iba

ibaPDA

Introduction and Installation

Manual Part 1

Issue 8.13

Measurement Systems for Industry and Energy

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The content of this publication has been checked for compliance with the described hardware and software. Nevertheless, discrepancies cannot be ruled out, and we do not provide guarantee for complete conformity. However, the information furnished in this publication is updated regularly. Required corrections are contained in the following regulations or can be downloaded on the Internet.

The current version is available for download on our web site www.iba-ag.com and can be found in the iba help center docs.iba-ag.com.

Version	Date	Revision	Author	Version SW
8.13	02-2026	User management: Display names for Active Directory users	RM	8.13.0

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Contents

1   About this documentation

This documentation describes the function and application of the software

ibaPDA.

1.1   Target group and previous knowledge

This documentation is aimed at qualified professionals who are familiar with handling electrical and electronic modules as well as communication and measurement technology. A person is regarded as professional if they are capable of assessing safety and recognizing possible consequences and risks on the basis of their specialist training, knowledge and experience and knowledge of the standard regulations.

1.2   Notations

In this manual, the following notations are used:

Action	Notation
Menu command	Menu *Logic diagram*
Calling the menu command	*Step 1 – Step 2 – Step 3 – Step x* Example: Select the menu *Logic diagram – Add – New function block*.
Keys	<Key name> Example: <Alt>; <F1>
Press the keys simultaneously	<Key name> + <Key name> Example: <Alt> + <Ctrl>
Buttons	<Key name> Example: <OK>; <Cancel>
Filenames, paths	Filename, Path Example: Test.docx

1.3   Used symbols

If safety instructions or other notes are used in this manual, they mean:

Danger!

The non-observance of this safety information may result in an imminent risk of death or severe injury!

Observe the specified measures.

Warning!

The non-observance of this safety information may result in a potential risk of death or severe injury!

Observe the specified measures.

Caution!

The non-observance of this safety information may result in a potential risk of injury or material damage!

Observe the specified measures.

Note

A note specifies special requirements or actions to be observed.

Tip

Tip or example as a helpful note or insider tip to make the work a little bit easier.

Other documentation

Reference to additional documentation or further reading.

1.4   Documentation structure

This documentation fully describes the functionality of the *ibaPDA* system. It is designed both as a tutorial as well as a reference document. The sections and chapters essentially follow the procedure for configuring the system.

In addition to this documentation, you can examine the version history in the main menu, *Help – Version history* (file `versions.htm`) for the latest information about the installed version of the program. This file not only lists the bugs that have been eliminated, but also refers to extensions of the system in note form.

In addition, special "NewFeatures..." documentation comes with any software update that includes significant new features, which provides a more detailed description of the new features.

The state of the software to which the respective part of this documentation refers is listed in the revision table on page 2.

The *ibaPDA* system documentation (PDF and printed version) is divided into seven separate parts. Each part has its own section and page numbering beginning at 1, and is updated independently.

Part 1	Introduction and installation	General notes, license policy and add-ons
		Installation and program start
		User interface, system architecture, client server
		User management, printing
Part 2	I/O Manager	Basic information about the I/O Manager, general settings
		Groups and vector signals, text signals, outputs, configuration files
Part 3	Data interfaces and modules	Interfaces for the measurement data acquisition
		Standard interfaces, ibaFOB, Ethernet-based interfaces and more. For interfaces for which there are separate manuals, these are referred to.
Part 4	Expression builder	All functions for calculating virtual signals
Part 5	Data storage	Types of data recording, recording profiles, signal selection
Part 6	Data visualization	All display modes for live data, their operation and settings
Part 7	Appendix	Various additions, error listings, etc.

2 Product information

In this section you find information about the overall system as well as security aspects, the license policy, add-ons and demo mode.

2.1 Introduction

The *ibaPDA* (Process Data Acquisition) system is a PC-based system for the acquisition, recording and analysis of measured signals.

It consists of coordinated hardware and software components for the acquisition, recording, evaluation and processing of measurement data.

Thanks to the modular design and easy configuration, the system can be comfortably adapted to the most diverse tasks and is scalable in size at any time. As a result, a wide range of applications can be covered: from small systems for mobile commissioning with 64 measuring signals to large, stationary systems with several thousand signals. If a system is not sufficient on its own, multiple *ibaPDA* computers can be synchronized in the multistation mode. Similar to a flight data recorder, the *ibaPDA* system records a wide range of measurement data and stores it for long-term availability.

The recorded measurement data is saved in a measurement file continuously (24/7) or only with the occurrence of defined events. The measurement files can be up to 64 GB in size and support UTF-8 encoding (UNICODE), so that texts and signal names can also consist of Asian characters, for example. For protection of data and know-how, the measurement files can be protected with a password. Alternatively or additionally, measurement data can also be continuously recorded by means of an *ibaHD-Server*.

An essential feature of the *ibaPDA* system is the strong connectivity to automation systems and field bus technologies. An iba data acquisition system can be connected to almost any common automation system via vendor-specific special assemblies, field bus connections or Ethernet protocols, regardless of manufacturer or device generation.

There is also a wide range of high-quality analog/digital converters for discrete and time-critical signals available, which offer acquisition rates of up to 100 kHz and are connected to the *ibaPDA* computer via the proprietary ibaNet bus system.

Besides the acquisition of measurement data, *ibaPDA* also offers the possibility to output signals and calculated values. For output signals, different interfaces are available. Discrete analog and digital signals can be used for controlling or alarming via ibaNet and suitable hardware components. All configured signals are available as tags for SNMP, OPC and OPC-UA servers integrated in *ibaPDA*. Further interfaces to databases, MQTT brokers and cloud systems complete the range of functionality.

The analysis of the data recorded by *ibaPDA* is carried out with the license-free software, *ibaAnalyzer*.

The benefits of the system can be considerably extended with special add-ons, such as *ibaCapture* for signal-synchronous video recording or *ibaQPanel* for HMI-like visualization of measured values.

With *ibaPDA*, metrological solutions can be implemented regardless of sector or technology and for a wide range of applications:

- Troubleshooting

- Process data analysis

- Quality documentation

- Condition monitoring

- Fault recorder (TFR) and energy quality

- Test bench automation

- Retrofit

2.2   Safety aspect

ibaPDA is a software package that is not designed for process or plant control. Special warnings regarding risks for people and machines are therefore not required.

The signal output option of *ibaPDA* is only used for information purposes in the sense of signaling and alarms or the transmission of recorded signals without security-related effects. If output signals from *ibaPDA* are to be incorporated into a security plan, then this must be done with appropriate systems in process or plant automation.

Safety and hazard warnings for using the hardware components can be found in the corresponding documentation.

2.3   License for base software

Order no.	Product name	Description
30.770064	ibaPDA-64	64 signals, 1 client [1], 2 data storages, standard interfaces
30.770128	ibaPDA-128	128 signals, 1 client [1], 2 data storages, standard interfaces
30.770256	ibaPDA-256	256 signals, 1 client [1], 2 data storages, standard interfaces
30.770512	ibaPDA-512	512 signals, 1 client [1], 2 data storages, standard interfaces
30.771024	ibaPDA-1024	1024 signals, 1 client [1], 2 data storages, standard interfaces
30.772048	ibaPDA-2048	2048 signals, 1 client [1], 2 data storages, standard interfaces
30.774096	ibaPDA-4096	4096 signals, 1 client [1], 2 data storages, standard interfaces
30.778192	ibaPDA-8192	8192 signals, 1 client [1], 2 data storages, standard interfaces

Order no.	Product name	Description
30.779999	ibaPDA-unlimited	>8192 signals, 1 client [1], 2 data storages, standard interfaces
30.770021	ibaPDA-One-Data-Store	1 additional data store
30.770022	ibaPDA-Two-Data-Stores	2 additional data stores
30.770023	ibaPDA-Ultra-Data-Store	Max. 255 data storages with up to 20 signals each; more signals per data storage are possible but with every additional multiple of 20 or part of it the number of usable data storages decreases by 1. 1...20 signals require 1 data storage 21...40 signals require 2 data storages 41...60 signals require 3 data storages
30.770024	ibaPDA-Client	1 additional client
30.770025	ibaPDA-Multi Client	5 additional clients
30.770001	Upgrade ibaPDA-64 to 128	Increase number of signals
30.770002	Upgrade ibaPDA-128 to 256	Increase number of signals
30.770003	Upgrade ibaPDA-256 to 512	Increase number of signals
30.770004	Upgrade ibaPDA-512 to 1024	Increase number of signals
30.770005	Upgrade ibaPDA-1024 to 2048	Increase number of signals
30.770006	Upgrade ibaPDA-2048 to 4096	Increase number of signals
30.770007	Upgrade ibaPDA-4096 to 8192	Increase number of signals
30.770008	Upgrade ibaPDA-8192 to unlimited	Increase number of signals
30.770009	Upgrade PLC-Xplorer to PDA-64	Upgrade to a full-fledged ibaPDA license
30.001930	ibaPDA-Multistation-License	License for the synchronous operation of multiple ibaPDA computers

[1] One client for use on other computers included. There is another client available, which can only be used on the server computer.

2.4   Licenses for interfaces

Order no.	Product name	Description
31.000001	ibaPDA-Interface-S7-Xplorer	Single license for 16 connections, expandable by up to 14 licenses for max. 240 connections
31.000002	ibaPDA-Interface-Codesys-Xplorer	Single license for 16 connections, expandable by up to 14 licenses for max. 240 connections
31.000003	ibaPDA-Interface-AB-Xplorer	Single license for 16 connections, expandable by up to 14 licenses for max. 240 connections
31.000004	ibaPDA-Interface-Sigmatek-Xplorer	Single license for 16 connections, expandable by up to 3 licenses for max. 64 connections
31.000005	ibaPDA-Interface-TwinCAT-Xplorer	Single license for 16 connections, expandable by up to 14 licenses for max. 240 connections
31.000006	ibaPDA-Interface-B&R-Xplorer	Single license for 16 connections, expandable by up to 14 licenses for max. 240 connections
31.000007	ibaPDA-Interface-Logix-Xplorer	Single license for 16 connections, expandable by up to 14 licenses for max. 240 connections
31.000008	ibaPDA-Interface-MELSEC-Xplorer	Single license for 16 connections, expandable by up to 14 licenses for max. 240 connections
31.000009	ibaPDA-Interface-ABB-Xplorer	Single license for 16 connections, expandable by up to 14 licenses for max. 240 connections
31.000030	ibaPDA-Interface-SINAMICS-Xplorer	Access to SINAMICS Control Units Single license for 32 connections, expandable by up to 15 licenses for max. 512 connections
31.000031	ibaPDA-Interface-SIMOTION-Xplorer	Access to SIMOTION motion controllers Single license for 32 connections, expandable by up to 15 licenses for max. 512 connections
31.000033	ibaPDA-Interface-SINUMERIK-Xplorer	Access to SINUMERIK controllers (NCUs) Single license for 16 connections, expandable by up to 15 licenses for max. 256 SINUMERIK NCUs
31.000034	ibaPDA-Interface-Bachmann-Xplorer	Single license for 16 connections, expandable by up to 14 licenses for max. 240 connections

Order no.	Product name	Description
31.000035	ibaPDA-Interface-OMRON-Xplorer	Single license for 16 connections, expandable by up to 14 licenses for max. 240 connections With WIBU CodeMeter license only!
31.001005	ibaPDA-Interface-Ethernet-IP	Single license for 64 connections, expandable by up to 3 licenses for max. 256 connections
31.001006	ibaPDA-Interface-ibaNet-E	Single license for up to 16 ibaNet-E connections to foreign devices
31.001007	ibaPDA-Interface-eLumina	Single license for up to 16 connections to eLumina CCUs via ibaN-2E; expandable by up to 15 licenses for max. 256 connections
31.001009	ibaPDA-Interface-HPCi-DGM200E	Use of a DGM200E adapter device from GE
31.001010	ibaPDA-Interface-HPCi-DGM200P	Use of a DGM200P card from GE
31.001011	ibaPDA-Interface-LANDSCAN	Single license for 2 connections, expandable by up to 7 licenses for max. 16 connections
31.001012	ibaPDA-Interface-LMI-Gocator	Single license for 2 sensors, expandable by up to 7 licenses for max. 16 connections
31.001013	ibaPDA-Interface-Raytek	Single license for 2 scanners, expandable by up to 7 licenses for max. 16 connections
31.001014	ibaPDA-Interface-LAND-SPOT+	License for unlimited connections to LAND SPOT+ pyrometers
31.001015	ibaPDA-Interface-ibaLogic-TCP	Single license for 64 modules, each with 32 analog values (REAL) and 32 digital values.
31.001016	ibaPDA-Interface-Micro-Epsilon	Single license for 2 scanners, expandable by up to 7 licenses for max. 16 connections
31.001017	ibaPDA-Interface-FBGS	Single license for 4 channels, expandable by up to 63 licenses for max. 256 channels
31.001018	ibaPDA-Interface-HTTP(S)	License for unlimited connections/modules for sending HTTP(s) requests
31.001019	ibaPDA-Interface-AMEPA	License for one connection to one AMEPA sensor (TSD); expandable for up to 256 connections
31.001020	ibaPDA-Interface-Modbus-TCP-Server	Single license for 64 connections, expandable by up to 3 licenses for max. 256 connections

Order no.	Product name	Description
31.001021	ibaPDA-Interface-Modbus-Serial	Driver license to use the Modbus protocol via serial interface (Master/Slave, RTU/ASCII)
31.001022	ibaPDA-Interface-Modbus-TCP-Client	Single license for 64 connections, expandable by up to 3 licenses for max. 256 connections
31.001024	ibaPDA-Interface-Modbus-TCP-Client-16	Single license for 16 connections, expandable by up to 15 licenses for max. 256 connections
31.001025	ibaPDA-Interface-PCLink-Automax	License to use a PCLink connection via Automax DCS Network to Rockwell (Reliance).
31.001026	ibaPDA-Interface-AN-X-DCSNet	License for communication via Automax DCS Network to Rockwell (Reliance) automation systems.
31.001027	ibaPDA-Interface-CAN	License for two connections to CAN bus devices via a CAN-to-Ethernet gateway
31.001030	ibaPDA-Interface-RAW-Ethernet	License to receive IEEE 802.3 Multicast Frames on max. 4 network interfaces.
31.001040	ibaPDA-Interface-S7-TCP/UDP	Single license for 64 connections, expandable by up to 3 licenses for max. 256 connections
31.001042	ibaPDA-Interface-PLC-Xplorer	License package for all currently available PLC-Xplorer-interfaces
31.001044	ibaPDA-Interface-Drive-Xplorer	License package for all currently available Drive-Xplorer-interfaces
31.001045	ibaPDA-Interface-SCRAM-Net	License for direct access to the Reflective Memory area of the SCRAM-Net SC150 interface card
31.001046	ibaPDA-Interface-Toshiba-ADMAP JAMI1	License for communication via an ADMAP network card; access to the variables of the connected stations; Scan Transmission, ADMAP-5M
31.001047	ibaPDA-Interface-TC-net	License for communication via a Tc-net 100 PCI, TC-net 100 PCIe or TC-net 1G network card. Max. 2 cards of the same type may be used.
31.001050	ibaPDA-Interface-SIMOLINK	License for data acquisition on the SIMOLINK drive bus via bus module ibaBM-SLM

Order no.	Product name	Description
31.001051	ibaPDA-Interface-GH180-Xplorer	Access to Innomotics Perfect Harmony GH180 medium voltage drives. Single license for one (1) connection, expandable by up to 254 licenses for max. 255 connections
31.001055	ibaPDA-Interface-Sisteam-TCP	License for communication with Ingelectric automation systems
31.001056	ibaPDA-Interface-TDC-TCP/UDP	Single license for 64 connections, expandable by up to 3 licenses for max. 256 connections
31.001065	ibaPDA-Interface-VIP-TCP/UDP	Single license for 64 connections, expandable by up to 3 licenses for max. 256 connections
31.001070	ibaPDA-Interface-EGD	Single license for 64 connections, expandable by up to 3 licenses for max. 256 connections
31.001075	ibaPDA-Interface-Generic-UDP	Single license for 64 connections, expandable by up to 3 licenses for max. 256 connections
31.001076	ibaPDA-Interface-Generic-TCP	Single license for 64 connections, expandable by up to 3 licenses for max. 256 connections
31.001080	ibaPDA-Interface-GCOM	Connection to the ABB Stressometer rolls
31.001090	ibaPDA-Interface-IEC61850-Client	Single license for 64 modules, expandable by up to 3 licenses for max. 256 modules
31.001100	ibaPDA-Interface-Hitachi-MicroSigma	Single license for connection to one IKS-LM-SN1G/-SN100 device in a μΣNET-WORK-1000 network; including 32 modules with up to 4096 bytes each
31.001101	ibaPDA-Interface-Audio	Single module license for acquisition and recording of audio signals from the Windows system.
31.001111	ibaPDA-Interface-OPC-UA-Client	Single license for 16 connections, expandable by up to 15 licenses for max. 256 connections; number of signals limited to 1000 analog + 1000 digital signals per license.
31.001112	ibaPDA-Interface-MQTT	License for connecting one or more MQTT brokers in order to receive data
31.001113	ibaPDA-Interface-Oracle	Single license for 8 modules with interface to an Oracle DB, expandable by up to 3 licenses for max. 32 modules

Order no.	Product name	Description
31.001114	ibaPDA interface SQL Server	Single license for 8 modules with interface to a SQL Server DB, expandable by up to 3 licenses for max. 32 modules
31.001115	ibaPDA-Interface-PostgreSQL	Single license for 8 modules with interface to a PostgreSQL DB, expandable by up to 3 licenses for max. 32 modules
31.001116	ibaPDA-Interface-MySQL	Single license for 8 modules with interface to a MySQL DB, expandable by up to 3 licenses for max. 32 modules
31.001117	ibaPDA-Interface-SAP-HANA	Single license for 8 modules with interface to a SAP-HANA DB, expandable by up to 3 licenses for max. 32 modules
31.001220	ibaPDA-Interface-Reflective-Memory	Reflective Memory connection from GE Fanuc (formerly VMIC)
31.001350	ibaPDA-Interface-Profinet-CP	License to use the Siemens cards CP1616 or CP1626
31.001300	ibaPDA-Request-HPCi	HPCi system from GE Energy Power Conversion (formerly Converteam)
31.001302	ibaPDA-Request-HiPAC	HiPAC system from Danieli
31.001303	ibaPDA-Request-TwinCAT	Beckhoff controllers
31.001310	ibaPDA-Request-S7-DP/PN	SIMATIC S7 from Siemens via Profibus/Profinet
31.001311	ibaPDA-Request-S7-UDP	SIMATIC S7 from Siemens via Ethernet Single license for 2 Request modules, expandable by up to 127 licenses for max. 256 Request modules
31.001320	ibaPDA-Request-SD	Simadyn D from Siemens
31.001330	ibaPDA-Request-TDC	SIMATIC TDC from Siemens
31.001340	ibaPDA-Request-X-Pact	X-Pact from SMS Siemag
31.001360	ibaPDA-Request-FM458/TDC	SIMATIC TDC from Siemens with FM458 board
31.001380	ibaPDA-Request-DTBox-128	DT-Box request interface for 128 signals
31.001381	ibaPDA-Request-DTBox-1024	DT-Box request interface for 1024 signals
31.001382	ibaPDA-Request-DTBox-unlimited	DT-Box Request interface for more than 1024 signals
31.001400	ibaPDA-Interface-IEC61850-9-2	Single license for 2 streams via the IEC61850-9-2 interface, expandable by up to 3 licenses for 2 streams each

2.5   Licenses add-ons

Order no.	Product name	Description
30.670040	ibaQPanel-Add-on	License for using ibaQPanel on an ibaPDA and/or ibaHD client
30.681223	ibaInSpectra	Complete package for ibaInSpectra functions (acquisition, recording and analysis of measured vibration signals, frequency band analysis, orbit analysis); 4 modules
30.681215	ibaInCycle	Functions for monitoring and analysis of cyclical processes and rotating machines, visualization by cycle view and circle view; 4 modules
30.770026	ibaPDA-Snapshot	Feature for buffering of signal data with subsequent computation; unlimited number of modules

2.6   Licenses for special data storage

Order no.	Product name	Description
30.670141/2/3	ibaPDA-Data-Store- SAP-HA-NA-64/256/1024	Data storage in an SAP HANA DB for 64/256/1024 signals
30.670160/1/2/3	ibaPDA-Data-Store-Kafka-16/64/256/1024	Data storage in an Apache Kafka cluster for 16/64/256/1024 signals
30.670180/1/2/3	ibaPDA-Data-Store-MindSphere-16/64/256/1024	Data storage in a Siemens MindSphere Cloud for 16/64/256/1024 signals
30.671000/1/2/3	ibaPDA-Data-Store-MQTT-16/64/256/1024	Data storage to an MQTT broker for 16/64/256/1024 signals
30.671020/1/2	ibaPDA-Data-Store-Oracle-64/256/1024	Data storage in an Oracle DB for 64/256/1024 signals
30.671030/1/2	ibaPDA-Data-Store-SQL-Server-64/256/1024	Data storage in an SQL-Server DB for 64/256/1024 signals
30.671040/1/2	ibaPDA-Data-Store-PostgreSQL-64/256/1024	Data storage in a PostgreSQL DB for 64/256/1024 signals
30.671050/1/2	ibaPDA-Data-Store-MySQL-64/256/1024	Data storage in a MySQL DB for 64/256/1024 signals
30.671060/1/2	ibaPDA-Data-Store-InfluxDB-64/256/1024	Data storage in a Influx-DB for 64/256/1024 signals

2.7   Upgrade policy

Upgrades can be purchased to increase the number of signals, clients, data storages or interfaces according to the table shown above.

Starting with an *ibaPDA-PLC-Xplorer* license, the purchase of an upgrade to a full *ibaPDA* license with at least 64 signals is required if you want to use Add-ons or other interfaces such as *ibaFOB*-cards etc.

2.8   Update policy

For *ibaPDA* our conditions for software maintenance and support apply.

In the first two years after purchasing the software, you can use the software maintenance and support services free of charge. After that, a maintenance contract with an annual fee is required.

Once a licensed software has been purchased it can be used thoroughly and independently from the software maintenance and support services!

Just the update of the used software towards a newer version is unacceptable without maintenance service fee.

If and to what extend the license extensions of your system affect the maintenance service fee can be learned usually from our offers.

Alternatively, you can contact our service and support team.

You can check the validity period for free updates and support services of your license wherever the license information for your dongle is displayed:

■   *ibaPDA* I/O Manager: *General* tab - *Settings* node

■   *ibaPDA* service status

■   *ibaDongle viewer* (Marx Dongles only)

EUP date
In these programs you'll find the "EUP date". This date is set with purchase of an applicable software license (date of purchase + 2 years) and will be adapted with each extension of the update period (maintenance contract). It determines the end of the period for free updates. All major versions of a software, which had been and still will be released prior to this EUP date can be installed, including the associated bugfix versions. Relevant for this is not the date of installation but the release date of the software version.

Hence, you can still install updates after the EUP date, as long as versions are involved which had been released before the EUP date.

Required EUP date
In order to control the installation procedure there is the "required EUP date" which is hard coded in the software. Practically, this date corresponds to the production or release date of a major version of the software. The "required EUP date" is only visible in the dialogs of the corresponding software (*ibaPDA*, *ibaHD-Server*, *ibaCapture*), not in *ibaDongle-Viewer*.

During the installation, the "required EUP date" and the "EUP date" set in the dongle or in the soft license are compared in order to check if the installation is still permissable. You can find the EUP date of your software product e.g. in the status app.
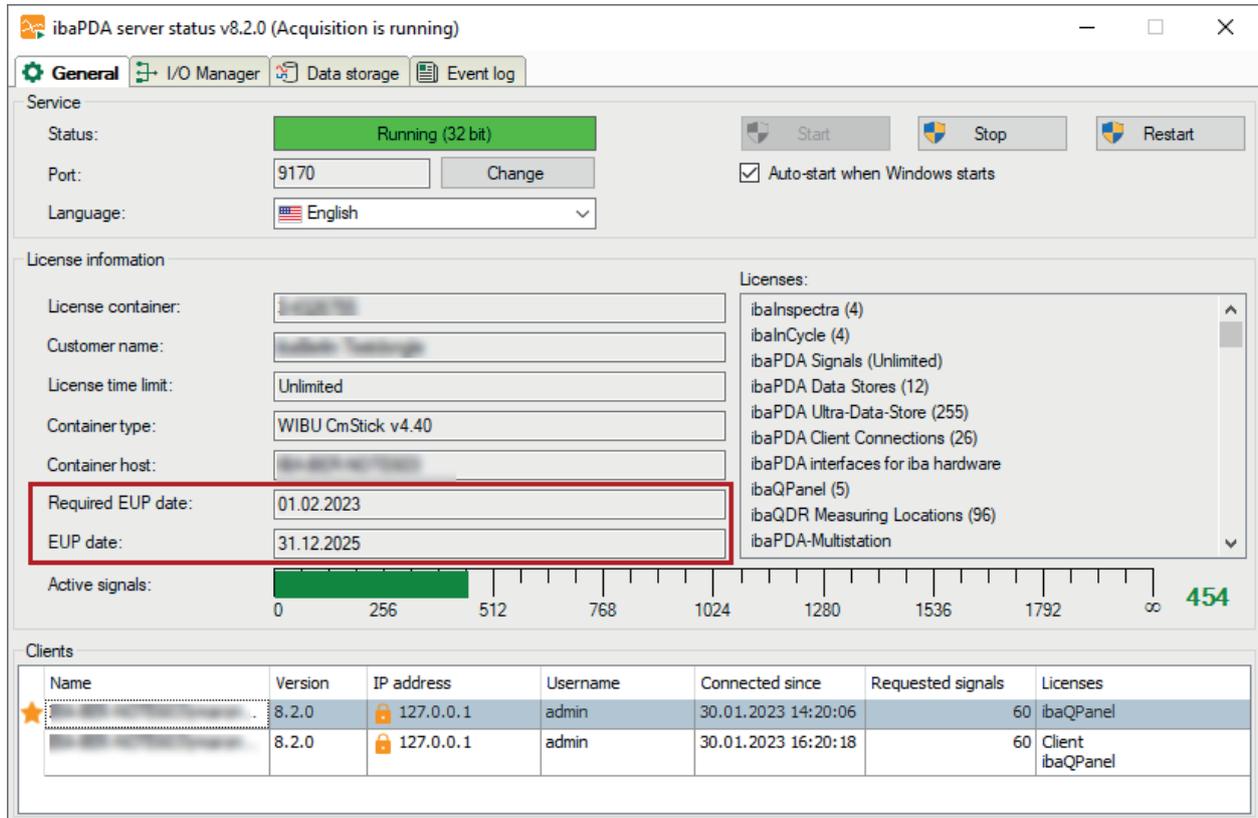
If the "Required EUP date" is before the "EUP date," then you still have update protection and can use the support.

If the "Required EUP date" is later than the "EUP date", then the software version in question had been released outside of your update period and must not be installed.

You will be advised to this fact by the installation wizard. In this case, abort the installation and contact the iba support desk.

In the course of installation of *ibaPDA* you have the option in the installation wizard (step "EUP information") to search for available license updates. This facilitates the task in case you already have a DongleUpgrade available.

For further information, please see ⬈ *Standard installation, page 25*.

2.9   Demo mode

*ibaPDA* supports a demo mode.

If no dongle is inserted, *ibaPDA* automatically switches to demo mode.

Only 2 types of interfaces are allowed in demo mode:

- Playback, for more information see Part 3, *Playback*

- Virtual, for more information see Part 3, *Virtual*

Up to 1024 signals are allowed. Data storage is disabled.

The switch to demo mode is displayed when validating the configuration.
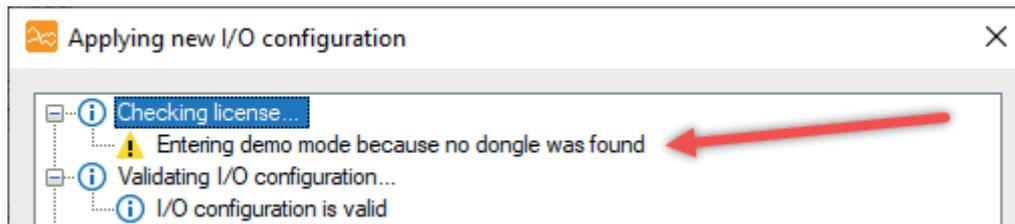
This mode is suitable, in principle, to gain an impression of the system or to become familiar with the basic functions.

Note

If you have used *ibaPDA* based on a demo license the switch-over to demo mode does not work after the demo license expired.

If you want to continue using the software without another demo license then close the program, unplug the license container (dongle) and restart the program.

If you use a soft license, the license needs to be re-hosted in the *CodeMeter License Central WebDepot*.

You'll find detailed information about re-hosting licenses in the "WIBU CodeMeter for iba users" manual, in chapters *Re-hosting licenses* (with internet connection) or *Re-hosting licenses file-based* (without internet connection). Alternatively, you can find this information in the iba Help center:

Re-hosting licenses or Re-hosting licenses file-based

2.10   Demo licenses

For testing license-dependent functions or interfaces that are not activated on the dongle or soft license on an existing system, an option is available to provide individual functions for demonstration purposes with a limited useful life.

Users can therefore equip their existing system with new features and test them. Once the test time has elapsed, the function in question is disabled but the rest of the system continues to operate according to the original license time limit.

The functions that are enabled with a demo license are colored and identified with the addition of "(DEMO)" in the license options in the I/O Manager, *General* tab, *Settings* node. The remaining time for (all) demo licenses is displayed in the license time limit field. The following figure shows an example of a demo license for the *ibaPDA-Interface-EGD*.
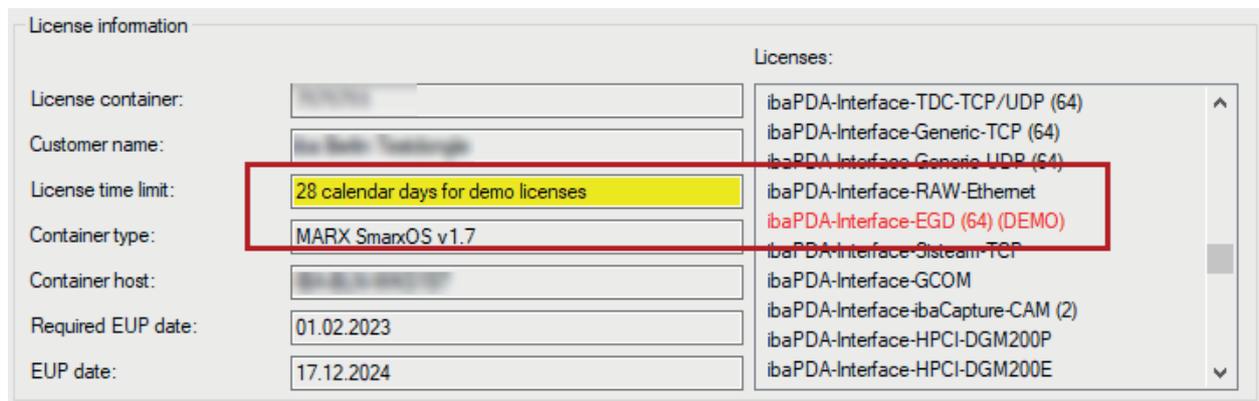
The same information is displayed as in the server status program.

When you open the module of a demo license in the I/O Manager, the demo status is also indicated here by a yellow header bar and the word, "DEMO".
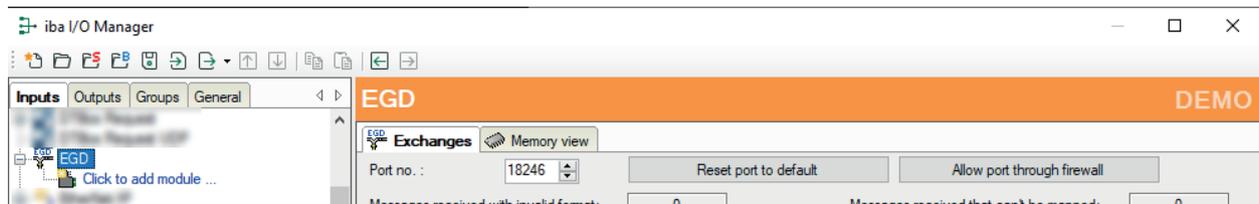
3   Installation and program start

This chapter provides information about the system requirements, the installation and about starting the program.

3.1   System requirements

Software

■ Operating system: Windows 10 (x86/x64) version 1607 or higher, Windows 11 (x64), Windows Server 2016 (x64), Windows Server 2019 (x64), Windows Server 2022 (x64) or Windows Server 2025 (x64)

■ .NET Framework v4.8 or higher

Note

| | Since v8.0.0 of *ibaPDA* the operating systems Windows 7 and Windows Server 2008 R are not supported anymore. Since v8.9.0 the installation of *ibaPDA* with these operating systems is not possible anymore. |

Further pre-requisites and compatibility conditions can be found in the file `versions_pda.htm` which is part of the data storage medium "iba Software & Manuals" or of the download ZIP file. The following figure shows an example of this file.

Open this file in your Web browser and click on the header *Version compatibility.* Besides information about the current program version you can find a history, too.

Some older PC-cards made by iba as well as by other manufacturers are not supported by the x64 version anymore. You can find a listing of those cards in this file as well.

ibaPDA

Version history	Version compatibility	
Current version		
Version	**Operating system**	**Requirements**
	Windows 8.1 (x86/x64)	.NET Framework 4.8
	Windows 10 (x86/x64)	Version 1607 or later .NET Framework 4.8 (integrated in OS in version 1903 and later)
	Windows 11 (x64)	.NET Framework 4.8 (integrated in OS)
	Windows Server 2012 (x64)	.NET Framework 4.8
	Windows Server 2012 R2 (x64)	.NET Framework 4.8
	Windows Server 2016 (x64)	.NET Framework 4.8
	Windows Server 2019 (x64)	.NET Framework 4.8
	Windows Server 2022 (x64)	.NET Framework 4.8 (integrated in OS)
Supported hardware		**Remarks**
License		WIBU CmStick or CmActLicense MARX dongle
ibaFOB-D, ibaFOB-Dexp, ibaFOB-io-ExpressCard, ibaFOB-io-USB, ibaFOB-SD, ibaFOB-SDe, ibaFOB-TDC, ibaFOB-TDCe, ibaCom-L2B, VMIC-5565, VMIC-5576, DGM200P, CP1616, CP1626, PC Link SST 5136-RE2-PCI		Supported on both x86 and x64 OS

Tip

You can also get this overview in the *ibaPDA* program under menu *Help – Version History*.

Hardware

■   PC, Multicore CPU 2 GHz, 8 GB RAM, 512 GB HDD (program needs approx. 3.5 GB)

Virtual machines

The use of iba software in virtualized Windows systems is basically possible if no special PCI or PCIe cards are needed and slight response delays can be tolerated. Thus, the operation of *ibaPDA* using Ethernet-based interfaces (TCP/IP, UDP, etc.) in a virtual environment is possible.

It is not permitted to operate iba cards (*ibaFOB-D*, *-Dexp*, *-SD*, *-TDC*, etc.) in virtualized environments.

The provision of the licenses stored on an USB-dongle can be granted by use of a so called dongle server which can be purchased from iba AG. Alternatively, licensing can also be done via a soft license. If necessary, speak with your respective iba representative or iba Support.

The selection and adaption of the virtualization layer (e.g. VMWare, Microsoft HyperV, Citrix, XEN, Oracle etc.) and/or the use of hardware interfaces via I/O pass through are not in the responsibility of iba AG.

Note

Further specific system pre-requisites, e.g. for special interfaces, can be found in the respective chapters and manuals.

3.2   Installation

You can install the software either by using the installation wizard or by using the command line.

3.2.1   Standard installation

If an older version of *ibaPDA* is already installed, you can simply install the new one. The older version of the program is automatically removed after a prompt and confirmation. The settings and configurations chosen with the older version are preserved.

If you have a ZIP file of the new *ibaPDA* version (e.g., after a download), unzip it into a (temporary) folder of your choice.

You will find the file in the `...\01_iba_Software\ibaPDA`" directory of the "iba Software & Manuals" data medium.

Execute the `ibaPDASetup_v8.exe` file, e.g., by double-clicking on the filename in Windows Explorer. Follow the instructions of the installation wizard.

1. Accept the license agreement.

2. Select the installation folder. (on first installation only)

3. Select the components to be installed:

■ ibaPDA Client
The client component must always be installed unless there is another computer in the network on which a client is installed and which has access to the local computer. Without a client, the server cannot be configured and signals cannot be viewed online. A local installation of the client on the server PC is recommended for being independent from the network.

■ ibaPDA ActiveX Control
You only need to select this component if, on the computer, *ibaPDA* is to be embedded as an ActiveX control in another application, like in an HMI application. See part 7, chapter *Setting up the ibaPDA client as an ActiveX control*.

■ ibaPDA Server
The server component must be installed if the measurement data is physically acquired and processed with the relevant computer locally.

▪ ibaFOB-D network card
This option is enabled for the server installation by default. The *ibaFOB-D* network drivers are required if the 32Mbit Flex protocol is to be used to connect to iba peripheral devices. Communication to the devices is carried out with an Ethernet protocol via the ibaNet fiber-optic connection. If you do not use *ibaFOB-D* cards or the 32 Mbit-Flex protocol, you can disable the installation of this driver. The drivers can be installed at any time. Note Hardware such as *ibaFOB*-cards is not supported by an *ibaPDA-PLC-Xplorer* license. The installation of the card drivers is not required but won't harm either.

▪ Driver for iba-external hardware
This option is enabled for the server installation by default. *ibaPDA* provides the driver for a number of external PC cards, such as reflective memory or DGM200P. If you are not using external cards, then you can disable the installation of this driver. The drivers can

be installed at any time. Note: Hardware such as ibaFOB-cards is not supported by an *ibaPDA-PLC-Xplorer* license. The installation of the card drivers is not required but won't harm either.

■ ibaPDA-S7-Xplorer proxy
You only need to select this component if you want to access a SIMATIC CPU with the S7-Xplorer interface by PC/CP without STEP 7 or SIMATIC Net being installed on the *ibaPDA* computer. For more information about this, Part 7, *ibaPDA-S7-Xplorer Proxy for PC/CP interface*.

■ ibaDongleViewer
This is not a component of *ibaPDA*, but rather a separate tool you can use to easily query the data of the license dongle (Marx Dongle only, no WIBU Dongle). It is offered for installation for all iba programs, is optional and only needs to be installed on a computer once.

■ ibaManagementStudio Agent
If there is an *ibaManagementStudio* server available in the network you can manage this *ibaPDA* installation by *ibaManagementStudio*. Therefore, you have to enable this option in order to install the *ibaManagementStudio* agent. If this program is already installed on your computer you can disable this option.

4. Check the EUP information. The EUP date should be in the future (green). In case you are still using an USB-dongle of "Marx CryptoBox Smarx" type and if a DongleUpgrade for this license is available you may enable the option "Search for license updates". If you enable this option and click on <Next>, the dialog of the ibaLicenseUpdater opens. Enter or browse the path where the DongleUpgrade files are stored. If a DongleUpgrade for this license is available in the path, first the DongleUpgrade process gets started before the installation continues. This setting (checkmark and path) will be stored and applied to upcoming installations.

5. If you are using the software "WIBU Codemeter Runtime" for licensing, the installer verifies the version of this software. If its version is outdated the installer offers to update this software. Please note, that other iba applications may use this software for licensing as well and be subject to stop and restart in the course of updating. If you you don't want to update the software at this point, just uncheck this option.

6. In the next step select further actions if needed.

7. Select the user account (on first installation only).
Use the user account to determine the user rights for the service process. To function properly, *ibaPDA* requires administrator rights, regardless of which user you choose. The default account is the local system account.

■ Local system account (default)
The local system account has administrator rights for the local computer. This is sufficient if the server only requires local access.

■ This user account
Select this option if you want to run the *ibaPDA* service (server) under a specific user account. Possible reasons for this are e.g. IT security aspects or the use of the OPC DA server.

8. Select the mode the program should be executed in (on first installation only).
ibaPDA (server) can run in 64-bit-mode or 32-bit-mode. A few functions are not available in

64-bit-mode. Consider the notes in the dialog in order to select the correct mode. This option is offered only for the first or a new installation. In case of updates the same mode like for the previous installation will be used.

9. Click <Next>. The installation process starts and the drivers are installed.

10. Then click <Finish> in order to finish the installation.

Note on installation of CodeMeter Runtime
iba software products use the WIBU licensing system to license certain features. The WIBU license containers are managed by the CodeMeter Runtime software which must be installed on the respective computer.

When installing the iba software the installer checks for existing CodeMeter Runtime installation and timeliness of version.

Along with an interactive installation (standard installation) a dialog opens which you can use to prevent or postpone the installation of CodeMeter Runtime. In case an update is offered, you have the option to prevent stopping other iba programs. This is relevant if other iba programs already use CodeMeter Runtime.

Along with a "silent" installation started by commandline, CodeMeter Runtime is only installed, if no previous installation exists. In such case, no running program on this computer uses this software. Updates of CodeMeter Runtime will not be initiated at all in "silent" mode.

3.2.2   Installing by command line

The installation of *ibaPDA* can also be started via a command line. This is help for the central software administration or when using deployment systems.

The installation process can also occur in so-called 'silent mode' so that the interaction with the user (clicking the <Next> button in the installation wizard) is omitted.

You can control how the installation is to go and which components are to be installed with the command line switches, which are set after calling up the installation program.

Notation (case-insensitive):

```
ibaPdaSetup_v8.x.y.exe [/HELP] [/SILENT | /VERYSILENT | /COMPO-
NENTS=xx,yy,...]
```

3.2.2.1   /HELP command line switch

This switch shows a message box containing all supported command line parameters.

3.2.2.2   /SILENT command line switch

This switch installs *ibaPDA* in "silent mode", i.e., interaction is not required during installation. All installer pages are skipped except the *Installing* page showing the installation progress.

The installer runs without specifying additional parameters, as if <Next> were always pressed in the dialog. In the case of a fresh installation, the program components are installed from the default settings (client + ActiveX + server including FOB-D drivers and third-party drivers + Dong-leViewer). The S7-Xplorer proxy is not installed. In the case of an installation update, the selected program components remain the same as the previous installation.

The selection of the execution mode (see standard installation step 8) in a silent installation is handled as follows. When installing for the first time, the 64-bit-mode is selected on an x64-system and the 32-bit-mode on an x86-system by default. When installing updates the same mode as of the previous installation is selected.

Combine this switch with /SUPPRESSMSGBOXES, in order to prevent message boxes popping up.

3.2.2.3   /VERYSILENT command line switch

Works like /SILENT, but nothing is shown.

Combination with /SUPPRESSMSGBOXES is recommended.

3.2.2.4   /SUPPRESSMSGBOXES command line switch

This switch prevents message boxes popping up. Always use in combination with /SILENT or / VERYSILENT.

3.2.2.5   /Dir= command line switch

This switch sets the installation directory.

Example:

`ibaPdaSetup_v8.4.0.exe /Dir=c:\programfiles\iba\ibaPDA`

3.2.2.6   /COMPONENTS= command line switch

Add the names of the components to be installed right after the equal sign in a comma-separated list. Only the components specified in the list will be installed.

Following components are permitted:

- ibaPDAClient

- ibaPDAActiveXControl

- ibaPDAServer

- ibaPDAServer\ibaFOBNetwork

- ibaPDAServer\NonIbaHW

- ibaPDAS7XplorerProxy

- ibaDongleViewer

- ibaManagementStudioAgent

Example:

`ibaPdaSetup_v8.4.0.exe /COMPONENTS=ibaPDAClient,ibaPDAServer`

This will install *ibaPDA* client and *ibaPDA* server.

3.2.2.7   /FORCECLIENTCLOSE command line switch

When updating an *ibaPDA* installation, the previous version is uninstalled first. When uninstalling the old version, the installer checks for open *ibaPDA* clients at this time. In the course of a standard installation, a dialog pops up in this case requesting the manual termination of the client. In the course of a "Silent mode" installation, the installation will be interrupted without notice.

This switch allows to terminate an eventually open client automatically along with the installation. This may cause the loss of configuration changes of the client, which have not yet been saved. You may use this switch in scripts facilitating the automatic installation of new *ibaPDA* versions.

The switch can be combined with other switches, e.g.:

`ibaPDASetup_v8.5.0.exe /SILENT /FORCECLIENTCLOSE`

3.2.2.8   /LOG, /LOG='filename' command line switch

This switch activates a logging function for the installation.

Alle steps and events in the course of installation will be logged in a file, which is stored in the user's TEMP folder, if you only use /LOG.

You can determine the storage location of the log file by specifying full path and filename with the switch /LOG='filename', where 'filename' should be replaced by path and filename.

Example:

`ibaPdaSetup_v8.6.0.exe /LOG=C:\iba\logs\MyInstallerLog.txt`

3.2.2.9   /TASKS= command line switch

Use this switch to determine whether a desktop icon should be created after installation or not.

Example:

With desktop icon: `ibaPdaSetup_v8.4.0.exe /TASKS=desktopicon`

Without desktop icon: `ibaPdaSetup_v8.4.0.exe /TASKS=nodesktopicon`

3.3   Version alignment of ibaPDA-server and ibaPDA-Client

An *ibaPDA*-Client can establish a connection to an *ibaPDA*-Server of a different version without difficulty.

If the client version does not support features of a more recent server version, the use of these features is not possible or restricted. For instance, the I/O configuration or the data storage configuration may be opened in read-only mode only.

Correspondingly, the same applies if you use a client version for connecting to an older server version.

In case of such a version conflict you can use the command *Install client version from server* in the *Help* menu at any time in order to install the matching client version.

An alignment in the inverse direction, i.e. adaption of the server version according to the client version is not possible.

Note

![i]	If an *ibaPDA*-Server is installed on the client computer too, this method of adapting the client version is not possible. The client version should always match the server version on the same computer.

3.4   Start program

After *ibaPDA* had been installed as described in chapter *Installation*, the application can be started in different ways.

3.4.1   Startup of the server

The *ibaPDA* server is a service under Windows. It is configured by installation to start automatically when installation is finished and with each system start (boot).

After installation (incl. server) you can find the *ibaPDA* server service icon in the Windows task bar.

	ibaPDA server service and data acquisition are running.
	ibaPDA server service is running, data acquisition is stopped.
	ibaPDA server service is not running. A double-click on this icon opens the *ibaPDA* server status application to start the service.

Table 1: Taskbar icons

You can operate the basic server functions conveniently with the *Server Status* tool, which was automatically installed with the server.

You can start the *ibaPDA Server Status* program as follows:

■ Double-click on the *ibaPDA* Server icon in the info tray of the task bar

■ Using the context menu of the *ibaPDA* Server icon (right mouse click – *Status*)

■ Using the Windows Start menu *All programs – iba – ibaPDA – Server Status*

3.4.2   Starting the client

After the installation, you will find the *ibaPDA* client icon on your Windows desktop.

The client process is started by a double-click on the icon.

Alternatively, you may start the client via the Windows program menu (Start button):

Start – All Programs – iba – ibaPDA – ibaPDA client

3.4.3   Starting the ibaPDA client via command line

3.4.3.1   General

The *ibaPDA* client can be started in the command line. This makes it possible to use batch files or scripts to start *ibaPDA* client(s). The syntax for such a command line is:
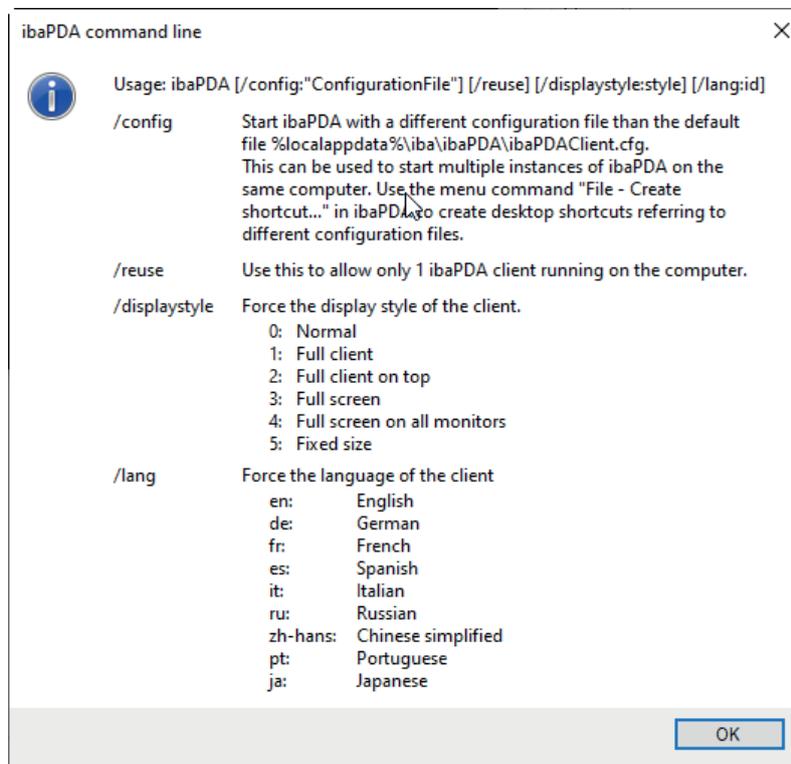
`ibaPDA.exe` */switch*

The "/switch" optional switch serves as a placeholder for different parameters, which can be used to start the *ibaPDA* client.

Full syntax description:

`ibaPDA.exe [/config:"ConfigurationFile"][/reuse][/displaystyle:-style][/lang:id]`

If you enter the `ibaPDA /?` command in the command line, you receive complete assistance:

3.4.3.2   /config: command line switch

You can start the *ibaPDA* client with the /config: command line switch.

Using this function you can load an individual configuration. It is therefore possible to operate several clients on one computer. The individual clients can be connected to different servers, each of them with a different layout. The /config: switch requires a configuration file. The configuration file contains the server that the client connects to and the initial position and size of the client window. The directory containing the configuration file is also used as the base directory for the client files, e.g., the layout file, log files, address books, etc.

Example

```
ibaPDA.exe /config:"c:\ibaPda\Configuration1\Configuration 1.cfg"
```

The *ibaPDA* client will use the specified configuration file. The configuration file is an XML file with the following format.

XML configuration file

```
1    <?xml version="1.0"?>
2    <ClientConfiguration>
3    <Servers>
4    <Server>
5    <Address>localhost</Address>
6    <PortNr>9170</PortNr>
7    </Server>
8    </ Servers>
9    <AutoReconnect>false</AutoReconnect>
10   <Monitor>0</Monitor>
11   <FormPlacement>2;3;-1;-1;-1;-1;161;1152;189;867</FormPlacement>
12   </ClientConfiguration>
```

Lines 1 to 3

This is the general XML header.

Lines 4 to 9

This section contains the address and port number of the *ibaPDA* server to which the client will attempt to connect. By setting "AutoReconnect" to "true" or "false", you can specify whether or not the client should automatically attempt to establish a connection to the server. In this case, enter "true" for <AutoReconnect>.

Line 10

The "Monitor" setting determines on which monitor the client will appear. If "Monitor" is set to 0, the primary display will be used. If "Monitor" is set to 1, display number 1 will be used. If "Monitor" is set to 2, display number 2 will be used and so on.

If you are unsure about the numbering of your displays, use the *Identify* function in the Windows display settings of the relevant PC.

If another monitor is set in the "FormPlacement" setting, the "Monitor" setting is overridden.

Line 11

The "FormPlacement" setting makes the "Monitor" setting obsolete. *ibaPDA* saves the position, size and state of the main window in "FormPlacement" when it closes. If "FormPlacement" is available, *ibaPDA* will restore the position, size and status of the main window when *ibaPDA* starts. It is not advisable to manually change the values in "FormPlacement".

Tip

You can simplify the configuration by starting *ibaPDA* with a configuration file and then set up the display as desired. Afterwards, close the client again. When closing the client, the settings (including the selected monitor) are updated and saved in the configuration file. The next time you start the client with the the the same configuration file, the client window opens at the selected position.

3.4.3.3   /reuse command line switch

Example

`ibaPDA.exe /reuse`

With this switch you can limit the number of clients on a computer to 1.

When the client is started with the /reuse switch, it will first search whether there is already another client running with this switch. If another client is found, the new client will activate the running client instead of starting itself.

Tip

If you do not want to start *ibaPDA* client using the command line, you can also do so by enabling the *Allow only one instance of ibaPDA client* option in the *ibaPDA* preferences, *General* Register.

3.4.3.4   /displaystyle: command line switch

`ibaPDA.exe /displaystyle:0`

Use this switch to start the *ibaPDA* client with a specific display style.

For more information, see ↗ *The View menu, page 46*.

The following switches are available:

/displaystyle:0	Normal
/displaystyle:1	Full client
/displaystyle:2	Full client on top
/displaystyle:3	Full screen
/displaystyle:4	Full screen on all monitors
/displaystyle:5	Resized to a predefined window size

3.4.3.5   /lang: command line switch

`ibaPDA.exe /lang:de`

Use this switch to start the *ibaPDA* client in a specific language.

The following switches are available:

/lang:de	German
/lang:en	English
/lang:fr	French
/lang:it	Italian
/lang:es	Spanish
/lang:ru	Russian
/lang:zh-hans	Chinese
/lang:ja	Japanese
/lang:pt	Portuguese

Note

With the simple online language switching in the *ibaPDA* client, it is possible that some objects or dialogs, such as the *ibaQPanel* toolbox, continue to be displayed in the original language in which the *ibaPDA* client was started.

Starting the *ibaPDA* client with the language switch has the advantage that all instanced objects of the application are started in the specified language.

Note

Note that some languages require licenses. If the desired language is not available, please contact the iba support or your regional iba representative.

3.4.4   Starting multiple clients on the same computer

By means of the *Create shortcut* command in the *File* menu, you can have multiple clients running on the same computer. This can then be very helpful especially when administrating different *ibaPDA* systems in large scale installations from a central workstation. The individual clients can be connected to different servers, each of them with a different layout.

The configuration file, which is stored with the creation of every shortcut, contains:

- the server that the client connects to and

- the initial position and size of the client window

The directory to which the configuration file is stored serves as the base directory for client files (layout file, log files, address books, etc.)

Without setting up different desktop shortcuts, you can start multiple clients with individual configuration files on a computer by using the command line call and the "/config" switch.

For more information, see ↗ */config: command line switch, page 33*.

In order to create a shortcut, follow these steps:

1. Go to the menu item *File – Create shortcut….*

→ The *Create shortcut* dialog opens.

Create shortcut	
Shortcut name:	ibaPDA-System2
Client settings path:	D:\ibaPDA-Clients ...
☑ Switch current instance to new settings path	Create Cancel
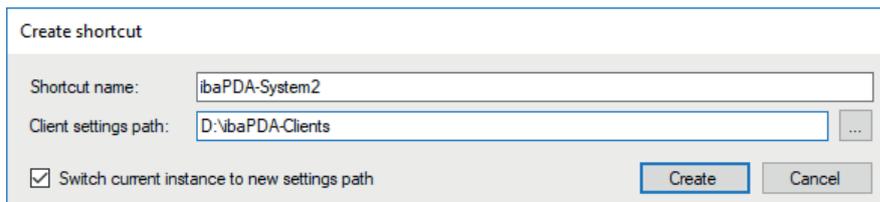
2. Enter a plain-text name for the shortcut, indicating the server it links to. By default, the name is formed from "ibaPDA" followed by the name of the currently connected server.

3. The path for the client settings is the base directory for the client files corresponding with the shortcut. Enter an appropriate path according to your needs if required. With the settings shown in the screenshot above, *ibaPDA* will create the `D:\ibaPDA-Clients\ibaPDA-System2` directory.
   In this directory, *ibaPDA* will then create a configuration file as well as the current layout file. A shortcut with the name, "ibaPDA-System2", is subsequently created on the desktop that links to `ibaPDA.exe /config:"D:\ibaPDA-Clients\ibaPDA-System2\ibaPdaClient.cfg"`.

4. Check the *Switch current instance to new settings path* option if you want *ibaPDA* to switch its current directory to the new shortcut directory. This will save all subsequent changes made to the layout or the server connection in the directory of the shortcut.
   If this selection box is activated, *ibaPDA* will act as if it was started from the shortcut. If the selection box is deactivated, *ibaPDA* will not change its current directory and no changes will be made.

5. Click the <Create> button.

If you want to create more shortcuts to other *ibaPDA* servers, iba AG recommends the following procedure.

1. Close the current instance of *ibaPDA* client and start a new one (not by the previous shortcut).

2. Connect the desired *ibaPDA* server.

3. Open the client preferences, select the *Connections* node and choose "Last connected server" for connection on startup. You may choose "Default server", but in this case make sure that the correct server is specified in the field *Default server*.

4. Then create a new shortcut as described above.

Example
In the case of a large plant with multiple *ibaPDA* systems, e.g., for the plant's lead-in area, processing area and lead-out area, you can create three shortcuts for the *ibaPDA* clients on your desktop.

In the file system, this appears as follows:
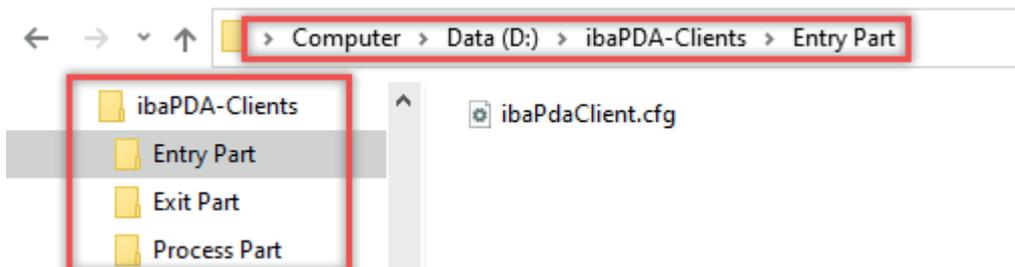
3.4.5   Disconnect another client on client startup

When a client tries to connect to an *ibaPDA* server and the server reports that there are no more client licenses available, the client displays the following message box.
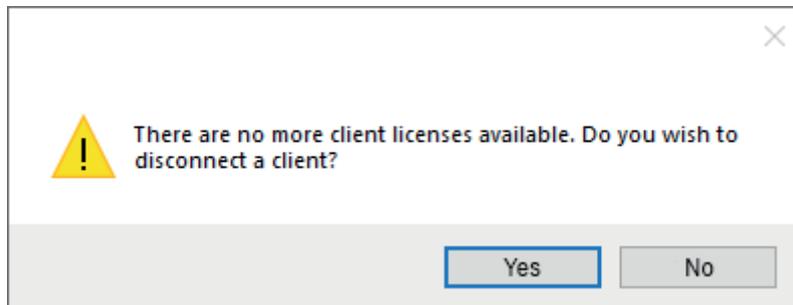
If you click <Yes>, then a dialog opens:
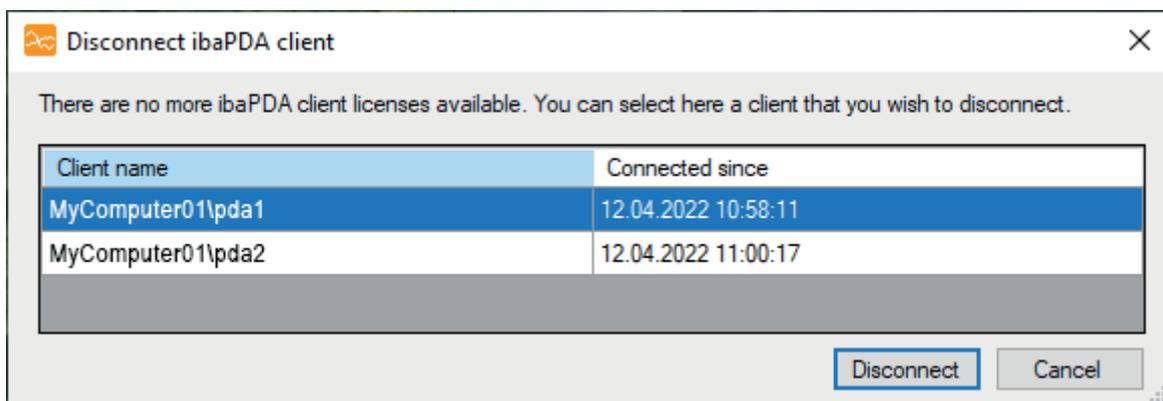
The table shows all clients currently connected. Select one of them and click the <Disconnect> button in order to disconnect the client. If required, you will be asked to enter the password. If the other client is disconnected, your client will connect to the server and replace the other client.

Note

 If the user management is active, this function can be disabled depending on the logged in user (*Server rights – Disconnect other user*).

---

4 User interface

This chapter provides information about the main screen, menus, tool bars and hot keys.

4.1 The screen

The different areas of the *ibaPDA* screen are presented as an example in the following image.

However, the arrangement of the areas is not fixed. Signal views, signal tree, event log, data storage status and watch window are dockable windows which you can move or hide. You can adapt the user interface to your needs. The arrangement is always saved in a layout file.

In the following you'll find an overview of the default *ibaPDA* main screen.
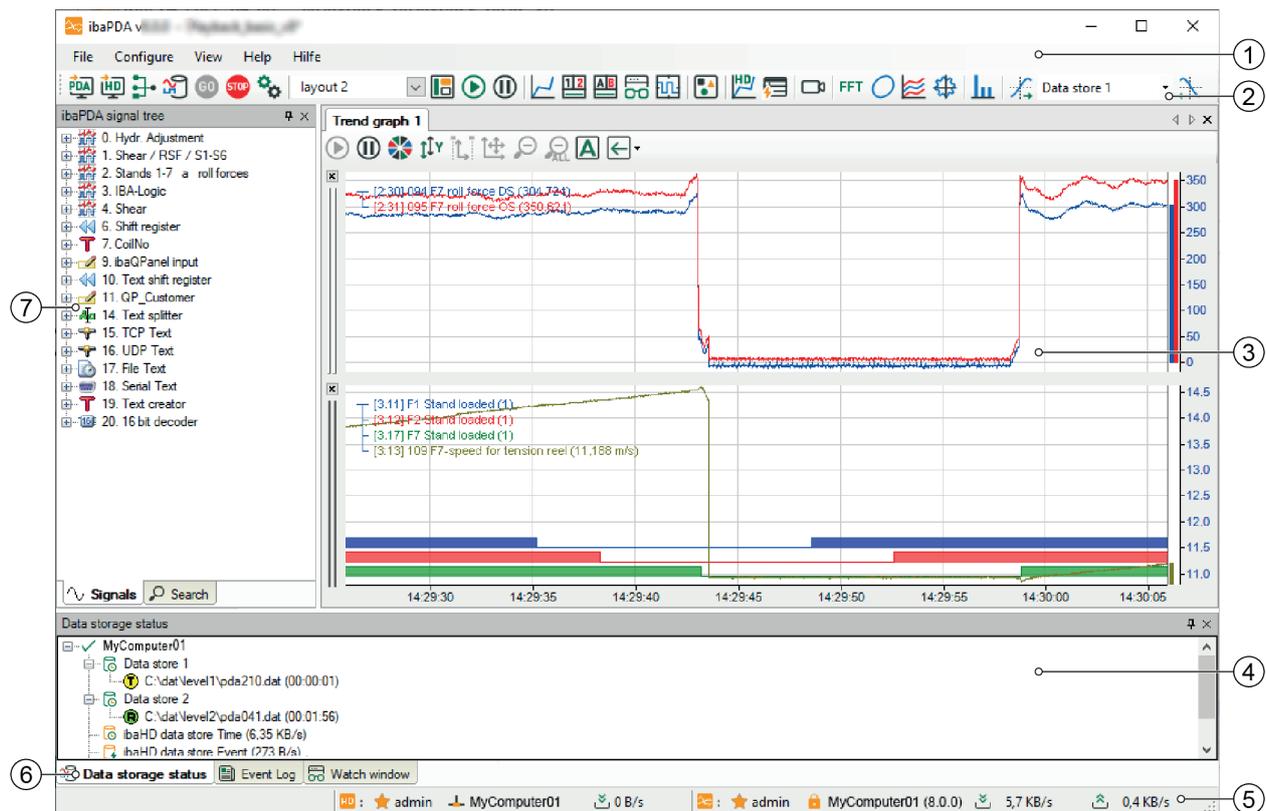
Legend

1	Menu bar
2	Toolbar
3	Display area
4	Windows for the data storage status, watch window, event log
5	Status bar
6	Tab to switch windows
7	Signal tree and signal search

4.2   The menu bar

The main menu includes:

- File

- Configuration

- View

- Help

If you click on the *ibaPDA* symbol in the upper left corner (window header), a menu appears where you can minimize, move, resize or close the current window of the *ibaPDA* client. The *Close* command or double-clicking the icon closes the current window, i.e. the *ibaPDA* client. *ibaPDA* server, data acquisition and recording remain unchanged.

4.2.1   The File menu

The *File* menu offers some basic operations such as opening and saving projects, activation of password protection and exiting the program.

New project / Open project / Save project
These functions refer to the *ibaPDA* project management. You can save different projects, i.e. I/O configurations, data stores and layouts.

For more information, see ⬀ *Configuring the system, page 59*.

Create shortcut
With this command, users can create shortcuts on the desktop for starting the *ibaPDA* client. By using this function, multiple clients can be run simultaneously on the same computer, as a configuration file is saved for every shortcut created. The individual clients can be connected to different servers, each of them with a different layout.

For more information, see ⬀ *Starting multiple clients on the same computer*, page 37.

Print setup / Print
The print function includes only those parts, shown in the signal monitor area, i.e. trend graphs, FFT views, camera views, scope views, etc.
Log, status and signal tree windows will NOT be printed. By clicking on the *Print* command, the printing process of the entire signal monitor area starts immediately.

If you want to print only certain views, right-click on the caption of the subject view and select "*Print* from the context menu. The caption is standardized and contains date and time, layout name and the version number of *ibaPDA*.

Click on *Print setup* to open the dialog for the printer setup. In addition to the common print settings such as paper size, orientation, etc., you can decide whether or not to add a caption and/or a border around the image.

To change the color settings for printing, see ⬀ *Settings for printing views, page 108*.

Log out from ibaPDA server/ibaHD server
This command drops the connection to the *ibaPDA* server or *ibaHD-Server*.

Exit
Exit the *ibaPDA* client program. The server and hence the data acquisition and data storage continue.

4.2.2   The Configuration menu

The *configuration* menu offers all important functions for system configuration, data acquisition and data storage.

Select ibaPDA server...
This menu function opens the *Select ibaPDA server* dialog (see ⬀ *ibaPDA-server, page 67*) for establishing a connection between the *ibaPDA* client and an *ibaPDA* server.

You can open this dialog also by this button in the toolbar: 🖥️

In the "Address" field, enter the name of the server PC in the network. In the "Address" field, enter the name of the server PC in the network. If client and server run on the same computer, just enter "localhost".

The system automatically detects and lists all active servers available in the network. You only need to select the desired server from the list and press <OK> in order to establish the connection. The port number will be given automatically.

If the desired server is not in the list, you can use the search function. Click on the <Search> button. The bar indicates the search progress.

You can establish a connection to multiple servers one after another, e.g. for configuration purposes.

Select ibaHD server (only available if the license for the *ibaHD-Server* **is available)**
This menu function opens the dialog for selecting an *ibaHD-Server* for historical data recording. This function requires a license for the *ibaHD-Server* and *ibaHD-Server* client.

You can open this dialog also by this button in the toolbar:

For more information, see Part 6, *Connecting to HD server*.

I/O Manager
This menu function opens the dialog of the *iba I/O Manager,* hereafter referred to as *I/O Manager.* This is the main dialog for the configuration of the signals to be measured, groups and outputs.

You can open this dialog also by this button in the toolbar:

With the I/O Manager, you define among others

■ the integrated servers, such as *OPC- , OPC UA- , SNMP- and IEC 61850-Server*

■ the *Address books* of the PLC interfaces

■ *Time synchronization*, *Knowhow protection* and *Certificates*

■ the *data sources* (interfaces) you want to use

■ the *modules* (devices) to be connected

■ the *analog* and *digital signals* as well as the *text signals*, you want to acquire

■ the *virtual signals* you want to use

■ the *signal groups* containing selected signals

■ the *outputs*, i. e. signals which should be sent from *ibaPDA* to other systems over appropriate interfaces or by e-mail.

In addition, real time diagnostics provides information on the status of the connected

■ modules in this dialog

■ actual values of the signals

A bar chart always informs you about the actual number of signals used with regard to your license limit.

Data Store Manager

This menu item opens the configuration dialog for the *data storage*.

You can open this dialog also by this button in the toolbar:

In this dialog you can define and configure

■ the *archive profiles*, you want to use for the data recordings

■ the different *data stores* for creating standard data files, but also for *ibaQDR*- and *ibaHD-Server*-data stores as well as for sending data to external systems like databases, MQTT-broker etc.

Furthermore, for each data store

■ the trigger settings and the recording mode

■ the selection of the signals to be stored

■ file name and path of the data files

■ Usage of text signals

■ Automatic cleanup for the hard disk

■ Buffer (for HD and database/cloud related data stores only)

User Management

This menu item opens the configuration dialog for the user management.

The user management provides service for

■ adding or removing users

■ assigning user rights for server and client functions

■ creating and changing passwords

Layout Manager

This menu function opens the dialog for layout management.

You can open this dialog also by this button in the toolbar:

With the Layout Manager you can make general settings for the layout, create layouts and assign layouts to users. You can save, load, export and import the created layouts here.

For more information, see Part 6, *Managing layouts*.

Server Access Manager

By using this menu function, you open a dialog for reserving client-licenses for selected clients. Furthermore, you can filter by clients (IP addresses) in order to limit the access to the *ibaPDA* server.

For more information, please see ↗ *Server access control, page 81*.

Start

By using this menu function, you start the data acquisition (measurement) on the connected server.

You can open this function also by this button in the toolbar:

This function can be locked with a *password.*

At start of the measurement, a pop-up window will inform you about the start sequence.

Stop
With this menu function, you stop the data acquisition (measurement) on the connected server.

You can open this function also by this button in the toolbar: 🛑

This function can be locked with a *password.*

After the Stop command is issued, a warning will appear which must be confirmed before the measurement is stopped.

Log out from ibaPDA server/Log out from ibaHD server
With these menu functions you can selectively log out the actual client from the corresponding server, e.g. in order to unblock client licenses. The function is only available if the user management is enabled.

Client preferences
This menu item opens the configuration dialog for the signal monitor and screen layout preferences.

You can open this dialog also by this button in the toolbar: ⚙

In this dialog, you can define the following:

■ General settings for the client (behavior, buffer, signal names etc.)

■ Display properties of all views for print and display

■ Scaling settings for *X and Y axis* of the graphs

Note

i	These settings will be stored in the local registry of the client computer. They apply exclusively to the *ibaPDA* client instances running on the same computer but not to clients on other computers.

For more information, see Part 6, *Data visualization*.

4.2.3   The View menu

This menu offers all the features for the design of the screen and the management of different panes and layouts. The term "layout" means the individual arrangement of signal monitors, signal selection and status information windows. At program startup, *ibaPDA client* uses the `CurrentLayout.lay` configuration file.

Add view

By clicking on this menu item, a submenu opens providing a selection of different display types.

Symbol	Function	Description
	Add Trend graph	Adds a new trend graph view. All views on the screen re-organize automatically. Every signal monitor has its own scrolling control, zoom function and X axis. For more information, see Part 6, *Trend graphs*.
	Add Numeric digital display	Adds a new digital numeric display to the digital display window. Afterwards, you can drag the digital display out of the window and drop it at a different position on the screen. For more information, see Part 6, *Numeric digital display*.
	Add Text digital display	Adds a new digital text display to the digital display window. Afterwards, you can drag the digital display out of the window and drop it at a different position on the screen. For more information, see Part 6, *Text digital display*.
	Add Watch view	Adds a new watch view to the signal monitoring area, in order to display signal values in tabular manner. For more information see Part 6, *Watch view*.
	Add Scope view	Adds a new oscilloscope view to the signal monitor area. For more information, see Part 6, *Scope view*.
	Add ibaQPanel	Adds a new *ibaQPanel* view to the signal monitoring area. The QPanel view requires the *ibaQPanel* add-on. For more information, see Part 6, *ibaQPanel*.
	Add HD trend graph	Adds a new trend graph of historical data to the signal monitor area. A connection to an *ibaHD server* as well as a time-based storage are required to display data. For more information, see Part 6, *Historical data trend graph (HD trend graph)*.
	Add HD event table	Adds an event table to the signal monitoring area. A connection to an *ibaHD server* as well as an event-based HD storage are required to display events. For more information, see Part 6, *HD event table.*

Symbol	Function	Description
	Add HD time period table	Adds a time period table to the signal monitoring area. A connection to an *ibaHD server* as well as a time-based HD storage are required to display time periods. For more information, see Part 6, *HD time period table.*
	Add camera view	Adds a new camera view to the signal monitor area. A connection to an *ibaCapture* server is required to display video images. For more information, see Part 6, *ibaCapture camera view*.
FFT	Add FFT view	Adds a new FFT view to the signal monitor area. To use the FFT view in its full functional extend, the add-on *ibaInSpectra* is required. For more information, see Part 6, *FFT view*.
	Add Orbit view	Adds a new orbit view to the signal monitor area. The Orbit view requires the *ibaInSpectra* add-on. For a full description of the view, please read the corresponding manual for the software product *ibaInSpectra.*
	Add Cycle view	Adds a new cycle view to the signal monitoring area, in order to display values of an *ibaInCycle* module. For a full description of the view, please read the corresponding manual for the software product *ibaInCycle.*
	Add Circle view	Adds a new circle view to the signal monitoring area, in order to display values of an *ibaInCycle* module. For a full description of the view, please read the corresponding manual for the software product *ibaInCycle.*
	Add PQU spectrum	Adds a new spectrum bar chart view to the signal monitor area. The view is designed with respect to the device for power quality analysis (*ibaPQU-S*) and shows the harmonics. For more information, see Part 6, *PQU spectrum*.
	Add Phasor view	Adds a new vector diagram to the signal monitor area. The view is designed with respect to the device for power quality analysis (*ibaPQU-S*) and shows voltage and current vectors. For more information, see Part 6, *Phasor view*.

Table 2: Toolbar icons for views

Hide tabs

With this menu function, you can hide the tabs showing the name of the respective signal monitor. Thereby, you can save some space when using grouped (stacked) views. Note that you only see the current topmost monitor and that there is no way to switch to the other monitors behind unless tabs are shown.

Hide tab borders

This menu function allows you to hide the frames of tabs. This is useful for "Full screen" or "Full client" mode.

ibaPDA signal tree

This menu function allows you to show and hide the signal tree window of the ibaPDA server.

ibaHD signal tree

This menu function allows you to show and hide the signal tree window of a historical data server.

Data storage status

This menu function allows you to show and hide the data storage status window.

ibaPDA event log and ibaHD event log

These menu functions allow you to show and hide the event log windows of the corresponding servers.

Watch window

This menu function allows you to show and hide the watch window for the tabular display of signals and their actual values. Operation and function is the same as for *Watch view*.

Digital displays

This menu function allows you to show and hide the window for the digital numeric and text displays. The window is dockable and is shown when a new digital display is added via the menu or the toolbar button. If the digital display window is opened, you can add digital displays by dragging more signals or text signals into the window.

Reset window layout

This menu function allows you to reset all free floating windows (e.g. signal tree, watch window, data storage status etc.) in the currently active layout to their default position, size and visibility state.

There are similar commands available in the Layout Manager in order to apply this function to all layouts and not just the currently active layout.

For more information see *ibaPDA* manual part 6, chapter Layout pool.

Display style

This menu function provides a submenu offering 6 different display styles. You can activate and deactivate the display styles here.

The keyboard shortcuts allow you to switch (toggle) between the "Normal" display style and the selected style.

Tip

It makes sense to know the keyboard shortcuts by heart or to have them at hand in case operation with the mouse is not possible (since toolbars or menus are no longer shown).

You can press the <F10> key several times to set and exit all of the aforementioned styles. Use the <ESC> key to exit any style and go back to the normal display style.

Style	Shortcut key	Description
Normal		Standard Windows frame with signal monitor area, toolbars, menus, signal tree Data storage status event log, data storage status, etc.
Full client	<Ctrl>+<Shift>+<C>	The signal monitor area (with the layouts) is expanded over the full area of the *ibaPDA* client window including the frame; no toolbars, menus or other windows are visible. Other Windows programs can be positioned above the *ibaPDA* client. When you restore the *ibaPDA* client window, you can still see the desktop background.
Full client on top	<Ctrl>+<Shift>+<T>	Equivalent to *Full client*, but the *ibaPDA* client is always in the foreground.
Full screen	<Ctrl>+<Shift>+<F>	Equivalent to *Full client on top*, but the signal monitor area covers the whole screen. The Windows task bar is also covered.
Full screen on all monitors	<Ctrl>+<Shift>+<A>	Equivalent to *Full screen* when using several monitors.
Fixed size	<Ctrl>+<Shift>+<S>	Shows the Client window in size and with options as set in dialog *Configure fixed size …* (in the same menu). You can adjust the size of the client pixel-precisely and enable/disable some options regarding tabs and scroll bars. The settings of *Hide tabs* and *Hide tab borders* overwrite the corresponding settings made in view menu above. If a layout contains a QPanel you can use the *Fixed size* display style to place and move the QPanel view freely on the screen. Therefore, an empty area in the QPanel without any element is required in order to grab and drag the view with the mouse.

Table 3: Client display modes

You can use these display modes to maximize the available display area for signal monitors or to avoid an unauthorized use of the *ibaPDA* client. However, we recommend user management to effectively restrict operational access.

Language

The *Language* submenu makes it possible to switch between the GUI languages. The menu offers all the languages that are available in *ibaPDA*. note that some languages are only available with a corresponding license.

Free languages:	Licensed languages:
■ English	■ Spanish
■ German	■ Portuguese
■ French	■ Italian
	■ Russian
	■ Chinese
	■ Japanese

ibaQPanel language dictionary

With this menu item, you open the dialog for editing the dictionary for the add-on *ibaQPanel*. In this dictionary you can enter all the texts which have been configured in the *ibaQPanel* in all available languages. Depending on the language setting in the *Language* menu of the display, the texts in the *ibaQPanel* user interface will switch their language accordingly.

Unit system

Under this menu item you can switch to a different unit system for the proper display of numerical values given in physical or other units. As a pre-requisite you should have configured one or more unit systems in the unit table and have enabled this function in the I/O Manager, section *General - Unit table*. The default setting is "Metric" (for the metric unit system).

4.2.4   The Help menu

The help menu provides information about the *ibaPDA* software version (*Version history…*), changes (*Version History…*) and iba contact information (*Support…*). In addition, it offers a user-friendly function in case you need help.

Help
This menu item opens the *ibaPDA*-online help.

Contact iba Support
Here, you will find the iba Customer Support and contact information for all branch offices worldwide.

Save information for iba Support
With this command, you can create a ZIP file containing the following information:

■ the current project with the current layout

■ a complete log directory of the server

■ system information about the server

This command allows the user to gather all information relevant to the support with only one click. In general, we recommend submitting an updated support file to our support desk.

You can also create a support file via command line, e.g. by executing a script. The program `ibaPdaGenerateSupportFile.exe` is available for that purpose.

You will find more detailed information about how to generate a support file by command line in the Appendix of the ibaPDA manual (part 7).

Version history
This menu function starts the Internet file in an Web browser showing the history of the different software versions. We recommend having a look at this file after every *ibaPDA* update. Here, you will find interesting information about new functions, improvements and bugfixes.

Install client version from server
This command allows you to download the *ibaPDA* client version from the *ibaPDA*-Server you are currently connected to and install it on the client computer. This way, you install the appropriate client version which matches the server's version in order to gain the best functional compliance. We recommend doing so particularly if the client version is lower than the server version.

About
Here, you'll find relevant information about the current version of the *ibaPDA* software (client, server) as well as about the license number and the registered customer name.

4.3   Toolbars

The toolbars offer the most important functions you can also find in the menus.

ibaPDA comes with a default toolbar and menu configuration. You can customize the toolbar and menus according to your needs, save them as a profile and assign them to *ibaPDA* users.

For more information, see chapter *Manage layouts* in part 6 of the *ibaPDA* manual.

4.3.1   Configuration toolbar part

Symbol	Name	Description
PDA	Select ibaPDA server...	Opens the dialog for the connection to an *ibaPDA* server. For more information, please see ↗ *Select an ibaPDA server, page 68*.
HD	Select ibaHD server...	Opens the dialog for the connection to an *ibaHD-Server*. For more information, see Part 6, *Connecting to HD server*.
	I/O Manager	Opens the I/O Manager. For more information, see Part 2 *I/O-Manager*.
	Data Store Manager	Opens the dialog for the data storage configuration For more information, see Part 5 *Data storage*.
	User Management	Opens the dialog for the ibaPDA and ibaHD-Server user management. For more information , see chapter ↗ *User management, page 85*.
GO	Start	Starts the acquisition on the server
STOP	Stop	Stops the acquisition on the server
	Client preferences	Opens the dialog for the preferences of signal monitors and views, printing and preferred ibaPDA/ibaHD server connections. For more information, see Part 6, *Display preferences and view properties*.

4.3.2   Layout toolbar part

Symbol	Name	Description
layout 2 / Filter Layouts … / layout 1 / layout 2	Selection list Layout	Pick-list for selecting the desired and saved layout (overview). You can also toggle between layouts with the <F11> function key.
	Layout Manager	Opens the dialog for managing the layouts. In this dialog you can make general settings for the layout, create layouts and assign layouts to users.
	Start views / Stop views	Starts or stops the feeding of trend graphs. This function applies to all visible trend graphs of any view.

Symbol	Function	Description
	Add Trend graph	Adds a new trend graph view. All views on the screen re-organize automatically. Every signal monitor has its own scrolling control, zoom function and X axis. For more information, see Part 6, *Trend graphs*.
	Add Numeric digital display	Adds a new digital numeric display to the digital display window. Afterwards, you can drag the digital display out of the window and drop it at a different position on the screen. For more information, see Part 6, *Numeric digital display*.
	Add Text digital display	Adds a new digital text display to the digital display window. Afterwards, you can drag the digital display out of the window and drop it at a different position on the screen. For more information, see Part 6, *Text digital display*.
	Add Watch view	Adds a new watch view to the signal monitoring area, in order to display signal values in tabular manner. For more information see Part 6, *Watch view*.
	Add Scope view	Adds a new oscilloscope view to the signal monitor area. For more information, see Part 6, *Scope view*.
	Add ibaQPanel	Adds a new *ibaQPanel* view to the signal monitoring area. The QPanel view requires the *ibaQPanel* add-on. For more information, see Part 6, *ibaQPanel*.
	Add HD trend graph	Adds a new trend graph of historical data to the signal monitor area. A connection to an *ibaHD server* as well as a time-based storage are required to display data. For more information, see Part 6, *Historical data trend graph (HD trend graph)*.

Symbol	Function	Description
	Add HD event table	Adds an event table to the signal monitoring area. A connection to an *ibaHD server* as well as an event-based HD storage are required to display events. For more information, see Part 6, *HD event table.*
	Add HD time period table	Adds a time period table to the signal monitoring area. A connection to an *ibaHD server* as well as a time-based HD storage are required to display time periods. For more information, see Part 6, *HD time period table.*
	Add camera view	Adds a new camera view to the signal monitor area. A connection to an *ibaCapture* server is required to display video images. For more information, see Part 6, *ibaCapture camera view*.
FFT	Add FFT view	Adds a new FFT view to the signal monitor area. To use the FFT view in its full functional extend, the add-on *ibaInSpectra* is required. For more information, see Part 6, *FFT view*.
	Add Orbit view	Adds a new orbit view to the signal monitor area. The Orbit view requires the *ibaInSpectra* add-on. For a full description of the view, please read the corresponding manual for the software product *ibaInSpectra.*
	Add Cycle view	Adds a new cycle view to the signal monitoring area, in order to display values of an *ibaInCycle* module. For a full description of the view, please read the corresponding manual for the software product *ibaInCycle.*
	Add Circle view	Adds a new circle view to the signal monitoring area, in order to display values of an *ibaInCycle* module. For a full description of the view, please read the corresponding manual for the software product *ibaInCycle.*
	Add PQU spectrum	Adds a new spectrum bar chart view to the signal monitor area. The view is designed with respect to the device for power quality analysis (*ibaPQU-S*) and shows the harmonics. For more information, see Part 6, *PQU spectrum*.
	Add Phasor view	Adds a new vector diagram to the signal monitor area. The view is designed with respect to the device for power quality analysis (*ibaPQU-S*) and shows voltage and current vectors. For more information, see Part 6, *Phasor view*.

Table 4: Toolbar icons for views

4.3.3   Data storage toolbar part
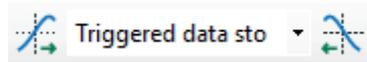
The buttons in this part of the toolbar allow you to manually control the data storage. In order to avoid erroneous operation, this toolbar is not shown by default. It must be activated manually.

Symbol	Name	Description
	Start	Manual triggering of the start trigger; starts the recording, which is selected in the field on the right next to the button. This button is only enabled if a start trigger has been defined for the recording. Very useful for testing and commissioning
	Stop	Manual firing of the stop trigger; stops the recording, which is selected in the field on the left next to the button. The button is enabled for both triggered and continuous recordings. Thus, also continuous recordings can be stopped manually. Very useful for testing and commissioning
	Select data store	Pick-list for selecting the desired data storage to be triggered manually.

4.4   Status bar

The status bar at the bottom of the *ibaPDA* program window contains some information about the connection between client and server:

Symbol	Description
	A connection has been established between client and server. On the right side of the symbol the name of the connected server and the version of the server software (in brackets) are displayed.
	Connection established between *ibaPDA* client and *ibaPDA* server with status of main connection (MC) and data connection (DC): MC+DC encrypted / only MC encrypted / MC+DC not encrypted For details, see ↗ *Server access control, page 81*
	The connection between client and server is broken; no server connected
13 KB/s	Data rate (downstream) from server to client Refers to the load of the server due to the data that it has to send to the client.
0,8 KB/s	Data rate (upstream) from client to server
	Server type: PDA server, HD server
admin Operator	The administrator or user currently logged on
SI : Metric	The currently selected unit system

Table 5: Status bar symbols

Example

SI : Metric   ☰ : ⭐ admin   🔒 MyComputer01   ⌄ 0,0 KB/s   ⌃ 0,0 KB/s
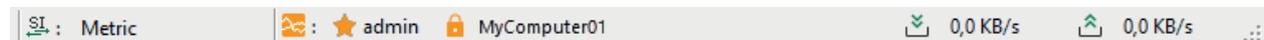
ibaPDA client is connected to the *ibaPDA* server on the MyComputer01 computer and logged in as the administrator. Actual data upload rate amounts to 0.0 kBps and download rate to 0.0 kBps. The currently selected unit ystem is metric.

4.5   Operation via keyboard shortcuts

General and display

Keyboard	Function
<Ctrl>+<U>	Open user management
<Ctrl>+<Shift>+<C>	*Full client* display style on/off
<Ctrl>+<Shift>+<T>	*Full client on top* display style on/off
<Ctrl>+<Shift>+<F>	*Full screen* display style on/off
<Ctrl>+<Shift>+<A>	*Full screen on all monitors* display style on/off
<Ctrl>+<Shift>+<U>	Menu to customize toolbars and menus
<F11> / <Shift>+<F11>	Next/previous layout
<Ctrl>+<D>	QPanel display: Designer mode on/off
<Ctrl>+<I>	Open I/O Manager
<Ctrl>+<O>	Open Data Store Manager
<Ctrl>+<P>	Print all visible views
<Ctrl>+<L>	Open Layout Manager

Signal tree and signals

Keyboard	Mouse	Function
<Ctrl>	Double-click	a signal in the signal tree: Adds the signal to an existing and marked signal strip (trend graph) and attaches it to the Y axis of the lowest signal.
<Shift>	Double-click	a signal in the signal tree: Inserts a signal in a marked trend graph display with its own Y-Axis.
<Ctrl>	Drag & Drop	a signal in the signal tree: Inserts a signal in the trend graph display and attaches it to the Y-axis of the lowest signal when it is dropped in the free area of the display.
<Shift>	Drag & Drop	a signal in the signal tree: Inserts a signal in trend graph display with its own Y-axis when it is dropped in the free area of the trend view.

Marker in trend graph

Keyboard	Mouse	Function
<Ctrl>	Move marker	Marker locks in place precisely at the samples.
<Shift>	Move marker	Markers X1 and X2 move in the same direction at a constant distance
<Ctrl>+<Shift>	Move marker	Markers X1 and X2 lock into place precisely at the samples and move in the same direction at a constant distance

I/O Manager

Keyboard	Mouse	Function
	Double-click	Toggling between binary settings, such as true/false; Double-click on the field where "True" or "False" appears, e.g., "Locked" in the general module settings.
<Ctrl>+<E>		Enable/disable the selected module

5 Configuring the system

ibaPDA is configured in the *ibaPDA* client program. So, the first step is the establishment of a connection between the client and the server. If only one server is available, usually *ibaPDA* automatically establishes a client server connection. If, however, a network includes several *ibaPDA* servers, you ensure your client to be connected to the right server before starting the configuration.

For more information, see ↗ *Select an ibaPDA server, page 68*.

Generally, the system configuration consists of 3 parts:

1. The configuration of the data sources of the signals to be measured
   The data sources and signals to be measured are generally configured in the I/O Manager.

   Also see Part 2, *I/O Manager.*

2. The configuration of the data storage
   In the dialog of the data storage, you configure the type of data storage in data files, databases or *ibaHD-Server*.

   Also see Part 5, *Configuring data storage*.

3. The configuration of the display layout
   The layout of *ibaPDA* client is configured on the screen itself by arranging signal displays, views and windows.

   The layout configuration is mainly described in Part 6, *Data visualization*.

You can store each of the different configurations individually in configuration files as described in the above-mentioned chapters. For a more convenient, secure and flexible management of different configurations there are two more features:

■ Project management

■ External configuration

5.1 Project management

The project management in *ibaPDA* was invented for a more convenient and saver workflow with different or changing configurations. This may apply to different users of the same system with changing configurations, for instance in testing facilities, or to service engineers traveling from plant to plant always facing different systems.

Instead of saving and reloading the files for the configuration of the I/O Manager as well as Data storage and views, only one project needs to be loaded. An *ibaPDA* project consists of an I/O configuration and a data storage configuration. It can also contain one or more views (layouts), user management and server access data, as well as server plugins and address books. The project is saved with its respective individual name on the server. It can also be saved as ZIP file. The name of the currently loaded project is displayed in the caption bar of the client.
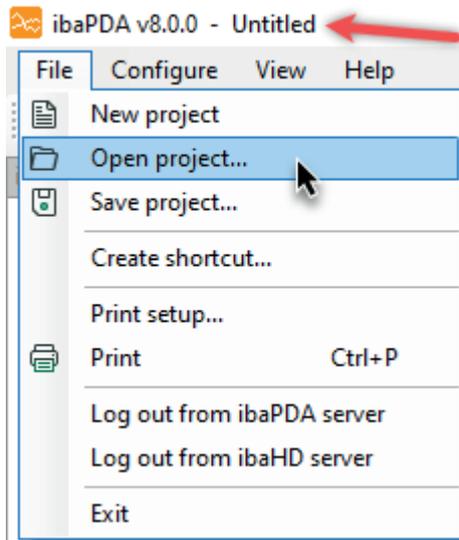
By default the project is called "Untitled" as you can see in the picture above. You can open or save the project via the file menu. As soon as you have finished an I/O configuration or data storage configuration (as described later in this manual) you can save it in an *ibaPDA* project.

When you click *Save project…*, the following dialog appears:
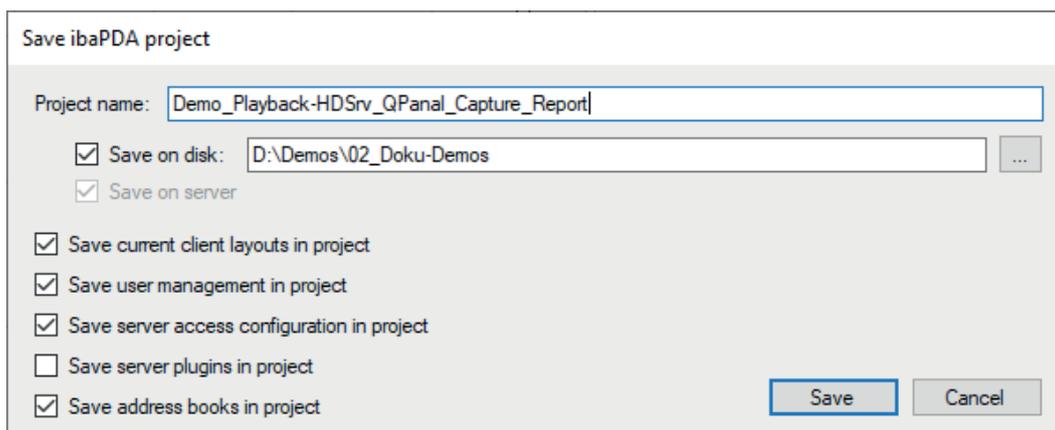
In this dialog, you can enter the project name. The project includes at least the current I/O configuration and the configuration of the data storage By default, it contains also the current layout. If you do not want to save the layout, uncheck the checkbox *Save current layout in project*. The project is always saved in the "Projects" subdirectory of the server's program data path (default: `C:\ProgramData\iba\ibaPDA\Projects`). If you also want to save the project to a file on the hard disk or another storage medium, then check the checkbox *Save on disk* and enter a full path. Saving a project on a hard disk or a network share can be reasonable for security reasons or for exchange with other users.

In addition, there are the following options:

Save user management in project
If you enable this option, then the configured user management, i.e. all defined users together with their granted client and server credentials as well as all passwords is stored in the project. Please note, that at least one administrator password (for user **admin**) must be known in order to open such a project.

For more information, see ↗ *Local user management in ibaPDA, page 87*.

Save server access configuration in project

If you enable this option, then the server access configuration (permitted access to the server by *ibaPDA* clients) – if available – is stored in the project on *ibaPDA* server.

For more information, see ↗ *Server access control, page 81*.

Save server plugins in project

If you enable this option, then any existing function files (.dII) that you have created with the *ibaPDA*-Plugin as well as other files which are required by the plugin (.ini, .xml etc.) are saved in the project.

If you want to open and load a project in which plugins are stored, then first a dialog opens for selecting the plugins. The system shows you a comparison of the status of the Plugins in the project file and on the *ibaPDA* server. Carefully check which plugins you want to load and select them specifically.

For more information, see Part 4, *Plugins*.

Save address books in project

If you enable this option, then all address books configured in the I/O Manager under *General – Address books* are saved in the project.

Depending on the amount and size of the address books, this can make the project file very large!

If you want to open and load a project in which address books are stored, then first a dialog opens for selecting the address books. The system shows you a comparison of the status of the address books in the project file and on the *ibaPDA* server. Carefully check which address books you want to load and select them specifically.

As soon as you have saved the project, the *ibaPDA* server will inform all the connected clients about the project name change and the clients will refresh their caption bar. If you change the I/O configuration or the data storage configuration, then an asterix (*) is added to the end of the project name, indicating that the project has been modified.

To open a project, click *Open project…* in the file menu. The following dialog appears:
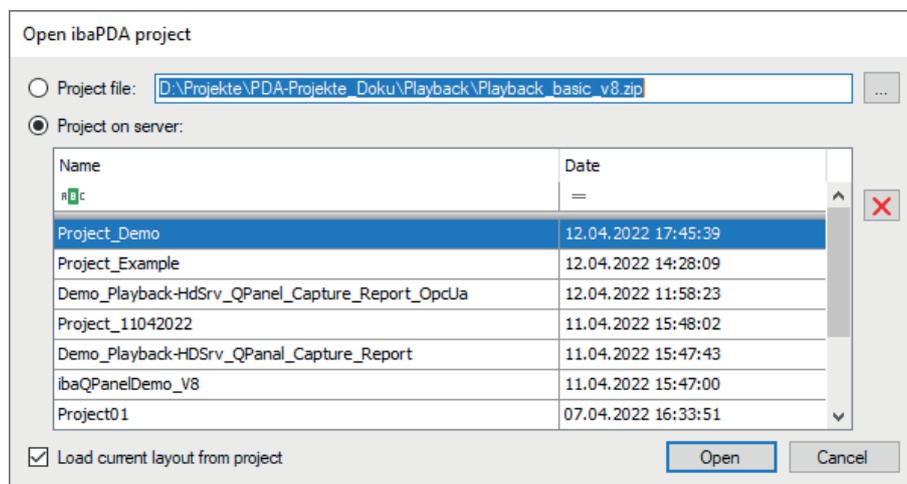
You can select a project either from a file or from the server. Check the radio button *Project file* and browse the file system for a ZIP file if you want to load the project from a file.

The table shows the projects available on the server. If you want to open a project from the server, select the project in the table and click on "Open".

If the list of projects is very long, you can use the filter row in the table header to find the desired project more easily.

For detailed information about the filter functions, please refer to part 7 of the manual, chapter *Advanced filters in tables*.

If you wish to remove a project from the server, select it and click on ✕.

When you open a project, then *ibaPDA* stops the acquisition if it was running. *ibaPDA* then loads the I/O configuration and data storage configuration from the project.

If the *Load current layout from project* checkbox is activated and if the project contains a layout, then the layout is transferred from the server to the client and the client loads the layout. If a user management configuration had been stored in the project, you will be asked when opening whether to load the user management configuration or not.
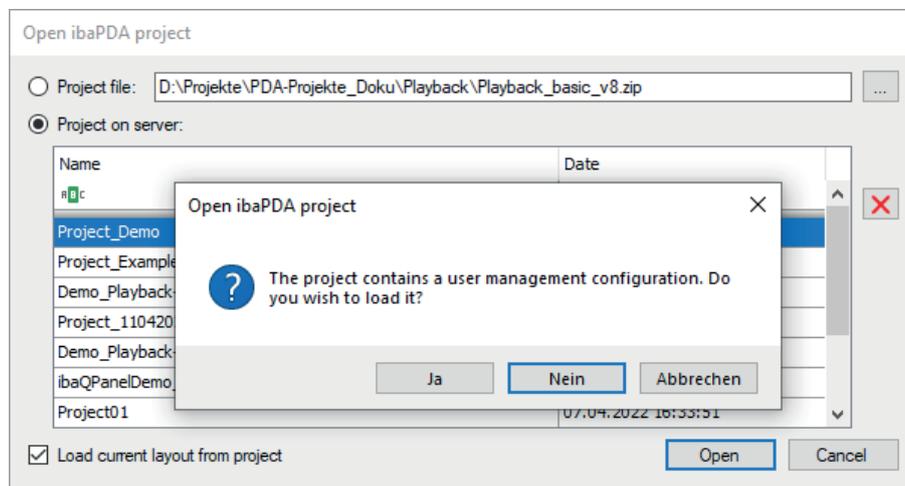
Only confirm the query with <Yes> if you know the administrator password!

If the I/O configuration of the project to be opened contains retentive modules or modules with initial values (e.g. ibaQPanel input, ibaQPanel text input, shift register, Virtual rententive etc.), you are asked whether to clear or to load the initial values or to use the last values from the server.
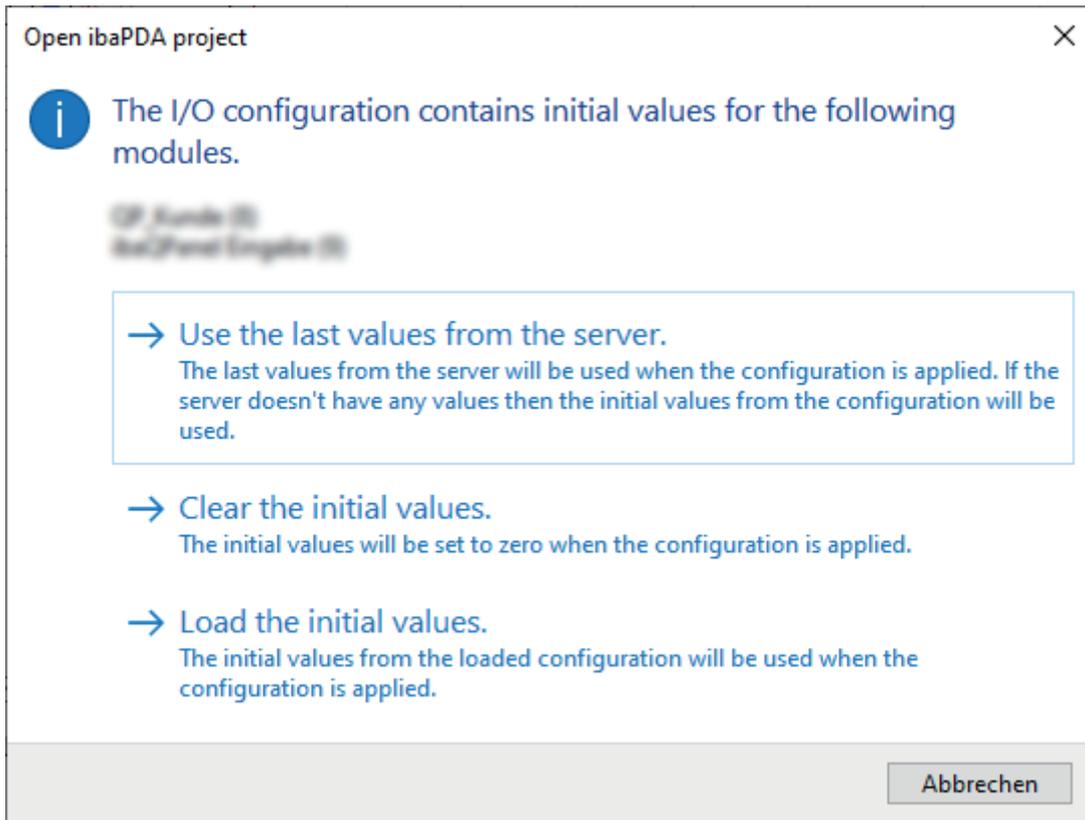
If you choose "Clear the initial values", the initial values are replaced by zero when applying the configuration.

If you choose "Load the initial values", the initial values as saved in the configuration are applied.

If you choose "Use last values from server", the last valid values of the currently running configuration will be used in the new configuration. If there is no corresponding module available in the loaded configuration, the last values from the loaded project will be used.

After the loading process, the data acquisition must be restarted manually.

Note

    If you open an I/O configuration in the I/O Manager you will get the same dialog.

5.2   Remote configuration

The remote configuration feature enables the user to control the configuration of one or more *ibaPDA* systems from a remote location via a configuration file.

5.2.1   Principle of operation

The remote configuration is an automatic function with immediate effect on the running data acquisition, resulting in a stop and restart of the acquisition.

When activated, the remote configuration feature periodically checks if the configured file is available. If the file is available, it is executed and afterwards deleted.

The processing depends on the file extension.

■ ZIP file (.zip):
  ibaPDA tries to open this file as a project file. At success, the I/O configuration and the data store configuration will be loaded and the data acquisition starts. Layout configurations will not be loaded even if the ZIP file contains those files.

■ IO file (.io):
  ibaPDA tries to open this file as a new I/O configuration. At success, the new I/O configuration is applied and the data acquisition starts.

■ DS file(.ds).:
  ibaPDA tries to load this file as a new configuration of the Data storage. At success, the new data storage configuration is applied.

■ other files:
  ibaPDA interprets this file as a text file. It reads out the first line. This line can contain one of the following commands.

  ▪ STOP
    ibaPDA stops the data acquisition.

  ▪ RESUME
    ibaPDA continues the data acquisition.

  ▪ EXPORT
    ibaPDA exports the current I/O configuration to the file specified in the rest of the first line.

Example: `EXPORT c:\export\MyPdaIoComfog.io`

If none of these commands are in the first line, then *ibaPDA* tries to import this file as a new I/O configuration. At success, the new I/O configuration is applied and the data acquisition starts.

5.2.2   Setting up the remote configuration

The remote configuration needs to be configured and activated.

1. Open the I/O Manager and select the *Remote configuration* node under *General* register.
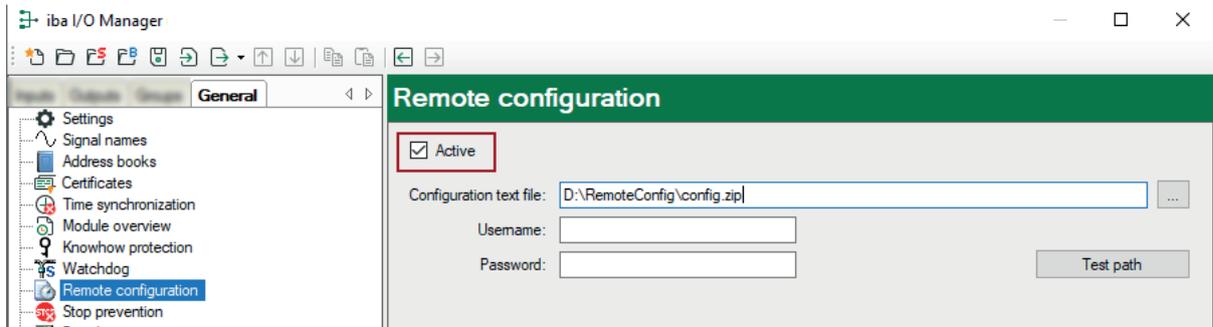
2. Enable the function by checking the *Active* selection box.

3. Enter the full path and name of the configuration file you wish to use. The file name spec-
    ified here including the file extension must exactly match the file name you will copy later
    into this directory.
    It may be useful to choose a file name which will be reused every time you want to change
    the configuration, such as "config".
    In that case you are not urged to change the filename in the I/O manager every time. On
    the other hand, the configuration name in the caption of the *ibaPDA* client window would
    always be the same.

4. You can type in the information manually or you can use a browser which makes it easier if
    the path is very long or on a network share.
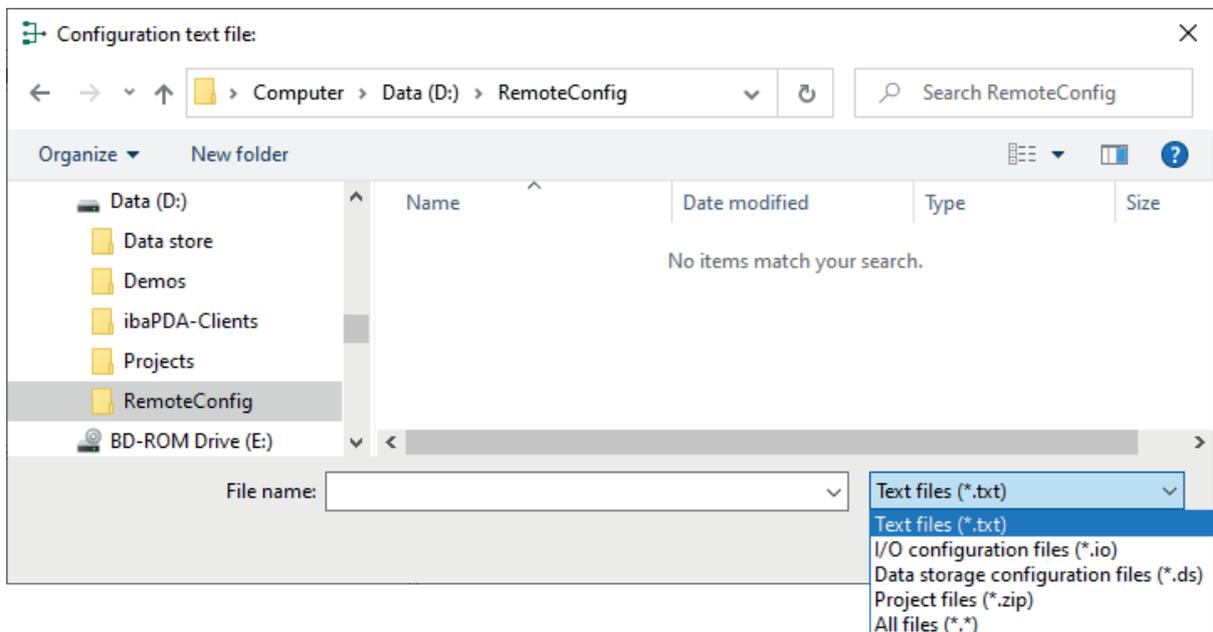
5. Via the button <Test path> you can check the accessibility of the directory, particularly if it is
    a network share.

6. Click on <OK> to close the I/O Manager. If the real configuration file is already stored in the
    specified directory, *ibaPDA* will immediately take the file, process and delete it.

Tip

Setting up the remote configuration is part of the I/O configuration. To make sure that the remote configuration works again after it was executed, the remote configuration feature must be enabled and properly setup in every configuration file which is loaded via remote configuration.

Attention!

As the system reacts immediately when a proper configuration file was copied to the specified directory, you should take care that all settings or changes made are correct.

Otherwise, the system might have a wrong configuration which leads to incorrect data files, displays or even prevent the system from restarting.

6　ibaPDA-server

"Server" describes a basic process in *ibaPDA* which is relevant for the data acquisition and storage in *ibaPDA*. Data is displayed online not via the server but the client. In addition, the client is the user interface of *ibaPDA* and serves not only for display, but also for server configuration.

The server can run independently and without a client.

You can see an example for a topology of a Single Server Multiple Client system in the following figure.
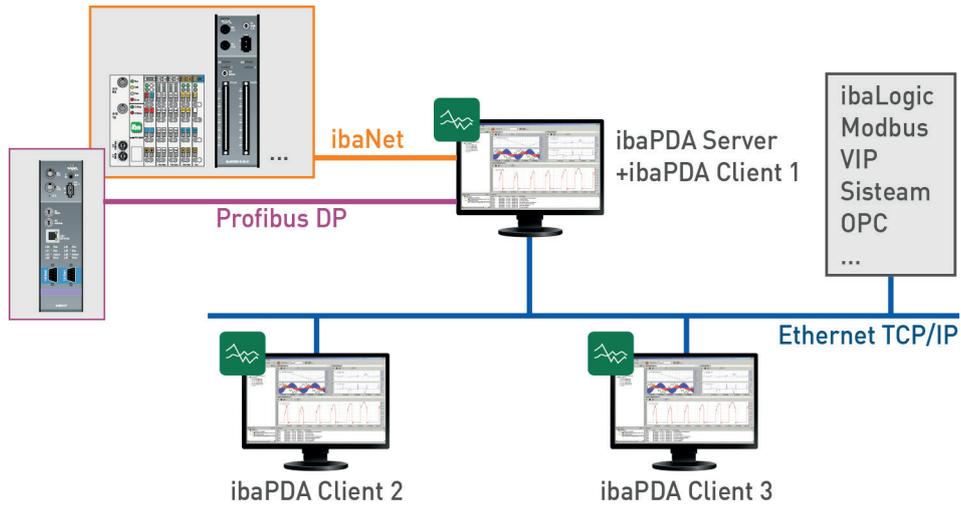
6.1 Select an ibaPDA server

In order to open the dialog for server configuration, click on the following toolbar button 📺.
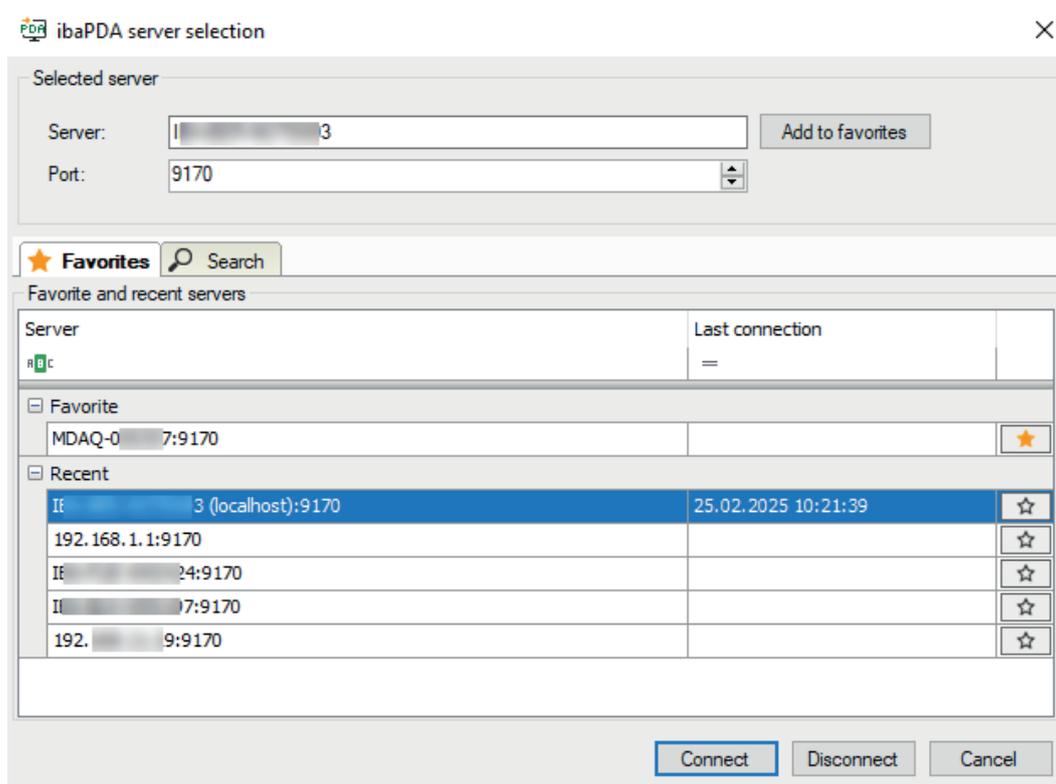
In this dialog, you can select the server to be connected with the client. All changes made in the I/O configuration and data storage configuration will also concern the selected server. You can always connect and disconnect a server in this dialog.

Use the client preferences to determine the behaviour of the client at startup in terms of server connection. For more information see ⤴ *Configure server connections for client startup, page 70*.

If the client is already connected to a server, this server is indicated on top of the dialog in the area *Selected server*.

As soon as the dialog opens, *ibaPDA* automatically searches the local computer and the network for active *ibaPDA* servers for approximately 3 s. The found servers will be listed in the *Search* tab of the dialog, in the area *Servers found in the network.*.

Search tab

Select this tab if you want to search for active servers locally or in the network.
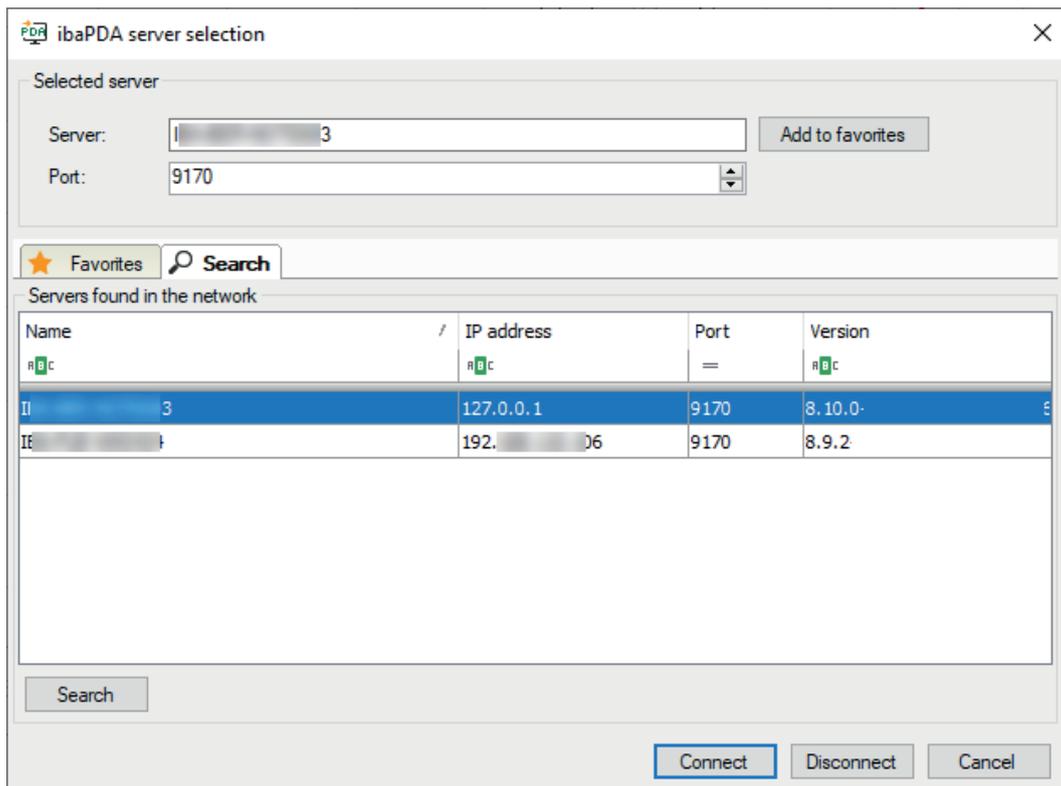
Click on the <Search> button to start a search for available servers.

The found servers will be listed in a table, which offers filter and sort functions in its header. If the right server is listed you can connect the client with this server by doubleclick on the corresponding row in the table or by selecting the server, followed by click on <Connect>.

Enter the server manually
You can also specify the server manually in the *Server* field in the upper part of the dialog. Enter the host name or the IP address of the server computer. If client and server run on the same computer, you may enter "localhost". If the server runs on a remote device, you may enter the host name or the IP address.

Tip

Some cases may occur where the name resolution works not properly in a network and hence the server cannot be found under its host name. Enter then the IP address of the server computer instead.

Port
The port number will be given automatically. (Default=9170)

Click on <Connect> to establish the connection. If the corresponding server is not accessible you will get an error message.

Favorites tab

In the *Favorites* tab you find an overview of preferred and also previous server connections. You may use this list to determine preferred servers (favorites). When you double-click on a server the client starts a connection attempt to this server.

This dialog can be helpful, especially in case of frequently changing sites (service), in testing environments or when configuring multiple distributed servers at a central desk.

The *ibaPDA* server can be selected either by double-click on the server in the list or by clicking on the server and pressing <OK>.

Favorite and recent servers

In the *Favorites* tab you find an overview of preferred and also previous server connections. You may use this list to determine preferred servers (favorites). When you double-click on a server the client starts a connection attempt to this server.

This dialog can be helpful, especially in case of frequently changing sites (service), in testing environments or when configuring multiple distributed servers at a central desk.

The table as well, offers filter and sort functions in its header.

Besides the column with host name or IP address there is a column *Last connection* showing date and time when the connection to this server was established for the last time.

Recent
The group *Recent* contains servers, the client was connected to in the past.

Favorite
The *Favorite* group is only available if at least one server out of the *Recent* group has been declared as favorite. Click on the star button in order to enable or disable the favorite status of a server.

If you want to add the currently connected server to the favorites, click on the <Add to favorites> button in the upper part of the dialog.

Configure server connections for client startup

In the client preferences you can define the server the client should connect to on startup. Therefore, select the node *Connections* in the client preferences.
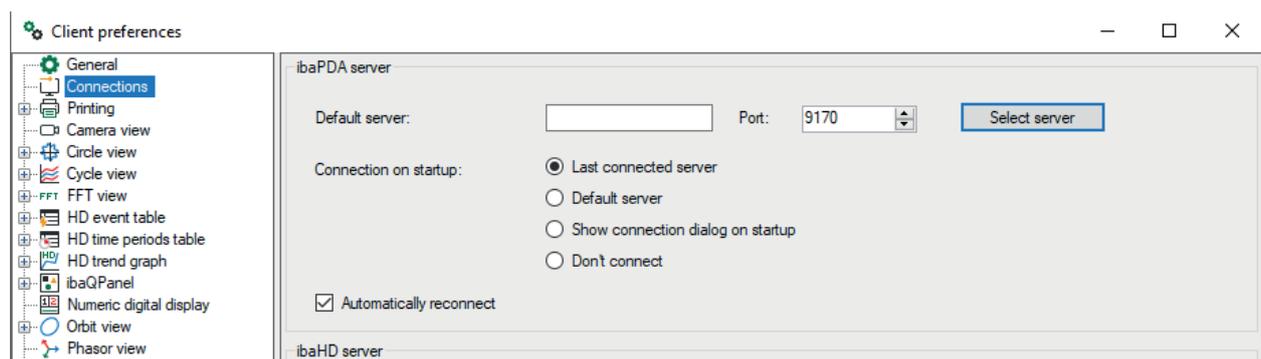
Default server
If there is a server the client should always connect to by default, then enter it here. Enter the computer name or the IP address of the server computer. Alternatively, you can click on the <Select server> button in order to open the *Server selection* dialog and select an available server of your choice.

Connection on startup
Choose one of the options for startup of the client.

■ Last connected server: The client connects to the same server it was connected to when it was last closed. This is not necessarily the default server.

■ Default server: The client connects to the server which is set as default server above.

■ Show connection dialog on startup: The dialog *ibaPDA or ibaHD server selection* opens. Here you can select the server manually.

■ Don't connect: The client starts without connecting to any server.

Automatically reconnect:
If you enable this option, the client tries to reconnect to the server automatically, in case the connection is interrupted.

6.2 Server status display

The *ibaPDA* software package includes the separate tool *Server Status* for control and diagnostic analysis of the *ibaPDA* server.

This software is auto-installed with the server.

You can execute it as follows:

■ the Windows Start menu *Start – Programs – iba – ibaPDA – Server Status*

■ by double-click on the server icon in the Windows system tray.

6.2.1 Server Status, General

Service

Status
Indication whether service is running or not.

Port
The port number is assigned automatically, but can be changed here manually if necessary (<Change> button).

<Start>, <Stop> and <Restart> buttons
Use these buttons to start, stop or restart the *ibaPDA* service

Auto-Start when Windows starts
This option must be enabled if an automatic restart of the system is planned after a computer restart.

Auto-restart whenever service fails
Enable this option if you want the system to restart after the *ibaPDA* service failed.

Language
Here you can select one of the languages supported by *ibaPDA*, which will be used for both the dialogs of this program *ibaPDA Server Status* and all messages which are generated by the *ibaPDA*-Server. By the setting "System" the program will adopt the Windows language setting. A change of language will come into effect after a restart of the service.

Open ibaPDA client button
Click on the button with the *ibaPDA* icon in order to open *ibaPDA* client. If *ibaPDA* client is already open, then another instance of the program will be opened.

License information

In the *License information* area you'll find important information about your current software license.

License container
The license container number is important for all service queries and upgrades. Please provide the license container number to our support team. It is linked to your license container, i.e. either MARX dongle, WIBU dongle or WIBU soft license and stored in our database.

Customer name
In this field, you will find the name of the customer for which this license has been approved. For projects, which were initially completed via system integrators, registration of the end user should have been requested from iba either from the outset or, at the latest, after the warranty period has expired. This makes it easier to assign the license in the case of later extensions or support cases.

License time limit
This field shows the validity time of the licenses. Depending on the container type there is either a remaining validity time given in days or hours or there is an expiration date.

Container type
This field indicates whether a MARX dongle, a WIBU dongle (WIBU CmStick) or a WIBU soft license (WIBU CmActLicense) is used.

Container host
This field shows the name of the computer where the license container is attached, which supplies the licenses obtained by the application.

Required EUP date and EUP date

The EUP date specifies the date until which the period of free software updates is valid. After the update period has expired you still can continue running the program as usual but only with the features which were already available until then.

For more information, see Part 1, *Update policy*.

Licenses

This window displays all the available basic and additional licenses, such as clients, data storages, interfaces, plug-ins etc.

If multiple licenses are applicable, e.g. clients, Xplorer interfaces, data storages etc., the number of respective licenses is given in brackets.

Active signals

A bar on the scale and the value behind the scale show the number of currently active signals. The end value of the scale indicates the maximum permissible number of signals according to the license.

Clients

This table shows all the clients currently connected to the server. It provides information about

■   the host name of the client and the logged on user,

■   the *ibaPDA* software version of the client,

■   the IP address of the client computer,

■   date and time of the establishment of the current connection to the server,

■   number of currently requested signals (only with running acquisition), i.e. of the signals which are currently used in all layouts of the client and

■   special licenses, which are claimed by the client

6.2.2   Server status I/O Manager

Acquisition

This dialog offers relevant information about data acquisition.

Beside the signal tree, which contains all defined modules and signals, you can see whether or not the acquisition (=measurement) is running. Below the signal tree, you will find the number of currently used signals (analog and binary).

The display for the driver status (*ibaPDA* driver) must show the "Loaded" status on green background for proper operation. In case of a failure, the field turns red and an error message appears below the start button. If, for example, another process is already running with *ibaPDA*-drivers, the message would indicate that an instance of the program is already running.

In addition, you will find a number of displays that reflect the interrupt behavior. The interrupts are good indicators of the proper function of the system.

iba interrupts

This is an interrupt counter for interrupts, which are generated by iba PC cards. In proper operation, it counts up with a rate of 1000 / sec corresponding to an interrupt cycle of 1 ms.

Non-iba interrupts

This counter will only change if other cards in the computer generate interrupts. This could occur in case of "shared interrupts". If the iba card generating the interrupt is assigned an exclusive interrupt, the counter must not change.

Internal timer counter

The internal timer counter is active when no interrupt source (PC card) is available. In this case the Windows timer is used.

The counter usually also count upwards with 1000 / sec.

Time correction

The value for time correction will only be displayed during acquisition and the internal timer counter serves as interrupt source.

Generally, the internal timer counter has not exactly the same resolution like the basic sample time. Hence, each counter step has a deviation of a few microseconds. These microseconds are added in the time correction counter. As soon as the sum matches the timer resolution, a double counter pulse will be triggered. This method enables the internal timer to match the basic sample time in average.

Acquisition thread CPU usage

This is the CPU time the server needs to read data from the driver and process them, e.g. evaluation of virtual signals, writing to the data file, buffering for transmission to clients etc.

Interrupt buffer (fill level)

This display shows how much data is in the interrupt buffer of the driver.

The *ibaPDA* server periodically reads from this buffer. If the interrupt service routine (ISR) of the driver takes too long, the *ibaPDA* server has not enough time to read all data out of the buffer and the buffer overflows. This would cause a stop of the acquisition. In that case, either a reduction of the number of signals or an increase of the basic sample time is required in order to ensure proper operation. This would reduce the read-out time for the ISR.

In the *I/O-Manager – General* tab – *Interrupt Info* node you may increase the size of the interrupt buffer up to 1024 MB, in order to prevent fast buffer overflow. Default size of the buffer is 50 MB.

Timer resolution

This time value given in ms should approximately correspond to the measurement time base. The timer is used for the internal generation of interrupts.

Interrupt times

These values are only displayed when the acquisition is running.

The system measures the actual processing time of the ISR (=interrupt time) and stores the shortest (Min) and longest (Max) time. The ISR reads the requested data from the different PC cards. The ratio of interrupt time to interrupt cycle time shows the percentage of CPU time required to read the data from the cards.

The actual interrupt time should never exceed double the interrupt cycle time. If so, interrupts will get lost and the measurement is not accurate.

Interrupt cycle times

These values are only displayed when the acquisition is running.

The system measures the actual cycle time of the interrupt and stores the shortest (Min) and longest (Max) time.

6.2.3   Server Status, Data storage
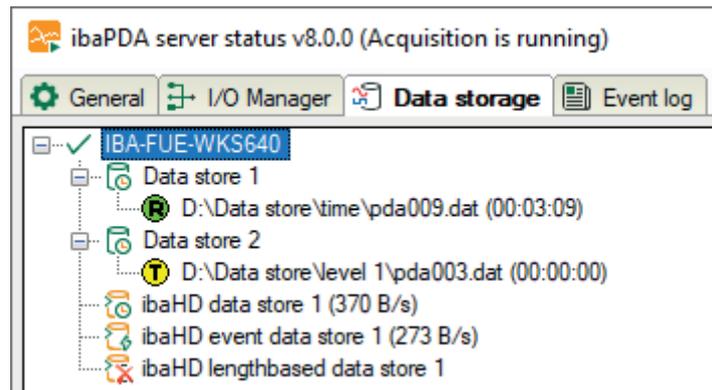
You will find the same information in the *ibaPDA* client program in the menu *View – Data storage status*.

Here, all configured data stores are displayed with their status, sorted by server name, data storage name and data file.

The colored symbols in the tree indicate the current status of the recording or the data file respectively.

Icon	followed by ...	Display in ...	Description
R	Path and file name	Data storage status	Data recording is running
T	Path and file name	Data storage status	Waiting for (start) trigger; appears only if trigger is configured for data storage. Measured values are buffered in the RAM memory for the defined pre-trigger time and saved in the data file when the start trigger occurs.
P	Path and file name	Data storage status	Post-trigger phase; stop trigger occurred but acquisition continues until the post-trigger time is over. The symbol only appears if a stop trigger is configured for the data storage.
S	Server name	Data storage status signal tree	Acquisition stopped, no recording
i	Server name	Data storage status signal tree	Server not available (no connection), thus no signals available and no recording
!	behind a signal name	Signal monitor / legend	Signal not available, e.g. when acquisition stopped or server not available.

Table 6: Status icons

6.2.4   Server status, Event log
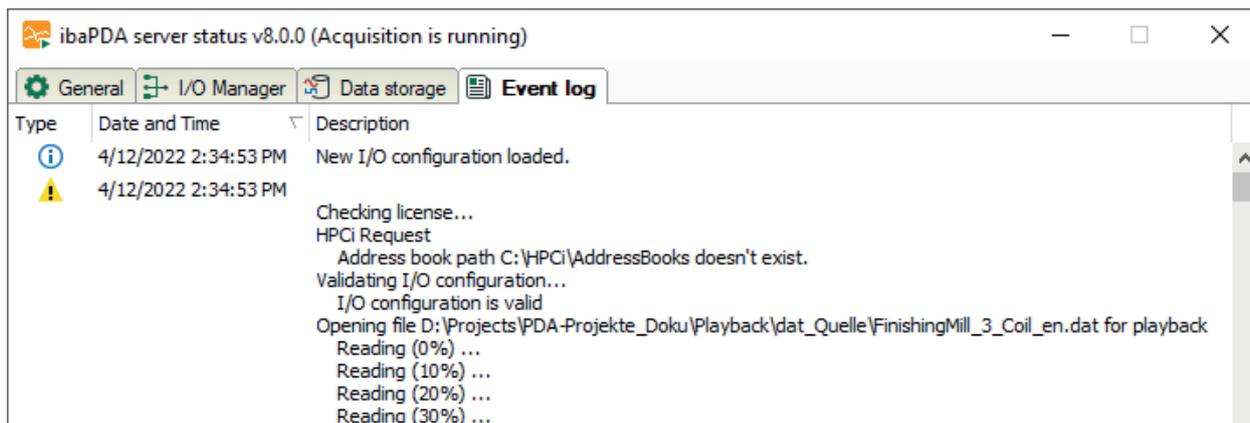
You will find the same information in the *Event log* window in the *ibaPDA* client program (*View – Event log*).

All relevant system events, such as configuration changes, are logged and listed in a table.

6.3   Server – more information

The *ibaPDA* server is a service under Windows. A Windows service always runs with reference to a user, i.e. it is assigned to a user account.
The *ibaPDA* server runs only if the user has administrator rights. The default setting is the local system account. This system-defined account has administrator rights on the local machine.

Note

[i]

If *ibaPDA* server only needs to access the local machine, i.e. also the data storage uses only the local hard disk, then the local system account is sufficient.

If *ibaPDA* server requires access to remote computers in the network which requires special rights on the remote machine, e.g. writing data files on a remote file server, you should create an appropriate user account.

This user account must be available on all computers involved.

Furthermore, this user account should be either set during installation of ibaPDA server (see ↗ *Installation*, page 25) or configured later in the Windows service administration (*Control Panel – Administrative Tools – Services – ibaPDA service / Properties – Log On*).

In order to view or change the current user account set in the *ibaPDA* server, please go to the Windows service management. Enter "Services" in the Windows search bar. Open the *Services* app and go to the service *ibaPDA service*.

In order to see the settings of the service, right-click on *ibaPDA service* and select *Properties* in the context menu.
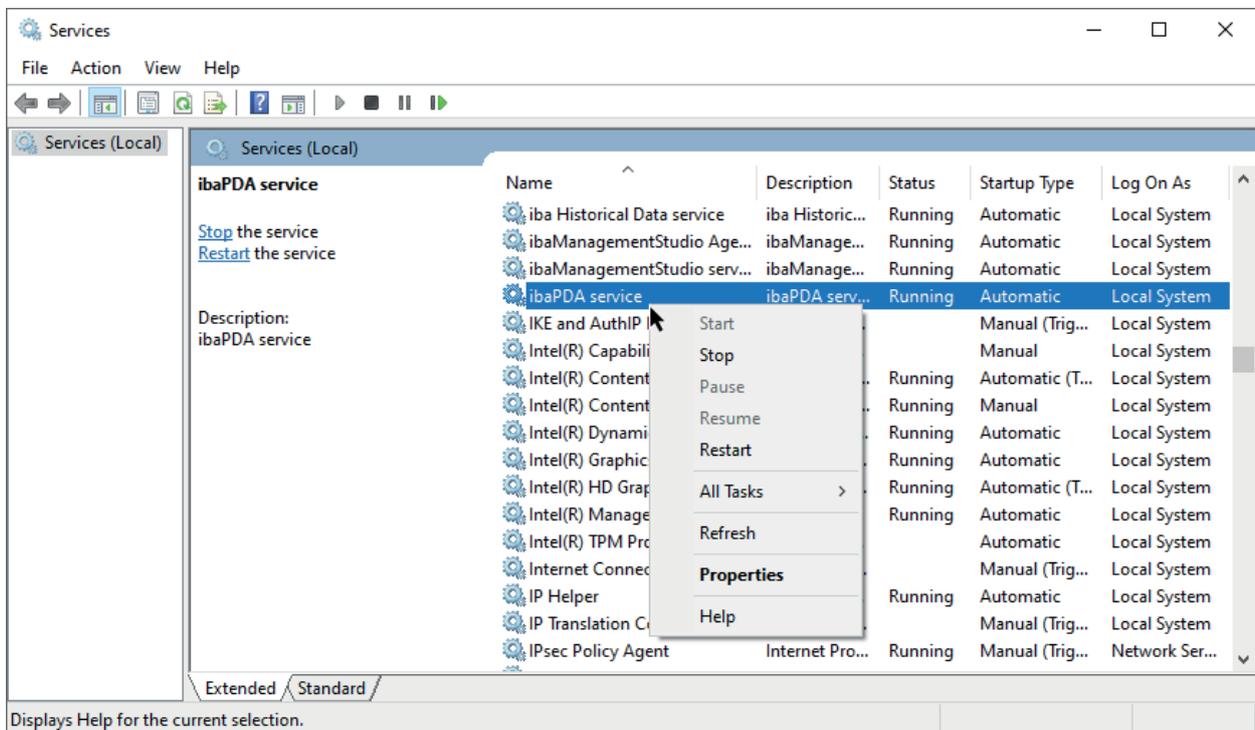
In the properties, select the *Log On* tab.

Here, you can verify if the service is currently running under the local system account or if another user account is logged on.

If you want to change the user account, please click on *This Account*, fill in the registration information and exit the dialog by clicking <OK>.
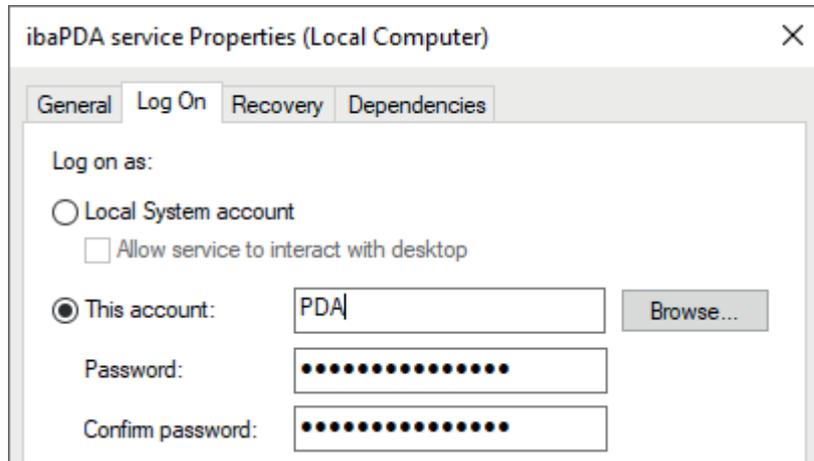
6.4   Server access control

By setting up the server access control, you have the option to reserve licenses for selected users and to limit the access to the *ibaPDA* server.

For the configuration of the server access control, in the *ibaPDA* client, select the *Configuration – Server Access Manager* menu…

The following dialog is shown.
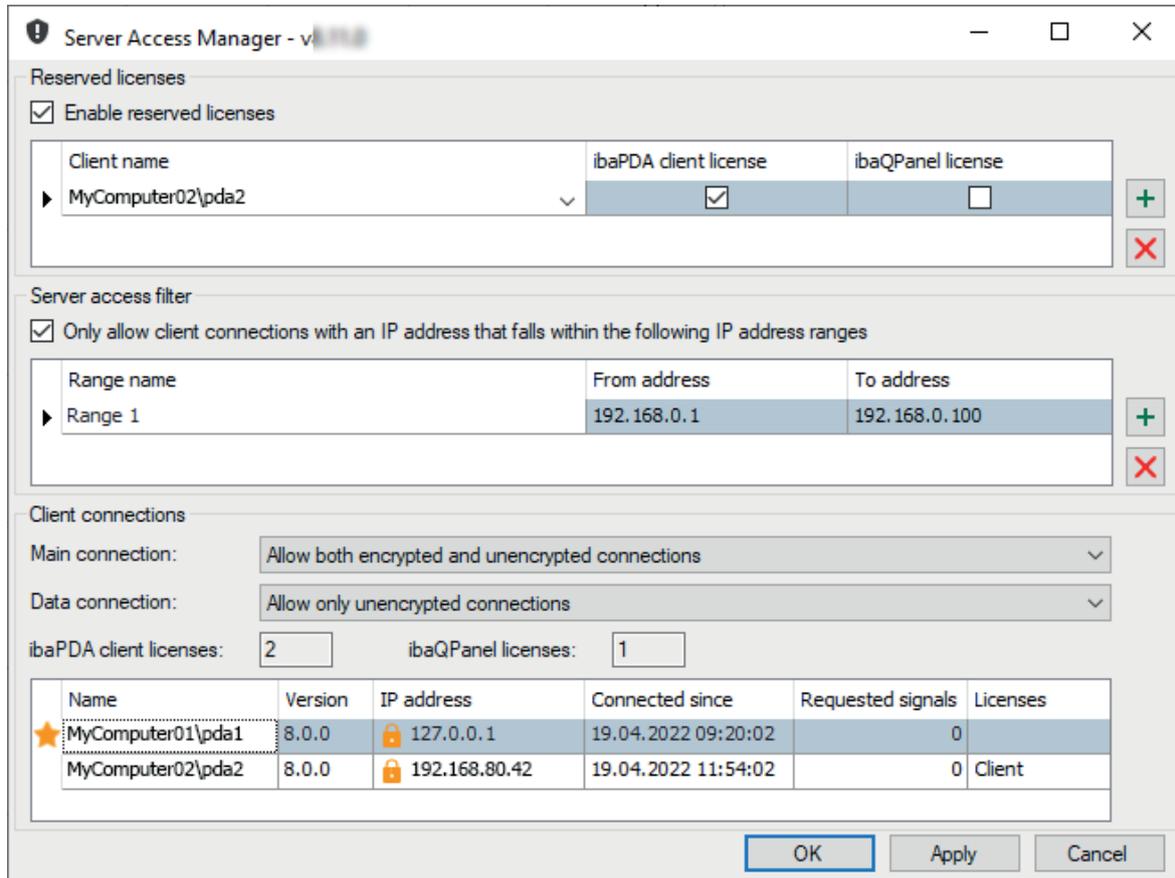
Reserved licenses

In the *Reserved licenses* section, you can reserve *ibaPDA* client and *ibaQPanel* licenses for certain computers on the network.

Because the *ibaPDA* license model works with free (floating) licenses, any client that wants to access the server can take advantage of a free license. However, this entails the risks that clients that need to access the server no longer find a free license if other clients were "faster" and have taken all the available licenses.

By reserving, you can now guarantee that the clients that absolutely need to gain server access, e.g., a computer on a control desk with *ibaPDA* client and *ibaQPanel*, always receive a license.

You must identify the computer with its name. You can reserve multiple licenses for a computer if multiple instances of the *ibaPDA* client are to run on the same computer. Reserved licenses can only be used by computers on the list.

Clients that are not on the list can only use generally available licenses.

In the *Current client connections* section at the bottom of the dialog window, the available *ibaPDA* client and *ibaQPanel* licenses are displayed.

For reserved licenses for clients that are not currently connected to the server, the row has a gray background.

Enable reserved licenses
If you select this option, the allocation of licenses is regulated according to the reservations. If you disable this option, all licenses of the server become available again.

Reserve license

1. Click the button ✚ to add a new line.
   A computer name is then immediately displayed in the *Client name* column if there are active clients in the network. The name of the server computer is usually in the first row.

2. Select the desired client in the drop-down list with available clients.

3. Then put a check mark in the selection fields of the desired license(s).

Cancel reservation

1. Click in the table row of the client for which you no longer need a reservation.

2. Click the button ✕.

Server access filter

In the *Server access filter* area, you can determine to which clients a connection to the server is allowed. You do this by specifying the IP address ranges for the allowed clients.

Only allow client connections with an IP address...
If you select this option then connections are only allowed from clients in one of the IP address ranges in the table below. When you disable this option, access is not filtered.

Note

> If this option is enabled without an IP address range in the list, the access to the server is only granted for local clients which are running on the server computer.

Add address range for filter

1. Click the button ✚ to add a new line.
   A default name is provided in the *Range name* column, which you can change if you want.

2. Click in the field in the *From address* column and enter the start address of the range allowed.

3. Click in the field in the *To address* column and enter the start address of the range allowed.

Delete filter range

1. Click in the table row of the range you no longer want to filter.

2. Click the button ✕.

Save configuration

The server access configuration can be stored in an *ibaPDA* project.
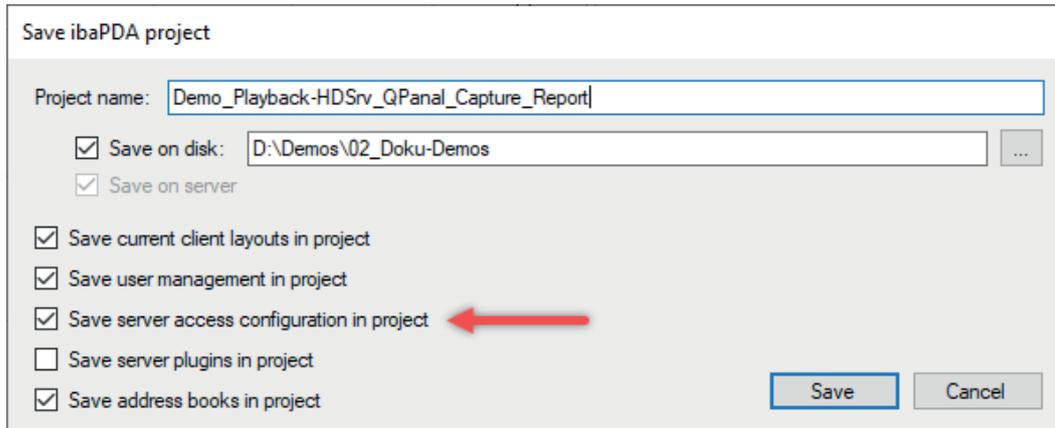
If a project containing a server access configuration is to be loaded, the user is asked whether to also load the server access configuration.

Client connections

The communication between client and server can run encrypted or unencrypted. The following connection types can be distinguished:

- Main connection for the transmission of configuration data and diagnostic data

- Data connection for the transmission of signal data when acquisition is running

In this area you can setup if the communication should run either encrypted or unencrypted or both.

Main connection
There are two settings for the main connection:

1. Allow both encrypted and unencrypted connections

2. Allow only encrypted connections

Purely encrypted connections are only possible with version v7.3.0 or higher of the *ibaPDA* client and the *ibaPDA* server. Clients running on version <v7.3.0 will always connect unencrypted. If you want to make sure that even older clients can connect to the current server, choose option 1. The other way round, clients running on a version ≥v7.3.0 connect unencrypted to a server with an older version.

Data connection
There are two settings for the data connection:

1. Allow both encrypted and unencrypted connections

2. Allow only encrypted connections

3. Allow only unencrypted connections

Since an encrypted data connection sometimes requires a lot of computing power depending on the number of signals to be transmitted, option 3 is the default setting here.

A data connection can only be encrypted if the main connection is also encrypted. Option 2 for the data connection therefore also requires option 2 for the main connection.

If you select option 1 for the data connection, the data connection is encrypted, provided that the main connection is also encrypted. If the main connection is unencrypted, then an unencrypted data connection is also used.

ibaPDA client licenses and ibaQPanel licenses
These fields show the number of the respective licenses.

Connection table
The table below shows one row for each currently connected client. In it you will find the

■ name/user, client version and IP address of the connected computer

■ date and time the connection was established

■ the number of signals transmitted to the respective client

■ licenses used by the client.

The first client running locally on the *ibaPDA* server does not need a license. It is marked with a star icon in the table.

There is a lock symbol in front of the IP address which indicates the encryption status of the respective client connection.

🔒	Both the main connection and the data connection are encrypted
🔒	The main connection is encrypted, the data connection is unencrypted
🔓	Both the main connection and the data connection are unencrypted

Table 7: Encryption status of the client connection

The same symbols are shown in the status bar of the *ibaPDA* client.

SI : Metric	⇄ : ⭐ admin 🔒 MyComputer01	⌄ 0,0 KB/s	⌃ 0,0 KB/s
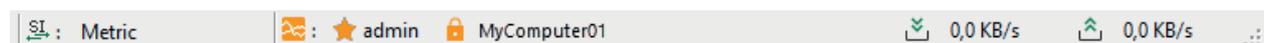
7   User management

Common user management for ibaPDA and ibaHD-Server

The user management system of *ibaPDA* and *ibaHD-Server* allows different user accounts to be created for use of each program.

A distinction is made between local users and domain users.

Both user types can be managed via the *user management*.

As the program *ibaPDA* client is used for both *ibaPDA* and *ibaHD-Server*, the user management for both programs is possible in the *User management* dialog of
ibaPDA client. Some differences exist with regard to the program-specific permissions.

In *ibaPDA* client, you can access the User management dialog either

■   by choosing *Configure - User management…* menu or

■   via the shortcut <Ctrl>+< U>.

For *ibaHD-Server*, there is the additional user management option in the *ibaHD Manager* program.

ibaPDA-specific user management

For *ibaPDA*, rights for the *ibaPDA* client and *ibaPDA* server can be assigned to users via the user management dialog.

Other documentation

The program-specific rights for *ibaHD-Server* are described in the *ibaHD-Server* product manual.

After opening the dialog, the *Current user* is always initially selected in the user tree in the left-hand window. This is the user who is currently logged in to the server. The identity of this user is shown in the column header of the table to the right. Depending on whether the *ibaPDA* client is connected only to an *ibaPDA* server, only to an *ibaHD-Server* or to both, different user management screens will appear.

Currently logged in user, *ibaPDA* only:

Currently logged in user, *ibaHD-Server* only:

Currently logged in user for *ibaPDA* and *ibaHD-Server*:
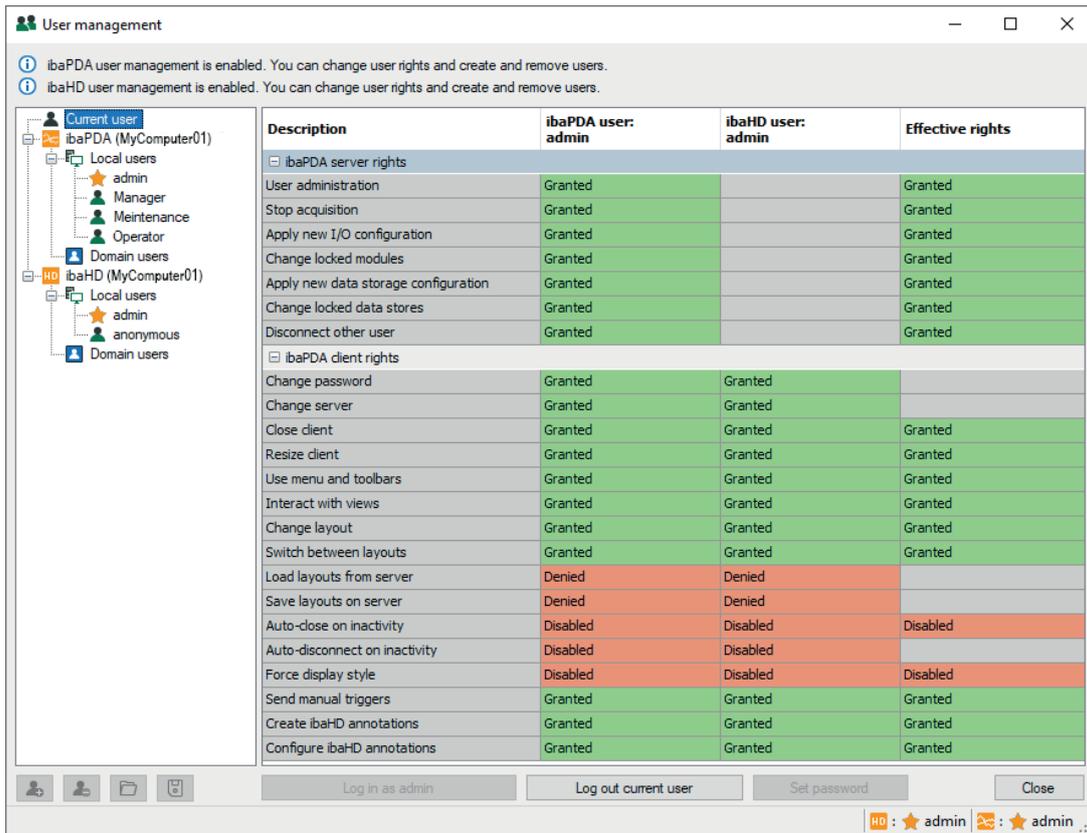
If the *ibaPDA* client is connected to an *ibaPDA server* and an *ibaHD-Server*, the rights for both servers are displayed. Different users can be logged in via the *ibaPDA* client.

Since the *ibaPDA*-client permissions are relevant for both *ibaPDA* and *ibaHD-Server* users, the settings are linked and the result is displayed in the "Effective rights" column.

For more information about this, see ↗ *Rights when simultaneously logged in to ibaPDA and ibaHD-Server, page 103.*

7.1   Local user management in ibaPDA

Local users are created only on application level for *ibaPDA* (or *ibaHD-Server* respectively), provided with application-specific permissions. These users are independent from the Windows-user. They only exist on the *ibaPDA* server or *ibaHD-Server*.

Each user account has several server rights and client rights. There is one user, called **admin**, who generally has all rights and whose rights cannot be altered. At first, only the user **admin** is able to create other users. Other users can only do this if they have been granted the "user administration" right. The following picture shows the user administration from the **admin** user's point of view.
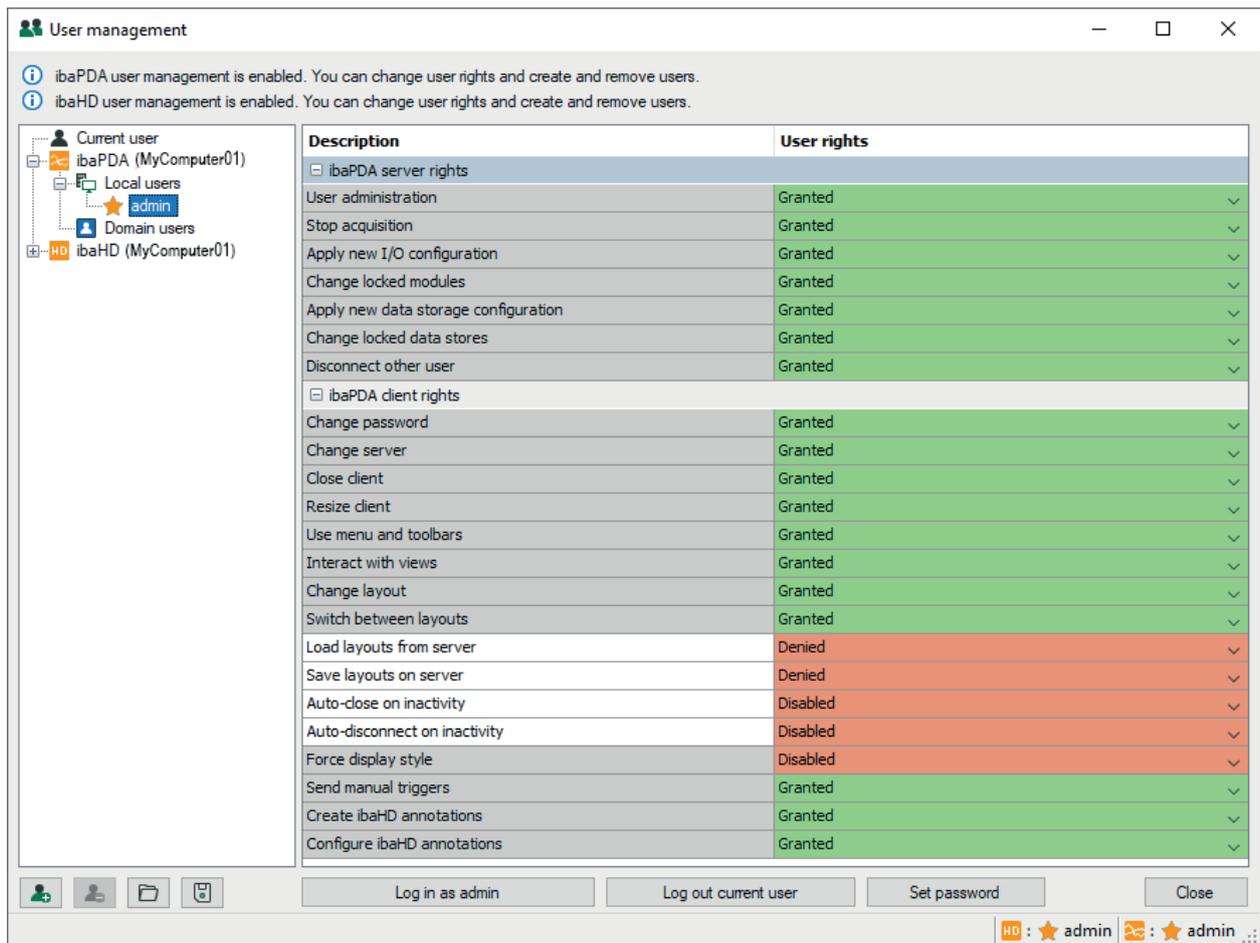
By default, there is only the **admin** user. The user management is disabled as long as the **admin** user does not have a password. If the user management is disabled, every *ibaPDA* client automatically connects to the *ibaPDA* server as **admin**. This ensures that every client has full rights.

To enable the user management system, you have to set a password for the **admin** user. For this purpose, click the <Set password> button.


Note

Please note, that there is a difference between Marx and WIBU license containers in terms of password length and characters.

Marx dongle: max. 15 ASCII characters

WIBU dongle or soft license: no limitation in terms of length and character set

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Enter a password, repeat it and close the dialog via <OK>.

An active user management is indicated by a text line on top of the user management dialog.
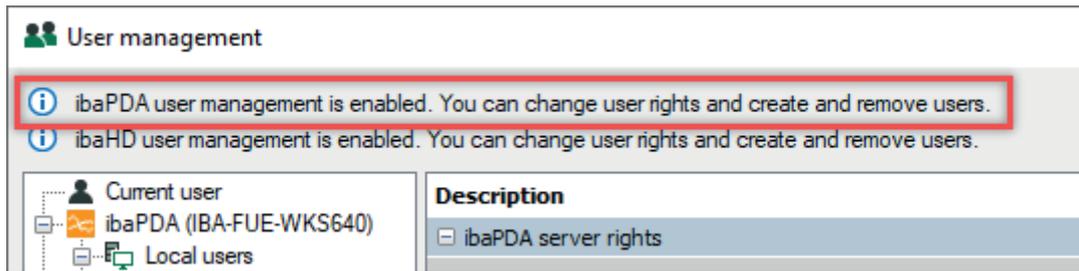
If the user management is enabled and you are logged in as **admin**, you can add or delete users and change user permissions. You can also assign passwords for each user account.

To add and delete users, the following buttons are available at the bottom (green icons for local users):

👥 👥	Add local user/domain user (in *ibaPDA* client, a distinction is made between *ibaPDA* users and *ibaHD-Server* users).
👥 👥	Delete selected local user/domain user
📁	Load users from an existing user file (*.pda_users)
💾	Save the configured (*ibaPDA*) users in a user file (*.pda_users), incl. all permissions and passwords

Table 8: User management buttons

User groups can only be created for domain users. For additional information on adding domain users, see ↗ *Add domain user, page 98*.

You can change the permissions by selecting the relevant user in the tree and choosing the desired option in the table to the right using the fields' drop-down menu.

Tip

Using the context menu of the table (right mouse click on the table) you can copy the settings of one user and transfer them to another user.

If the user management is enabled, a login dialog will appear when you connect to the *ibaPDA* server.
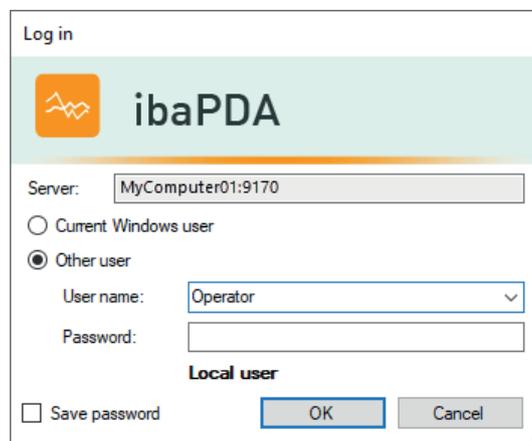
The *Current Windows user* selection works only for domain users.

Available users can be selected from a drop-down *User name* list.

If you enable the "Save password" option, the user name and password will be saved and re-used during the next connection attempt to the *ibaPDA* server to enable automatic login. It is not possible to save the password for the **admin** user for security reasons.

In the status bar of the client, you can see your current user name and the server you are connected to.

1	Logged in user	2	Connected server

If you are not logged in as **admin**, or do not have the user administration permission, you can only change your own password in the user management dialog. You cannot add or delete users or change their permissions. To log in as **admin**, first highlight the **admin** user in the user tree and then click the <Log in as admin> button.
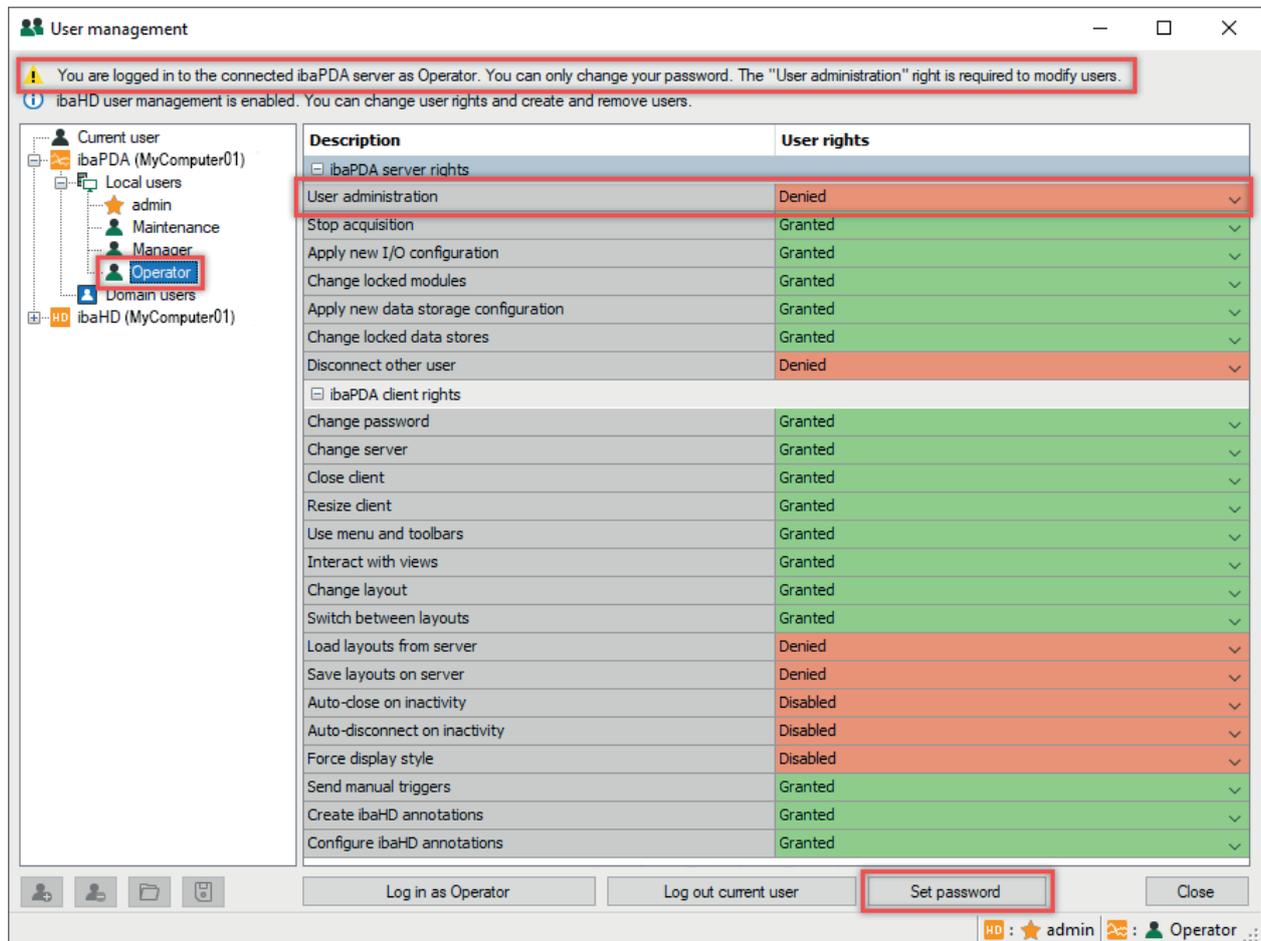
Note

If your *ibaPDA* client is connected to an *ibaHD-Server* (too), there is a separate user management available for the *ibaHD-Server* which can also be configured in this dialog. A simultaneous connection to both servers will partially result in effective permissions.

For more information, please see ↗ *Rights when simultaneously logged in to iba-PDA and ibaHD-Server, page 103*.

7.1.1   ibaPDA server rights

Option	Description
User administration	The right to add/delete users and to change the assigned rights
Stop acquisition	The right to stop the measurement
Apply new I/O configuration	The right to apply a new I/O configuration
Change locked modules	The right to change the settings of a locked module. A locked module is a module, whose configuration cannot be changed. All the module properties are locked. All the signal properties like name, scaling, unit etc. are locked.
Apply new data store configuration	The right to apply a new data store configuration
Change locked data stores	The right to change the "Locked" property of a data store. A locked data store is a data store whose configuration cannot be changed.
Disconnect other user	The right to disconnect another client in case the server has no more free client licenses left at the time the current user tries to connect to the server with another client. If no more client licenses are available, a dialog will appear showing a list of the currently connected clients and offering the possibility to select and disconnect a client.

Table 9: User management, ibaPDA server rights

Note

The majority of the client rights for the user **admin** is fix and cannot be altered by this user.

Tip

One way to prevent acquisition from being unintentionally terminated by a user with permission to do so is to use the "Stop prevention" function in the I/O Manager. More information about this can be found in part 2 of the *ibaPDA* manual, chapter 4.11 "Stop prevention".

7.1.2   ibaPDA client rights

Option	Description
Changing the password	The right for a user to change his own password
Change server	The right to connect to a (different) *ibaPDA* server
Close client	The right to close the *ibaPDA* client
Resize client	The right to change the size of the program window or the display style, either using the mouse or using a key combination, e.g. to enable/disable full screen mode.
Use menu and toolbars	The right to use menu commands and buttons of the toolbar. Without this right, the menus and toolbars are disabled (grayed out), except for the toolbar of the views. The user can add/remove signals to/from the current views.
Interact with views	The right to interact with views, e.g. zoom in/out, show/hide signals or change the scaling in trend graphs.
	If a user is not authorized to interact with views, the right "Change layout" must also be disabled.
	This right does not apply to FFT and oscilloscope views. Interaction with those views is always possible.
Change layout	The right to change the current layout.
	If you do not have this right, then you cannot move, reduce or enlarge the *ibaPDA* client window. You cannot change views. You cannot change docking windows.
Switch between layouts	The right to switch layouts.
	Users with this right can switch between different layouts by using the layout toolbar or function key <F11>.
Load layouts from server	The right to load layouts from the server
	Users with this right can manually load layouts from the server via the Layout Manager. When logging in to the server, a query appears asking if layouts should be loaded from the server. Users who do not have this right cannot manually load layouts from the server, nor is there a query when they log in.
	Exception user admin:
	■ Denied: Layouts can be loaded manually from the server. There is no query when logging in.
	■ Granted: Layouts can be loaded manually from the server. There is an additional query when logging in.

Option	Description
Save layouts on server	The right to save current or modified layouts on the server. Users with this right can manually save layouts on the server via the Layout Manager. If layouts have been changed, an additional query appears asking whether layouts should be saved on the server when the user logs out or exits *ibaPDA*. Users who do not have this right cannot manually save layouts on the server, nor is there a query when they log out. Exception user admin: ■ Denied: Layouts can be saved manually on the server. There is no query when logging out. ■ Granted: Layouts can be saved manually on the server. There is an additional query when logging out if layouts have been changed. When saving on the server, the layouts are saved in the layout file (*.layouts) in the path for the server configuration files, e.g. `C:\ProgramData\iba\ibaPDA\Layouts`
Auto-close on inactivity	Clients that are logged in under a user with this right are automatically exited after the set time if no use occurred in this time. Times from 5 min to 24 h can be selected.
Auto-disconnect on inactivity	Clients, which are logged in by a user with this right will be disconnected from the *ibaPDA* server automatically if the set time has elapsed without any operation during this time. The last layout remains loaded and the log-in dialog appears on the screen. Times from 5 min to 24 h can be selected.
Force display style	Clients that are logged in under a user with this right show the set display style during starting.
Send manual triggers	The right to send start and stop triggers using the buttons in the toolbar of the data store or the context menu on the data store status tree.
Create ibaHD annotations	The right to enter new annotations based on a pre-configured annotation type (selection from a drop-down list).
Configure ibaHD annotations	The right to configure new annotation types

Note

The majority of the client rights for the user "admin" is fix and cannot be altered by this user. Exception: Auto- close / disconnect on inactivity.

Tip

If the menus and tool bars are disabled and you need to return to the user management dialog, press <Ctrl>+<U> for a new login to the server.

7.2   User management in a domain with Active Directory

The iba software products *ibaPDA*, *ibaHD-Server*, *ibaCapture* and *ibaDaVIS* support user management via Active Directory. Thus, not only are local users of the programs accepted, but also domain users or groups defined by the IT admins.

Note

> *ibaPDA* only supports Active Directory security groups for user management. Distribution groups are not supported.
>
> Further information on security groups and distribution groups can be found in the Microsoft documentation.

7.2.1   Advantages of the Active Directory method

For the IT administration, Active Directory offers the advantage of central user management for applications such as *ibaPDA*, *ibaHD-Server*, *ibaCapture* or *ibaDaVIS* in one domain. This simplifies the maintenance of user accounts and their authorizations within the applications.

Active Directory users, or *domain users* as they are called in the softwares, are users or groups defined in an Active Directory.

The individual users inherit the permissions from the group to which they belong. Therefore, it is not necessary to create all users individually in the software's user management system. If the group is created as a domain user, any user belonging to this group can log in with their domain credentials and use the software with the permissions assigned to the group. This means that adjustments can be made very easily by the IT administration, e.g., in the case of staff changes or new employees.

Individual users can still be created locally in the software's user management system if required, e.g., to obtain rights that differ from those of the group.

The software-specific rights are granted or denied to the individual users via the software's user management interfaces (*ibaPDA* or *ibaHD-Server*). This can be done by all users who have the *User administration* right.

7.2.2   Establish a connection to a domain

To add a domain user, you must first establish a connection to a domain. Under the *domain user* node in the user management dialog, you can set which Active Directory domain *ibaPDA* or *ibaHD-Server* you should connect to.

If the *ibaPDA/ibaHD-Server* computer is a member of a domain, you can decide to use this domain. It is also possible to use another domain by entering the domain name and the credentials of a user from that domain. Thus, it is possible to use the users of an Active Directory on an *ibaPDA* computer that is not integrated in a domain (e.g., only part of a workgroup). The prerequisite is, of course, that the domain is accessible so that *ibaPDA* can query the corresponding information.

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ibaPDA or *ibaHD-Server* will then search for domain users and groups in the set domain and its sub-domains.
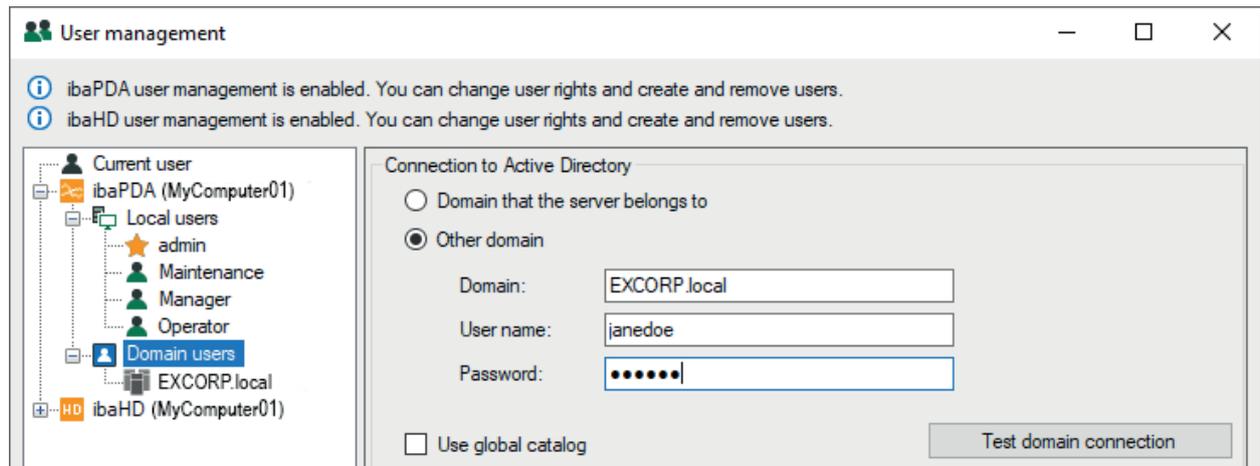
Proceed as follows:

1. If you have not already done so, log on as a user with the "User administration" right.

2. In the user tree, select the *Domain users* node. The *Connection to Active Directory* section appears in the right-hand dialog box.

3. If the computer is already in a domain and you want to access the users of this domain, select *Domain that the server belongs to*.

4. If you want to access the users or groups of another domain, select *Other domain* and specify the credentials of a valid domain user. It is recommended to use the full domain name (FQDN: Fully Qualified Domain Name) with all name components (e.g., including the suffix *.local*).

5. Click on <Test domain connection> to check that the information is correct. If the connection is successful, you will receive a message.
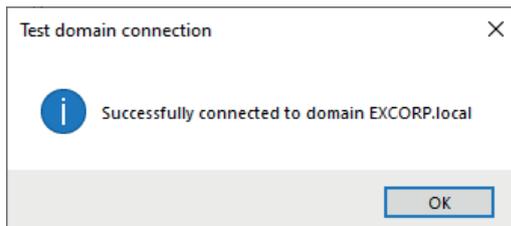
6. If you enable the *Use global catalog* option, then parent domains and trusted domains are also included when searching for users and groups.

At the bottom of the user tree there are four buttons (blue icons for domain users) with the following functions:

👤➕ 👤➕	Add local user/domain user (in *ibaPDA* client, a distinction is made between *ibaPDA* users and *ibaHD-Server* users).
👤➖ 👤➖	Delete selected local user/domain user
📁	Load users from an existing user file (*.pda_users)
💾	Save the configured (*ibaPDA*) users in a user file (*.pda_users), incl. all permissions and passwords

Table 10:   User management buttons

7.2.3   Add domain user
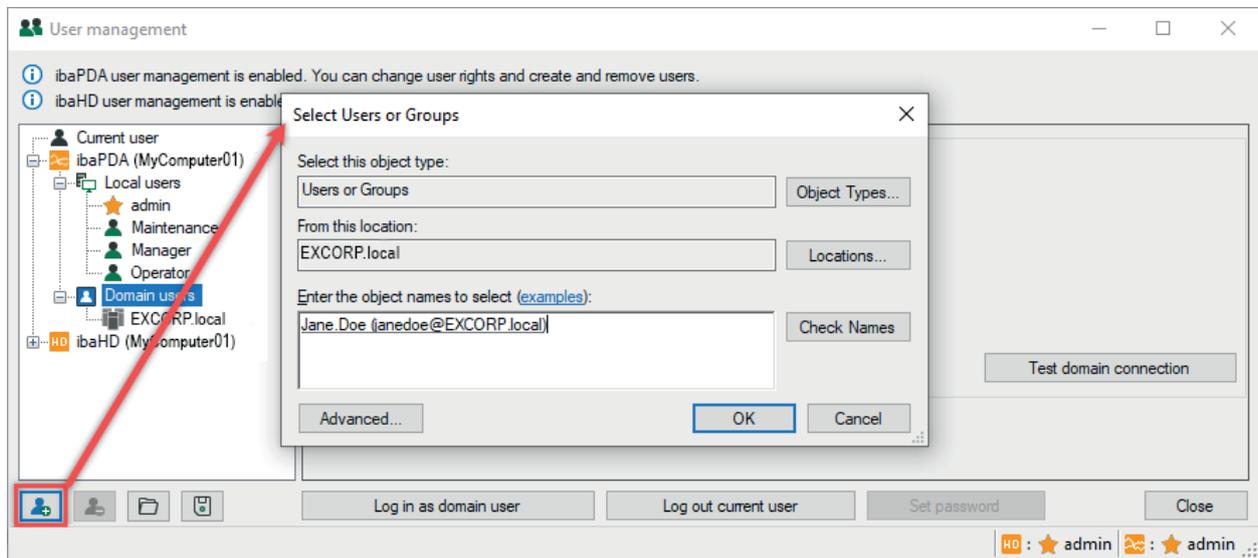
Proceed as follows:

1. Make sure that any node in the *Domain users* section of the user tree is selected.

2. Click the "Add user" button at the bottom of the tree. The tooltip for the button shows the program and computer name for which the user is created, e.g., "ibaPDA (*computer name*)". The "Select users or groups" dialog opens (Windows standard dialog). The default domain is set as configured in the domain settings (see figure in 7.2.2, page 96).

3. Enter a user or group name in the empty field if you know it. If not, you can use the search function via <Advanced...>. Then select the desired user or group from the search results. If necessary, you can select several users or groups here, separated by semicolons.

4. Close the dialog with <OK>. The new user or group now appears in the user tree under a domain node.

5. If you want to add additional users, make sure that the *Domain users* node or the child domain node is selected.

7.2.4   Manage user rights

If a user or group is selected in the user tree, the corresponding permissions are displayed to the right of it. Select the top node *Current user* if you want to see the granted permissions for the currently logged-in user.

You can assign or revoke rights to users or groups if you are logged in to the *ibaPDA* server or *ibaHD-Server* as a user with the "User administration" right (e.g., admin).

Rights that are not available or cannot be changed are grayed out. For example, the "Change password" right is not available for domain users or groups.

By right-clicking in the table you can copy the user rights and transfer them to another user.

7.2.5   Effective rights

One domain user can belong to several groups. Permissions can be assigned both directly to the user or inherited from the groups to which they belong.

The "Effective rights" column shows the result of this mechanism and is only displayed for domain users, not for groups or local users.

If both a domain user and the user group to which it belongs are entered in the user management, there may be different settings for group and user.

In such a case, the **granted** rights always prevail over the denied ones. Example *ibaPDA:*

Example *ibaHD-Server*:

The figures show that the user "jdoe" has been denied the "Switch server" right. However, this user still gets the right granted because it is also a member of the "ibaPDA-users" or "ibaHD-users" group, which has this permission.

If a right has been granted, the tooltip on the mouse cursor shows the source(s) that inherited the right.

In this context, similar cases are also possible:

The configured domain user is a member of a group

User	Group	Effective
Granted	Granted	Granted
Granted	Denied	Granted
Denied	Granted	Granted
Denied	Denied	Denied

The configured domain user is a member of more than one group

User	Group 1	Group 2	Effective
Granted	Granted	Granted	Granted
Granted	Granted	Denied	Granted
Granted	Denied	Granted	Granted
Granted	Denied	Denied	Granted
Denied	Granted	Granted	Granted
Denied	Granted	Denied	Granted
Denied	Denied	Granted	Granted
Denied	Denied	Denied	Denied

In the case of users who are members of several groups, *ibaPDA* successively verifies the group based rights in their listed order in the list of SIDs received from the Active Directory controller (AD controller). This list is requested by ibaPDA from the AD controller whenever a domain user logs on. The group rights are combined with one another according to fixed rules. If the domain user is entered individually in the *ibaPDA* user management system, its rights are used as the basis for the additional combinations. If the user is not entered in the user management system, only the group rights are taken into account.

The order of the groups in the SID list is important for certain rights.

1. They are determined as granted/denied via a Boolean "OR" function, whereby "Granted" is dominant.

2. For the rights "Auto-close on inactivity" and "Auto-disconnect on inactivity", the lowest value is always applied. For example, if one group has a value of 10 minutes and the other group has a value of 1 minute, 1 minute is applied.

3. The "Force display style" right is applied from the user or the first group with a preselected display style.

4. For the rights "Load layouts from server" and "Save layouts on server", the layout directory is applied from the user or the first group for whom one of these rights is set.

The domain user is not entered in the user management system but is a member of multiple groups

Group 1	Group 2	Effective (current user)
Granted	Granted	Granted
Granted	Denied	Granted
Denied	Granted	Granted
Denied	Denied	Denied

7.2.6   Logging in as a domain user

You can log in as a domain user in the user management dialog. To do this, click the button <Log in as domain user> at the bottom of the dialog. The button is only available if the *Domain user* node or one of its child nodes is selected in the user tree.

In the subsequent login dialog, you have various options for logging in.

Current Windows user

Logging in with the current Windows user is only possible for domain user accounts. Local Windows users are not supported.

The *ibaPDA server* or *ibaHD-Server* uses the SID (Security IDentifier) of the logged-in user to determine whether this user is present in the configured Active Directory (setting is configured via user management – *Domain users* node). If the search is successful, the user's group memberships in the Active Directory are determined. Based on these, the user's rights within *ibaPDA/ibaHD-Server* are configured via the *ibaPDA/ibaHD* user management dialog. It is not necessary to enter a password for the current Windows user, because their credentials have already been verified during Windows logon.

Other user

You can also log in under "Other user" with the full credentials of a user. The drop-down list in the *Users* field shows all configured local users and domain users that are available for selection.

To log in as a domain user, enter the user name in the user field using the syntax `Domain\ User name`. It is recommended to use the full domain name (FQDN: Fully Qualified Domain Name) with all name components (e.g., including the suffix *.local*). Additionally, you must enter the password of the domain user.

The *ibaPDA/ibaHD-Server* logs on to the desired domain with the entered credentials, thereby verifies the user and queries the SID.

The rest of the procedure is identical to that for the "Current Windows user":

The *ibaPDA server* or *ibaHD-Server* uses the SID to determine whether the user exists in the configured Active Directory. If the search is successful, the user's group memberships in the Active Directory are determined. Based on these, the user's rights within *ibaPDA/ibaHD-Server* are configured via the *ibaPDA/ibaHD* user management dialog.

7.2.7   Indication of logon name and display name

Active Directory users have a logon name and a display name. The logon name is indicated in the user management by default.

ibaPDA will retrieve the display name of new Active Directory users that are added. For existing Active Directory users, you can let *ibaPDA* retrieve the display name by executing the command *Update AD user display names*.

By using the context menu in the domain users area of the user tree you can decide which name is shown in the tree:

- Logon name: The logon name is shown in the tree and the display name is shown as tooltip.

- Display name: The display name is shown in the tree and the logon name is shown as tooltip.

- Logon and display name: The logon name is shown in the tree, followed by the display name in brackets.

Context menu on user tree, domain users area

Logon name and display name (in brackets)

7.3 Rights when simultaneously logged in to ibaPDA and ibaHD-Server

The *ibaPDA* client program can connect to an *ibaPDA* server as well as to an *ibaHD-Server*. Users can be connected to both servers simultaneously and logged in as the same or different users. On the other hand, exclusive connections only to the *ibaPDA server* or *ibaHD-Server* are also possible. The *ibaPDA* client program can thus assume the role of an *ibaPDA* client and an *ibaHD* client (both are also possible at the same time).

Note

[i]	Simultaneous login to *ibaPDA server* and *ibaHD-Server* with different users is possible, but not necessarily useful. For example, in cases where both an *ibaPDA* user and an *ibaHD-Server* user have the same rights, the system will determine the combined effective rights.

If you select the top node *Current user* in the user tree, then the table shows the user accounts that were used to log in to *ibaPDA* and *ibaHD-Server* respectively.

The column "ibaPDA user" shows the rights that are granted when logging in to the *ibaPDA* server. If the user is a domain user, then the mouse cursor tooltip indicates the source(s) from which the rights were inherited. This user does not need to exist as a single user in the user tree if it belongs to a group that is set as a domain user.

The column "ibaHD user" shows the same for *ibaHD-Server* users.

The "Effective rights" column shows the result of combining the permissions of *ibaPDA* and *ibaHD-Server* users. For most rights, an AND operation is applied for this purpose. This means that both users must have been granted each the right in order to also receive the effective right.

ibaPDA server rights are only available to *ibaPDA* users. Some of the *ibaPDA* client rights are handled differently and are not combined. These rights will then be unavailable (grayed out) in the Effective rights column.

7.3.1   ibaPDA-client rights for PDA and HD clients

ibaPDA client right	ibaPDA client	Log. operation	ibaHD client	Effective	Comment
Change password	X		X	-	Change you rown password on the relevant server
Change server	X		X	-	Change the respective server
Close client	X	AND	X	X	"Denied" is dominant; this affects the shared *ibaPDA* client program.
Resize client	X	AND	X	X	"Denied" is dominant; this affects the shared *ibaPDA* client program.
Use menu and toolbars	X	AND	X	X	"Denied" is dominant; this affects the shared *ibaPDA* client program.
Interact with views	X	AND	X	X	"Denied" is dominant; this affects the shared *ibaPDA* client program.
Change layout	X	AND	X	X	"Denied" is dominant; this affects the shared *ibaPDA* client program.
Switch between layouts	X	AND	X	X	"Denied" is dominant; this affects the shared *ibaPDA* client program.
Load layouts from server	X		X	-	CurrentLayout.lay is loaded from the relevant server;if granted for both, the layouts overwrite each other.
Save layouts on server	X		X	-	Layout is saved on the relevant server; PDA user saves to PDA server, HD user saves to HD server.
Auto-close on inactivity	X		X	X	Lowest current value is applied.
Auto-disconnect on inactivity	X		X	-	The user concerned is logged out; *ibaPDA* client program remains open.

ibaPDA client right	ibaPDA client	Log. oper- ation	ibaHD client	Effective	Comment
Force display style	X	AND/OR	X	(X)[1]	May only be enabled on one server or settings must be the same
Send manual trig- gers	X	AND	X	X	"Denied" is dominant.
Create ibaHD an- notations	X	AND	X	X	"Denied" is dominant.
Configure ibaHD annotations	X	AND	X	X	"Denied" is dominant.

Table 11:   Combination of ibaPDA and ibaHD-Server client rights for ibaPDA clients

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[1] Disabled, if settings are not the same

7.3.2   ibaPDA server rights for PDA and HD clients

| ibaPDA server right	ibaPDA client	Log. oper- ation	ibaHD client	Effective	Comment
User administra- tion	X			= PDA client	Right only exists on *ibaPDA* server
Stop acquisition	X			= PDA client	Right only exists on *ibaPDA* server
Apply new I/O con- figuration	X			= PDA client	Right only exists on *ibaPDA* server
Change locked modules	X			= PDA client	Right only exists on ibaPDA server.
Apply new data storage configura- tion	X			= PDA client	Right only exists on *ibaPDA* server
Change locked data stores	X			= PDA client	Right only exists on *ibaPDA* server
Disconnect other user	X			= PDA client	Right only exists on *ibaPDA* server

Table 12:   Combination of ibaPDA and ibaHD-Server client rights for ibaPDA server

8   Printing

*ibaPDA* supports printing of each view separately, or all panes at once.

In order to print a single view, right-click on the tab of the relevant view and select *Print* from the context menu.

To print all views at once, select *Print* in the *File* menu or press <Ctrl>+<P>.
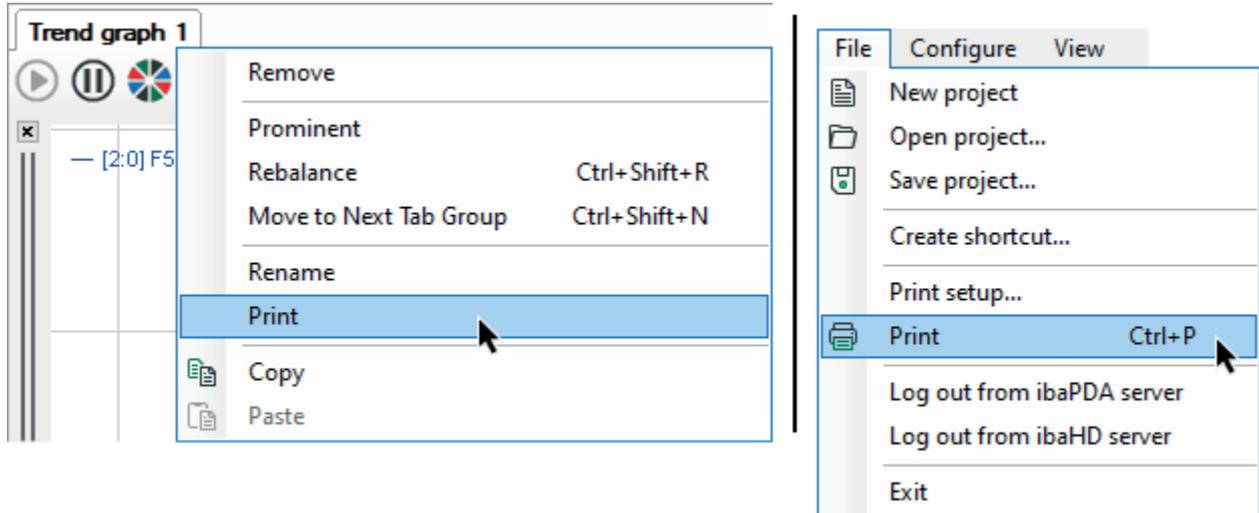
8.1   Printer setup

The *ibaPDA* print setup dialog can be accessed in the *File– Print settings…* menu. The dialog also opens when printing a single view via the context menu of the View tab.
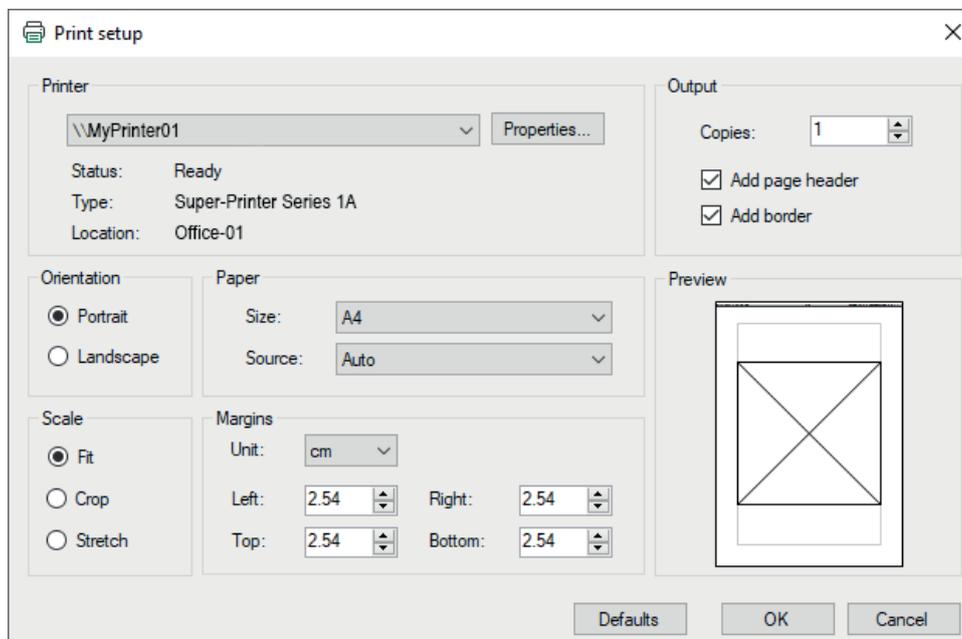
This dialog provides the usual printing options:

■ printer selection and the possibility to open the printer specific options dialog (<Properties…> button)

■ Number of copies

■ Orientation

■ Page size and printer tray

■ Page margins

Some printing options are more specific to *ibaPDA*:

■ Output

▪ A header containing time stamp, title of the printed view and the current *ibaPDA*-version will be inserted on the page.

▪ A frame will be printed around the view.

■ Scale

▪ *Fit*: the views to be printed are scaled to fit the print range without changing their aspect ratio.

▪ *Crop*: the views to be printed are not scaled. The views are printed in screen size. The images are cropped to the print range if larger.

▪ *Stretch*: the views to be printed fit the entire print area. The aspect ratio is not observed.

■ Margins

▪ The minimal values depend on the non-printable page area of the selected printer.

■ Preview

▪ Shows a schematic print preview. If the *Fit* scaling mode is selected, the view's aspect ratio is considered square.

8.2   Settings for printing views

In addition to the aforementioned general print setup, there are more settings to be configured in the C*lient preferences* dialog or in the *Properties* dialog of the views to be printed.

This dialog configures the color settings for printout of views. If, for instance, a view with a black background works well on a screen, it is a reasonable approach to use a white background in a printout in order to save toner.

General print settings are available on the "Printing" item, followed by subordinated branches for FFT view, trend graph/HD trend graph, camera, cycle, scope view etc.; *ibaQPanel* elements, like multi-state picture, label, bar chart, text input control and QPanel.

For all these element types, foreground and background colors can be usually set in general and individually. Some additional color settings are available depending on the element.
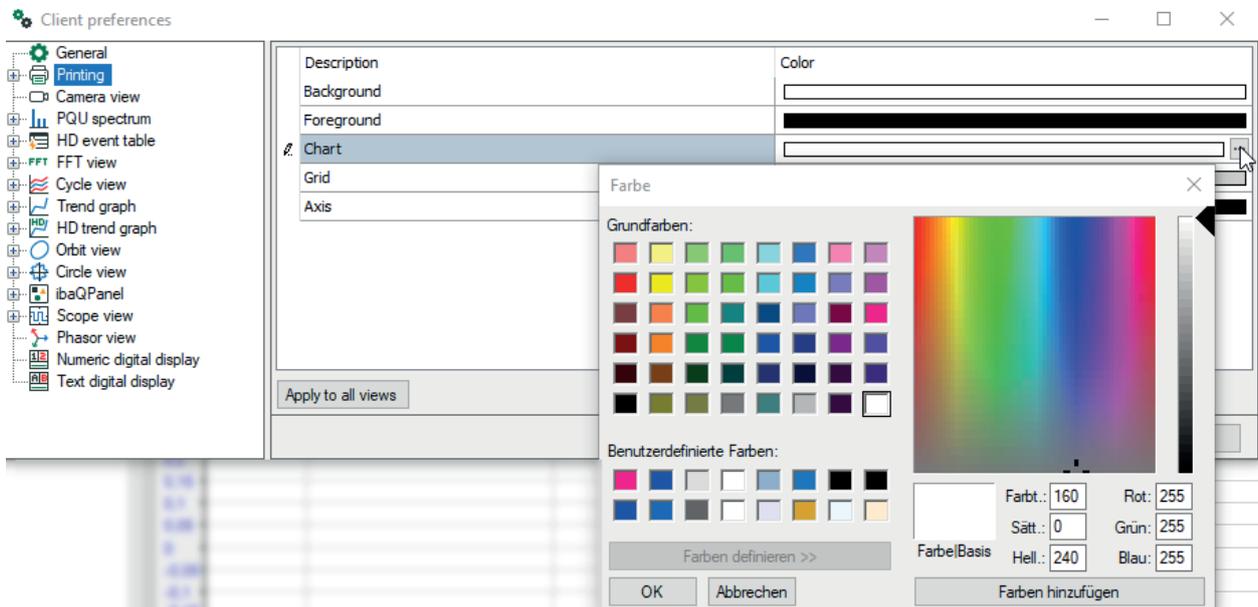
Note

If you want to set or modify the printing options of a specific view, use the "Properties" dialog of the view in question.
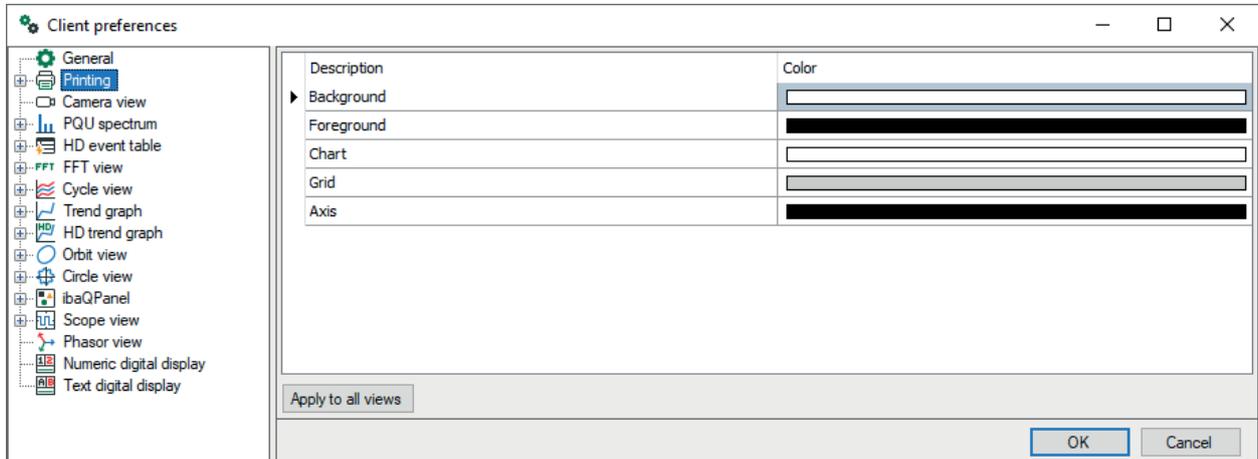
In order to make a general color setting, select the "Printing" main branch in the tree. Click in a cell in the color column and select the desired color. If you want the new settings to be applied to all types of views, click on the <Apply to all views> button.

Click <OK> to close the dialog.

In order to change the color settings for each element individually, select an element from the tree and click in a cell of the color column. Select the desired color and click <OK>.

Note

Changes of the color settings in the preferences apply to newly opened views only.

9   Support and contact

Support

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Email: support@iba-ag.com

Note

> If you need support for software products, please state the number of the license container. For hardware products, please have the serial number of the device ready.

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