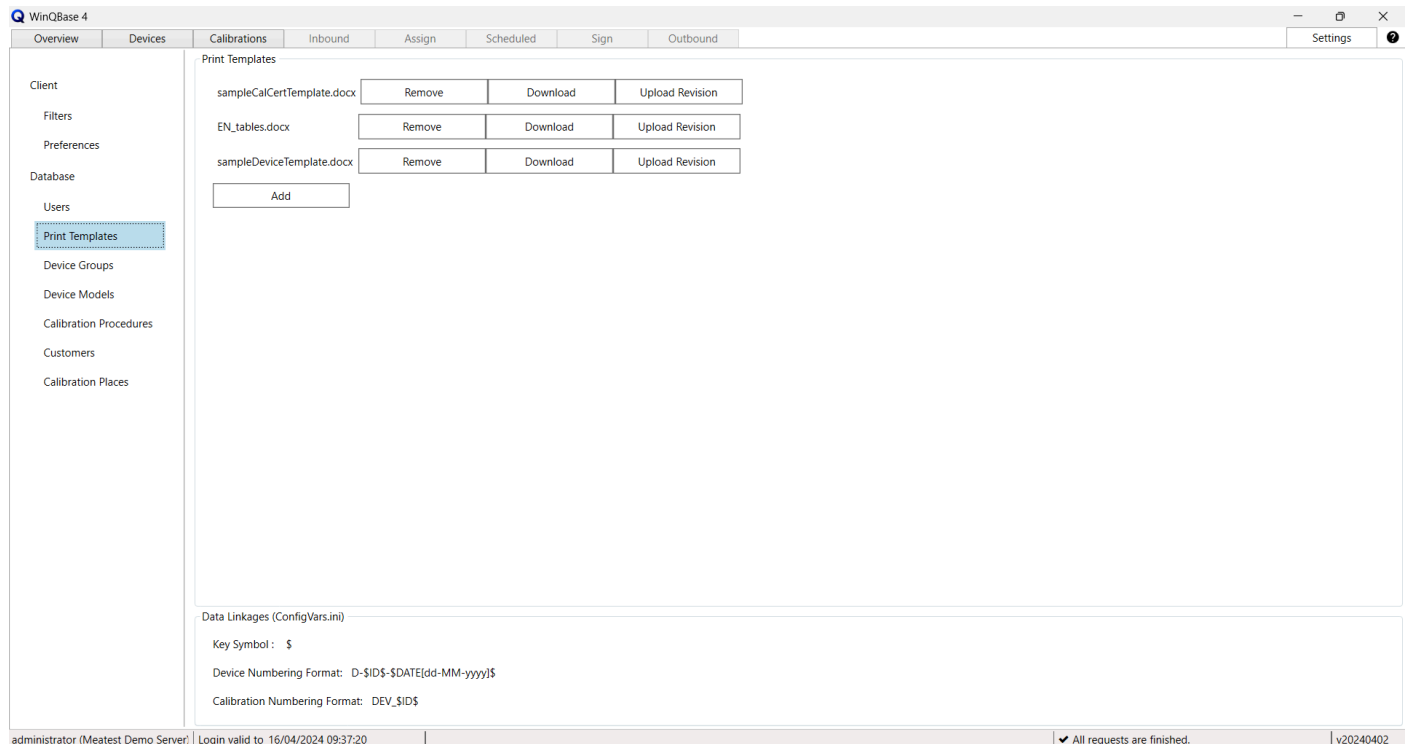
		Archived				
		Restore				
	Add	New device group	✓	✓	✓	⊘
	Edit	Edit	✓	✓	✓	⊘
	Tools	Archive	✓	✓	⊘	⊘
		Print			✓	
		History			✓	
DEVICE CARDS	View	Search	✓	✓	✓	⊘
		Archived				
		Refresh				
	Add	Create by program	✓	✓	✓	⊘
		New from this				
		Import				
	Edit	Edit	✓	✓	✓	⊘
		Edit				
	Tools	Export	✓	✓	✓	⊘
		Archive			⊘	
		Print			✓	
		History			✓	
		Upload DEV file			⊘	
CALIBRATION PROCEDURES	View	Search	✓	✓	✓	⊘
		Archived				
		Refresh				
	Add	Create by program	✓	✓	✓	⊘
		Import				
	Edit	Edit	✓	✓	✓	⊘
		Edit				
	Tools	Export	✓	✓	✓	⊘
		Archive			⊘	
		Print			✓	

			History			✓		
CUSTOMERS		View	Search	✓	✓	✓	✓	
			Archived					
			Refresh					
		Add	Add customer	✓	✓	✓	✓	
		Edit	Edit	✓	✓	✓	✓	
		Tools	Customer workplaces	✓	✓	✓	✓	
			Archive			⊘	⊘	
			Print			✓	✓	
			Historie			✓	✓	
		WORKPLACES	View	Archived	✓	✓	✓	✓
			Add	Add new workplace	✓	✓	✓	✓
	Edit		Edit	✓	✓	✓	✓	
	Tools		Archive	✓	✓	⊘	⊘	
			Print			✓	✓	
			History			✓	✓	
	CALIBRATION PLACES		View	Search	✓	✓	✓	✓
				Archived				
				Refresh				
Add		Add calibration place	✓	✓	✓	⊘		
Edit		Edit	✓	✓	✓	⊘		
Tools		Archive	✓	✓	⊘	⊘		
		Print			✓			
		History			✓			

# Settings - Print Templates

**Access level:** Administrator, Head of Laboratory, Calibration Technician

Lists print templates available in this database and enables their editing.



## Print Templates

- **Remove** Removes print template from current database.
- **Download** Downloads print template file to local PC.
- **Upload Revision** Replaces print template with selected file on local PC.
- **Add** Adds new template from selected file on local PC.

## Data Linkages

Items listed here are important for print template design. **Key symbol** is character used in print report templates to mark sections to be completed by WinQBase when generating documents. **Numbering formats** determine how ID numbers of new Devices (used in inventory lists) and Calibrations (used in calibration certificates) are created. All items on this page are read only and can be set up in [ConfigVars.ini](#) server configuration file.



# Tips & Tricks

## Print Templates

Print Templates are files, stored in database and available as templates for generating documents like calibration certificates, calibration stickers, inventory records and other record printouts. When selected for printing, WinQBase will make a copy of the template file, replace all **Keywords** inside the file with record data and either save the file on a local PC or print the content on a printer based on [Client Preferences](#). See below an example of .docx print template (left) and calibration certificate generated from this template (right):

meatest

Calibration certificate no. \$certificateID\$  
Issued by \$operator\$ on \$date\$

Customer	\$Customer\$
Unit under test	ID \$UUT\$
Result	\$Result\$
Calibration date, validity	\$Date\$, \$ValidTo\$
Standards used	\$StandardsList\$standards_list_text\$
Procedure	\$ProcedureDescription\$
Lab conditions	Workplace \$Place\$ Temperature \$Temperature\$ °C Humidity \$Humidity\$ %
Notes	\$Note\$
Calibration data:	\$CalibrationData\$
Calibrated by	Approved by
\$operator\$	\$operator\$

meatest

Calibration certificate no. 34  
Issued by Filip Kossner on 02/10/2023

Customer	MEATEST S.r.o.							
Unit under test	ID 2, METEX, M3850D, GD405459							
Result	OK							
Calibration date, validity	30/10/2023, 30/10/2024							
Standards used	M143, Meatest, SN: 670081 (5155578v, 30/10/2023)							
Procedure	Direct measurement of M143 Multifunction Calibrator.							
Lab conditions	Workplace Lab 1 Temperature 23 °C Humidity 50 %							
Notes	-							
Calibration data:								
DC Voltage								
Function	Range	Standard	UUT	Deviation	%spec	Allowed	Uncertainty	
VDC-2W	4 V	1.000 V	1.002 V	2.00 mV	50	4.01 mV	0.59 mV	ok
VDC-2W	4 V	4.000 V	4.002 V	2.00 mV	15	13.01 mV	0.67 mV	ok
VDC-2W	40 V	4.00 V	4.00 V	0.0 mV	0	22.0 mV	5.8 mV	ok

## Print Template management

Print templates can be added, updated and deleted from database on [Settings - Server](#) page but their content **can be edited only in its default editor** outside WinQBase (f.e. MS Word for .docx files). Supported file formats are: MS Word documents (**.docx**, **.doc**, **.xlsx**, **.xls**...) and other plain-text file formats (**.txt**, **.html**, **.xml**,...).

## Keywords

Click any item in [Single Record Overview](#) to see its Keyword shown in tooltip at the bottom of the page. Such Keywords, wrapped between **Key signs** as defined on [Settings - Server](#) page ('\$' by default) can be placed into any print template to be replaced by record data items when the record gets printed. F.e. *\$Manufacturer\$* may print as "Meatest" or "Keysight" when printing Device-type record, i.e. inventory list.

Calibration certificate print templates can use additional keywords from table below:

KEYWORD TYPE	DESCRIPTION	EXAMPLES
DUT data	Use "Device." prefix to access Device Under Test data.	\$Device.Model\$ \$Device.AssetID\$ ...
Standards' data	List standards used in calibration from <a href="#">Standards List</a> . See available formats in <a href="#">ConfigVars.ini</a> server file	\$StandardsList[standards_list_text]\$ \$StandardsList[standards_list_html]\$ ...
Protocol	Use \$Protocol\$ keyword to print calibration data into any template as plain text. Monospaced font is recommended for this type of output. MS Word templates also support \$ProtocolTable[parameters]\$ keyword to print calibration data in table format. See note below the table for more details.	\$Protocol\$ \$ProtocolTable[Diagram=#ff0000 #000000 #0000ff, Header=#00008e, Rows=#ffffff #e3e3e3]\$
Signatures	Print signature images used by PersonInCharge or PersonResponsible. Signatures can be set by each user on <a href="#">Settings - Client</a> page.	\$SIGNATURE_PERFORMED\$ \$SIGNATURE_APPROVED\$

## Table protocols in MS Word

Table format can be customized in three ways:

- **Keyword parameters.** ProtocolTable keyword can be modified with parameters Diagram, Header and Rows, divided by comma. All parameters are optional.

Add **Diagram** parameter to print measurement diagram with each cal point. Optionally, assign Diagram parameter with up to 3 hex colors, divided by '|' to define diagram colors for DUT specification limits, measured value and source value.

Define cell background colors with **Header** and/or **Rows** parameters. Rows parameter may hold up to 2 hex colors, divided by '|'. Second value defines interchanging row color. Omitting any of these parameters will cause WinQBase to use default table colors defined in the template document.

- **MS Word text styles** with names "ProtocolTableHeaderText" and "ProtocolTableContentText" define table header and content text format. Furthermore, Caliber 3.04 and higher supports styles in protocol notes. Any note with non-zero style inside the protocol will split the protocol table and print the note on a separate line with

"styleX" text style. F.e. Note created in Caliber with style number 7 will print using MS Word's "style7" text style. Missing styles are replaced by document's default style.

- **Caliber Report settings.** Go to Caliber > Modify > Configuration > Text Report to define column order, widths and header texts to be printed in both Plain-text and Table protocols of WinQBase. All other settings on that page like protocol footer note, symbol descriptions, decimal sign definition, etc. will also affect WinQBase output.

## Viewing the Standard List in the printing template

The Standards List is always part of the print template for calibration and will always be printed in full.

User can decide where this list appears in your report by using the keyword "StandardsList" and specifying its format in square brackets.

This format refers to a variable defined in the ConfigVars.ini file on the server. This variable determines how each line of the list will look, including links to different attributes of each record.

This way, you can customize the order, separators, or even the table row format in HTML. All keywords are wrapped in a key symbol (\$ by default).

When the print template is being created, each record is processed in order, with each one ending on a new line.

To see an example of how to define the format of the Standards List click [here](#).

## Standards List

WinQBase is able to recognize when a device is used in a calibration as a Standard, and to view the list of Standards in generated reports.

### Requirements

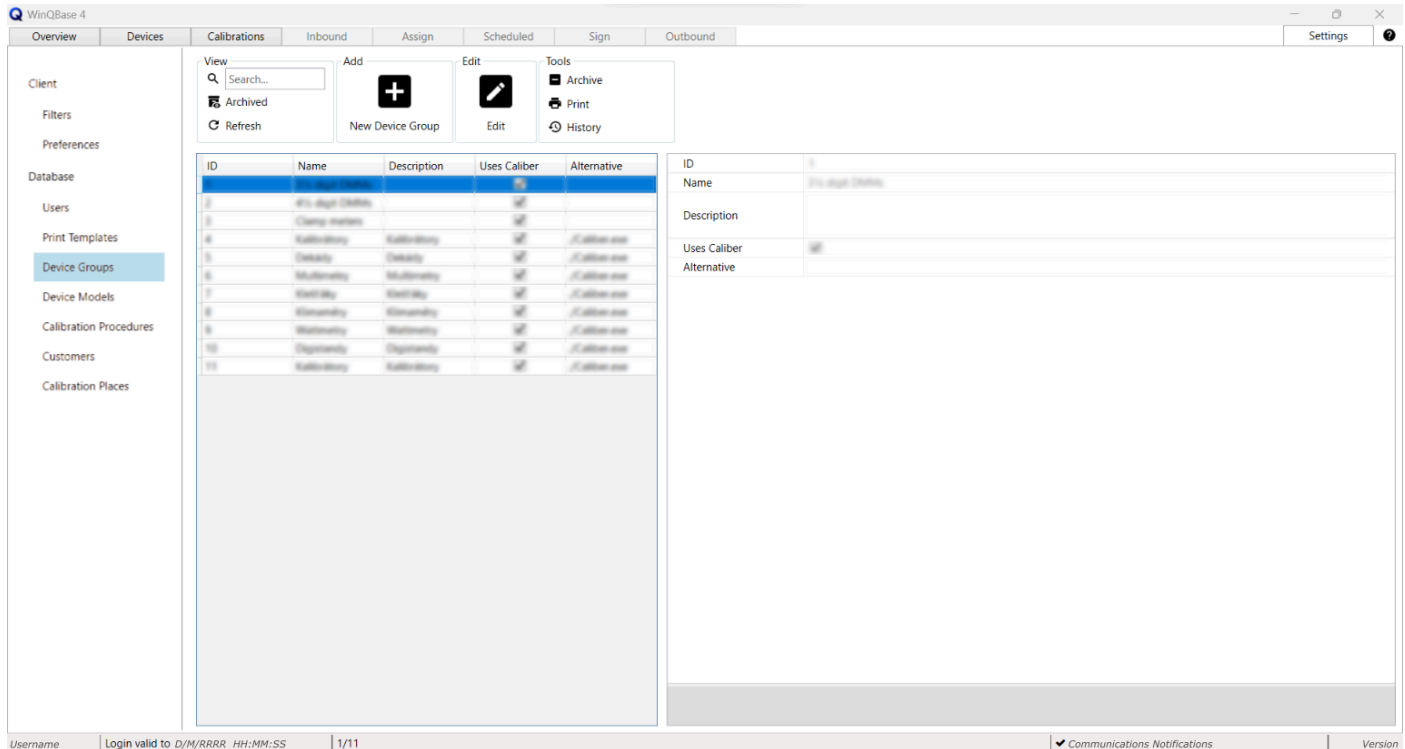
- 1.The Device has to have a CAL file assigned, and the CAL file has to contain a Serial Number. CAL file is created within Caliber in the Instrument card window, by filling in the „Calibration data“. For more info visit Help in Caliber (open Caliber and press F1), on the page „Calibration data“.
- 2.The Serial Number in the CAL file must be matching the Serial Number in WinQBase. This is done in Caliber by using „Create by Program“ or „Edit by Program“ options, within Device Models under Settings. After calibration, Serial Number in CAL file is imported to WinQBase along with the protocol, and it's being matched with the record in WinQBase.
- 3.The Device has to have a checkmark in the „Standard“ field in WQB.

# Settings - Device Groups

**Access level:** Administrator, Head of Laboratory, Calibration Technician

Devices can be sorted into Device Groups allowing users to search devices in the database more effectively.

Future development will allow use of **alternative** programs for calibrations of devices within a group and user **role** allocation based on Device Groups.



## Toolbar controls

[View](#)

[Add](#)

[Edit](#)

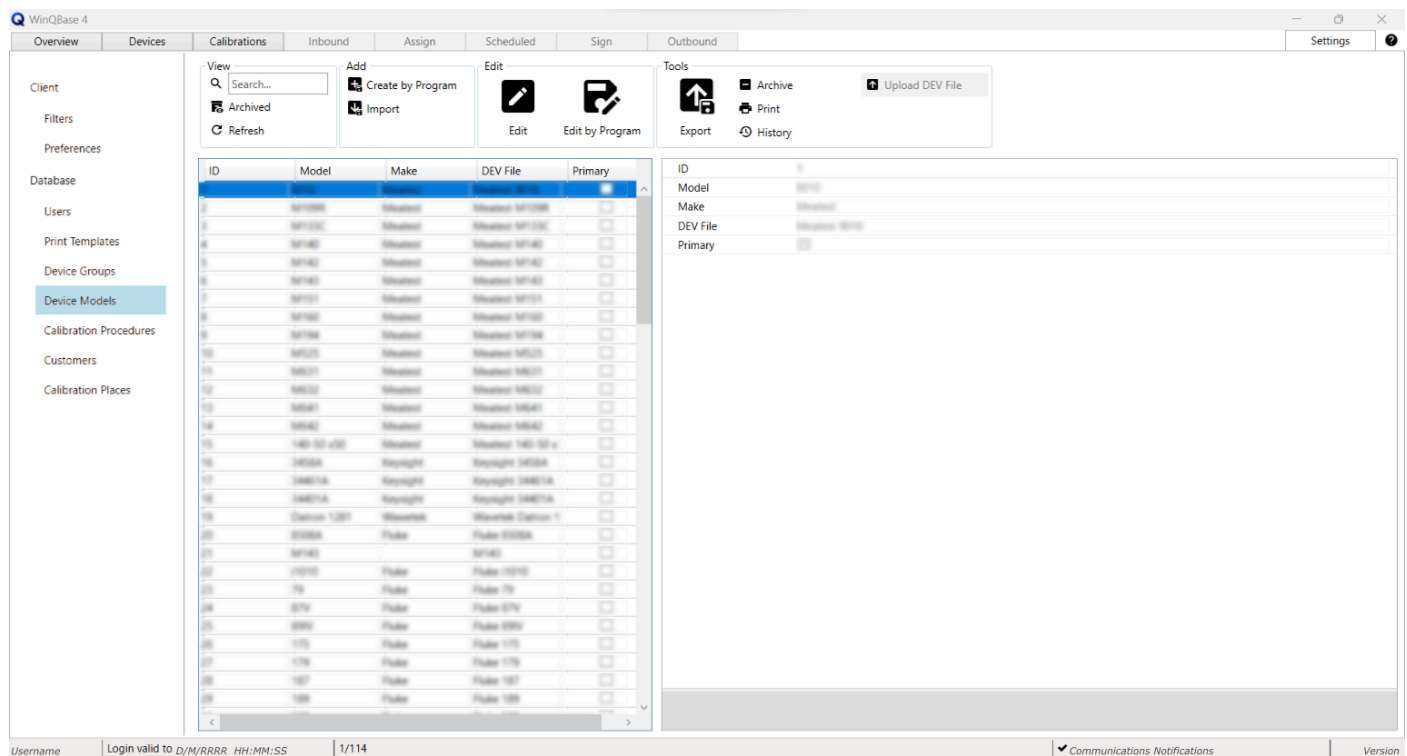
[Tools](#)

# Settings - Device Models

**Access level:** Administrator, Head of Laboratory, Calibration Technician

This page lists Device Models available to be assigned to individual devices in the database. Each record includes a link to **Caliber's** Instrument Card, ie. device driver that provides Caliber with necessary data to use the device in a calibration. In general, all tools with floppy disk icon use Caliber to perform the associated task and therefore proper setup of **Path to Caliber** on [Settings - Client](#) page is required to use them.

Caliber may use auxiliary Instrument Cards in procedures for virtual converters, alternative instrument setup, specifications, etc. Such Instrument Cards get imported into the database during procedure creation or procedure import as new Device Model records which may represent the same model as another record or may represent no device at all but are still necessary for Caliber to operate properly. For this reason, **newly created Device Models need to be marked as Primary to become assignable in Devices tab**. All other records will remain hidden and available only to Caliber.



## Toolbar controls

[View](#)

[Add](#)

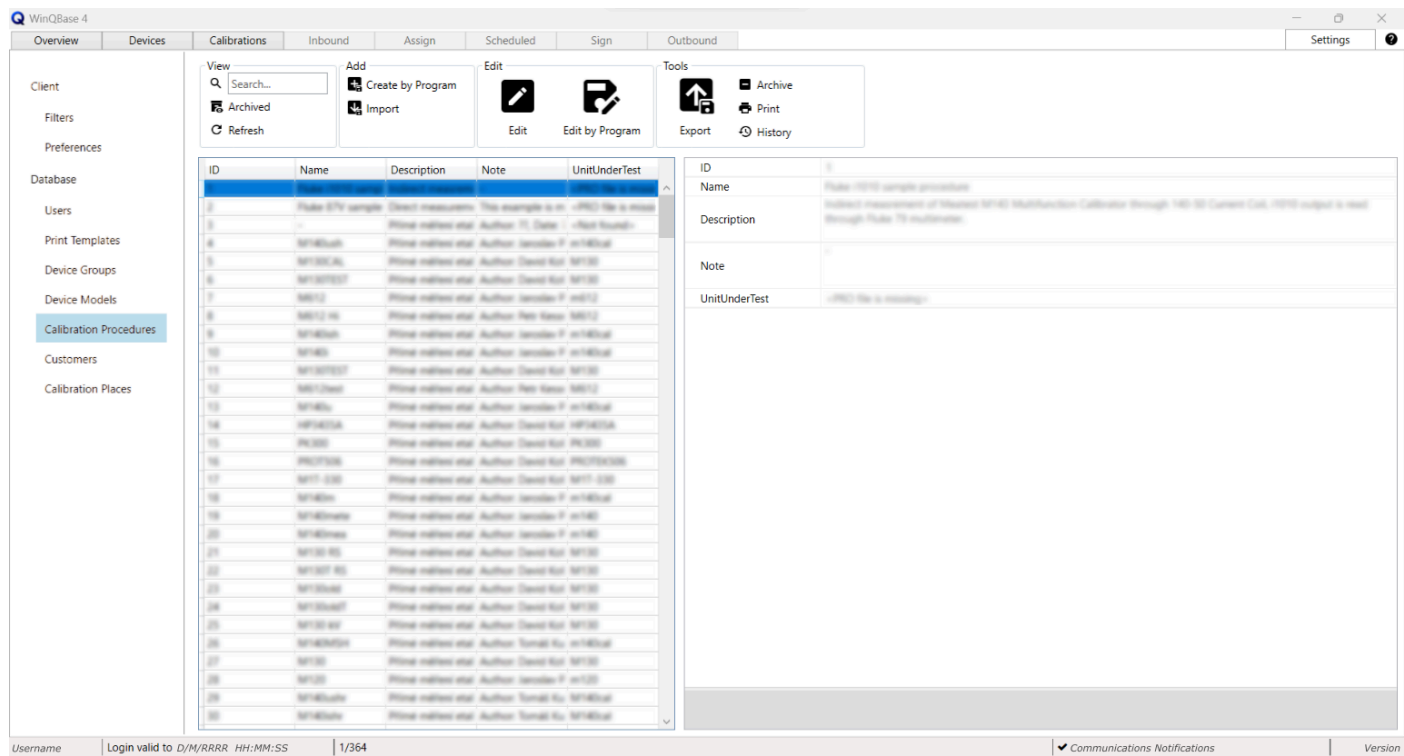
[Edit](#)

[Tools](#)

# Settings - Calibration Procedures

**Access level:** Administrator, Head of Laboratory, Calibration Technician

Manages **Caliber's** Procedures that can be used to run calibrations. All tools with floppy disk icon use Caliber to perform the associated task and therefore proper setup of **Path to Caliber** on [Settings - Client](#) page is required to use them. New Instrument Cards generated by procedure creation or import in Caliber get automatically imported into the database as new [Device Model](#) records.



## Toolbar controls

[View](#)

[Add](#)

[Edit](#)

[Tools](#)

# Settings - Customers

**Access level:** everyone

Devices in database can be linked to a Customer, whose data will be printed on all future calibration certificates. It is recommended to create one or more customer records for the calibration laboratory itself in order to distinguish between internal and external devices. Addresses of customers being based in multiple locations can be distinguished by defining **Customer Locations**.

ID	Name	Email	Contact	Billing Information
1	Customer B Co., Ltd.		Customer B Co., Ltd. 123 Main Street	
2	TESTA Group		General Policing	Brno
3	MEATEST spol. s r.o.		David Rosta	Brno
4	ZTS Elektronika s.r.o.		Ing. Bohuslav	Nová Dubnice
5	SAWSET C.A.M.L. s.r.o.		Pavel Váňa	MUROMEC
6	CHIBET AG		CHIBET AG	
7	VIOTRA		Ing. David	VIOTRA
8	VEI s.r.o.		Ing. Petr	BRNO
9	VEI s.r.o. - 2. odd.		Ing. David	
10	SCUD s.r.o.		Ing. Jan Lipavský	BLANŠKOV
11	SIC electronics		Václav Remeš	Praha
12	Barbora Apparent			Brno
13	Capitoline s.r.o.		J. Váňa	
14	ACR s.r.o.			
15	Chemie s.r.o.			
16	VEI			
17	VEI s.r.o. - 3. odd.		Petr Váňa	
18	VEI s.r.o. - 4. odd.		Jan Váňa	
19	VEI s.r.o. - 5. odd.		Ing. Váňa	
20	VEI s.r.o. - 6. odd.		Ing. Váňa	
21	VEI s.r.o. - 7. odd.		Ing. Váňa	
22	VEI s.r.o. - 8. odd.			
23	VEI s.r.o. - 9. odd.			
24	VEI s.r.o. - 10. odd.			
25	VEI s.r.o. - 11. odd.			
26	VEI s.r.o. - 12. odd.			
27	VEI s.r.o. - 13. odd.			
28	VEI s.r.o. - 14. odd.			
29	VEI s.r.o. - 15. odd.			
30	VEI s.r.o. - 16. odd.			

## Toolbar controls

[View](#)

[Add](#)

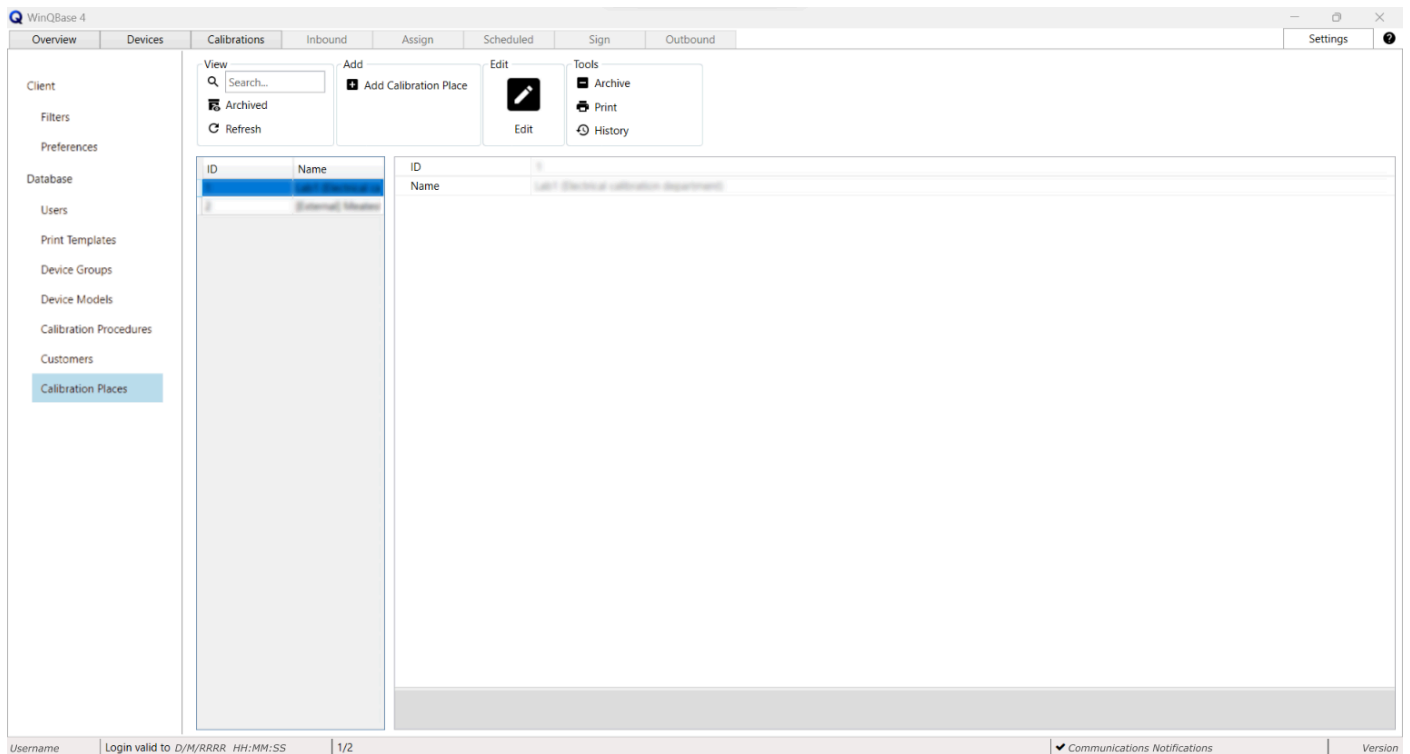
[Edit](#)

[Tools](#)

# Settings - Calibration Places

**Access level:** Administrator, Head of Laboratory, Calibration Technician, Logistics

Manages list of laboratory workplaces, teststands or locations to be later associated with **Calibrations** and printed in calibration certificates. Third party laboratories can be listed here too, allowing the user to associate external calibration certificates (imported for traceability purposes) with certain location.



## Toolbar controls

[View](#)

[Add](#)

[Edit](#)

[Tools](#)

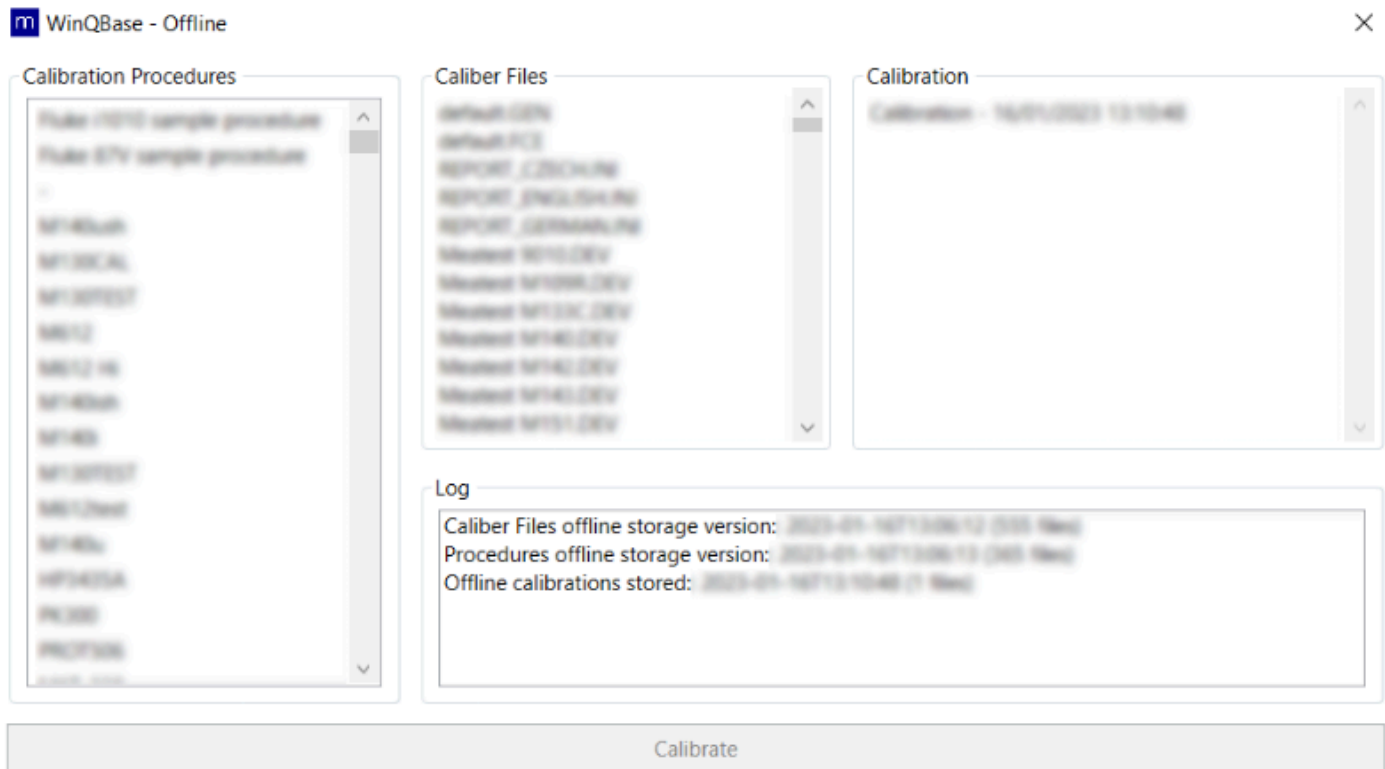


# Offline Forms

Calibration.....34

# Calibration in Offline mode

Offline mode allows the user to run calibrations in Caliber offline, using locally stored procedures and instrument cards. Offline mode requires having properly configured interface for Meatest software **Caliber** and offline data to be stored in local client app. These can be set up in online mode under **Offline storage** and **Advanced** sections of [Settings > Client](#) screen.



Offline calibration process is as follows:

1. Select procedure from the **Calibration Procedures** list.
2. Click **Calibrate** to initiate the offline calibration in **Caliber** app. Calibration record will appear in **Calibration** list once the calibration is done.
3. Next time you log in online, go Devices tab, find the associated UUT and click on **Import calibration button** to save the offline calibration into online database.
4. Finally, print the calibration certificate (online) using [Print button](#) to complete the calibration process and set the calibration record status to **Completed**.

# Controls

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  - Workplace .....39
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- Tools .....41
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# Toolbar - View group

View group tools narrow down the **List of Records** to help the user find a particular record. Devices & Calibrations can be filtered out using preselected **Filters** whereas records in Settings tab can be filtered out using **Search** query.



## Filters

Used in **Devices** & **Calibrations** tabs. Individual Filters can be toggled on and off by clicking on individual Filter buttons or deactivated all at once by clicking **Show all** button. Some filters may request additional search criteria (such as Serial Number filter asking for serial number to search the list for).

Each user can individually pick filters for their user interface at [Filters](#) page on **Settings** tab. The list of available filters there can be managed and expanded by system administrators as described [here](#).



## Search

Used in **Settings** tab only. Type in a search phrase to find all records that contain such phase in any of their text attributes.

### Tools common to both methods:



## Archived Decommissioned

Toggles visibility of archived records. Visibility of archived items is turned off by default. With visibility turned on, user may browse through both archived and active records.



## Refresh

Refreshes **List of Records** using selected filters. The list gets refreshed automatically when switching filters, the main purpose of this button is to clear the list from newly archived records.

# Toolbar - Add group

Add group tools add new records into the database.



**New Device**  
**Add Calibration Place**  
**New Device Group**  
**Add Customer**  
**Add User**  
**New Workplace**

Adds new record of given type and activates [edit mode](#), enabling user to enter individual values in **single record overview** below.

See more info on: [adding users](#) or [adding workplaces](#).



**Create by Program**

Starts external program (**Caliber** by default) to create new **Procedure** or **Instrument card** and add it into the database.



**New from This**

Clones selected record and activates [edit mode](#), enabling user to edit copied values in **single record overview** below.

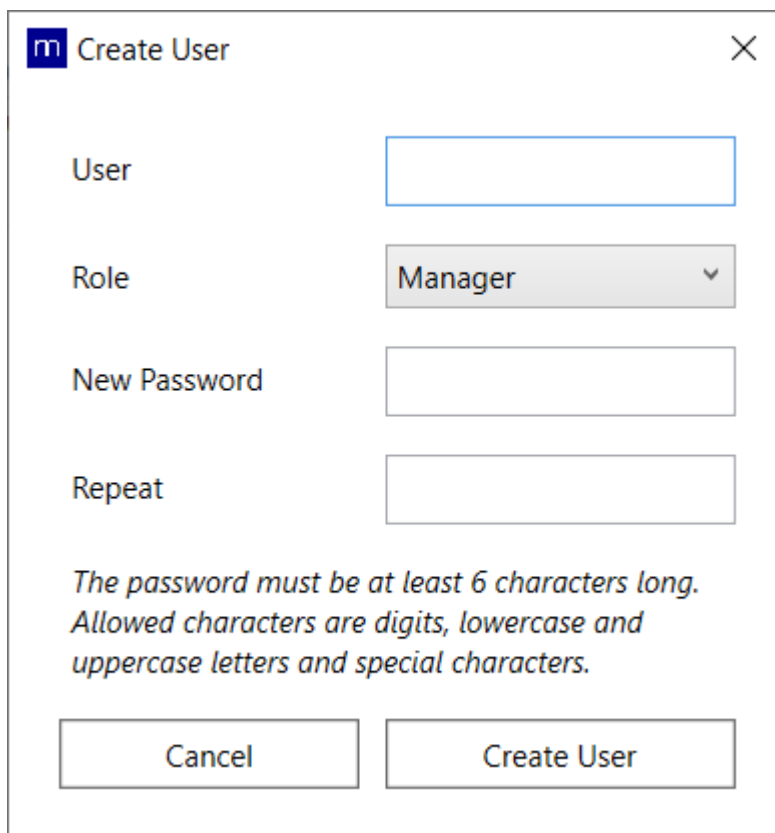


**Import**

Starts external program (**Caliber** by default) to import external **Procedure** or **Instrument card** file into the database.

# Create user

**Create user** form is used to create a new user account to access the system. A user account is defined by a login, a password and a role with access rights.



m Create User

User

Role Manager ▼

New Password

Repeat

*The password must be at least 6 characters long.  
Allowed characters are digits, lowercase and  
uppercase letters and special characters.*

The form is accessible through the **Create user** tool in the **Add** controls section, located on the parent record form.

## Create user

When a new record is created, the login (login name) of the new user is entered in the **User** field. The password is defined and verified in the **New password** and **Again** fields according to the specified criteria. The user will use these parameters when **Login**. New user's access permissions are determined by the assigned role.

The login defined when creating the user **can't be changed**. Other account attributes can be modified as needed.

# Workplace

**Workplace** form is used to manage customer workplaces maintained in the system. Such categorization enables a more efficient laboratory agenda and a clearer selection when filtering from the total set of records. Each customer always has at least one workplace defined.

m

Customer Workplaces

View

Archived

Add

Add Workplace

Edit

Edit

Tools

Archive

Print

History

ID	Name	Email	Contact	Address	Customer
1	My Chem Laboratory				My Chem Laboratory

< >

ID	1
Name	My Chem Laboratory - Location A
Email	
Contact	
Address	
Customer	My Chem Laboratory, Inc.

< >

The form is accessible through the **Workplace** tool in the [Tools](#) control section, which is located on the [Customers](#) parent form.

## Controls

View

**Add**

[Edit](#)

## Tools

## List

## Detail

# Toolbar - Edit group

Most records in WinQBase are read-only by default and can only be edited in **edit mode**. Clicking on Edit icon will activate the edit mode and allow the user to change certain entries. Once in edit mode, the edit group tools get replaced with **Save** and **Cancel** options and the rest of the toolbar, list of records and tab switch become locked, forcing the user to either save or discard changes before leaving edit mode.



## Edit

Activates edit mode (see above) and allows the user to edit entries in [single record overview](#) below the toolbar.



## Edit by program

Starts external program (**Caliber** by default) to edit associated **Procedure** or **Instrument card**.



# Toolbar - Tools group

## General tools:



### Archive Decommission

Toggles condition of the selected record to or from archived state. Archived/decommissioned records no longer appear in the [list of records](#) unless recalled using related switch in [view group](#) of the toolbar.



### History

Shows history of changes of the selected record in dedicated [History pop-up window](#).

## Printing & data export:



### Print

Prints selected record data (fe. to create a calibration certificate). See more details [here](#).



### Record File

Exports the entire content of the [list of records](#) into CSV or HTML table file. List record count affects the time needed to create the Record File so the export **may be a lengthy operation**. Avoid using this tool on long and unfiltered lists.



### Protocol File

Calibrations tab only. Exports just the calibration data (rather than all calibration data like **Print** does) from the selected calibration record. This can be useful as raw data export for further processing.



### Export

Settings - Device Cards & Calibration Procedures only. Starts external program (**Caliber** by default) to export **Procedure** or **Instrument card** from the database into a file.

## Tools specific to Settings - Server - Users:



### Delete User

Removes selected user from the database. **This action cannot be undone.**



### Reset Password

Opens pop-up window for the operator to set a new password for the selected user. Old password will no longer work once the new password is set.



### Show Activity

Opens pop-up window that shows activity of the selected user (ie. actions done inside the WinQBase system) within selected timeframe. This popup is similar to [Record History](#).

## Other tools:



### Customer Locations

Opens pop-up window where the user can manage different customer locations. Each Customer record is associated with at least one Location record. Newly added Customers get automatically associated with a default Location created from Customer data.



### Upload DEV File

For use by system administrators only. This tool restores device card record's missing link to a DEV file. DEV-less device cards can be created only through database conversion from WinQBase 3.9 or earlier. Similarly to **Import** tool, Upload DEV File starts external program (**Caliber** by default) to import external **Instrument card** file into the database and link it to selected record.

# History

**History** form is used to display the editing history of the selected record. When viewing the history, the user has the option of choosing a time window of display. It defines this using preset speed dials or by directly entering the start and end date.

History

Today

Last Week

Last Month

All

From

DD.MM.RRRR

To

DD.MM.RRRR

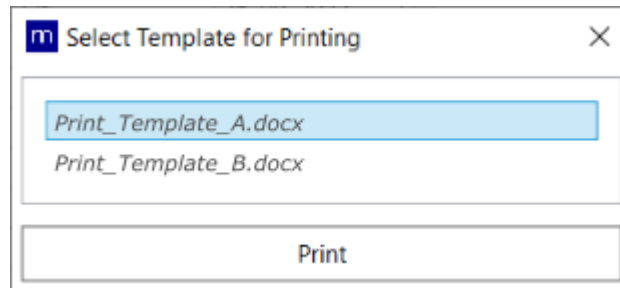
Show History

D/M/RRRR HH:MM:SS	User A	Attribute 2	=>	Value
D/M/RRRR HH:MM:SS	User C	Attribute 4	=>	Value
D/M/RRRR HH:MM:SS	User C	Attribute 1	=>	Value
D/M/RRRR HH:MM:SS	User C	Attribute 3	=>	Value
D/M/RRRR HH:MM:SS	User A	Attribute 3	=>	Value
D/M/RRRR HH:MM:SS	User B	Attribute 1	=>	Value
D/M/RRRR HH:MM:SS	User A	Attribute 2	=>	Value
D/M/RRRR HH:MM:SS	User A	Attribute 1	=>	Value
D/M/RRRR HH:MM:SS	User A	Attribute 1	=>	Value

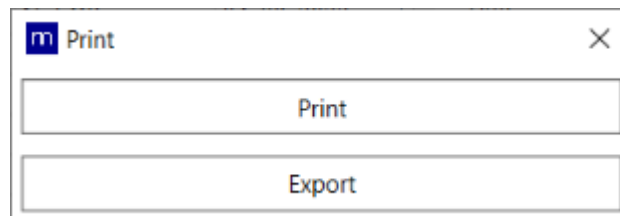
The form is accessible through **History** or **View activity** tool in the [Tools](#) control section, located on the parent record form.

# Print

**Print** form is used to specify a print for the selected record. One or more records to be printed are selected from the list on the form of the given type of records. When entering a print job, user has the option of choosing which of the print templates will be used. Management of print reports used in the system is done on the [Server](#) settings form. A description of the rules for creating or editing a template can be found [here](#).



After processing the print template, the user has the option to determine how to complete the print job by printing on the selected device or by exporting to a file.



The form is accessible through the **Print** tool in the [Tools](#) section of the controls, located on the parent record form.

## Print

The user selects the output device for printing through the standard system dialog, and then the prepared data is printed itself.

## Export

The print template is processed and then saved in the original file format on the client device. The location of the exported data is specified by the user through the file explorer dialog window.

# Toolbar - Calibration group

## Tools specific to Devices tab:

*Note: All these tools will eventually switch to Calibrations tab.*



### Calibrate

Opens pop-up window with list of available calibration procedures. Clicking on Calibrate inside the pop-up will start external program (**Caliber** by default) to run this procedure.

Once the calibration is done, WinQBase will switch to **Calibrations** tab, use the data from external program to create new calibration record, associate it with selected device and activate **Edit mode** for the user fill in additional details.



### Import Calibration

Asks the user to import either data from previously created **offline calibration** or an external calibration report in PDF, XLS, XLSX, DOC or DOCX format. WinQBase will then switch to **Calibrations** tab, prompts the user to define calibration date, use the data to create new calibration record, associate it with selected device and activate **Edit mode** for the user fill in additional details.

Import of external reports automatically sets calibration status to external and further prompts the user to input certificate ID and issue date.



### Show Calibrations

Switches to **Calibrations** tab and shows calibrations related to the selected device. This is done by filtering out all other calibrations from the **List of Records**.

## Tools specific to Calibrations tab:



### Redo Calibration

Starts external program (**Caliber** by default) to re-run selected calibration. Once the calibration ends, WinQBase will use the data from external program to create new calibration record, copy all other data from the previously selected calibration record and activate [Edit mode](#) for the user touch up any details as needed.



### Standards List

Opens pop-up window with list of standards used in selected calibration. The list can be printed in calibration report as required by ISO17025.

User may add and remove devices from current database flagged as **Standards** to/from the list using Add Standard and Remove Standard buttons in the pop-up window.

# Toolbar - Service events group

Service event tools manage failures that may impact device performance and therefore prevent the device from being used in a calibration.



## Report Failure

Opens pop-up window for the user to describe and report a new failure of the selected device. Clicking on Report Failure inside the pop-up will set the device condition to **Malfunction**, create new service event and associate it with the device.



## Mark as Repaired

Opens pop-up window for the user (repair technician) to describe the work done on the selected device in order to restore it into working condition. Clicking on Mark as Repaired inside the pop-up will set the device condition back to **Ok** and close the active service event of the device.



## History

Opens pop-up window with list of all failures associated with the selected device for the user to manage. Setting a Solved date will render the **Failure** solved and ultimately restore the **Device** condition to Ok.

## List of records

List of records shows preview of records of a given type. The list can be filtered out using predefined filters in [View](#) section of the toolbar or sorted by clicking on individual columns of the list. Selecting a record in the list will show its details in [single record overview](#) and allow the user to interact with the record through toolbar above.

ID Number	Etalon	Customer	Workplace	Owner Info	Device Group	Make	Model
402	<input type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Kullibrony	Measured	MF113C
401	<input type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Kullibrony	Measured	MF10
400	<input checked="" type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Multimetry	Measured	MF10
400	<input checked="" type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Multimetry	Measured	MF10
400	<input checked="" type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Multimetry	Measured	MF10
407	<input type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Kullibrony	Measured	MF40
406	<input type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Kullibrony	Measured	MF10
405	<input type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Kullibrony	Measured	MF113C
404	<input type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Kullibrony	Measured	MF10
403	<input type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Kullibrony	Measured	Opticon RCD
402	<input checked="" type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Multimetry	Measured	MF10
401	<input type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Delcity	Measured	MF 520
400	<input type="checkbox"/>	???	???		Kullibrony	Measured	MF10
419	<input checked="" type="checkbox"/>				Kullibrony	Measured	MF10
418	<input type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Kullibrony	Measured	MF10
417	<input type="checkbox"/>	-	-		Kullibrony	Measured	F4000
416	<input type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Kullibrony	Measured	MF10
415	<input type="checkbox"/>	-	-		Kullibrony	Measured	MF40
414	<input type="checkbox"/>	-	-		Kullibrony	Measured	MF10
413	<input type="checkbox"/>	-	-		Kullibrony	Measured	MF10
412	<input type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Kullibrony	Measured	MF113C
411	<input type="checkbox"/>	-	-		Kullibrony	Measured	MF10
410	<input type="checkbox"/>	-	-		Kullibrony	Measured	MF10
409	<input type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Kullibrony	Measured	MF113C
408	<input type="checkbox"/>	-	-		Kullibrony	Measured	MF10
407	<input type="checkbox"/>	-	-		Kullibrony	Measured	F4000
406	<input type="checkbox"/>	-	-		Kullibrony	Measured	MF10
405	<input type="checkbox"/>	-	-		Kullibrony	Measured	F4000
404	<input type="checkbox"/>	-	-		Kullibrony	Transville	1000A
403	<input type="checkbox"/>	-	-		Kullibrony	Transville	2010A
402	<input type="checkbox"/>	-	-		Kullibrony	Measured	F4000
401	<input type="checkbox"/>	-	-		Kullibrony	Measured	F4000
400	<input type="checkbox"/>	-	-		Kullibrony	Measured	F4000
400	<input type="checkbox"/>	-	-		Kullibrony	Measured	F4000
407	<input type="checkbox"/>	???	???		Delcity	Measured	M400
406	<input type="checkbox"/>	-	-		Kullibrony	Measured	F4000
405	<input type="checkbox"/>	MEATIST apt. 32	Brno	Brno	Delcity	Measured	MF 520

List is divided into pages that can be listed through using navigation panel below the list. Number of records that fit on a page is defined by **Entities per Page** on [Client](#) page of Settings tab.

## List customization

Columns in the list can be reordered, resized, added or removed to achieve optimal personalized layout. Custom layouts are saved individually for each user. Drag and drop column header to change its position. Drag column header edge or double-click the edge to resize it. Right click on column header and select either **Add columns** or **Remove column** to select which data columns will be shown in the list.

Boundary between the list and single record overview can be adjusted as well. The fewer columns there are in the list, the more space you get for the overview and vice versa.



# Single record overview

Single record overview shows all attributes of the record selected in [list of records](#). Attributes are grouped into foldable sections for clarity. Overview width can be adjusted by dragging the boundary between the overview and **list of records**. The fewer columns there are in the list, the more space you get for the overview and vice versa.

Identification

ID Number

478

Etalon

00

Customer

Workplace

Owner Info

Device Group

Calibration

Make

Meatest

Model

47800

Serial Number

710001

Status

Condition

Without valid calibration

Last Service Event

Date of Registration

06. March 2019

Warranty

Date of Decommission

Calibration

Calibration Due

06. March 2019

Last Calibration

06. March 2019

Calibration Interval

0

Calibration Cost

0

Default Procedure

1

Ostatni

Asset ID

Price

0

Note

Custom

custom attribute 2

specification

quantity

group type

interval

dynamic 1

custom text

Person responsible

interval

By default, all data in the overview are read-only and can only be edited in [edit mode](#), activated by **Add** or **Edit** tools. In edit mode, user can either pick values from dropdowns/ selectors on the right or type in custom values as appropriate.

Fields with red borders are **mandatory**. Mandatory fields have to be filled out in order to save changes done in Edit mode. The only exceptions are "Calibration Place" and "Person Responsible" items in Calibration records which can be left blank if no Calibrations Places or Persons Responsible have been defined yet. See [Users](#) and [Calibration Places](#) settings sections for more details.

System administrators may define content of certain dropdowns in [ConfigFieldValues.json](#) server configuration file.

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# Basic Information

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# System Requirements

WinQServer has the following system requirements:

- **Windows OS** (any desktop version from Windows 7 to Windows 11 or server version from Windows Server 2008 to Windows Server 2022).
- **MySQL or MSSQL** The tested versions are MySQL 8.0.28 and MSSQL 15.0.2104.1 (version 2019, build KB4518398). Newer versions should work but are not tested, with older versions you could stumble upon some issues.
- **MySQL or MSSQL database, installed on SSD drive.** Database installation is part of the installation procedure. Performance is significantly reduced when the database is installed on HDD.
- **Internet connection** for periodic online license validation & update.
- **Display resolution** minimum of 1280x1024 and recommended full HD

Setting up a VPN is recommended for remote access to the database.

# Configuration files

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# Server Configuration - Config.ini

**File:** SYSTEM\_DRIVE:/ProgramData/WinQServer/Config.ini

**Scope:** entire system

The file contains categories of properties that are used for basic configuration of application. Table below shows their definitions and values.

CATEGORY	PROPERTY	VALUE	DESCRIPTION
[Logs]	RelativePath	\Logs	Relative path (relative to location of configuration file) of folder with server's log files.
	FileTemplate	ServiceLog_{0}_{1}_{2}.txt	Pattern of log file names. Symbol {0} represents year, {1} is month, and {2} represents day.
[Database]	Server	localhost	Domain name or IP address of computer with RDBMS installed.
	Username	Username	Username to access RDBMS.
	Password	Password	Password to access RDBMS.
	Database	Database name	Name of the database in RDBMS with WinQDB modules that will be used.
[Pooling]	PoolMaximum	10	Specifies number of requests that server can handle simultaneously.
	LockTimeout	10	Maximum number of seconds that a single request can take to be serviced before it is forced to terminate.
	AutoClose	300	Defines number of seconds after slot is closed to requests if it is not in use.
[Service]	Port	8080	Number of communication port that is used for operation of service. <b>WARNING:</b> Each service that is managed in server's operating system must have its own unique port number assigned!
	Protocol	http	Type of communication protocol that is used to operate the service.

	LoginExpirationMinutes	60	Defines number of minutes after which each user's login is valid.
[Session]	SessionActivityProtectionMins	15	Number of minutes that a user is considered active even if they do not send any requests to the server.

If server have to manage more than one database, then to add new database, new **DatabaseX** and **ServiceX** categories must be created in the configuration file with the definition of its interface. Index **X** can take on values from 2 to 10. Server together with the mandatory default database service is able to manage up to 10 different databases in total. Table below shows the category definitions and values.

CATEGORY	PROPERTY	VALUE	DESCRIPTION
[DatabaseX]	Server	localhost	Domain name or IP address of computer with RDBMS installed.
	Username	Username	Username to access RDBMS.
	Password	Password	Password to access RDBMS.
	Database	Database name	Name of database in RDBMS with WinQDB modules that will be used. <b>WARNING:</b> Multiple server services must not be connected to one physical database!
[ServiceX]	Port	Port number	Number of communication port that is used for operation of service. <b>WARNING:</b> Each server service must be assigned its own unique port number (eg 8081, 8082, etc.)!
	Protocol	http	The type of communication protocol that is used to operate the service.
	LoginExpirationMinutes	60	Defines number of minutes after which each user's login is valid.

# Server Configuration - ConfigXFilters.json

**File:** SYSTEM\_DRIVE:/ProgramData/WinQServer/ConfigXFilters.json

**Scope:** entire system

ConfigXFilters.json defines **filters for Device and Calibration records**. Filters help users to search specific records or list certain records (f.e. devices past calibration due date).

All filters listed in this file show up on [Settings - Filters](#) page in client application, where each user can individually pick which filters they want to use. Newly added filters are deactivated on Settings - Filters page by default.

## Syntax

Each filter is defined by a group between '{' and '}', separated by ',' from another filter. Filter group consists of the following parameters:

FILTER GROUP	DESCRIPTION	EXAMPLE
PARAMETER		
"type"	Can be "device" or "calibration". Defines where the filter is supposed to show up.	"type": "device",
"name"	Display name for client application users.	"name": "Customer",
"join"	Used for advanced filtering using records from multiple SQL tables. Part of SQL command to be added after <b>JOIN</b> clause (including "join")s.	"join": "JOIN failure ON device_enr.id=failure.fk_device",
"sql"	Part of SQL command to be added after <b>WHERE</b> keyword. SQL commands can be fixed or further parametrized by <b>arguments</b> as defined below.	"sql": "fk_workplace = '{{Location ID}}'", with <i>Location ID</i> being f.e. 5, this filter will generate SQL command "SELECT * FROM device WHERE fk_workplace = 5"
"description"	Description for client application users.	"description": "Displays devices that belong to the customer's selected workplace.",
"arguments"	Arguments allow users to parametrize filters with their inputs. F.e. to search for a particular device based on its serial number. When user clicks on a filter with arguments in client application, a pop-up form with parameter names, inputs and descriptions will appear. Parametrized filter then activates as soon as user types in required inputs and hits OK.	"arguments": [{"name": "Serial Number", "type": "string"}],



Each argument group consists of the following parameters:

ARGUMENT GROUP PARAMETER	DESCRIPTION	EXAMPLE
"name"	Display name for client application users.	"name": "Location ID",
"type"	Argument type. Can be "string", "integer", "decimal", "boolean", "datetime" or "enum".	"type": "integer",
"description"	Description for client application users.	"description" : "workplace ID number"
"allowedValues"	<b>Enum</b> type only. List of available enum values.	"allowedValues": ["apple", "orange"],
"defaultValues"	Default value to be pre-filled in client application form.	"defaultValues": "apple",
"isArray"	Allows multiselect and defines argument as an array of values. Can be "true" or "false".	"isArray": "true",

Example of filter definition: {

```

"type": "device",

"name": "Customer",

"sql": "fk_workplace = '{{Location ID}}'",

"description": "Displays devices that belong to the customer's selected workplace.",

"arguments": [

{

"name": "Location ID",

"type": "integer",

"description" : "workplace ID number"

}

]

},

```

# Server Configuration - ConfigFieldValues.json

**File:** SYSTEM\_DRIVE:/ProgramData/WinQServer/ConfigFieldValues.json

**Scope:** database; servers running multiple databases have additional ConfigFieldValuesX.json files, one for each database

ConfigFieldValues.json defines **presets for custom items** of Device and Calibration records and "Manufacturer" item in Device records. Items listed in this file show up with dropdowns next to manual entry in client app, allowing users to pick a value from the list rather than typing values in by hand:

The screenshot shows a form with several fields. The 'Other' section is expanded, showing 'Asset ID', 'Price' (0), and 'Note' (V1 version). Below these is a 'Custom' section with a table. The table has columns for 'Custom', 'condition', 'good', and a dropdown menu. The dropdown menu is open, showing options: 'good', 'bad', and 'ugly'. The 'good' option is selected.

Custom	condition	good	good
Custom			good
			bad
			ugly

File contents can be also viewed in client application on [Settings - Parameters](#) page. See [Settings - Server](#) page in client app for list of custom items that presets can be defined for.

## Syntax

Each preset is defined by a group between '{' and '}', consisting of item name and list of associated values. Value list consists of individual values, listed between '[' and ']' and separated by ','. Preset groups are also separated by ',' from one another. Default content of ConfigFieldValues.json is as follows:

```
{
  "Name": "manufacturer",
  "Values": [
    "Chauvin Arnoux",
    "Fluke",
    "Gossen Metrawatt",
    "Keysight",
    "Keithley",
    "Meatest",
    "Wawetek",
    "Yokogawa"
  ]
},
```

# Configuration - ConfigVars.ini

**File:** SYSTEM\_DRIVE:/ProgramData/WinQServer/ConfigVars.ini

**Scope:** database; servers running multiple databases have additional ConfigVarsX.ini files, one for each database

ConfigVars.ini includes custom definitions of **Key symbol** for printing templates, **record numbering formats** for Devices and Calibrations, **standard listing formats** for calibration certificates, **password policies** defining requirements for newly created passwords and how **overall calibration result** is determined.

Record IDs cannot be changed once created so make sure to set numbering formats before adding any new items into the database.

## Syntax

Each variable needs to be defined on a separate line with format VARIABLE\_NAME=VALUE. Furthermore, Wildcards and Iterators used in numbering and standards' list formats need to be wrapped between **Key symbols** as shown under [Print Templates](#) section of client app settings. Default key symbol is dollar sign (\$). Alternative key symbol may be defined here using key\_symbol variable, f.e. "key\_symbol=#".

**ConfigVars.ini content example:**

```
calibration_list_format=CAL$DATE[yyyy-MM]$$-ID$
device_list_format=$ID$
standards_list_text=$EtalonModel$, $EtalonManufacturer$, SN: $EtalonSerialNumber$ ($CertificateID$, $CertificateDate$)
```

## Calibration and Device numbering formats

Main IDs are assigned to newly created records according to these numbering format definitions. By default, main IDs use primary database record IDs (wildcard "ID") to create a unique ID for each newly created record. Both definitions can be customized by adding characters, calibration numbering formats may use additional wildcards and iterators:

CALIBRATION		
RECORD	DESCRIPTION	EXAMPLE
WILDCARD		
USERID	Prints operator's ID number.	<b>\$USERID\$</b> prints as "5", "2",...
DATE[format]	Prints calibration date with specified "format".	<b>\$DATE[dd-MM-yyyy]\$</b> prints as "31-12-2023", "01-01-2024",...
ITERATOR[label]	Iterators can be used as an alternative to ID wildcard. Prints a number, starting with 1 and counting up with each new record. "Label" defines how often the counter gets reset to 1 with available options being "daily_label", "weekly_label", "monthly_label" and "yearly_label".	calibration format description <b>"CAL \$DATE[dd-MM-yyyy]\$\$- \$ITERATOR[daily_label]\$"</b> creates IDs like "CAL 12-03-2023-1", "CAL 12-03-2023-2", "CAL 13-03-2023-1",...

# Standards' list printing format

Include `$StandardsList[standards_list_format]$` label into your Calibration print templates to print a list of standards used in the calibration. Multiple standard list formats can be defined to handle specifics of certain template format, for example "standards\_list\_\*\*html\*\*" or "standards\_list\_\*\*text\*\*". Format definition may include the following wildcards:

STANDARD LIST WILDCARD	DESCRIPTION
<code>\$EtalonManufacturer\$</code>	Prints standard's make, f.e. "Meatest" or "Keysight".
<code>\$EtalonModel\$</code>	Prints standard's model number, f.e. "9010" or "3458A".
<code>\$EtalonSerialNumber\$</code>	Prints standard's serial number, f.e. "751461".
<code>\$CertificateID\$</code>	Prints calibration certificate number of standard's last calibration, f.e. "CAL3210"
<code>\$CertificateDate[format]\$</code>	Prints calibration date of standard's last calibration with specified "format", f.e. "20-10-2024"

## Text format example

ConfigVars.ini definition	standards_list_text=\$EtalonManufacturer\$, \$EtalonModel\$, SN: \$EtalonSerialNumber\$ (Cert. \$CertificateID\$ from \$CertificateDate\$)
Template entry	Standards used: \$StandardsList[standards_list_text]\$
Result	Standards used: Meatest, 9010, SN:751461, (Cert. 3210 from 20-10-2024) METEX, 3850D, SN:GD405459, (Cert. 3177 from 16-8-2024)

## HTML example

ConfigVars.ini definition	standards_list_html=<tr><td>\$EtalonManufacturer\$<\td><td>\$EtalonModel\$
Template entry	\$StandardsList[standards_list_html]\$
Result (text)	<tr><td>Meatest<\td><td>9010<\td><td>751461<\td><\tr> <tr><td>METEX<\td><td>3850D<\td><td>GD405459<\td><\tr>

# Custom password policy

Default password policy in WQB is for the password to have at least 6 characters. Alternative password policy can be defined using regular expression such as this one:

password\_policy\_regex = ((?=.\*[a-z])(?=.\*[A-Z])).{8,}\$

password\_policy\_description = Minimum password length is 8 characters. Password has to include both small and capital letters.

## Overall calibration result

By default, overall calibration result is PASS only if all test points are PASS too. Adding a line "treat\_uncertain\_as\_pass = true" into ConfigVars.ini will result in calibrations passing even with UNCERTAIN test points or in other words, all calibrations with no FAIL test points will be evaluated as overall PASS.

# WinQMonitor

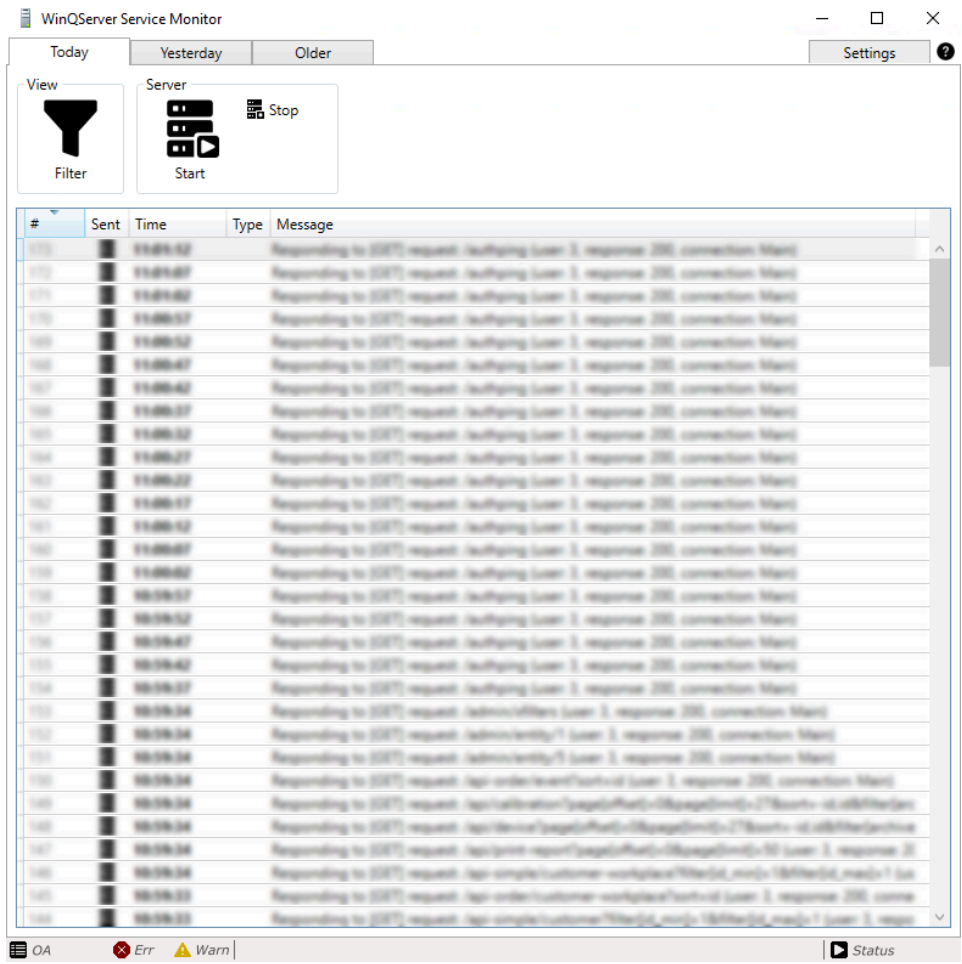
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# Forms

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# Today

**Today** form is used to preview current entries in log file of **WinQServer** server service. Each record consists of data on originator of the event, time of occurrence, type (severity level) and its brief description. It also includes a set of basic tools that serve user to control server service itself.



The form is accessible through the main menu tabs on the top bar and by default displays a complete overview of records. A defined set of control elements can be used to work with records.

The bottom information bar contains record statistics and current status of server service. The statistical indicator **OA** (overall) is total number of logged records, **Err** (Error) is number of logged records with error type, and **Warn** (Warning) is number of logged records with warning type.

## Controls

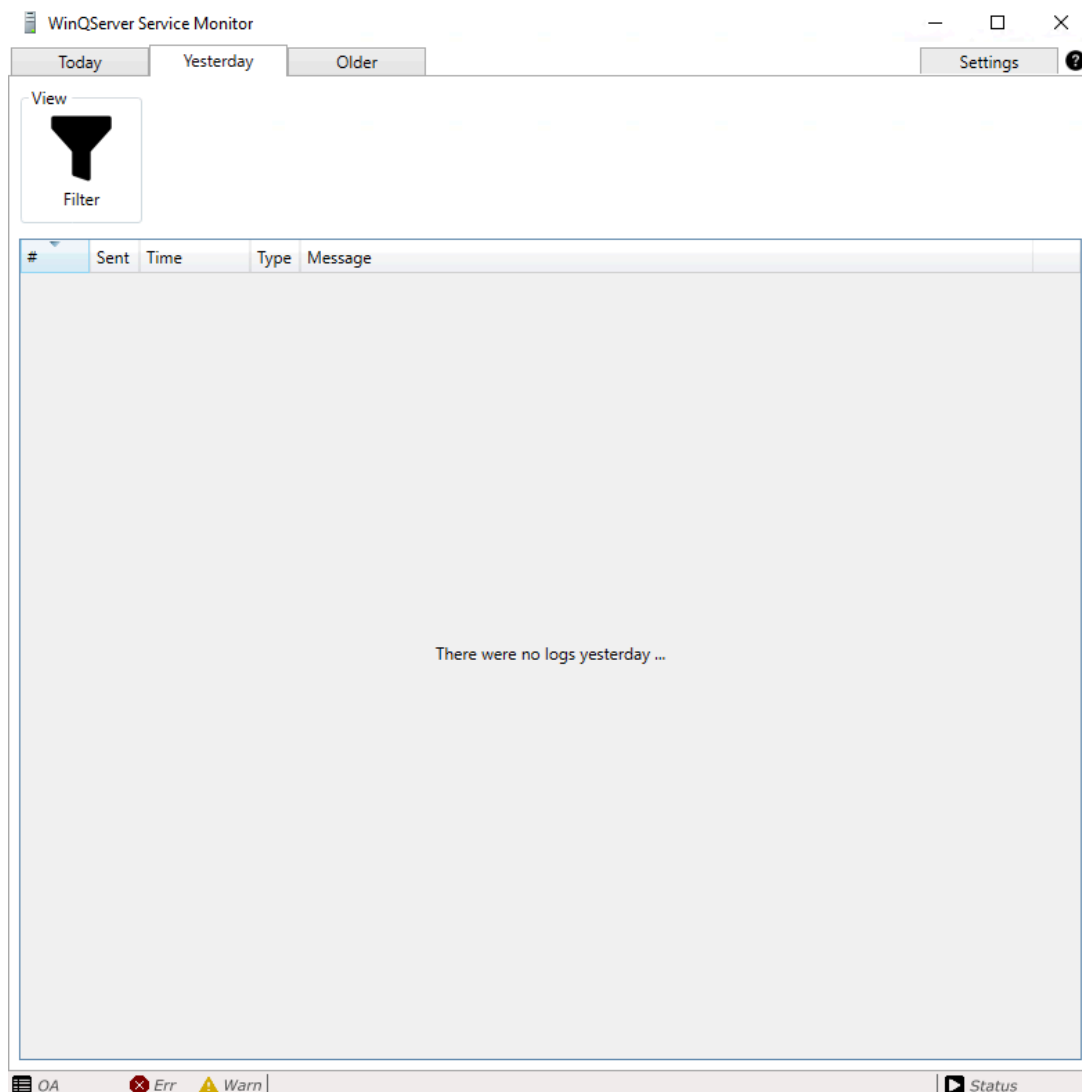
[View](#)

[Server](#)



# Yesterday

**Yesterday** form is used to preview entries in the log file of **WinQServer** server service that were recorded the previous day. Each record consists of data on originator of event, time of occurrence, type (severity level) and its brief description.



The form is accessible through the main menu tabs on the top bar and by default displays a complete overview of records. A defined set of control elements can be used to work with records.

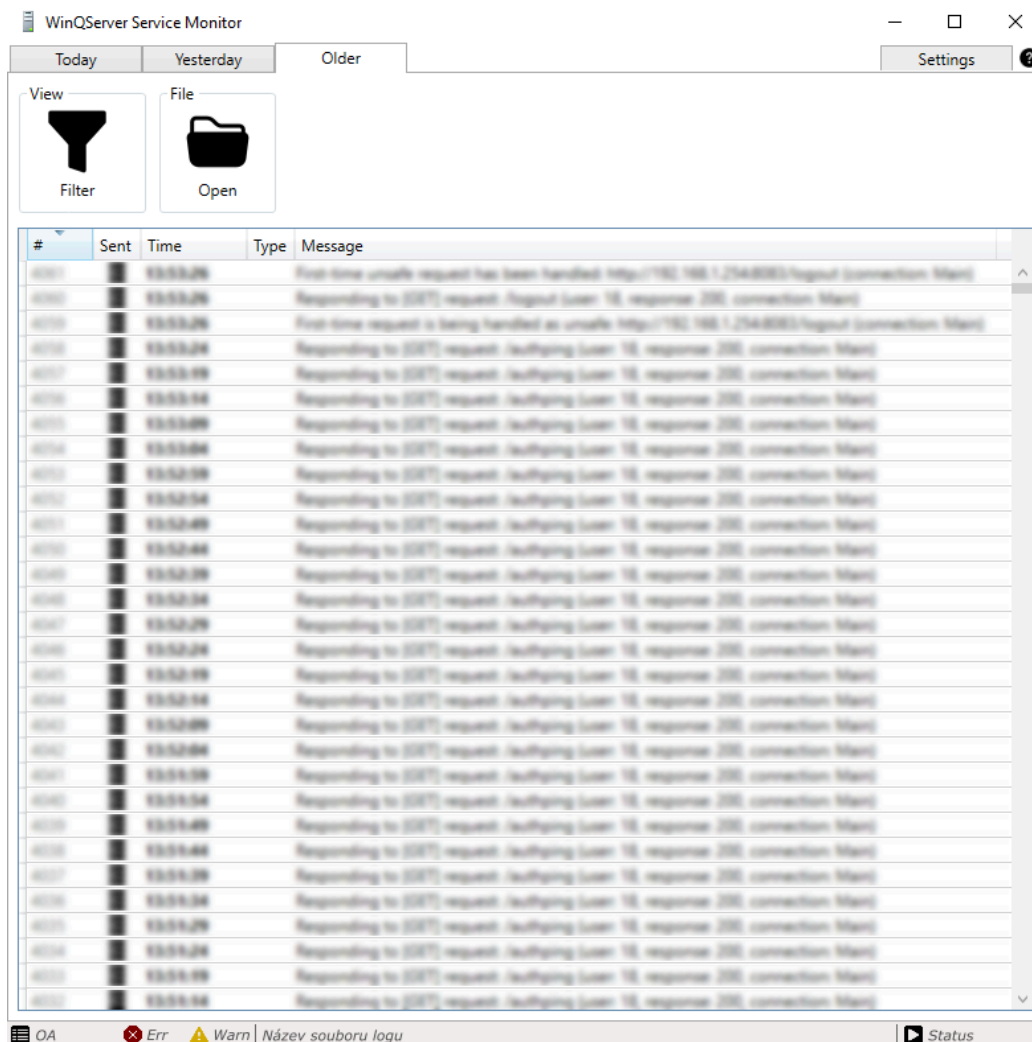
The bottom information bar contains record statistics and current status of server service. The statistical indicator **OA** (overall) is the total number of logged records, **Err** (Error) is the number of logged records with error type and **Warn** (Warning) is number of logged records with warning type.

## Controls

### [View](#)

# Older

**Older** form is used to preview past entries in the log file of the **WinQServer** server service. Each record consists of data on the originator of the event, time of occurrence, type (severity level) and its brief description. A tool for browsing and selecting from saved log files is included.



The form is accessible through the main menu tabs on the top bar and by default displays a complete overview of records. A defined set of control elements can be used to work with records.

The bottom information bar contains record statistics, name of displayed file and current status of server service. The statistical indicator **OA** (overall) is total number of logged records, **Err** (Error) is number of logged records with error type, and **Warn** (Warning) is number of logged records with warning type.

## Controls

[View](#)

[File](#)

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# Settings - General

**General** settings form is used to preview selected parameters of **WinQServer** server service, which are used for its basic [configuration](#). User can use the explorer's direct access to settings files through prepared controls.

The screenshot shows the 'WinQServer Service Monitor' application window. At the top, there are tabs for 'Today', 'Yesterday', and 'Older', and a 'Settings' button with a help icon. The left sidebar has a 'General' tab selected, with a 'Database' option below it. The main area contains a 'File' section with 'Explore' and 'Edit' buttons. Below this is a 'Logs' section with 'RelativePath' and 'FileTemplate' fields. The 'Pooling' section has 'PoolMaximum', 'LockTimeout', and 'AutoClose' fields. The 'Session' section has a 'SessionActivityProtectionMins' field. The bottom status bar shows a 'Status' button.

The form is accessible through the settings menu tabs on the sidebar and by default displays an overview of configurable parameters. **Settings** menu is accessible through the main menu tabs on the top bar. A defined set of control elements can be used to work with records.

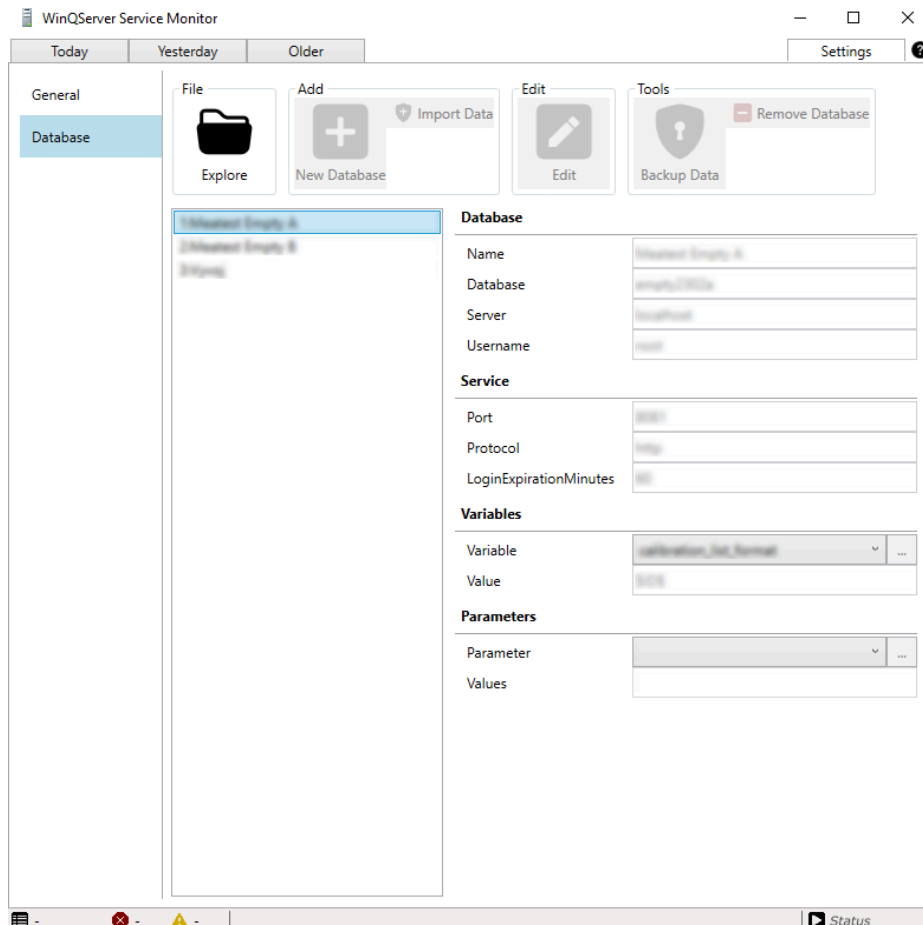
## Controls

[File](#)

**Edit**

# Settings - Database

**Database** settings form is used to preview parameters of connected databases in the **WinQServer** server service. This view contains properties from basic [configuration](#) that are related to database setup. Information from the files [variables](#) and [parameters](#) of viewed database is also attached. User can use the explorer's direct access to the settings files through the prepared controls.



The form is accessible through the settings menu tabs on the sidebar and by default displays an overview of configurable parameters. **Settings** menu is accessible through the main menu tabs on the top bar. A defined set of control elements can be used to work with records.

## Controls

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**Add**

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# Controls - View

**View** controls group groups together tools intended for filtering displayed records. It is therefore possible to effectively pre-select displayed records (from their total number) based on preset criteria.



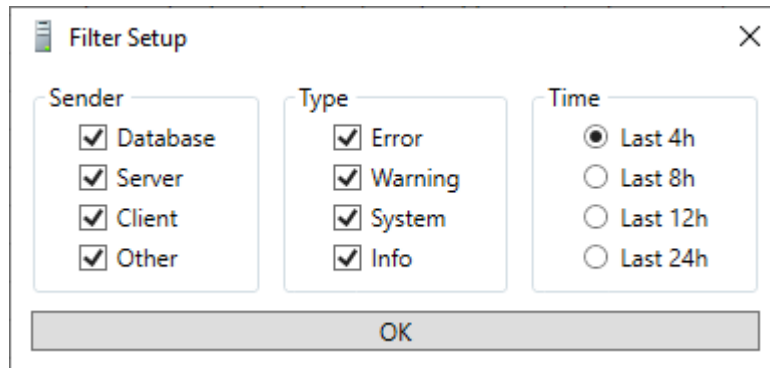
## Filter

Only records that meet the criteria set by the filter are included in the displayed set of records of the given type.

### [DETAIL](#)

# Filter setup

**Filter setup** form is used for display settings for the selected set of records. User has option to choose from event originators, types (severity level) and time window. This defines criteria that must be met for the given record to be displayed.

A screenshot of the 'Filter Setup' dialog box. The dialog has a title bar with a close button (X) in the top right corner. It contains three main sections: 'Sender', 'Type', and 'Time'. The 'Sender' section has four checked checkboxes: 'Database', 'Server', 'Client', and 'Other'. The 'Type' section has four checked checkboxes: 'Error', 'Warning', 'System', and 'Info'. The 'Time' section has four radio buttons: 'Last 4h' (selected), 'Last 8h', 'Last 12h', and 'Last 24h'. At the bottom of the dialog is a single 'OK' button.

The form is accessible through the **Filter** tool in the [View](#) controls section, located on the parent form with records.

An active display filter is indicated by a change in background graphic of the **Filter** control. By repeatedly clicking on the element, the filtering is deactivated (complete set of records is displayed).



# Controls - Server

**Server** controls group groups together tools intended for filtering displayed records. It is therefore possible to effectively pre-select displayed records (from their total number) based on preset criteria.



## Start

Starts running the installed server service **WinQServer**.



## Stop

Initiates an **immediate** stop of **WinQServer** server service.

# Controls - File

File controls group groups together tools designed to access the file system. For example you can select log files or navigate directly to folder with configuration files of **WinQServer** server service.



## Open

Opens a system dialog that allows the user to browse and select a file.



## Explore

Through operating system explorer displays contents of folder with configuration files of WinQServer **WinQServer** server service.