



QUENTRY DESKTOP

QUENTRY

QUENTRY DESKTOP
Version 3.1

Software User Guide
Revision 1.0

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1 GENERAL INFORMATION

1.1 Contact Data

Support

If you cannot find information you need in this guide, or if you have questions or problems, contact Brainlab support:
support@qentry.com

Expected Service Life

Brainlab provides five years of service for software applications. During this period of time software updates are offered.

Feedback

Despite careful review, this user guide may contain errors.
Please contact us at info@qentry.com if you have improvement suggestions.

Manufacturer

Brainlab AG
Olof-Palme-Str. 9
81829 Munich
Germany

1.2 Legal Information

Copyright

This guide contains proprietary information protected by copyright. No part of this guide may be reproduced or translated without express written permission of Brainlab.

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 - **Qentry**® is a trademark of Brainlab AG.
 - **iHelp**® is a trademark of Brainlab AG.
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Non-Brainlab Trademarks

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 - Firefox® is a registered trademark of the Mozilla Foundation in the United States and other countries.
 - Chrome® is a registered trademark of the Google Inc. in the United States and other countries.
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Patent Information

This product may be covered by one or more patents or pending patent applications. For details, see: www.brainlab.com/patent.

Integrated Third-Party Software

This software is based in part on the following work:

- The Independent JPEG Group.
 - The AWS SDK for .NET developed by Amazon.com, Inc.
 - The ClearCanvas SDK developed by ClearCanvas, Inc.
 - The Log4Net developed by the Apache Software Foundation.
 - The Microsoft .NET Framework SDK developed by Microsoft Corp.
 - The Microsoft .NET Framework (WCF) developed by Microsoft Corp.
 - The Microsoft DeepZoomTools developed by Microsoft Corp.
 - The Microsoft DirectX SDK (February 2010) developed by Microsoft Corp.
 - The Open DICOM developed by Albert Gandt.
 - The SharpZipLib (.NET).
-

CE Label



The CE label indicates that the Brainlab product complies with the essential requirements of Council Directive 93/42/EEC (the "MDD").

Qentry Desktop is a part of **Qentry**, which is a Class I product according to the rules established by the MDD.

Report Incidents Related to This Product

You are required to report any serious incident that may have occurred related to this product to Brainlab, and if within Europe, to your corresponding national competent authority for medical devices.

Sales in US

US federal law restricts this device to sale by or on the order of a physician.

No Medical Advice

Neither Brainlab nor **Qentry** provide any medical advice. Customer is solely responsible for all medical decisions, including but not limited to the interpretation of any patient data, and any diagnosis, treatment or treatment plan made by the customer in connection with the use of **Qentry**. The customer acknowledges that image capture, image processing and image display also depend on the customer's specific computer hardware environment and corresponding system settings which are beyond reasonable control of Brainlab. Brainlab does not warrant that the image representation through **Qentry** will be free from any errors such as image distortions, color deviations or poor contrast and brightness values. It is the sole responsibility of the customer and any other user, physician or medical physicist involved to anticipate the possibility of such display errors in interpreting images visualized through .

1.3 Symbols

Warnings



Warning

Warnings are indicated by triangular warning symbols. They contain safety-critical information regarding possible injury, death or other serious consequences associated with device use or misuse.

Cautions



Cautions are indicated by circular caution symbols. They contain important information regarding potential device malfunctions, device failure, damage to device or damage to property.

Notes

NOTE: Notes are formatted in italic type and indicate additional useful hints.

1.4 Using the System

Intended Use

Qentry Desktop is indicated for image data transfer and online storage of medical images and related data.

The **Qentry Desktop** program is a web-based software for medical professionals that:

- Supports doctors to build their global clinical network
- Provides an online community, to work in virtual groups, send messages
- Provides doctors with tools for secure online image (DICOM) storage, review, and sharing
- Provides users with tools for aggregation and graphical visualization of patient data collected within **Qentry**

It is not intended for primary diagnosis, detailed treatment planning or treatment of patients.

Intended User(s) and Conditions

The device is generally used by medical professionals and medical organization support staff such as doctors, their assistants or nursing staff, within a hospital, a clinic, a doctor's office, or from remote locations, such as at home.

Plausibility Review



Warning

Before patient treatment, review the plausibility of all information input to and output from the system.

1.5 Compatibility with Software

Compatible Brainlab Medical Software

Only Brainlab medical software specified by Brainlab may be installed and used with the system. Contact Brainlab support for clarification regarding compatibility with Brainlab medical software.

Non-Brainlab Software



Only authorized Brainlab employees may install software on the Brainlab system. Do not install or remove any software applications.

Updates



Warning

Updates to the operating system (hotfixes) or third-party software should be performed outside clinical hours and in a test environment to verify correct operation of the Brainlab system. Brainlab monitors the released Windows hotfixes and will know, for some updates, if problems can be expected. Contact Brainlab support if any problems to operating system hotfixes are encountered.

Virus Scanning and Malware

Brainlab recommends protecting the system with state-of-the-art anti-virus software.

Be aware that some malware protection software (e.g., virus scanner) settings can negatively affect system performance. For example, if real-time scans are performed and each file access is monitored, then loading and saving patient data may be slow. Brainlab recommends disabling real-time scans and performing virus scans during non-clinical hours.



Warning

Ensure that your anti-virus software does not modify any Brainlab directories, specifically:

- C:\Brainlab, D:\Brainlab, F:\Brainlab, etc.
- C:\PatientData, D:\PatientData, F:\PatientData, etc.



Warning

Do not download or install updates during treatment planning.

Contact Brainlab support for further information regarding any of these issues.

Microsoft Security Updates for Windows and Driver Updates

Brainlab allows the installation of security patches only. Do not install service packs and optional updates. Verify your settings to ensure updates are downloaded and installed correctly and at a suitable time. Do not update drivers on Brainlab platforms.

See the Brainlab website for more information about settings and a list of Microsoft Security Updates blocked by Brainlab support.

Address: www.brainlab.com/updates

Password: WindowsUpdates!89

1.6 Training and Documentation

Responsibility



Warning

This system solely provides assistance to the surgeon and does not substitute or replace the surgeon's experience and/or responsibility during its use. It must always be possible for the user to proceed without the assistance of the system.

Only trained medical personnel may operate system components and accessory instrumentation.

Reading User Guides

This guide describes complex medical software or medical devices that must be used with care.

It is therefore important that all users of the system, instrument or software:

- Read this guide carefully before handling the equipment
- Have access to this guide at all times

1.7 Technical Requirements

General

Standard computer with internet connection.

Software

Software	Requirement
Microsoft Windows	Microsoft Windows 7 or higher In addition, Brainlab recommends that you apply all critical updates and hot fixes using Windows Update.
Microsoft .NET Framework	Microsoft .NET Framework v4.5 or higher (installed via OS)

Internet Connection

Qentry Desktop is a desktop application designed to connect you to cloud-based systems over the internet. An internet connection is required in order to use the application.

The amount of time required to transfer these images varies depending on the image size, format and available internet bandwidth. DICOM image file sets (studies) can vary in size from just a few megabytes (5 to 10 MB per image) for a typical X-ray, to 100 Mbs or more for CT or MRI scans.

For this reason, Brainlab recommends using **Qentry Desktop** with a broadband internet connection. Whether connected from your home, office, or hospital or clinic, upload times will depend on the total file size of the images being transferred and available internet bandwidth.

Network

Images from your local PACS can be uploaded to your **Qentry.com** account. To perform these functions, the computer running **Qentry.com** must have a network connection (physical or VPN) to PACS.

Qentry Desktop must be able to access the WCF service URL (open the firewall if necessary). Access to *.qentry.com on port 443.

2 QUENTRY DESKTOP

2.1 Introducing Qentry Desktop

General Information

Qentry Desktop is a highly secure, web-based service that makes it easy to transfer medical images between your computer, clinic, hospital PACS systems, other medical imaging systems and **Qentry.com**.

Qentry Desktop provides a convenient way to upload your DICOM images from various sources to **Qentry.com**. **Qentry Desktop** enables you to:

- Upload images from a local folder to a **Qentry** cloud account.
- Search and upload images from the PACS to a **Qentry.com** account.

Secure Connection

All communication with **Qentry.com** accounts, including login and image upload, is transferred over a 128-bit SSL-encrypted connection. A **Qentry.com** account requires a valid Brainlab ID and password before online data can be accessed. Communication with a PACS or other DICOM-compatible devices and applications takes place on your local network over standard DICOM protocols.

2.2 Installing Qentry Desktop

Before Installation

Ensure your system complies with the specifications in this user guide. The **Qentry Desktop** installation process checks that system requirements are met before installation.

Installing Behind a Firewall

If a Windows firewall or other software firewall product is enabled on your computer, you may be prompted to allow **Qentry.com** to communicate on your network.

- If you have a Windows firewall, activate the check box for **Private** networks to allow **Qentry** to operate when your computer is connected to your home or work network.
- If you are installing **Qentry** on a mobile computer, you may also choose to allow **Public** networks so that you can upload images when you are outside of your home or office.

Select **Allow Access** to authorize **Qentry.com** to communicate through your Windows firewall.

Configuring Qentry

After installation, **Qentry Desktop** may be configured as described in Desktop Settings . Settings must only be configured if you intend to connect **Qentry Desktop** to your PACS system. Configuration is not required to upload image files from your computer.



All files on temporary folders are encrypted. You are responsible for maintaining access control and security on systems where components are installed.

Related Links

- 1.7 Technical Requirements on page 12
 - 2.3.4 Desktop Settings on page 22
-

How to Install Qentry Desktop

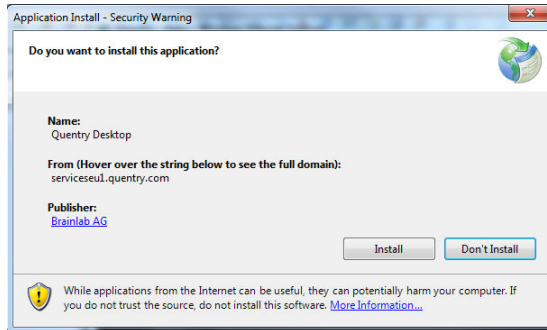
Qentry Desktop, is upgraded automatically.

To install **Qentry Desktop**:

Step
1. Log in to your Qentry.com account.
2. Select Applications in the top menu. A list of available Qentry.com applications is displayed.
3. Select Install beside the Qentry Desktop option.

Step

- If **Qentry Desktop** is already installed, it will launch.
- If **Qentry Desktop** is not installed, a window is displayed asking whether you want to install the application.



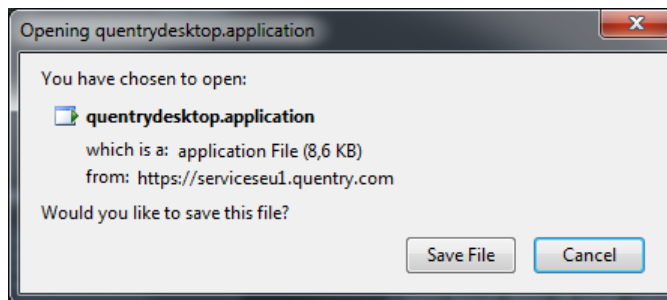
4. Select **Install** to download **Qentry Desktop** to your computer. **Qentry Desktop** is installed automatically and runs immediately after the download is completed.

How to Install from Chrome, Firefox or Other Browsers

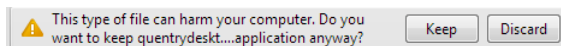
When installing from a browser other than Internet Explorer, you may be prompted to save a file called *Qentrydesktop.application*. When prompted by your browser, perform the following:

Step

1. Save the file to your computer. For example, the following is displayed in Mozilla Firefox:



In Google Chrome:



2. Locate the saved *.application* file.
3. Double-click it to proceed with installation.

2.3 Using Qentry Desktop

2.3.1 Launching Qentry Desktop

How To launch Qentry from www.qentry.com

Step
1. Run Qentry Desktop from the start menu.
2. Log in using your Qentry account details.
3. Select Applications .
4. Select Install under Qentry Desktop . Qentry checks that you have the most up-to-date version of the previously installed application, and launches it.
5. The login window is displayed. Enter your Brainlab ID and Password .

How to Launch from the Start Menu

Step
1. Select the Qentry Desktop icon to launch the application.
2. Enter your Qentry Brainlab ID and Password . The main window is displayed:

2.3.2 Uploading Files

General Information

This option enables you to upload files to your **Qumentry.com** account from:

- Files or a complete folder on your computer
- A DICOM CD ROM
- A PACS server

All the files will be uploaded to either:

- The currently logged in user, or
 - A CareTeam or contact if they permit upload.
-

Supported File Formats

You can upload image files and attachments (case notes, reports etc.) in the following formats:

- DICOM
 - PDF
 - DOC
 - JPEG, JPG
 - PNG
 - BMP
 - TXT
 - CSV
 - XML
 - PPT
 - XLS
 - MP4
 - ZIP
 - xBrain folder
-

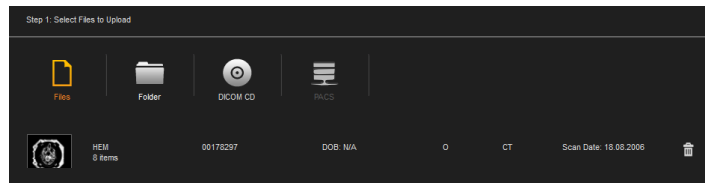
How to Upload Files

Step
<p>1. Select Upload.</p> <div data-bbox="632 1509 1283 1789" data-label="Image"></div>
<p>2. You can select to upload:</p>

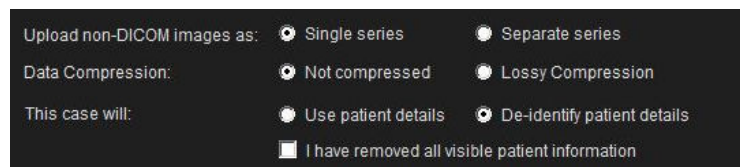
Step

- **Files:** To choose individual files from your computer.
- **Folder:** To choose an entire folder from your computer.
- **DICOM CD:** To choose the contents of a DICOM CDROM.
- **PACS:** To choose from a PACS server.

Once you have made your selection, **Quentry Desktop** analyzes the files and displays a summary:

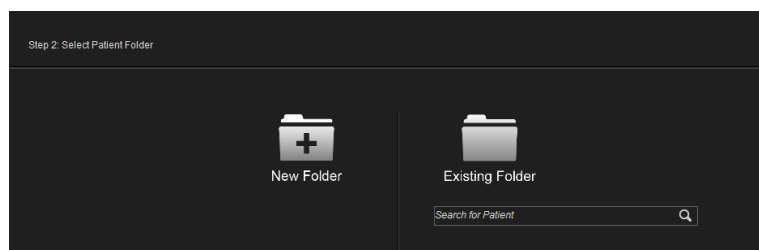


3. Choose the data compression to be used when uploading the images:
 - **Not compressed:** Where the original files are uploaded.
 - **Lossy compression:** Where image quality is reduced through file compression.



4. Select how to upload patient data by activating one of the radio buttons:
 - **Use patient details:** Showing patient details.
 - **De-identify patient details:** With patient details removed. If you choose this option, you must further confirm that you have removed all patient data from the images by activating the check box. You must be careful to remove any patient data that might have been recorded on the image itself.

5. Choose a folder on **Quentry.com** where the image files will be stored.



6. To create a new folder, select **New Folder**.

Step

You can choose which account to upload the files to:

- Your own account.
- The account of a contact or CareTeam that has given you permission to upload.

Patient details are taken from the DICOM data, unless:

- You chose to de-identify the files, or
- You are uploading a JPEG file without DICOM data.

In these cases, you must provide details to identify the new folder:

NOTE: If you have chosen to upload the patient records as de-identified, a de-identified name is suggested but can be changed.

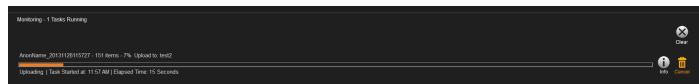
7. If you choose to store the files in an **Existing Folder**, you must search for and choose which folder to use.

NOTE: To add images to an existing patient folder you must either have uploaded data previously or share a data set with the right to upload data.

8. If you upload to **Myself** or to a **CareTeam** of which you are a member, you can add patient folder tags during the upload process.

- Upload to **Myself**: You can use existing tags or create new ones.
- Upload to a **CareTeam**: You can use the CareTeam's predefined tags.

9. Select **Finish & Upload**. The main screen is displayed, with this and any other running tasks.



*NOTE: You can end and remove a running task before completion by selecting **Cancel**.*

*NOTE: File transfer processes may take several minutes or more to complete depending on your PACS system, local network, internet connection and number and size of the images contained in the studies. Once images are transferred to **Quentry.com**, please allow some additional time for online processing before the images will appear in your **Quentry.com** account.*

2.3.3 Downloading Files

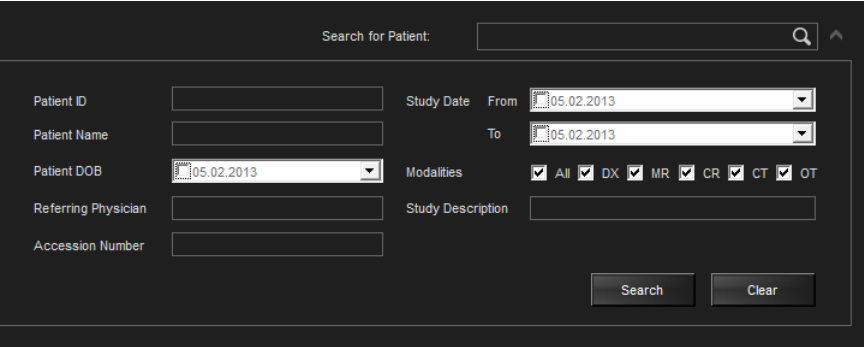
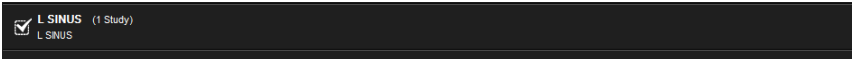
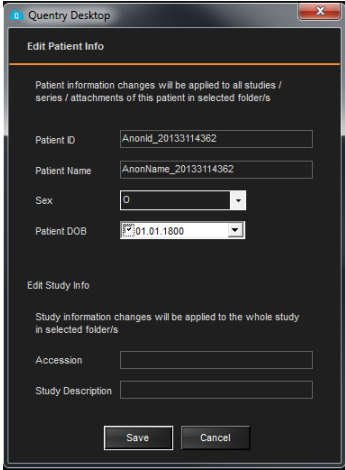
General Information

This option enables you to find images and attachments and download them from **Qentry.com** to a PACS system or a folder.

Search options

To clear the search criteria, select **Clear**.

How to Search for Images

<p>Step</p> <p>1. Specify the criteria of the images for which to search in the PACS system and select Search.</p>	
<p>2. A list of the patient folders that match the specified criteria is displayed.</p>	 <p>Activate the check box corresponding to each patient folder that you wish to download.</p>
<p>3. Select Edit Demographics to Edit Patient Info or add accession or descriptive information for a study. These changes are applied to the downloaded files.</p>	
<p>4. Select:</p>	

Step
<ul style="list-style-type: none">• Save to PACS to download the images to your PACS server.• Save to Folder to select or create a folder on your computer to store the downloaded images.



Importing DICOM images into different PACS systems is a PACS administrator function. Qentry provides limited DICOM tag editing functions to assist customers with reconciling study data. Patient information varies between different systems, and medical institutions. Users must be responsible for reconciling demographics upon importing images using tools provided in Qentry or native PACS functions.

2.3.4 Desktop Settings

General Information

Settings need only be configured if you intend to connect **Qentry Desktop** to your PACS system. Configuration is not required in order to upload image files from your computer.

Validate the ports by checking the numeric values within the allowed port numbers range. All fields are mandatory in PACS/SCU configuration. You must obtain the correct information from your PACS system administrator in order to configure **Qentry Desktop**. The PACS administrator must perform additional steps to allow DICOM connectivity.

Security



You must authenticate and sign valid Qentry credentials to commit to PACS. Additionally, many PACS systems can be configured to control which systems on the network can commit images. The admin user or PACS administrator can assign permissions to allow or deny users access to this function.

DICOM Settings

This option enables you to configure the **Qentry Desktop** connection to the local PACS for requesting data. **Qentry Desktop** can only be defined to work with a single PACS. Contact your PACS administrator for this information.

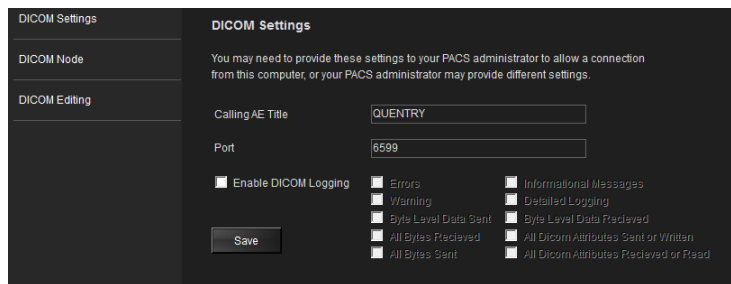


Figure 1

Setting	Description
Calling AE Title	Client AE title
Port	The port that Qentry Desktop uses to listen for incoming DICOM images
Enable DICOM Logging	Enables the logging of DICOM actions between Qentry Desktop and the PACS, in order to identify any inconsistencies during the communication between the systems. You must enter a log-level value provided by Brainlab technical support when enabling DICOM logging. The DICOM logs are located in: %temp%\Qentry\DicomObjectsLogs. Activate the corresponding check box for each type of information you want to record in the log.

DICOM Node

This window enables you to specify the DICOM settings that will allow you to connect from your computer to the PACS. Contact your PACS administrator for this information.

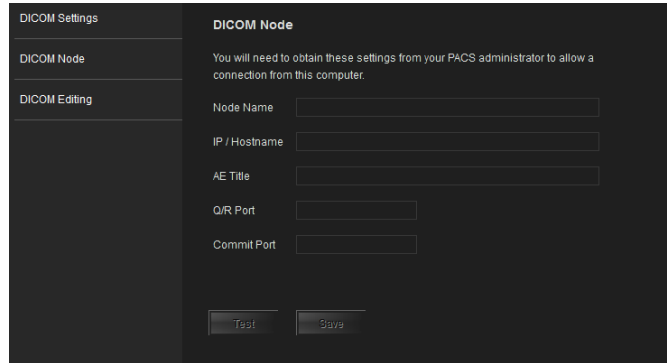


Figure 2

Setting	Description
Node Name	PACS server name. This is the name that will appear when you use the Quentry Desktop Search option.
IP / Hostname	The IP address of the PACS server.
AE Title	PACS Application Entity title.
Q/R Port	The port used to query and retrieve images from the PACS (C-FIND and C-MOVE).
Commit Port	The port used to store images in the PACS (C-STORE).
Test	Performs a DICOM ECHO test.
Save	Saves the settings.

DICOM Editing

This window enables you to modify the DICOM tags of an image before sending the image to the DICOM node. You can either automatically replace the value of a tag for all downloaded images, or to automatically add a prefix/suffix (using either user-entered text or keyword values) to a selected tag after the images are downloaded.

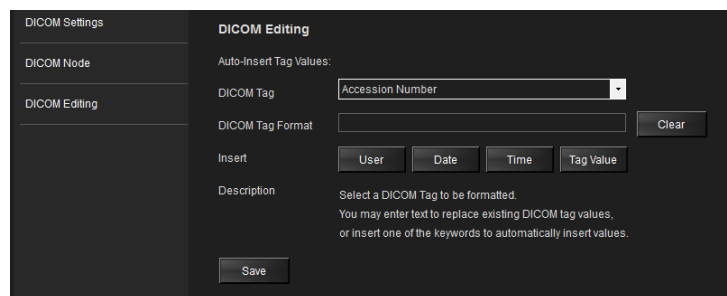


Figure 3

Setting	Description
DICOM Tag	Choose a tag from the list.
DICOM Tag Format	Specify text to replace a tag, or choose a keyword by pressing one of the buttons next to Insert .

How to Configure PACS

Step
1. Select Settings to configure the PACS system.
2. Modify the settings as required and select Save .

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