DICOM CONFORMANCE STATEMENT

iQ-WEB 7.2.9

A component of iQ-SYSTEM PACS v1

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MD   CE 0482

IMAGE
Information Systems

1 Conformance statement overview

The product iQ-WEB implements the necessary DICOM services to transfer DICOM objects via network transmission, to query other DICOM systems for workflow and data information and to send print requests to DICOM Print aware systems (printer).

The following table provides an overview of the network services supported by iQ-WEB:

SOP Classes	User of service (SCU)	Provider of service (SCP)
Transfer		
Computed Radiography Image Storage	Yes	Yes
Digital X-ray Image Storage - For Presentation	Yes	Yes
Digital X-ray Image Storage - For Processing	Yes	Yes
Digital Mammography X-ray Image Storage - For Presentation	Yes	Yes
Digital Mammography X-ray Image Storage - For Processing	Yes	Yes
CT Image Storage	Yes	Yes
Ultrasound Multi-frame Image Storage (retired)	Yes	Yes
Ultrasound Multi-frame Image Storage	Yes	Yes
MR Image Storage	Yes	Yes
Nuclear Medicine Image Storage (retired)	Yes	Yes
Ultrasound Image Storage (retired)	Yes	Yes
Ultrasound Image Storage	Yes	Yes
Secondary Capture Image Storage	Yes	Yes
Standalone Overlay Image Storage	Yes	Yes
Standalone Curve Storage	Yes	Yes
Standalone Modality LUT Storage	Yes	Yes
Standalone VOI LUT Storage	Yes	Yes
X-Ray Angiographic Image Storage	Yes	Yes
X-Ray Radiofluoroscopic Image Storage	Yes	Yes
X-Ray Angiographic Bi-plane Image Storage (retired)	Yes	Yes
X-Ray 3D Angiographic Image Storage	Yes	Yes
X-Ray 3D Craniofacial Image Storage	Yes	Yes
Breast Tomosynthesis Image Storage	Yes	Yes
Nuclear Medicine Image Storage	Yes	Yes
Positron Emission Tomography (PET) Image Storage	Yes	Yes
RT Dose Storage	Yes	Yes

SOP Classes	User of service (SCU)	Provider of service (SCP)
RT Image Storage	Yes	Yes
RT Plan Storage	Yes	Yes
RT Structure Set Storage	Yes	Yes
VL Endoscopic Image Storage	Yes	Yes
VL Microscopic Image Storage	Yes	Yes
VL Slide-Coordinates Microscopic Image Storage	Yes	Yes
VL Photographic Image Storage	Yes	Yes
Ophthalmic Photography 8 Bit Image Storage	Yes	Yes
Ophthalmic Photography 16 Bit Image Storage	Yes	Yes
Ophthalmic Tomography Image Storage	Yes	Yes
Enhanced CT Image Storage	Yes	Yes
Enhanced MR Image Storage	Yes	Yes
MR Spectroscopy Storage	Yes	Yes
Enhanced MR Color Image Storage	Yes	Yes
Raw Data Storage	Yes	Yes
Surface Segmentation Storage	Yes	Yes
Real World Value Mapping Storage	Yes	Yes
Grayscale Softcopy Presentation State Storage	Yes	Yes
Color Softcopy Presentation State Storage	Yes	Yes
Pseudo-Color Softcopy Presentation State Storage	Yes	Yes
Blending Softcopy Presentation State Storage	Yes	Yes
XA/XRF Grayscale Softcopy Presentation State Storage	Yes	Yes
Video Endoscopic Image Storage	Yes	Yes
Video Photographic Image Storage	Yes	Yes
Encapsulated PDF Storage	Yes	Yes
Basic Text Structured Report Storage	Yes	Yes
Enhanced Structured Report Storage	Yes	Yes
Comprehensive Structured Report Storage	Yes	Yes
VL Whole Slide Microscopy Image Storage	Yes	Yes
X-Ray Radiation Dose SR	Yes	Yes
Query/Retrieve		
Patient Root Query/Retrieve Info Model – FIND	Yes	Yes
Patient Root Query/Retrieve Info Model – MOVE	Yes	Yes

SOP Classes	User of service (SCU)	Provider of service (SCP)
Patient Root Query/Retrieve Info Model – GET	No	Yes
Study Root Query/Retrieve Info Model – FIND	Yes	Yes
Study Root Query/Retrieve Info Model – MOVE	Yes	Yes
Study Root Query/Retrieve Info Model – GET	No	Yes
Patient/Study Only Query/Retrieve Info Model – FIND	No	Yes
Patient/Study Only Query/Retrieve Info Model – MOVE	No	Yes
Patient/Study Only Query/Retrieve Info Model – GET	No	Yes
Workflow Management		
Modality Worklist Info Model – FIND	Yes	Yes
Detached Study Management	Yes	No
Key Object Selection Document	Yes	Yes
Storage Commitment Push Model	Yes	Yes
Print Management		
Basic Grayscale Print Management Meta	Yes	No
Basic Color Print Management Meta	Yes	No
Other		
Instance Availablity Notification	Yes	No
Verification SOP Class	Yes	Yes

The following table provides an overview of the Media Storage Application Profiles supported by **iQ-WEB**:

Media Storage Application Profile	Write Files (FSC or FSU)	Read Files (FSR)
Compact Disk – Recordable		
General Purpose CD-R	Yes	Yes
DVD		
General Purpose DVD-RAM	Yes	Yes

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3   Introduction

3.1   Audience

This document is written for the people that need to understand how iQ-WEB will integrate into their healthcare facility. This includes both those responsible for overall imaging network policy and architecture, as well as integrators who need to have a detailed understanding of the DICOM features of the product.

This document contains some basic DICOM definitions so that any reader may understand how this product implements DICOM features. However, integrators are expected to fully understand all the DICOM terminology, how the tables in this document relate to the product's functionality, and how that functionality integrates with other devices that support compatible DICOM features.

3.2   Remarks

The scope of this DICOM Conformance Statement is to facilitate integration between iQ-WEB and other DICOM products. The Conformance Statement should be read and understood in conjunction with the DICOM Standard (DICOM). DICOM by itself does not guarantee interoperability. The Conformance Statement does, however, facilitate a first-level comparison for interoperability between different applications supporting compatible DICOM functionality.

This Conformance Statement is not supposed to replace validation with other DICOM equipment to ensure proper exchange of intended information. In fact, the user should be aware of the following important issues:

- The comparison of different Conformance Statements is just the first step towards assessing interconnectivity and interoperability between the product and other DICOM conformant equipment.
- Test procedures should be defined and executed to validate the required level of interoperability with specific compatible DICOM equipment, as established by the healthcare facility.

iQ-WEB follows the recommendations of the industry-wide Integrating the Healthcare Enterprise (IHE) Technical Framework. The IHE Integration Statement for iQ-WEB, together with the IHE Technical Framework, may facilitate the process of validation testing.

3.3 Terms and definitions

Informal definitions are provided for the following terms used in this Conformance Statement. The DICOM Standard is the authoritative source for formal definitions of these terms.

Term	Definition
Abstract Syntax	The information agreed to be exchanged between applications, generally equivalent to a Service/Object Pair (SOP) Class. Examples: Verification SOP Class, Modality Worklist Information Model Find SOP Class, Computed Radiography Image Storage SOP Class.
Application Entity (AE)	An end point of a DICOM information exchange, including the DICOM network or media interface software; i.e., the software that sends or receives DICOM information objects or messages. A single device may have multiple Application Entities.
Application Entity Title (AET)	The externally known name of an Application Entity, used to identify a DICOM application to other DICOM applications on the network.
Application Context	The specification of the type of communication used between Application Entities. Example: DICOM network protocol.
Association	A network communication channel set up between Application Entities.
Attribute	A unit of information in an object definition; a data element identified by a tag. The information may be a complex data structure (Sequence), itself composed of lower level data elements. Examples: Patient ID (0010,0020), Accession Number (0008,0050), Photometric Interpretation (0028,0004), Procedure Code Sequence (0008,1032).
Information Object Definition (IOD)	The specified set of Attributes that comprise a type of data object; does not represent a specific instance of the data object, but rather a class of similar data objects that have the same properties. The Attributes may be specified as Mandatory (Type 1), Required but possibly unknown (Type2), or Optional (Type 3), and there may be conditions associated with the use of an Attribute (Types 1C and 2C). Examples: MR Image IOD, CT Image IOD, Print Job IOD.
Joint Photographic Experts Group (JPEG)	A set of standardized image compression techniques, available for use by DICOM applications.

Term	Definition
Media Application Profile	The specification of DICOM information objects and encoding exchanged on removable media(e.g., CDs)
Module	A set of Attributes within an Information Object Definition that are logically related to each other. Example: Patient Module includes Patient Name, Patient ID, Patient Birth Date, and Patient Sex.
Negotiation	First phase of Association establishment that allows Application Entities to agree on the types of data to be exchanged and how that data will be encoded.
Presentation Context	The set of DICOM network services used over an Association, as negotiated between Application Entities; includes Abstract Syntaxes and Transfer Syntaxes.
Protocol Data Unit (PDU)	A packet (piece) of a DICOM message sent across the network. Devices must specify the maximum size packet they can receive for DICOM messages.
Security Profile	A set of mechanisms, such as encryption, user authentication, or digital signatures, used by an Application Entity to ensure confidentiality, integrity, and/or availability of exchanged DICOM data
Service Class Provider (SCP)	Role of an Application Entity that provides a DICOM network service; typically, a server that performs operations requested by another Application Entity (Service Class User). Examples: Picture Archiving and Communication System (image storage SCP, and image query/retrieve SCP), Radiology Information System (modality worklist SCP).
Service Class User (SCU)	Role of an Application Entity that uses a DICOM network service; typically, a client. Examples: imaging modality (image storage SCU, and modality worklist SCU), imaging workstation (image query/retrieve SCU)
Service/Object Pair Class (SOP Class)	The specification of the network or media transfer (service) of a particular type of data (object); the fundamental unit of DICOM interoperability specification. Examples: Ultrasound Image Storage Service, Basic Grayscale Print Management.
Service/Object Pair Instance (SOP Instance)	An information object; a specific occurrence of information exchanged in a SOP Class. Examples: a specific x-ray image.
Tag	A 32-bit identifier for a data element, represented as a pair of four digit hexadecimal numbers, the "group" and

Term	Definition
	the "element". If the "group" number is odd, the tag is for a private (manufacturer-specific) data element. Examples: (0010,0020) [Patient ID], (07FE,0010) [Pixel Data], (0019,0210)[private data element]
Transfer Syntax	The encoding used for exchange of DICOM information objects and messages. Examples: JPEG compressed (images), little endian explicit value representation.
Unique Identifier (UID)	A globally unique "dotted decimal" string that identifies a specific object or a class of objects; an ISO-8824 Object Identifier. Examples: Study Instance UID, SOP Class UID, SOP Instance UID.
Value Representation (VR)	The format type of an individual DICOM data element, such as text, an integer, a person's name, or a code. DICOM information objects can be transmitted with either explicit identification of the type of each data element (Explicit VR), or without explicit identification (Implicit VR); with Implicit VR, the receiving application must use a DICOM data dictionary to look up the format of each data element.

3.4   Abbreviations

Abbreviations	Meaning
AE	Application Entity
AET	Application Entity Title
CAD	Computer Aided Detection
CDA	Clinical Document Architecture
CD-R	Compact Disk Recordable
CSE	Customer Service Engineer
CR	Computed Radiography
CT	Computed Tomography
DHCP	Dynamic Host Configuration Protocol
DICOM	Digital Imaging and Communications in Medicine
DIT	Directory Information Tree (LDAP)
DN	Distinguished Name (LDAP)
DNS	Domain Name System
DX	Digital X-ray

Abbreviations	Meaning
FSC	File-Set Creator
FSU	File-Set Updater
FSR	File-Set Reader
GSDF	Grayscale Standard Display Function
GSPS	Grayscale Softcopy Presentation State
HIS	Hospital Information System
HL7	Health Level 7 Standard
IHE	Integrating the Healthcare Enterprise
IOD	Information Object Definition
IPv4	Internet Protocol version 4
IPv6	Internet Protocol version 6
ISO	International Organization for Standards
IO	Intra-oral X-ray
JPEG	Joint Photographic Experts Group
LDAP	Lightweight Directory Access Protocol
LDIF	LDAP Data Interchange Format
LUT	Look-up Table
MAR	Medication Administration Record
MPEG	Moving Picture Experts Group
MG	Mammography (X-ray)
MPPS	Modality Performed Procedure Step
MR	Magnetic Resonance Imaging
MSPS	Modality Scheduled Procedure Step
MTU	Maximum Transmission Unit (IP)
MWL	Modality Worklist
NM	Nuclear Medicine
NTP	Network Time Protocol
O	Optional (Key Attribute)
OP	Ophthalmic Photography
OSI	Open Systems Interconnection
PACS	Picture Archiving and Communication System
PET	Positron Emission Tomography
PDU	Protocol Data Unit
R	Required (Key Attribute)
RDN	Relative Distinguished Name (LDAP)

Abbreviations	Meaning
RF	Radiofluoroscopy
RIS	Radiology Information System.
RT	Radiotherapy
SC	Secondary Capture
SCP	Service Class Provider
SCU	Service Class User
SOP	Service-Object Pair
SPS	Scheduled Procedure Step
SR	Structured Reporting
TCP/IP	Transmission Control Protocol/Internet Protocol
U	Unique (Key Attribute)
UL	Upper Layer
US	Ultrasound
VL	Visible Light
VR	Value Representation
XA	X-ray Angiography

3.5   References

- [DICOM]: Digital Imaging and Communications in Medicine (DICOM) Standard, http://dicom.nema.org
- [IHE]: IHE Radiology Technical Framework, http://www.ihe.net
- iQ-WEB 7.2.9 Administration Guide
- iQ-WEB 7.2.9 Instructions for Use

4 Networking

4.1 Implementation model

4.1.1 Application data flow

The DICOM Conformance Statement specifies the behavior and functionality of the iQ-WEB software, release 7.2.9. This software provides the following capabilities:

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- Sends and receives DICOM objects via the DICOM Storage Service Class.
- Allows sending and receiving of DICOM Query, Retrieve and Move requests
- Retrieves DICOM Modality Worklist from remote systems.

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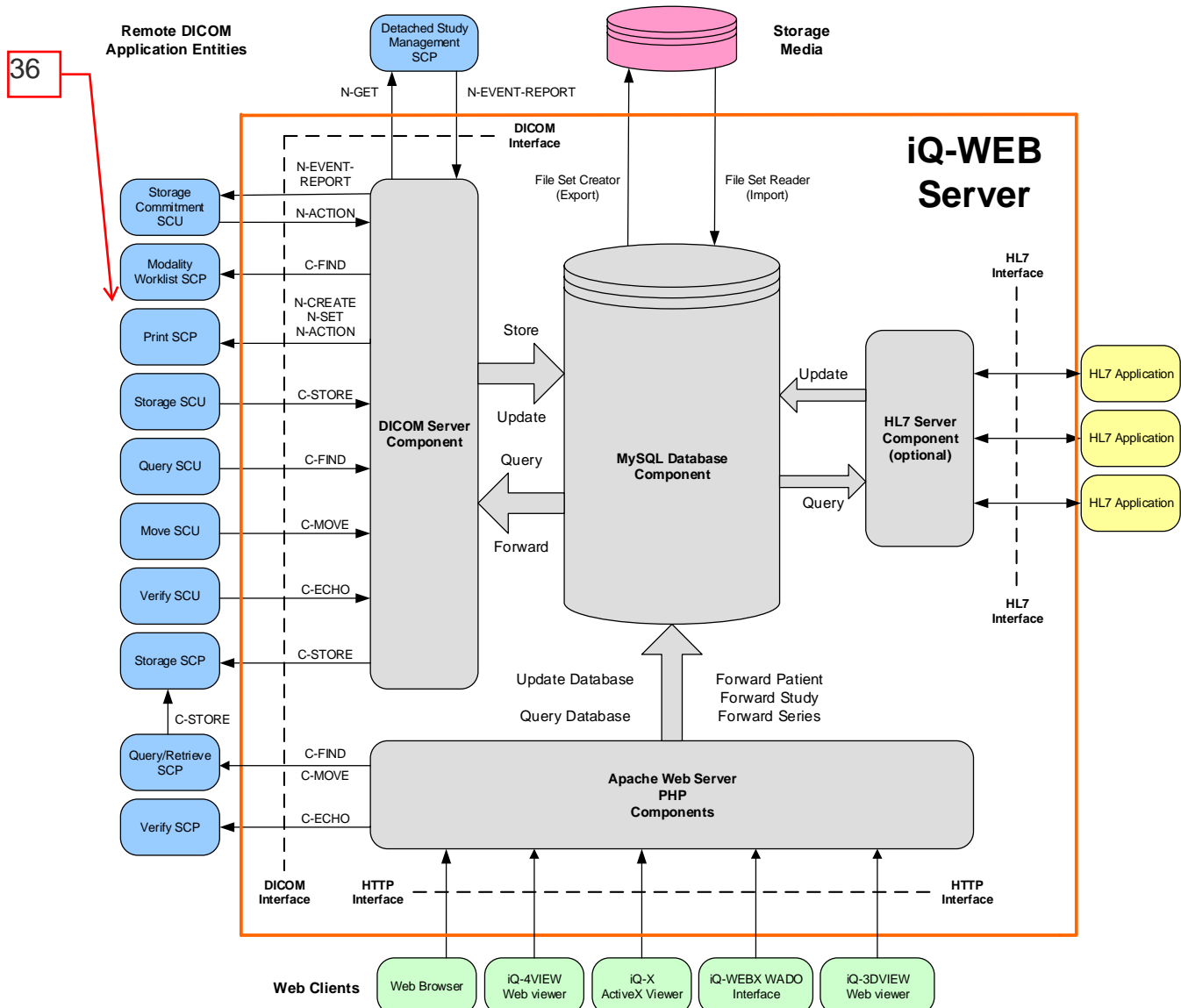
4.1.2 Functional definition of AEs

4.1.2.1 Functional definition of iQ-WEB

All communications and image transfer with the remote application is accomplished utilizing the DICOM protocol over a network using the TCP/IP protocol stack.

Below is a table of the functions supported by iQ-WEB application entities:

SCU	SCP
Verification	Verification
Storage	Storage
Query/Retrieve	Query/Retrieve
Modality Worklist Management	Modality Worklist Management
Basic Grayscale Print Management	Storage Commitment Push Model
Detached Study Management	
Storage Commitment Push Model	

4.1.3 Sequencing of real world activities

There is no sequencing constraint that exists across all iQ-WEB application entities.

4.2 AE specifications

4.2.1 iQ-WEB AE

4.2.1.1 SOP classes

This Application Entity provides Standard Conformance to the following SOP Class(es):

Table 4.2-1 SOP Class(es) for iQ-WEB Application Entity

SOP Class Name[1]	SOP Class UID	SCU	SCP
Verification SOP Class	1.2.840.10008.1.1	Yes	Yes
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1	Yes	Yes
Digital X-ray Image Storage – For Presentation	1.2.840.10008.5.1.4.1.1.1.1	Yes	Yes

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[1] **Notice:** An association negotiation profile file allows to enable/disable support for each individual SOP class shown in this table.

SOP Class Name[1]	SOP Class UID	SCU	SCP
Digital X-ray Image Storage – For Processing	1.2.840.10008.5.1.4.1.1.1.1.1	Yes	Yes
Digital Mammography X-ray Image Storage – For Presentation	1.2.840.10008.5.1.4.1.1.1.2	Yes	Yes
Digital Mammography X-ray Image Storage – For Processing	1.2.840.10008.5.1.4.1.1.1.2.1	Yes	Yes
CT Image Storage	1.2.840.10008.5.1.4.1.1.2	Yes	Yes
Ultrasound Multi-frame Image Storage (retired)	1.2.840.10008.5.1.4.1.1.3	Yes	Yes
Ultrasound Multi-frame Image Storage	1.2.840.10008.5.1.4.1.1.3.1	Yes	Yes
MR Image Storage	1.2.840.10008.5.1.4.1.1.4	Yes	Yes
Nuclear Medicine Image Storage (retired)	1.2.840.10008.5.1.4.1.1.5	Yes	Yes
Ultrasound Image Storage (retired)	1.2.840.10008.5.1.4.1.1.6	Yes	Yes
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1	Yes	Yes
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	Yes	Yes
Standalone Overlay Image Storage (retired)	1.2.840.10008.5.1.4.1.1.8	Yes	Yes
Standalone Curve Storage (retired)	1.2.840.10008.5.1.4.1.1.9	Yes	Yes
Standalone Modality LUT Storage (retired)	1.2.840.10008.5.1.4.1.1.10	Yes	Yes
Standalone VOI LUT Storage (retired)	1.2.840.10008.5.1.4.1.1.11	Yes	Yes
X-Ray Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.12.1	Yes	Yes
X-Ray Radiofluoroscopic Image Storage	1.2.840.10008.5.1.4.1.1.12.2	Yes	Yes
X-Ray Angiographic Bi-plane Image Storage (retired)	1.2.840.10008.5.1.4.1.1.12.3	Yes	Yes
X-Ray 3D Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.13.1.1	Yes	Yes
X-Ray 3D Craniofacial Image Storage	1.2.840.10008.5.1.4.1.1.13.1.2	Yes	Yes
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3	Yes	Yes
Nuclear Medicine Image Storage	1.2.840.10008.5.1.4.1.1.20	Yes	Yes
Positron Emission Tomography (PET) Image Storage	1.2.840.10008.5.1.4.1.1.128	Yes	Yes
RT Dose Storage	1.2.840.10008.5.1.4.1.1.481.2	Yes	Yes
RT Image Storage	1.2.840.10008.5.1.4.1.1.481.1	Yes	Yes
RT Plan Storage	1.2.840.10008.5.1.4.1.1.481.5	Yes	Yes
RT Structure Set Storage	1.2.840.10008.5.1.4.1.1.481.3	Yes	Yes
VL Endoscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.1	Yes	Yes
VL Microscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.2	Yes	Yes

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SOP Class Name[1]	SOP Class UID	SCU	SCP
VL Slide-Coordinates Microscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.3	Yes	Yes
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	Yes	Yes
Ophthalmic Photography 8 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.1	Yes	Yes
Ophthalmic Photography 16 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.2	Yes	Yes
Ophthalmic Tomography Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.4	Yes	Yes
Enhanced CT Image Storage	1.2.840.10008.5.1.4.1.1.2.1	Yes	Yes
Enhanced MR Image Storage	1.2.840.10008.5.1.4.1.1.4.1	Yes	Yes
MR Spectroscopy Storage	1.2.840.10008.5.1.4.1.1.4.2	Yes	Yes
Enhanced MR Color Image Storage	1.2.840.10008.5.1.4.1.1.4.3	Yes	Yes
Raw Data Storage	1.2.840.10008.5.1.4.1.1.66	Yes	Yes
Surface Segmentation Storage	1.2.840.10008.5.1.4.1.1.66.5	Yes	Yes
Real World Value Mapping Storage	1.2.840.10008.5.1.4.1.1.67	Yes	Yes
Grayscale Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.1	Yes	Yes
Color Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.2	Yes	Yes
Pseudo-Color Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.3	Yes	Yes
Blending Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.4	Yes	Yes
XA/XRF Grayscale Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.5	Yes	Yes
Video Endoscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.1.1	Yes	Yes
Video Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4.1	Yes	Yes
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1	Yes	Yes
Basic Text Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.11	Yes	Yes
Enhanced Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.22	Yes	Yes
Comprehensive Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.33	Yes	Yes
Patient Root Query/Retrieve Info Model - FIND	1.2.840.10008.5.1.4.1.2.1.1	Yes	Yes
Patient Root Query/Retrieve Info Model - MOVE	1.2.840.10008.5.1.4.1.2.1.2	Yes	Yes
Study Root Query/Retrieve Info Model - FIND	1.2.840.10008.5.1.4.1.2.2.1	Yes	Yes

SOP Class Name[1]	SOP Class UID	SCU	SCP
Study Root Query/Retrieve Info Model - MOVE	1.2.840.10008.5.1.4.1.2.2.2	Yes	Yes
Modality Worklist Info Model – FIND	1.2.840.10008.5.1.4.31	Yes	Yes
Key Object Selection Document	1.2.840.10008.5.1.4.1.1.88.59	Yes	Yes
Instance Availablity Notification	1.2.840.10008.5.1.4.33	Yes	No
Detached Study Management (retired)	1.2.840.10008.3.1.2.3.1	Yes	No
Basic Grayscale Print Management Meta	1.2.840.10008.5.1.1.9	Yes	No
Basic Color Print Management Meta	1.2.840.10008.5.1.1.18	Yes	No
Patient Root Query/Retrieve Info Model - GET	1.2.840.10008.5.1.4.1.2.1.3	No	Yes
Study Root Query/Retrieve Info Model - GET	1.2.840.10008.5.1.4.1.2.2.3	No	Yes
Patient/Study Only Query/Retrieve Info Model – FIND (retired)	1.2.840.10008.5.1.4.1.2.3.1	No	Yes
Patient/Study Only Query/Retrieve Info Model – MOVE (retired)	1.2.840.10008.5.1.4.1.2.3.2	No	Yes
Patient/Study Only Query/Retrieve Info Model - GET (retired)	1.2.840.10008.5.1.4.1.2.3.3	No	Yes
Modality Performed Procedure Step	1.2.840.10008.3.1.2.3.3	No	Yes
Modality Performed Procedure Step Retrieve	1.2.840.10008.3.1.2.3.4	No	Yes
Modality Performed Procedure Step Notification	1.2.840.10008.3.1.2.3.5	No	Yes

4.2.1.2 Association policies

4.2.1.2.1 General

The DICOM Application Context Name (ACN) proposed by iQ-WEB is fixed: "1.2.840.10008.3.1.1.1". The maximum PDU size which can be transmitted by iQ-WEB is fixed at 32 Kbytes. The maximum PDU size which can be received by iQ-WEB is up to 32 Kbytes.

4.2.1.2.2 Number of associations

The number of simultaneous associations which can be accepted by iQ-WEB is limited only by the kernel parameters of underlying TCP/IP implementation and resource utilization of the computer where iQ-WEB is installed. iQ-WEB utilizes a thread pool to service each association request that it receives. Therefore, iQ-WEB can have multiple simultaneous connections, and

there is no inherent limitation on the total number of simultaneous associations which iQ-WEB can maintain.

4.2.1.2.3   Asynchronous nature

iQ-WEB does not support asynchronous operations and will not perform asynchronous window negotiation.

4.2.1.2.4   Implementation identifying information

iQ-WEB provides the following implementation class UID: 1.2.826.0.1.3680043.2.737

4.2.1.3   Association initiation policy

iQ-WEB will attempt to initiate associations in response to user requests from the web user interface to verify DICOM connection status (C-ECHO) to remote Application Entity (AE).

iQ-WEB will attempt to initiate associations in response to user requests from the web user interface to query and retrieve (C-FIND) remote Query/Retrieve SCP applications.

iQ-WEB will attempt to initiate associations in response to C-MOVE requests from other Application Entities. iQ-WEB will only initiate associations in response to valid C-MOVE requests for images that are stored in the MySQL database.

iQ-WEB will attempt to initiate associations in response to user selected forwarding requests from the web user interface, where users can select one or more patient(s), study(s) or series to forward (C-STORE) to a remote destination application entity (AE).

iQ-WEB can also initiate associations to remote destination AE(s) automatically based on the automatic routing table. Users can define entries in the automatic routing table which consist of a source AE title, destination AE title and a schedule, so that the images received from the specified source AE will be automatically forwarded (C-STORE) to one of more destination AE(s) based on the specified schedule, either as soon as received (Immediately) or on a particular 24-hour clock interval., e.g., 7:00 p.m.

iQ-WEB can initiate Modality Worklist - FIND requests to remote Modality Worklist SCP applications, either in response to unsolicited Study Scheduled N-EVENT-REPORT notifications, or by querying the Worklist SCP regularly based on a configurable polling interval. Users can also initiate Modality Worklist - FIND request by clicking on the "Get Worklist" link from the web user interface.

4.2.1.3.1　Verification

4.2.1.3.1.1 Description and sequencing of activities

From the iQ-WEB web user interface, users can select the 'DICOM' Page to display a list of defined application entities (AE). If the TCP port number for an AE is defined, an Echo link will be displayed in the 'Verify Connection' column. Clicking on the Echo link will initiate a C-ECHO request to the TCP port number of the corresponding AE. A confirmation message will be displayed if the C-ECHO request is successfully acknowledged by the remote AE, otherwise a timeout error or any error response from the remote AE will be displayed.

4.2.1.3.1.2 Proposed presentation contexts

The table shows the presentation contexts that are proposed by iQ-WEB for verification operations.

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Verification	1.2.840.10008.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None

4.2.1.3.1.3 SOP specific conformance for SOP class(es)

iQ-WEB provides standard conformance for DICOM SOP Verification class.

4.2.1.3.2　Query/Retrieve

4.2.1.3.2.1 Description and sequencing of activities

From the iQ-WEB web user interface, users can select the 'DICOM' Page to display a list of defined application entities (AE). If the TCP port number for an AE is defined, a Query/Retrieve link will be displayed in the 'Remote Exams' column. Clicking on the Query/Retrieve link will initiate a C-FIND request to the TCP port number of the corresponding AE. Any matching patients and/or studies returned by the remote AE will be displayed; otherwise a timeout error or any error response from the remote AE will be displayed.

4.2.1.3.2.2 Proposed presentation contexts

The table shows the presentation contexts that are proposed by iQ-WEB for verification operations.

Abstract Syntax		Transfer Syntax		Role	Extended Negoti- ation
Name	UID	Name List	UID List		
Patient Root Query/Retrieve Information Model - FIND	1.2.840.10008.5.1.4 .1.2.1.1	Implicit VR Little Endian	1.2.840.10 008.1.2	SCU	None
Patient Root Query/Retrieve Information Model - MOVE	1.2.840.10008.5.1.4 .1.2.1.2	Implicit VR Little Endian	1.2.840.10 008.1.2	SCU	None
Study Root Query/Retrieve Information Model - FIND	1.2.840.10008.5.1.4 .1.2.2.1	Implicit VR Little Endian	1.2.840.10 008.1.2	SCU	None
Study Root Query/Retrieve Information Model - MOVE	1.2.840.10008.5.1.4 .1.2.2.2	Implicit VR Little Endian	1.2.840.10 008.1.2	SCU	None

4.2.1.3.2.3 SOP specific conformance for SOP class(es)

The table below contains the key matching methods supported by iQ-WEB when initiating C-FIND requests to remote Query/Retrieve SCP applications:

Key matching methods	Description	Supported by iQ-WEB
SV	Single Value Matching	Yes
UM	Universal Matching	Yes
WC	Wild-Card Matching	Yes
DR	Date Range Matching	Yes

The table below indicates which keys are used by the iQ-WEB for the Patient Root information model when initiating C-FIND requests to remote Query/Retrieve SCP applications.

Level	Description	Tag	Matching method	Level
Patient	Patient Name	0010 0010	SV,UM,WC	R
	Patient ID	0010 0020	SV,UM,WC	U

Level	Description	Tag	Matching method	Level
	Patient's Birth Date	0010 0030	SV,UM,DR	O
	Patient's Birth Time	0010 0032		O
	Patient's Sex	0010 0040		O
	Patient's Age	0010 1010		O
	Patient's Size	0010 1020		O
	Patient's Weight	0010 1030		O
	Number of Patient Related Studies	0020 1200		O
	Number of Patient Related Series	0020 1202		O
	Number of Patient Related Instances	0020 1204		O
Study	Study Date	0008 0020	SV,UM,DR	R
	Study Time	0008 0030	SV,UM	R
	Accession Number	0008 0050	SV,UM,WC	R
	Referring Physician Name	0008 0090		O
	Study Description	0008 1030		O
	Study Instance UID	0020 000D	SV,UM	U
	Study ID	0020 0010	SV,UM,WC	R
	Number of Study Related Series	0020 1206		O
	Number of Study Related Instances	0020 1208		O
Series	Series Date	0008 0021	SV,UM,DR	O
	Series Time	0008 0031	SV,UM	O
	Modality	0008 0060	SV,UM,WC	R
	Body Part Examined	0018 0015		O
	Series Instance UID	0020 000E	SV,UM	U
	Series Number	0020 0011	SV,UM	R
	Number of Series Related Instances	0020 1209		O
Image	SOP Class UID	0008 0016	SV,UM	O
	SOP Instance UID	0008 0018	SV,UM	U
	Instance Number	0020 0013	SV,UM	R
	Overlay Number	0020 0022		O
	Curve Number	0020 0024		O
	LUT Number	0020 0026		O
	Samples Per Pixel	0028 0002		O
	Rows	0028 0010		O

Level	Description	Tag	Matching method	Level
	Columns	0028 0011		O
	Bits Allocated	0028 0100		O
	Bits Stored	0028 0101		O
	Pixel Representation	0028 0103		O

4.2.1.3.3   Move request from external node

4.2.1.3.3.1 Description and sequencing of activities

The associated Real-World activity is a C-MOVE request received from an external application. If an application successfully establishes an association with the iQ-WEB and makes a valid C-MOVE request that identifies one or more images known by the iQ-WEB, the iQ-WEB will query the 'applentity' MySQL database table to see if a matching entry can be found for the specified destination application entity title. If a match is found, the iQ-WEB will initiate an association with the destination application entity specified in the incoming C-MOVE request. New entries to this table can be done via the web interface "Communications → DICOM".

4.2.1.3.3.2 Proposed presentation contexts

In response to a C-MOVE request, iQ-WEB builds a complete list of images to be moved. The list includes the SOP class of each image to be moved. iQ-WEB extracts the unique SOP classes from the image lists and proposes a set of presentation contexts that includes one presentation context for each unique SOP class identified in the image list. Thus, the association request may have a single presentation context or multiple presentation contexts. Each presentation context contains the abstract syntax that identifies one image class as found in the image list.

Abstract Syntax		Transfer Syntax		Role	Extended Negoti-ation
Name	UID	Name List	UID List		
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
CT Image Storage	1.2.840.10008.5.1.4.1.1.2	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None

Ultrasound Multi-frame Image Storage (retired)	1.2.840.10008.5.1.4.1.1.3	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Ultrasound Multi-frame Image Storage	1.2.840.10008.5.1.4.1.1.3.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
MR Image Storage	1.2.840.10008.5.1.4.1.1.4	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Nuclear Medicine Image Storage (retired)	1.2.840.10008.5.1.4.1.1.5	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Ultrasound Image Storage (retired)	1.2.840.10008.5.1.4.1.1.6	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
X-Ray Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.12.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
X-Ray Radiofluoroscopic Image Storage	1.2.840.10008.5.1.4.1.1.12.2	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None

X-Ray Angiographic Bi-plane Image Storage (retired)	1.2.840.10008.5.1.4.1.1.12.3	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
X-Ray 3D Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.13.1.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
X-Ray 3D Craniofacial Image Storage	1.2.840.10008.5.1.4.1.1.13.1.2	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Digital X-ray Image Storage - For Presentation	1.2.840.10008.5.1.4.1.1.1.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Digital X-ray Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.1.1.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Digital Mammography X-ray Image Storage - For Presentation	1.2.840.10008.5.1.4.1.1.1.2	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Digital Mammography X-ray Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.1.2.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Nuclear Medicine Image Storage	1.2.840.10008.5.1.4.1.1.20	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None

Positron Emission Tomography (PET) Image Storage	1.2.840.10008.5.1.4.1.1.128	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
RT Image Storage	1.2.840.10008.5.1.4.1.1.481.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
RT Dose Storage	1.2.840.10008.5.1.4.1.1.481.2	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
RT Structure Set Storage	1.2.840.10008.5.1.4.1.1.481.3	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
RT Plan Storage	1.2.840.10008.5.1.4.1.1.481.5	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
VL Endoscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
VL Microscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.2	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
VL Slide-Coordinates Microscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.3	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None

Video Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Ophthalmic Photography 8 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Ophthalmic Photography 16 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.2	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Ophthalmic Tomography Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.4	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Enhanced CT Image Storage	1.2.840.10008.5.1.4.1.1.2.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Enhanced MR Image Storage	1.2.840.10008.5.1.4.1.1.4.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
MR Spectroscopy Storage	1.2.840.10008.5.1.4.1.1.4.2	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Enhanced MR Color Image Storage	1.2.840.10008.5.1.4.1.1.4.3	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Raw Data Storage	1.2.840.10008.5.1.4.1.1.66	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None

Surface Segmentation Storage	1.2.840.10008.5.1.4.1.1.66.5	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Real World Value Mapping Storage	1.2.840.10008.5.1.4.1.1.67	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Grayscale Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Color Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.2	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Pseudo-Color Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.3	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Blending Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.4	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
XA/XRF Grayscale Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.5	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Video Endoscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.1.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None

Basic Text Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.11	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Enhanced Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.22	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Comprehensive Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.33	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
X-Ray Radiation Dose Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.67	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
VL Whole Slide Microscopy Image Storage	1.2.840.10008.5.1.4.1.1.77.1.6	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None
Key Object Selection Document	1.2.840.10008.5.1.4.1.1.88.59	See Proposed Transfer Syntaxes below	See Proposed Transfer Syntaxes below	SCU	None

iQ-WEB supports following transfer syntaxes:

Transfer syntax name	Transfer syntax UID
Implicit VR, Little Endian (DICOM Default)	1.2.840.10008.1.2
Explicit VR, Little Endian	1.2.840.10008.1.2.1
Explicit VR, Big Endian	1.2.840.10008.1.2.2
Explicit VR, JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50

Transfer syntax name	Transfer syntax UID
Explicit VR, JPEG Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51
Explicit VR, JPEG Lossless (Process 14)	1.2.840.10008.1.2.4.57
Explicit VR, JPEG Lossless, Non-hierarchical, First-order prediction (Process 14)	1.2.840.10008.1.2.4.70
JPEG-LS Lossless Compression	1.2.840.10008.1.2.4.80
JPEG-LS Near-Lossless Compression	1.2.840.10008.1.2.4.81
JPEG 2000 Part-1 Lossless Only Compression	1.2.840.10008.1.2.4.90
JPEG 2000 Part-1 Lossless Or Lossy Compression	1.2.840.10008.1.2.4.91
JPEG 2000 Part-2 Lossless Only Compression	1.2.840.10008.1.2.4.92
JPEG 2000 Part-2 Lossless Or Lossy Compression	1.2.840.10008.1.2.4.93
JPIP Referenced	1.2.840.10008.1.2.4.94
JPIP Referenced Deflate	1.2.840.10008.1.2.4.95
Explicit VR, Deflated Little Endian	1.2.840.10008.1.2.4.99
MPEG-2 Compression	1.2.840.10008.1.2.4.100
MPEG-4 AVC/H.264 High Profile Compression / Level 4.1	1.2.840.10008.1.2.4.102
MPEG-4 AVC/H.264 BD-Compatible Compression	1.2.840.10008.1.2.4.103
RLE Lossless	1.2.840.10008.1.2.5

When sending images to a remote AE, iQ-WEB will propose the same transfer syntax in which the stored SOP instance is encoded. If the encoding transfer syntax is Explicit VR Little-Endian transfer syntax (UID 1.2.840.10008.1.2.1), iQ-WEB will also propose the default Implicit VR Little-Endian transfer syntax (UID 1.2.840.10008.1.2), so that when sending images to applications that do not support the Explicit VR Little-Endian transfer syntax, iQ-WEB will translate from the encoding Explicit VR Little-Endian to the Implicit VR Little-Endian transfer syntax.

4.2.1.3.3.3 SOP specific conformance for SOP class(es)

All C-STORE operations are in the context of a C-MOVE request from an external application. iQ-WEB sends one C-MOVE response message for each attempted C-STORE operation. iQ-WEB does not attempt any extended negotiation. iQ-WEB does not delete any elements from the files it transfers. Therefore the set of optional elements depends entirely on the contents of the files which were originally stored on the iQ-WEB.

In the event that iQ-WEB receives an unsuccessful C-STORE response, iQ-WEB will continue sending the remaining images in the requested set.

4.2.1.3.4   Modality worklist management

4.2.1.3.4.1 Description and sequencing of activities

From the iQ-WEB web user interface, users can select the 'DICOM' Page to display a list of defined application entities (AE). If the TCP port number for an AE is defined and the remote AE has been defined as Modality Worklist SCP ('worklistScp' column set to 'True' in the 'applentity' table), a 'Get Worklist' link will be displayed in the 'Modality Worklist' column. Clicking on the 'Get Worklist' link will initiate a Modality Worklist - FIND request to the TCP port number of the corresponding AE. Any matching result returned by the remote Modality Worklist SCP will be displayed; otherwise a timeout error or any error response from the remote AE will be displayed.

iQ-WEB can also receive unsolicited Study-Scheduled N-EVENT-REPORT notifications. iQ-WEB will then send Modality Worklist - FIND commands to query all configured Modality Worklist SCP application entities for the corresponding study.

iQ-WEB also polls any configured Modality Worklist SCP application entities to update the Worklist table on a regular basis. The default polling interval is 10 minutes.

4.2.1.3.4.2 Proposed presentation contexts

The table below shows the presentation contexts that are proposed by iQ-WEB for Modality Worklist - FIND operations.

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	**UID**	**Name List**	**UID List**		
Modality Worklist Info Model – FIND	1.2.840.10008. 5.1.4.31	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None

4.2.1.3.4.3 SOP specific conformance for SOP class(es)

The table below contains the key matching methods supported by iQ-WEB when initiating Modality Worklist-FIND requests to remote Worklist SCP applications:

Key matching methods	Description	Supported by iQ-WEB
SV	Single Value Matching	Yes
UM	Universal Matching	Yes
WC	Wild-Card Matching	Yes
DR	Date Range Matching	Yes

The table below indicates which keys are used by the iQ-WEB for the Modality Worklist - FIND requests to remote Modality Worklist SCP applications.

Level	Description	Tag	Matching method	Type
Scheduled procedure step	Scheduled Procedure Step Sequence	0040 0100		1
	>Modality	0008,0060	UM,WC	1
	>Scheduled Station AE Title	0040 0001	UM,WC	1
	>Scheduled Procedure Step Start Date	0040 0002	SV,UM,DR	1
	>Scheduled Procedure Step Start Time	0040 0003	UM	1
Requested procedure	Requested Procedure ID	0040 1001	UM,WC	1
	Requested Procedure Description	0032 1060		1C
	Study Instance UID	0020 000D		1
	Referenced Study Sequence	0008 1110		2
	>Referenced SOP Class UID	0008 1150		1C
	>Referenced SOP Instance UID	0008 1155		1C
Imaging service request	Accession Number	0008 0050	SV,UM,WC	2
	Referring Physician's Name	0008 0090	UM	2
	Requesting Physician's Name	0032 1032		2
Patient identification	Patient's Name	0010 0010	SV,UM,WC	1
	Patient ID	0010 1020	SV,UM,WC	1
Patient demographic	Patient's Birth Date	0010 1030	SV,UM,DR	2
	Patient's Sex	0010 1040	SV,UM	2

4.2.1.3.5   Printing

4.2.1.3.5.1 Description and sequencing of activities

After logging into the iQ-WEB web user interface, if the 'Print' privilege has been enabled, the current user can select a list of patients, studies, series or images, and click on the Print button.

The user can then select the destination remote printer, make any appropriate changes to the print parameters, then click on the Print button to send the selected patients, studies, series or images to the printer.

4.2.1.3.5.2 Proposed presentation contexts

The table shows the presentation contexts that are proposed by iQ-WEB for verification operations.

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Basic Grayscale Print Management Meta	1.2.840.1000.8.5.1.1.9	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
Basic Color Print Management Meta	1.2.840.1000.8.5.1.1.18	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None

4.2.1.3.5.3 SOP specific conformance for SOP class(es)

iQ-WEB supports the following required print SOP classes for the Basic Grayscale/Color Management Meta classes:

SOP Class name	SOP Class UID
Basic Film Session	1.2.840.10008.5.1.1.1
Basic Film Box	1.2.840.10008.5.1.1.2
Basic Grayscale Image Box	1.2.840.10008.5.1.1.4
Basic Color Image Box	1.2.840.10008.5.1.1.4.1
Printer	1.2.840.10008.5.1.1.16

iQ-WEB supports the following optional print SOP classes for the Basic Grayscale/Color Management Meta classes:

SOP Class name	SOP class UID
Basic Annotation Box	1.2.840.10008.5.1.1.15

4.2.1.3.5.3.1 Conformance for basic film session SOP class

iQ-WEB supports the following attributes for N-CREATE command of the basic film session SOP class:

N-CREATE attributes of the basic film session SOP class		
Tag	Description	Possible values
(2000,0010)	Number of Copies	1 – 99
(2000,0020)	Print Priority	LOW, MED, HIGH
(2000,0030)	Medium Type	BLUE FILM, CLEAR FILM, PAPER
(2000,0040)	Film Destination	MAGAZINE, PROCESSOR, BIN_i
(2000,0050)	Film Session Label	PacsOne-YYYY.MM.DD.MM.HH.SS

iQ-WEB also uses N-DELETE to delete the created basic film session SOP instance returned by the remote print SCP.

4.2.1.3.5.3.2 Conformance for SOP class basic film box

iQ-WEB supports the following attributes for N-CREATE command of the Basic Film Box SOP class:

N-CREATE attributes of the basic film box SOP class		
Tag	Description	Possible values
(2010,0010)	Image Display Format	STANDARD\C,R; R1,R2,R3; C1,C2,C3; SLIDE; SUPERSLIDE
(2010,0030)	Annotation Display Format ID	Printer specific annotation display format string
(2010,0040)	Film Orientation	LANDSCAPE, PORTRAIT
(2010,0050)	Film Size ID	DEFAULT, 8INX10IN, 10INX12IN, 11INX14IN, 14INX14IN, 14INX17IN
(2010,0500)	Referenced Film Session Sequence	
(0008,1150)	> Referenced SOP Class UID	
(0008,1155)	> Referenced SOP Instance UID	

iQ-WEB also uses N-ACTION to print a complete Basic Film Box SOP instance and N-DELETE to delete the SOP instance after printing is complete.

4.2.1.3.5.3.3 Conformance for SOP class basic grayscale image box

iQ-WEB supports the following attributes for N-SET command of the Basic Grayscale Image Box SOP class:

N-SET attributes of the basic grayscale image box SOP class		
Tag	Description	Possible values
(2020,0010)	Image Position	1, 2, …
(2020,0020)	Polarity	Normal, Reverse
(2020,0110)	Preformatted Grayscale Image Sequence	
(0028,0002)	>Samples Per Pixel	
(0028,0004)	>Photometric Interpretation	MONOCHROME1, MONOCHROME2
(0028,0010)	>Rows	> 0
(0028,0011)	>Columns	> 0

N-SET attributes of the basic grayscale image box SOP class		
(0028,0034)	>Pixel Aspect Ratio	1
(0028,0100)	>Bits Allocated	8, 16
(0028,0101)	>Bits Stored	8, 12
(0028,0102)	>High Bit	7, 11
(0028,0103)	>Pixel Representation	0
(7FE0,0010)	>Pixel Data	

4.2.1.3.5.3.4 Conformance for SOP class printer

iQ-WEB supports the following attributes for N-GET command of the printer box SOP class:

N-GET attributes of the printer SOP class	
Tag	Description
(0008,0070)	Manufacturer
(0008,1090)	Manufacturer Model Name
(0018,1000)	Device Serial Number
(0018,1020)	Software Versions
(0018,1200)	Date Last Calibration
(0018,1201)	Last Calibration
(2110,0010)	Printer Status
(2110,0020)	Printer Status Info
(2110,0030)	Printer Name

4.2.1.3.5.3.5 Conformance for basic annotation box SOP class

iQ-WEB supports the following attributes for N-GET command of the basic annotation SOP class:

N-GET attributes of the basic annotation box SOP class	
Tag	Description
(2030,0010)	Annotation Position
(2030,0020)	Text String

4.2.1.3.6   Detached study management

4.2.1.3.6.1 Description and sequencing of activities

iQ-WEB accepts unsolicited N-EVENT-REPORT notifications sent from Detached Study Management SCP application entities. iQ-WEB will then issue N-GET request back to the remote SCP to get more information for the corresponding study.

Additionally, upon receipt of the Study Scheduled event notification sent from the Detached Study Management SCP, iQ-WEB will initiate a Modality Worklist - FIND request to configured Modality Worklist SCP application entity(s) to query the corresponding study information contained in the event report.

When iQ-WEB receives any Detached Study Management N-EVENT-REPORT notifications sent from a Detached Study Management SCP AE, it will first validate the association request by checking the remote AE title against the internal 'applentity' table. If access is enabled in the 'applentity' table, the association request will be accepted and the event notification will be processed. Otherwise, the association request will be rejected by iQ-WEB and this event notification will not be processed.

4.2.1.3.6.2 Proposed presentation contexts

The table shows the presentation contexts that may be accepted by iQ-WEB for Detached Study Management N-EVENT-REPORT notifications.

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	**UID**	**Name List**	**UID List**		
Detached Study Management (retired)	1.2.840.10008.3.1.2.3.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None

4.2.1.3.6.3 SOP specific conformance for SOP class(es)

iQ-WEB supports the following attributes in the N-EVENT-REPORT-RQ notification sent from a Detached Study Management SCP application entity:

Level	Description	Tag
Study Created	Instance Creation Date	0008 0012
	Referenced Patient Sequence	0008 1120
	>Referenced SOP Class UID	0008 1150
	>Referenced SOP Instance UID	0008 1155

Level	Description	Tag
	Referenced Visit Sequence	0008 1125
	>Referenced SOP Class UID	0008 1150
	>Referenced SOP Instance UID	0008 1155
	Instance Creation Time	0008 0013
	Instance Creator UID	0008 0014
	Study Status ID	0032 000A
Study Scheduled	Specific Character Set	0008 0005
	Referenced Patient Sequence	0008 1120
	>Referenced SOP Class UID	0008 1150
	>Referenced SOP Instance UID	0008 1155
	Referenced Visit Sequence	0008 1125
	>Referenced SOP Class UID	0008 1150
	>Referenced SOP Instance UID	0008 1155
	Scheduled Study Start Date	0032 1000
	Scheduled Study Start Time	0032 1001
	Scheduled Study Location	0032 1020
	Scheduled Study Location Application Entity Title	0032 1021
	Requested Procedure Description	0032 1060
	Requested Procedure Code Sequence	0032 1064
	>Code Value	0008 0100
	>Coding Scheme Designator	0008 0102
	>Code Meaning	0008 0104
Patient Arrived	Study Arrival Date	0032 1040
	Study Arrival Time	0032 1041
Study Started	Study Date	0008 0020
	Study Time	0008 0030
Study Completed	Referenced Performed Procedure Step Sequence	0008 1111
	>Referenced SOP Class UID	0008 1150
	>Referenced SOP Instance UID	0008 1155
	Study Completed Date	0032 1050
	Study Completed Time	0032 1051
Study Verified	Referenced Performed Procedure Step Sequence	0008 1111
	>Referenced SOP Class UID	0008 1150
	>Referenced SOP Instance UID	0008 1155
	Study Verified Date	0032 0032

Level	Description	Tag
	Study Verified Time	0032 0033
Study Read	Study Read Date	0032 0034
	Study Read Time	0032 0035
Study Deleted		

iQ-WEB returns one of the following status codes in the N-EVENT-REPORT-RSP sent back to the Detached Study Management SCP:

Service status	Further meaning	Status codes	Description
Success	Success	0x0000	Operation performed properly

4.2.1.3.7 Storage commitment push model

4.2.1.3.7.1 Description and sequencing of activities

From the 'DICOM' page of iQ-WEB, see the iQ-WEB "Administration Guide" document, if a remote AE is configured as a Storage Commitment Report SCP and the "Request Storage Commitment Report for DICOM images sent to this SCP" option is enabled for this remote AE, then iQ-WEB will request DICOM Storage Commitment Report (via the N-ACTION-RQ command) for any DICOM SOP instance sent to this remote AE.

4.2.1.3.7.2 Proposed presentation contexts

The table below shows the presentation contexts that are proposed by iQ-WEB for Storage Commitment Push Model requests.

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Storage Commitment Push Model	1.2.840.10008. 1.20.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None

4.2.1.3.7.3 SOP specific conformance for SOP class(es)

iQ-WEB supports the following elements for this SOP class as an SCU:

Action type name	Action type ID	Attribute name	Tag
	1	Transaction UID	(0008,1195)

Action type name	Action type ID	Attribute name	Tag
Request Storage Commit-ment		Referenced SOP Sequence	(0008,1199)
		>Referenced SOP Class UID	(0008,1150)
		>Referenced SOP Instance UID	(0008,1155)

4.2.1.3.7.3.1 Storage commitment results

After receiving the DICOM Storage Commitment Report request sent from iQ-WEB, the remote AE will respond by sending the Storage Commitment Report for the requested SOP instances in the form of DICOM N-EVENT-REPORT messages back to iQ-WEB. The N-EVENT-REPORT contains the Transaction UID value contained in the initiating N-ACTION-RQ request sent from iQ-WEB. The N-EVENT-REPORT is sent on a separate association from the initiating N-ACTION-RQ request.

iQ-WEB supports the Event Report Information as specified in the table below:

Action type name	Action type ID	Attribute name	Tag
Storage Commitment Request Successful	1	Transaction UID	(0008,1195)
		Referenced SOP Sequence	(0008,1199)
		>Referenced SOP Class UID	(0008,1150)
		>Referenced SOP Instance UID	(0008,1155)
Storage Commitment Request Complete – Failure Exist	2	Transaction UID	(0008,1195)
		Referenced SOP Sequence	(0008,1199)
		>Referenced SOP Class UID	(0008,1150)
		>Referenced SOP Instance UID	(0008,1155)
		Failed SOP Sequence	(0008,1198)
		>Referenced SOP Class UID	(0008,1150)
		>Referenced SOP Instance UID	(0008,1155)
		>Failure Reason	(0008,1197)

After receiving the Storage Commitment Report (N-EVENT-REPORT) from the remote AE, iQ-WEB will display one of the following status indications for the containing DICOM study of the referenced SOP instances for which the reports have been received:

- **Report initiated**: iQ-WEB has initiated the storage commitment report (N-ACTION-RQ) for the SOP instances of this study
- **Partially committed**: Storage commitment report (N-EVENT-REPORT) has been received for the SOP instance of this study, but not all instances have been committed successfully by the remote AE

- **Fully committed**: storage commitment report (N-EVENT-REPORT) has been received for the SOP instances of this study, and all instances have been committed successfully by the remote AE

4.2.1.4 Association acceptance policy

4.2.1.4.1 Verification

4.2.1.4.1.1 Description and sequencing of activities

iQ-WEB accepts associations from applications that wish to perform a verification (C-ECHO) operation on the iQ-WEB.

4.2.1.4.1.2 Accepted presentation contexts

The table shows the presentation contexts that may be accepted by iQ-WEB for verification operations.

Abstract Syntax		Transfer Syntax		Role	Extended Negoti-ation
Name	UID	Name List	UID List		
Verification	1.2.840.10008.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None

4.2.1.4.1.3 SOP specific conformance for SOP class(es)

iQ-WEB provides standard conformance for DICOM SOP verification class.

4.2.1.4.2 Storage

4.2.1.4.2.1 Description and sequencing of activities

The associated Real-World activity associated with the C-STORE operation is the storage of the images on the disk of the system upon which the iQ-WEB is running. Images are stored by writing the data set of the C-STORE command directly to disk, either with no further header or interpretation ("Native" format), or with the standard file header described in the DICOM 3.0 Part 10 document (DICOM Part 10 format). The above storage formats are configurable when iQ-WEB is installed by running the 'Setup.exe' program.

After an image is stored to disk, the iQ-WEB updates the MySQL database with patient, study, series and image information; this MySQL database is used by the iQ-WEB for query/retrieve operations, it is also used by the Apache web server to display patient, study, series, and image information, display stored images through a web browser, and maintain patient/study/series/image tables for authorized users.

iQ-WEB will issue a failure status if it is unable to store the image on disk, if the image does not conform to the IOD of the SOP class under which it was transmitted, or if the iQ-WEB is not able to successfully update its MySQL database.

4.2.1.4.2.2 Accepted presentation contexts

The following presentation contexts shown in the table below are acceptable to the iQ-WEB when receiving images.

Abstract Syntax		Transfer Syntax		Role	Extended Negoti-ation
Name	UID	Name List	UID List		
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
CT Image Storage	1.2.840.10008.5.1.4.1.1.2	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Ultrasound Multi-frame Image Storage (retired)	1.2.840.10008.5.1.4.1.1.3	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Ultrasound Multi-frame Image Storage	1.2.840.10008.5.1.4.1.1.3.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
MR Image Storage	1.2.840.10008.5.1.4.1.1.4	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Nuclear Medicine Image Storage (retired)	1.2.840.10008.5.1.4.1.1.5	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Ultrasound Image Storage (retired)	1.2.840.10008.5.1.4.1.1.6	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1	See Transfer Syntax	See Transfer Syntax	SCP	None

		Selection Policies Below	Selection Policies Below		
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
X-Ray Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.12.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
X-Ray Radiofluoroscopic Image Storage	1.2.840.10008.5.1.4.1.1.12.2	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
X-Ray Angiographic Bi-plane Image Storage (retired)	1.2.840.10008.5.1.4.1.1.12.3	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
X-Ray 3D Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.13.1.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
X-Ray 3D Craniofacial Image Storage	1.2.840.10008.5.1.4.1.1.13.1.2	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Digital X-ray Image Storage - For Presentation	1.2.840.10008.5.1.4.1.1.1.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Digital X-ray Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.1.1.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Digital Mammography X-ray Image Storage - For Presentation	1.2.840.10008.5.1.4.1.1.1.2	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None

Digital Mammography X-ray Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.1.2.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Nuclear Medicine Image Storage	1.2.840.10008.5.1.4.1.1.20	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Positron Emission Tomography (PET) Image Storage	1.2.840.10008.5.1.4.1.1.128	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
RT Image Storage	1.2.840.10008.5.1.4.1.1.481.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
RT Dose Storage	1.2.840.10008.5.1.4.1.1.481.2	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
RT Structure Set Storage	1.2.840.10008.5.1.4.1.1.481.3	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
RT Plan Storage	1.2.840.10008.5.1.4.1.1.481.5	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
VL Endoscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
VL Microscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.2	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
VL Slide-Coordinates Microscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.3	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	See Transfer Syntax	See Transfer Syntax	SCP	None

		Selection Policies Below	Selection Policies Below		
Video Photographic Image Storage	1.2.840.10008.5 .1.4.1.1.77.1.4.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Ophthalmic Photography 8 Bit Image Storage	1.2.840.10008.5 .1.4.1.1.77.1.5.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Ophthalmic Photography 16 Bit Image Storage	1.2.840.10008.5 .1.4.1.1.77.1.5.2	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Ophthalmic Tomography Image Storage	1.2.840.10008.5 .1.4.1.1.77.1.5.4	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Enhanced CT Image Storage	1.2.840.10008.5 .1.4.1.1.2.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Enhanced MR Image Storage	1.2.840.10008.5 .1.4.1.1.4.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
MR Spectroscopy Storage	1.2.840.10008.5 .1.4.1.1.4.2	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Enhanced MR Color Image Storage	1.2.840.10008.5 .1.4.1.1.4.3	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Raw Data Storage	1.2.840.10008.5 .1.4.1.1.66	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Surface Segmentation Storage	1.2.840.10008.5 .1.4.1.1.66.5	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Real World Value Mapping Storage	1.2.840.10008.5 .1.4.1.1.67	See Transfer Syntax	See Transfer Syntax	SCP	None

		Selection Policies Below	Selection Policies Below		
Grayscale Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Color Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.2	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Pseudo-Color Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.3	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Blending Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.4	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
XA/XRF Grayscale Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.5	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Video Endoscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.1.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Basic Text Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.11	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Enhanced Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.22	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Comprehensive Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.33	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None

X-Ray Radiation Dose Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.67	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
VL Whole Slide Microscopy Image Storage	1.2.840.10008.5.1.4.1.1.77.1.6	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None
Key Object Selection Document	1.2.840.10008.5.1.4.1.1.88.59	See Transfer Syntax Selection Policies Below	See Transfer Syntax Selection Policies Below	SCP	None

iQ-WEB supports the following transfer syntaxes:

Transfer syntax name	Transfer syntax UID
Implicit VR, Little Endian (DICOM Default)	1.2.840.10008.1.2
Explicit VR, Little Endian	1.2.840.10008.1.2.1
Explicit VR, Big Endian	1.2.840.10008.1.2.2
Explicit VR, JPEG Lossless, Non-hierarchical, First-order prediction (Process 14)	1.2.840.10008.1.2.4.70
Explicit VR, JPEG Lossless (Process 14)	1.2.840.10008.1.2.4.57
Explicit VR, JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50
Explicit VR, JPEG Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51
RLE Lossless	1.2.840.10008.1.2.5
MPEG2 Image Compression	1.2.840.10008.1.2.4.100
MPEG4 AVC/H.264 Image Compression	1.2.840.10008.1.2.4.102
MPEG4 Image Compression	1.2.840.10008.1.2.4.103
JPEG 2000 Part-1 Lossless Only Compression	1.2.840.10008.1.2.4.90
JPEG 2000 Part-1 Lossless Or Lossy Compression	1.2.840.10008.1.2.4.91
JPEG-LS Lossless Compression	1.2.840.10008.1.2.4.80
JPEG-LS Near-Lossless Compression	1.2.840.10008.1.2.4.81

When iQ-WEB receives association requests which contain multiple presentation contexts with different transfer syntaxes, iQ-WEB will accept those presentation contexts with supported transfer syntaxes listed above, and reject any presentation context with un-supported transfer syntax. If multiple transfer syntaxes are proposed in a presentation context by the remote C-

STORE SCU, and iQ-WEB supports one or more of them, then the first transfer syntax on the list presented will be selected. Users can also define preferred transfer syntax via the web interface. For more information, refer to the iQ-WEB "Administration Guide" document.

If a preferred transfer syntax is defined and it's on the list of transfer syntaxes presented by the remote C-STORE SCU iQ-WEB will use the specified transfer syntax instead of selecting the first supported transfer syntax from the list presented by the remote AE.

4.2.1.4.2.3 SOP specific conformance for SOP class(es)

iQ-WEB implements Level 2 (Full) conformance for the Storage SOP Class. The raw image files themselves are not modified.

In the event that an image is successfully stored by iQ-WEB, it may be accessed by requesting associations with the iQ-WEB and performing query/retrieve operations. iQ-WEB can also display stored images to web browser clients through the Apache web server interface.

iQ-WEB stores images for an indefinite period. The stored images, as well as stored patient, study, series and image database records can be deleted from the Apache web server interface by users authorized with UPDATE privilege to the MySQL database.

iQ-WEB returns the following status codes in response to a C-STORE request:

Status code	Status	Description
0000H	Success	Image successfully stored
A700H	Refused	Out of resources, unable to create local file
A701H	Refused	Out of resources, failed to access database
A702H	Refused	Out of resources, memory allocation error
A703H	Refused	Out of resources, conflict with existing patient ID
A900H	Error	Data set does not match SOP Class
C000H	Error	Cannot understand

In the case of an error of an error storing an image, there is no documented method for recovery. Trouble-shooting information can be retrieved from the iQ-WEB log file. For more information about the log file see the iQ-WEB "Administration Guide" document.

4.2.1.4.3 Query/Retrieve

4.2.1.4.3.1 Description and sequencing of activities

The real-world activity associated with C-FIND and C-MOVE requests are query and retrieval operations initiated by another application. An application other than iQ-WEB queries iQ-WEB

for patient/study/series/image information that has been previously stored in the MySQL database and can request that the iQ-WEB send images to a third application entity.

4.2.1.4.3.2 Accepted presentation contexts

The table shows the presentation contexts that may be accepted by iQ-WEB for query operations.

Abstract Syntax		Transfer Syntax		Role	Extended Negoti-ation
Name	UID	Name List	UID List		
Patient Root Query/Retrieve Information Model - FIND	1.2.840.10008. 5.1.4.1.2.1.1	Implicit VR Little Endian	1.2.840.10008. 1.2	SCP	Relational queries
Patient Root Query/Retrieve Information Model - MOVE	1.2.840.10008. 5.1.4.1.2.1.2	Implicit VR Little Endian	1.2.840.10008. 1.2	SCP	Relational queries
Patient Root Query/Retrieve Information Model - GET	1.2.840.10008. 5.1.4.1.2.1.3	Implicit VR Little Endian	1.2.840.10008. 1.2	SCP	Relational queries
Study Root Query/Retrieve Information Model - FIND	1.2.840.10008. 5.1.4.1.2.2.1	Implicit VR Little Endian	1.2.840.10008. 1.2	SCP	Relational queries
Study Root Query/Retrieve Information Model - MOVE	1.2.840.10008. 5.1.4.1.2.2.2	Implicit VR Little Endian	1.2.840.10008. 1.2	SCP	Relational queries
Study Root Query/Retrieve Information Model - GET	1.2.840.10008. 5.1.4.1.2.2.3	Implicit VR Little Endian	1.2.840.10008. 1.2	SCP	Relational queries
Patient/Study Only Information Model – FIND (retired)	1.2.840.10008. 5.1.4.1.2.3.1	Implicit VR Little Endian	1.2.840.10008. 1.2	SCP	Relational queries
Patient/Study Only Information Model – MOVE (retired)	1.2.840.10008. 5.1.4.1.2.3.2	Implicit VR Little Endian	1.2.840.10008. 1.2	SCP	Relational queries

Patient/Study Only Information Model – GET (retired)	1.2.840.10008.5.1.4.1.2.3.3	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	Relational queries

4.2.1.4.3.3 SOP specific conformance for SOP class(es)

iQ-WEB supports relational queries in addition to hierarchical queries. The second table below indicates which keys are supported by the iQ-WEB for the Patient Root information model. The first table below indicates which keys are supported by the iQ-WEB for the Study Root information model.

iQ-WEB also supports the Patient/Study Only information model. The keys supported for that model are the same keys found in the second table with a level of either "Patient" or "Study".

The table below contains the key matching methods supported by iQ-WEB when processing C-FIND requests from remote Query/Retrieve SCU applications:

Key matching methods	Description	Supported by iQ-WEB
SV	Single Value Matching	Yes
UM	Universal Matching	Yes
WC	Wild-Card Matching	Yes
DR	Date Range Matching	Yes
TR	Time Range Matching	Yes

The table below indicates which keys are supported by the iQ-WEB for the Patient Root information model. These tables include all optional (O) and required (R) keys that are supported. Unique (U) are always required. Optional keys are supported like required keys.

Level	Description	Tag	Matching method	Type
Patient	Patient Name	0010 0010	SV,UM,WC	R
	Patient ID	0010 0020	SV,UM,WC	U
	Patient's Birth Date	0010 0030	SV,UM,DR	O
	Patient's Birth Time	0010 0032	SV,UM,TR	O
	Patient's Sex	0010 0040	SV,UM	O
	Patient's Age	0010 1010		O
	Patient's Size	0010 1020		O
	Patient's Weight	0010 1030		O
	Number of Patient Related Studies	0020 1200		O

Level	Description	Tag	Matching method	Type
	Number of Patient Related Series	0020 1202		O
	Number of Patient Related Instances	0020 1204		O
Study	Study Date	0008 0020	SV,UM,DR	R
	Study Time	0008 0030	SV,UM,TR	R
	Accession Number	0008 0050	SV,UM,WC	R
	Modalities In Study	0008 0061	SV,UM,WC	O
	Referring Physician Name	0008 0090		O
	Study Description	0008 1030		O
	Study Instance UID	0020 000D	SV,UM,WC	U
	Study ID	0020 0010	SV,UM,WC	R
	Number of Study Related Series	0020 1206		O
	Number of Study Related Instances	0020 1208		O
Series	Series Date	0008 0021	SV,UM,DR	O
	Series Time	0008 0031	SV,UM,TR	O
	Modality	0008 0060	SV,UM,WC	R
	Body Part Examined	0018 0015		O
	Series Instance UID	0020 000E	SV,UM,WC	U
	Series Number	0020 0011	SV,UM	R
	Number of Series Related Instances	0020 1209		O
Image	Instance Creation Date	0008 0012		O
	Instance Creation Time	0008 0013		O
	SOP Class UID	0008 0016	SV,UM,WC	O
	SOP Instance UID	0008 0018	SV,UM,WC	U
	Instance Number	0020 0013	SV,UM	R
	Overlay Number	0020 0022		O
	Curve Number	0020 0024		O
	LUT Number	0020 0026		O
	Samples Per Pixel	0028 0002		O
	Rows	0028 0010		O
	Columns	0028 0011		O
	Bits Allocated	0028 0100		O
	Bits Stored	0028 0101		O
	Pixel Representation	0028 0103		O

The table below indicates which keys are supported by the iQ-WEB for the Study Root information model. These tables include all optional (O) and required (R) keys that are supported. Unique (U) are always required. Optional keys are supported like required keys.

Level	Description	Tag	Matching method	Type
Study	Study Date	0008 0020	SV,UM,DR	R
	Study Time	0008 0030	SV,UM,TR	R
	Accession Number	0008 0050	SV,UM,WC	R
	Modalities In Study	0008 0061	SV,UM,WC	O
	Patient Name	0010 0010	SV,UM,WC	R
	Patient ID	0010 0020	SV,UM,WC	R
	Study ID	0020 0010	SV,UM,WC	R
	Study Instance UID	0020 000D	SV,UM,WC	U
	Referring Physician Name	0008 0090		O
	Study Description	0008 1030		O
	Patient's Birth Date	0010 0030	SV,UM,DR	O
Series	Patient's Birth Time	0010 0032	SV,UM,TR	O
	Patient's Sex	0010 0040	SV,UM	O
	Patient's Age	0010 1010		O
	Patient's Size	0010 1020		O
	Patient's Weight	0010 1030		O
	Series Date	0008 0021	SV,UM,DR	O
	Series Time	0008 0031	SV,UM,TR	O
	Modality	0008 0060	SV,UM,WC	R
	Body Part Examined	0018 0015		O
	Series Number	0020 0011	SV,UM	R
Image	Series Instance UID	0020 000E	SV,UM,WC	U
	Instance Creation Date	0008 0012		O
	Instance Creation Time	0008 0013		O
	SOP Instance UID	0008 0018	SV,UM,WC	U
	SOP Class UID	0008 0016	SV,UM,WC	O
	Image Number	0020 0013	SV,UM	R
	Overlay Number	0020 0022		O
	Curve Number	0020 0024		O
	LUT Number	0020 0026		O
	Samples Per Pixel	0028 0002		O
	Rows	0028 0010		O

Level	Description	Tag	Matching method	Type
	Columns	0028 0011		O
	Bits Allocated	0028 0100		O
	Bits Stored	0028 0101		O
	Pixel Representation	0028 0103		O

In response to a C-FIND request, iQ-WEB returns the following C-FIND-RSP status codes:

Status code	Status	Description
0000H	Success	Operation performed properly
A700H	Refused	Out of Resources
A900H	Error	Identifier does not match SOP Class
C000H	Error	Unable to Process
FE00H	Cancel	Sub-operations terminated due to Cancel Indication
FF00H	Pending	Sub-operations are continuing

iQ-WEB returns the following status codes in response to a C-MOVE request:

Status code	Status	Description
0000H	Success	Operation performed properly
A701H	Refused	Out of Resources – Unable to calculate number of matches
A702H	Refused	Out of Resources – Unable to perform sub-operations
A801H	Refused	Move destination unknown
A900H	Error	Identifier does not match SOP Class
B000H	Warning	Sub-operations Complete – One or more Failures
C000H	Error	Unable to Process
FE00H	Cancel	Sub-operations terminated due to Cancel Indication
FF00H	Pending	Sub-operations are continuing

4.2.1.4.4 Modality worklist management

4.2.1.4.4.1 Description and sequencing of activities

iQ-WEB accepts associations from applications that wish to perform Worklist Query (Worklist-FIND) operations on worklist items that have been previously received and stored in the MySQL database.

4.2.1.4.4.2 Accepted presentation contexts

The table below shows the presentation contexts that are accepted by iQ-WEB for Modality Worklist - FIND requests.

Abstract Syntax		Transfer Syntax		Role	Extended Negoti-ation
Name	UID	Name List	UID List		
Modality Worklist Info Model – FIND	1.2.840.10008.5.1.4.31	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None

4.2.1.4.4.3 SOP specific conformance for SOP class(es)

The table below contains the key matching methods supported by iQ-WEB when servicing Modality Worklist-FIND requests from remote Worklist SCU applications:

Key matching methods	Description	Supported by iQ-WEB
SV	Single Value Matching	Yes
UM	Universal Matching	Yes
WC	Wild-Card Matching	Yes
DR	Date Range Matching	Yes

The table below indicates the keys accepted by the iQ-WEB for the Modality Worklist - FIND requests sent from remote Modality Worklist SCU applications.

Module	Description	Tag	Matching method	Type
Scheduled Procedure Step	Scheduled Procedure Step Sequence	0040 0100		1
	>Modality	0008 0060	UM,WC	1
	>Scheduled Station AE Title	0040 0001	UM,WC	1
	>Scheduled Procedure Step Start Date	0040 0002	SV,UM,DR	1
	>Scheduled Procedure Step Start Time	0040 0003	UM	1

Module	Description	Tag	Matching method	Type
Requested Procedure	Requested Procedure ID	0040 1001	UM,WC	1
	Requested Procedure Description	0032 1060		1C
	Study Instance UID	0020 000D		1
	Referenced Study Sequence	0008 1110		2
	>Referenced SOP Class UID	0008 1150		1C
	>Referenced SOP Instance UID	0008 1155		1C
Imaging Service Request	Accession Number	0008 0050	SV,UM,WC	2
	Referring Physician's Name	0008 0090	UM	2
	Requesting Physician's Name	0032 1032		2
Patient Identification	Patient's Name	0010 0010	SV,UM,WC	1
	Patient ID	0010 1020	SV,UM,WC	1
Patient Demographic	Patient's Birth Date	0010 1030	SV,UM,DR	2
	Patient's Sex	0010 1040	SV,UM	2

4.2.1.4.5   Storage commitment push model

4.2.1.4.5.1 Description and sequencing of activities

iQ-WEB stores images that are sent to it from an SCU. The request for storage commitment may then be transmitted to iQ-WEB with a list of references to one or more SOP instances. iQ-WEB will receive and respond to DIMSE N-ACTION of Request Storage Commitment for a set of referenced SOP instances.

4.2.1.4.5.2 Accepted presentation contexts

The table below shows the presentation contexts that are accepted by iQ-WEB for Storage Commitment Push Model requests.

Abstract Syntax		Transfer Syntax		Role	Extended Negoti- ation
Name	UID	Name List	UID List		
Storage Commitment Push Model	1.2.840.10008. 1.20.1	Implicit VR Little Endian	1.2.840.10008. 1.2	SCP	None

4.2.1.4.5.3 SOP specific conformance for SOP class(es)

iQ-WEB supports the following elements for this SOP class as an SCP:

Action Type Name	Action Type ID	Attribute Name	Tag
Request Storage Com-mitment	1	Transaction UID	(0008,1195)
		Referenced SOP Sequence	(0008,1199)
		>Referenced SOP Class UID	(0008,1150)
		>Referenced SOP Instance UID	(0008,1155)

4.3   Network interfaces

4.3.1 Physical network interface

The application is indifferent to the physical medium over which TCP/IP executes; which is dependent on the underlying operating system and hardware.

4.3.2 Additional protocols

No additional protocols are used.

4.3.3 IPv4 and IPv6 support

iQ-WEB provides DICOM V3.0 TCP/IP Network Communication Support as defined in Part 8 of the Standard.

iQ-WEB uses the TCP/IP stack from Microsoft Windows upon which it executes. It uses a subroutine library that is based on the Windows Socket API (Winsock 2.0) interface.

4.4   Configuration

iQ-WEB obtains configuration information from a database table which is stored in a relational database. In this implementation, the relational database is the open source MySQL database. Modifying the default configuration is done via the web interface.

4.4.1 AE title / presentation address mapping

4.4.1.1 Local AE titles

Application entity	Default AE title	Default TCP port
iQ-WEB	MyAeTitle	1234

4.4.1.2 Remote AE title / presentation address mapping

The MySQL database table 'applentity' is used to map between AE Titles and Presentation Addresses. The format of the table is as follows:

Field	Type	Null	Key	Default
title	varchar(16)	NO	Primary	N/A
hostname	varchar(64)	YES	N/A	NULL
ipaddr	varchar(64)	YES	N/A	NULL
port	int(11)	YES	N/A	NULL
allowaccess	tinyint(1)	YES	N/A	0
archivedir	varchar(255)	YES	N/A	NULL

5   Media interchange

iQ-WEB conforms to DICOM Media Storage Service File Format (PS 3.10) and the Media Storage Application Profiles (PS 3.11) for reading images on CD/DVD drive, as well as writing images to a local DICOM file format directory (DICOMDIR) which can be archived into CD-R/RW or DVD-R/RW/RAM/+R/+RW media later.

5.1   Implementation model

5.1.1 Media Storage application profiles

The following application profiles are supported by iQ-WEB:

Description	Identifier
General Purpose CD-R Interchange	STD-GEN-CD
General Purpose Interchange on DVD-RAM Media	STD-GEN-DVD-RAM

5.1.1.1   Functional definition of iQ-WEB

iQ-WEB supports the following storage SOP classes when importing from DICOM Media Storage format compliant CD/DVD drives, and exporting patients/studies stored in iQ-WEB database to local DICOM Media Storage formatted directories:

Storage SOP class name	Storage SOP class UID
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1
CT Image Storage	1.2.840.10008.5.1.4.1.1.2
Ultrasound Multi-frame Image Storage (retired)	1.2.840.10008.5.1.4.1.1.3
Ultrasound Multi-frame Image Storage	1.2.840.10008.5.1.4.1.1.3.1
MR Image Storage	1.2.840.10008.5.1.4.1.1.4
Nuclear Medicine Image Storage (retired)	1.2.840.10008.5.1.4.1.1.5
Ultrasound Image Storage (retired)	1.2.840.10008.5.1.4.1.1.6
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7
X-Ray Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.12.1
X-Ray Radiofluoroscopic Image Storage	1.2.840.10008.5.1.4.1.1.12.2
X-Ray Angiographic Bi-plane Image Storage (retired)	1.2.840.10008.5.1.4.1.1.12.3
X-Ray 3D Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.13.1.1
X-Ray 3D Craniofacial Image Storage	1.2.840.10008.5.1.4.1.1.13.1.2
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3
Digital X-ray Image Storage - For Presentation	1.2.840.10008.5.1.4.1.1.1.1

Storage SOP class name	Storage SOP class UID
Digital X-ray Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.1.1.1
Digital Mammography X-ray Image Storage - For Presentation	1.2.840.10008.5.1.4.1.1.1.2
Digital Mammography X-ray Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.1.2.1
Nuclear Medicine Image Storage	1.2.840.10008.5.1.4.1.1.20
Positron Emission Tomography (PET) Image Storage	1.2.840.10008.5.1.4.1.1.128
RT Image Storage	1.2.840.10008.5.1.4.1.1.481.1
RT Dose Storage	1.2.840.10008.5.1.4.1.1.481.2
RT Structure Set Storage	1.2.840.10008.5.1.4.1.1.481.3
RT Plan Storage	1.2.840.10008.5.1.4.1.1.481.5
VL Endoscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.1
VL Microscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.2
VL Slide-Coordinates Microscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.3
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4
Video Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4.1
Ophthalmic Photography 8 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.1
Ophthalmic Photography 16 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.2
Ophthalmic Tomography Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.4
Enhanced CT Image Storage	1.2.840.10008.5.1.4.1.1.2.1
Enhanced MR Image Storage	1.2.840.10008.5.1.4.1.1.4.1
MR Spectroscopy Storage	1.2.840.10008.5.1.4.1.1.4.2
Enhanced MR Color Image Storage	1.2.840.10008.5.1.4.1.1.4.3
Raw Data Storage	1.2.840.10008.5.1.4.1.1.66
Surface Segmentation Storage	1.2.840.10008.5.1.4.1.1.66.5
Real World Value Mapping Storage	1.2.840.10008.5.1.4.1.1.67
Grayscale Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.1
Color Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.2
Pseudo-Color Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.3
Blending Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.4
XA/XRF Grayscale Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.5
Video Endoscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.1.1
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1
Basic Text Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.11
Enhanced Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.22

Storage SOP class name	Storage SOP class UID
Comprehensive Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.33
X-Ray Radiation Dose Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.67
VL Whole Slide Microscopy Image Storage	1.2.840.10008.5.1.4.1.1.77.1.6
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3
Key Object Selection Document	1.2.840.10008.5.1.4.1.1.88.59

When importing or exporting images of the storage SOP classes listed in the table above, iQ-WEB requires or uses the following mandatory Selection Keys/Attributes defined in DICOM PS 3.10 and PS 3.3:

Directory record type	Selection key name	Tag
Patient	Patient Name	(0010,0010)
	Patient ID	(0010,0020)
Study	Study UID	(0020,000D)
	Study ID	(0020,0010)
Series	Modality	(0008,0060)
	Series Number	(0020,0011)
Image	Referenced File ID	(0004,1500)
	Referenced SOP Class UID in File	(0004,1510)
	Referenced SOP Instance UID in File	(0004,1511)
	Referenced Transfer Syntax UID in File	(0004,1512)
	Image Number	(0020,0013)
SR Document	Instance Number	(0020,0013)
	Completion Flag	(0040,A491)
	Verification Flag	(0040,A493)
	Content Date	(0008,0023)
	Content Time	(0008,0033)
	Verification DateTime	(0040,A030)
	Concept Name Code Sequence	(0040,A043)

5.1.2 Sequencing of real world activities

Not applicable.

5.1.3 File meta information for implementation class and version

5.1.3.1   Reading images from CD/DVD drives

When reading images from CD/DVD media drives, iQ-WEB will play the role of File Set Reader (FSR). From the iQ-WEB web user interface, users can import external images stored in CD/DVD media drives by visiting the Tools page from the Main Menu Bar, from which users can select the Import option by entering:

- Both the CD/DVD media drive and the destination storage directory where the images will be imported and raw image files on the media drive will be copied to the destination directory.
- Or a source DICOM storage format compatible directory with or without DICOMDIR directory record, from which the images will be imported into iQ-WEB database but the raw image files are not copied, as the iQ-WEB database records will be linked directly to the source directory.

5.1.3.2   Writing images to local directory

When writing images to a local directory using DICOM Media Storage compliant directory formats (DICOMDIR directory record), iQ-WEB plays the role of the File Set Creator (FSC).

From the iQ-WEB web user interface, users can export patients/studies stored in the iQ-WEB database to a local directory using the DICOM Media Storage formats, by visiting the Tools page from the Main Menu Bar (see the "iQ-WEB Instructions for Use" section "Export"), from which users can select a list of one or more patients/studies, enter a media label for the export, and enter a destination directory to export to. Users will also select the export media types which can be CD (650 MB), DVD (4.7 GB), Double-Layer DVD (8.5 GB) or Unlimited (single volume). In case the total size of the selected patients/studies exceeds the storage limit for the selected media type, multiple volumes will be created with the volume number automatically appended to the specified media label.

6 Transformation of DICOM to CDA

Not applicable.

7   Support of character sets

iQ-WEB currently does not support any extended character sets.

Anyway, iQ-WEB accepts and stores any DICOM data including its characters set in its binary form, without being able to display them correctly in every case. Request for data in a specific character set will be ignored and their results will always be delivered in the original character set of the data.

8　Security

8.1　Security profiles

None supported.

8.2　Association level security

None supported.

8.3　Application level security

None supported.

9 Annexes

9.1 IOD contents

9.1.1 Created SOP instance(s)

iQ-WEB does not create SOP instances.

9.1.2 Usage of attributes from received IODs

No SOP class specific fields for images are required.

The database and remote queries make use of the conventional identification attributes to distinguish patients, studies, series and instances.

9.1.3 Attribute mapping

Not applicable.

9.1.4 Coerced / modified fields

Not applicable.

9.2 Data dictionary of private attributes

No private attributes are defined.

9.3 Coded terminology and templates

None supported.

9.4 Grayscale image consistency

None supported.

9.5 Standard extended / specialized / private SOP classes

None.

9.6 Private transfer syntaxes

None.