

DICOM Conformance Statement

DICOM Gateway R1.1



Issued by:

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1. DICOM Conformance Statement Overview

Table 1: Network Services

SOP Class		User of Service (SCU)	Provider of Service (SCP)
Name	UID		
Query Retrieve			
Study Root QR Information Model - FIND SOP Class	1.2.840.10008.5.1.4.1.2.2.1	Yes	No
Study Root QR Information Model - MOVE SOP Class	1.2.840.10008.5.1.4.1.2.2.2	Yes	No
Transfer			
CT Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.2	No	Yes
Enhanced CT Image Storage	1.2.840.10008.5.1.4.1.1.2.1	No	Yes
Ultrasound Multi-frame Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.3.1	No	Yes
MR Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4	No	Yes
Ultrasound Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.6.1	No	Yes
Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7	No	Yes
Nuclear Medicine Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.20	No	Yes
Computed Radiography Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.1	No	Yes
Digital X-Ray Image Storage - For Pres. SOP	1.2.840.10008.5.1.4.1.1.1.1	No	Yes
Digital X-Ray Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.1.1.1	No	Yes
Digital Mammography X-Ray Image Storage - Pres. SOP	1.2.840.10008.5.1.4.1.1.1.2	No	Yes
Digital Mammography X-Ray Image Storage – For Processing	1.2.840.10008.5.1.4.1.1.1.2.1	No	Yes
12-Lead ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.1	No	Yes
General ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.2	No	Yes
Ambulatory ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.3	No	Yes
Multi-frame Single Bit Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.1	No	Yes
Multi-frame Grayscale Byte SC Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.2	No	Yes
Multi-frame Grayscale Word SC Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.3	No	Yes
Multi-frame True Color Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7.4	No	Yes
Grayscale Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.1	No	Yes
X-Ray Angiographic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.12.1	No	Yes
X-Ray Radiofluoroscopic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.12.2	No	Yes
X-Ray 3D Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.13.1.1	No	Yes
Enhanced XA Image Storage	1.2.840.10008.5.1.4.1.1.12.1.1	No	Yes
Enhanced XRF Image Storage	1.2.840.10008.5.1.4.1.1.12.2.1	No	Yes
Enhanced MR Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4.1	No	Yes
MR Spectroscopy Storage SOP Class	1.2.840.10008.5.1.4.1.1.4.2	No	Yes
Raw Data Storage SOP Class	1.2.840.10008.5.1.4.1.1.66	No	Yes
Spatial Registration Storage	1.2.840.10008.5.1.4.1.1.66.1	No	Yes
Enhanced SR SOP Class	1.2.840.10008.5.1.4.1.1.88.22	No	Yes

SOP Class		User of Service (SCU)	Provider of Service (SCP)
Name	UID		
Hemodynamic Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.2.1	No	Yes
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	No	Yes
Ophthalmic Photography 8 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.1	No	Yes
Ophthalmic Photography 16 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.2	No	Yes
Keratometry Measurements Storage	1.2.840.10008.5.1.4.1.1.78.3	No	Yes
Ophthalmic Axial Measurements Storage	1.2.840.10008.5.1.4.1.1.78.7	No	Yes
Intraocular Lens Calculations Storage	1.2.840.10008.5.1.4.1.1.78.8	No	Yes
Basic Text SR SOP Class	1.2.840.10008.5.1.4.1.1.88.11	No	Yes
Comprehensive SR SOP Class	1.2.840.10008.5.1.4.1.1.88.33	No	Yes
Key Object Selection Document	1.2.840.10008.5.1.4.1.1.88.59	No	Yes
Chest CAD SR	1.2.840.10008.5.1.4.1.1.88.65	No	Yes
X-Ray Radiation Dose SR	1.2.840.10008.5.1.4.1.1.88.67	No	Yes
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1	No	Yes
Positron Emission Tomography Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.128	No	Yes
RT Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.1	No	Yes
RT Dose Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.2	No	Yes
RT Structure Set Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.3	No	Yes
RT Beams Treatment Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.4	No	Yes
RT Plan Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.5	No	Yes
RT Brachy Treatment Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.6	No	Yes
RT Treatment Summary Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.7	No	Yes
RT Ion Plan Storage	1.2.840.10008.5.1.4.1.1.481.8	No	Yes
Philips Private Grayscale Softcopy Presentation State Storage	1.3.46.670589.2.2.1.1	No	Yes
Philips Private X-Ray Image Storage	1.3.46.670589.2.3.1.1	No	Yes
Philips Private Xray MF Image	1.3.46.670589.7.8.1618510091	No	Yes
Philips Private Stent Boost WorkItem	1.3.46.670589.7.8.16185100912	No	Yes
Philips Private Live Run WorkItems	1.3.46.670589.7.8.1618510092	No	Yes
Philips Private Run WorkItems	1.3.46.670589.7.8.16185100129	No	Yes
Philips Private Reco WorkItems	1.3.46.670589.7.8.16185100130	No	Yes
Philips Private Three DCA WorkItem	1.3.46.670589.7.8.16185100913	No	Yes
Embedded Document	1.3.46.670589.2.8.1.1	No	Yes

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3. Introduction

As per the Health Suite Reference Architecture given below, DICOM Gateway is a critical component that connects the On-premise devices to the Cloud.

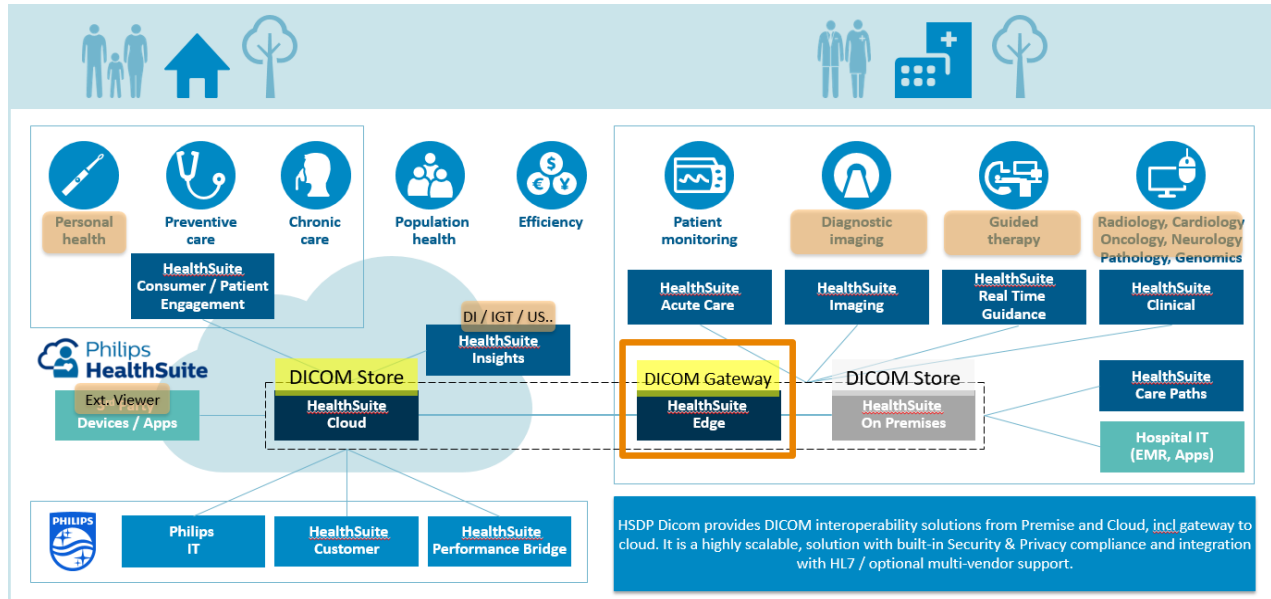


Figure 1: DICOM Gateway Release Workflow

The HSDP Cloud DICOM Gateway provides means for customers to store DICOM data on Cloud using the DICOM REST interfaces. However, most of the devices, scanners and workstations in Hospitals do not understand the DICOM REST interface and hence cannot store data directly to DICOM Gateway.

DICOM Gateway solves this problem by being a bridge between the On-Premise legacy systems that only communicate over Classic DICOM (using TCP/IP) and DICOM Gateway.

It provides means to ingest DICOM data from existing Philips and third-party Devices and Workstations on-premises via the classic DICOM C-Store interface. DICOM Gateways also provides retrieval of DICOM data from the Cloud DICOM Gateway to existing Philips and third-party Devices and Workstations via the classic DICOM C-Move interface.

The key features of DICOM Gateway

- Network tolerant upload with caching to handle intermittent connectivity
- Low footprint & containerized deployment
- DICOM interoperability
- Security and Privacy compliant
- ATNA Complaint auditing

3.1 Revision History

Table 2: Revision History

Document Version	Date of Issue	Description of change
01	29-Mar-2021	First Release for DICOM Gateway R1.1

3.2 Audience

This Conformance Statement is intended for:

- (Potential) customers
- System integrators of medical equipment
- Marketing staff interested in system functionality
- Software designers implementing DICOM interfaces

It is assumed that the reader is familiar with the DICOM standard.

3.3 Remarks

The DICOM Conformance Statement is contained in chapter 4 through 7 and follows the contents and structuring requirements of DICOM PS 3.2.

This DICOM Conformance Statement by itself does not guarantee successful interoperability of Philips equipment with non-Philips equipment. The user (or user's agent) should be aware of the following issues:

- **Interoperability**
Interoperability refers to the ability of application functions, distributed over two or more systems, to work successfully together. The integration of medical devices into an IT environment may require application functions that are not specified within the scope of DICOM. Consequently, using only the information provided by this Conformance Statement does not guarantee interoperability of Philips equipment with non-Philips equipment.
It is the user's responsibility to analyze thoroughly the application requirements and to specify a solution that integrates Philips equipment with non-Philips equipment.
- **Validation**
Philips equipment has been carefully tested to assure that the actual implementation of the DICOM interface corresponds with this Conformance Statement.
Where Philips equipment is linked to non-Philips equipment, the first step is to compare the relevant Conformance Statements. If the Conformance Statements indicate that successful information exchange should be possible, additional validation tests will be necessary to ensure the functionality, performance, accuracy and stability of image and image related data. It is the responsibility of the user (or user's agent) to specify the appropriate test suite and to carry out the additional validation tests.
- **New versions of the DICOM Standard**
The DICOM Standard will evolve in future to meet the user's growing requirements and to incorporate new features and technologies. Philips is actively involved in this evolution and plans to adapt its equipment to future versions of the DICOM Standard. In order to do so, Philips reserves the right to make changes to its products or to discontinue its delivery. The user should ensure that any non-Philips provider linking to Philips equipment also adapts to future versions of the DICOM Standard. If not, the incorporation of DICOM enhancements into Philips equipment may lead to loss of connectivity (in case of networking) and incompatibility (in case of media).

3.4 Definitions, Terms and Abbreviations

Table 3: Definitions, Terms and Abbreviations

Abbreviation/Term	Explanation
AE	Application Entity
ANSI	American National Standard Institute
DICOM	Digital Imaging and Communications in Medicine
EBE	DICOM Explicit VR Big Endian
ELE	DICOM Explicit VR Little Endian
HIS	Hospital Information System
ILE	DICOM Implicit VR Little Endian
IOD	Information Object Definition
NEMA	National Electrical Manufacturers Association
NM	Nuclear Medicine
PDU	Protocol Data Unit
RF	X-Ray Radiofluoroscopic
RWA	Real-World Activity
SCP	Service Class Provider
SCU	Service Class User
SOP	Service Object Pair
TCP/IP	Transmission Control Protocol/Internet Protocol
UID	Unique Identifier

3.5 References

[DICOM] Digital Imaging and Communications in Medicine, Parts 1 - 22 (NEMA PS 3.1- PS 3.22),
National Electrical Manufacturers Association
1300 North 17th Street
Suite 900
Arlington, Virginia 22209
Internet: <https://www.dicomstandard.org/current>

Note that at any point in time the official standard consists of the most recent yearly edition of the base standard (currently 2021) plus all the supplements and correction items that have been approved as Final Text.

4. Networking

This section contains the networking related services (vs. the media related ones).

4.1 Implementation model

4.1.1 Application Data flow

The below overview diagram shows the general data flow of DICOM Data from the Gateway to the HSDP DICOM Gateway and other services.

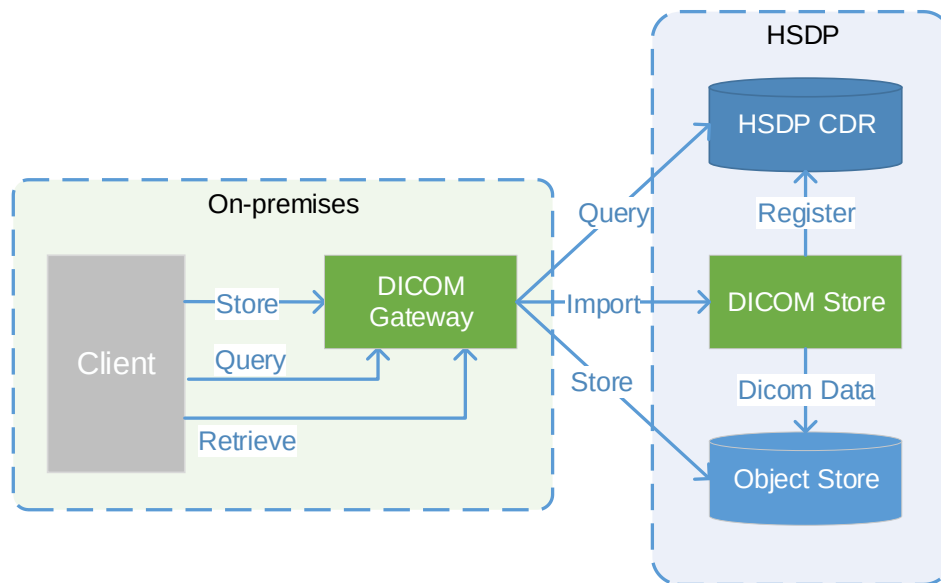


Figure 2: Data Flow Diagram 1

The connectivity with the client systems is established over secure HTTPS, extending the reach of the Cloud-hosted services as an extension of the hospital network

DICOM Gateway uses the following HSDP Services to do its operations

1. HSDP DICOM Store – The data is uploaded to and downloaded from DICOM Store
2. HSDP IAM – All communication with other HSDP services is authorized using IAM.
3. HSDP Log – All the service logs from DICOM Gateway services are drained to HSDP Log drainer.
4. HSDP S3 creds – The access to S3 is protected using S3 creds
5. HSDP Audit – All operations are audited using Audit service.
6. HSDP CDR – For Download capability CDR is accessed for the requested data

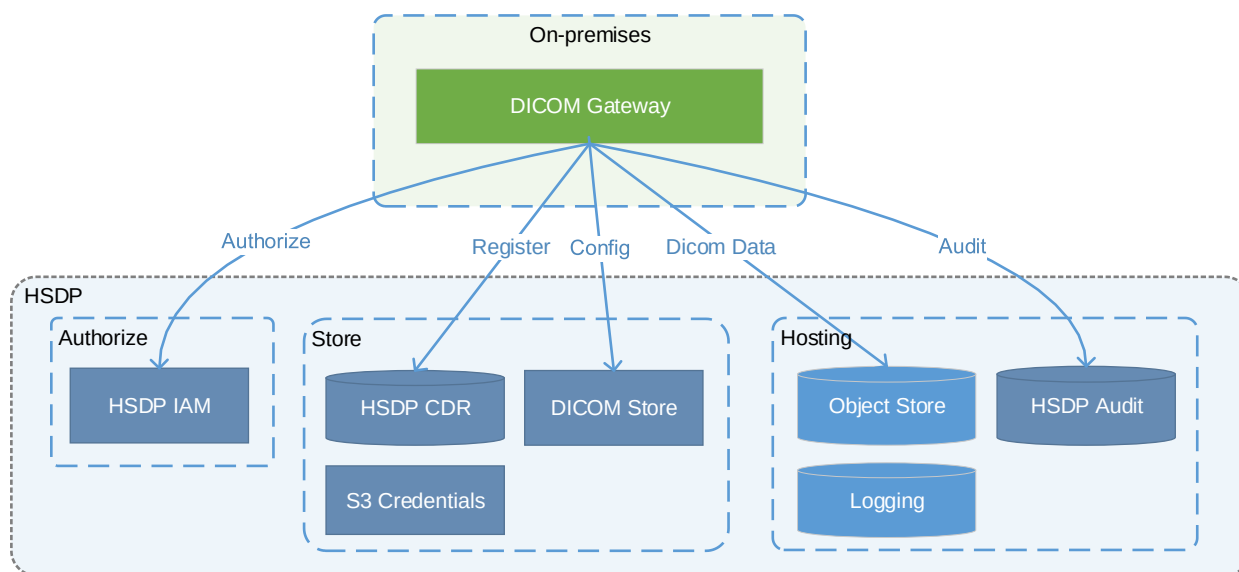


Figure 3 Data Flow Diagram 2

4.1.2 Functional Definition of AE

4.1.2.1 Functional Definition of Dicom Gateway AE

Dicom Gateway AE implements the following network transaction to achieve the following workflow.

- Image Import (Store as SCP)
- FIND as SCP
- MOVE as SCP
- Image Export (Store as SCU)

4.1.3 Sequencing of Real World Activities

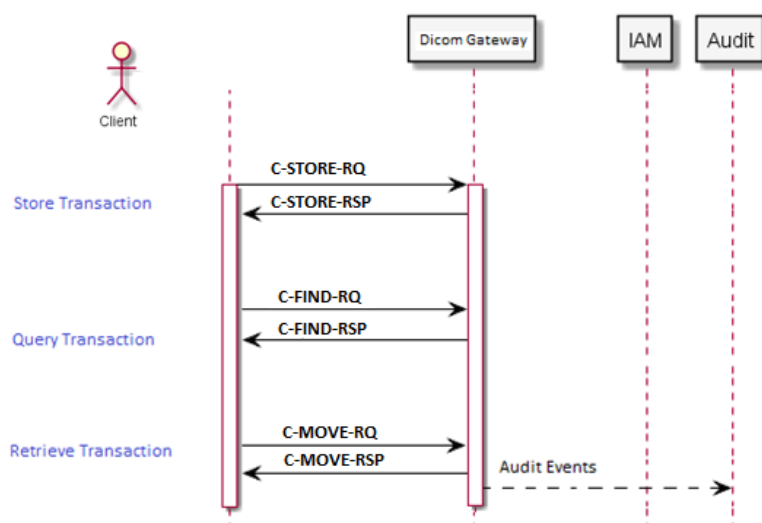


Figure 2 Sequencing of Real world activities

4.2 AE Specifications

The following table describes the common status code for all the transactions.

Table 4: Status Code Behaviour

Status	Code Status	Condition
Success	200 (Success)	Requested operation was processed without error.
Failure	401 (Unauthorized)	The OAuth access token used is not recognized.
	404 (Not found)	The target resource was not found
	406 (Not acceptable)	The Target Resource does not have a representation that would be acceptable to the user agent

4.2.1 HSDP DICOM Gateway AE

4.2.1.1 Association Policies

Each AE specification contains a description of the general association establishment and acceptance policies of the AE.

4.2.1.1.1 General

The DICOM standard application context is specified below.

Table 5: DICOM Application Context

Description	Value
Application Context Name	1.2.840.10008.3.1.1.1

4.2.1.1.2 Number of Associations

The number of simultaneous associations that an Application Entity may support as an Initiator or Acceptor is specified here.

Table 6: Number of associations as an Association Initiator for this AE

Description	Value
Maximum number of simultaneous associations	Configurable / limited by system resources

Table 7: Number of associations as an Association Acceptor for this AE

Description	Value
Maximum number of simultaneous associations	Configurable / limited by system resources

4.2.1.1.3 Asynchronous Nature

The DICOM Gateway supports asynchronous operations for storage commitment as SCU and will perform asynchronous window negotiation.

Table 8: Asynchronous nature as an Association Initiator for this AE

Description	Value
Maximum number of outstanding asynchronous transactions	1

4.2.1.1.4 Implementation Identifying Information

The value supplied for Implementation Class UID and version name are documented here.

- Implementation Class UID: 1.3.46.670589.54.2.21.4
- Implementation Version Name: 21.4.0.0

4.2.1.1.5 Communication Failure Handling

The behavior of the AE during communication failure is summarized in the next table.

Table 9: Communication Failure Behavior

Exception	Behavior
ARTIM Timeout	The association setup fails; the reason is logged and reported to the user.

4.2.1.2 Association Initiation Policy

The Application Entity will respond to a received Association rejection as shown in the next table.

Table 10: Association Rejection response

Result	Source	Reason/Diagnosis	Behavior
1 - rejected-permanent	1 - DICOM UL service-user	1 - no-reason-given	Association is not established. The following error is logged. Association rejected by peer 1: REJECT_RESULT_permanent, 1: REJECT_SOURCE_dul_user, 1: REJECT_REASON_no_reason_given
		2 - application-context-name-not supported	Association is not established. The following error is logged. Association rejected by peer 1: REJECT_RESULT_permanent, 1: REJECT_SOURCE_dul_user, 2: REJECT_REASON_application_context_not_support
		3 - calling-AE-title-not-recognized	Association is not established. The following error is logged. Association rejected by peer 1: REJECT_RESULT_permanent, 1: REJECT_SOURCE_dul_user, 3: REJECT_REASON_calling_aetitle_not_recognized
		7 - called-AE-title-not-recognized	Association is not established. The following error is logged. Association rejected by peer 1: REJECT_RESULT_permanent, 1: REJECT_SOURCE_dul_user, 7: REJECT_REASON_called_aetitle_not_recognized
	2 - DICOM UL service-provider (ACSE related function)	1 - no-reason-given	Association is not established. The following error is logged. Error: UserRecoverable: impl.dicom.access.PEER: Associationrejected by peer 1: REJECT_RESULT_permanent, 2: REJECT_SOURCE_dul_provider (acse), 1: REJECT_REASON_no_reason_given

Result	Source	Reason/Diagnosis	Behavior
		2 - protocol-version-not-supported	Association is not established. The following error is logged. Association rejected by peer 1: REJECT_RESULT_permanent, 2: REJECT_SOURCE_dul_provider (acse), 2: REJECT_REASON_application_context_not_support
	3 - DICOM UL service-provider (Presentation related function)	1 - temporary-congestion	Association is not established. The following error is logged. Association rejected by peer 1: REJECT_RESULT_permanent, 3: REJECT_SOURCE_dul_provider (presentation), 1: REJECT_REASON_no_reason_given
		2 - local-limit-exceeded	Association is not established. The following error is logged. Association rejected by peer 1: REJECT_RESULT_permanent, 3: REJECT_SOURCE_dul_provider (presentation), 2: REJECT_REASON_application_context_not_support
2 - rejected-transient	1 - DICOM UL service-user	1 - no-reason-given	Association is not established. The following error is logged. Association rejected by peer 2: REJECT_RESULT_transient, 1: REJECT_SOURCE_dul_user, 1: REJECT_REASON_no_reason_given
		2 - application-context-name-not-supported	Association is not established. The following error is logged. Association rejected by peer 2: REJECT_RESULT_transient, 1: REJECT_SOURCE_dul_user, 2: REJECT_REASON_application_context_not_support
		3 - calling-AE-title-not-recognized	Association is not established. The following error is logged. Association rejected by peer 2: REJECT_RESULT_transient, 1: REJECT_SOURCE_dul_user, 3: REJECT_REASON_calling_aetitle_not_recognized
		7 - called-AE-title-not-recognized	Association is not established. The following error is logged. Association rejected by peer 2: REJECT_RESULT_transient, 1: REJECT_SOURCE_dul_user, 7: REJECT_REASON_called_aetitle_not_recognized
	2 - DICOM UL service-provider (ACSE related function)	1 - no-reason-given	Association is not established. The following error is logged. Association rejected by peer 2: REJECT_RESULT_transient, 2: REJECT_SOURCE_dul_provider (acse), 1: REJECT_REASON_no_reason_given
		2 - protocol-version-not-supported	Association is not established. The following error is logged. Association rejected by peer 2: REJECT_RESULT_transient, 2: REJECT_SOURCE_dul_provider (acse), 2: REJECT_REASON_application_context_not_support
	3 - DICOM UL service-provider(Presentation related function)	1 - temporary-congestion	Association is not established. The following error is logged. Association rejected by peer 2: REJECT_RESULT_transient, 3: REJECT_SOURCE_dul_provider (presentation), 1: REJECT_REASON_no_reason_given

Result	Source	Reason/Diagnosis	Behavior
		2 - local-limit-exceeded	Association is not established. The following error is logged. Association rejected by peer 2: REJECT_RESULT_transient, 3: REJECT_SOURCE_dul_provider (presentation), 2: REJECT_REASON_application_context_not_support

The behavior of the AE on receiving an Association abort is summarized in the next table.

Table 11: Association Abort Handling

Source	Reason/Diagnosis	Behavior when received	Sent when
0 - DICOM UL service-user (initiated abort)	0- reason-not-specified	When received, the DICOM Gateway terminates the connection with the following log: Association ABORTED by peer 0: ABORT_SOURCE_dul_user, 0: ABORT_REASON_not_specified	- Abort is issued to an executing job that utilizes this network connection (ExportNetwork/ArchiveNetwork/DICOMCopy/DICOMMove) - Any other problem than ones specified for HSDP Clinical Platform (CPF) SCU in the rows below. (Examples: Problem while decoding the DICOM stream, SCU was unable to send the Response to SCP, Error writing to SCU stream).
2 - DICOM UL service-provider (initiated abort)	0 - reason-not-specified	When received, the HSDP Clinical Platform (CPF) terminates the connection with the following log: Association ABORTED by peer 2: ABORT_SOURCE_dul_provider, 0: ABORT_REASON_not_specified	- There are problems in SCU/SCP role negotiation. - Any other problem than ones specified for HSDP Clinical Platform (CPF) SCU in the rows below. (Example: Problem while decoding the DICOM stream).
	1 - unrecognized-PDU	When received, the HSDP Clinical Platform (CPF) terminates the connection with the following log: Association ABORTED by peer 2: ABORT_SOURCE_dul_provider, 1: ABORT_REASON_unrecognized_pdu.	An unrecognized PDU type is received ⁴ .
	2 - unexpected-PDU	When received, The DICOM Gateway terminates the connection with the following log: Association ABORTED by peer 2: ABORT_SOURCE_dul_provider, 2: ABORT_REASON_unexpected_pdu.	The received PDU type is not expected in the current state of connection ⁵ .
	4 - unrecognized-PDU-parameter	When received, The DICOM Gateway terminates the connection with the following log: Association ABORTED by peer 2: ABORT_SOURCE_dul_provider, 4: ABORT_REASON_unrecognized_pdu_parameter.	An unrecognized Associate PDU item is received ¹ .
	5 - unexpected-PDU-parameter	When received, The DICOM Gateway terminates the connection with the following log: Association ABORTED by peer 2: ABORT_SOURCE_dul_provider, 5: ABORT_REASON_unexpected_pdu_parameter.	- One of the Associate PDU items is received more than once². - One of the Associate PDU items is received unexpectedly².

Source	Reason/Diagnosis	Behavior when received	Sent when
	6 - invalid-PDU-parameter-value	When received, The DICOM Gateway terminates the connection with the following log: Association ABORTED by peer 2: ABORT_SOURCE_dul_provider, 6: ABORT_REASON_invalid_pdu_parameter.	• One of the Associate PDU items is received more than once³. • One of the Associate PDU items is not received³. • There is mismatch in the application context names between the SCU and the SCP. • Illegal Asynchronous Operations Window invoke value is received. • Illegal Asynchronous Operations Window perform value is received. • Unknown presentation context id is received. • Unknown abstract syntax is received. • The length or the format of a received PDU item is invalid.

Notes:

1. Associate PDU items that are recognized:

- 0x10 APPLICATION CONTEXT
- 0x20 PRESENTATION CONTEXT (RQ)
- 0x21 PRESENTATION CONTEXT (AC)
- 0x30 ABSTRACT SYNTAX
- 0x40 TRANSFER SYNTAX
- 0x50 USER INFO
- 0x51 MAXIMUM LENGTH
- 0x52 IMPLEMENTATION CLASS UID
- 0x54 SCP/SCU ROLE SELECTION
- 0x55 IMPLEMENTATION VERSION NAME

2. Associate PDU items for Unexpected-PDU parameter received more than once:

- 0x10 APPLICATION CONTEXT (SCU, SCP)
- 0x30 ABSTRACT SYNTAX (SCU, SCP)
- 0x40 TRANSFER SYNTAX (SCU)

Received unexpectedly:

- 0x20 PRESENTATION CONTEXT (RQ) (SCU)

3. Associate PDU items for Invalid-PDU parameter value:

Received more than once (SCU, SCP):

- 0x50 USER INFO
- 0x51 MAXIMUM LENGTH
- 0x52 IMPLEMENTATION CLASS UID
- 0x55 IMPLEMENTATION VERSION NAME

Received illegally:

- 0x21 PRESENTATION CONTEXT (AC) (SCP)

PDU items not received:

- 0x10 APPLICATION CONTEXT (SCU, SCP)
- 0x20 PRESENTATION CONTEXT (RQ) (SCP)
- 0x21 PRESENTATION CONTEXT (AC) (SCU)
- 0x50 USER INFO (SCU, SCP)
- 0x30 ABSTRACT SYNTAX (SCU)
- 0x40 TRANSFER SYNTAX (SCU)
- 0x51 MAXIMUM LENGTH (SCU, SCP)
- 0x52 IMPLEMENTATION CLASS UID (SCU)

4. PDU types that are recognized:

- 0x01 A-ASSOCIATE-RQ
- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ
- 0x04 P-DATA-TF
- 0x05 A-RELEASE-RQ
- 0x06 A-RELEASE-RP
- 0x07 A-ABORT

5. Expected PDU's for following states:

STATE_IDLE:

- 0x01 A-ASSOCIATE-RQ
- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ
- 0x05 A-RELEASE-RQ
- 0x06 A-RELEASE-RP

STATE_ASSOCIATED:

- 0x01 A-ASSOCIATE-RQ
- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ
- 0x06 A-RELEASE-RP

STATE_ASSOCIATING (SCU):

- 0x01 A-ASSOCIATE-RQ
- 0x04 P-DATA-TF
- 0x05 A-RELEASE-RQ
- 0x06 A-RELEASE-RP

STATE_RELEASING:

- 0x01 A-ASSOCIATE-RQ
- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ

STATE_WAIT_FOR_ASSOCIATE (SCP):

- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ
- 0x04 P-DATA-TF
- 0x05 A-RELEASE-RQ
- 0x06 A-RELEASE-RP
- 0x07 A-ABORT

STATE_WAIT_FOR_FINISH:

- 0x01 A-ASSOCIATE-RQ
- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ
- 0x04 P-DATA-TF
- 0x05 A-RELEASE-RQ
- 0x06 A-RELEASE-RP

STATE_WAIT_FOR_DISCONNECT:

- 0x01 A-ASSOCIATE-RQ
- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ

STATE_TIMED_OUT:

- 0x01 A-ASSOCIATE-RQ
- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ
- 0x04 P-DATA-TF
- 0x05 A-RELEASE-RQ
- 0x06 A-RELEASE-RP
- 0x07 A-ABORT

Table 12: DICOM Command Communication Failure Behavior

Exception	Behavior
Reply Time-out	The association is aborted using A-ABORT and command marked as failed. The reason is logged and reported to the user.

4.2.1.2.1 (Real-World) Activity – Image Export

4.2.1.2.1.1 Description and Sequencing of Activities

The DICOM Gateway initiates associations from configured systems that wish to store images in the DICOM Gateway database using the C-STORE command.

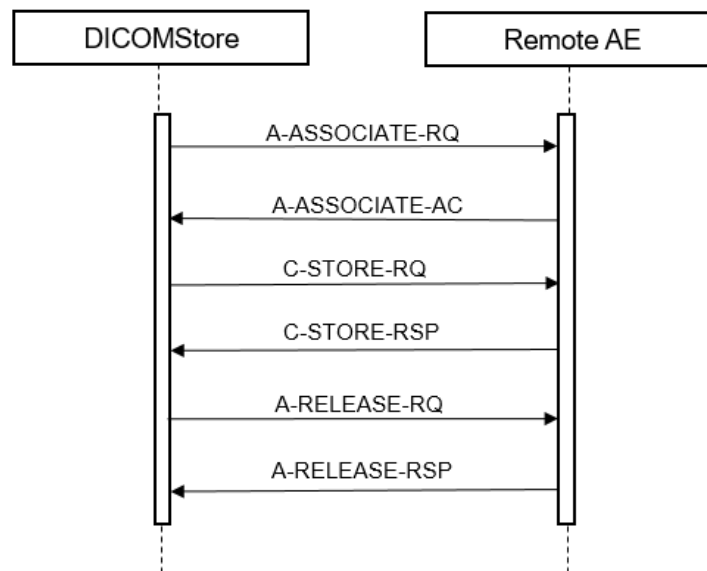


Figure 14: Data Flow Diagram – Image Export

4.2.1.2.1.2 Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 27: Acceptable Presentation Contexts for (Real-World) Activity – Image Export

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Computed Radiography Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Digital X-Ray Image Storage - For Pres. SOP	1.2.840.10008.5.1.4.1.1.1.1	JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70	SCU	None
		RLE Lossless	1.2.840.10008.1.2.5		
		Implicit VR Little Endian	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		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Digital X-Ray Image Storage - For Proc. SOP	1.2.840.10008.5.1.4.1.1.1.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Digital Mammography X-Ray Image Storage - Pres. SOP	1.2.840.10008.5.1.4.1.1.1.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Digital Mammography X-Ray Image Storage - Proc. SOP	1.2.840.10008.5.1.4.1.1.1.2.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Grayscale Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
X-Ray Angiographic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.12.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Enhanced XA Image Storage	1.2.840.10008.5.1.4.1.1.12.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
X-Ray Radiofluoroscopic	1.2.840.10008.5.1.4.1.1.12.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Image Storage SOP Class		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Enhanced XRF Image Storage	1.2.840.10008.5.1.4.1.1.12.2.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Positron Emission Tomography Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.128	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
X-Ray 3D Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.13.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
CT Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Enhanced CT Image Storage	1.2.840.10008.5.1.4.1.1.2.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Nuclear Medicine Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.20	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Ultrasound Multi-frame Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.3.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
MR Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Enhanced MR Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
MR Spectroscopy Storage SOP Class	1.2.840.10008.5.1.4.1.1.4.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
RT Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
RT Dose Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
RT Structure Set Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.3	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
RT Beams Treatment Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.4	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
RT Plan Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.5	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
RT Brachy Treatment Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.6	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
RT Treatment Summary Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.7	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Ultrasound Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.6.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Raw Data Storage SOP Class	1.2.840.10008.5.1.4.1.1.66	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Spatial Registration Storage	1.2.840.10008.5.1.4.1.1.66.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
X-Ray Radiation Dose SR	1.2.840.10008.5.1.4.1.1.88.67	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Multi-frame Single Bit Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
	1.2.840.10008.5.1.4.1.1.7.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Multi-frame Grayscale Byte SC Image Storage SOP Class		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Multi-frame Grayscale Word SC Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.3	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Multi-frame True Color Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7.4	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Basic Text SR SOP Class	1.2.840.10008.5.1.4.1.1.88.11	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Enhanced SR SOP Class	1.2.840.10008.5.1.4.1.1.88.22	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Comprehensive SR SOP Class	1.2.840.10008.5.1.4.1.1.88.33	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
	1.2.840.10008.5.1.4.1.1.88.59	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Key Object Selection Document		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Chest CAD SR	1.2.840.10008.5.1.4.1.1.88.65	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
12-Lead ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
General ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Ambulatory ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.3	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Hemodynamic Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.2.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Ophthalmic Photography 8 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
	1.2.840.10008.5.1.4.1.1.77.1.5.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Ophthalmic Photography 16 Bit Image Storage		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Keratometry Measurements Storage	1.2.840.10008.5.1.4.1.1.78.3	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Ophthalmic Axial Measurements Storage	1.2.840.10008.5.1.4.1.1.78.7	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Intraocular Lens Calculations Storage	1.2.840.10008.5.1.4.1.1.78.8	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
	1.2.840.10008.5.1.4.1.1.481.8	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
RT Ion Plan Storage		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Philips Private Grayscale Softcopy Presentation State Storage	1.3.46.670589.2.2.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Philips Private X-Ray Image Storage	1.3.46.670589.2.3.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Philips Private Xray MF Image	1.3.46.670589.7.8.1618510091	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
	1.3.46.670589.7.8.16185100912	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Philips Private Stent Boost WorkItem		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Philips Private Live Run WorkItems	1.3.46.670589.7.8.1618510092	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Philips Private Run WorkItems	1.3.46.670589.7.8.16185100129	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Philips Private Reco WorkItems	1.3.46.670589.7.8.16185100130	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
	1.3.46.670589.7.8.16185100913	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Philips Private Three DCA WorkItem		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Embedded Document	1.3.46.670589.2.8.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		

4.2.1.2.1.3 SOP Specific Conformance for Storage SOP Classes

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

4.2.1.2.1.3.1 Dataset Specific Conformance for C-STORE-RSP

Detail regarding the Dataset Specific response behavior will be reported in this section.

This includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

Table 13: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Successful stored	Progress of the export job is updated and connection is retained for the next store. If the store of all the SOP instances is completed then the connection is released.
Failure	A7xx	Refused: Out of Resources	Error is logged and the export job fails. Connection is released.
	A9xx	Error: Data Set does not match SOP Class	Error is logged and the export job fails. Connection is released.
	Cxxx	Error: cannot understand	Error is logged and the export job fails. Connection is released.
Warning	B000	Coercion of Data Elements	Warning is logged and the export job continues. Connection is not released.
	B007	Data Set does not match SOP Class	Warning is logged and the export job continues. Connection is not released.

Service Status	Error Code	Further Meaning	Behavior
	B006	Elements Discarded	Warning is logged and the export job continues. Connection is not released.

4.2.1.3 Association Acceptance Policy

The Application Entity may reject association attempts as shown in the below table.

Table 14: Association Rejection response

Result	Source	Reason/Diagnosis	Behavior
1 - rejected permanent	1 - DICOM UL service-user	1 - no-reason-given	Association is not established due to any problem other than that specified for HSDP Clinical Platform (CPF) SCP in the rows below. (Example: Problem while decoding the DICOM stream).
		2 - application-context-name-not-supported	An application context name other than 1.2.840.10008.3.1.1.1 is requested by the SCU during association.
		3 - calling-AE-title-not-recognized	The configuration does not contain a repository having the Calling AE Title as per the association request; There is a problem in configuration (related to composing the configuration from the SCU and the SCP configuration).
		7 - called-AE-title-not-recognized	The called AE Title in the association request does not match the AE Title as per the configuration.
	2 - DICOM UL service provider (ACSE related function)	1 - no-reason-given	Not used.
		2 - protocol-version-not-supported	Not used.
	3 - DICOM UL service provider (Presentation related function)	1 - temporary-congestion	Not used.
		2 - local-limit-exceeded	Not used.
2 - rejected-transient	1 - DICOM UL service-user	1 - no-reason-given	Not used.
		2 - application-context-name-not-supported	Not used.
		3 - calling-AE-title-not-recognized	Not used.
		7 - called-AE-title-not-recognized	Not used.
	2 - DICOM UL service provider (ACSE related function)	1 - no-reason-given	Maximum number of associations is exceeded and an association request is received.
		2 - protocol-version-not-supported	Not used.
	3 - DICOM UL service provider (Presentation related function)	1 - temporary-congestion	Not used.
		2 - local-limit-exceeded	Not used.

The behavior of the AE on DICOM receiving an Association abort is summarized in the next table.

Table 15: Association Abort Policies

Source	Reason/Diagnosis	Behavior when received	Sent when
0 - DICOM UL service-user (initiated abort)	0 - reason-not-specified	When received, The Dataserver Subsystem terminates the connection with the following log: Association ABORTED by peer 0: ABORT_SOURCE_dul_user, 0: ABORT_REASON_not_specified).	Association times out due to inactivity; Any other problem than ones specified for HSDP Clinical Platform (CPF) SCP in the rows below. (Examples: Problem while decoding the DICOM stream, Invalid request, Echo/Find/Move/N-Action SCP was unable to send the Response to SCU, Error writing to SCU stream).
2 - DICOM UL service-provider (initiated abort)	0 - reason-not-specified	When received, The Dataserver Subsystem terminates the connection with the following log: Association ABORTED by peer 2: ABORT_SOURCE_dul_provider, 0: ABORT_REASON_not_specified	Import fails (Import SCP Performer returns fail status)
	1 - unrecognized-PDU	When received, The Dataserver Subsystem terminates the connection with the following log: Association ABORTED by peer 2: ABORT_SOURCE_dul_provider, 1: ABORT_REASON_unrecognized_pdu	An unrecognized PDU type is received ⁴ .
	2 - unexpected-PDU	When received, The Dataserver Subsystem terminates the connection with the following log: Association ABORTED by peer 2: ABORT_SOURCE_dul_provider, 2: ABORT_REASON_unexpected_pdu	The received PDU type is not expected in the current state of connection ⁵ .
	4 - unrecognized-PDU parameter	When received, The Dataserver Subsystem terminates the connection with the following log: Association ABORTED by peer 2: ABORT_SOURCE_dul_provider, 4: ABORT_REASON_unrecognized_pdu_parameter	An unrecognized Associate PDU item is received ¹ .
	5 - unexpected-PDU parameter	When received, The Dataserver Subsystem terminates the connection with the following log: Association ABORTED by peer 2: ABORT_SOURCE_dul_provider, 5: ABORT_REASON_unexpected_pdu_parameter	One of the Associate PDU items is received more than once ² ; One of the Associate PDU items is received unexpectedly ² .
	6 - invalid-PDU-parameter value	When received, The Dataserver Subsystem terminates the connection with the following log: Association ABORTED by peer 2: ABORT_SOURCE_dul_provider, 6: ABORT_REASON_invalid_pdu_parameter	One of the Associate PDU items is received more than once ³ ; One of the Associate PDU items is not received ³ ; Empty Called AE Title String (space-only) is received; Empty Calling AE Title String (space-only) is received; Unknown abstract syntax is received; The length or the format of the received PDU item is invalid.

Notes:

- Associate PDU items that are recognized:
 - 0x10 APPLICATION CONTEXT
 - 0x20 PRESENTATION CONTEXT (RQ)

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- 0x21 PRESENTATION CONTEXT (AC)
- 0x30 ABSTRACT SYNTAX
- 0x40 TRANSFER SYNTAX
- 0x50 USER INFO
- 0x51 MAXIMUM LENGTH
- 0x52 IMPLEMENTATION CLASS UID
- 0x54 SCP/SCU ROLE SELECTION
- 0x55 IMPLEMENTATION VERSION NAME

2. Associate PDU items for Unexpected-PDU parameterReceived more than once:

- 0x10 APPLICATION CONTEXT (SCU, SCP)
- 0x30 ABSTRACT SYNTAX (SCU, SCP)
- 0x40 TRANSFER SYNTAX (SCU)

Received unexpectedly:

- 0x20 PRESENTATION CONTEXT (RQ) (SCU)

3. Associate PDU items for Invalid-PDU parameter value:

Received more than once (SCU, SCP):

- 0x50 USER INFO
- 0x51 MAXIMUM LENGTH
- 0x52 IMPLEMENTATION CLASS UID
- 0x55 IMPLEMENTATION VERSION NAME

Received illegally:

- 0x21 PRESENTATION CONTEXT (AC) (SCP)

PDU items not received:

- 0x10 APPLICATION CONTEXT (SCU, SCP)
- 0x20 PRESENTATION CONTEXT (RQ) (SCP)
- 0x21 PRESENTATION CONTEXT (AC) (SCU)
- 0x50 USER INFO (SCU, SCP)
- 0x30 ABSTRACT SYNTAX (SCU)
- 0x40 TRANSFER SYNTAX (SCU)
- 0x51 MAXIMUM LENGTH (SCU, SCP)
- 0x52 IMPLEMENTATION CLASS UID (SCU)

4. PDU types that are recognized:

- 0x01 A-ASSOCIATE-RQ
- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ
- 0x04 P-DATA-TF
- 0x05 A-RELEASE-RQ
- 0x06 A-RELEASE-RP
- 0x07 A-ABORT

5. Expected PDU's for following states:

STATE_IDLE:

- 0x01 A-ASSOCIATE-RQ
- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ
- 0x05 A-RELEASE-RQ
- 0x06 A-RELEASE-RP

STATE_ASSOCIATED:

- 0x01 A-ASSOCIATE-RQ
- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ
- 0x06 A-RELEASE-RP

STATE_ASSOCIATING (SCU):

- 0x01 A-ASSOCIATE-RQ
- 0x04 P-DATA-TF
- 0x05 A-RELEASE-RQ
- 0x06 A-RELEASE-RP

STATE_RELEASING:

- 0x01 A-ASSOCIATE-RQ
- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ

STATE_WAIT_FOR_ASSOCIATE (SCP):

- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ
- 0x04 P-DATA-TF
- 0x05 A-RELEASE-RQ
- 0x06 A-RELEASE-RP
- 0x07 A-ABORT

STATE_WAIT_FOR_FINISH:

- 0x01 A-ASSOCIATE-RQ
- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ
- 0x04 P-DATA-TF
- 0x05 A-RELEASE-RQ
- 0x06 A-RELEASE-RP

STATE_WAIT_FOR_DISCONNECT:

- 0x01 A-ASSOCIATE-RQ
- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ

STATE_TIMED_OUT:

- 0x01 A-ASSOCIATE-RQ
- 0x02 A-ASSOCIATE-AC
- 0x03 A-ASSOCIATE-RJ
- 0x04 P-DATA-TF
- 0x05 A-RELEASE-RQ
- 0x06 A-RELEASE-RP
- 0x07 A-ABORT

Table 39: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Confirmation	Confirm the verification request.

4.2.1.3.1 (Real-World) Activity – Image Import

4.2.1.3.1.1 Description and Sequencing of Activities

The DICOM Gateway accepts associations from configured systems that wish to store images in the DICOM Gateway database using the C-STORE command.

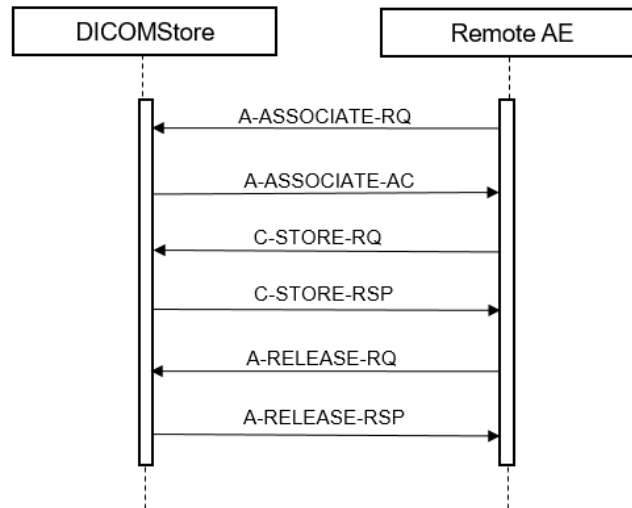


Figure 14: Data Flow Diagram – Image Import

4.2.1.3.1.2 Accepted Presentation Contexts

The presentation contexts are defined in the next table.

Table 16: Acceptable Presentation Contexts for (Real-World) Activity – Image Import

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Computed Radiography Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Digital X-Ray Image Storage - For Pres. SOP	1.2.840.10008.5.1.4.1.1.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Digital X-Ray Image Storage - For Proc. SOP	1.2.840.10008.5.1.4.1.1.1.1.1	RLE Lossless	1.2.840.10008.1.2.5	SCP	None
		Implicit VR Little Endian	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		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Digital Mammography X-Ray Image Storage - Pres. SOP	1.2.840.10008.5.1.4.1.1.1.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Digital Mammography X-Ray Image Storage - Proc. SOP	1.2.840.10008.5.1.4.1.1.1.2.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Grayscale Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
X-Ray Angiographic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.12.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Enhanced XA Image Storage	1.2.840.10008.5.1.4.1.1.12.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
X-Ray Radiofluoroscopic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.12.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Enhanced XRF Image Storage	1.2.840.10008.5.1.4.1.1.12.2.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Positron Emission Tomography Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.128	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
X-Ray 3D Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.13.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
CT Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Enhanced CT Image Storage	1.2.840.10008.5.1.4.1.1.2.1	JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70	SCP	None
		RLE Lossless	1.2.840.10008.1.2.5		
		Implicit VR Little Endian	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		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Nuclear Medicine Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.20	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Ultrasound Multi-frame Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.3.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
MR Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Enhanced MR Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
MR Spectroscopy Storage SOP Class	1.2.840.10008.5.1.4.1.1.4.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
RT Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.1	Explicit VR Little Endian	1.2.840.10008.1.2.1	SCP	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		Implicit VR Little Endian	1.2.840.10008.1.2		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
RT Dose Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
RT Structure Set Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.3	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
RT Beams Treatment Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.4	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
RT Plan Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.5	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
RT Brachy Treatment Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.6	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
RT Treatment Summary Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.7	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Ultrasound Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.6.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Raw Data Storage SOP Class	1.2.840.10008.5.1.4.1.1.66	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Spatial Registration Storage	1.2.840.10008.5.1.4.1.1.66.1	JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70	SCP	None
		RLE Lossless	1.2.840.10008.1.2.5		
		Implicit VR Little Endian	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		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
X-Ray Radiation Dose SR	1.2.840.10008.5.1.4.1.1.88.67	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Multi-frame Single Bit Secondary	1.2.840.10008.5.1.4.1.1.7.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Capture Image Storage SOP Class		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Multi-frame Grayscale Byte SC Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Multi-frame Grayscale Word SC Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.3	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Multi-frame True Color Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7.4	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
		RLE Lossless	1.2.840.10008.1.2.5		
Basic Text SR SOP Class	1.2.840.10008.5.1.4.1.1.88.11	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Enhanced SR SOP Class	1.2.840.10008.5.1.4.1.1.88.22	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Comprehensive SR SOP Class	1.2.840.10008.5.1.4.1.1.88.33	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Key Object Selection Document	1.2.840.10008.5.1.4.1.1.88.59	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Chest CAD SR	1.2.840.10008.5.1.4.1.1.88.65	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
12-Lead ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
General ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Ambulatory ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.3	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
Hemodynamic Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.2.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Ophthalmic Photography 8	1.2.840.10008.5.1.4.1.1.77.1.5.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Bit Image Storage		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Ophthalmic Photography 16 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Keratometry Measurements Storage	1.2.840.10008.5.1.4.1.1.78.3	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Ophthalmic Axial Measurements Storage	1.2.840.10008.5.1.4.1.1.78.7	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Intraocular Lens Calculations Storage	1.2.840.10008.5.1.4.1.1.78.8	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
RT Ion Plan Storage	1.2.840.10008.5.1.4.1.1.481.8	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Philips Private Grayscale Softcopy Presentation State Storage	1.3.46.670589.2.2.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Philips Private X-Ray Image Storage	1.3.46.670589.2.3.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Philips Private Xray MF Image	1.3.46.670589.7.8.1618510091	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		

Presentation Context Table

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Philips Private Stent Boost WorkItem	1.3.46.670589.7.8.16185100912	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Philips Private Live Run WorkItems	1.3.46.670589.7.8.1618510092	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Philips Private Run WorkItems	1.3.46.670589.7.8.16185100129	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Philips Private Reco WorkItems	1.3.46.670589.7.8.16185100130	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Philips Private Three DCA WorkItem	1.3.46.670589.7.8.16185100913	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Embedded Document	1.3.46.670589.2.8.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		

The DICOM Gateway accepts all contexts in the intersection of the proposed and acceptable Presentation Contexts. This means that multiple proposed presentation contexts with the same SOP class but different transfer syntaxes are accepted by the DICOM Gateway as far as those transfer syntaxes are part of the acceptable transfer syntaxes. There is no check for duplicate contexts and these are therefore accepted.

4.2.1.3.1.3 SOP Specific Conformance for Storage SOP Classes

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

The DICOM Gateway will only accept associations from configured systems. The DICOM Gateway may provide level 2 (full) conformances, depending on the implemented database.

Remarks:

- Value Representation 'UN' (Unknown) is supported, and will be used for any attributes not known to DICOM Gateway and received per implicit transfer (ILE).

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4.2.1.3.1.3.1 Dataset Specific Conformance for C-STORE-RSP

Detail regarding the Dataset Specific response behavior will be reported in this section.

This includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

Table 17: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Successful command	Successful completion of the store request.
Failure	A700	Refused: out of resources	Not enough resources available to do a store.
	C000	Error: cannot understand	Any other exception generated during the store.

Note- Additional set of characters is getting added to the patient name having maximum number of characters.

This case is applicable only when patient name has maximum permissible characters in the value.

For a patient with less characters the extension is not done.

As the chance of having a patient with the maximum amount of characters in patient name is quite low the issue is accepted for this release.

4.2.1.3.2 (Real-World) Activity – FIND as SCP

4.2.1.3.2.1 Description and Sequencing of Activities

HSDP Clinical Platform (CPF) sends associations to systems to query the remote database using the C-FIND command.

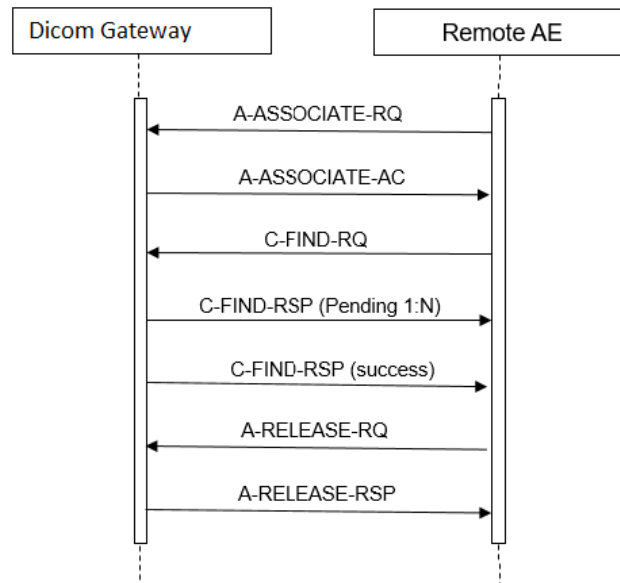


Figure 7: Data Flow Diagram – FIND as SCP

4.2.1.3.2.2 Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 18: Proposed Presentation Contexts for (Real-World) Activity – FIND As SCP

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Study Root QR Information Model - FIND SOP Class	1.2.840.10008.5.1.4.1.2.2.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		

4.2.1.3.2.3 SOP Specific Conformance for Study Root QR Information Model - FIND SOP Class

4.2.1.3.2.3.1 Dataset Specific Conformance for Study Root QR Information Model - FIND SOP Class C-FIND-SCP

DICOM Gateway supports the following Query keys. Image Level is not supported.

Table 19: Supported Query Keys for Study Root Information Model

Study Root QR Information Model - FIND SOP Class				
Attribute Name	Tag	VR	Type of Matching	Comment
Study level keys				
Query/Retrieve Level	0008,0052	CS	NA	
Study Date	0008,0020	DA	Universal	
Study Time	0008,0030	TM	Universal	
Accession Number	0008,0050	SH	Universal	
Modalities in Study	0008,0061	CS	Universal	
Referring Physician Name	0008,0090	PN	Universal	
Patient's Name	0010,0010	PN	Universal	
Patient ID	0010,0020	LO	Universal	
Study Instance UID	0020,000D	UI	UNIQUE	
Study ID	0020,0010	SH	Universal	
Series level keys				
Modality	0008,0060	CS	Universal	
Series Instance UID	0020,000E	UI	UNIQUE	
Series Number	0020,0011	IS	Universal	
Scheduled Procedure Step ID	0040,0009	SH	Universal	
Performed Procedure Step Start Date	0040,0244	DA	Universal	
Performed Procedure Step Start Time	0040,0245	TM	Universal	
Request Attributes Sequence	0040,0275	SQ	Universal	
Image level keys				
Instance Number	(0020,0013)	IS	Single Value	
SOP Instance UID	(0008,0018)	UI	Universal	

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

Table 20: Status Response

Service Status	Error Code	Further Meaning	Behavior*
Success	0000	Matching is complete – No final identifier is supplied	The C-FIND request handling is completed, no more C-FIND responses are sent.
Failure	A700	Refused – Out of resources	The reason is logged and association is released.
	C000	Failed – Unable to process	The C-FIND request cannot be parsed. The reason is logged.
Pending	FF00	Matches are continuing - Current match is supplied and any optional keys were supported in the same manner as required keys.	The C-FIND responses are continuing.
	FF01	Matches are continuing - Warning that one or more optional keys were not supported for existence and/or matching for this identifier	The C-FIND responses are continuing.
Cancel	FE00	Matching terminated due to Cancel request	C-Cancel is not implemented by the product. Response is sent after receiving the C-Cancel. Receiving system is not expecting this but are expected to be able to handle the incoming packages. As such no breaking workflow is created.

Note- Design choice of the product.

SUT is terminating the connection when non negotiated sop class is queried.

SUT should have sent reject (0112H) in C-FIND-RSP, instead SUT closes the connection gracefully by sending release.

Workflow is ending in the same way as there are no results send and connection is closed.

4.2.1.3.3 (Real-World) Activity – MOVE as SCP

4.2.1.3.3.1 Description and Sequencing of Activities

The Real World activity associated with the C-MOVE command is retrieval of images from the disk and storage of the images to a remote system using a C-STORE command

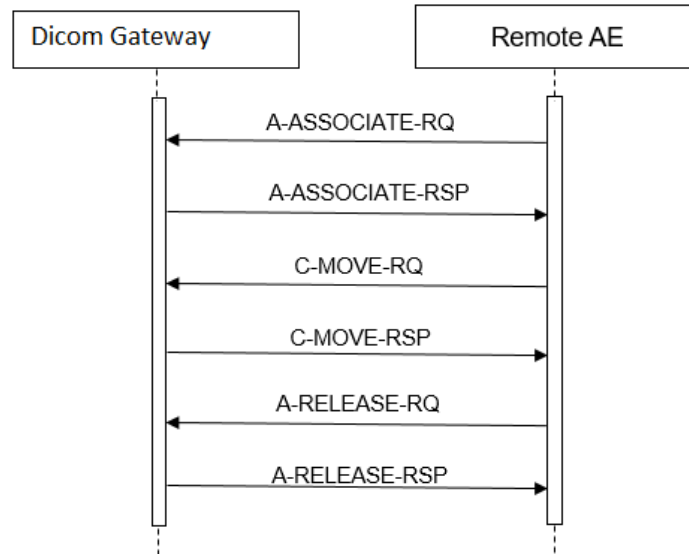


Figure 8: Data Flow Diagram – MOVE as SCP

4.2.1.3.3.2 Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 21: Proposed Presentation Contexts for (Real-World) Activity – MOVE As SCP

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Study Root QR Information Model - MOVE SOP Class	1.2.840.10008.5.1.4.1.2.2.2	Implicit VR Little Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Explicit VR Big Endian	1.2.840.10008.1.2		

4.2.1.3.3.3 SOP Specific Conformance for Study Root QR Information Model - MOVE SOP Class

4.2.1.3.3.3.1 Dataset Specific Conformance for Study Root QR Information Model - MOVE SOP Class C-MOVE-SCP

Table 22: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Sub-operations complete – No failures	The C-MOVE command has been completed. When the C-Move operation is successful.
Failure	A701	Refused – Out of resources - Unable to calculate number of matches	The reason is logged and association is released.
	C000	Failed – Unable to process	The C-MOVE request cannot be parsed. No Store Command will be sent. The reason is logged.
Warning	B000	Sub-operations complete – One or more failures	A response with this status code is sent when 1 or more export (sub-operation) jobs are failed.
Cancel	FE00	Sub-operations terminated due to Cancel indication	Move operation is terminated with a status code in response due to Cancel indication.

Service Status	Error Code	Further Meaning	Behavior
Pending	FF00	Sub-operations are continuing	The Move job continues.

4.3 Network Interfaces

4.3.1.1 Physical Network Interfaces

DICOM Gateway support the physical medium as provided by the HSDP Hosting infrastructure.

4.3.1.2 Additional Protocols

4.3.1.2.1 Basic TLS Secure Transport Connection Profile

HSDP infrastructure on the cloud manages this for all hosted services

4.3.1.2.2 Basic Time Synchronization Profile

Time Synchronization is managed by HSDP Hosting infrastructure

4.3.1.2.3 Basic Application Level Confidentiality Profile

Not supported.

4.3.1.2.4 IPv4 and IPv6 Support

IPv4 and IPv6 Support managed by HSDP Hosting infrastructure.

4.3.1.3 Configuration

Not Applicable.

5. Media Interchange

Not Supported

6. Support of Character Sets

Any support for character sets in Network and Media services is described here.

Table 23: Supported DICOM Character Sets

Character Set Description	Defined Term	ESC Sequence	ISO Registration Number	Code Element	Character Set
Latin alphabet No. 1	ISO_IR 100	-	ISO-IR 100	G1	Supplementary set of ISO 8859
Default repertoire	ISO-IR 6	-	ISO-IR 6	G0	ISO 646
Latin alphabet No. 2	ISO_IR 101	-	ISO-IR 101	G1	Supplementary set of ISO 8859
Latin alphabet No. 3	ISO_IR 109	-	ISO-IR 109	G1	Supplementary set of ISO 8859
		-	ISO-IR 6	G0	ISO 646
Latin alphabet No. 4	ISO_IR 110	-	ISO-IR 110	G1	Supplementary set of ISO 8859
		-	ISO-IR 6	G0	ISO 646
Cyrillic	ISO_IR 144	-	ISO-IR 144	G1	Supplementary set of ISO 8859
		-	ISO-IR 6	G0	ISO 646
Latin alphabet No. 5	ISO_IR 148	-	ISO-IR 148	G1	Supplementary set of ISO 8859
		-	ISO-IR 6	G0	ISO 646
Thai	ISO_IR 166	-	ISO-IR 166	G1	TIS 620-2533 (1990)
		-	ISO-IR 6	G0	ISO 646
Korean	ISO 2022 IR 149	ESC 02/04 02/09 04/03	ISO-IR 149	G1	KS X 1001: Hangul and Hanja
Japanese	ISO 2022 IR 87	ESC 02/04 04/02	ISO-IR 87	G0	JIS X 0208: Kanji
UTF-8	ISO IR 192	-	ISO IR 192	-	

7. Security

7.1 Security Profiles

7.1.1 Security use Profiles

The DICOM Gateway APIs and underlying platform service components support:

- DICOM Gateway APIs requests are only allowed from secure HTTPS channels. HTTP requests from clients are rejected.

7.1.2 Security Transport Connection Profiles

The DICOM Gateway APIs are protected using the OAuth2 access mechanism, and OAuth2 access tokens are required for invoking any DICOM Gateway API. DICOM Gateway uses IAM as provided on HSDP Cloud Foundry to authenticate & authorize the users accessing the DICOM Services.

The DICOM Gateway APIs are only allowed over secure HTTPS channels.

Data access security is achieved by using S3 Credentials service as provided by HSDP Cloud Foundry.

7.1.3 Digital Signature Profiles

Not supported by DICOM Gateway.

7.1.4 Media Storage Security Profiles

Not supported by DICOM Gateway.

7.1.5 Attribute Confidentiality Profiles

Not supported by DICOM Gateway, DICOM Gateway stores and retrieves the Dicom content as is.

7.1.6 Network Address Management Profiles

Network Address is managed by the Cloud Foundry or IaaS on which DICOM Gateway is hosted.

7.1.7 Time Synchronization Profiles

Time Synchronization is managed by the user of DICOM Gateway.

7.1.8 Application Configuration Management Profiles

Dicom Configuration API's are provided to configure Dicom Services. POST and GET methods are allowed to update and retrieve the Configuration resources.

7.1.9 Audit Trail Profiles

The following Audit events are generated:

Table 24: Audit Events

Audit Event	Trigger
Application Activity (Start & Stop)	This audit message describes the event of an Application Entity starting or stopping.
Security Alert	This message describes any security related event caused by configuration changes.
Data Import	The Upload service will log this event when data is imported to the DICOM Gateway
Query	The QR service will log this event when data is queried from DICOM Gateway

Begin Transfer	The QR service will log this event when data is retrieved from DICOM Gateway
Instance Transferred	The QR service will log this event when data is retrieved from the DICOM Gateway

7.2 Association Level Security

Not supported.

7.3 Application Level Security

7.3.1 Authorization

DICOM Gateway uses following Application Level Security

- TLS protocol for providing secure communication to store, query and retrieve data
- AE filtering is provided to ensure whitelisting of the DICOM SCU's connecting to DICOM Gateway
- Integrates with Authorize – IAM capabilities to provide Organization-Based Access Control to connect with DICOM Services hosted on Cloud.

7.3.2 Authentication

DICOM Gateway when configured to communicate over TLS protocol, uses certificate validation as per the TLS profile. DICOM Gateway when acting as SCP, sends the certificate configured in the system to the SCU to establish TLS communication. DICOM Gateway when acting as SCU, validates the certificate sent by the SCP against the root CA configured in the system.

