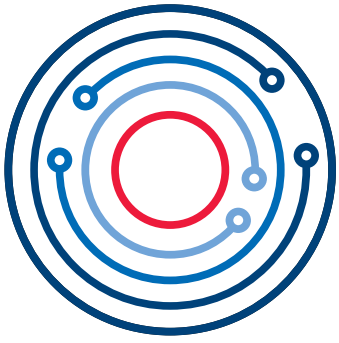
January 2022

QIAsphere User Manual



QIAsphere

Sample to Insight

QIAGEN

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1 Introduction

Before connecting your QIAsphere-ready instrument to QIAsphere Cloud and using the QIAsphere Base, it is essential that you read this user manual carefully and pay attention to the safety information.

QIAsphere connects customers with QIAGEN's comprehensive digital ecosystem to deliver a unique user experience and improve laboratory efficiency and safety through cloud-based connectivity. The QIAsphere system consists of the following components:

- **QIAsphere-ready Instruments** from QIAGEN, which can be connected to the QIAsphere solution
- **QIAsphere App** for instrument monitoring, available for mobile devices and web browser for desktop use
- **QIAsphere Base** which is an IoT (Internet of Things) gateway device for secure network communication

1.1 About this user manual

This user manual provides information about the QIAsphere in the following sections:

1. Introduction
2. Safety Information
3. General Description
4. QIAsphere Setup
5. Before Installation
6. Configuring QIAsphere Mobile App
7. Connecting QIAsphere Base to Local Network
8. Connecting QIAsphere Base to the QIAsphere Cloud
9. Connecting QIAsphere-ready Instruments to Local Network and QIAsphere Base
10. Connecting Users and Instruments in Cloud Mode
11. Connecting and Managing Mobile Devices in Local Mode
12. QIAsphere App
13. Administration of QIAsphere Base
14. Resetting QIAsphere Base
15. QIAsphere Export Tool Application

16. Troubleshooting
17. Appendix A – Technical Data
18. Appendix B – IT Prerequisites for Using QIAsphere

1.1.1 Technical assistance

At QIAGEN®, we pride ourselves on the quality and availability of our technical support. Our Technical Services Departments are staffed by experienced scientists with extensive practical and theoretical expertise in molecular biology and the use of QIAGEN products. If you have any questions or experience any difficulties regarding the QIAsphere or QIAGEN products in general, do not hesitate to contact us. QIAGEN customers are a major source of information regarding advanced or specialized uses of our products. This information is helpful to other scientists as well as to the researchers at QIAGEN. We therefore encourage you to contact us if you have any suggestions about product performance or new applications and techniques. For technical assistance and more information, please see our Technical Support Center at **www.qiagen.com/support/technical-support**, or call one of the QIAGEN Technical Service Departments or local distributors, see back cover or visit **www.qiagen.com**.

1.1.2 Policy statement

It is the policy of QIAGEN to improve products as new techniques and components become available. QIAGEN reserves the right to change specifications at any time. To produce useful and appropriate documentation, we appreciate your comments on this user manual. Please contact QIAGEN Technical Services.

1.2 Intended use of the QIAsphere

QIAsphere is an IoT platform intended to be used for connecting QIAGEN instruments for remote monitoring, notifications, and other connectivity services using cloud or local network connection.

The QIAsphere system is intended for molecular biology applications. This product is not intended for the diagnosis, prevention, or treatment of a disease.

1.3 Requirements for QIAsphere users

The table below covers the general level of competence and training necessary for delivery, installation, use, maintenance, and servicing of the QIAsphere components.

Task	Personnel	Training and experience
Delivery	No special requirements	No special requirements
Installation, routine use and maintenance	Laboratory technicians or equivalent	Appropriately trained and experienced personnel familiar with use of computers and automation in general
Servicing	QIAGEN Field Service Specialists only	Trained and authorized by QIAGEN

2 Safety Information

Before installing or using QIAsphere Base, it is essential that you carefully read the user manual provided by the hardware supplier Eurotech and pay attention to their safety information. The instructions and safety information in this user manual must be followed to ensure safe operation of the instrument and to maintain the instrument in a safe condition.

The safety information for QIAsphere Base (Eurotech – ReliaGATE 10-12) can be found at **https://www.eurotech.com/en/products/iot/multi-service-iot-edge-gateways/reliagate-10-12**.

3 General Description

QIAsphere system connects QIAGEN´s QIAsphere-ready instruments via QIAsphere Base (gateway device) to the QIAsphere App running on mobile devices or desktop PCs, enabling the user for an increasing number of applications such as remote instrument monitoring. QIAsphere can be set up in the cloud-connected mode (cloud mode) or within your local network (local mode). In the cloud mode, you make the most out of your QIAsphere experience:

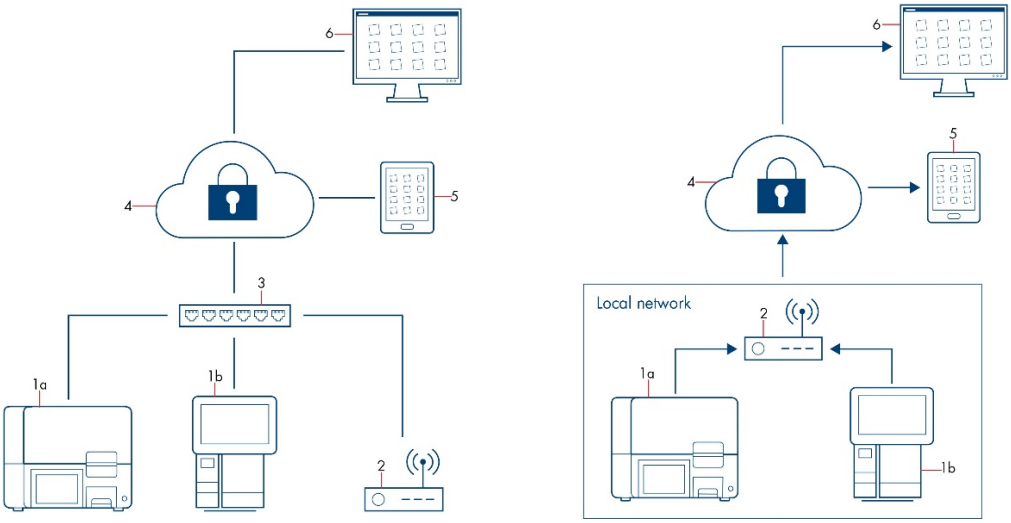
- **Stay connected** – Monitor your instrument(s) while being network independent in cloud mode. QIAsphere App can access the QIAsphere Cloud from anywhere, whereas local mode can only be used if the QIAsphere Base with associated instruments and App are within the same local network.
- **Monitor instrument status with mobile devices or from desktop PC** – In addition to the mobile app for iOS and Android devices, a web app version can be launched on PCs to monitor instruments from your desktop in cloud mode.
- **Full walk-away convenience** – Keep track of instrument status, e.g., run complete, through push notifications in cloud mode which is not available in local mode.
- **Schedule and reserve instruments** – Manage your instrument effectively in the app and check instrument availability in the scheduler, or make an instrument reservation for your next instrument.
- **Connect to multiple QIAsphere Bases** – Monitor instruments in your QIAsphere App that are connected to different local networks and QIAsphere Bases at the same time using cloud mode. In the local mode, only one QIAsphere Base can be connected to your QIAsphere App at a time. Hence, only the information of the instrument being connected to that one QIAsphere Base can be accessed.

Note: QIAGEN does not collect any personal identification or sensitive data such as patient health data when using QIAsphere cloud-connected mode. QIAsphere Cloud is used only to provide you fully functional instrument monitoring and other cloud services. The QIAsphere cloud is hosted on western European data center and servers. For more information on cyber security and data protection, download the security whitepaper, see **www.qiagen.com/qiasphere**.

3.1 Network architecture and data flow

3.1.1 Cloud mode

QIAsphere-ready instruments are connected via local network to a QIAsphere Base (see network architecture and data flow of cloud mode in Figure 1). The QIAsphere Base manages the instrument data transfer to the QIAsphere App using internet connection via the QIAsphere Cloud. In cloud mode, multiple QIAsphere Bases and associated instruments can be connected to the cloud (not shown in Figure 1), so that instrument information from different local networks are accessible in the QIAsphere App. Other QIAsphere clients running the QIAsphere App, e.g., mobile devices or desktop PC are network independent since they are connected via the cloud.

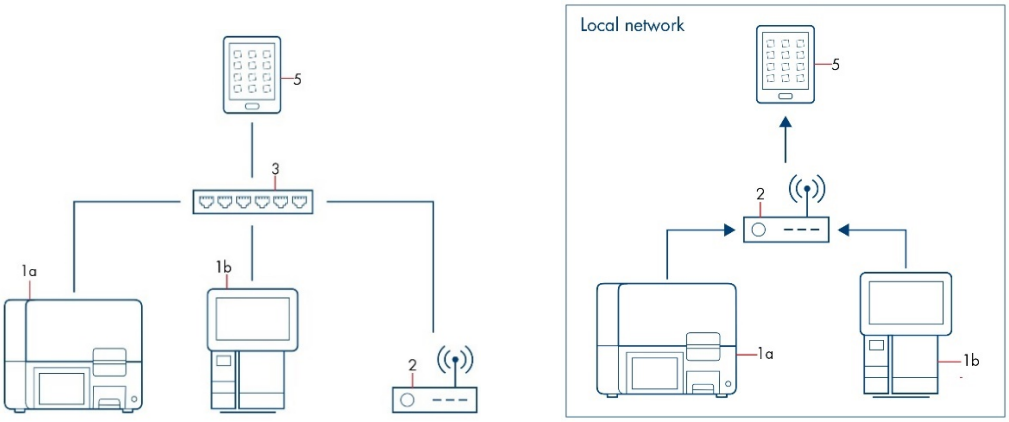


1	QIAsphere-ready Instruments	**4**	QIAsphere Cloud
2	QIAsphere Base (gateway device)	**5**	Mobile Device
3	Local Network/IT Department	**6**	Personal Computer (PC)

Figure 1. Network architecture (A) and data flow (B) between QIAsphere-ready instruments and QIAsphere App launched on mobile devices or desktop PCs in cloud mode.

3.1.2 Local mode

QIAsphere-ready instruments are connected via local network to a QIAsphere Base (see network architecture and data flow of local mode in Figure 2). In local mode, the QIAsphere Base manages the instrument data transfer to the mobile device running the QIAsphere App via the same local network.



1	QIAsphere-ready Instruments	**3**	Local Network/IT Department
2	QIAsphere Base (gateway device)	**5**	Mobile Device

Figure 2. Network architecture (A) and data flow (B) between QIAsphere-ready instruments and QIAsphere App launched on mobile devices or desktop PCs in local mode.

4 QIAsphere Setup

QIAsphere can be set up in cloud mode or local mode.

4.1 QIAsphere cloud mode setup

Requirements on site:

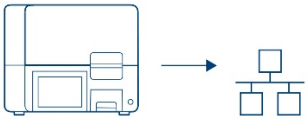
- Create **My QIAGEN** account, see section 5.3
- Request QIAsphere License, see section 5.4
- **Optional**: Install QIAsphere App and certificate on mobile device, see section 6

Follow the steps below to set up QIAsphere in cloud-connected mode:

1. Connect QIAsphere Base to local network, see section 7

2. Connect QIAsphere Base to QIAsphere Cloud, see section 8

3. Connect QIAsphere-ready instrument to local network and QIAsphere Base, see section 9



4. Set up workgroup:

- Create workgroup, see section 10.1
- Assign connected instrument, see section 10.2
- Invite and assign users, see section 10.3.1

4.2 QIAsphere local mode setup

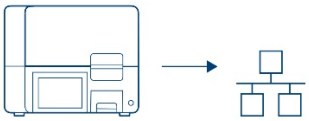
Requirements on site:

- Install QIAsphere App on mobile device, see section 6.1
- Install the app certificate, see section 5.2

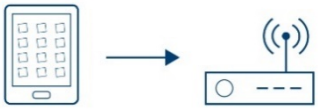
Follow the steps below to set up QIAsphere in local mode:

1. Connect QIAsphere Base to local network, see section 7

2. Connect QIAsphere-ready instrument to local network and QIAsphere Base, see section 9

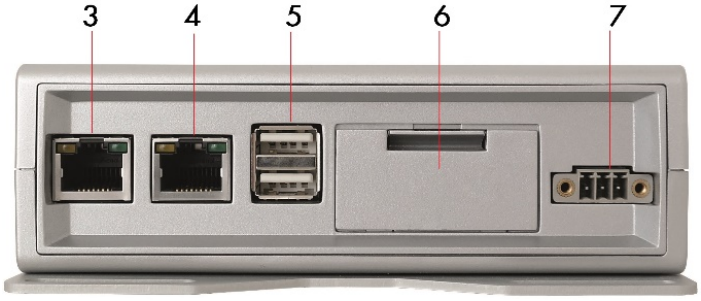


3. Connect QIAsphere App to QIAsphere Base, see section 11.1



4.3 External features of QIAsphere

Front View of QIAsphere Base



Rear View of QIAsphere Base

1 Status LEDs: User1, User 2, User 3, and User 4

2 Power LED: Blue LED indicator for power On/Off

3 ETH1 Ethernet port: Connect QIAsphere Base to local network

4 ETH0 Ethernet port: Connect QIAsphere Base to personal computer

5 Two USB ports

6 Service panel (includes microSD card slot, factory reset button, and backup battery)

7 Power cord socket

5 Before Installation

Please read the site and power requirements described in sections 5.1 and 5.2. For using QIAsphere in cloud mode, you need a valid **My QIAGEN** account and QIAsphere License. In case you do not have an account in **My QIAGEN** and QIAsphere License with associated administrator rights yet, please follow the instructions in sections 5.3 and 5.4 before installation.

To set up QIAsphere in cloud or local mode and to use connectivity services, QIAsphere-ready instruments and QIAsphere Base must be integrated into your local network. Depending on your local network settings, you may need to consult your IT department. If required, please share the QIAsphere Product and Solution Security Whitepaper (**www.qiagen.com/qiasphere**) and Appendix B on page 67, listing IT prerequisites and network requirements for the network integration of QIAsphere with your IT specialist.

5.1 Site requirements

QIAsphere Base must be connected to the same network as other QIAsphere-ready instruments. QIAsphere Base does not need to be located in close proximity to enable proper connection.

In cloud mode, the device (mobile device or desktop PC) running the QIAsphere App is network independent. In local mode, the mobile device running the App must be connected to the same network as the QIAsphere Base and instrument(s).

5.2 Power requirements

QIAsphere Base requires 100–240 V AC, 50/60 Hz power supply. The included power supply transforms the voltage to the operational voltage of 6–36 V DC. Ensure that the voltage rating of the QIAsphere Base is compatible with the AC voltage available at the installation site. Main supply voltage fluctuations must not exceed 10% of the nominal supply voltages.

Important: The power connector is **NOT** protected against short circuit. Always include an external fuse to protect the product. Details about power supply specifications and on how to supply power can be found in the user manual from Eurotech: **https://www.eurotech.com/en/products/iot/multi-service-iot-edge-gateways/reliagate-10-12**.

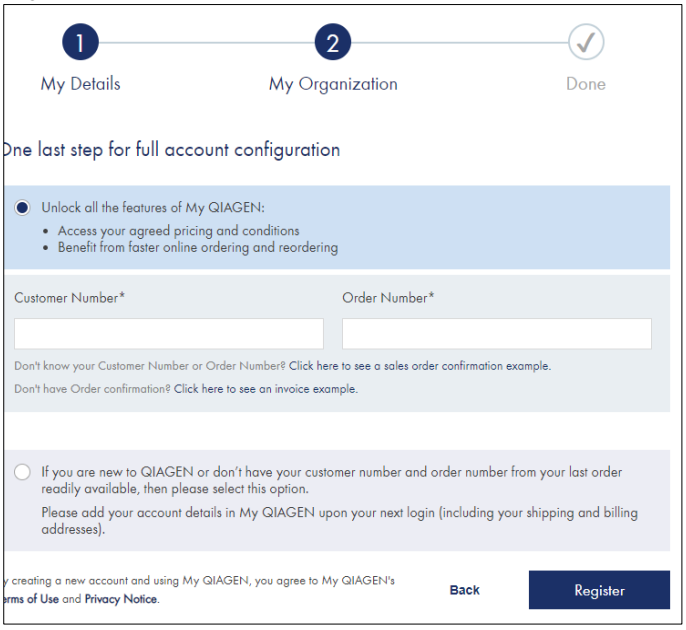
5.3 My QIAGEN account registration

An account in **My QIAGEN** is required to access the QIAsphere Administration and QIAsphere App in cloud mode.

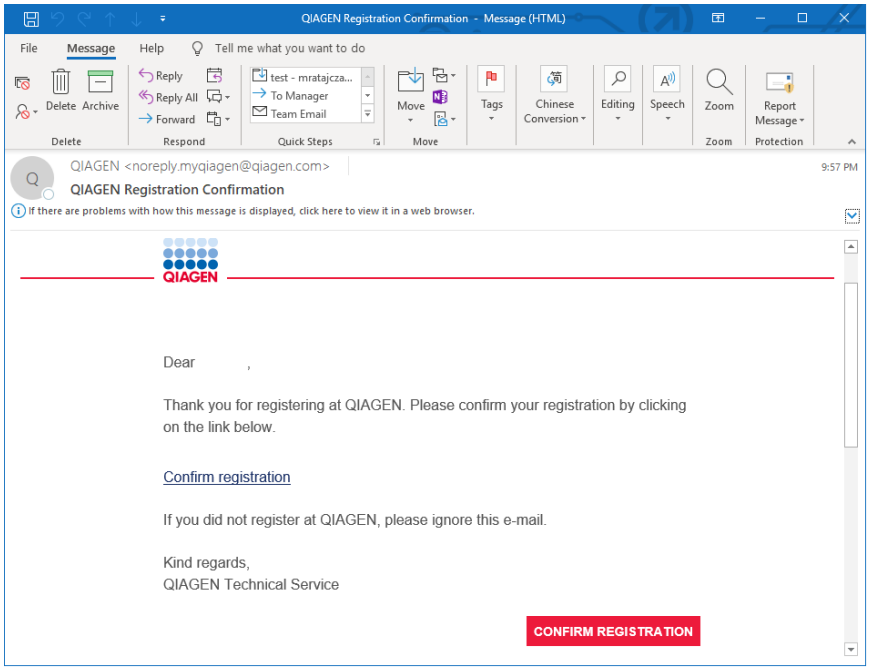
- The QIAsphere Administration is used to manage QIAsphere cloud connectivity and access rights for other users in your organization.
- The QIAsphere App is your primary tool for remote instrument monitoring.

If you do not have an account in **My QIAGEN** yet, go through the registration process as follows:

1. Go to **My QIAGEN** login page at **www.qiagen.com/myqiagen**.
2. Click **Register now**.
3. Follow the registration process by filling in the form in two steps shown below, then click **Register**.



4. A confirmation email is sent to you. Confirm the registration by clicking **CONFIRM REGISTRATION**.



5.4 Requesting QIAsphere license

Every organization needs at least one QIAsphere license. Multiple instruments can be maintained under this same license, under which a single administrator can manage QIAsphere for the whole organization.

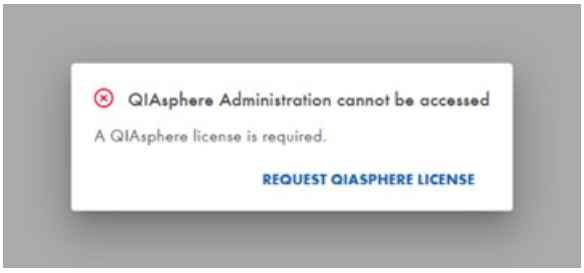
However, QIAsphere also allows multiple licenses per organization, in case single department or groups want to maintain their own QIAsphere.

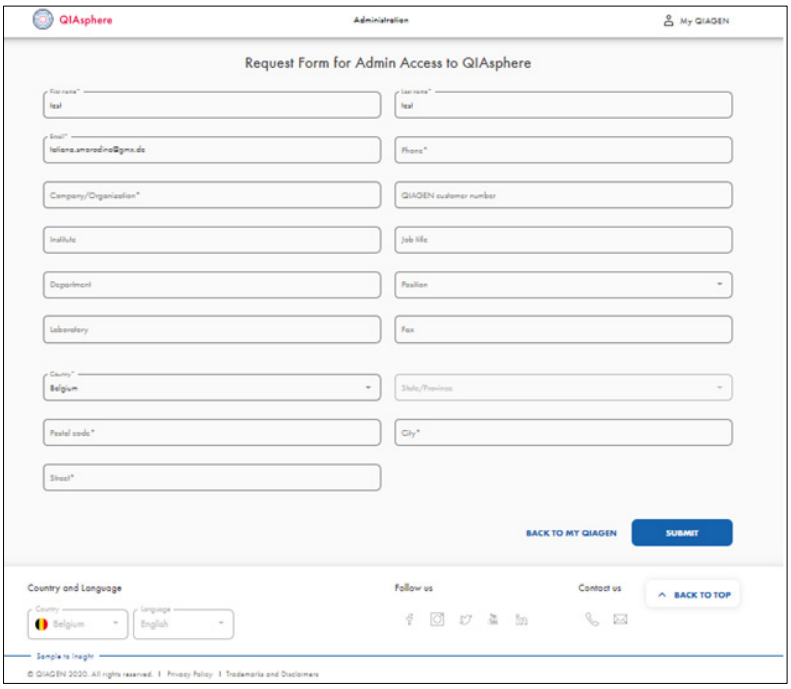
The QIAsphere license administrator can establish cloud connectivity and manage access rights for other users. To request a license perform the following steps:

1. Log in to your **My QIAGEN** Account.
2. Go to the **QIAsphere Administration** widget and click **MANAGE QIAsphere**.

Note: If you do not see the **QIAsphere Administration** widget, click **Manage Widgets**, then select **QIAsphere** widget and save your settings.

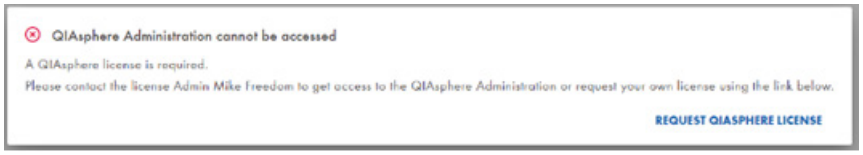
3. Depending on the license status, these two different scenarios are possible:
   - **Scenario 1**: **QIAsphere license does not yet exist for your organization.**
     You will see a popup window with an option to request for a QIAsphere License. Click **REQUEST QIASPHERE LICENSE**, enter your personal information as prompted in the request form and click **REQUEST**.

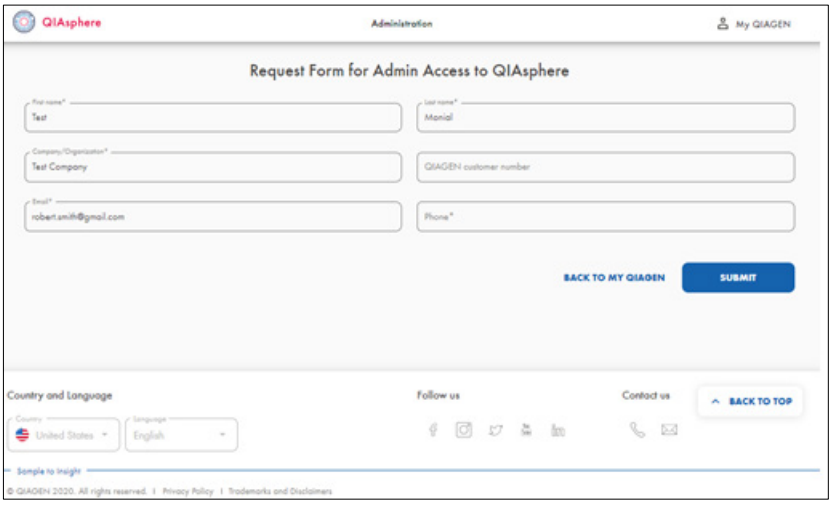




Note: You will be notified by email as soon as the license is created and you have been automatically assigned as QIAsphere Administrator. This may take 2 to 3 working days.
Note: If your **My QIAGEN** account is already assigned to a QIAsphere license, you will be directed to the **Administration** Portal.

- **Scenario2**: **QIAsphere license exists for your organization but you are not registered yet as a user.**
  The prompt screen informs you who the license administrator in your organization is, and an option to request your own license. Depending on your preference you can:
  - Contact the specified license administrator. This admin user can register you as a user, and assign you to a workgroup within the existing QIAsphere license.
    Note: If required, the administrator can upgrade your rights to QIAsphere Administrator for the same license in a separate step (as described in section 10.3.3).
  - Request a new license by clicking **REQUEST QIAPHERE LICENSE**. Fill out the request form as prompted and click **SUBMIT**.





Note: You will be notified by email as soon as admin rights are given. This may take 2 to 3 working days.

6 Configuring QIAsphere Mobile App

The QIAsphere App can be downloaded on iOS and Android devices. Follow the instructions in the respective sub section to install the mobile app and the required application´s certificate.

6.1 Installation of mobile application

The mobile application can be installed on iOS or Android devices.

6.1.1 Installing mobile application on iOS devices

Important: The minimum iOS version to install the QIAsphere App is **iOS 11** or later.

1. Go to **App Store** using your mobile device and search for QIAsphere App released by QIAGEN.

   QIAsphere
2. Follow the system instructions for app installation.

6.1.2 Installing mobile application on Android devices

Important: The minimum Android version to install the QIAsphere App is **Android 6.0** or later.

1. Go to **Google Play Store** using your mobile device and search for QIAsphere App released by QIAGEN:

   QIAsphere

   Note: If **Google Play Store** is not available in your country, go to **www.qiagen.com/qiasphere** and download QIAsphere App (apk file).
2. Follow system instructions for app installation.

6.2 Mobile app certificate installation

In certain scenarios, the QIAsphere App needs to retrieve data directly from the QIAsphere Base via the local network. The certificate is required to allow the direct communication.

Note: If you never connect your mobile device to the same network as QIAsphere Base, you do not need to install the certificate.

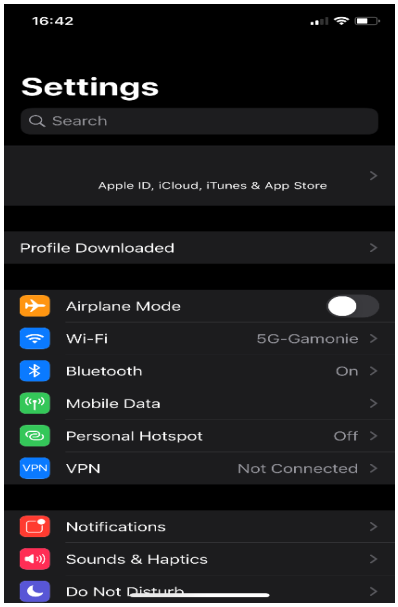
Installation of the certificate is mandatory if you want to use:

- Local mode
- The **QIAcube Connect Run Setup** feature (only available for QIAcube Connect)

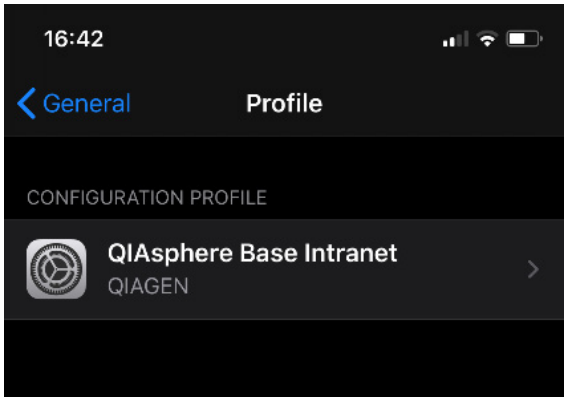
6.2.1 Certificate installation on iOS devices

Important: Install QIAsphere App first before you proceed with certificate installation (see section 6.1).

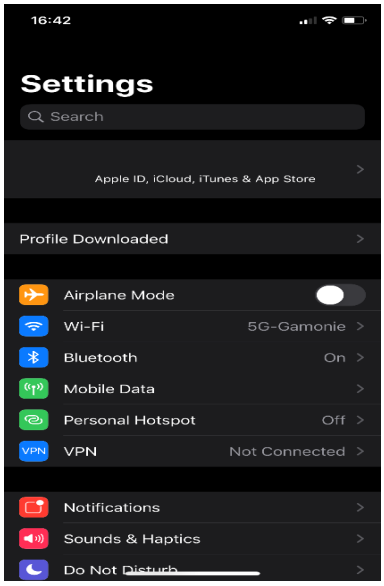
1. Use your iOS device and go to QIAsphere Product page at **www.qiagen.com/qiasphere**.
2. Download the iOS QIAsphere Profile (QIAsphere Local Mode Profile.mobileconfig).
3. Go to **Settings** app of your device and click **Profile Downloaded**.



4. Click the **QIAsphere Base Intranet** profile.

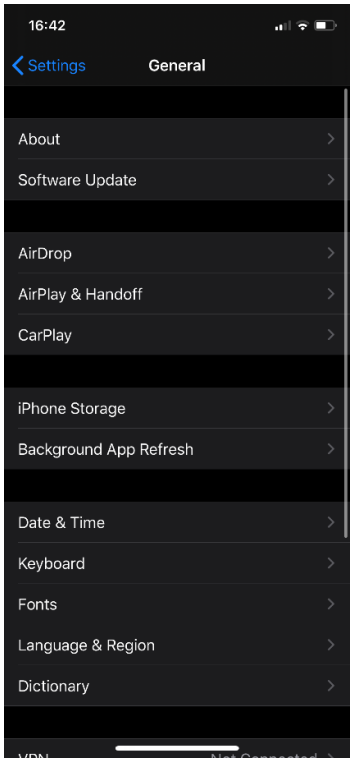


5. Verify the profile and click **Install**.
6. Enter your device passcode or password and click **Done**.
7. Read the warning and click **Install**.
8. Go to **Settings** app of your device and click **Profile Downloaded**.

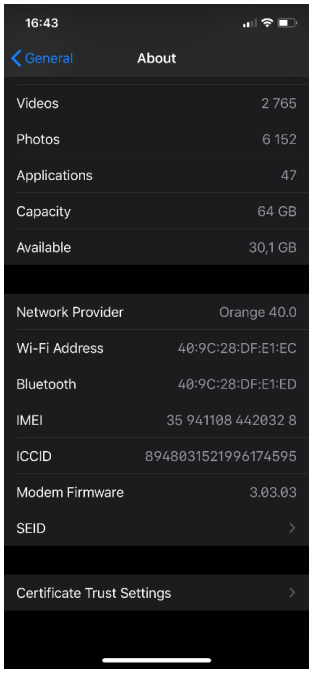


9. Acknowledge installation by clicking **Install**.
10. Profile is installed. Close the window by clicking **Done**.

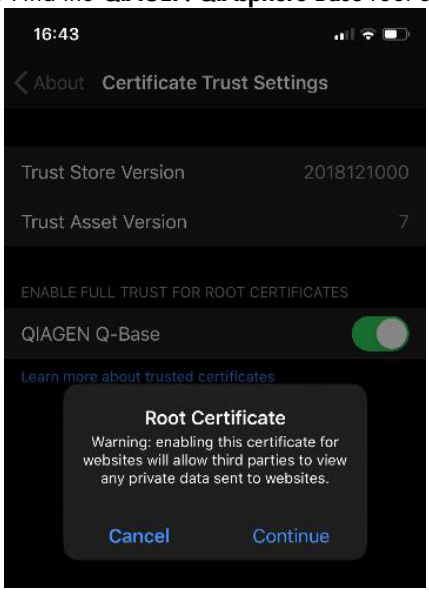
11. Go to the **General** section of the **Settings** app and choose **About**.



12. In the **About** section, scroll all the way down and go to **Certificate Trust Setting**.



13. Find the **QIAGEN QIAsphere Base** root certificate and click the toggle switch.



14. Acknowledge the fact you are trusting **Root Certificate** by clicking **Continue**.
15. QIAGEN QIAsphere Base certificate is now installed.

6.2.2 Certificate installation on Android devices

Important: Install QIAsphere App first before you proceed with certificate installation (see section 6.1).

1. Download Certificate for Android at **www.qiagen.com/qiasphere**.
2. Go to **My Files**.
3. Select the folder where the file has been downloaded to and open the file (find and choose the certificate from your files folder).
4. An installation process is started. During this process, it is necessary to:
    a. Enter your pin or password
    b. Assign a name to the certificate (you can choose any name). QIAGEN recommends selecting a name that is easily identifiable like **QIAsphereCert**.
    c. Select a **Credential use**. Set it to **VPN and apps**.

You can check on the security certificates screen of the Android settings, whether the certificate was successfully installed or not. How this screen can be reached depends on the type of device. On a Samsung Galaxy Tab A, for example, they can be reached by selecting **Settings > Security > Other Security settings > View security certificates**. The newly installed certificate should be visible in the **Users** tab.

7 Connecting QIAsphere Base to Local Network

Following section describes the setup of QIAsphere Base network connection. There are two setup processes available using:

- Personal computer (PC) and QIAsphere Base Setup Portal (recommended; refer to section 7.1)
- QIAsphere App installed on a mobile device (refer to section 7.2).

Both setup options can be used to connect QIAsphere Base to wireless or Ethernet networks.

Important: You may need assistance from your local IT service desk if the network you are about to use is protected with firewall. You can also use the listed network requirements in Appendix B on page 67 to clarify the IT prerequisites upfront.

7.1 Connecting QIAsphere Base to local network using PC

This section describes how to connect QIAsphere Base to local network using a personal computer (PC) and the QIAsphere Base Setup Portal (QBSP). This process requires a direct Ethernet connection between QIAsphere Base and the PC:

- For wireless QIAsphere Base network connection via Wi-Fi, follow the instruction below and proceed with section 7.1.1. You need the network name and password ready for the desired Wi-Fi network.
- For wired QIAsphere Base network connection, follow the instructions below and proceed with section 7.1.2.

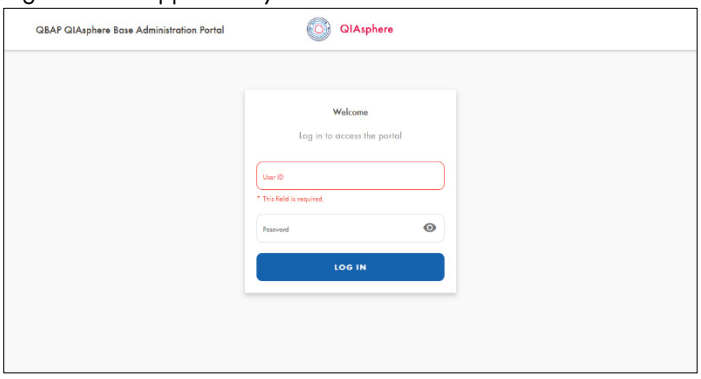
1. For **wireless** network connection, plug in Wi-Fi/Bluetooth adaptor into available USB port of QIAsphere Base (see section 4.3).
   For **wired** network connection, connect your QIAsphere Base to a wired network using Ethernet cable and ETH1 port of the QIAsphere Base (see section 4.3).
2. Power up the QIAsphere Base by plugging the power cord into an appropriate power socket.
   Note: Power socket may be covered with a protective plug, remove it before plugging in power cord.
3. Wait for approximately 5 to 10 minutes until **User 1** LED is on. Then, connect your PC to the ETH0 port of QIAsphere Base (see section 4.3) using an Ethernet cable.

4. Open a web browser (e.g., Chrome™ or Mozilla® Firefox) and enter the following URL to launch QBSP: **https://172.16.0.1**

   Note: Use a recent browser. Older browsers (like Internet Explorer®) may not correctly display all features of the QBSP.

   Note: QIAsphere Base uses a self-signed certificate for the https connection. Therefore, the browser may issue a security warning. Ignore the warning or add an exception to access the QIAsphere Base configuration.

5. Log in screen appears in your browser.



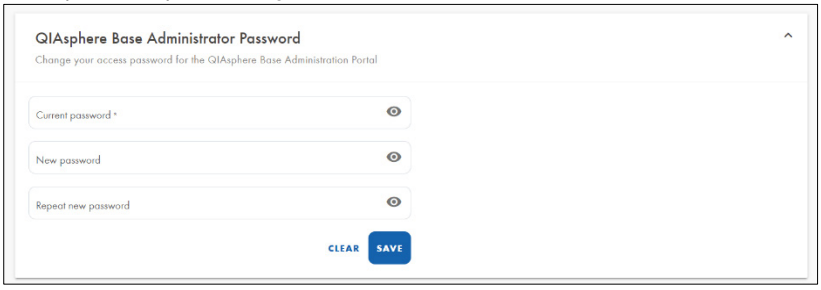
6. Enter the Default login details below and click **log in**:

   User Name: **admin**

   Password: **Qiagen@123**

   Note: If you have configured the QIAsphere Base before, use the password that you have set after the first log in and proceed with step 8.

7. The **Change Password** screen appears as shown below. Choose a new password according to the provided password guidelines, and then click **Save**.



   Note: Remember the new password. It will be required if you want to change QIAsphere Base configuration in the future.

8. Once the password is changed successfully, you will be redirected to the main screen of the QBSP.

9. To complete the network configuration, proceed with section 7.1.1 or 7.1.2, respectively.

7.1.1 Setting up wireless QIAsphere Base network connection using PC

1. After successful log in to QBSP, select the **Network configuration** menu.
2. Select the desired Wi-Fi network from the list of available networks, then enter the Wi-Fi password in the **Password** field and click **Connect**.

   Note: If the desired Wi-Fi network uses hidden SSID (network name), click **Other network** and enter SSID and password manually.
3. QBSP main screen is displayed. The network configuration of QIAsphere Base is complete, as shown by the displayed QIAsphere Base IP address and network name.

   Note: Note down the IP address, you will need it later.
4. To use cloud mode, continue with section 8 to connect the QIAsphere Base to the cloud. If you want to use QIAsphere in local mode, log out by clicking **Log out** in the menu, close the browser, then remove the cable between ETH0 and your PC and proceed with section 9.

7.1.2 Setting up wired QIAsphere Base network connection using PC

Most Ethernet networks support automated IP address assignment using DHCP. In some special cases, networks do not support DHCP. In this case, static IP settings can be configured.

Ethernet connection with DHCP

1. After successful log in to QBSP, main screen is displayed. The network configuration of QIAsphere Base is already complete, as shown by the displayed QIAsphere Base IP address.

   Note: Note down the IP address, you will need it later.
2. To connect the QIAsphere Base to Cloud in order to use cloud mode, continue with section 8. If you want to use QIAsphere in local mode, log out by clicking **Log out** in the menu, close the browser, then remove the cable between ETH0 and your PC and proceed with section 9.

Ethernet connection with static IP

You may consult your IT service desk to provide additional support and information on IP address, subnet mask, default gateway, and DNS server for QIAsphere Base**.**

1. After successful log in to QBSP, select the **Network configuration** menu and open the **LAN** tab.

2. Select **static IP**.
3. Enter the IP address in the **IP address** field that should be used for the QIAsphere Base.
4. Enter the Subnet mask in the **Subnet mask** field that should be used for the QIAsphere Base.
5. **Optional**: Enter the DNS server in the **DNS server** field.
6. **Optional**: In the **Gateway** field, enter the IP address of the gateway.
7. Click **Connect**.
8. QBSP main screen is displayed. The network configuration of QIAsphere Base is complete, as shown by the displayed QIAsphere Base IP address.

   Note: Note down the IP address, you will need it later.
9. To connect the QIAsphere Base to the cloud in order to use cloud mode, continue with section 8. If you want to use QIAsphere in local mode, log out by clicking **Log out** in the menu, close the browser, then remove the cable between ETH0 and your PC and proceed with section 9.

7.2 Connecting QIAsphere Base to local network using QIAsphere App

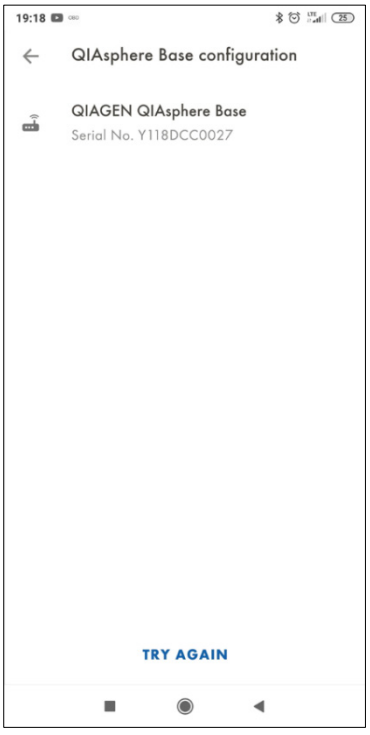
This section describes how to connect QIAsphere Base to local network using QIAsphere App installed on a mobile device. This process requires a Bluetooth connection between the mobile device and QIAsphere Base. For successful Bluetooth pairing, both devices must be within a maximum range of 10 meters. QIAsphere Base switches Bluetooth automatically off one hour after the QIAsphere Base was powered on.

- For wireless QIAsphere Base network connection via Wi-Fi, follow the instruction below and proceed with section 7.2.1. You need the network name and password ready for the desired Wi-Fi network.
- For wired QIAsphere Base network connection, follow the instructions below and proceed with section 7.2.2.

1. Download and install QIAsphere App and certificate as described in section 6.
2. Plug in Wi-Fi/Bluetooth adaptor into available USB port of QIAsphere Base (see section 4.3). For **wired** network connection, proceed with step 3. For **wireless** network connection, proceed with step 4.
3. Connect QIAsphere Base to local network with Ethernet cable using ETH1 port of QIAsphere Base (see section 4.3)
4. Power up the QIAsphere Base by plugging the power cord into an appropriate power socket.

Note: Power socket may be covered with a protective plug, remove it before plugging in power cord.

5. Wait for approximately 5 to 10 minutes until **User 1** LED is on before you proceed.
6. Activate Bluetooth on your mobile device where the QIAsphere App is installed and launch the QIAsphere App.
7. Click the **Continue in local mode** button.
8. To proceed, read and accept the app's terms and conditions. The terms and conditions only appear during the first run of the application.
9. In the QIAsphere App go to **My Account > QIAsphere Base > QIAsphere Base Configuration**. The QIAsphere Base should appear on the list of devices available for configuration. If your QIAsphere Base does not appear, refresh the list by clicking **Try again**.



10. Select the QIAsphere Base that you want to configure.
11. In case that the default local mode password was changed in QBSP of this QIAsphere Base, a **enter password** pop up window appears. Enter and confirm the new password. The new password should be obtained from the administrator. To complete the network configuration, proceed with section 7.2.1 or 7.2.2 respectively.

7.2.1 Setting up wireless QIAsphere Base network connection using QIAsphere App

1. After QIAsphere Base selection, a popup window with information that QIAsphere Base network is not configured appears. Click **Configure**.
2. Enter the default password **Qiagen@123** in the **Password** field and click **log in**.

   Note: If you have configured the QIAsphere Base before, use the password that you have set after the first log in and proceed with step 5.
3. The QIAsphere App will prompt you to change the password. Enter a password of your choice according to the password rules provided by the app, then click **Reset**.

   Note: Remember this password. It will be required if you want to change QIAsphere Base configuration in the future.
4. To configure the Wi-Fi connection, click the **Wi-Fi** tab in the QIAsphere App.
5. Select the desired Wi-Fi network from the list of available networks.
6. Enter the Wi-Fi password in the **Password** field and click **Connect**.
7. A popup window with information that connection successful appears. Confirm by clicking **OK**.
8. The network configuration of QIAsphere Base is complete. To connect the QIAsphere Base to the cloud to use cloud mode, continue with section 8. If you want to use QIAsphere in local mode, proceed with section 9.

7.2.2 Setting up wired QIAsphere Base network connection using QIAsphere App

Most Ethernet networks support automated IP address assignment using DHCP. In some special cases, networks do not support DHCP. In this case, static IP settings can be configured..

Ethernet connection with DHCP

1. After QIAsphere Base selection, one of the below described popup windows appears:
   a. Popup window with information that QIAsphere Base is reachable: Click **Connect**.
   b. Popup window with information that QIAsphere Base is unreachable: Click **Add QIAsphere Base**.
      Note: If QIAsphere Base is unreachable, the network configuration of QIAsphere Base is still successful shown by the displayed IP address in the popup window.
      QIAsphere Base unreachable in this context means that mobile device and QIAsphere Base cannot communicate yet. First, the set up for cloud mode or local mode is to be completed.

2. To connect QIAsphere Base to the cloud to use cloud mode, continue with section 8.
   If you want to use QIAsphere in local mode, proceed with section 9.

Ethernet connection with static IP

You may consult your IT service desk to provide additional support and information on IP address, subnet mask, default gateway, and DNS server for QIAsphere Base.

1. After QIAsphere Base selection, a popup window with information that QIAsphere Base network is not configured appears. Click **Configure**.
2. Enter default password **Qiagen@123** in the **Password** field and click **log in**.

   Note: If you have configured the QIAsphere Base before, use the password that you have set after the first log in and proceed with step 5.
3. The QIAsphere App will prompt you to change the password. Enter a password of your choice according to the password rules provided by the app, then click **Reset**.

   Note: Remember this password. It will be required if you want to change QIAsphere Base configuration in the future.
4. Select **Static IP.**
5. Enter the IP address in the **IP address** field that should be used for the QIAsphere Base.
6. Enter the Subnet mask in the **Subnet mask** field that should be used for the QIAsphere Base.
7. **Optional**: Enter the DNS server in the **DNS server** field.
8. **Optional**: Enter the IP address of the gateway in the **Gateway** field.
9. Click **Connect**.
10. A popup window with information connection successful appears. Confirm by clicking **OK.**
11. To connect QIAsphere Base to cloud to use cloud mode, continue with section 8. If you want to use QIAsphere in local mode, proceed with section 9.

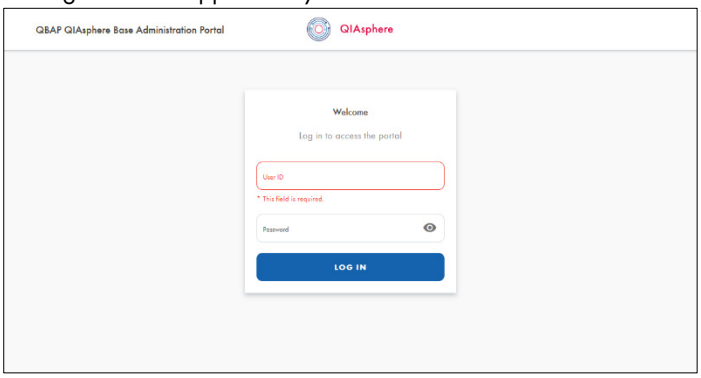
8 Connecting QIAsphere Base to the QIAsphere Cloud

QIAsphere cloud connectivity is set up in QBSP and QIAsphere Administration. You need a QIAsphere license and admin rights (see section 5.5).

Note: If the network setup of QIAsphere Base was performed using QBSP (section 6.1) and you are still logged in, you can start with step 7.

1. Make sure QIAsphere Base is powered on. Otherwise, plug in the power cord into an appropriate power socket and wait for approximately 5 to 10 minutes until **User 1** LED is on.
2. Open a web browser (e.g., Chrome™ or Mozilla® Firefox) on your PC that is connected to the same network as the QIAsphere base and enter **https://**, followed by the IP address of QIAsphere Base in the address field, to launch the QIAsphere Setup Portal (QBSP). Example IP address: **https://192.168.1.10**.

   Note: Use a recent browser. Older browsers (like Internet Explorer®) may not correctly display all features of the QBSP.
3. The log in screen appears in your browser.



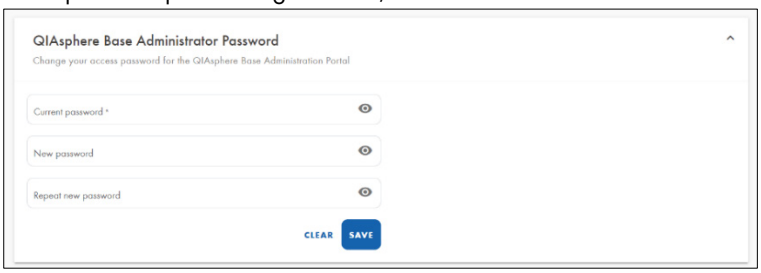
4. Enter the default admin values below if you have not yet configured the QIAsphere Base, then click **LOG IN**.

   User Name: admin

   Password: Qiagen@123

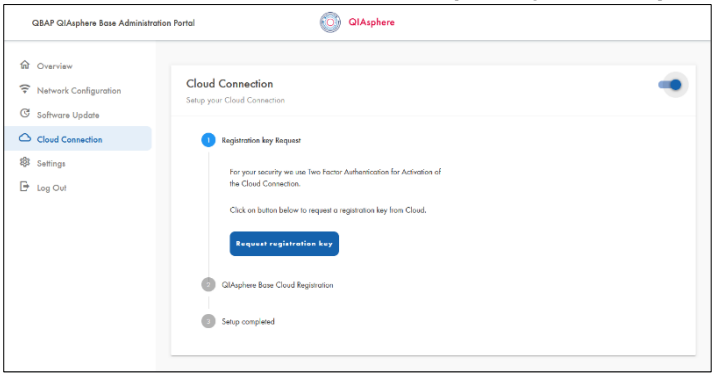
   If you have set another password already, e.g., during QIAsphere Base network configuration (see section 6), use your own password, then click **LOG IN** and proceed with step 6.

5. The **Change password** screen appears as shown below. Choose a new password according to the provided password guidelines, then click **Save**.



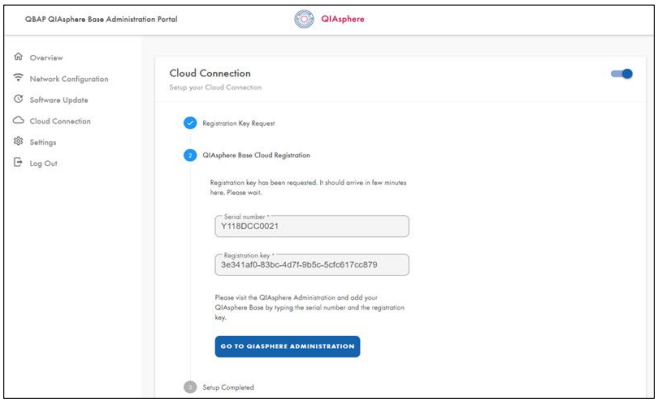
Note: Remember the password. It will be required if you want to change QIAsphere Base configuration in the future.

6. Once the password is changed successfully, confirm the popup window and click **OK**. You will be redirected to the main page of the QBSP.
7. Go to **Settings** menu and set the correct **time**, **date** and **time zone** (see section 13.1), then click **Save**.
8. You will be logged out from system, you have to log in once again.
9. Go to **Cloud Connection** menu and click **Request registration key**.



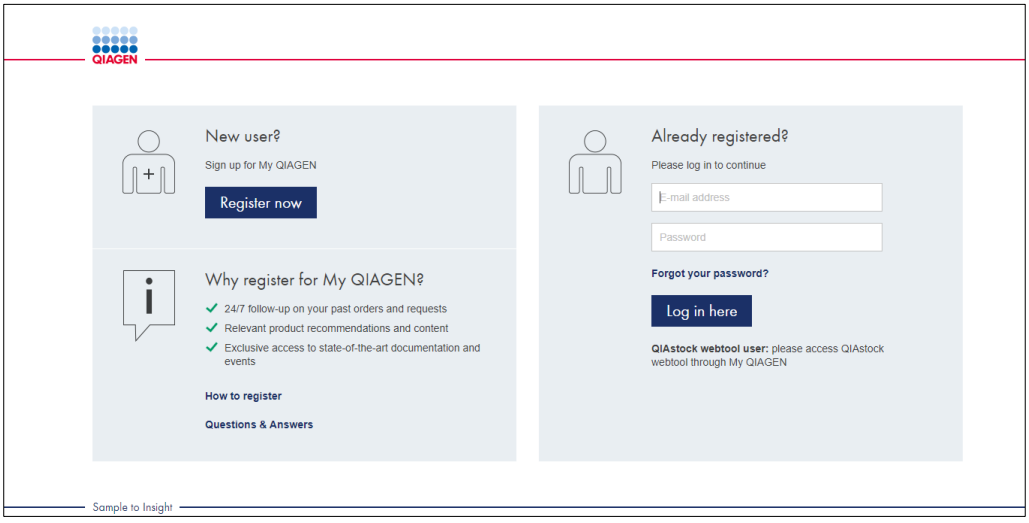
10. Wait until registration key is displayed, it may take about 2 minutes. You are automatically directed to step 2 of the registration process.

11. Click **GO TO QIASPHERE ADMINISTRATION**. Do not close the **QBSP** window in your browser.



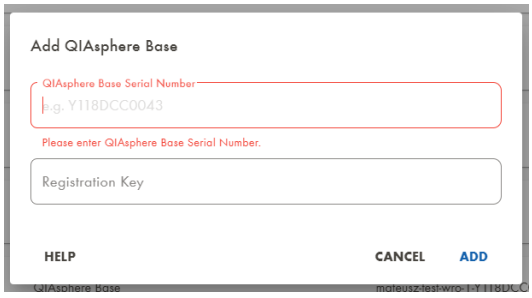
12. **My QIAGEN** log in window opens. Log in using your account credentials.

    Note: If the page does not open automatically, go to **www.qiagen.com/myqiagen** and click the **QIAsphere Administration** widget.

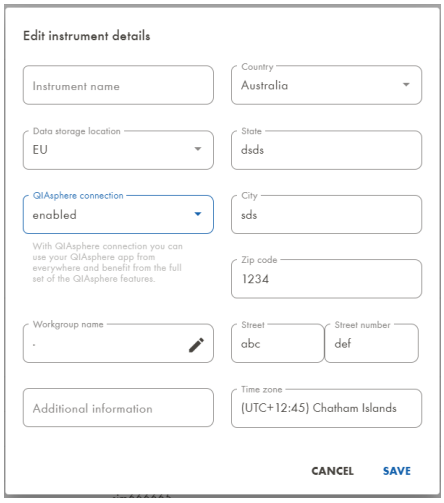


13. Click **Add QIAsphere Base**.

14. In the popup window, enter the QIAsphere Base serial number and registration key as displayed in step 11. You may go back to the **QBSP** window in your browser to copy the values.



15. Click **Add**.
16. Fill out the device details. Ensure that the QIAsphere connection is enabled and click **Save**.



17. A popup window appears, confirm by clicking **OK**.

    Note: Your instruments that are connected to the respective QIAsphere Base must be enabled proactively for QIAsphere connection as well. See section 10. 2, step 5.

18. Your QIAsphere Base will appear on the list of instruments.
19. Go back to the **QBSP** window in your browser.
20. When the registration is successful, you will be automatically directed to step 3 of the cloud connection and receive a confirmation about the completed setup.

    Note: Since your QIAsphere Base is now connected to QIAsphere Cloud, it is subject to automatic updates. It may happen that an automatic update was already triggered at this point and the QBSP does not react anymore. In this case, close the browser and wait for the update process to complete.

21. The device is now connected to the QIAsphere cloud.
22. Log out from QBSP and close the browser.

9 Connecting QIAsphere-ready Instruments to Local Network and QIAsphere Base

The process of connecting instruments to the local network and to QIAsphere Base can vary depending on the instrument type and its operating software. Please refer to the user manual of your instrument for specific instructions and make sure that the instrument is connected to the same network as the QIAsphere Base.

To connect an instrument to a QIAsphere Base, you need the IP address and the instrument connection password of the respective QIAsphere Base. If you have performed the network configuration of QIAsphere Base with QBSP (section 7.1), the QIAsphere Base IP address is displayed in the Ethernet or wireless network field of the QBSP overview screen. If you have performed the network configuration with the QIAsphere App (section 7.2), you will find the QIAsphere Base IP address in **App > My Account > QIAsphere Base Connection**.

The instrument connection password can be set in QBSP (Changing instrument connection password). The default password of a new QIAsphere Base or after factory reset is **test1234**.

When your instrument is connected, proceed with section 10 or 11 to set up cloud or local mode, respectively.

10 Connecting Users and Instruments in Cloud Mode

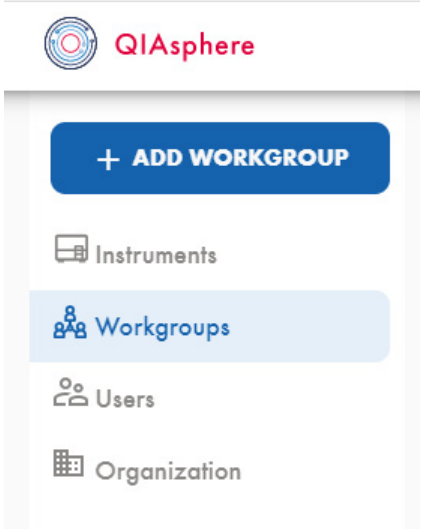
In QIAsphere Administration, the admin users (see section 5.4) can manage workgroups to provide other users an access to instrument information. When setting up cloud mode for the first time, it is recommended to do the following steps in the proposed sequence:

1. Create a Workgroup, see section 10.1
2. Assign instruments to workgroup, see section 10.2
3. Assign/invite users to workgroup, see section 10.3

10.1 Creating a workgroup

At least one workgroup is required to provide users access to instrument information in the QIAsphere App.

1. Log in to **My QIAGEN** and select **QIAsphere Administration** widget.
2. Go to **Workgroups** menu.
3. Click **ADD WORKGROUP**.



4. Enter the workgroup name that you want to create in the popup window.

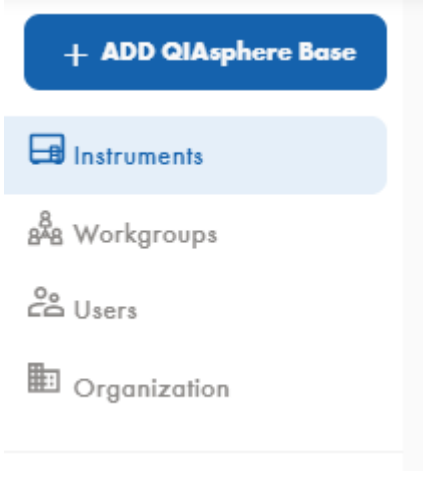
   Optional: When setting up multiple workgroups, you can create subgroups by assigning an existing workgroup as parent workgroup.

5. Click **Add**. The workgroup is created and is displayed in the **Workgroups** menu.

10.2 Assigning connected instruments to a workgroup

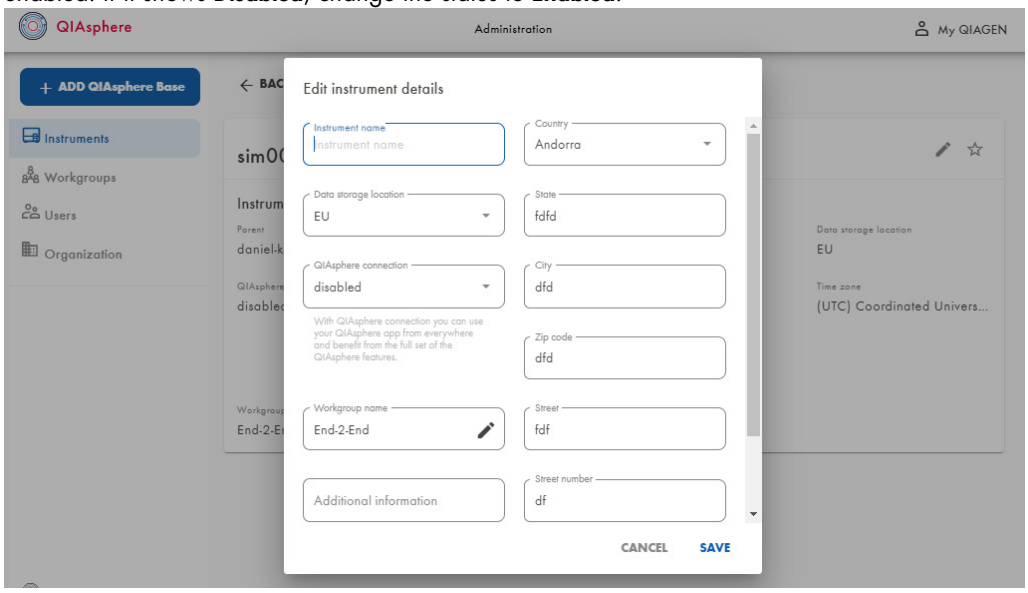
Users of QIAsphere can see instrument information in the QIAsphere App of the QIAsphere Base connected instruments that are assigned to their workgroup. When QIAsphere Base is connected to the cloud, its connected instruments are automatically registered. They are visible in a list of available instruments ready to be assigned to a workgroup.

1. Log in to **My QIAGEN** and select **QIAsphere Administration** widget.
2. Go to **Instruments** menu.



3. Click the relevant instrument or QIAsphere Base.
   Note: If you assign one QIAsphere Base to a workgroup, the instruments that are connected to that QIAsphere Base will also be automatically assigned to the workgroup. Individual instruments can still be assigned to other workgroups later.
4. To edit, click the pencil icon.

5. In the **Edit instrument details** popup window, make sure that QIAsphere connection is enabled. If it shows **Disabled**, change the status to **Enabled**.



6. Click the pencil icon at the **Workgroup name** field and select the relevant workgroup.
7. Click **Save**. The instrument is now assigned to a workgroup.

10.3 User management

To provide other users access to instrument information, you can create and invite users to QIAsphere and add them to a workgroup.

The QIAsphere Administration portal supports two User Roles:

- **QIAsphere User**

  QIAsphere User has full access to instruments assigned to its workgroup(s) in the QIAsphere App, but only limited to read access in the QIAsphere Administration Portal.

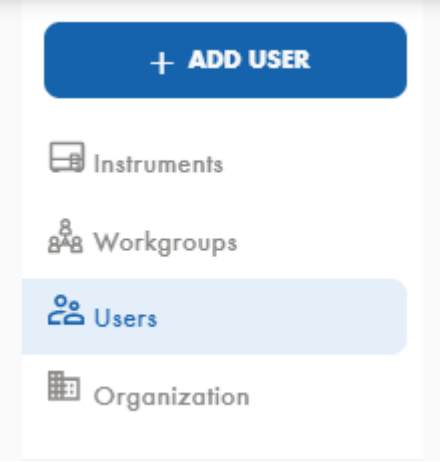
- **QIAsphere Administrator**

  QIAsphere Administrator has full access to instruments assigned to its workgroup(s) in the QIAsphere App, as well as full read and write access in QIAsphere Administration Portal to setup and manage cloud connectivity (see section 8) and to setup workgroups by assigning instruments and users (see section 10). QIAsphere Administrator can also create and invite new users (see section 10.3.1) and upgrade other users to QIAsphere Administrators.

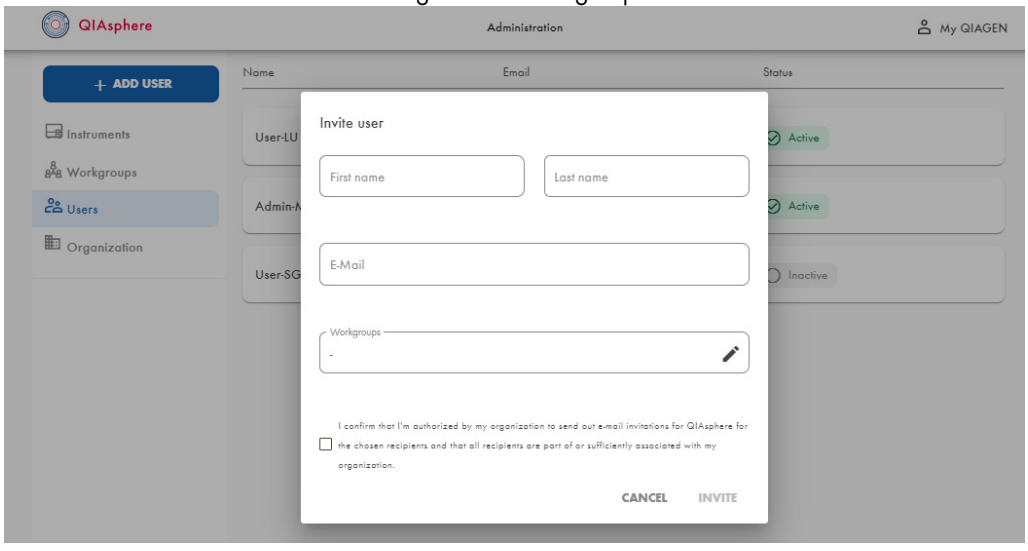
10.3.1 Creating new user in QIAsphere

Before a user can see instruments in the QIAsphere App, the user must be invited to QIAsphere and added to a workgroup.

1. Log in to **My QIAGEN** and select **QIAsphere Administration** widget.
2. Go to **User** menu.



3. Click **ADD USER**.
4. Fill out all mandatory fields such as **first name**, **last name,** and **E-mail address** in the popup window. The new user can now be assigned to a workgroup.



5. Check the box and click **Invite**.
6. The new user receives an email. By clicking **Activate your QIAsphere Account** link in the email, the user is added to QIAsphere and can be found in the **Users** menu. The new user

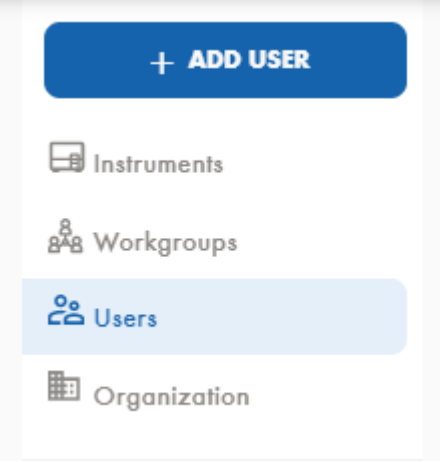
can launch the QIAsphere App and can see immediately all instruments when the user is assigned to a workgroup during the invitation.

Note: To use QIAsphere App (web app version or mobile app), the user needs to have a **My QIAGEN** account (see section 5.3).

10.3.2 Adding new user to a QIAsphere workgroup

Existing users can be added to one or more workgroups.

1. Log in to **My QIAGEN** and select the **QIAsphere Administration** widget.
2. Go to **Users** menu.



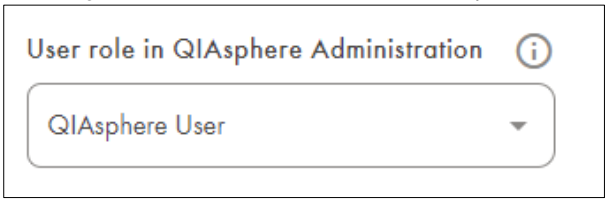
3. In the list of available users, search for the user you want to add and click on the user.
4. To edit, click the pencil icon.
5. Select the relevant workgroup.
6. Check the box and click **SAVE**.

10.3.3 Editing user role

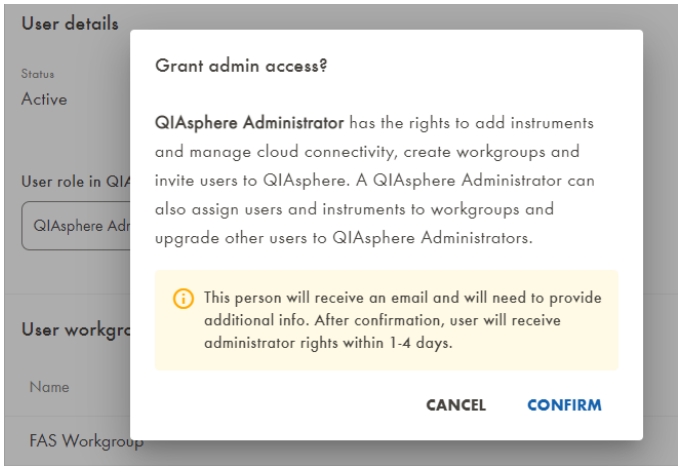
User with **QIAsphere Administrator** role can change the role of other existing users. To edit user role:

1. Log in to **My QIAGEN** and select the **QIAsphere Administration** widget.
2. Go to **Users** menu.

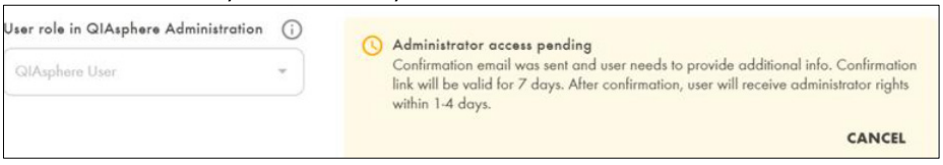
3. From the list of available users, search and select for the user you want to change the user role.
4. To change the user role, use the **User role** dropdown menu in the user screen.



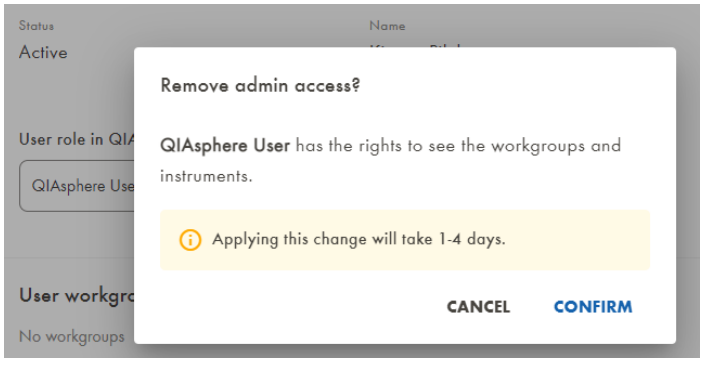
   - Change role from **QIAsphere User** to **QIAsphere Administrator**.
     After selecting the new role **QIAsphere Administrator** from the dropdown menu, a pop-up window with additional information about the user role change appears. Click the **Confirm** button to request new user role **QIAsphere Administrator**.



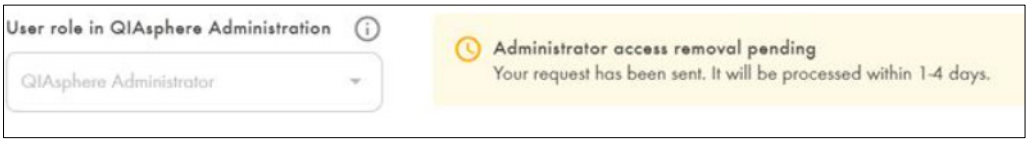
The promoted user receives an e-mail containing a link to a registration form. The promoted user has to fill out and confirm the registration form. As long as the promoted user does not confirm the registration form, the administrator can invalidate the role change request by clicking the **Cancel** button in the information box next to the user role dropdown menu. In this case, the promoted user will not be able to confirm the form anymore. If the promoted user confirms the form, the **Cancel** button disappear. After the role change is performed, the pending message disappears, and new role is shown. In case the invited user does not confirm the form, the promotion to Administrator will be canceled automatically after seven days.



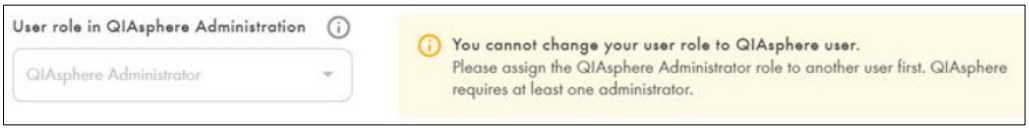
- Change role from **QIAsphere Administrator** to **QIAsphere User**.
  After selecting the new role **QIAsphere User** from the dropdown menu, a pop-up window with additional information about the user role change appears. Click the **Confirm** button to request new user role **QIAsphere User**.



After confirmation, a message appears that your request is pending. The **User role** field becomes grayed out until the request has been processed automatically in the system. This user role change may take 1 to 4 business days.



Note: At least one user with role **QIAsphere Administrator** is required to be able to administrate QIAsphere. It is prevented to reduce the role of the last remaining QIAsphere Administrator. In this case, the **User role** field is grayed out and an appropriate information message is shown.



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11 Connecting and Managing Mobile Devices in Local Mode

You may want to use QIAsphere without connecting to the QIAsphere Cloud and use local network connection only. Usually, this case will appear when your organization has a very strict data privacy policy. While using QIAsphere in local intranet mode, you will have limited connectivity functionalities such as:

- Access QIAsphere App only from a mobile device that is connected to the same network locally.
- QIAsphere web app to be launched from desktop PCs is not available in local mode.
- No push notification functionality. QIAsphere App must be open to see instrument status changes.
- No instrument scheduler functionality (see section 12.4)

After connecting a QIAsphere-ready instrument to QIAsphere Base (see section 9), users can use the mobile QIAsphere App to monitor instruments on mobile devices.

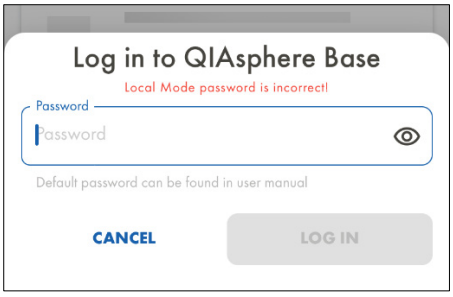
11.1 Connecting QIAsphere App on a mobile device to a QIAsphere Base

See following instructions on how to connect a mobile device with QIAsphere App to a QIAsphere Base. You can connect multiple mobile devices to one QIAsphere Base.

1. Download and install the QIAsphere App as described in section 6.1.
2. Install the app certificate as described in section 6.2.
3. Make sure that the mobile device is connected to the same local network as the QIAsphere Base.
4. Launch the QIAsphere App and skip log in by clicking **Continue** in local mode.
5. In the QIAsphere App, go to **My Account** > **QIAsphere Base** > **QIAsphere Base Connection**.
6. Click **Add**.
7. Enter the IP address of the existing QIAsphere Base.

   Note: If you have performed the network configuration of QIAsphere Base with QBSP (section 7.1), the QIAsphere Base IP address is displayed in the Ethernet or wireless network field of the QBSP overview screen. If you have performed the network configuration with the QIAsphere App (section 7.2), you will find the QIAsphere Base IP address in **App > My Account > QIAsphere Base Connection**.
8. Click **Connect**.

9. In case that default local mode password was changed in QBSP of this QIAsphere Base, an **enter password** pop up window appears. Enter and confirm the new password. The new password should be obtained from the administrator.



11.2 Enabling and disabling instruments for QIAsphere App

In local mode, all connected instruments are visible in the QIAsphere App by default. Follow the instruction in section 13.9 to enable or disable single instruments.

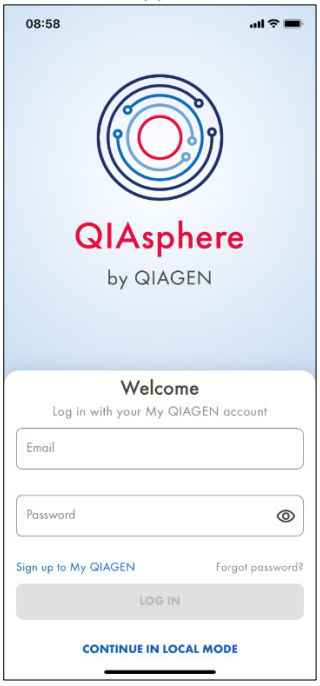
12 QIAsphere App

The QIAsphere App is available in two versions. A mobile app can be installed on mobile iOS or Android devices (see section 6), whereas the web app version can be launched in a web browser on a desktop PC.

12.1 Starting mobile QIAsphere App in cloud or local mode

1. Download and install QIAsphere App as described in section 6.1.
2. Install the app certificate as described in section 6.2.
3. Launch the QIAsphere App.
4. To enter the app in cloud mode, log in with your **My QIAGEN** user name and password. If you do not have an account in **My QIAGEN**, register as described in section 5.3.

   To enter the app in local mode, click **CONTINUE IN LOCAL MODE**.



12.2 Starting QIAsphere web app

The web app version is only available in cloud connected mode.

1. Go to **www.qiagen.com/myqiagen** and log in with your **My QIAGEN** credentials. If you do not have a **My QIAGEN** account, register as described in section 5.3.

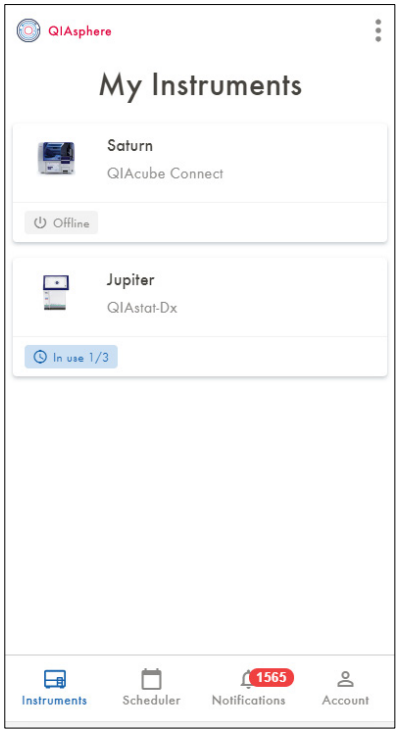
2. Open the **QIAsphere** widget to launch the **QIAsphere web app**.

   Note: If you do not see **QIAsphere** widget, click **Manage Widgets**, then select **QIAsphere** widget and save your settings.

12.3 My Instruments list

Go to **My Instruments** menu. On **My Instruments** list, you see all instruments assigned to your workgroup.

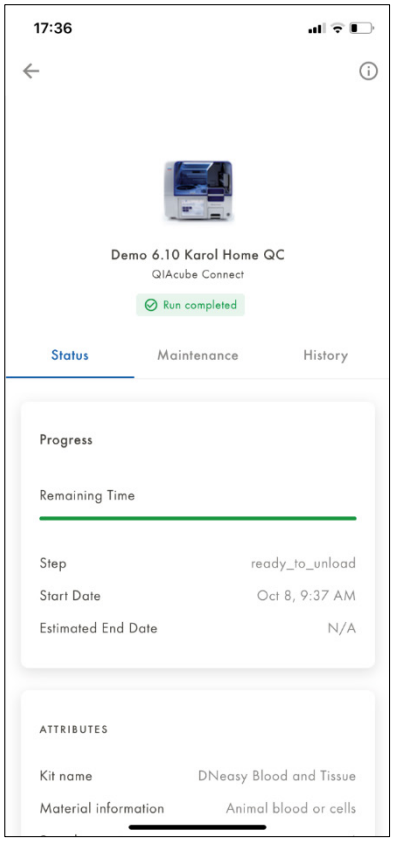
- Colored overlay icons inform the user about the current run and maintenance status of every instrument.
- The list of displayed instruments can be personalized (see section 12.5.1).
- If you do not see all relevant instruments on the list, please contact your QIAsphere admin to check the assigned instruments of your workgroup.

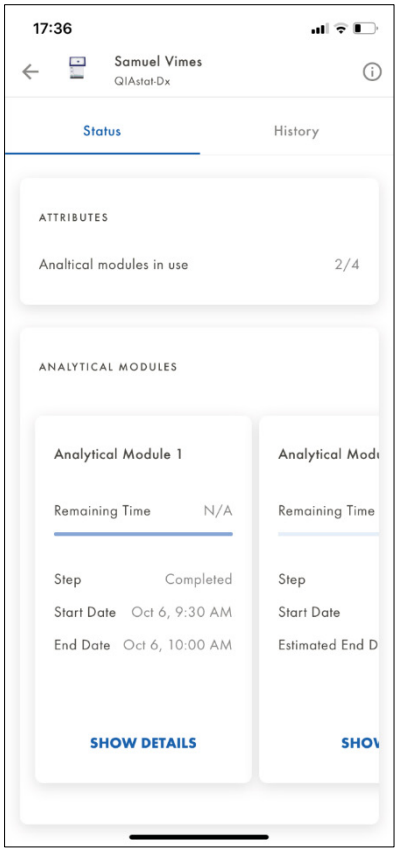


12.3.1 Instrument status

To see details of an instrument status like current run information, go to **My Instruments** menu and click on the instrument of interest. The instrument status is displayed.

- Instrument status involves run progress information and other detailed run information.
- **If applicable for the instrument type, e.g., QIAstat-Dx**: Run information of instrument modules can be checked by scrolling to the modules and swiping to see the different modules.



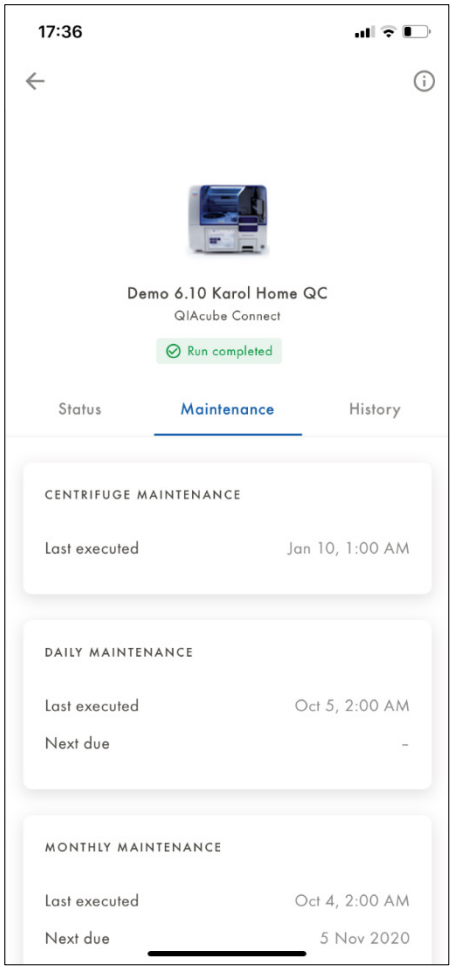


12.3.2 Instrument maintenance view

Note: Some QIAsphere-ready instruments do not display the maintenance information in the mobile App.

Go to **My Instruments** menu and click on the instrument of interest. The instrument status is displayed by default. Click the **Maintenance** tab to see historical and future instrument maintenance activities.

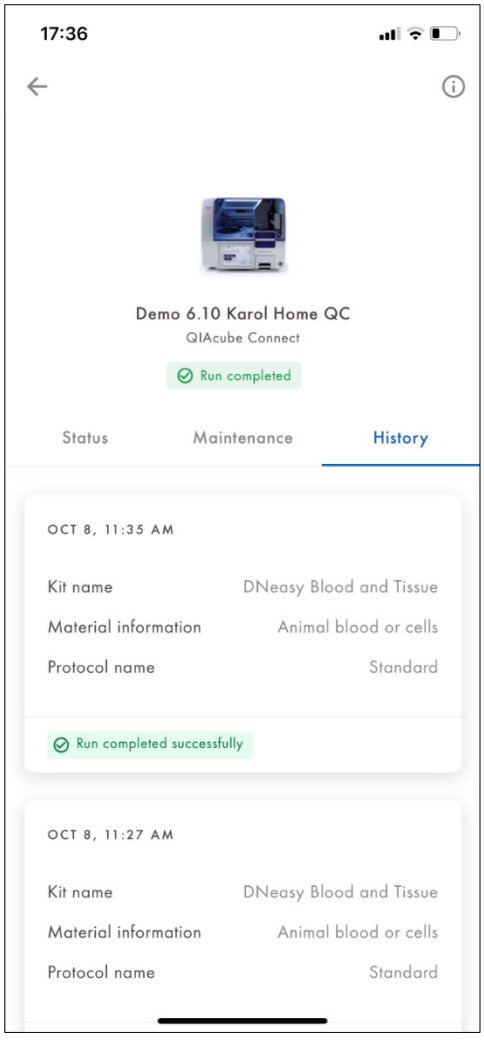
- A yellow overlay icon is displayed when maintenance activity is due soon.
- A red overlay icon is displayed when a maintenance activity is overdue.

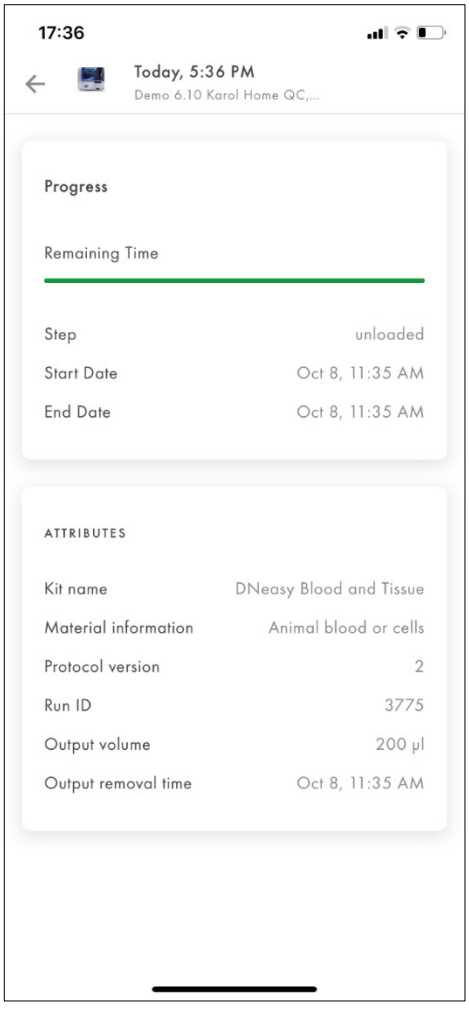


12.3.3 Instrument history

Go to **My Instruments** menu and click on the instrument of interest. The instrument status is displayed by default. Click the **History** tab.

- Historical runs are listed and sorted by date with a short preview information.
- Selecting a historical run from the list opens the run details.



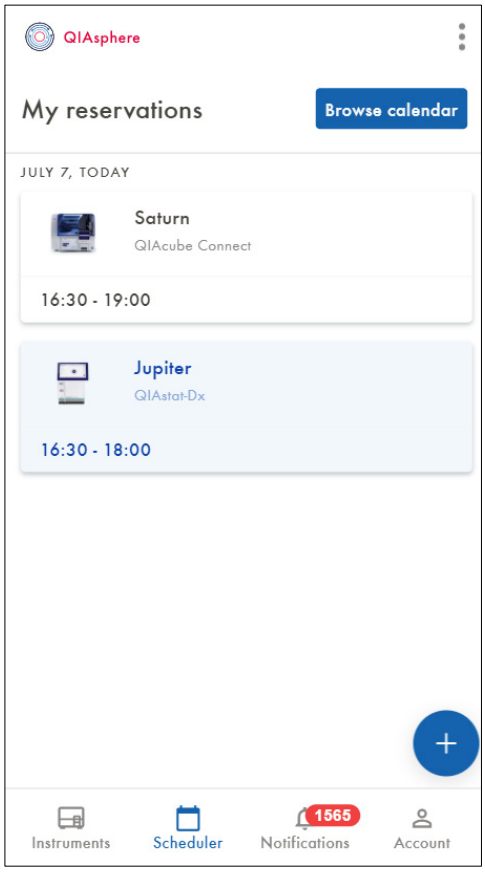


12.4 Scheduler

Users of the same workgroup can manage the use of shared instruments with the scheduler function. Instruments can be reserved, and a shared calendar provides an overview about instrument availabilities.

12.4.1 My reservations

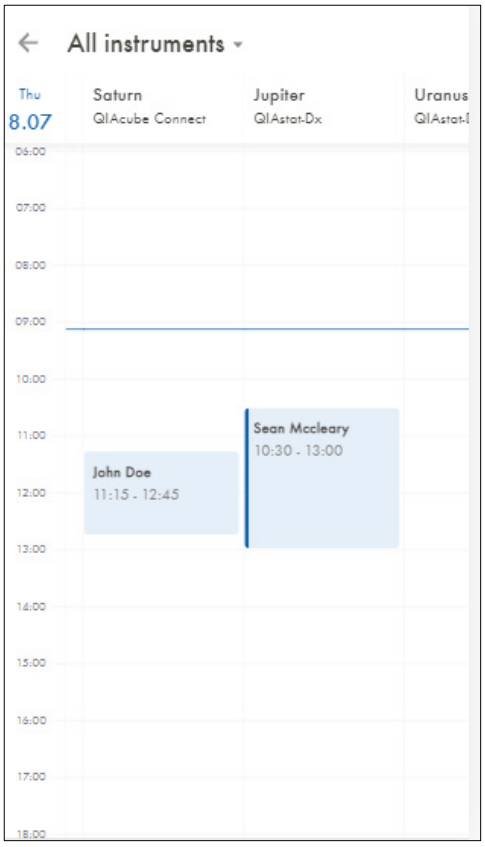
Go to the **Scheduler** menu. Your upcoming reservations are displayed in the **My reservations** list.



12.4.2 Calendar view

Clicking the **Browse Calendar** button opens the calendar view. In the calendar view, bookings from other workgroup members are displayed and you can also check instrument availabilities.

- Displayed instruments can be filtered by clicking the dropdown menu above the calendar. From the dropdown menu, you can select the following: all instruments, instruments from **My instrument** list, or instruments of a particular instrument type.
- The date can be selected by clicking the date calendar widget or by scrolling the calendar.

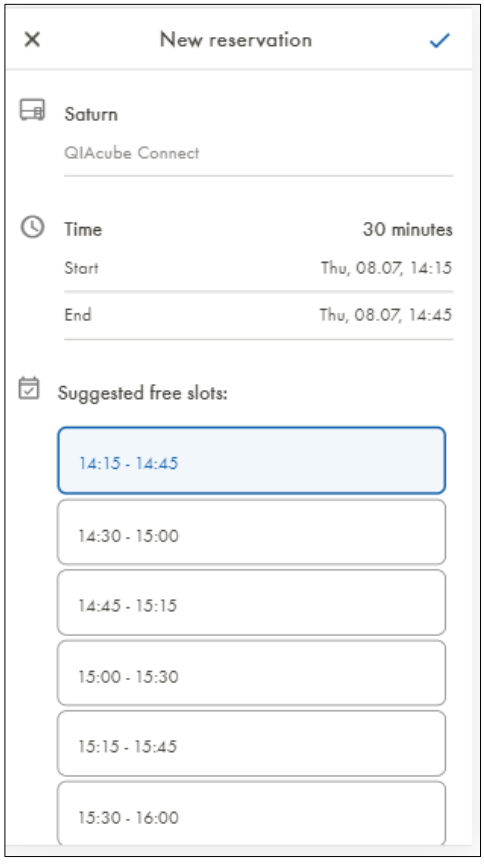


12.4.3 Creating new reservation

There are two ways to create a new instrument reservation:

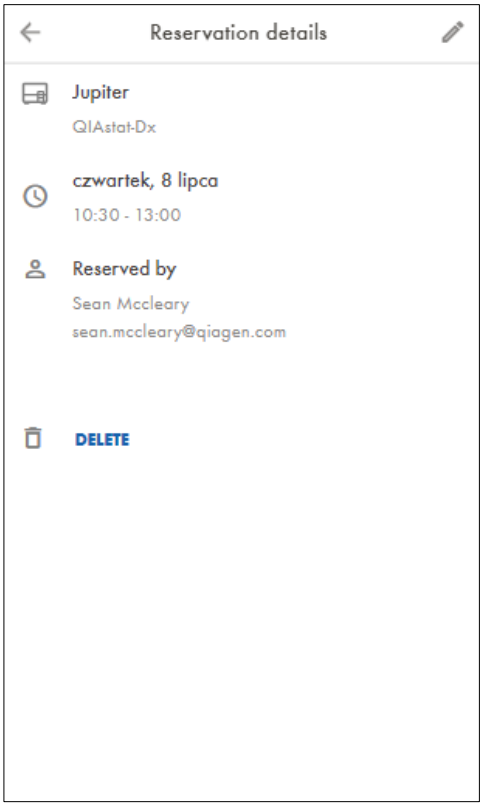
- Click the "**+**" button on the scheduler main page
- Click on a free space in the calendar view of a particular instrument

The **New reservation** view opens. Enter or edit the required information and save your reservation by clicking the check icon.



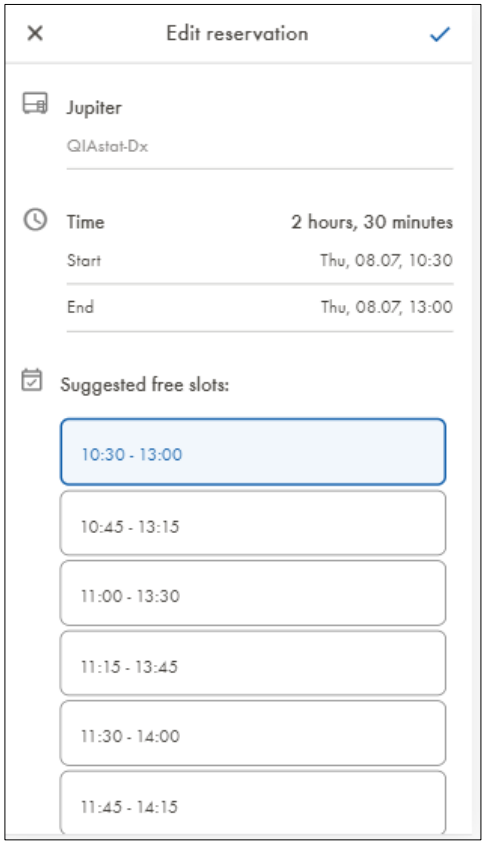
12.4.4 Reservation details view

Clicking an item in the **My reservations** list or on a reservation in the calendar view opens the **Reservation details** view.



12.4.5 Editing reservation

You can edit your own reservation by clicking the pencil icon in the respective **Reservation details** view. The **Edit reservation** view opens. Change the desired parameters of the reservation and click the check icon to save the reservation.



12.4.6 Deleting reservation

You can delete your own reservations by clicking the **Delete** button on the **Reservation details** view. Confirm the deletion by clicking **Delete** on the **Confirmation** view, or click **Cancel**.

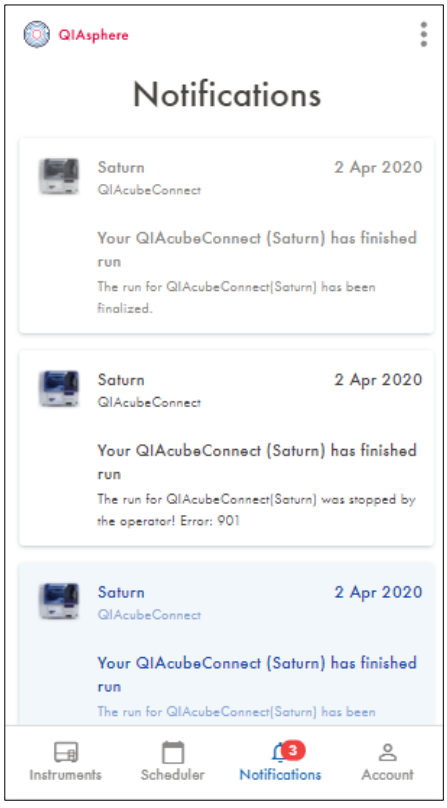
12.5 Notifications

New unread notifications are indicated by a red cycle with a number on the **Notifications** menu in the menu bar at the bottom.

12.5.1 Notifications list

Go to the **Notifications** menu to see all notifications. Most recent notifications are added to the top of the list. To manage which type of notification shall be received, follow the instructions in section 12.5.3.

- Unread notifications are colored.
- Read notifications are greyed out
- By swiping a notification tile to the left, the notification will be deleted.



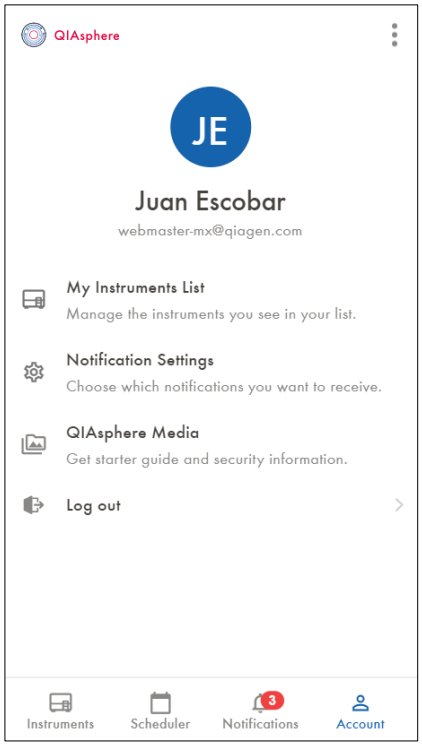
12.5.2 Notifications details

By clicking on the notification of interest from the notifications list, the notification details are displayed.

The notification will be deleted by clicking the trash can icon. After deletion, the notification list is shown.

12.6 My Account view

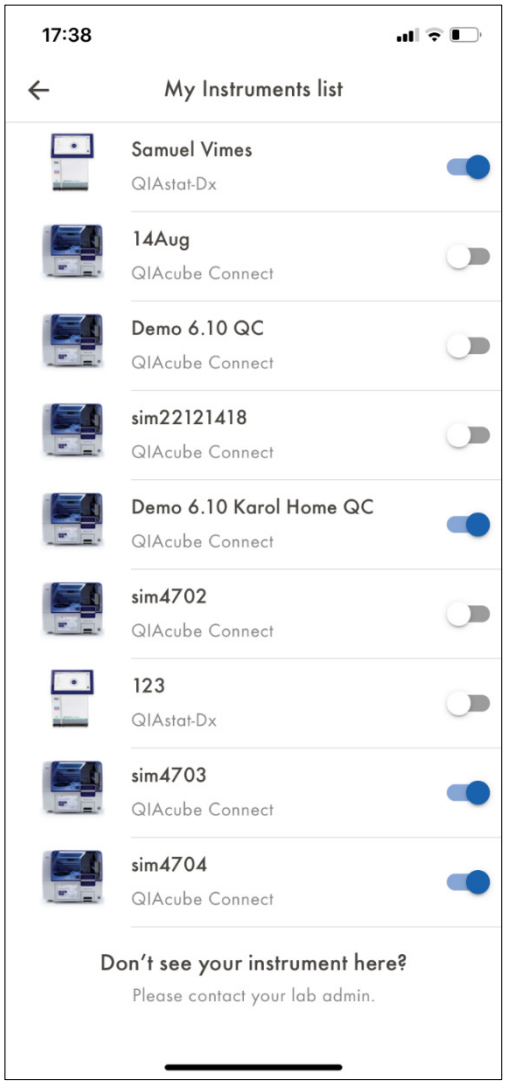
Go to **My Account** menu. In this menu, the user has access to various setting options.



12.6.1 My instruments List

Go to **My Account** menu and select **My Instruments** List. Select which instruments shall be displayed in the instrument list by switching the respective toggle switch on or off.

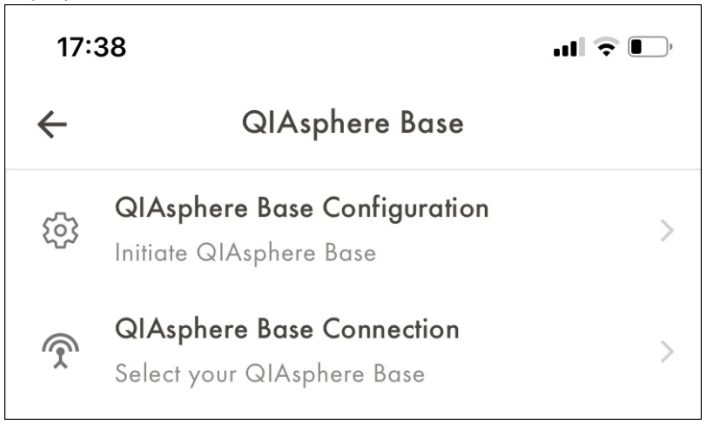
Note: This feature is only available in cloud mode.



12.6.2 QIAsphere Base

Go to **My Account** menu and select **QIAsphere Base**. Two setting options are available:

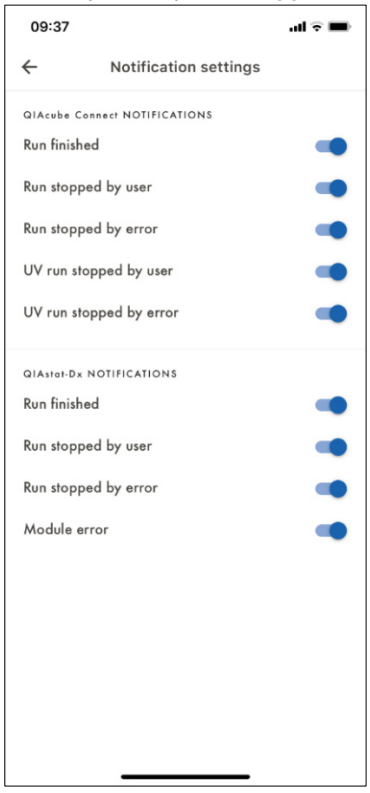
- **QIAsphere Base Configuration**: To configure a new QIAsphere Base
- **QIAsphere Base Connection** (only in local mode): To select relevant QIAsphere Base during local mode setup (see section 11.1). When local mode is set up, a list of all connected instruments is displayed.



12.6.3 Notification settings

Go to **My Account** menu and select **Notification Settings**. Settings of push notifications are displayed per instrument type:

- Select the type of events where push notifications and in app notifications shall be received by switching the respective toggle on or off switch.

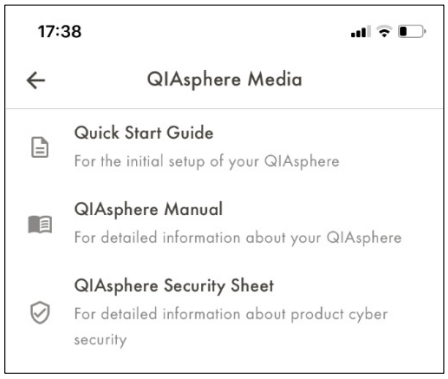


12.6.4 QIAsphere Media

Go to **My Account** menu and select **QIAsphere Media**:

- To download the short version of the user manual, click **QIAsphere Quick Start Guide**.
- To download the detailed QIAsphere user manual, click **QIAsphere User Manual**.

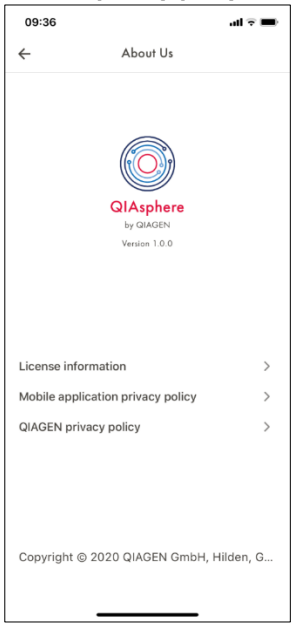
- To download the QIAsphere Product and Solution Security Whitepaper, click **QIAsphere Security Sheet**.



12.6.5 About

In the mobile App, click on the menu icon on the top right corner and select **About**. In the web app version, click **About** below the left-hand navigation. The **About** view provides information on:

- Installed mobile app version
- **License information** – Click **License information** to see the end user license agreement that was accepted by the user during the first log in to the app, including an overview of the 3rd party software used.
- **Mobile application privacy policy** – Click the respective line to see the policy.
- **QIAGEN privacy policy** – Click the respective link to see the policy on **www.qiagen.com**.



13 Administration of QIAsphere Base

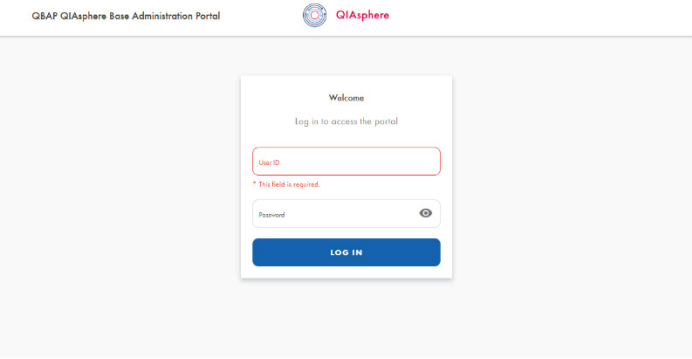
QIAsphere Base administration can be performed through the QIAsphere Base Setup Portal (QBSP), using an internet browser on a personal computer that is connected to the same local network as the QIAsphere Base. In the QBSP, you can access the system time settings, cloud connection, QIAsphere maintenance features, and instrument administration.

To use the QBSP, proceed as follows:

1. Open a web browser on the personal computer (e.g., Chrome or Firefox).

   Note: Use a recent browser. Older browsers (like Internet Explorer) may not correctly display all features of the QBSP.

2. Enter **https://** followed by the QIAsphere Base **IP address** into the address field and click **Enter**. Example IP address: **https://192.168.1.10**.



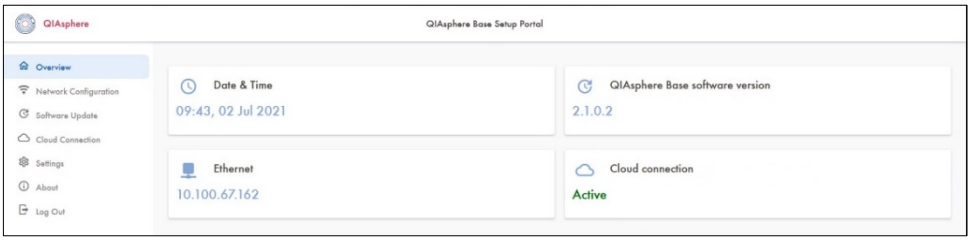
   Note: QIAsphere Base uses a self-signed certificate for the https connection. Therefore, the browser may issue a security warning. Ignore the warning or add an exception to access the QIAsphere Base configuration.

3. Enter your admin user login credentials

   User name: **admin**

   Password: self-defined password that was set during initial QIAsphere Base set up

4. The **QBSP** home screen is displayed.



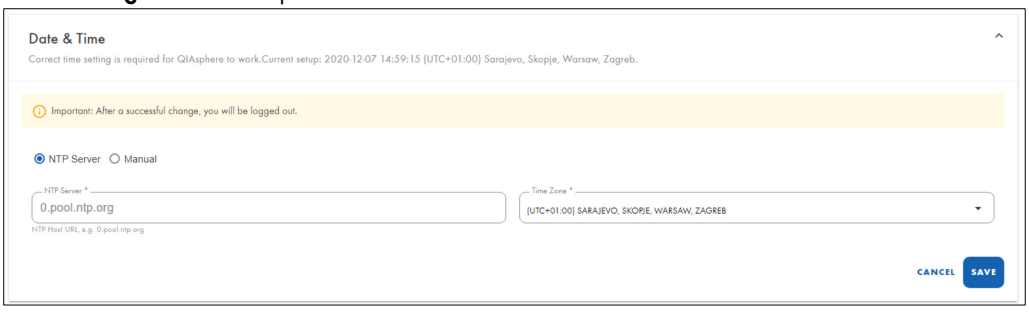
13.1 Setting time, date, and time zone

Setting the right time and time zone is necessary for the QIAsphere Base to work properly. It should be the same as for the instruments. There are two ways to set the date and time:

- **Recommended**: Synchronize date and time with the remote Network Time Protocol Server (NTP server)
- Manual date and time setting

13.1.1 Setting time, date and time zone using the NTP server

1. Go to **Settings** menu and open the **Date & Time** tab.

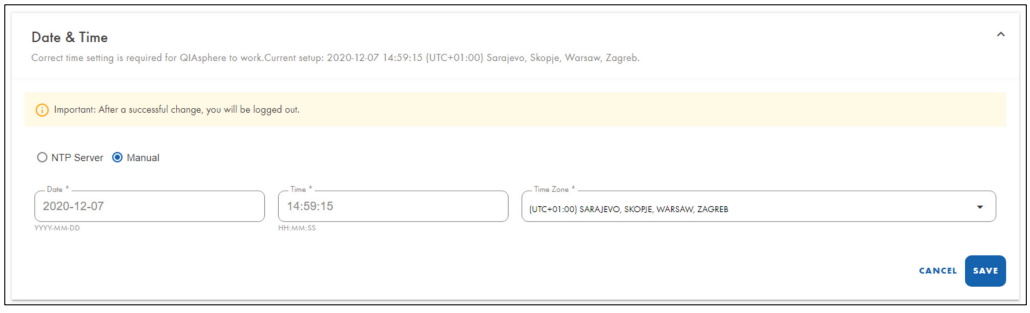


2. Provide the URL of NTP server. The following value is provided already as default: **0.pool.ntp.org**.
3. Select time zone.
4. Click **Save**.

   Note: You will be logged out from the system. If you want to make other changes in QBSP, log in again.

13.1.2 Setting time, date and time zone manually

1. Go to **Settings** menu and open the **Date & Time** tab.
2. Switch from **NTP Server** to **Manual** radio button.



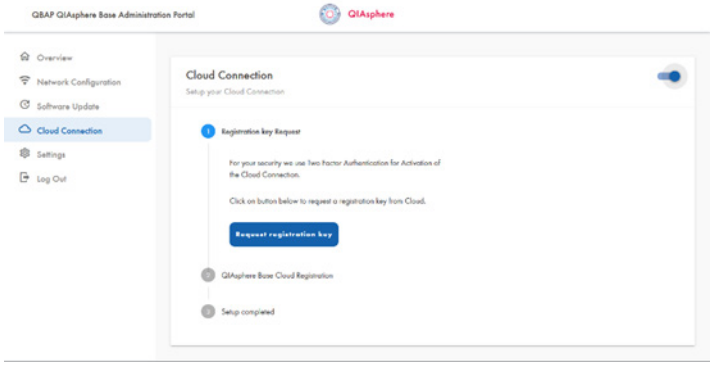
3. Set the correct time, date, and time zone.
4. Click **Save**.

   Note: You will be logged out from the system. When you want to make other changes in QBSP, log in again.

13.2 Disabling QIAsphere Base cloud connection

When QIAsphere Base is set up according to section 7, QIAsphere Base can be used in local mode without further configuration. In case you have connected QIAsphere Base to the cloud and the cloud connection shall be switched off, follow the instructions below:

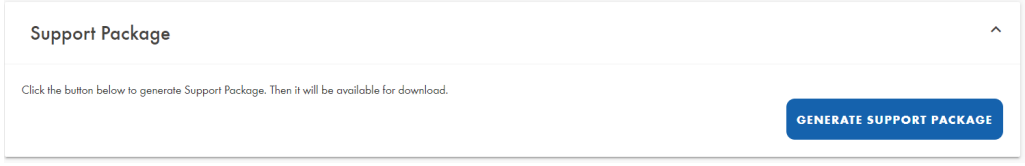
1. Go to **Cloud Connection** menu and switch off the toggle on the top right corner.



2. The QIAsphere Base is now disconnected from the cloud.

13.3 Creating support package of QIAsphere Base

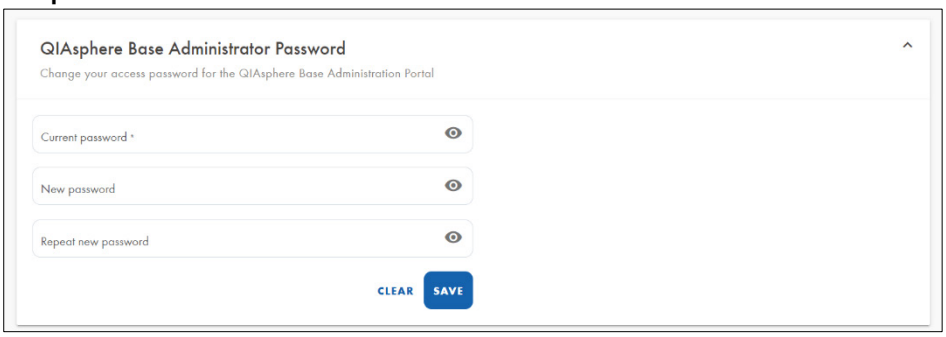
1. Go to **Settings** menu and open **Support Package** tab.



2. Click **GENERATE SUPPORT PACKAGE**.
3. After loading, the package is ready to be saved to your PC.
4. Click **Download**.
5. The browser prompts you to save the file to your computer.

13.4 Changing admin password

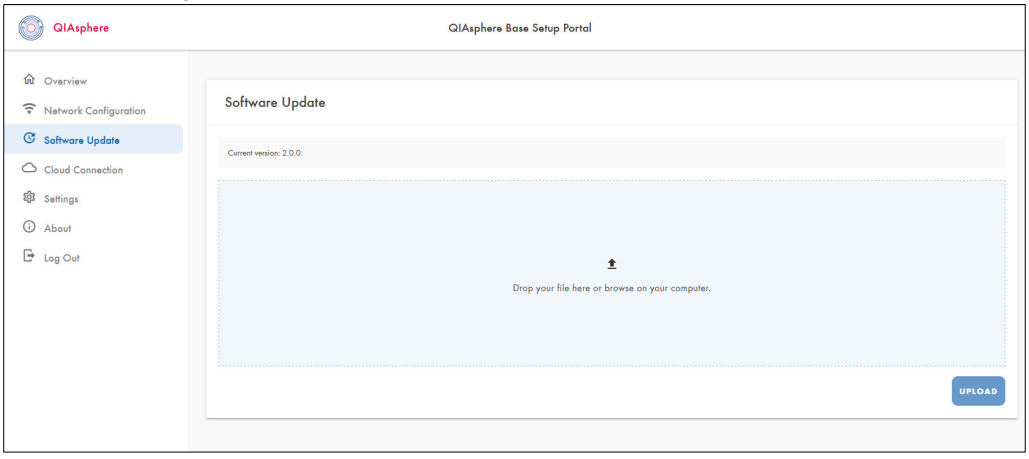
1. To change the QIAsphere Base login password, select **Settings** menu and open the **QIAsphere Base Administrator** tab.



2. Enter the password into the **Old Password** field.
3. Enter **New Password**.
4. Repeat **New Password** and click **Save**.

13.5 Updating QIAsphere Base software

1. Download the QIAsphere Base software update file from **www.qiagen.com/qiasphere** and save it on your computer.
2. Go to **Software Update** menu.

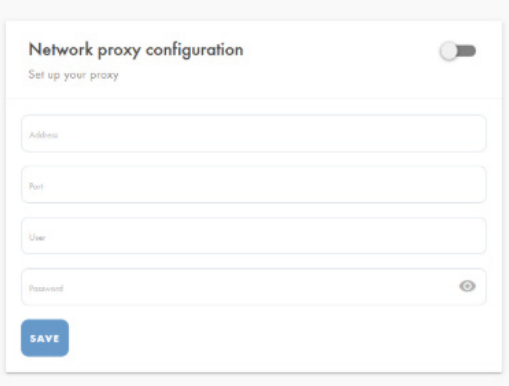


3. Click **Choose file**.
4. Dialog window will appear. Select the location of the update file on your drive, then select the update file.

   Note: In case the update file is a zipped file, do not unzip the file.
5. Click **OK**. Update will start automatically. You will be informed if the update is done.

13.6 Proxy settings

1. To set proxy connection, go to **Network Configuration** menu and select **Network proxy configuration** section.



2. Switch on the toggle of the proxy on the top-right corner.
3. Enter **proxy setting** of your network and click **Save**.

13.7 Changing instrument connection password

The instrument connection password is required to set up the connection of a QIAsphere-ready instrument to a respective QIAsphere Base. The default password of a new QIAsphere Base or after factory reset is: **test1234**.

1. To change password for QIAsphere-ready instrument connection, go to **Settings** menu and open the **Instrument Connecting Password** tab.
2. Enter and repeat new password then click **Save**.

3. Your new password has been saved. Remember your password for future instrument connection.

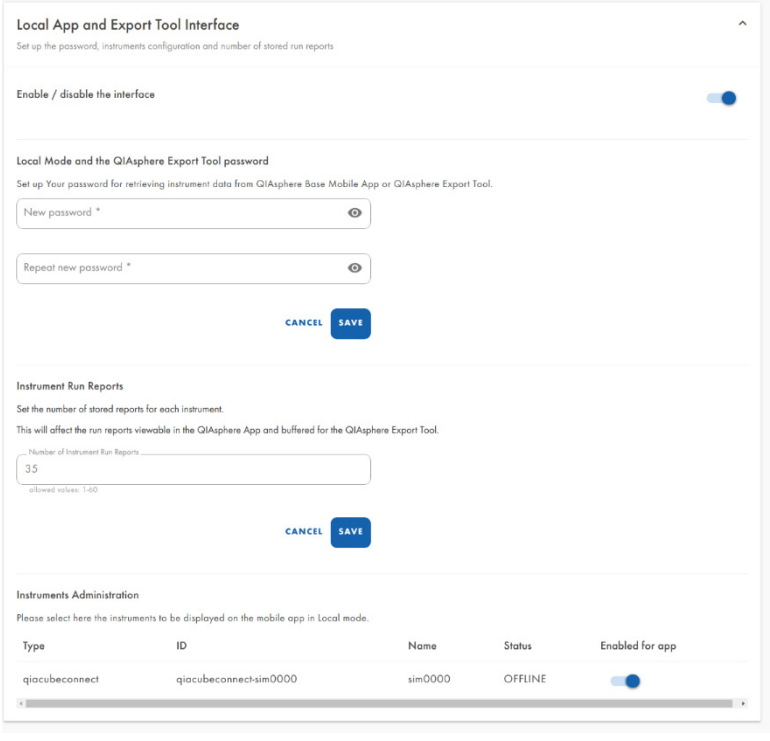
   Note: This is not a password set for your instrument itself, but for the connection between your instrument and your QIAsphere Base.

13.8 Configuration of the Local App and Export Tool Interface

The **Local App and Export Tool Interface** of the QIAsphere Base provides certain data from the connected QIAsphere-ready Instruments to the QIAsphere App and QIAsphere Export Tool, within the local network. It is required for the correct function of the following:

- The QIAsphere Export Tool (see section 15)
- The QIAsphere App in Local Mode
- The QIAcube Connect Run Setup via QIAsphere App

To disable the Interface or change the configuration (password, number of stored run reports, instrument administration), select **Settings** menu and open the **Local App and Export Tool Interface** tab.



13.8.1 Disabling the Local App and Export Tool Interface

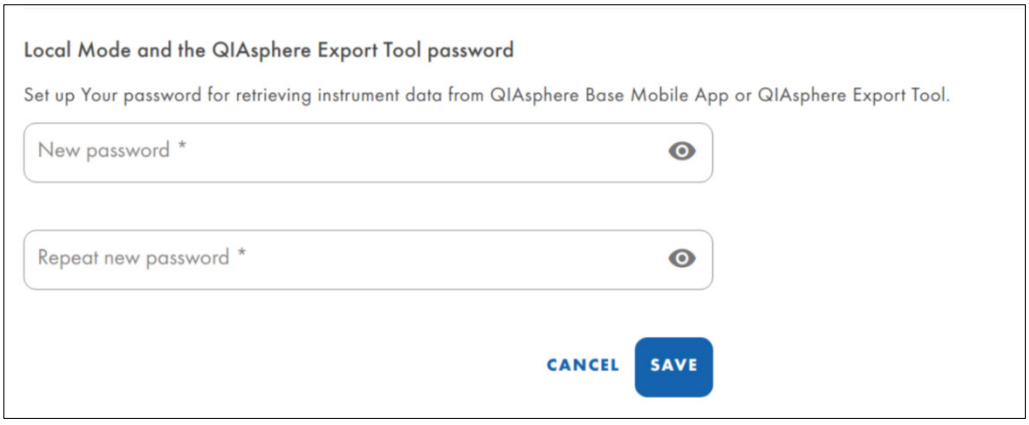
The **Local App and Export Tool Interface** is initially enabled. To disable the interface, switch the toggle position from **Enable** to **Disable** in the interface section.

Note: When Local Mode is disabled, there is no communication between QIAsphere Base and Local App, as well as the QIAsphere Export Tool. Any configuration also cannot be changed when the mode is **OFF**.

13.8.2 Changing the Local Mode and QIAsphere Export Tool password

The **Local Mode and QIAsphere Export Tool** password is used to set up the connection between QIAsphere App in local mode or the QIAsphere Export Tool and your QIAsphere Base. The default password is: **Qiagen@123**.

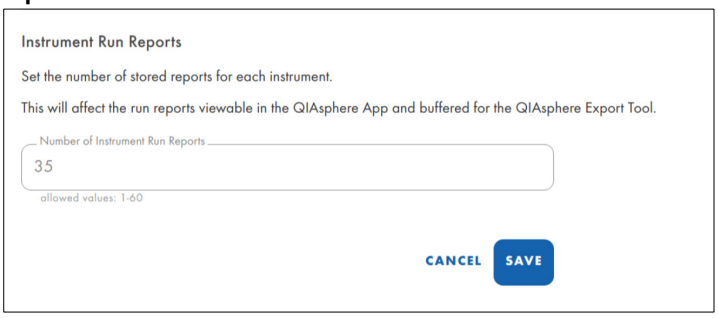
1. To change the Local Mode password, select **Settings** menu and open the **Local App and Export Tool Interface** tab.



2. Enter and repeat new password, then click **Save**.
3. Your new password has been saved. Remember your password for future Local App or Export Tool connection.

13.8.3 Changing number of stored run reports

1. To change number of stored run reports, go to **Settings** menu and open the **Local App and Export Tool Interface** tab.



2. The system will inform you about the maximum number of run reports.
3. Enter the desired number and click **SAVE**.

13.8.4 Instrument administration (for local mode only)

When used in Local Mode, all instruments that provide Local Mode functionality and are connected to the same QIAsphere Base can be monitored in the QIAsphere App. By default, newly connected instruments will automatically become visible. Follow the instruction below to change the visibility status for single instrument in QBSP.

1. Go to **Settings** menu.
2. Open the **Instruments Administration** tab.
3. All connected instruments are displayed. Choose which instrument should be visible for the mobile app in the local mode by switching on the respective toggle.

14 Resetting QIAsphere Base

There are two options to reset your QIAsphere Base:

- QIAsphere Base restart, e.g., when connection issues occur.
- QIAsphere Base factory reset, e.g., when all settings shall be removed.

14.1 QIAsphere Base restart

If you are facing connection issues or the device is not responding, try to restart by switching QIAsphere Base on and off.

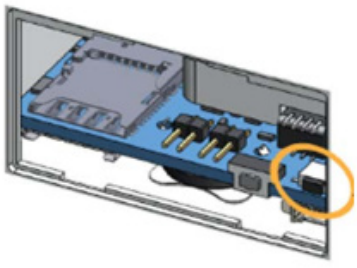
1. Unplug QIAsphere Base from the power socket and wait a few seconds.
2. Plug it back in.
3. Wait until QIAsphere Base is back on and LED indicator is on.

14.2 QIAsphere Base factory reset

When all QIAsphere Base settings shall be removed, you can reset it to factory settings.

Note: Once done, this operation cannot be reversed, all existing data including log files and settings will be deleted. The QIAsphere Base password will be reset to the default password **Qiagen123**. The QIAsphere Base will be rebooted and will start with the initial configuration.

1. **Important**: Make sure no dongle is attached to the Q-Base.
2. To turn it on, plug in the Q-Base power cord.
3. Wait until **User 2** and **User 4** LED turn on.
4. Open the lid on the side of the device.
5. Click and hold the marked button in the picture below for 10 seconds:



6. **LED USER1** indicator blinks during operation and turns off once it is done.

15 QIAsphere Export Tool Application

The **QIAsphere Export Tool** is a Windows application that provides a fast and safe way to automatically download experiment and run reports from instruments connected to a QIAsphere Base gateway to a configurable location. With software version 1.1.0, the **QIAsphere Export Tool** can connect to multiple QIAsphere Bases at the same time.

Important: QIAsphere Base software version 2.2.0 or higher is required to use the QIAsphere Export Tool. See Chapter 13, "Administration of QIAsphere Base" to check the installed software version and how to update it if required.

Note: The QIAsphere Export Tool itself has no limitation regarding the maximum number of connected QIAsphere Base gateways. The limiting factor is the used computer.

15.1 Download and Installation

The application is only suitable for the Windows operating system (version 7 or higher).

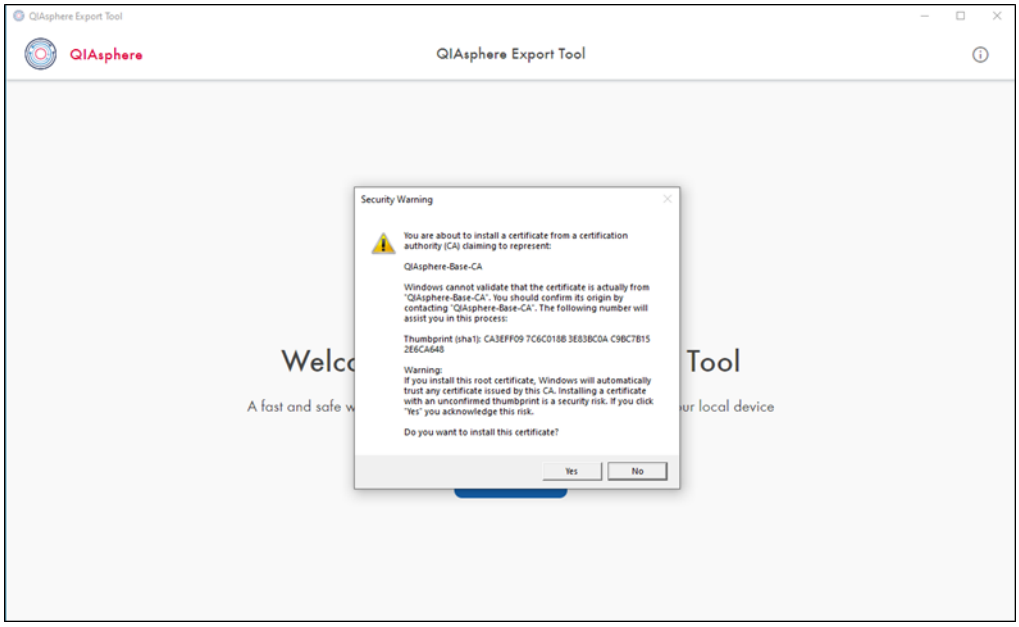
To install the **QIAsphere Export Tool**:

1. Go to **qiagen.com/qiasphere** and download installation package for **QIAsphere Export Tool**.
2. Double click on the installation file.
3. Follow the system instructions for app installation.

15.2 QIAsphere-Base-CA root certificate installation

The **QIAsphere Export Tool** needs to retrieve data directly from the QIAsphere Base via the local network. The installation of a **QIAsphere-Base-CA** root certificate is mandatory to allow secure, direct communication.

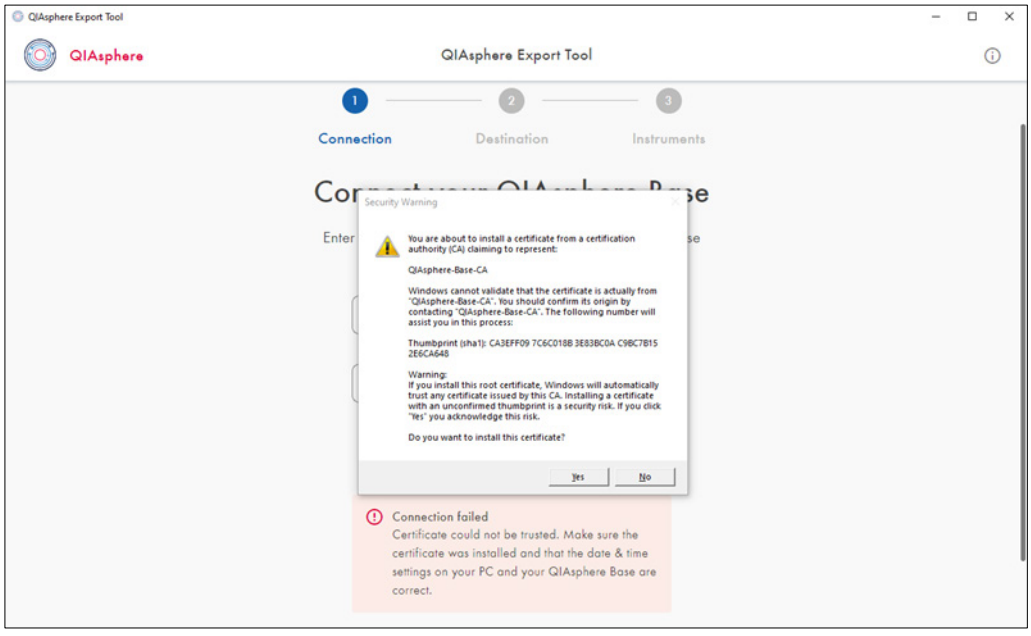
If the installation wizard of the **QIAsphere Export Tool** is confirmed with the **Finish** button (see section 15.1), a **security warning** regarding the installation of the **QIAsphere-Base-CA** root certificate is displayed.



Click **Yes** to install the required certificate. The installation process continues without any further user actions. After installing the certificate, the **QIAsphere Export Tool** is restarted and the QIAsphere Export Tool **Welcome** screen for initial setup is displayed (see section 15.3).

Once the **QIAsphere Export Tool** is installed, the **Security Warning** pop up for **QIAsphere-Base-CA** will not appear again.

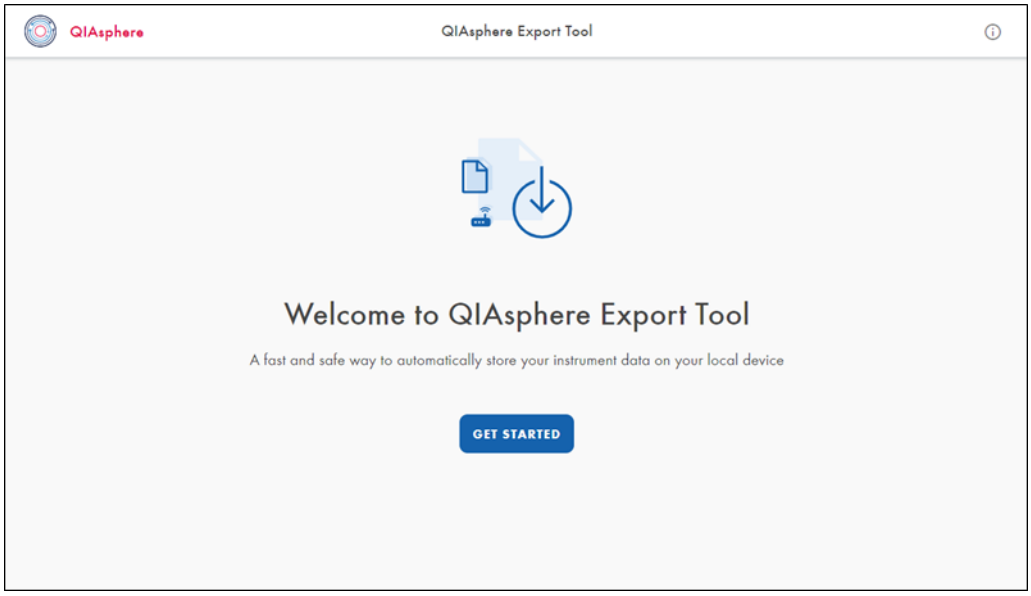
Note: Without the root certificate, the **QIAsphere Export Tool** cannot connect to QIAsphere Base gateway. If you skipped the certificate installation, the prompt to install the **QIAsphere-Base-C certificate** appears again when trying to connect to a QIAsphere Base.



15.3 Initial configuration settings

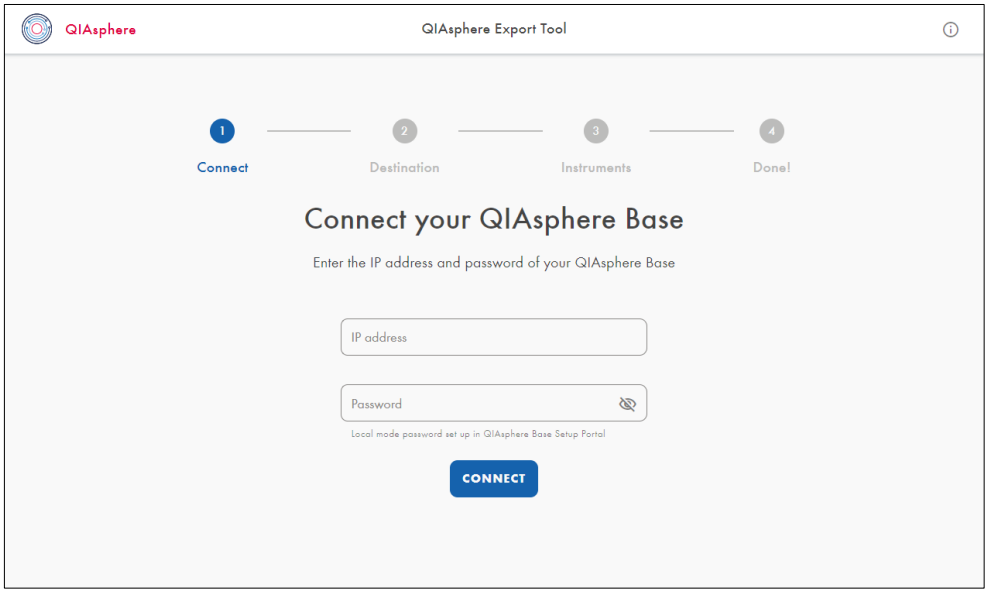
After installation, the application starts automatically for initial setup. Next, a connection to the desired QIAsphere Base gateways must be established, because experiment and run results of instruments are transferred via these gateways. Later you can customize the list of connected instruments for each connected QIAsphere Base to specify which instrument reports should be stored.

To start the initial setup of the **QIAsphere Export Tool**, press **GET STARTED** on the **Welcome** screen. A Wizard guides you through the several steps:



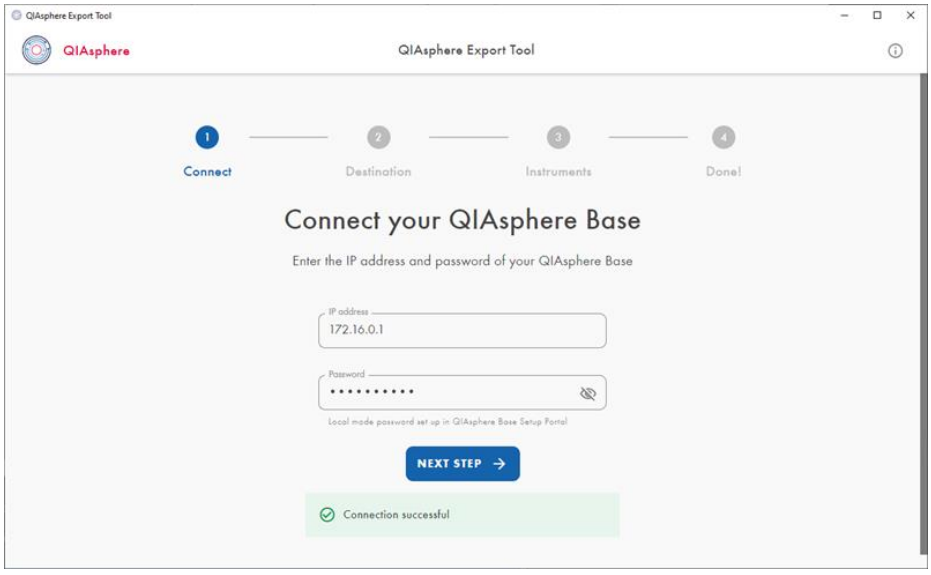
1. Enter the IP address and local mode password of the QIAsphere Base when prompted.

   Note: The local mode password has to be configured in the QIAsphere Base Setup Portal (QBSP) of the selected QIAsphere Base (see section 13.7.2). If the password was not changed, you can use the default password: **Qiagen@123**.

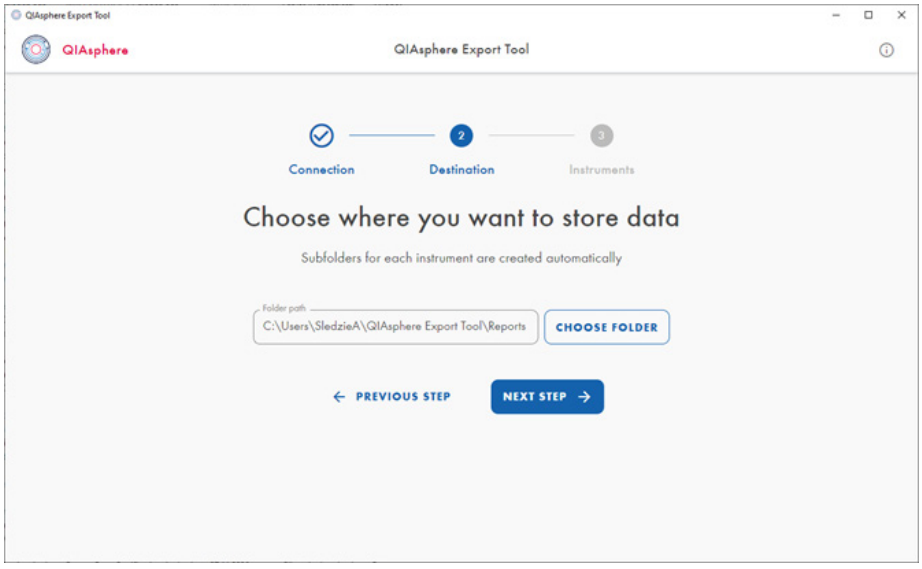


2. Click **CONNECT**.

3. After successful connection to QIAsphere Base, click **NEXT STEP**.

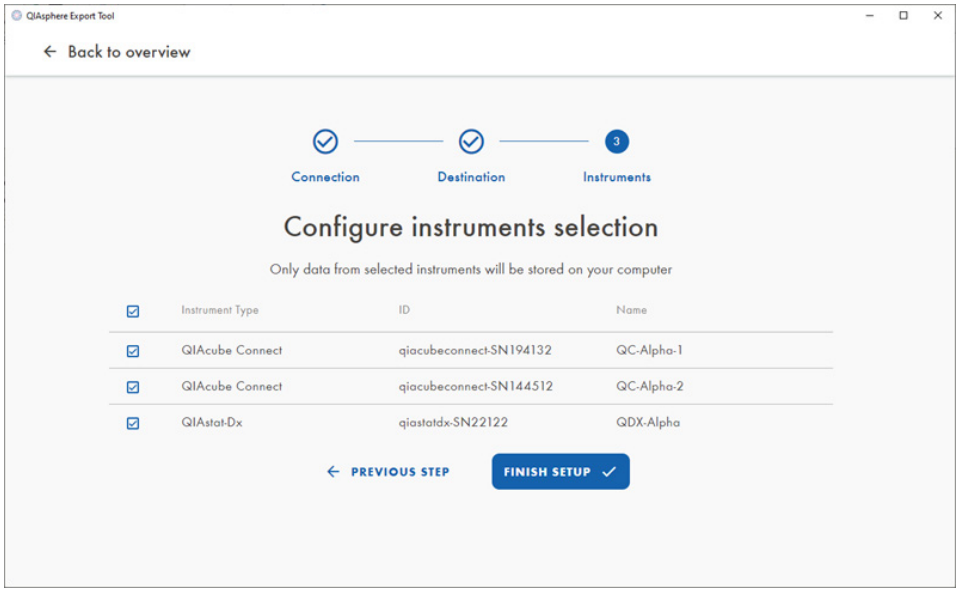


4. Click **CHOOSE FOLDER** to specify the destination folder where reports will be store.

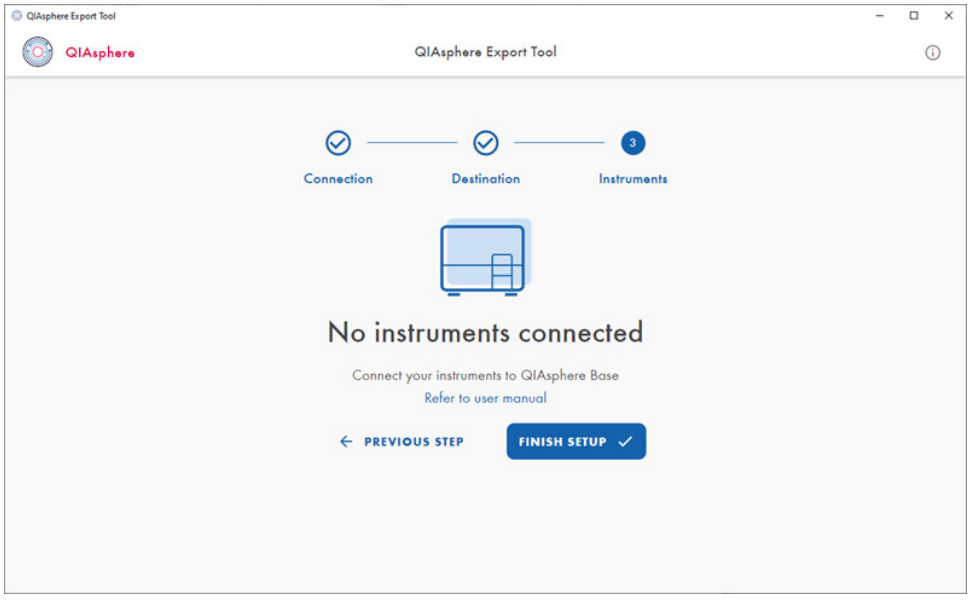


5. The Windows File Explorer is displayed to browse and choose the destination folder on the device.
6. Select a storage folder and accept.
   Note: The **QIAsphere Export Tool** will automatically create sub-folders for each instrument.
7. Click the **NEXT STEP** button.

8. A list with the instruments connected to the specified QIAsphere Base gateway is displayed. Only data from the selected instruments will be exported. By default, all instruments are selected. If necessary, you can deselect individual instruments by unchecking the box next to the respective instrument.

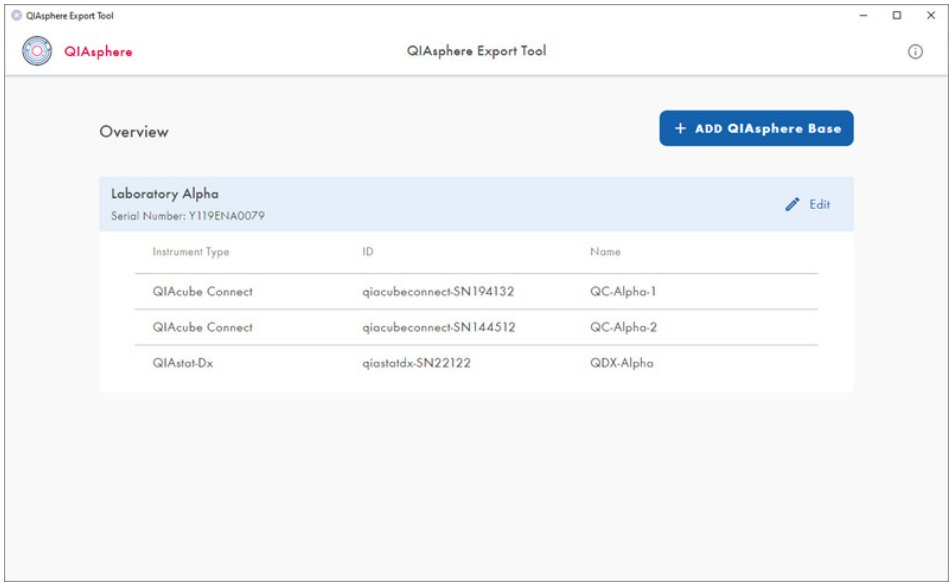


9. Click the **FINISH SETUP** button to complete the configuration settings.
Note: If no instrument is detected at this stage, the following screen will be shown:

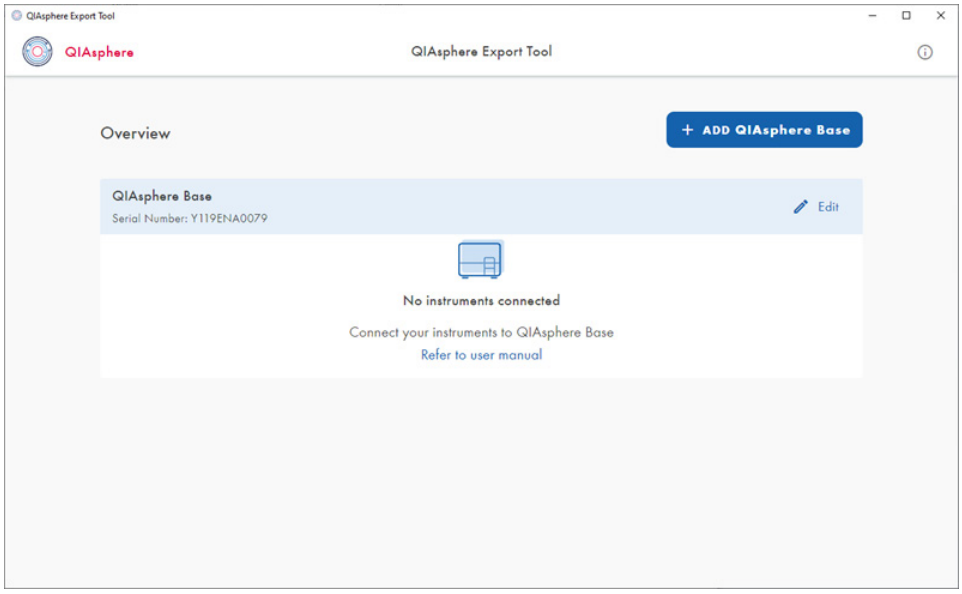


In this case, please verify the instruments connected to the QIAsphere Base. As soon as the result files of an instrument are stored on the QIAsphere Base, and the first file of this instrument is exported with the **QIAsphere Export Tool**, the corresponding instrument appears in the list view.

10. An overview of the dedicated QIAsphere Base settings is displayed. The automatic download service is now configured and runs in the background. The reports are downloaded and saved in the selected location. You can close the overview.



Note: If no instruments are connected to the QIAsphere Base, the overview shows the status No Instruments connected:

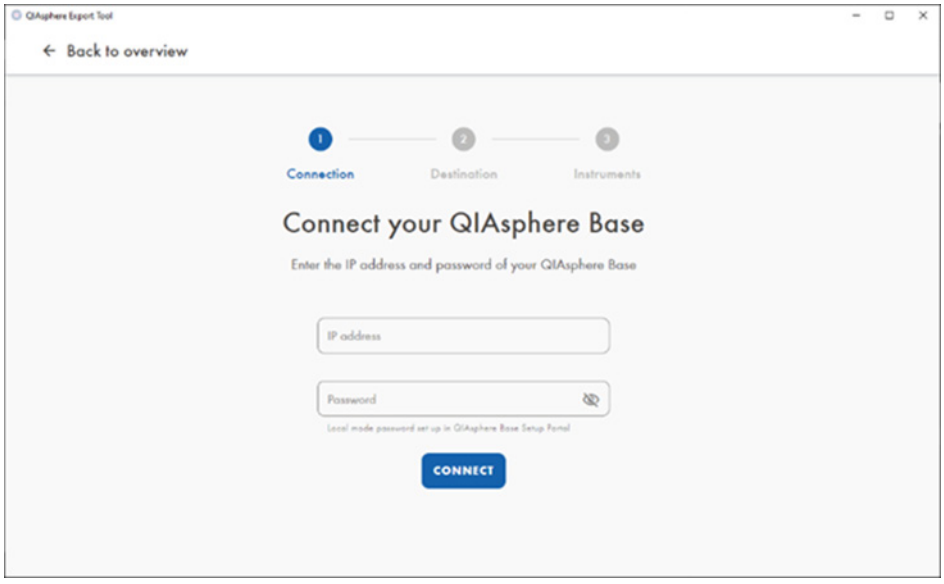


15.4 Changing the QIAsphere Export Tool settings

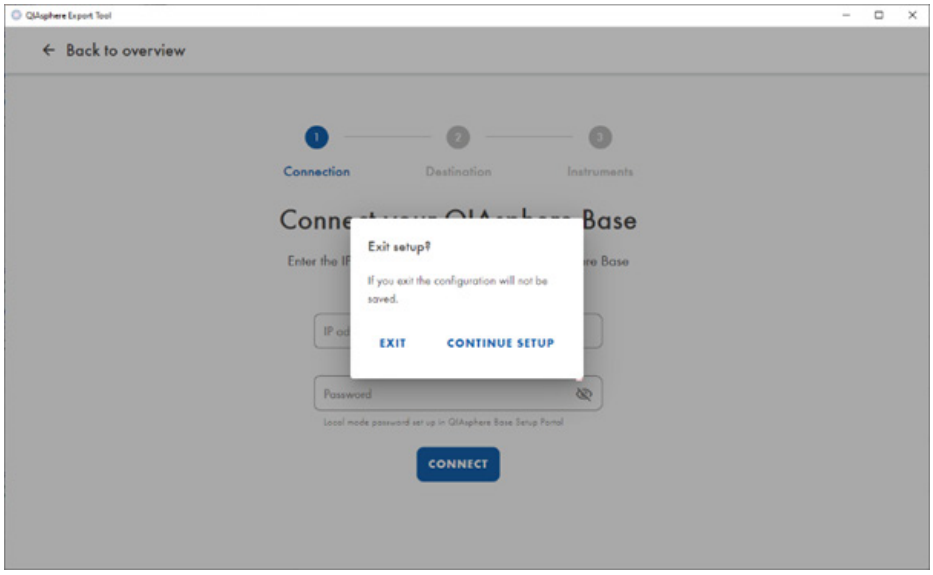
Open the application by double clicking on the application icon in the task bar, to check or change settings of the **QIAsphere Export Tool**. The **Overview** screen is displayed.

15.4.1 Adding a QIAsphere Base to **QIAsphere Export Tool**

1. Click the **+ Add QIAsphere Base** button.
2. The **Connect your QIAsphere Base** screen appears. To connect a new QIAsphere Base to the **QIAsphere Export Tool**, follow the same steps as described in section **Initial Configuration settings**.



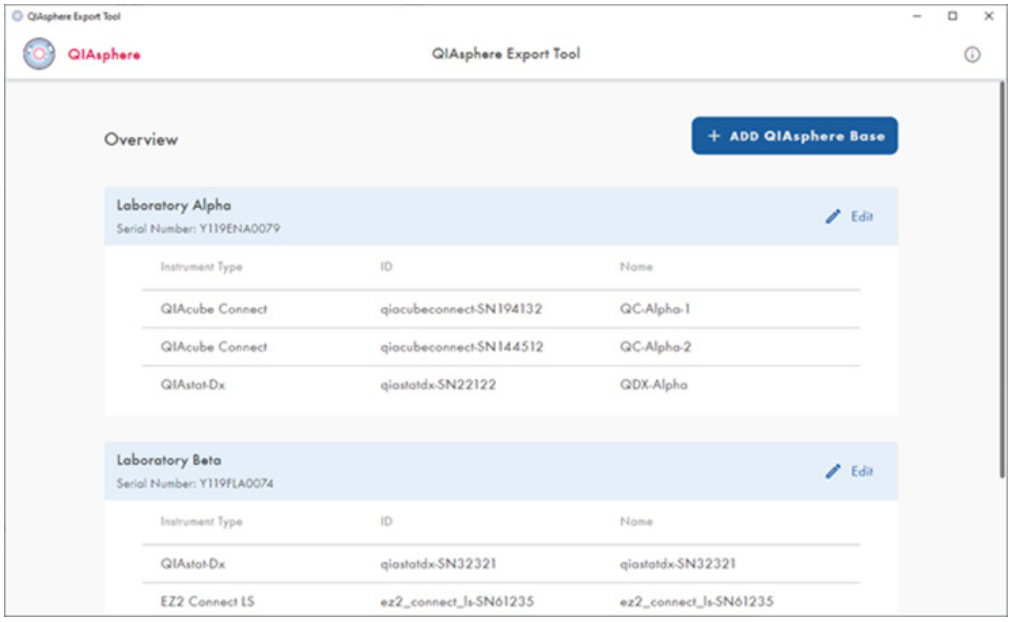
Note: Click **Back to overview** to exit the setup process of the new QIAsphere Base without saving. A dedicated popup window is shown to confirm. Click **EXIT** to return to the **Overview** screen.



3. After finalizing the setup process successfully, the **Overview** screen including the new QIAsphere Base settings is shown.

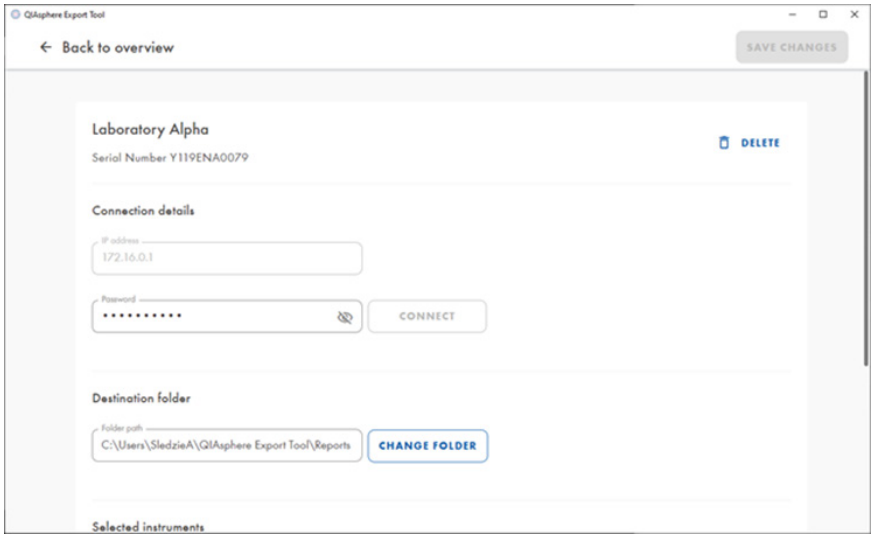
15.4.2 Changing settings of a QIAsphere Base

Click the pencil icon or the **Edit** button of the respective QIAsphere Base in the **Overview** screen. The **Edit** screen is shown.



15.4.3 Adjusting the QIAsphere Base password

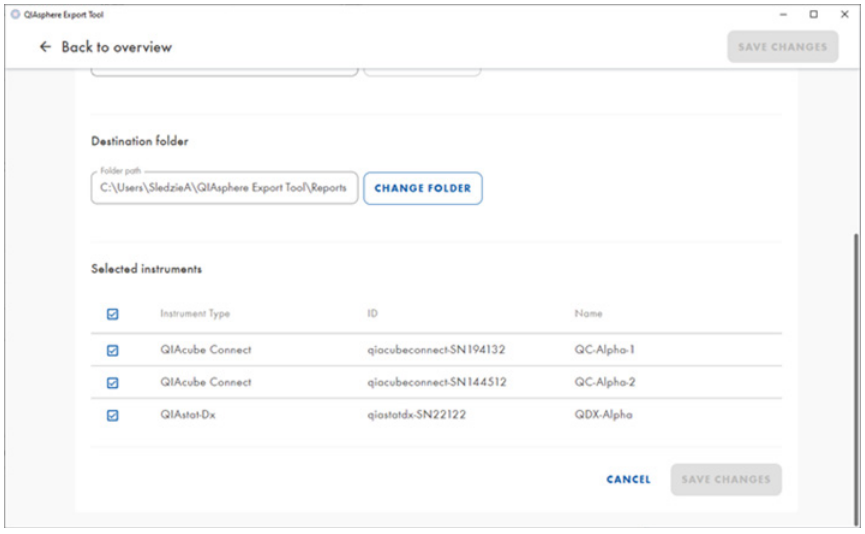
1. Go to the **Connection Details** section of the **Edit** screen.
2. Edit the password in the **Password** field and click **Connect**. An error message is shown if the password is not correct. In this case, please try again.



3. If password is correct, click **SAVE CHANGES**.

15.4.4 Changing the destination folder

1. Go to the **Destination Folder** section of the **Edit** screen.
2. Click **CHANGE FOLDER** to change the destination folder.



3. The standard Windows File Explorer is opened to browse and choose the destination folder.
4. Choose folder and accept.
5. The selected storage folder is displayed in the folder path field.
6. Click **SAVE CHANGES**.

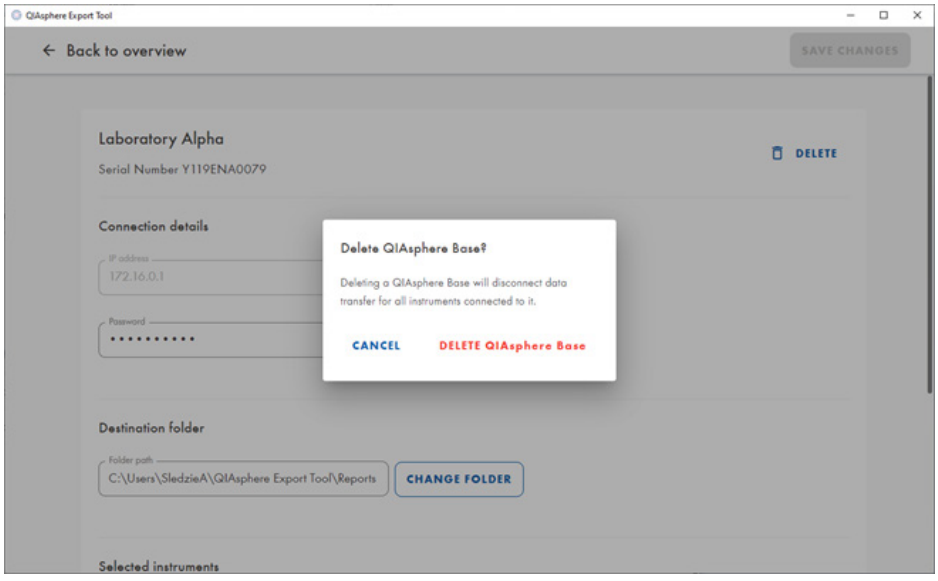
15.4.5 Changing instrument selection

1. Go to the **Selection instruments** section of the **Edit** screen.
2. All instruments connected to a QIAsphere Base is displayed. Only data from the selected instruments will be exported from a QIAsphere Base and stored in the specified folder.
3. Enable or disable single instruments using the checkbox next to the respective instrument.
4. Click **SAVE CHANGES**.

To save changes in any of the sections in the **Edit** screen, click **SAVE CHANGES**. This will return you to the **Overview** page.

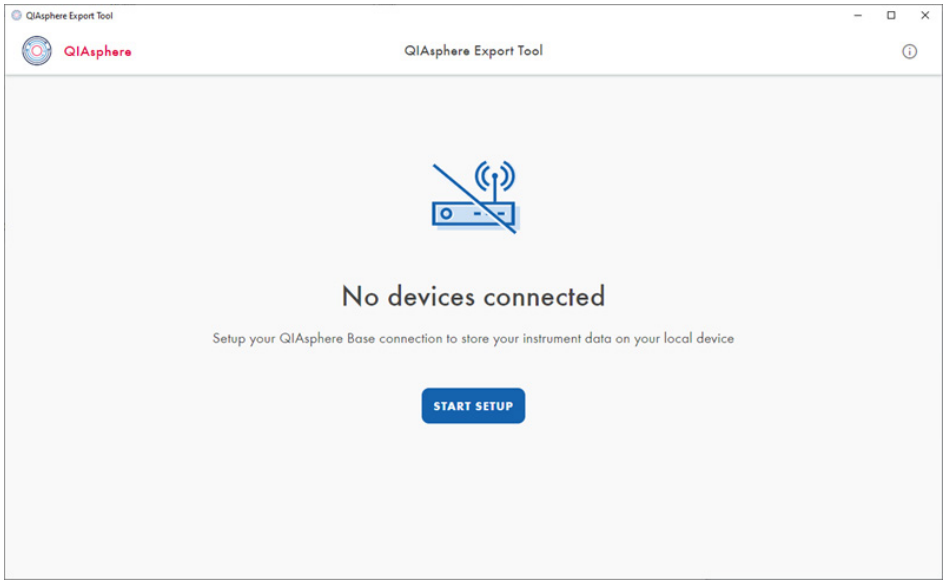
15.4.6 Deleting a QIAsphere Base from the QIAsphere Export Tool

1. Click the pencil icon or the **Edit** button of the respective QIAsphere Base in the **Overview** screen.
2. The **Edit** screen is displayed.
3. Click **DELETE**.



4. Click **DELETE QIAsphere Base** to confirm the deletion of this QIAsphere Base from the **QIAsphere Export Tool**. All settings of this QIAsphere Base are deleted and the updated **Overview** page is displayed.

Note: If the last QIAsphere Base gateway has been deleted from the **QIAsphere Export Tool**, the **No devices connected** screen is displayed instead of the **Overview** page. Click **Start Setup** to add the first QIAsphere Base to **QIAsphere Export Tool**.

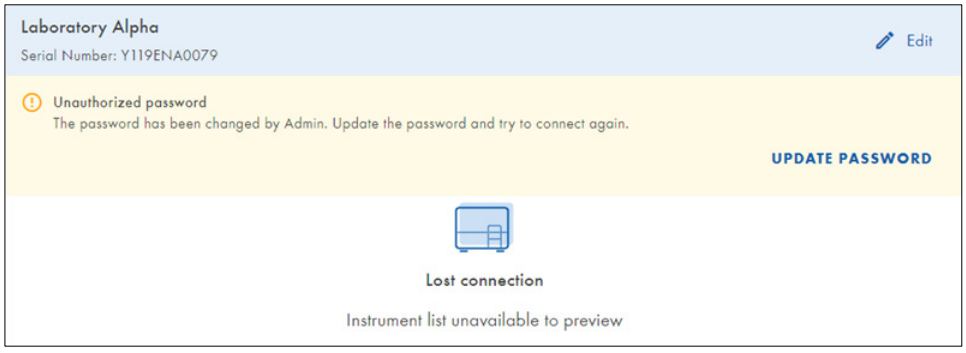


5. Click **CANCEL** to cancel the deletion of the QIAsphere Base.

15.4.7 Error handling in QIAsphere Export Tool

Unauthorized password

If the password of a QIAsphere Base was changed, the **QIAsphere Export Tool** loses the connection to this QIAsphere Base. The warning **Unauthorized Password** is displayed in the **Overview** page below the title header of the respective QIAsphere Base gateway.

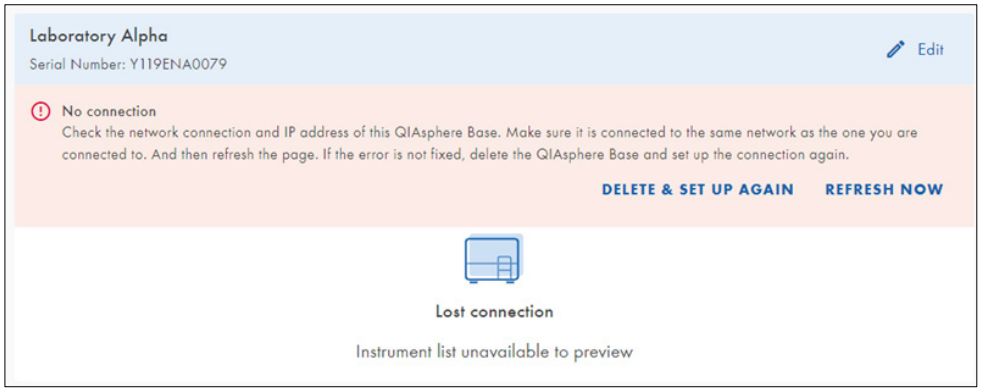


1. Click **Edit** to open the **Edit** screen.
2. Go to the **Connection Details** section of the **Edit** screen.

   Note: The same warning message is shown below the **Password** field.
3. Change the password. See section **Adjusting the QIAsphere Base password**.

No connection

In case the **QIAsphere Export Tool** lost the connection to the QIAsphere Base, the error message **No connection** is displayed in the **Overview** page. Please check the network connection and the IP address of the respective QIAsphere Base.



1. The error message provides two actions: **DELETE & SETUP AGAIN** and **REFRESH NOW**.
2. Click **REFRESH NOW** to trigger a reconnection with the QIAsphere Base. If the connection can be established, the warning message disappears and the normal state of the respective QIAsphere base is displayed.
3. If the reconnection is not successful, click **DELETE & SETUP AGAIN**. The confirmation window appears.
4. After confirmation this QIAsphere Base will be deleted from the **QIAsphere Export Tool**.

16 Troubleshooting

16.1 General information

This section provides information about what to do if an error occurs when using QIAsphere Base.

16.2 Contacting QIAGEN technical services

When you encounter an error in your QIAsphere Base, be sure to have the following information at hand:

- Detailed description of the error situation
- QIAsphere Base log files

This information will help you and your QIAGEN Technical Service Specialist to deal most efficiently with the issue.

Note: Information about the latest software versions can be found at **www.qiagen.com**.

16.3 FAQs

16.3.1 Why can't I find the QIAsphere Base device in the QIAsphere Base configuration menu during the first installation?

If you are using an iOS device, make sure you are not paired.

QIAsphere App and QIAsphere Base try to connect via Bluetooth. When you switch on QIAsphere Base, the Bluetooth module is automatically switched on for 1 hour. Make sure that Bluetooth is enabled on the mobile device and that the procedure is started from the App within 60 minutes. If QIAsphere Base still cannot be found, try to refresh the Bluetooth search.

Make sure that the Wi-Fi/Bluetooth dongle has been inserted as described in Section 3.2.

16.3.2 Which network settings are supported by the QIAsphere Base?

You can use either wired Ethernet or Wi-Fi connection, which is Wi-Fi Protected Access 2 (WPA2) protected.

16.3.3 Why are not all applications/kits/protocol files visible in the QIAcube Connect run setup?

Each time a QIAcube Connect instrument is switched on, all data (e.g., protocol files) will be uploaded to QIAsphere Base. During this upload phase, the QIAcube Connect App is not able to show the files that have not yet been uploaded for run setup. Wait for 10 minutes and retry.

16.3.4 How can I retrieve a forgotten password?

If the password is lost, it can be reset by performing a factory reset of QIAsphere Base (see section 4.6).

16.3.5 Can the number of run records be changed?

Yes, the number of run records can be set using the **Q-Base Administration Portal**. Refer to section 4.5.5 for details. The default value is 60.

16.3.6 Why can't I reach the QIAsphere Base Setup Portal?

Make sure that you have successfully placed the QIAsphere Base into your network and it has a valid IP address. Then, enter **https:\\IP-address** in your internet browser window (**IP-address** is the actual IP address of your QIAsphere Base). Make sure to include the letter **s** in **https:**. QIAsphere Base uses a self-signed certificate for the https connection. Therefore, the browser may issue a security warning. Ignore the warning or add an exception to access the QIAsphere Base configuration.

17 Appendix A – Technical Data

Technical data of the QIAsphere Base can be found in the data sheet of the hardware supplier Eurotech (Eurotech – ReliaGATE 10-12) at the following site:

https://www.eurotech.com/en/products/iot/multi-service-iot-edge-gateways/reliagate-10-12.

18 Appendix B – IT Prerequisites for Using QIAsphere

To set up QIAsphere in cloud or local mode and to use connectivity services, QIAsphere clients such as QIAsphere-ready instruments and QIAsphere Base gateway device must be integrated into your local network (see network diagrams in section 3.1). Depending on your local network settings, you may need to consult your IT department. If required, the checklist below provides guidance to clarify the IT prerequisites and to prepare the network infrastructure with your IT specialist before starting with the network integration of QIAsphere.

Task	Description
Network connection	QIAsphere clients can be connected to a wireless or wired network. Consider the following prerequisites depending on the connection: a. **Wireless –** Have Wi-Fi network name and password available b. **Wired Ethernet –** One active Ethernet wall socket per QIAsphere client
Network setup of QIAsphere clients	a. **Cloud mode –** Make sure QIAsphere Base and QIAsphere-ready instruments are connected to the same local network. b. **Local mode –** Make sure QIAsphere Base, QIAsphere-ready instrument(s) and the mobile device running the QIAsphere App are connected to the same network.
IP configuration	Using DHCP as network protocol is recommended and configured by default. If required, static IP can be set manually. a. **DHCP –** Make sure the server has minimum one free IP address per QIAsphere client available. b. **Static IP –** Provide the following network parameters for each QIAsphere client: IP address and Subnet mask, Default Gateway and DNS server.
NTP configuration	Maintaining a correct time setting on the QIAsphere Base is of great importance to all QIAsphere functions. Wherever possible, the QIAsphere Base should be connected to an NTP server. By default, it is configured to connect to **0.pool.ntp.org**.

<table>
<tr><td></td><td>Make sure communication to this server on TCP port 123 is allowed by your firewall or request the correct server to be used from your IT department.</td></tr>
<tr><td>Firewall rules</td><td>QIAsphere clients use the following communication ports and protocols to transfer data. Set local firewall rules accordingly to allow communication on these ports:
<table>
<tr><th>URL</th><th>Port</th><th>Protocol</th></tr>
<tr><td>cs.qiasphere.qiagen.com

api.qiasphere.qiagen.com

global.azure-devices-provisioning.net

qiaspherecloudconnector.blob.core.windows.net

prdlandingzoneweu.blob.core.windows.net/</td><td>Outbound TCP 443</td><td>HTTPS</td></tr>
<tr><td>prd-qiasphere-iot-hub.azure-devices.net</td><td>Outbound TCP 8883 and 433</td><td>MQTT + HTTPS</td></tr>
</table></td></tr>
</table>

If your IT department ask for the MAC address of the QIAsphere Base, you can find it on the QIAsphere Base type plate on the device bottom.

Older QIAsphere Bases may not have the MAC address on the type plate. In this case, please contact your QIAGEN technical support at **www.support.qiagen.com**. To request for the MAC address, you need to provide the QIAsphere Base serial number which can be found on the bottom of the QIAsphere Base.

19 Version History

Document	Date	Description
HB-2843-003	January 2022	Updated the **QIAsphere Export Tool Application** section.
HB-2843-002	September 2021	Updated the following sections due to the launch of the new QIAsphere App version: Updated Section 3 – General Description Updated Section 5.4 – Requesting QIAsphere license Added additional step on Section 7.2 – Connecting QIAsphere Base to local network using QIAsphere App Updated Section10.3 – User management Updated Section10.3.1 – Creating new user in QIAsphere Added Section 10.3.3 – Editing user role Added Section 12.4 – Scheduler Updated Section 13.1 – Setting time, date, and time zone Updated Section 13.7 – Changing instrument connection password Added Section 13.8 – Configuration of the Local App and Export Tool Interface Added Section 15 – QIAsphere Export Tool Application Updated the Firewall rules in the Appendix section

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