iQ IMAGE
a PARATUS Medical Imaging Company

iQ-WEB

Version 7.2.9

All-inclusive PACS
for Archiving, Teleradiology and Image Sharing

Why not have it all for a change? iQ-WEB **1** is a complete, easy-to-use and affordable PACS solution for storing, distributing, viewing and sharing medical imaging studies and reports. It consists of several applications all in one package.

Our iQ-WEB is a component of iQ-SYSTEM PACS

1 iQ-WEB – a picture archiving and communication system (PACS) for the management, retention, routing, analysis and review of medical images stored in proper DICOM format and a system of interrelated software components.

The other components are iQ-VIEW, iQ-4VIEW and iQ-ROUTER. Every component in this system is responsible for performing its specific tasks. The components can be used all together and/or in various combinations. The full scope of functionality of iQ-SYSTEM PACS is reached when integrating all components into the imaging network.

iQ⁺

Contact us to find out how iQ-WEB can optimize your medical imaging workflow.

4 good Reasons for iQ-WEB
What's included?

WEB SERVER FOR AN UNLIMITED NUMBER OF USERS

This server allows the secure web-based distribution of any medical image and report to an unlimited number of web users, combined with efficient user management and strict authentication procedures.

DICOM SERVER

This application enables communication between the imaging modalities and the archive server. It is essential for study storage, query/retrieve, forwarding, printing, as well as importing and exporting any kind of DICOM object.
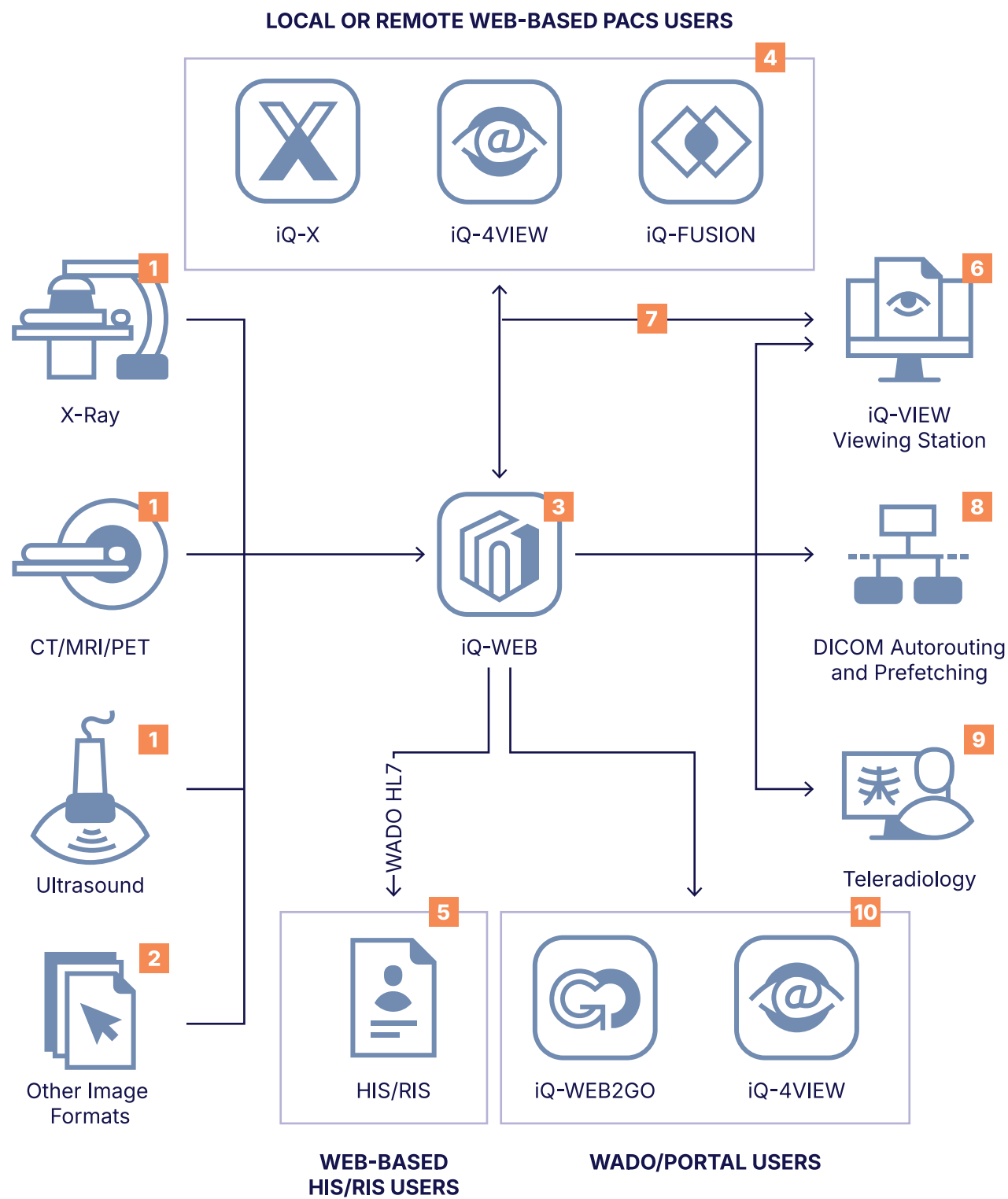
VENDOR NEUTRAL ARCHIVE (VNA)

iQ-WEB can store up to 500 million images or objects in a single database and includes hierarchical archive support for short-term and long-term archives. When used in combination with iQ-ROUTER PRO, the archive is even more flexible and customizable. A second iQ-WEB server can automatically be synchronized to ensure up-to-date disaster recovery options.

NATIVE VNA INCLUDED

iQ-WEB stores the most commonly used file formats (e.g. DICOM PDF/ JPEG) as well as endoscopy, microscopy, pathology, and more.

Efficient Workflow
with iQ-WEB

LOCAL OR REMOTE WEB-BASED PACS USERS

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iQ-X   iQ-4VIEW   iQ-FUSION

1 X-Ray

1 CT/MRI/PET

1 Ultrasound

2 Other Image Formats

3 iQ-WEB

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6 iQ-VIEW Viewing Station

8 DICOM Autorouting and Prefetching

9 Teleradiology

WADO HL7

5 HIS/RIS

WEB-BASED HIS/RIS USERS

10 iQ-WEB2GO   iQ-4VIEW

WADO/PORTAL USERS

1 iQ-WEB is typically connected to all DICOM modalities in an imaging network, such as X-Ray, CT/MRI/PET and Ultrasound.

2 iQ-WEB supports storage (upload for example via iQ-WEB UPLOADER) of virtually any kind of DICOM image (see the DICOM conformance statement for details).

3 As a component of the vendor neutral archiving system, iQ-WEB serves as the core of an imaging network, offering advanced features such as automatic patient reconciliation when paired with any hospital information system via a worklist.

4 Optional viewers, e.g. iQ-4VIEW or iQ-FUSION, allow web-based local or remote PACS users to view medical images in diagnostic quality.

5 iQ-4VIEW, iQ-X and iQ-FUSION can be seamlessly integrated with virtually any medical information system using the optional WADO function ensuring direct image access from e.g. HIS or RIS.

6 Reading stations, such as iQ-VIEW, can be connected directly to iQ-WEB using DICOM communication.

7 Structured reports can be created using iQ-VIEW or the integrated iQ-4VIEW viewers. Reports obtained from hospital information systems can be received via the optional iQ-WEB REPORT CONVERTER module.

8 The intelligent autorouting feature forwards studies based on predefined criteria to any DICOM compliant station. Even prefetching previous studies for the same patient can be included, if desired.

9 Efficient teleradiology connections are achieved by built-in data compression algorithms, allowing iQ-4VIEW users fast access to images and return of reports.

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10 WADO and iQ-WEB PORTAL users can enjoy radiology viewing via mobile devices for fast and easy access to medical images from anywhere - with the optional iQ-WEB2GO module and the diagnostic viewer iQ-4VIEW.
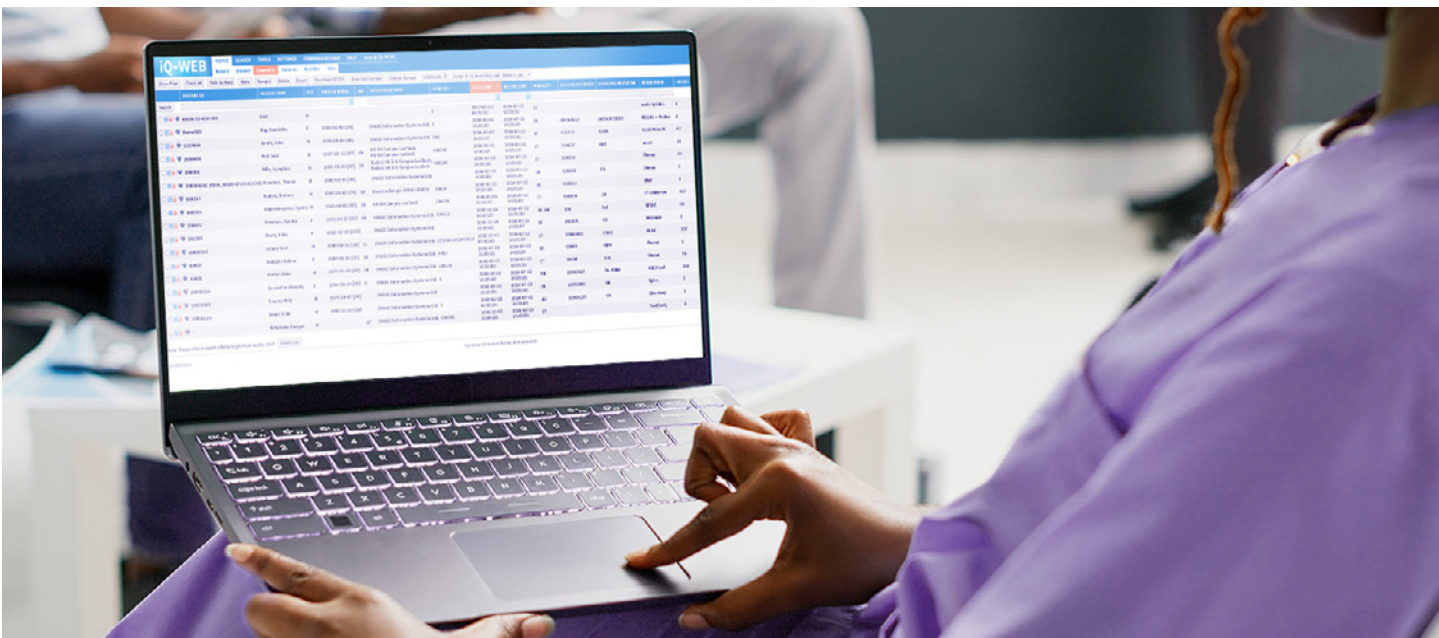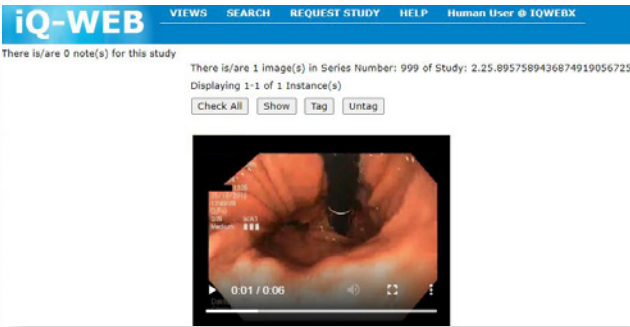
iQ-WEB Workflow Steps
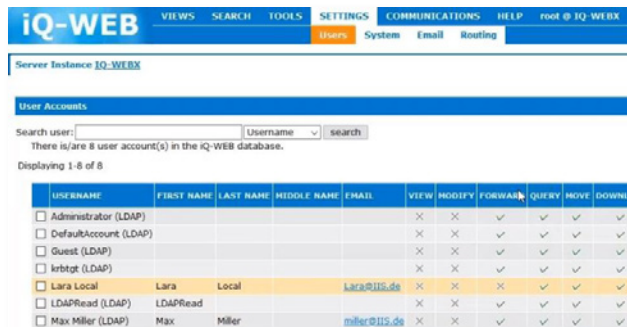## for Efficient Use
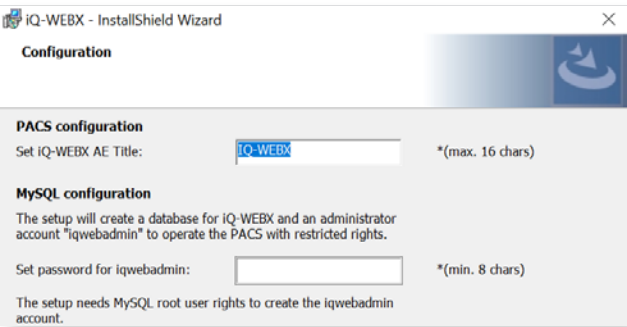
INSTALLATION/CONFIGURATION

- iQ-WEB is supplied with an installation file for easy and independent installation. In addition, the option for convenient web-based configuration helps users save time and money.

USER AUTHENTICATION

- User rights can be automatically and periodically synchronized from an active directory for Single Sign-on. Optional two-factor authentication ensures HIPAA/GDPR compliant data sharing.
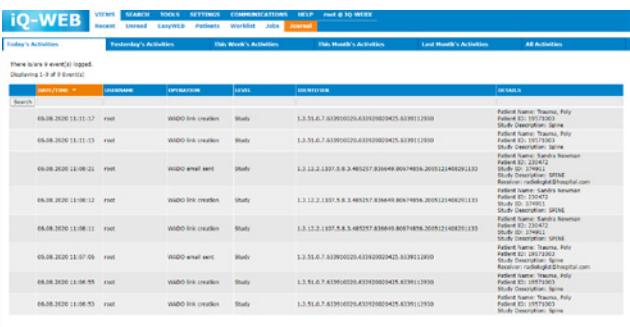

CUSTOMIZATION

- The EasyWEB page provides a customizable and filterable overview of all data.

PATIENT IDENTIFICATION

- iQ-WEB offers patient identification via the institutional and the national ID simultaneously (USP).

ZERO-FOOTPRINT

- iQ-WEB includes a zero-footprint video viewer e.g. for endoscopy.

DATA SHARING

- Create a secure WADO link for data sharing on a study or patient level using only 3 mouse clicks.

DETAILED INFORMATON
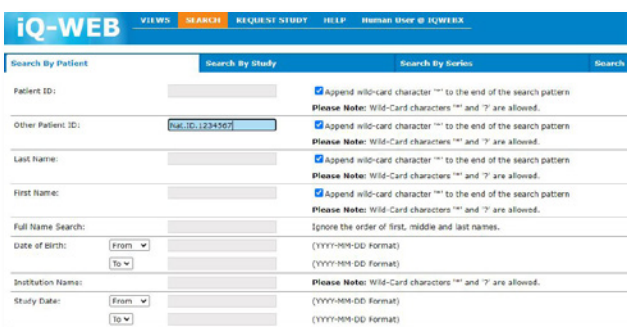
- The HIPAA-compliant WADO email log gives information about which kind of studies were shared by whom and when.

EASY EXPORT

- The displayed table content can be easily exported by using the "Export CSV" button e.g. for statistical analysis. Multiple studies can be directly assigned to a specific user as a reading physician.

Workflow and Technical Features*
of iQ-WEB

SERVER

- Server instance monitoring
- Enhanced server statistics (e.g. studies received from DICOM nodes or institutions per period)
- Automatic patient reconciliation via worklist
- Complete 64-bit architecture for high-performance scalability

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COMMUNICATION

- DICOM print and DICOM Worklist clients
- Rule-based auto-forwarding of data sets
- Emergency management with priority routing
- Restricted forwarding to user-selected AE titles
- Enhanced auto-routing due to advanced scheduling options
- WADO (web access to DICOM objects) (optional)
- Email notification when new study has arrived

IMPORT/EXPORT

- Web-based import of any DICOM media
- Web-based burning of patient CDs/DVDs (using optional iQ-LITE viewer)
- DICOM export function
- CSV export of EasyWEB page content for comprehensive statistical analysis

DATABASE

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- 64-bit MySQL
- Automatic synchronization with other DICOM servers
- Configurable overflow management (high water/low water, study date, custom settings)
- Stores up to 500 million images**

COMPATIBILITY

- iQ-WEB 7.2.9 is compatible and available in one setup with
  1. iQ-4VIEW 2.4
  2. iQ-X 2.2
  3. iQ-WEB2GO 1.2
  4. Various AI options available by request

* Detailed information on iQ-WEB's system requirements is available in the iQ-SYSTEM PACS Hardware Purchasing Guide or the iQ-WEB Administration Guide, various AI options available by request
** Depending on hardware and database system used

CYBER SECURITY

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- Effective protection against cyber attacks by
  1. Enhanced email functionality (transmission via SSL/TLS protocol)
  2. Up-to-date web server components (Apache 2.4, PHP 8.2)
  3. Included MySQL 8.0 database for HIPAA and GDPR compliance **NEW**

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WEB

- Unlimited number of web users and concurrent users by default
- Optional access portal for referring physicians
- Can open studies in iQ-VIEW from EasyWEB page

2.d

- Displays all color/grayscale images and structured reports

2.d

- Web-based query of external DICOM archives
- Web-based transfer of images to DICOM destinations
- Attach files and notes to images or studies
- Web-based DICOM MPEG video management

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- Play DICOM videos with or without audio **NEW**

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- Additional coercion rule trigger by defined DICOM tags (e.g. institution name, involved physician, modality)
- Character sets supported (only one character set at a time), see DICOM conformance statement for details
- Use, browse and filter local and global Patient ID (e.g. national Patient ID) in different columns (USP)
- Improved assignment of multiple studies to a reading physician (e.g. for tele-radiology purposes) directly from EasyWEB page

DATA AND USER MANAGEMENT & SECURITY

- User login credential synchronization from active directory via LDAP (periodical synchronization, query of multiple organizational units (OUs), simultaneous WADO and LDAP users)
- One login for multiple applications
- Different privilege settings for each user/group
- User access control (UAC)
- Two-factor authentication to meet FDA cyber security and GDPR requirements
- Flexible login by using either username or email address
- Enhanced user rights management (e.g. multiple user access filter, user assignment based on AE title)
- Definition of password complexity rules
- User blocking after more than 5 failed login attempts (default: 2 hours)
- Group admin rights e.g. to manage users of certain institutions
- Merge/Split function for easy correction of accidentally merged studies

LANGUAGE

- English, German, Spanish, French, Russian, Polish, Ukranian, Albanian and Chinese (included by default), other languages on request

LICENSE

- Available for 2, 3, 5, 10, 15, 20, 30, 40 or an unlimited number of DICOM nodes

CERTIFICATION

- iQ-SYSTEM PACS (incl. iQ-WEB) is registered according to:
  1. MDR (EU) 2017/745, class IIb (v1; iQ-WEB UDI-DI (EEA): +B403IQWEB72906)
  2. FDA 510(k), class II (version 1.9; UDI-DI: +B403IQS190C)

Feature Highlights
of iQ-WEB

EASY SEARCH FEATURES

Thanks to the innovative EasyWEB feature, physicians maintain an overview of all studies. They can conveniently search and filter the database to quickly find desired studies. Images and documents (PDF or structured reports) can be attached to a study and shared with referring physicians or colleagues.

PATIENT RECONCILIATION

All stored studies can be verified with a DICOM worklist. Study data can be automatically corrected in an IHE compatible protocol to ensure that consistent image data is stored in the archive.

VERY HIGH LEVEL OF PRIVACY

iQ-WEB is a HIPAA compliant system. Referring physicians may log in to review only their own cases while the chief radiologist can be granted access to the entire patient database. Imaging data can also be shared among physicians, while staying compliant with strict privacy regulations.

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WEB-BASED DICOM PRINT

Images can be printed from the web client to a local or remote DICOM imager.

EMAIL ALERT NOTIFICATION

Once a new study or report is ready for viewing, the referring physician can automatically be alerted via email or text message which includes a link to the image. (This feature uses a 3rd party mail2SMS gateway service with possible additional costs.)

WEB-BASED ADMINISTRATION

Configuration, maintenance tasks and quality monitoring of the system can be performed via web browser with no need to be directly in front of the server.

Sharing Medical Records
with iQ-WEB PORTAL*

Do you want to share medical results, imaging studies and reports with your patients, referring or external reading physicians in diagnostic quality?
iQ-WEB PORTAL offers easy and secure data sharing via email, WhatsApp or cloud.

SHARING

Share medical results, imaging studies and reports online with your patients, referring or external reading physicians without burning CD/DVDs or printing films

ACCESS

Access studies in full diagnostic quality via QR code, direct login or via crypto web links

PORTAL

Portal access can be shared e.g. via WhatsApp or paper-based QR codes or direct integration with HIS/RIS/EMR

CLIENTS

No client installation or registration required

COMPLIANCE

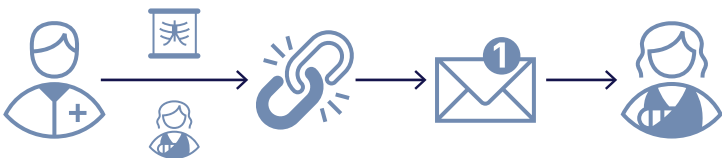Fully compliant with HIPAA and GDPR requirements for patient data sharing

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DEVICES

Runs on virtually any browser or device (smartphone, tablet or computer)

* For detailed information, please refer to our brochure on iQ-WEB PORTAL.

Easy Web Access
to DICOM Objects (WADO)

EMAIL BASED WADO

1. User selects studies of patient data to share.
2. User creates WADO link(s) and forwards it/them to the recipient e.g. via email.
3. Recipient enters date of birth (DOB) to access the studies.
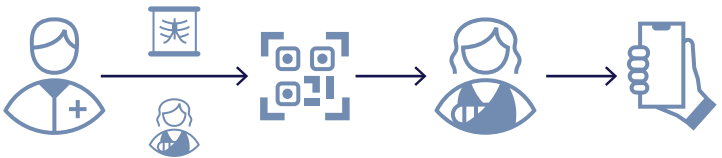
QR CODE BASED WADO

1. Web user selects studies of patient and prints QR code.
2. Typically, the QR code is given to the patient.
3. The patient can decide with whom to share imaging and results via any tablet, smartphone or QR code scanner.
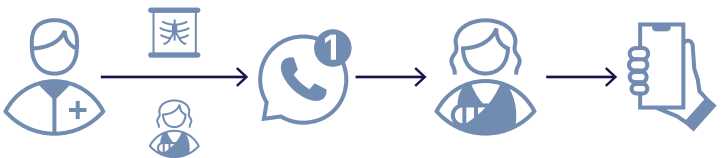
WHATSAPP BASED WADO

1. User selects studies or patient and copies the created WADO link(s) to WhatsApp.
2. Recipient clicks on link to open the studies securely.

WADO Features
at a Glance

GENERAL

- Configuration embedded in the iQ-WEB administration web interface
- Study/image evaluation via direct call into a viewer
- Return to specific site in iQ-4VIEW after opening a WADO link (using the viewer's back button) `NEW`
- Temporary or permanent external diagnostic access to selected studies via WADO links
- Integrate any HIS/EMR via HL7 ORU or MDM message (WADO HL7)

ACCESS

- Single Sign On using predefined login data for automatic authentication (no need to log in twice)
- Customizable duration of link validity, e.g. to limit PACS access to 4 weeks
- Creation of WADO links as QR codes to provide fast access to diagnostic-quality studies and reports to referring physicians/colleagues and patients via smartphone or QR code reader
- Share WADO links directly from web GUI via email

SUPPORTED CALLS

- Lists all studies/images depending on transmitted identifier:
    1. Patient IDs/Global Patient IDs
    2. Accession numbers
    3. Study instance UIDs and Series instance UIDs
    4. Patient names
    5. Date of birth `NEW`
- Access to patients' studies by BDT/GDT file
- "Viewer" option allows opening in either:
    1. iQ-X, iQ-4VIEW, iQ-VIEW
    2. Simple web image view in JPEG quality
    3. Browser-dependent opening of viewer (when using IE, iQ-X viewer is opened; all other browsers open iQ-4VIEW by default)
- HL7 support on request
    1. Inbound ORM message orders
    2. Outbound ORU messages (typically with embedded WADO URL)

SECURITY

- High security by optional encrypted WADO IDs
- Compliant with US and European data protection laws and regulations
- HIPAA/GDPR compliant log information of shared WADO links (user, recipient, patient(s), studies, date/time)
- Dual authentication (suggested for email based sharing of WADO links)

iQ-WEB Add-ons
to choose from

`69`

There are several add-ons available for iQ-WEB which serve different medical image viewing and sharing needs.*
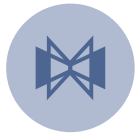
iQ-4VIEW

`20 și 2a`

Diagnostic zero-footprint reading at high speed for virtually any browser, operating system and device (desktop computer, tablet, smartphone)

iQ-X**

Diagnostic web viewer for reading and processing of DICOM images using Internet Explorer®.

iQ-SR2PDF CONVERTER

Tool to automatically copy the content of DICOM structured reports (DICOM SR) to institutional letterheads, insert signature(s) of reading physician(s) and attach it as PDF for printing, downloading or forwarding.

iQ-WEB REPORT CONVERTER

This optional add-on uses a state-of-the-art algorithm to automatically convert and transmit DICOM structured reports and HL7 text reports between HIS/RIS and iQ-WEB.

iQ-FUSION**

Diagnostic zero-footprint viewer for web-based PET/CT image fusion

iQ-WEB UPLOADER

Web-based user interface that allows healthcare professionals to transfer medical images, photos/documents (JPEG/PDF) from any computer/smart device to a PACS (DICOM data generation and storage)

> * Detailed information on the individual iQ-WEB add-ons and options (iQ-4VIEW, iQ-X, iQ-FUSION, iQ-WEB REPORT CONVERTER, iQ-WEB2GO, iQ-WEB PORTAL, iQ-DASHBOARD) is available on our website for download (Download Center).
> ** Must not be sold in the European Union.

IN ADDITION: iQ-WEB offers various options to meet interface requirements.

iQ-WEB Options

WEB-BASED REPORTING

iQ-4VIEW's built-in report editor allows physicians to create DICOM structured reports online from anywhere in the world.

iQ-WEB2GO

Mobile viewer for basic web-based viewing of radiology images on any tablet or smartphone.

REFERRING PHYSICIAN PORTAL

Imaging centers can offer referring physicians access to their own cases so that they can view them anytime and anywhere without requiring additional software.

WADO HL7

The WADO HL7 interface can seamlessly integrate iQ-WEB with virtually any medical information system in order to provide quick and easy access to imaging studies and reports from a HIS, EMR or practice management system - without the need to login (see details on page 12-13).

WADO

This optional interface allows to share medical results, imaging studies and reports with patients, referring or external reading physicians e.g. via QR code, WhatsApp or email (see details on page 12-13).

iQ-DASHBOARD

Business intelligence solution which provides system administrators and radiology directors with iQ-WEB PACS statistics at a glance.

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iQ-WEB REPORT CONVERTER
(optional)

The optional iQ-WEB REPORT CONVERTER module uses a state-of-the-art algorithm to automatically convert and transmit DICOM structured reports and HL7 text reports between information systems and iQ-WEB.

GENERAL

- Compatible with virtually any HL7 compliant EMR, HIS, RIS or practice management system
- Supports Latin-1 ext. A character set

INPUT

- Receives HL7 ORU^R01 messages (see HL7 conformance statement for iQ-WEB REPORT CONVERTER)
- Supports one report per message
- Queries study form PACS for incoming report
- Queries for incoming DICOM Structured Report (see DICOM conformance statement)

OUTPUT

- Sends DICOM Structured Report to iQ-WEB (PACS)
- Sends HL7 ACK messages to acknowledge the report has been received
- Sends HL7 ORU^R01 to any HL7 compatible Information System

EXAMPLE: HL7^ORU TO DICOM SR

HIS/RIS — `1` ORU^R01 → iQ-WEB REPORT CONVERTER — Queries Study from PACS for incoming DICOM SR → iQ-WEB (PACS) `2`
HIS/RIS ← `3` ACK — iQ-WEB REPORT CONVERTER — DICOM Structured Report appended to the Study → iQ-WEB (PACS)
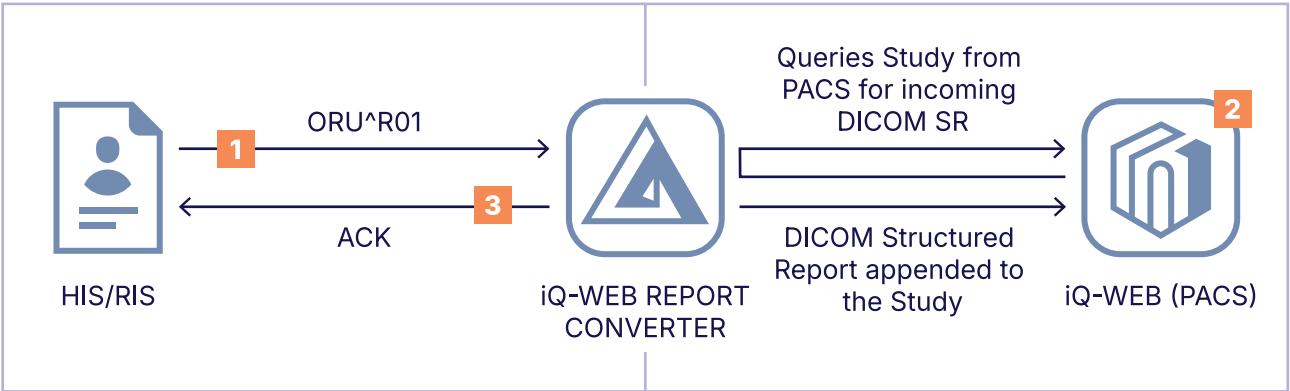
`1` A medical report is created using an information system (HIS/RIS/EMR). This report is sent to the iQ-WEB REPORT CONVERTER.

`2` iQ-WEB REPORT CONVERTER finds the corresponding study in the iQ-WEB (PACS), converts the received report into a DICOM structured report, and attaches the report in the new format to the study.

`3` iQ-WEB REPORT CONVERTER returns a confirmation message to acknowledge that the report was received.

MD CE 0482

Component of
iQ-SYSTEM PACS