DICOM Conformance Statement

IntelliSpace Universal Data Manager 2.1

PHILIPS

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**		
Other			
Verification SOP Class	1.2.840.10008.1.1	Yes	Yes
Print Management			
Basic Grayscale Print Management Meta SOP Class	1.2.840.10008.5.1.1.9	Yes	No
>Basic Film Box SOP Class	1.2.840.10008.5.1.1.2	Yes	No
>Basic Film Session SOP Class	1.2.840.10008.5.1.1.1	Yes	No
>Basic Grayscale Image Box SOP Class	1.2.840.10008.5.1.1.4	Yes	No
>Printer SOP Class	1.2.840.10008.5.1.1.16	Yes	No
Stored Print Storage	1.2.840.10008.5.1.1.27	Yes	No
Query/Retrieve			
Patient Root QR Information Model - C-FIND SOP Class	1.2.840.10008.5.1.4.1.2.1.1	Yes	Yes
Patient Root QR Information Model - C-MOVE SOP Class	1.2.840.10008.5.1.4.1.2.1.2	Yes	Yes
Patient/Study Only QR Info. Model - C-FIND SOP Class (Retired)	1.2.840.10008.5.1.4.1.2.3.1	Yes	Yes
Patient/Study Only QR Info. Model - C-MOVE SOP Class (Retired)	1.2.840.10008.5.1.4.1.2.3.2	Yes	Yes
Study Root QR Information Model - C-FIND SOP Class	1.2.840.10008.5.1.4.1.2.2.1	Yes	Yes
Study Root QR Information Model - C-MOVE SOP Class	1.2.840.10008.5.1.4.1.2.2.2	Yes	Yes
Transfer			
Computed Radiography Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.1	Yes	Yes
Digital X-Ray Image Storage - For Pres. SOP	1.2.840.10008.5.1.4.1.1.1.1	Yes	Yes
Digital X-Ray Image Storage - For Proc. SOP	1.2.840.10008.5.1.4.1.1.1.1.1	Yes	Yes
Digital Mammography X-Ray Image Storage - Pres. SOP	1.2.840.10008.5.1.4.1.1.1.2	Yes	Yes
Digital Mammography X-Ray Image Storage - Proc. SOP	1.2.840.10008.5.1.4.1.1.1.2.1	Yes	Yes
Digital Intra-oral X-Ray Image Storage - Pres. SOP	1.2.840.10008.5.1.4.1.1.1.3	Yes	Yes
Digital Intra-oral X-Ray Image Storage - Proc. SOP	1.2.840.10008.5.1.4.1.1.1.3.1	Yes	Yes
Standalone Modality LUT Storage (Retired)	1.2.840.10008.5.1.4.1.1.10	Yes	Yes
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1	Yes	Yes
Encapsulated CDA Storage SOP Class	1.2.840.10008.5.1.4.1.1.104.2	Yes	Yes
Standalone VOI LUT Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.11	Yes	Yes
Grayscale Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.1	Yes	Yes
Color Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.2	Yes	Yes
Pseudo-Color Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.3	Yes	Yes
Blending Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.4	Yes	Yes
X-Ray Angiographic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.12.1	Yes	Yes
X-Ray Radiofluoroscopic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.12.2	Yes	Yes
X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.12.3	Yes	Yes
Positron Emission Tomography Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.128	Yes	Yes
Standalone PET Curve Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.129	Yes	Yes
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3	Yes	Yes

SOP Class		User of Service (SCU)	Provider of Service (SCP)
Name	**UID**		
CT Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.2	Yes	Yes
Nuclear Medicine Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.20	Yes	Yes
Ultrasound Multi-frame Image Storage (Retired)	1.2.840.10008.5.1.4.1.1.3	Yes	Yes
Ultrasound Multi-frame Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.3.1	Yes	Yes
MR Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4	Yes	Yes
Enhanced MR Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4.1	Yes	Yes
MR Spectroscopy Storage SOP Class	1.2.840.10008.5.1.4.1.1.4.2	Yes	Yes
RT Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.1	Yes	Yes
RT Dose Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.2	Yes	Yes
RT Structure Set Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.3	Yes	Yes
RT Beams Treatment Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.4	Yes	Yes
RT Plan Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.5	Yes	Yes
RT Brachy Treatment Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.6	Yes	Yes
RT Treatment Summary Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.7	Yes	Yes
RT Ion Plan Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.8	Yes	Yes
RT Ion Beams Treatment Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.9	Yes	Yes
Nuclear Medicine Image Storage (Retired)	1.2.840.10008.5.1.4.1.1.5	Yes	Yes
Ultrasound Image Storage (Retired)	1.2.840.10008.5.1.4.1.1.6	Yes	Yes
Ultrasound Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.6.1	Yes	Yes
Enhanced US Volume Storage SOP Class	1.2.840.10008.5.1.4.1.1.6.2	Yes	Yes
Raw Data Storage SOP Class	1.2.840.10008.5.1.4.1.1.66	Yes	Yes
Spatial Registration Storage SOP Class	1.2.840.10008.5.1.4.1.1.66.1	Yes	Yes
Spatial Fiducials Storage SOP Class	1.2.840.10008.5.1.4.1.1.66.2	Yes	Yes
Segmentation Storage	1.2.840.10008.5.1.4.1.1.66.4	Yes	Yes
Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7	Yes	Yes
Multi-frame Single Bit Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.1	Yes	Yes
Multi-frame Grayscale Byte SC Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.2	Yes	Yes
Multi-frame Grayscale Word SC Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.3	Yes	Yes
Multi-frame True Color Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7.4	Yes	Yes
VL Endoscopic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.77.1.1	Yes	Yes
VL Microscopic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.77.1.2	Yes	Yes
VL Slide-Coordinates Microscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.3	Yes	Yes
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	Yes	Yes
Ophthalmic Photography 8 Bit Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.77.1.5.1	Yes	Yes
Ophthalmic Photography 16 Bit Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.77.1.5.2	Yes	Yes
Stereometric Relationship Storage	1.2.840.10008.5.1.4.1.1.77.1.5.3	Yes	Yes
Standalone Overlay Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.8	Yes	Yes
Basic Text SR SOP Class	1.2.840.10008.5.1.4.1.1.88.11	Yes	Yes
Enhanced SR SOP Class	1.2.840.10008.5.1.4.1.1.88.22	Yes	Yes
Detail SR Storage - Trial (Retired)	1.2.840.10008.5.1.4.1.1.88.3	Yes	Yes
Comprehensive SR SOP Class	1.2.840.10008.5.1.4.1.1.88.33	Yes	Yes
Procedure Log Storage	1.2.840.10008.5.1.4.1.1.88.40	Yes	Yes
Mammography CAD SR SOP Class	1.2.840.10008.5.1.4.1.1.88.50	Yes	Yes

SOP Class		User of Service (SCU)	Provider of Service (SCP)
Name	**UID**		
Key Object Selection Document	1.2.840.10008.5.1.4.1.1.88.59	Yes	Yes
Chest CAD SR	1.2.840.10008.5.1.4.1.1.88.65	Yes	Yes
X-Ray Radiation Dose SR	1.2.840.10008.5.1.4.1.1.88.67	Yes	Yes
Standalone Curve Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.9	Yes	Yes
12-Lead ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.1	Yes	Yes
General ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.2	Yes	Yes
Ambulatory ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.3	Yes	Yes
Hemodynamic Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.2.1	Yes	Yes
Cardiac Electrophysiology Waveform Storage	1.2.840.10008.5.1.4.1.1.9.3.1	Yes	Yes
Basic Voice Audio Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.4.1	Yes	Yes
Transfer of Private SOP classes			
GE Private eNTEGRA Storage (Xeleris Auto Start/eNTEGRA Protocol Data or NM Genie)	1.2.840.113619.4.27	Yes	Yes
Philips Private EasyVision 3D Volume Object Storage	1.3.46.670589.5.0.2	Yes	Yes
Philips Private EasyVision MR Cardio Analysis Storage	1.3.46.670589.5.0.11	Yes	Yes
Philips Private EasyVision MR Cardio Storage	1.3.46.670589.5.0.8	Yes	Yes
Philips Private EasyVision Surface Storage	1.3.46.670589.5.0.3	Yes	Yes
Philips Private EasyVision Volume Storage	1.3.46.670589.5.0.1	Yes	Yes
Philips Private iE33 3D NEO Presentation State Subpage Storage	1.3.46.670589.2.5.1.1	Yes	Yes
Philips Private MR Cardio Profile Image Storage	1.3.46.670589.5.0.7	Yes	Yes
Philips Private MR Series Data Storage	1.3.46.670589.11.0.0.12.2	Yes	Yes
Philips Private MR Spectrum Storage	1.3.46.670589.11.0.0.12.1	Yes	Yes
Philips Private Reconstructed X-ray Storage	1.3.46.670589.2.4.1.1	Yes	Yes
Philips Private ViewForum 3D Volume New Storage	1.3.46.670589.5.0.1.1	Yes	Yes
Philips Private ViewForum 3D Volume Object New Storage	1.3.46.670589.5.0.2.1	Yes	Yes
Philips Private ViewForum CT Synthetic Image Storage	1.3.46.670589.5.0.9	Yes	Yes
Philips Private ViewForum CX Synthetic Image Storage	1.3.46.670589.5.0.12	Yes	Yes
Philips Private ViewForum MR Cardio Analysis New Storage	1.3.46.670589.5.0.11.1	Yes	Yes
Philips Private ViewForum MR Cardio New Storage	1.3.46.670589.5.0.8.1	Yes	Yes
Philips Private ViewForum MR Synthetic Image Storage	1.3.46.670589.5.0.10	Yes	Yes
Philips Private ViewForum Perfusion Analysis Storage	1.3.46.670589.5.0.14	Yes	Yes
Philips Private ViewForum Perfusion Storage	1.3.46.670589.5.0.13	Yes	Yes
Philips Private ViewForum Surface New Storage	1.3.46.670589.5.0.3.1	Yes	Yes
Philips Private X-Ray Image Storage	1.3.46.670589.2.3.1.1	Yes	Yes
Workflow Management			
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3	Yes	Yes
Modality Worklist Information Model - C-FIND SOP Class	1.2.840.10008.5.1.4.31	No	Yes
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1	Yes	Yes

Table 2: WADO-RS Services

WADO Service	User Agent	Origin Server
WADO - RS - Retrieve Study	No	Yes
WADO - RS - Retrieve Series	No	Yes
WADO - RS - Retrieve Instance	No	Yes

WADO Service	User Agent	Origin Server
WADO - RS – Retrieve Frames	No	Yes
WADO - RS - Retrieve Metadata	No	Yes
WADO - RS - Retrieve Bulkdata	No	Yes

Table 3: STOW-RS Services

STOW Service	User Agent	Origin Server
STOW-RS	No	Yes

Table 4: QIDO-RS Services

STOW Service	User Agent	Origin Server
QIDO-RS*	No	Yes

*STUDY and SERIES Level

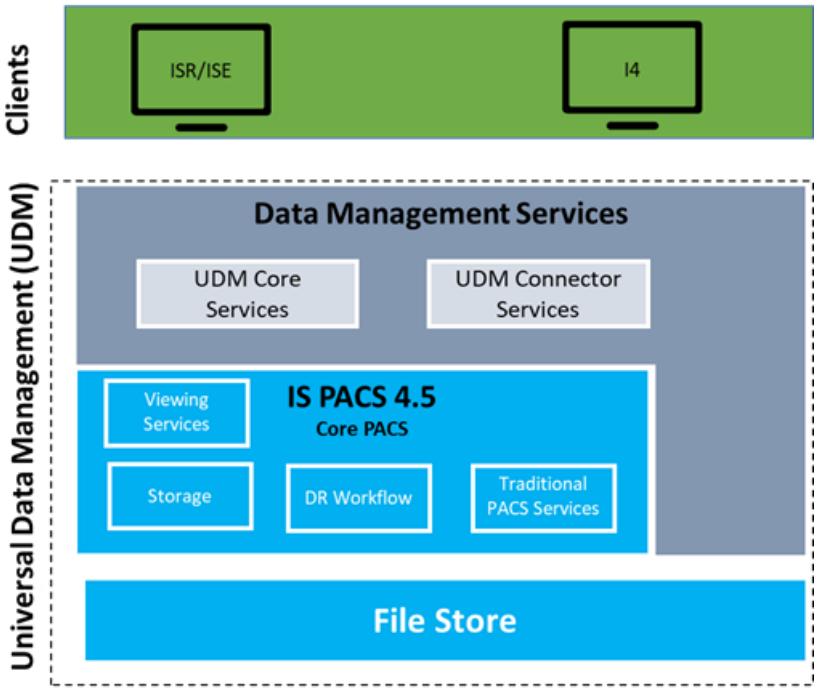
2. Table of Contents

3. Introduction

IntelliSpace Universal Data Manager 2.1. is a data management solution. It support DICOM networking, web interfaces and Audit trail profiles. Universal Data Manager utilizes industry-standard protocols and interfaces to ensure interoperability, while optimizing data representation to deliver at high-speeds to requestors. Imaging

Image processing and computing solutions like IntelliSpace Radiology and Illumeo can be connected to the IntelliSpace Universal Data manager.

The system block diagram below illustrates components and their interaction with other sub-systems.



3.1. Revision History

The revision history provides dates and differences of the different releases.

Table 5: Revision History

Document Version	Date of Issue	Description
00	08-Nov-2018	Final version

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 8 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 6: Definitions, Terms and Abbreviations

Abbreviation/Term	Explanation
AE	Application Entity
ANSI	American National Standard Institute
AP	Application Profile
BOT	Basic Offset Table
CD	Compact Disc
CD-R	CD-Recordable
CD-M	CD-Medical
CR	Computed Radiography
CT	Computed Tomography
DCR	Dynamic Cardio Review
DICOM	Digital Imaging and Communications in Medicine
DIMSE	DICOM Message Service Element
DIMSE-C	DIMSE-Composite
DIMSE-N	DIMSE-Normalized
DX	Digital X-Ray
EBE	DICOM Explicit VR Big Endian
ELE	DICOM Explicit VR Little Endian

Abbreviation/Term	Explanation
FSC	File-set Creator
FSR	File-set Reader
FSU	File-set Updater
GUI	Graphic User Interface
HIS	Hospital Information System
HL7	Health Level Seven
ILE	DICOM Implicit VR Little Endian
IOD	Information Object Definition
ISIS	Information System - Imaging System
MOD	Magneto-Optical Disk
MIME	Multipurpose Internet Mail Extensions
MPPS	Modality Performed Procedure Step
MR	Magnetic Resonance
NEMA	National Electrical Manufacturers Association
NM	Nuclear Medicine
PDU	Protocol Data Unit
RF	X-Ray Radiofluoroscopic
RIS	Radiology Information System
RT	Radiotherapy
RWA	Real-World Activity
SC	Secondary Capture
SCM	Study Component Management
SCP	Service Class Provider
SCU	Service Class User
SOP	Service Object Pair
TCP/IP	Transmission Control Protocol/Internet Protocol
UID	Unique Identifier
US	Ultrasound
USMF	Ultrasound Multi-frame
WLM	Worklist Management
XA	X-Ray Angiographic

3.5. References

[DICOM] Digital Imaging and Communications in Medicine, Parts 1 - 21 (NEMA PS 3.1- PS 3.21),
National Electrical Manufacturers Association (NEMA) Publication Sales 1300 N. 17th Street, Suite 900 Arlington, Virginia. 22209, United States of America
Internet: https://www.dicomstandard.org/current/

4. Networking

This section contains the networking related services.

4.1. Implementation model

The implementation model consists of three sections:

- The application data flow diagram, specifying the relationship between the Application Entities and the "external world" or Real-World Activities,
- A functional description of each Application Entity, and
- The sequencing constraints among them.

4.1.1. Application Data Flow

IntelliSpace Universal Data Manager supports receiving, sending, and storing studies, from the modality types supported by Picture Archiving and Communication Systems as well as demographic data from hospital/radiology information systems.

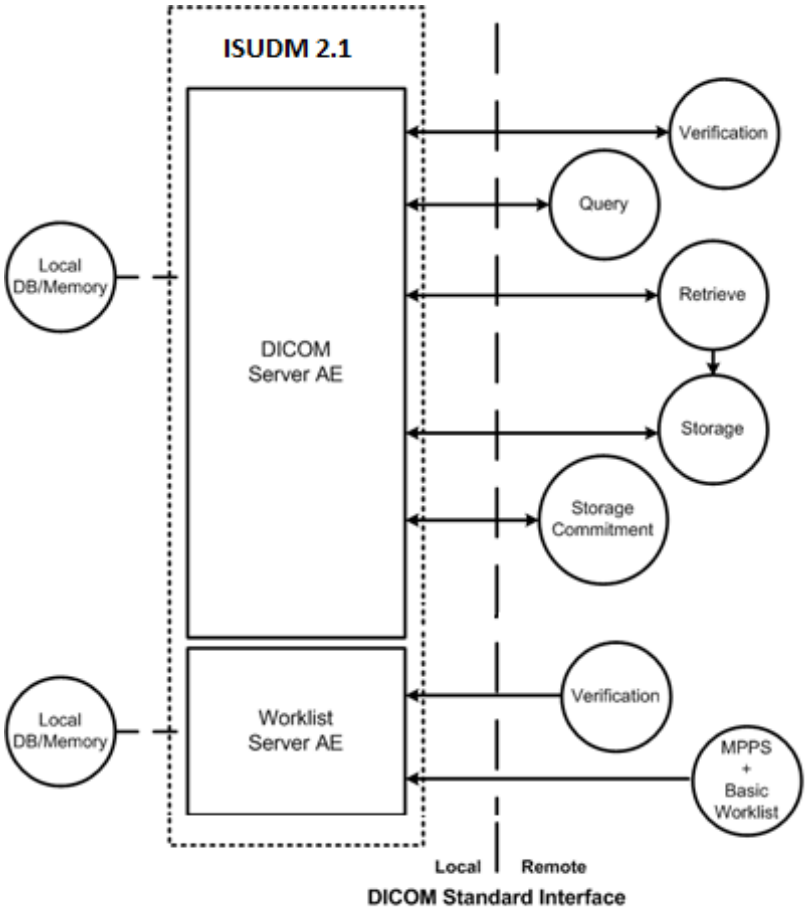


Figure 1: Application Data Flow Diagram 1

The WADO-RS Service Application receives WADO requests from a remote AE over HTTP based RS interfaces. These requests are HTTP(S) GET requests. It is associated with the local real-world activity "Retrieve Images". It converts these requests into internal lookup functions to find the matching SOP Instances. It then obtains these matching SOP Instances and composes a response back to the requesting remote AE.
The STOW-RS Service Application receives STOW requests from a remote AE. These requests are HTTP(S) POST requests. It is associated with the local real-world activity "Store Instances". It converts these requests into internal functions to store the given SOP Instances. It returns a summary HTTP(S) status line, including a status code indicating success, warning, or failure for each instance to the requesting remote AE.

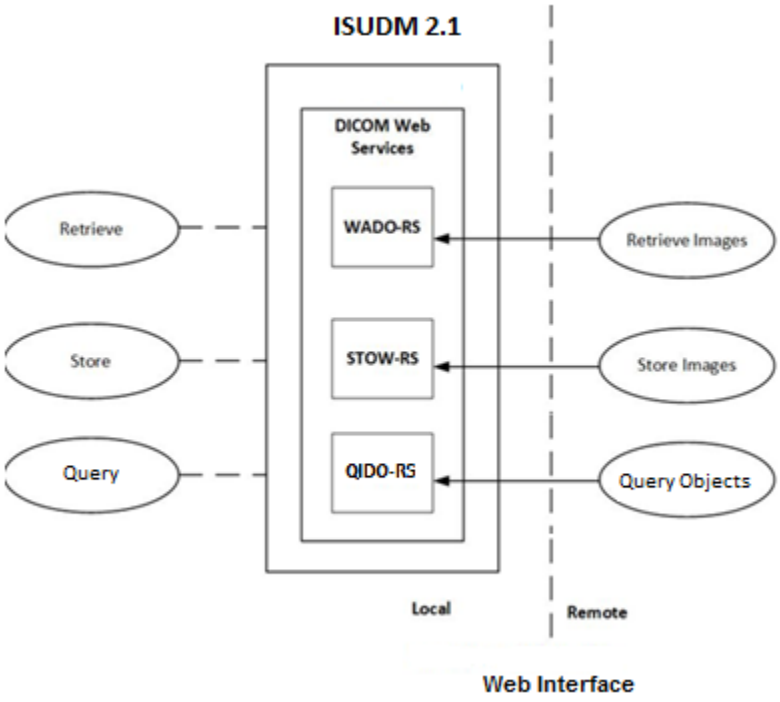


Figure 2: Application Data Flow Diagram 2

4.1.2. Functional Definition of AE's

4.1.2.1. Functional Definition of IntelliSpace Universal Data Manager 2.1 DICOM Server AE

The IntelliSpace Universal Data Manager 2.1 DICOM Server can both initiate and receive DICOM association requests. It will be started automatically as part of the operating system. Once started, the IntelliSpace Universal Data Manager 2.1 DICOM Server will wait for other applications to connect to its DICOM Storage service at the presentation address configured for its Application Entity Titles. IntelliSpace Universal Data Manager 2.1 supports multiple healthcare organizations in a single IntelliSpace Universal Data Manager 2.1 database. The name of the organization is also the AE Title of that organization. IntelliSpace Universal Data Manager 2.1 client applications also have the ability to initiate DICOM associations by the IntelliSpace Universal Data Manager 2.1 DICOM Server to remote DICOM devices for Storage and Query/Retrieve services.

4.1.2.2. Functional Definition of IntelliSpace Universal Data Manager 2.1 DICOM Worklist Server AE

The IntelliSpace Universal Data Manager 2.1 Worklist Server runs as a service and will be automatically started as part of the operating system. Once started, the IntelliSpace Universal Data Manager 2.1 Worklist Server will wait for other applications to connect to its DICOM Modality Worklist service at the presentation address configured.

4.2. AE Specifications

This section in the DICOM Conformance Statement is a set of Application Entity specifications. There are as many of these subsections as there are different AE's in the implementation.

4.2.1. IntelliSpace Universal Data Manager 2.1 DICOM Server AE

Details of this specific Application Entity is specified in this section.

4.2.1.1. SOP Classes

This Application Entity provides Standard Conformance to the following SOP Classes.

Table 7: SOP Classes for IntelliSpace Universal Data Manager 2.1 DICOM Server AE

SOP Class Name	SOP Class UID	SCU	SCP
Verification SOP Class	1.2.840.10008.1.1	Yes	Yes
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1	Yes	Yes
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3	Yes	Yes
Stored Print Storage	1.2.840.10008.5.1.1.27	Yes	No
Computed Radiography Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.1	Yes	Yes
Digital X-Ray Image Storage - For Pres. SOP	1.2.840.10008.5.1.4.1.1.1.1	Yes	Yes
Digital X-Ray Image Storage - For Proc. SOP	1.2.840.10008.5.1.4.1.1.1.1.1	Yes	Yes
Digital Mammography X-Ray Image Storage - Pres. SOP	1.2.840.10008.5.1.4.1.1.1.2	Yes	Yes
Digital Mammography X-Ray Image Storage - Proc. SOP	1.2.840.10008.5.1.4.1.1.1.2.1	Yes	Yes
Digital Intra-oral X-Ray Image Storage - Pres. SOP	1.2.840.10008.5.1.4.1.1.1.3	Yes	Yes
Digital Intra-oral X-Ray Image Storage - Proc. SOP	1.2.840.10008.5.1.4.1.1.1.3.1	Yes	Yes
Standalone Modality LUT Storage (Retired)	1.2.840.10008.5.1.4.1.1.10	Yes	Yes
Encapsulated PDF Storage SOP Class	1.2.840.10008.5.1.4.1.1.104.1	Yes	Yes
Encapsulated CDA Storage SOP Class	1.2.840.10008.5.1.4.1.1.104.2	Yes	Yes

SOP Class Name	SOP Class UID	SCU	SCP
Standalone VOI LUT Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.11	Yes	Yes
Grayscale Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.1	Yes	Yes
Color Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.2	Yes	Yes
Pseudo-Color Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.3	Yes	Yes
Blending Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.4	Yes	Yes
X-Ray Angiographic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.12.1	Yes	Yes
X-Ray Radiofluoroscopic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.12.2	Yes	Yes
X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.12.3	Yes	Yes
Positron Emission Tomography Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.128	Yes	Yes
Standalone PET Curve Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.129	Yes	Yes
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3	Yes	Yes
Breast Projection X-Ray Image Storage - For Presentation	1.2.840.10008.5.1.4.1.1.13.1.4	Yes	Yes
Breast Projection X-Ray Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.13.1.5	Yes	Yes
CT Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.2	Yes	Yes
Nuclear Medicine Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.20	Yes	Yes
Ultrasound Multi-frame Image Storage (Retired)	1.2.840.10008.5.1.4.1.1.3	Yes	Yes
Ultrasound Multi-frame Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.3.1	Yes	Yes
MR Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4	Yes	Yes

SOP Class Name	SOP Class UID	SCU	SCP
Enhanced MR Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4.1	Yes	Yes
MR Spectroscopy Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4.2	Yes	Yes
RT Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.1	Yes	Yes
RT Dose Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.2	Yes	Yes
RT Structure Set Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.3	Yes	Yes
RT Beams Treatment Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.4	Yes	Yes
RT Plan Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.5	Yes	Yes
RT Brachy Treatment Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.6	Yes	Yes
RT Treatment Summary Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.7	Yes	Yes
RT Ion Plan Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.8	Yes	Yes
RT Ion Beams Treatment Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.9	Yes	Yes
Nuclear Medicine Image Storage (Retired)	1.2.840.10008.5.1.4.1.1.5	Yes	Yes
Ultrasound Image Storage (Retired)	1.2.840.10008.5.1.4.1.1.6	Yes	Yes
Ultrasound Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.6.1	Yes	Yes
Enhanced US Volume Storage SOP Class	1.2.840.10008.5.1.4.1.1.6.2	Yes	Yes
Raw Data Storage SOP Class	1.2.840.10008.5.1.4.1.1.66	Yes	Yes
Spatial Registration Storage SOP Class	1.2.840.10008.5.1.4.1.1.66.1	Yes	Yes
Spatial Fiducials Storage SOP Class	1.2.840.10008.5.1.4.1.1.66.2	Yes	Yes

SOP Class Name	SOP Class UID	SCU	SCP
Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7	Yes	Yes
Multi-frame Single Bit Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.1	Yes	Yes
Multi-frame Grayscale Byte SC Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.2	Yes	Yes
Multi-frame Grayscale Word SC Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.3	Yes	Yes
Multi-frame True Color Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7.4	Yes	Yes
VL Endoscopic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.77.1.1	Yes	Yes
VL Microscopic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.77.1.2	Yes	Yes
VL Slide-Coordinates Microscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.3	Yes	Yes
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	Yes	Yes
Ophthalmic Photography 8 Bit Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.77.1.5.1	Yes	Yes
Ophthalmic Photography 16 Bit Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.77.1.5.2	Yes	Yes
Stereometric Relationship Storage SOP Class	1.2.840.10008.5.1.4.1.1.77.1.5.3	Yes	Yes
Standalone Overlay Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.8	Yes	Yes
Basic Text SR SOP Class	1.2.840.10008.5.1.4.1.1.88.11	Yes	Yes
Enhanced SR SOP Class	1.2.840.10008.5.1.4.1.1.88.22	Yes	Yes
Detail SR Storage - Trial (Retired)	1.2.840.10008.5.1.4.1.1.88.3	Yes	Yes
Comprehensive SR SOP Class	1.2.840.10008.5.1.4.1.1.88.33	Yes	Yes
Procedure Log Storage	1.2.840.10008.5.1.4.1.1.88.40	Yes	Yes

SOP Class Name	SOP Class UID	SCU	SCP
Mammography CAD SR SOP Class	1.2.840.10008.5.1.4.1.1.88.50	Yes	Yes
Key Object Selection Document	1.2.840.10008.5.1.4.1.1.88.59	Yes	Yes
Chest CAD SR	1.2.840.10008.5.1.4.1.1.88.65	Yes	Yes
X-Ray Radiation Dose SR	1.2.840.10008.5.1.4.1.1.88.67	Yes	Yes
Standalone Curve Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.9	Yes	Yes
12-Lead ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.1	Yes	Yes
General ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.2	Yes	Yes
Ambulatory ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.3	Yes	Yes
Hemodynamic Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.2.1	Yes	Yes
Cardiac Electrophysiology Waveform Storage	1.2.840.10008.5.1.4.1.1.9.3.1	Yes	Yes
Basic Voice Audio Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.4.1	Yes	Yes
GE Private eNTEGRA Storage (Xeleris Auto Start/eNTEGRA Protocol Data or NM Genie)	1.2.840.113619.4.27	Yes	Yes
Philips Private MR Spectrum Storage	1.3.46.670589.11.0.0.12.1	Yes	Yes
Philips Private MR Series Data Storage	1.3.46.670589.11.0.0.12.2	Yes	Yes
Philips Private X-Ray Image Storage	1.3.46.670589.2.3.1.1	Yes	Yes
Philips Private Reconstructed X-ray Storage	1.3.46.670589.2.4.1.1	Yes	Yes
Philips Private iE33 3D NEO Presentation State Subpage Storage	1.3.46.670589.2.5.1.1	Yes	Yes
Philips Private EasyVision Volume Storage	1.3.46.670589.5.0.1	Yes	Yes

SOP Class Name	SOP Class UID	SCU	SCP
Philips Private ViewForum 3D Volume New Storage	1.3.46.670589.5.0.1.1	Yes	Yes
Philips Private ViewForum MR Synthetic Image Storage	1.3.46.670589.5.0.10	Yes	Yes
Philips Private EasyVision MR Cardio Analysis Storage	1.3.46.670589.5.0.11	Yes	Yes
Philips Private ViewForum MR Cardio Analysis New Storage	1.3.46.670589.5.0.11.1	Yes	Yes
Philips Private ViewForum CX Synthetic Image Storage	1.3.46.670589.5.0.12	Yes	Yes
Philips Private ViewForum Perfusion Storage	1.3.46.670589.5.0.13	Yes	Yes
Philips Private ViewForum Perfusion Analysis Storage	1.3.46.670589.5.0.14	Yes	Yes
Philips Private EasyVision 3D Volume Object Storage	1.3.46.670589.5.0.2	Yes	Yes
Philips Private ViewForum 3D Volume Object New Storage	1.3.46.670589.5.0.2.1	Yes	Yes
Philips Private EasyVision Surface Storage	1.3.46.670589.5.0.3	Yes	Yes
Philips Private ViewForum Surface New Storage	1.3.46.670589.5.0.3.1	Yes	Yes
Philips Private MR Cardio Profile Image Storage	1.3.46.670589.5.0.7	Yes	Yes
Philips Private EasyVision MR Cardio Storage	1.3.46.670589.5.0.8	Yes	Yes
Philips Private ViewForum MR Cardio New Storage	1.3.46.670589.5.0.8.1	Yes	Yes
Philips Private ViewForum CT Synthetic Image Storage	1.3.46.670589.5.0.9	Yes	Yes

Note: Any SOP specific behavior is documented later in the conformance statement in the applicable SOP specific conformance section.

4.2.1.2. Association Policies

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

4.2.1.2.1. General

The IntelliSpace Universal Data Manager 2.1 DICOM Server application will request associations and accept associations for DICOM Storage and Query/Retrieve. The IntelliSpace Universal Data Manager 2.1 DICOM Server application supports a maximum PDU size of 64KB. The DICOM standard application context has specified.

Table 8: DICOM Application Context

Description	Value
Application Context Name	1.2.840.10008.3.1.1.1

4.2.1.2.2. Number of Associations

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

Table 9: Number of associations as an Association Initiator for this AE

Description	Value
Maximum number of simultaneous associations	3 (Default) / 1 (Q/R)

Table 10: Number of associations as an Association Acceptor for this AE

Description	Value
Maximum number of simultaneous associations	This is limited by the hardware platform and overall system performance requirements (Not Configurable)

4.2.1.2.3. Asynchronous Nature

The IntelliSpace Universal Data Manager 2.1 DICOM Server application does not support negotiation of multiple outstanding transactions.

4.2.1.2.4. Implementation Identifying Information

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

Table 11: DICOM Implementation Class and Version for IntelliSpace Universal Data Manager 2.1 DICOM Server AE

Description	Value
Implementation Class UID	1.3.46.670589.42.1.4.4.5
Implementation Version Name	PHISUDM2100

4.2.1.2.5. Communication Failure Handling

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

Table 12: Communication Failure Behavior

Exception	Behavior
ARTIM Time-out	The Association is aborted using AP-ABORT and command marked as failed. The reason is logged and reported to the user.

4.2.1.3. Association Initiation Policy

The Application Entity will respond to a received reject Association attempt as shown in next table.

Table 13: Association Rejection response

Result	Source	Reason/Diagnosis	Explanation
1 - rejected-	1 - DICOM UL service-user	1 - no-reason-given	The user is informed and details are logged.

Result	Source	Reason/Diagnosis	Explanation
permanent		2 - application-context-name-not supported	The user is informed and details are logged.
		3 - calling-AE-title-not-recognized	The user is informed and details are logged.
		7 - called-AE-title-not-recognized	The user is informed and details are logged.
	2 - DICOM UL service-provider (ACSE related function)	1 - no-reason-given	The user is informed and details are logged.
		2 - protocol-version-not-supported	The user is informed and details are logged.
	3 - DICOM UL service-provider(Presentation related function)	1 - temporary-congestion	The user is informed and details are logged.
		2 - Local-limit-exceeded	The user is informed and details are logged.
2 - rejected-transient	1 - DICOM UL service-user	1 - no-reason-given	The user is informed and details are logged.
		2 - application-context-name-not-supported	The user is informed and details are logged.
		3 - calling-AE-title-not-recognized	The user is informed and details are logged.
		7 - called-AE-title-not-recognized	The user is informed and details are logged.
	2 - DICOM UL service-provider (ACSE related function)	1 - no-reason-given	The user is informed and details are logged.
		2 - protocol-version-not-supported	The user is informed and details are logged.
	3 - DICOM UL service-provider (Presentation related function)	1 - temporary congestion	The user is informed and details are logged.
		2 - local-limit-exceeded	The user is informed and details are logged.

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

Table 14: Association Abort Handling

Source	Reason/Diagnosis	Behavior
0 - DICOM UL service-user (initiated abort)	0 - reason-not-specified	Notifies remote AE, terminates the connection and logs the event.
2 - DICOM UL service-provider (initiated abort)	0 - reason-not-specified	Notifies remote AE, terminates the connection and logs the event.
	1- unrecognized-PDU	Notifies remote AE, terminates the connection and logs the event.
	2 - unexpected-PDU	Notifies remote AE, terminates the connection and logs the event.
	4 - unrecognized-PDU parameter	Notifies remote AE, terminates the connection and logs the event.
	5 - unexpected-PDU parameter	Notifies remote AE, terminates the connection and logs the event.
	6 - invalid-PDU-parameter value	Notifies remote AE, terminates the connection and logs the event.

4.2.1.3.1. (Real-World) Activity – Verification as SCU

4.2.1.3.1.1. Description and Sequencing of Activities

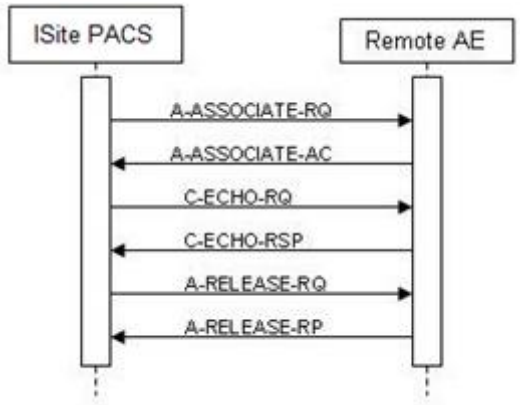


Figure 3: (Real-World) Activity – C-ECHO as SCU

4.2.1.3.1.2. Proposed Presentation Contexts

Table 15: Proposed Presentation Contexts for (Real-World) Activity – Verification as SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Verification SOP Class	1.2.840.10008.1.1	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		

4.2.1.3.1.3. SOP Specific Conformance for Verification SOP Class

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

4.2.1.3.1.3.1. Dataset Specific Conformance for Verification C-ECHO SCU

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

Table 16: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Confirmation	The SCP has successfully responded to the verification request

4.2.1.3.2. Modality Performed Procedure Step as SCU

4.2.1.3.2.1. Description and Sequencing of Activities

IntelliSpace Universal Data Manager 2.1 can be configured to forward MPPS to a configured Forward MPPS node. The forward node can be configured to receive images also. When MPPS messages are received from a modality, the messages are forwarded as such to the forward MPPS node. The MPPS Information model is same as that received from the SCU node.

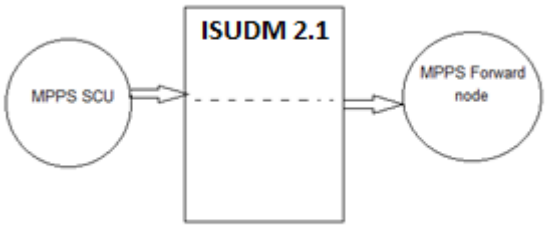


Figure 4 (Real-World) Activity – MPPS as SCU

4.2.1.3.2.2. Proposed Presentation Contexts

Table 17: Proposed Presentation Contexts for (Real-World) Activity – Modality Performed Procedure Step as SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3	Implicit VR Little Endian (Default)	1.2.840.10008.1.2	SCU	None

4.2.1.3.2.3. SOP Specific Conformance for SOP Classes

4.2.1.3.2.3.1. SOP Specific Conformance for Modality Performed Procedure Step SOP Class

The MPPS Information model is same as that received from the SCU node.
IntelliSpace Universal Data Manager 2.1 adds the following details to the MPPS information model while forwarding the MPPS messages.

Table 18: Attributes added to the MPPS forward

Attribute Name	Tag	VR	Comment
>Referenced SOP Class UID	0008,1150	UI	
>Referenced SOP Instance UID	0008,1155	UI	

4.2.1.3.3. (Real-World) Activity – Image Export

4.2.1.3.3.1. Description and Sequencing of Activities

IntelliSpace Universal Data Manager 2.1 client applications use the iExport tool of the IntelliSpace Universal Data Manager 2.1 DICOM Server to initiate and manage DICOM associations with remote Application Entities that support the DICOM Storage Service as a Service Class Provider. The iExport tool allows IntelliSpace Universal Data Manager 2.1 client applications to export DICOM Objects through (C-STORE SCU).

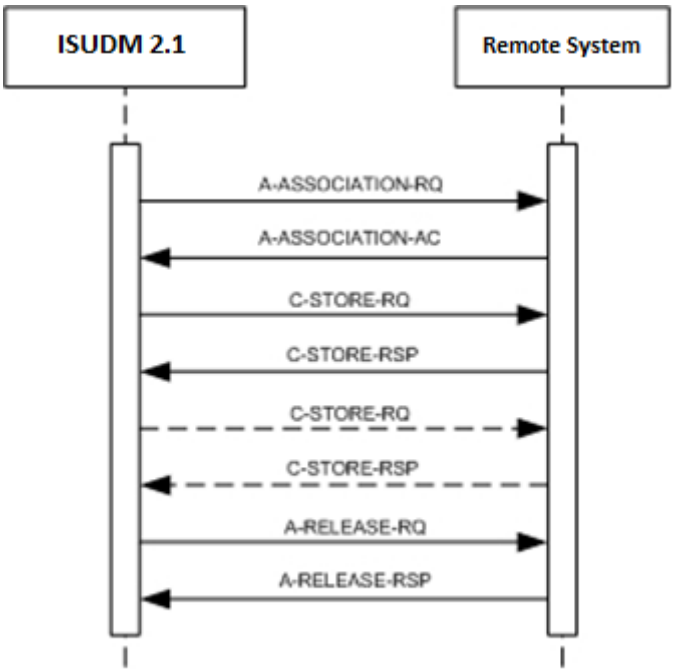


Figure 5: Sequence of C-Store as SCU

4.2.1.3.3.2. Proposed Presentation Contexts

The presentation contexts are defined in table 59.

Table 19: Proposed Presentation Contexts for (Real-World) Activity – Image Export

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name**	**UID**		
Computed Radiography Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.1	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Digital X-Ray Image Storage - For Pres. SOP	1.2.840.10008.5.1.4.1.1.1.1	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Digital X-Ray Image Storage - For Proc. SOP	1.2.840.10008.5.1.4.1.1.1.1.1	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Digital Mammography X-Ray Image Storage - Pres. SOP	1.2.840.10008.5.1.4.1.1.1.2	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Digital Mammography X-Ray Image Storage - Proc. SOP	1.2.840.10008.5.1.4.1.1.1.2.1	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Digital Intra-oral X-Ray Image Storage - Pres. SOP	1.2.840.10008.5.1.4.1.1.1.3	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Digital Intra-oral X-Ray Image Storage - Proc. SOP	1.2.840.10008.5.1.4.1.1.1.3.1	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
CT Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.2	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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 Multi-frame Image Storage (Retired)	1.2.840.10008.5.1.4.1.1.3	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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 Multi-frame Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.3.1	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
MR Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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 MR Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4.1	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
MR Spectroscopy Storage SOP Class	1.2.840.10008.5.1.4.1.1.4.2	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Nuclear Medicine Image Storage (Retired)	1.2.840.10008.5.1.4.1.1.5	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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 (Retired)	1.2.840.10008.5.1.4.1.1.6	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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: Default Transfer Syntax for DICOM	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		
Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
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: Default Transfer Syntax for DICOM	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		
		MPEG2 Main Profile @ Main Level	1.2.840.10008.1.2.4.100		
		MPEG2 Main Profile @ High Level	1.2.840.10008.1.2.4.101		
		MPEG-4 AVC/H.264 High Profile / Level 4.1	1.2.840.10008.1.2.4.102		
		MPEG-4 AVC/H.264 BD-compatible High Profile / Level 4.1	1.2.840.10008.1.2.4.103		
Multi-frame Grayscale Byte SC Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.2	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Multi-frame Grayscale Word SC Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.3	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Multi-frame True Color Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7.4	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Standalone Overlay Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.8	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		

Standalone Curve Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.9	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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: Default Transfer Syntax for DICOM	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: Default Transfer Syntax for DICOM	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: Default Transfer Syntax for DICOM	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: Default Transfer Syntax for DICOM	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		
Cardiac Electrophysiology Waveform Storage	1.2.840.10008.5.1.4.1.1.9.3.1	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Basic Voice Audio Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.4.1	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Standalone Modality LUT Storage (Retired)	1.2.840.10008.5.1.4.1.1.10	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Standalone VOI LUT Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.11	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Color Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.2	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Pseudo-Color Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.3	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Blending Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.4	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
X-Ray Angiographic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.12.1	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		

X-Ray Radiofluoroscopic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.12.2	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Breast Projection X-Ray Image Storage - For Presentattion	1.2.840.10008.5.1.4.1.1.13.1.4	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None
Breast Projection X-Ray Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.13.1.5	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None
Nuclear Medicine Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.20	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Raw Data Storage SOP Class	1.2.840.10008.5.1.4.1.1.66	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Spatial Registration Storage	1.2.840.10008.5.1.4.1.1.66.1	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Spatial Fiducials Storage	1.2.840.10008.5.1.4.1.1.66.2	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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 Endoscopic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.77.1.1	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
		MPEG2 Main Profile @ Main Level	1.2.840.10008.1.2.4.100		
		MPEG2 Main Profile @ High Level	1.2.840.10008.1.2.4.101		
		MPEG-4 AVC/H.264 High Profile / Level 4.1	1.2.840.10008.1.2.4.102		
		MPEG-4 AVC/H.264 BD-compatible High Profile / Level 4.1	1.2.840.10008.1.2.4.103		
VL Microscopic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.77.1.2	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
		MPEG2 Main Profile @ Main Level	1.2.840.10008.1.2.4.100		
		MPEG2 Main Profile @ High Level	1.2.840.10008.1.2.4.101		

		MPEG-4 AVC/H.264 High Profile / Level 4.1	1.2.840.10008.1.2.4.102		
		MPEG-4 AVC/H.264 BD-compatible High Profile / Level 4.1	1.2.840.10008.1.2.4.103		
VL Slide-Coordinates Microscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.3	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
		MPEG2 Main Profile @ Main Level	1.2.840.10008.1.2.4.100		
		MPEG2 Main Profile @ High Level	1.2.840.10008.1.2.4.101		
		MPEG-4 AVC/H.264 High Profile / Level 4.1	1.2.840.10008.1.2.4.102		
		MPEG-4 AVC/H.264 BD-compatible High Profile / Level 4.1	1.2.840.10008.1.2.4.103		
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
		MPEG-4 AVC/H.264 BD-compatible HighProfile / Level 4.1	1.2.840.10008.1.2.4.103		
		MPEG-4 AVC/H.264 High Profile / Level 4.1	1.2.840.10008.1.2.4.102		
		MPEG2 Main Profile @ High Level	1.2.840.10008.1.2.4.101		
		MPEG2 Main Profile @ Main Level	1.2.840.10008.1.2.4.100		
Ophthalmic Photography 8 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.1	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Ophthalmic Photography 16 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.2	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Stereometric Relationship Storage	1.2.840.10008.5.1.4.1.1.77.1.5.3	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Basic Text SR SOP Class	1.2.840.10008.5.1.4.1.1.88.11	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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: Default Transfer Syntax for DICOM	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: Default Transfer Syntax for DICOM	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		
Procedure Log SOP Class	1.2.840.10008.5.1.4.1.1.88.40	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Mammography CAD SR SOP Class	1.2.840.10008.5.1.4.1.1.88.50	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Key Object Selection Document	1.2.840.10008.5.1.4.1.1.88.59	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Chest CAD SR	1.2.840.10008.5.1.4.1.1.88.65	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
X-Ray Radiation Dose SR	1.2.840.10008.5.1.4.1.1.88.67	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Positron Emission Tomography Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.128	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		
Standalone PET Curve Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.129	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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 Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.1	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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 Dose Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.2	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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 Structure Set Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.3	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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: Default Transfer Syntax for DICOM	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: Default Transfer Syntax for DICOM	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: Default Transfer Syntax for DICOM	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: Default Transfer Syntax for DICOM	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 Ion Plan Storage	1.2.840.10008.5.1.4.1.1.481.8	Implicit VR Little Endian: Default Transfer Syntax for DICOM	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		

NOTE:
Normally images are sent out by the IntelliSpace Universal Data Manager 2.1 in the transfer syntax the object is received in. The following exceptions hold:

1. When the IntelliSpace Universal Data Manager 2.1 accepts images that with the RLE transfer syntax, they will be sent out with a proposed transfer syntax of RLE and ELE, upon which the SCP can select the appropriate one.
2. Images received in a lossless JPEG/JPEG2000 transfer syntax and have a compression ratio of less than 7.0 are internally converted into iSyntax and hence send out as ELE.

Table 20: Proposed Presentation Contexts for (Real-World) Activity – Private SOP class Export

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
GE Private eNTEGRA Storage (Xeleris Auto Start/eNTEGRA Protocol Data or NM Genie)	1.2.840.113619.4.27	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		
Philips Private ViewForum 3D Volume New Storage	1.3.46.670589.5.0.1.1	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		
Philips Private ViewForum MR Synthetic Image Storage	1.3.46.670589.5.0.10	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		
Philips Private ViewForum MR Cardio Analysis New	1.3.46.670589.5.0.11.1	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Storage		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private ViewForum CX Synthetic Image Storage	1.3.46.670589.5.0.12	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		
Philips Private ViewForum Perfusion Storage	1.3.46.670589.5.0.13	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		
Philips Private ViewForum Perfusion Analysis Storage	1.3.46.670589.5.0.14	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		
Philips Private ViewForum 3D Volume Object New Storage	1.3.46.670589.5.0.2.1	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		
Philips Private ViewForum Surface New Storage	1.3.46.670589.5.0.3.1	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		
Philips Private ViewForum MR Cardio New Storage	1.3.46.670589.5.0.8.1	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		
Philips Private ViewForum CT Synthetic Image Storage	1.3.46.670589.5.0.9	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		
Philips Private X-Ray Image Storage	1.3.46.670589.2.3.1.1	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		
Philips Private Reconstructed X-ray Storage	1.3.46.670589.2.4.1.1	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		
Philips Private iE33	1.3.46.670589.2.5.1.1	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
3D NEO Presentation State Subpage Storage		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private EasyVision 3D Volume Object Storage	1.3.46.670589.5.0.2	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		
Philips Private Gyroscan MR Series Data	1.3.46.670589.11.0.0.12.2	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		
Philips Private MR Spectrum Storage	1.3.46.670589.11.0.0.12.1	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		
Philips Private EasyVision MR Cardio Storage	1.3.46.670589.5.0.8	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		
Philips Private EasyVision MR Cardio Analysis Storage	1.3.46.670589.5.0.11	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		
Philips Private MR Cardio Profile Image Storage	1.3.46.670589.5.0.7	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		
Philips Private EasyVision Surface Storage	1.3.46.670589.5.0.3	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		
Philips Private EasyVision Volume Storage	1.3.46.670589.5.0.1	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		

4.2.1.3.3. SOP Specific Conformance for Storage SOP Classes

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

4.2.1.3.3.1. Dataset Specific Conformance for C-STORE-RQ

Details regarding the Dataset Specific response behavior are reported in this section. This includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs.

Table 21: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Successful stored	C-STORE-RQ accepted
Failure	Xxxx	Failed to store	Log the error in the IntelliSpace Universal Data Manager 2.1 iExport tool log file and retry the C-STORE-RQ a configurable amount of times after a configurable period of time.

Table 22: Communication Failure Behavior

Exception	Behavior
Association aborted	Log the error in the IntelliSpace Universal Data Manager 2.1 iExport tool log file and C-STORE-RQ is retried a configurable number of times at a configurable period of time.
Rejected, Image type is not supported by the remote Application Entity (Unacceptable service)	Log the error in the IntelliSpace Universal Data Manager 2.1 iExport tool log file and continue on sending the next image in the series.

4.2.1.3.4. (Real-World) Activity – Storage Commitment Push Model as SCU

4.2.1.3.4.1. Description and Sequencing of Activities

The IntelliSpace Universal Data Manager 2.1 supports synchronous mode and asynchronous mode for storage commitment SCU.

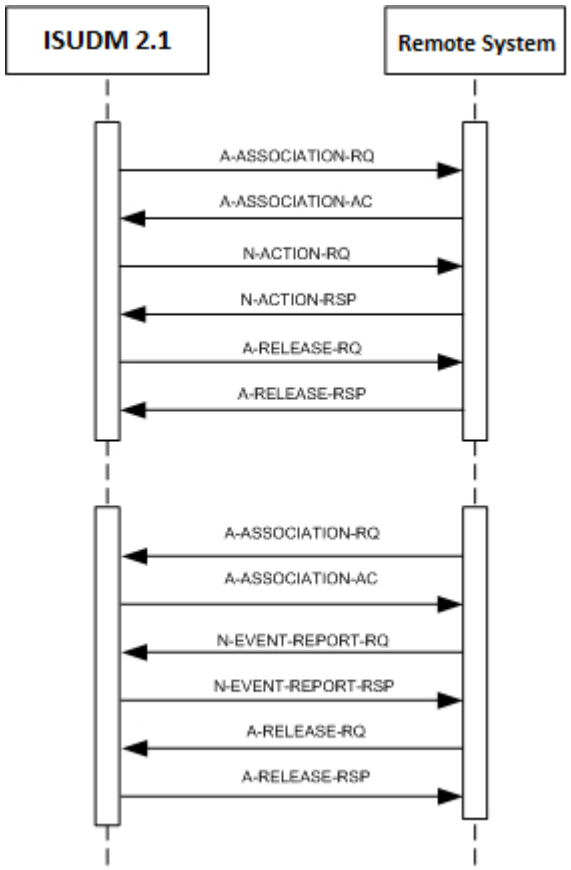


Figure 6: (Real-World) Activity – Asynchronous Storage Commitment as SCU

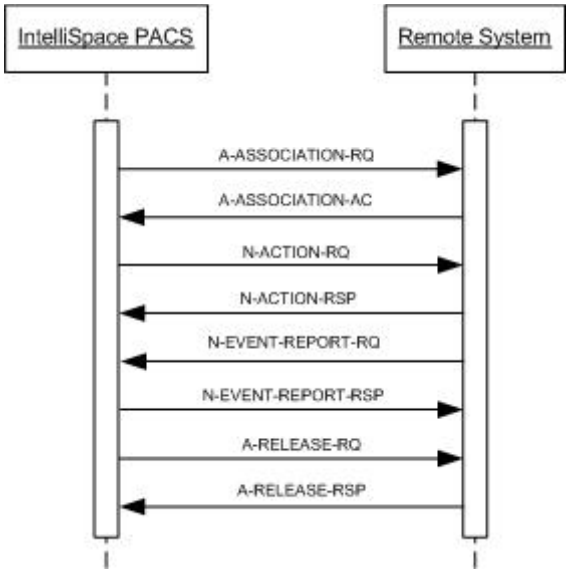


Figure 7: (Real-World) Activity – Synchronous Storage Commitment as SCU

4.2.1.3.4.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 23: Proposed Presentation Contexts for (Real-World) Activity – Storage Commitment Push Model as SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		

4.2.1.3.4.3. SOP Specific Conformance for SCU Storage Commitment Push Model SOP Class

The associated Activity with the Storage Commitment Push Model service is the communication by the STORAGE-SCU AE to peer AEs that it requested the SCP to commit to permanently store Composite SOP Instances that have been sent to it. It thus allows IntelliSpace Universal Data Manager 2.1 to perform as a VNA Client and determine whether the VNA Server (Storage SCP) has taken responsibility for the archiving of specific SOP Instances so that IntelliSpace Universal Data Manager 2.1 VNA Client (Storage SCU) can remove these SOP Instances from his system.
The SCU uses the N-ACTION primitive to request the SCP the safekeeping of a set of SOP Instances.

Upon receipt of a successful N-ACTION Response Status Code from the SCP, the SCU now knows that the SCP has received the N-ACTION request. Then the next step is to receive the N-EVENT-REPORT from the SCP, where it is reporting which SOP Instances have been successfully received and which have not successfully received.
IntelliSpace Universal Data Manager 2.1 Storage SCU, can receive the N-EVENT-REPORT either on the same association it sent the N-ACTION, or it can receive it on a new association established by the peer SCP.

The Storage SCU will wait for a certain time (wait time is configurable and it is defaulted to 60 seconds) to receive the Storage reply on the same association. When timed out the SCU storage will close the association and will accept later a new association from the Storage SCP to receive the N-Event-Report with the Status of the Storage Commitment.

The STORAGE-SCU will release the storage of the objects that have been committed by the Storage SCP, while for the other objects that the SCP did not accepted the SCU Storage will resend those objects and then after it will re send the Storage commitment for the left objects that have not yet been committed.

The STORAGE-SCU AE does not support the optional Storage Media File-Set ID & UID attributes in the N-ACTION.

4.2.1.3.4.3.1. Dataset Specific Conformance for Storage Commitment Push Model SOP Class N-EVENT-REPORT-SCP

IntelliSpace Universal Data Manager 2.1 server SCU will wait for the N-EVENT-REPORT on the same N-ACTION association for a certain time that is user configurable and is defaulted to 60 seconds, upon the receiving the N-ACTION-RQ reply. Then after the SCU will drop the N-ACTION Association and the SCP can send the N-EVENT-REPORT, later on a separate association. When the N-EVENT-REPORT is received with the status of the instances that were committed or refused, then the SCU will remove/mark deleted all the instances committed. While for the instances that were not committed, if any, the SCU will make another try to resend those instances and then request the commitment. If second attempt fails completely or partially then a warning will be displayed on the User Interface screen.

Table 24: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Successful store	Message was received successfully
Failed	0110	Operation failed	If failed to parse the message. Association is aborted.

Service Status	Error Code	Further Meaning	Behavior
	0119	Class instance Conflict	Class instance conflict. Association is aborted.
	0210	Duplicate	Duplicate invocation. Association is aborted.
	0115	Bad argument	Invalid argument value. Association is aborted.
	0212	Wrong argument	Mistyped argument. Association is aborted.
	0114	No argument	No such argument. Association is aborted.
	0113	Wrong event type	No such event type. Association is aborted.
	0118	Wrong SOP class	No such SOP class. Association is aborted.
	0112	Wrong SOP instance	No such SOP instance. Association is aborted.
	0213	Resource limitation	No resources available. Association is aborted.
	0211	Unrecognized operation	Such operation is not recognized. Association is aborted.

4.2.1.3.4.3.2. Dataset Specific Conformance for Storage Commitment Push Model SOP Class N-ACTION-SCU

The IntelliSpace Universal Data Manager 2.1 server Storage SCU initiates the storage commitment request through an N-ACTION-RQ Commitment Push specifying the transaction UID for synchronization with the SCP responses and the referenced SOP instances that need to be committed. The Storage Media File-Set is not supported. Upon sending the N-ACTION-RQ, the SCU will wait for the SCP reply. If the reply is successful then the SCU knows that the SCP received the Storage Commit request and it should expect to receive from the SCP the N-Event-Report with the status of the requested instances. If the reply contains an error then the Storage Commit has failed. The next table shows the Status codes for the N-Action-RQ reply.

The Storage AE will consider Storage Commitment failed if no N-EVENT-REPORT is received for a Transaction UID within a configurable time period after receiving a successful N-ACTION response (duration of applicability for a Transaction UID).
The Storage Commitment SCU Retry is driven by the Configuration parameter for Storage Commitment Retry. The value of the configuration parameter is in minutes and defaults to 5.

Table 25: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Success	The request for storage comment is considered successfully sent. A timer is started which will expire if no N-EVENT-REPORT for the Transaction UID is received within a configurable timeout period.
*	*	Any other status code.	The Association is aborted using A-ABORT and the request for storage comment is marked as failed. The status meaning is logged and reported to the user.

4.2.1.4. Association Acceptance Policy

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

Table 26: Association Reject Reasons

Result	Source	Reason/Diagnosis	Explanation
1 - rejected-permanent	1 - DICOM UL service-user	1 - no-reason-given	Association is not established and details are logged.
		2 - application-context-name-not supported	
		3 - calling-AE-title-not-recognized	
		7 - called-AE-title-not-recognized	

Result	Source	Reason/Diagnosis	Explanation
	2 - DICOM UL service-provider (ACSE related function)	1 - no-reason-given	
		2 - protocol-version-not-supported	
	3 - DICOM UL service-provider(Presentation related function)	1 - temporary-congestion	
		2 - Local-limit-exceeded	
2 - rejected-transient	1 - DICOM UL service-user	1 - no-reason-given	
		2 - application-context-name-not-supported	
		3 - calling-AE-title-not-recognized	
		7 - called-AE-title-not-recognized	
	2 - DICOM UL service-provider (ACSE related function)	1 - no-reason-given	
		2 - protocol-version-not-supported	
	3 - DICOM UL service-provider (Presentation related function)	1 - temporary congestion	
		2 - local-limit-exceeded	

The behavior of the AE for sending an association abort is summarized in next table

Table 27: Association Abort Policies

Source	Reason/Diagnosis	Behavior
0 - DICOM UL service-user (initiated abort)	0 - reason-not-specified	When received, terminates the connection and logs the event.
2 - DICOM UL service-provider (initiated abort)	0 - reason-not-specified	
	1 - unrecognized-PDU	
	2 - unexpected-PDU	
	4 - unrecognized-PDU parameter	
	5 - unexpected-PDU parameter	
	6 - invalid-PDU-parameter value	

4.2.1.4.1. (Real-World) Activity – Verification as SCP

4.2.1.4.1.1. Description and Sequencing of Activities

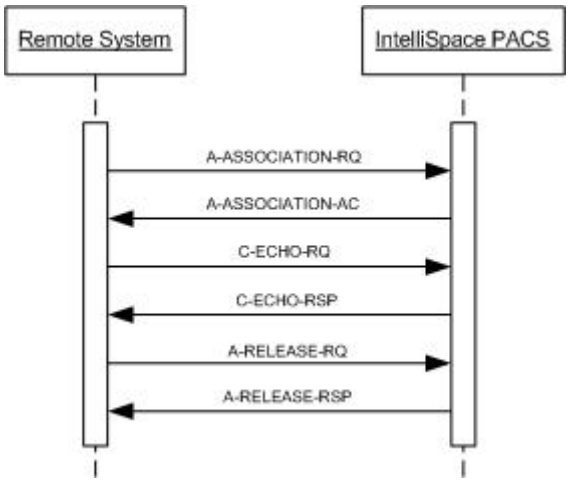


Figure 8: (Real-World) Activity – C-ECHO as SCP

4.2.1.4.1.2. Accepted Presentation Contexts

The presentation contexts are defined in next table.

Table 28: Acceptable Presentation Contexts for (Real-World) Activity – Verification as SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Verification SOP Class	1.2.840.10008.1.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		

4.2.1.4.1.3. SOP Specific Conformance for Verification SOP Class

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

4.2.1.4.1.3.1. Dataset Specific Conformance for Verification C-ECHO SCP

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

Table 29: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Success	C-Echo request accepted

4.2.1.4.2. (Real-World) Activity – Modality Performed Procedure Step as SCP

4.2.1.4.2.1. Description and Sequencing of Activities

The IntelliSpace Universal Data Manager 2.1 DICOM Server will accept DICOM Modality Performed Procedure Step association request that are initiated by remote DICOM entities. The IntelliSpace Universal Data Manager 2.1 DICOM Server will process the incoming MPPS messages and forward them to configured DICOM clients.

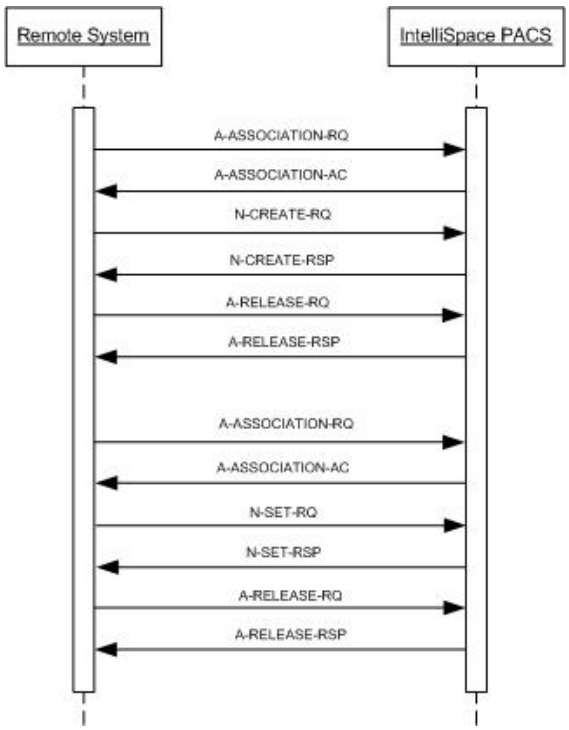


Figure 9: (Real-World) Activity – MPPS as SCP

4.2.1.4.2.2. Accepted Presentation Contexts

The presentation contexts are defined in next table.

Table 30: Acceptable Presentation Contexts for (Real-World) Activity – Modality Performed Procedure Step as SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		

4.2.1.4.2.3. SOP Specific Conformance for Modality Performed Procedure Step SOP Class

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

4.2.1.4.2.3.1. Dataset Specific Conformance for Modality Performed Procedure Step N-CREATE SCP

The IntelliSpace Universal Data Manager 2.1 Server MPPS SCP expects the following attributes to be available in the N-CREATE message for it to be considered valid. If an attribute is missing fail status is returned.

Table 31: Attributes for for Modality Performed Procedure Step N-CREATE SCP

Tag	Name
[0000,0002]	Affected SOP Class UID
[0000,1000]	Affected SOP Instance UID
[0008,0050]	Accession Number
[0008,0060]	Modality
Tag	**Name**
[0010,0010]	Patient Name
[0010,0020]	Patient ID
[0010,0030]	Patient Birth Date
[0020,000D]	Study Instance UID
[0020,0010]	Study ID
[0040,0009]	Schedule Procedure Step ID
[0040,0241]	Performed Station AE Title
[0040,0244]	Performed Procedure Step Start Date
[0040,0245]	Performed Procedure Step Start Time
[0040,0250]	Performed Procedure Step End Date
[0040,0251]	Performed Procedure Step End Time
[0040,0252]	Performed Procedure Step Status
[0040,0253]	Performed Procedure Step ID
[0040,0270]	Scheduled Step Attributes Sequence
[0040,1001]	Requested Procedure ID

Table 32: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Success	The N-CREATE-RQ is forwarded to the configured DICOM MPPS SCP
Failed	0121	Missing attribute value	The N-CREATE command is not forwarded to the configured DICOM MPPS SCP. Error is logged in the IntelliSpace Universal Data Manager 2.1 Server.

Table 33: Communication Failure Behavior

Exception	Behavior
Timeout	The association is released and the reason is logged
Association Aborted	The association is released and the reason is logged

4.2.1.4.2.3.2. Dataset Specific Conformance for Modality Performed Procedure Step N-SET SCP

The IntelliSpace Universal Data Manager 2.1 Server MPPS SCP expects the following attributes to be available in the N-SET message for it to be considered valid. If the attribute is missing fail status is returned.

Table 34: Attributes for for Modality Performed Procedure Step N-SET SCP

Tag	Name
[0000,1000]	Affected SOP Instance UID
[0000,1001]	Requested SOP Instance UID
[0040,0250]	Performed Procedure Step End Date

[0040,0251]	Performed Procedure Step End Time
[0040,0252]	Performed Procedure Step Status

Table 35: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Success	The N-SET-RQ is forwarded to the configured DICOM MPPS SCP
Failed	0121	Missing attribute value	The N-SET-RQ command is not forwarded to the configured DICOM MPPS SCP. Error is logged in the IntelliSpace Universal Data Manager 2.1 Server.

Table 36: Communication Failure Behavior

Exception	Behavior
Timeout	The association is released and the reason is logged
Association Aborted	The association is released and the reason is logged

4.2.1.4.3. (Real-World) Activity – C-FIND as SCP

4.2.1.4.3.1. Description and Sequencing of Activities

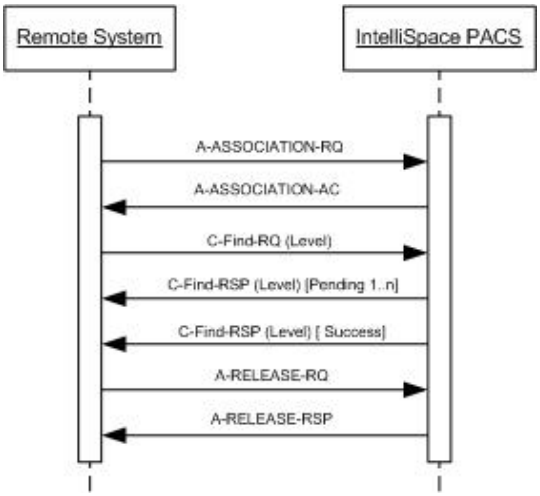


Figure 10: (Real-World) Activity – C-Find as SCP

4.2.1.4.3.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

Table 37: Acceptable Presentation Contexts for (Real-World) Activity – C-FIND as SCP

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Ext. Neg.
Name	UID	Name List	UID List		
Patient Root QR Information Model - C-FIND SOP Class	1.2.840.10008.5.1.4.1.2.1.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Patient/Study Only QR Info. Model - C-FIND SOP Class (Retired)	1.2.840.10008.5.1.4.1.2.3.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Study Root QR Information Model - C-FIND SOP Class	1.2.840.10008.5.1.4.1.2.2.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		

4.2.1.4.3.3. SOP Specific Conformance for Patient Root QR Information Model - C-FIND SOP Class

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

4.2.1.4.3.3.1. Dataset Specific Conformance for Patient Root QR Information Model - FIND SOP Class C-FIND-SCP

The supported Query keys and the DICOM command communication behavior are shown in the following tables. The standard as well as the specific status codes and their corresponding behavior are also specified.

Table 38: Requested Query Keys for Patient Root Information Model

Patient Root Information Model				
Attribute Name	**Tag**	**VR**	**Type Of Matching**	**Comment**
Q/R Patient level (Patient Root)				
Patient's Name	0010,0010	PN	Single Value, Universal, Wildcard	
Patient ID	0010,0020	LO	Single Value, Wildcard	
Patient’s Birth Date	0010,0030	DA	Single Value, Range	Optional Attribute. Returned when available
Patient’s Sex	0010,0040	CS	Single Value, Wildcard	Optional Attribute. Returned when available
Q/R Study level (Patient Root)				
Study Date	0008,0020	DA	Single Value, Range, Universal	
Study Time	0008,0030	TM	Single Value, Range, Universal	
Accession Number	0008,0050	SH	Single Value, Universal, Wildcard	
Referring Physicians Name	0008,0090	PN	Single Value, Universal, Wildcard	Optional Attribute
Study Description	0008,1030	LO	Universal	Optional Attribute. when available
Patient's Name	0010,0010	PN	Universal,	Patient’s Name key

			Wildcard	attribute matching type is implicitly converted from a single value matching to wild card matching by adding a wild card "*" character at the end of its value.
Patient ID	0010,0020	LO	Single Value	
Study Instance UID	0020,000D	UI	Single Value, Universal, List of UID	
Study ID	0020,0010	SH	Single Value, Universal, Wildcard	
Number of Study Related Series	0020,1206	IS	Universal	Optional Attribute Not used in Matching but returned when available.
Number of Study Related Instances	0020,1208	IS	Universal	Optional Attribute Not used in Matching but returned when available.
Modalities in Study	0008, 0061	CS	Single Value, Universal	Optional Attribute
Q/R Series level (Patient Root)				
Modality	0008,0060	CS	Single Value, Universal	
Patient ID	0010,0020	LO	Single Value	
Body Part Examined	0018,0015	CS	Universal	
Study Instance UID	0020,000D	UI	Single Value	
Series Instance UID	0020,000E	UI	Single Value, Universal, List Of UID	
Series Number	0020,0011	IS	Single Value, Universal	
Number of Series Related Images	0020,1209	IS	Universal	Optional Attribute Not used in Matching but returned when available.
Performed Procedure Step Start Date	0040,0244	DA	Single Value, Range, Universal	
Performed Procedure Step Start Time	0040,0245	TM	Single Value, Range, Universal	
Request Attribute Sequence	0040,0275	SQ	N/A	Optional Attribute Matching is performed up to 1 item level
>Requested Procedure ID	0040,1001	SH	Single Value, Universal, Wildcard	
>Scheduled Procedure Step ID	0040,0009	SH	Single Value, Universal, Wildcard	
Q/R Image level (Patient Root)				
Series Instance UID	0020,000E	UI	Single Value	
Image Type	0008,0008	CS	Universal	
SOP Instance UID	0008,0018	UI	Single Value, Universal, List Of UID	
Patient ID	0010,0020	LO	Single Value	
Study Instance UID	0020,000D	UI	Single Value	
Instance Number	0020,0013	IS	Single Value, Universal	

Table 39: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Matching is complete	A response is sent with this status code.
Failed	A700	Out of resources	Logged and released association.
	A900	Invalid dataset	A response is sent with this status code. The reason is logged in the file
	C000	Unable to process	A response is sent with this status code. The reason is logged in the file
	C001	Unable to process due to missing unique tags	A response is sent with this status code. The reason is logged in the file
Pending	FF00	Current match is supplied	Matches are continuing; Current match is supplied.
Cancel	FE00	Matching terminated due to Cancel Request	No more C-FIND Pending responses will be sent and a final response is sent with this status code. Cancel Request is logged.

Table 40: Communication Failure Behavior

Exception	Behavior
Timeout	The association is released and the reason is logged
Association Aborted	The association is released and the reason is logged

4.2.1.4.3.4. SOP Specific Conformance for Patient/Study Only QR Information Model - C-FIND SOP Class (Retired) - SCP

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

4.2.1.4.3.4.1. Dataset Specific Conformance for Patient/Study Only QR Information Model - FIND SOP Class C-FIND-SCP

The supported Query keys and the DICOM command communication behavior are shown in the following tables. The standard as well as the specific status codes and their corresponding behavior are also specified.

Table 41: Requested Query Keys for Patient/Study Only Information Model

Patient/Study Only Information Model				
Attribute Name	**Tag**	**VR**	**Type Of Matching**	**Comment**
Q/R Patient level (Patient/Study Only)				
Patient's Name	0010,0010	PN	Single Value, Universal, Wildcard	
Patient ID	0010,0020	LO	Single Value, Wildcard	
Patient's Birth Date	0010,0030	DA	Single Value, Range	Optional Attribute. Returned when available
Patient's Sex	0010,0040	CS	Single Value, Wildcard	Optional Attribute. Returned when available
Q/R Study level (Patient/Study Only)				
Study Date	0008,0020	DA	Single Value, Range, Universal	
Study Time	0008,0030	TM	Single Value, Range, Universal	
Accession Number	0008,0050	SH	Single Value, Universal, Wildcard	

Modalities in Study	0008,0061	CS	Single Value, Universal	
Referring Physician's Name	0008,0090	PN	Single Value, Universal, Wildcard	Optional Attribute
Study Description	0008,1030	LO	N/A	Optional Attribute. Not used in Matching but returned when available
Patient's Name	0010,0010	PN	Universal, Wildcard	Patient's Name key attribute matching type is implicitly converted from a single value matching to wild card matching by adding a wild card "*" character at the end of its value.
Patient ID	0010,0020	LO	Single Value	
Study Instance UID	0020,000D	UI	Single Value, Universal, List Of UID	
Study ID	0020,0010	SH	Single Value, Universal, Wildcard	
Number of Study Related Series	0020,1206	IS	Universal	Optional Attribute Not used in Matching but returned when available
Number of Study Related Instances	0020,1208	IS	Universal	Optional Attribute Not used in Matching but returned when available.

Table 42: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Matching is complete	A response is sent with this status code.
Failure	A700	Out of resources	Logged and released association.
	A900	Invalid dataset	A response is sent with this status code. The reason is logged in the file
	C000	Unable to process	A response is sent with this status code. The reason is logged in the file
	C001	Unable to process due to missing unique tags	A response is sent with this status code. The reason is logged in the file
Pending	FF00	Current match is supplied	Matches are continuing; Current match is supplied.
Cancel	FE00	Matching terminated due to Cancel Request	No more C-FIND Pending responses will be sent and a final response is sent with this status code. Cancel Request is logged.

Table 43: Communication Failure Behavior

Exception	Behavior
Timeout	The association is released and the reason is logged
Association Aborted	The association is released and the reason is logged

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

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

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

The supported Query keys and the DICOM command communication behavior are shown in the following tables. The standard as well as the specific status codes and their corresponding behavior are also specified.

Table 44: Requested Query Keys for Study Root Information Model

Study Root Information Model				
Attribute Name	**Tag**	**VR**	**Type Of Matching**	**Comment**
Q/R Study level (Study Root)				
Study Date	0008,0020	DA	Single Value, Range, Universal	
Study Time	0008,0030	TM	Single Value, Range, Universal	
Accession Number	0008,0050	SH	Single Value, Universal, Wildcard	
Modalities in Study	0008,0061	CS	Single Value, Universal	Optional Attribute
Referring Physician's Name	0008,0090	PN	Single Value, Universal, Wildcard	Optional Attribute
Study Description	0008,1030	LO	N/A	Optional Attribute. Not used in Matching but returned when available
Patient's Name	0010,0010	PN	Single Value, Universal, Wildcard	
Patient ID	0010,0020	LO	Single Value, Wildcard	
Patient's Birth Date	0010,0030	DA	Single Value, Range	Optional Attribute. Returned when available
Patient's Sex	0010,0040	CS	Single Value, Wildcard	Optional Attribute. Returned when available
Study Instance UID	0020,000D	UI	Single Value, Universal, List Of UID	
Study ID	0020,0010	SH	Single Value, Universal, Wildcard	
Number of Study Related Instances	0020,1208	IS	Universal	Optional Attribute Not used in Matching but returned when available.
Number of Study Related Series	0020, 1206	IS	Universal	Optional Attribute Not used in Matching but returned when available.
Q/R Series level (Study Root)				
Modality	0008,0060	CS	Single Value, Universal	
Body Part Examined	0018,0015	CS	Universal	
Study Instance UID	0020,000D	UI	Single Value	
Series Instance UID	0020,000E	UI	Single Value, Universal, List Of UID	
Series Number	0020,0011	IS	Single Value, Universal	
Number of Series Related Images	0020,1209	IS	Universal	Optional Attribute Not used in Matching but returned when available.
Performed Procedure Step Start Date	0040,0244	DA	Single Value, Range,	

			Universal	
Performed Procedure Step Start Time	0040,0245	TM	Single Value, Range, Universal	
Request Attribute Sequence	0040,0275	SQ	N/A	Optional Attribute Matching is performed up to 1 item level
>Scheduled Procedure Step ID	0040,0009	SH	Single Value, Universal, Wildcard	
>Requested Procedure ID	0040,1001	SH	Single Value, Universal, Wildcard	
Q/R Image level (Study Root)				
Image Type	0008,0008	CS	Universal	
SOP Instance UID	0008,0018	UI	Single Value, Universal, List Of UID	
Study Instance UID	0020,000D	UI	Single Value	
Series Instance UID	0020,000E	UI	Single Value	
Instance Number	0020,0013	IS	Single Value, Universal	

Table 45: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Matching is complete	A response is sent with this status code.
Failure	A700	Out of resources	Logged and released association.
	A900	Invalid dataset	A response is sent with this status code. The reason is logged in the file
	C000	Unable to process	A response is sent with this status code. The reason is logged in the file
	C001	Unable to process due to missing unique tags	A response is sent with this status code. The reason is logged in the file
Pending	FF00	Current match is supplied	Matches are continuing; Current match is supplied.
Cancel	FE00	Matching terminated due to Cancel Request	No more C-FIND Pending responses will be sent and a final response is sent with this status code. Cancel Request is logged.

Table 46: Communication Failure Behavior

Exception	Behavior
Timeout	The association is released and the reason is logged
Association Aborted	The association is released and the reason is logged

4.2.1.4.4. (Real-World) Activity – C-MOVE as SCP

4.2.1.4.4.1. Description and Sequencing of Activities

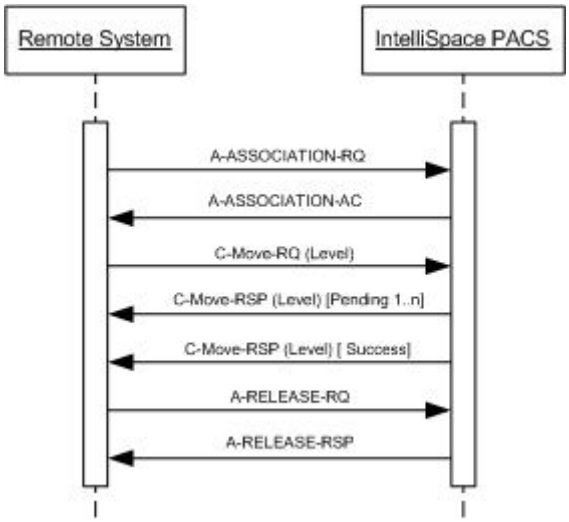


Figure 11: (Real-World) Activity – C-Move as SCP

4.2.1.4.4.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

Table 47: Acceptable Presentation Contexts for (Real-World) Activity – C-MOVE as SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Patient Root QR Information Model - C-MOVE SOP Class	1.2.840.10008.5.1.4.1.2.1.2	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Patient/Study Only QR Info. Model - C-MOVE SOP Class (Retired)	1.2.840.10008.5.1.4.1.2.3.2	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Study Root QR Information Model - C-MOVE SOP Class	1.2.840.10008.5.1.4.1.2.2.2	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		

4.2.1.4.4.3. SOP Specific Conformance for Patient Root QR Information Model - C-MOVE SOP Class

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

4.2.1.4.4.3.1. Dataset Specific Conformance for Patient Root QR Information Model - C-MOVE SOP Class C-MOVE-SCP

The supported C-MOVE request keys and the DICOM command communication behavior are shown in the following tables. The standard as well as the specific status codes and their corresponding behavior are also specified.

Table 48: Identifiers for C-MOVE Patient Root Information Model as SCP

Patient Root Information Model			
Attribute Name	**Tag**	**VR**	**Comment**
Q/R Patient level			
Patient ID	0010,0020	LO	
Q/R Study level (Patient Root)			
Patient ID	0010,0020	LO	
Study Instance UID	0020,000D	UI	
Q/R Series level (Patient Root)			
Patient ID	0010,0020	LO	
Study Instance UID	0020,000D	UI	
Series Instance UID	0020,000E	UI	
Q/R Image level (Patient Root)			
SOP Instance UID	0008,0018	UI	
Patient ID	0010,0020	LO	
Study Instance UID	0020,000D	UI	
Series Instance UID	0020,000E	UI	

Table 49: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Sub-operations complete – No Failures	A response with this status code is sent.
Failed	A700	Out of resources	Logged and released association.
	A900	Invalid dataset	A response with this status code is sent. The reason is logged in the file
	C001	Unable to process	A response with this status code is sent. The reason is logged in the file
Warning	B000	Sub-operations compete – 1 or more failures	A response with this status code is sent when 1 or more export jobs fail
Pending	FF00	Sub-operations are continuing	A response with this status code is sent.
Cancel	FE00	Sub-operations are terminated due to cancel Request	A response with this status code is sent. Cancel request is sent to export work item. The reason is logged in the file.

Table 50: Communication Failure Behavior

Exception	Behavior
Timeout	The association is released and the reason is logged
Association Aborted	The association is released and the reason is logged

4.2.1.4.4. SOP Specific Conformance for Patient/Study Only QR Info. Model - C-MOVE SOP Class (Retired)

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

4.2.1.4.4.1. Dataset Specific Conformance for Patient/Study Only QR Info. Model - C-MOVE SOP Class C-MOVE-SCP

The supported C-MOVE request keys and the DICOM command communication behavior are shown in the following tables. The standard as well as the specific status codes and their corresponding behavior are also specified.

Table 51: Identifiers for C-MOVE Patient/Study Only Information Model as SCP

Patient/Study Only Information Model			
Attribute Name	**Tag**	**VR**	**Comment**
Q/R Patient level (Patient/Study Only)			
Patient ID	0010,0020	LO	
Q/R Study level (Patient/Study Only)			
Patient ID	0010,0020	LO	
Study Instance UID	0020,000D	UI	

Table 52: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Sub-operations complete – No Failures	A response with this status code is sent.
Failed	A700	Out of resources	Logged and released association.
	A900	Invalid dataset	A response with this status code is sent. The reason is logged in the file
	C001	Unable to process	A response with this status code is sent. The reason is logged in the file
Warning	B000	Sub-operations compete – 1 or more failures	A response with this status code is sent when 1 or more export jobs fail
Pending	FF00	Sub-operations are continuing	A response with this status code is sent.
Cancel	FE00	Sub-operations are terminated due to cancel Request	A response with this status code is sent. Cancel request is sent to export work item. The reason is logged in the file.

Table 53: Communication Failure Behavior

Exception	Behavior
Timeout	The association is released and the reason is logged
Association Aborted	The association is released and the reason is logged

4.2.1.4.5. SOP Specific Conformance for Study Root QR Information Model - C-MOVE SOP Class

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

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

The supported C-MOVE request keys and the DICOM command communication behavior are shown in the following tables. The standard as well as the specific status codes and their corresponding behavior are also specified.

Table 54: Identifiers for C-MOVE Study Root Information Model as SCP

Study Root Information Model			
Attribute Name	**Tag**	**VR**	**Comment**
Q/R Study level (Study Root)			
Patient ID	0010,0020	LO	
Study Instance UID	0020,000D	UI	
Q/R Series level (Study Root)			
Study Instance UID	0020,000D	UI	
Series Instance UID	0020,000E	UI	
Q/R Image level (Study Root)			
SOP Instance UID	0008,0018	UI	
Study Instance UID	0020,000D	UI	
Series Instance UID	0020,000E	UI	

Table 55: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Sub-operations complete – No Failures	A response with this status code is sent.
Failed	A700	Out of resources	Logged and released association.
	A900	Invalid dataset	A response with this status code is sent. The reason is logged in the file
	C001	Unable to process	A response with this status code is sent. The reason is logged in the file
Warning	B000	Sub-operations compete – 1 or more failures	A response with this status code is sent when 1 or more export jobs fail
Pending	FF00	Sub-operations are continuing	A response with this status code is sent.
Cancel	FE00	Sub-operations are terminated due to cancel Request	A response with this status code is sent. Cancel request is sent to export work item. The reason is logged in the file.

Table 56: Communication Failure Behavior

Exception	Behavior
Timeout	The association is released and the reason is logged
Association Aborted	The association is released and the reason is logged

4.2.1.4.5. (Real-World) Activity – Image Import

4.2.1.4.5.1. Description and Sequencing of Activities

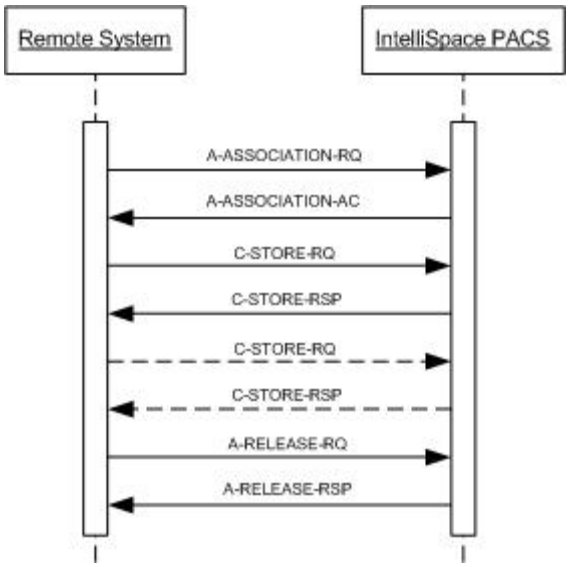


Figure 12: (Real-World) Activity – C-Store as SCP

4.2.1.4.5.2. Accepted Presentation Contexts

The presentation contexts are defined in next table.

Table 57: Acceptable Presentation Contexts for (Real-World) Activity – Image Import

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
12-Lead ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Ambulatory ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.3	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Basic Voice Audio Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.4.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Blending Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.4	JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		None
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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 Big Endian	1.2.840.10008.1.2.2		
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3	JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		None
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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 Big Endian	1.2.840.10008.1.2.2		
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Cardiac Electrophysiology Waveform Storage	1.2.840.10008.5.1.4.1.1.9.3.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Color Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.2	JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		None
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
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		
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Computed Radiography Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
		RLE Lossless	1.2.840.10008.1.2.5		
Digital Intra-oral X-Ray Image Storage - Pres. SOP	1.2.840.10008.5.1.4.1.1.1.3	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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 Intra-oral X-Ray Image Storage - Proc. SOP	1.2.840.10008.5.1.4.1.1.1.3.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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	1.2.840.10008.5.1.4.1.1.2.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
		JPEG Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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 CDA Storage	1.2.840.10008.5.1.4.1.1.104.2	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
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		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Enhanced US Volume Storage SOP Class	1.2.840.10008.5.1.4.1.1.6.2	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
		JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50		
		JPEG Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
General ECG Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.1.2	Explicit VR Big Endian	1.2.840.10008.1.2.2		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	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Hemodynamic Waveform Storage SOP Class	1.2.840.10008.5.1.4.1.1.9.2.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
MR Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Multi-frame Single Bit Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
		MPEG2 Main Profile @ Main Level	1.2.840.10008.1.2.4.100		
		MPEG2 Main Profile @ High Level	1.2.840.10008.1.2.4.101		
		MPEG-4 AVC/H.264 High Profile / Level 4.1	1.2.840.10008.1.2.4.102		
		MPEG-4 AVC/H.264 BD-compatible High Profile / Level 4.1	1.2.840.10008.1.2.4.103		
Multi-frame True Color Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7.4	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
		RLE Lossless	1.2.840.10008.1.2.5		
Nuclear Medicine Image Storage (Retired)	1.2.840.10008.5.1.4.1.1.5	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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 SOP Class	1.2.840.10008.5.1.4.1.1.77.1.5.2	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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 SOP Class	1.2.840.10008.5.1.4.1.1.77.1.5.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
		JPEG Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
Pseudo-Color Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.3	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
		RLE Lossless	1.2.840.10008.1.2.5		
RT Beams Treatment Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.4	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
RT Brachy Treatment Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.6	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
RT Dose Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.2	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
RT Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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 Beams Treatment Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.9	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
RT Ion Plan Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.8	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
RT Plan Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.5	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
RT Structure Set Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.3	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
RT Treatment Summary Record Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.7	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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 Fiducials Storage SOP Class	1.2.840.10008.5.1.4.1.1.66.2	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Spatial Registration Storage SOP Class	1.2.840.10008.5.1.4.1.1.66.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Standalone Curve Storage SOP Class	1.2.840.10008.5.1.4.1.1.9	Explicit VR Big Endian	1.2.840.10008.1.2.2		None

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
(Retired)		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Standalone Modality LUT Storage (Retired)	1.2.840.10008.5.1.4.1.1.10	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Standalone Overlay Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.8	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Standalone PET Curve Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.129	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Standalone VOI LUT Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.11	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Stereometric Relationship Storage	1.2.840.10008.5.1.4.1.1.77.1.5.3	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Ultrasound Image Storage (Retired)	1.2.840.10008.5.1.4.1.1.6	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Ultrasound Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.6.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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 (Retired)	1.2.840.10008.5.1.4.1.1.3	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
VL Endoscopic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.77.1.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		MPEG2 Main Profile @ Main Level	1.2.840.10008.1.2.4.100		
		MPEG2 Main Profile @ High Level	1.2.840.10008.1.2.4.101		
		MPEG-4 AVC/H.264 High Profile / Level 4.1	1.2.840.10008.1.2.4.102		
		MPEG-4 AVC/H.264 BD-compatible High Profile / Level 4.1	1.2.840.10008.1.2.4.103		
VL Microscopic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.77.1.2	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		MPEG2 Main Profile @ Main Level	1.2.840.10008.1.2.4.100		
		MPEG2 Main Profile @ High Level	1.2.840.10008.1.2.4.101		
		MPEG-4 AVC/H.264 High Profile / Level 4.1	1.2.840.10008.1.2.4.102		
		MPEG-4 AVC/H.264 BD-compatible High Profile / Level 4.1	1.2.840.10008.1.2.4.103		
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		
		MPEG2 Main Profile @ Main Level	1.2.840.10008.1.2.4.100		
		MPEG2 Main Profile @ High Level	1.2.840.10008.1.2.4.101		
		MPEG-4 AVC/H.264 High Profile / Level 4.1	1.2.840.10008.1.2.4.102		
		MPEG-4 AVC/H.264 BD-compatible High Profile / Level 4.1	1.2.840.10008.1.2.4.103		
VL Slide-Coordinates Microscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.3	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		MPEG2 Main Profile @ Main Level	1.2.840.10008.1.2.4.100		
		MPEG2 Main Profile @ High Level	1.2.840.10008.1.2.4.101		
		MPEG-4 AVC/H.264 High Profile / Level 4.1	1.2.840.10008.1.2.4.102		
		MPEG-4 AVC/H.264 BD-compatible High Profile / Level 4.1	1.2.840.10008.1.2.4.103		
X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.12.3	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		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	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91		
		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 Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
		JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57		
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70		
		RLE Lossless	1.2.840.10008.1.2.5		

Table 58: Proposed Presentation Contexts for (Real-World) Activity – Private SOP class Import

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
GE Private eNTEGRA Storage (Xeleris Auto Start/eNTEGRA Protocol Data or NM Genie)	1.2.840.113619.4.27	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private ViewForum 3D Volume New Storage	1.3.46.670589.5.0.1.1	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private ViewForum MR Synthetic Image Storage	1.3.46.670589.5.0.10	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private ViewForum MR Cardio Analysis New Storage	1.3.46.670589.5.0.11.1	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private ViewForum CX Synthetic Image Storage	1.3.46.670589.5.0.12	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private ViewForum Perfusion Storage	1.3.46.670589.5.0.13	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private ViewForum Perfusion Analysis Storage	1.3.46.670589.5.0.14	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private ViewForum 3D Volume Object New Storage	1.3.46.670589.5.0.2.1	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private ViewForum Surface New Storage	1.3.46.670589.5.0.3.1	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private ViewForum MR Cardio New Storage	1.3.46.670589.5.0.8.1	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private ViewForum CT Synthetic Image Storage	1.3.46.670589.5.0.9	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private X-Ray Image Storage	1.3.46.670589.2.3.1.1	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private Reconstructed X-ray Storage	1.3.46.670589.2.4.1.1	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private iE33 3D NEO Presentation State Subpage Storage	1.3.46.670589.2.5.1.1	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private EasyVision 3D Volume Object Storage	1.3.46.670589.5.0.2	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private Gyroscan MR Series Data	1.3.46.670589.11.0.0.12.2	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private MR	1.3.46.670589.11.0.0.12.1	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Spectrum Storage		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private EasyVision MR Cardio Storage	1.3.46.670589.5.0.8	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private EasyVision MR Cardio Analysis Storage	1.3.46.670589.5.0.11	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private MR Cardio Profile Image Storage	1.3.46.670589.5.0.7	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private EasyVision Surface Storage	1.3.46.670589.5.0.3	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Philips Private EasyVision Volume Storage	1.3.46.670589.5.0.1	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		

Table 59: Acceptable Presentation Contexts for (Real-World) Activity – Structured Report Import

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Basic Text SR SOP Class	1.2.840.10008.5.1.4.1.1.88.11	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Chest CAD SR	1.2.840.10008.5.1.4.1.1.88.65	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
		Implicit VR Little Endian	1.2.840.10008.1.2		
X-Ray Radiation Dose SR	1.2.840.10008.5.1.4.1.1.88.67	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Comprehensive SR SOP Class	1.2.840.10008.5.1.4.1.1.88.33	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Detail SR Storage - Trial (Retired)	1.2.840.10008.5.1.4.1.1.88.3	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Enhanced SR SOP Class	1.2.840.10008.5.1.4.1.1.88.22	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Key Object Selection Document Storage	1.2.840.10008.5.1.4.1.1.88.59	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Mammography CAD SR SOP Class	1.2.840.10008.5.1.4.1.1.88.50	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		
Procedure Log Storage SOP Class	1.2.840.10008.5.1.4.1.1.88.40	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		

4.2.1.4.5.3. SOP Specific Conformance for Storage SOP Classes

The C-Store SCP will receive any DICOM objects (images and non-image objects) transmitted in the open associated provided that the correct presentation context is used. If the objects are received successfully, they are stored and registered in the IntelliSpace Universal Data Manager 2.1 DICOM server local database; from there they can be loaded (and viewed) via IntelliSpace Universal

Data Manager 2.1 Radiology Viewer or IntelliSpace Universal Data Manager 2.1 Enterprise Viewer. Objects are stored in the local database as files.

If the objects are not received successfully then they are placed in the error folder.

Depending upon the system configuration, the IntelliSpace Universal Data Manager 2.1 DICOM Server application either performs “lifetime” persistence for the images received or manages an auto-deleted cache of the most recently active image studies. In the cache storage mode, images received will be deleted when the server disk space becomes full. Deletion will be performed based on a “least accessed patient” strategy. If an IntelliSpace Universal Data Manager 2.1 client has accessed any part of a patient’s studies, all images associated with that patient have a lower probability of being deleted.

4.2.1.4.5.3.1. Dataset Specific Conformance for C-STORE-RSP

The IntelliSpace Universal Data Manager 2.1 DICOM Server conforms to the SOPs of the Storage Service Class. No elements are discarded, but the following demographic elements may be modified:

Table 60: Attributes that may be modified by the IntelliSpace Universal Data Manager 2.1 DICOM Server

Attribute Name	Tag
Accession Number	(0008, 0050)
Referring Physician	(0008, 0090)
Procedure Sequence	(0008, 1032)
> Code Value	(0008, 0100)
> Code Meaning	(0008, 0104)
Patient Name	(0010, 0010)
Patient ID	(0010, 0020)
Patient Birth Date	(0010, 0030)
Patient Sex	(0010, 0040)
Requesting Physician	(0032, 1032)

Modification of data elements is initiated either by processing of manual edits initiated by end users of the system or automatic edits initiated by information received from ADT and Order Entry systems (HIS/RIS).

Table 61: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Successful stored	Server succeeds with store operation and required DICOM was stored.
Failure	A700	Refused: Out of Resources	There is insufficient storage in the server. Caller should try again later. Critical error is logged in server Log file.

4.2.1.4.6. (Real-World) Activity – Storage Commitment Push Model as SCP

4.2.1.4.6.1. Description and Sequencing of Activities

The IntelliSpace Universal Data Manager 2.1 supports synchronous and asynchronous mode for storage commitment SCP.

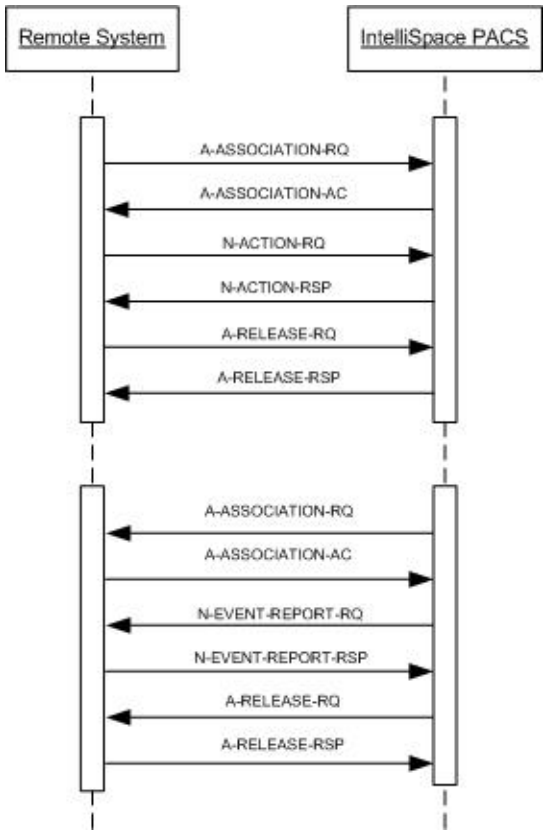


Figure 13: (Real-World) Activity – Asynchronous Storage Commitment as SCP

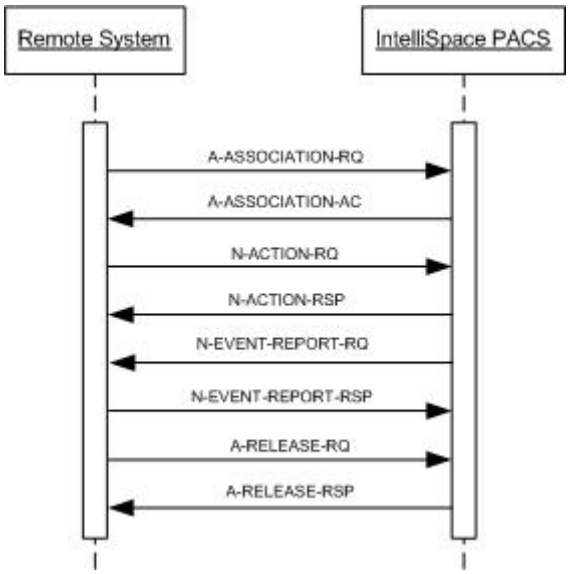


Figure 14: (Real-World) Activity – Synchronous Storage Commitment as SCP

4.2.1.4.6.2. Accepted Presentation Contexts

The presentation contexts are defined in next table.

Table 62: Acceptable Presentation Contexts for (Real-World) Activity – Storage Commitment Push Model AS SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		

4.2.1.4.6.3. SOP Specific Conformance for Storage Commitment Push Model SOP Class

The associated Activity with the Storage Commitment Push Model service is the communication by the STORAGE-SCP AE to peer AEs that it has committed to permanently store Composite SOP Instances that have been sent to it. It thus allows peer AEs to determine whether the IntelliSpace Universal Data Manager 2.1 Server has taken responsibility for the archiving of specific SOP Instances so that they can be flushed from the peer AE system.

The STORAGE-SCP AE takes the list of Composite SOP Instance UIDs specified in a Storage Commitment Push Model N-ACTION Request and checks if they are present in the IntelliSpace Universal Data Manager 2.1 DICOM Server application database. As long as the Composite SOP Instance UIDs are present in the database, the STORAGE-SCP AE will consider those Composite SOP Instance UIDs to be successfully archived.

Once the STORAGE-SCP AE has checked for the existence of the specified Composite SOP Instances, it will then attempt to send the Notification request (N-EVENT-REPORT-RQ). The default behavior is to attempt to send this Notification over the same Association that was used by the peer AE to send the original N-ACTION Request. If the Association has already been released or Message transfer fails for some reason then the STORAGE-SCP AE will attempt to send the N-EVENT-REPORT-RQ over a new Association. The STORAGE-SCP AE will request a new Association with the peer AE that made the original N-ACTION Request. The STORAGE-SCP AE can be configured to always open a new Association in order to send the Notification request.

The STORAGE-SCP AE will not cache Storage Commitment Push Model N-ACTION Requests that specify Composite SOP Instances that have not yet been transferred to the IntelliSpace Universal Data Manager 2.1 DICOM Server application. If a peer AE sends a Storage Commitment Push Model N-ACTION Request before the specified Composite SOP Instances are later sent over the same Association, the STORAGE-SCP AE will not commit to responsibility for such SOP Instances.

4.2.1.4.6.3.1. Dataset Specific Conformance for Storage Commitment Push Model N-EVENT-REPORT SCU

IntelliSpace Universal Data Manager 2.1 server issues an N-EVENT-REPORT-RQ Commitment Push (a notification request). Once N-EVENT-REPORT-RQ is sent to the SCP IntelliSpace Universal Data Manager 2.1 server waits for the response for the duration of 30 seconds. If response is not received within 30 seconds then error is written in the log.
In case of asynchronous communication, IntelliSpace Universal Data Manager 2.1 server aborts the association. For synchronous storage commit, the operation for the specified association id fails.

Table 63: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Successful store	Message was received successfully
Failed	0110	Operation failed	If failed to parse the message. Association is aborted.
	0119	Class instance Conflict	Class instance conflict. Association is aborted.
	0210	Duplicate	Duplicate invocation. Association is aborted.
	0115	Bad argument	Invalid argument value. Association is aborted.

Service Status	Error Code	Further Meaning	Behavior
	0212	Wrong argument	Mistyped argument. Association is aborted.
	0114	No argument	No such argument. Association is aborted.
	0113	Wrong event type	No such event type. Association is aborted.
	0118	Wrong SOP class	No such SOP class. Association is aborted.
	0112	Wrong SOP instance	No such SOP instance. Association is aborted.
	0213	Resource limitation	No resources available. Association is aborted.
	0211	Unrecognized operation	Such operation is not recognized. Association is aborted.

4.2.1.4.6.3.2. Dataset Specific Conformance for Storage Commitment Push Model N-ACTION SCP

Site server receives an N-ACTION-RQ Commitment Push. Then it parses the storage commit message and extracts transaction UID, then referenced SOP sequence, and sequentially, referenced SOP class UIDs, referenced SOP instance UIDs and referenced SOP sequence. Upon a completion of this the IntelliSpace Universal Data Manager 2.1 server returns the following status codes:

Table 64: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Successful store	Message was received successfully
Failed	0110	Operation failed	If failed to parse the message.

4.2.1.5. Dutch National Patient Identifier (BSN) support

Dutch National Patient Identifier support is implemented according to the Nictiz recommendation for both C-STORE-SCU and for C-FIND Q/R SCP. IntelliSpace Universal Data Manager 2.1 BSN support can be enabled via the configuration. By default this is not enabled.
Additionally, per DICOM destination IntelliSpace Universal Data Manager 2.1 can be configured if the destination can receive the BSN Patient Identifier or the patient's MRN in the Patient ID (0010, 0020) attribute.
The BSN Patient Identifier is only populated via HL7.

4.2.1.5.1. C-STORE SCU BSN support

The HL7 OID can be configured per assigning authority, so in case IntelliSpace Universal Data Manager 2.1 receives only the HL7 namespace (HD.1) still a world–wide unique OID can be exported.

Table 65: C-STORE-SCU BSN mode additional attributes

Attribute Name	Tag	VR	Remark/ Comment
Patient Identification Module			
Patient's Name	0010,0010	PN	Returns only first, middle and last name
Patient ID	0010,0020	LO	Patient BSN Identifier
Issuer of Patient ID	0010,0021	LO	Always "2.16.840.1.113883.2.4.6.3"
Other Patient IDs Sequence	0010,1002	SQ	Existing Patient Identifiers received via DICOM in this sequence are preserved as is. The original Patient ID and BSN Identifier are added according following definition.
> Patient ID	0010,0020	LO	BSN or Patient ID
> Issuer of Patient ID	0010,0021	LO	In case of a BSN Patient ID it contains: "2.16.840.1.113883.2.4.6.3". For other Patient Identifiers the HL7 Namespace ID is filled in if defined.
> Type Of Patient ID	0010,0022	CS	"TEXT"
> Issuer of Patient ID Qualifiers	0010,0024	SQ	For non-BSN Patient ID entries this sequence is added in

Attribute Name	Tag	VR	Remark/ Comment
Sequence			case an HL7 Universal Entity ID or HL7 Namespace exists
>> Universal Entity ID	0040,0032	UT	Value as configured for the HL7 assigning authority (the HL7 Universal Entity ID)
>> Universal Entity ID Type	0040,0033	CS	Type of configured HL7 Universal Entity ID if the HL7 Universal Entity ID exists

4.2.1.5.2. C-FIND Q/R SCP BSN support

This section specifies an extension to what is specified for the C-FIND-SCP (section 4.2.1.4.3) attributes for the Patient Root QR Information Model, the Study Root QR Information Model and Patient/Study Only Root QR information Model.

Table 66: C-FIND-SCP BSN mode additional attributes

Attribute Name	Tag	VR	Remark/ Comment	Matching Key Supported	Return Key Supported
Patient Identification Module					
Patient ID	0010,0020	LO	Matches MRN or BSN Patient Identifier depending on (0010,0021)	Y	Y
Issuer of Patient ID	0010,0021	LO	BSN Patient Identifier matching when “2.16.840.1.113883.2.4.6.3” otherwise MRN matching is done and the Issuer of Patient ID is ignored	Y	Y

4.2.2. IntelliSpace Universal Data Manager 2.1 DICOM Worklist Server AE

Details of this specific Application Entity is specified in this section.

4.2.2.1. SOP Classes

This Application Entity provides Standard Conformance to the following SOP Classes.

Table 67: SOP Classes for IntelliSpace Universal Data Manager 2.1 DICOM Worklist Server AE

SOP Class Name	SOP Class UID	SCU	SCP
Verification SOP Class	1.2.840.10008.1.1	No	Yes
Modality Worklist Information Model - C-FIND SOP Class	1.2.840.10008.5.1.4.31	No	Yes

Note: Any SOP specific behavior is documented later in the conformance statement in the applicable SOP specific conformance section.

4.2.2.2. Association Policies

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

4.2.2.2.1. General

The IntelliSpace Universal Data Manager 2.1 Worklist Server supports the acceptance of DICOM associations for the DICOM Modality Worklist Service and the DICOM Verification Service. The IntelliSpace Universal Data Manager 2.1 Worklist Server application supports a maximum PDU size of 64KB.
The DICOM standard application context name is specified in Table 68 below.

Table 68: DICOM Application Context

Description	Value
Application Context Name	1.2.840.10008.3.1.1.1

4.2.2.2.2. Number of Associations

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

Table 69: Number of associations as an Association Acceptor for this AE

Description	Value
Maximum number of simultaneous associations	Depends on hardware and overall system performance

4.2.2.2.3. Asynchronous Nature

The IntelliSpace Universal Data Manager 2.1 Worklist Server application does not support negotiation of multiple outstanding transactions.

4.2.2.2.4. Implementation Identifying Information

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

Table 70: DICOM Implementation Class and Version for IntelliSpace Universal Data Manager 2.1 DICOM Worklist Server AE

Description	Value
Implementation Class UID	1.3.46.670589.42.1.4.4.5
Implementation Version Name	PHISPACS44550

4.2.2.3. Association Initiation Policy

The Application Entity will respond to a received reject Association attempt as shown in next table.

Table 71: Association Rejection response

Result	Source	Reason/Diagnosis	Explanation
1 - rejected permanent	1 - DICOM UL service-user	1 - no-Reason-given	The user is informed and details are logged.
		2 - application-context-name-not-supported	
		3 - calling-AE-title-not-recognized	
		7 - called-AE-title-not-recognized	
	2 - DICOM UL service provider (ACSE related function)	1 - no-reason-given	
		2 - protocol-version-not-supported	
	3 - DICOM UL service provider (Presentation	1 - temporary-congestion	

Result	Source	Reason/Diagnosis	Explanation
	related function)	2 - local-limit-exceeded	
2 - Rejected-transient	1 - DICOM UL service-user	1 - no-Reason-given	
		2 - application-context-name-not-supported	
		3 - calling-AE-title-not-recognized	
		7 - called-AE-title-not-recognized	
	2 - DICOM UL service provider (ACSE related function)	1 - no-reason-given	
		2 - protocol-version-not-supported	
	3 - DICOM UL service provider (Presentation related function)	1 - temporary-congestion	
		2 - local-limit-exceeded	

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

Table 72: Association Abort Handling

Source	Reason/Diagnosis	Behavior
0 - DICOM UL service-user (initiated abort)	0 - reason-not-specified	Notifies remote AE, terminates the connection and logs the event.
2 - DICOM UL service-provider (initiated abort)	0 - reason-not-specified	
	1 - unrecognized-PDU	
	2 - unexpected-PDU	
	4 - unrecognized-PDU parameter	
	5 - unexpected-PDU parameter	
	6 - invalid-PDU-parameter value	

4.2.2.3.1. (Real-World) Activity – Verification as SCP

4.2.2.3.1.1. Description and Sequencing of Activities

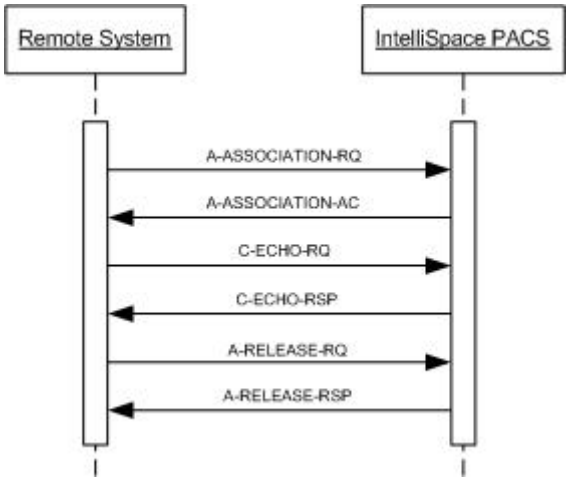


Figure 15: (Real-World) Activity – C-ECHO as SCP

4.2.2.3.1.2. Accepted Presentation Contexts

The presentation contexts are defined in next table.

Table 73: Acceptable Presentation Contexts for (Real-World) Activity – Verification as SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Verification SOP Class	1.2.840.10008.1.1	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		

4.2.2.3.1.3. SOP Specific Conformance for Verification SOP Class

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

4.2.2.3.1.3.1. Dataset Specific Conformance for Verification C-ECHO SCP

The DICOM command communication behavior is shown in the following table. The standard as well as the specific status codes and their corresponding behavior are also specified.

Table 74: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Confirmation	C-Echo request accepted

4.2.2.3.2. (Real-World) Activity – Modality Worklist as SCP

4.2.2.3.2.1. Description and Sequencing of Activities

A remote application entity will establish an association with the IntelliSpace Universal Data Manager 2.1 Worklist Server entity in order to
perform DICOM Modality Worklist operations. This activity is generally initiated by an end-user of the
remote system interacting with some user interface to generate the requests.

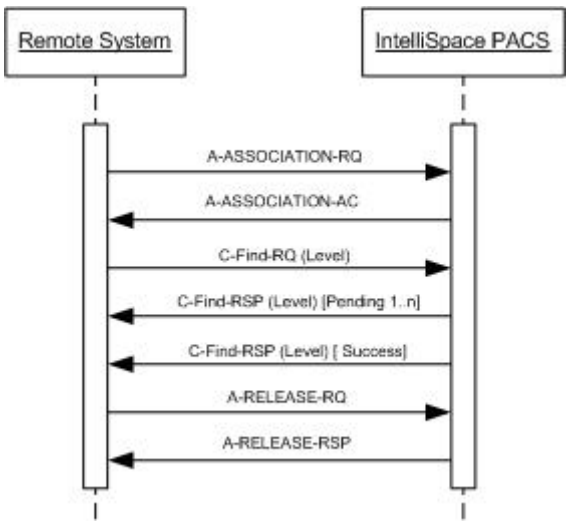


Figure 16: (Real-World World) Activity – Modality Worklist Information C-Find as SCP

4.2.2.3.2.2. Accepted Presentation Contexts

The presentation contexts are defined in next table.

Table 75: Acceptable Presentation Contexts for (Real-World) Activity – Modality worklist as SCP

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Ext. Neg.
Name	UID	Name List	UID List		
Modality Worklist Information Model - C-FIND SOP Class	1.2.840.10008.5.1.4.31	Explicit VR Big Endian	1.2.840.10008.1.2.2		None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		

4.2.2.3.2.3. SOP Specific Conformance for Modality Worklist Information Model - C-FIND SOP Class

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

4.2.2.3.2.3.1. Dataset Specific Conformance for Modality Worklist Information Model - C-FIND SCP

The supported C-Find request keys and the DICOM command communication behavior are shown in the following tables. The standard as well as the specific status codes and their corresponding behavior are also specified.

Table 76: Modality Worklist Return keys supported

Attribute Name	Tag	VR	Remark/ Comment	Matching Key Supported	Return Key Supported
SOP Common Module					
Specific Character Set	0008,0005	CS	Return the value as supplied in the request or “ISO_IR100” otherwise	N	Y
Timezone Offset From UTC	0008,0201	SH	Taken into account when matching the Scheduled Procedure Step Start Date and Start Time	Y	N
Patient Identification Module					
Patient's Name	0010,0010	PN	Returns only first, middle and last name	Y	Y
Patient ID	0010,0020	LO		Y	Y
Issuer of Patient ID	0010,0021	LO		N	Y
Patient Demographic Module					
Patient's Birth Date	0010,0030	DA		Y	Y
Patient's Sex	0010,0040	CS		Y	Y
Patient's Weight	0010,1030	DS		N	Y
Patient Comments	0010,4000	LT		N	Y
Confidentiality Constraint on Patient Data Description	0040,3001	LO	Returns value as sent in the request	N	Y
Patient Medical Module					
Medical Alerts	0010,2000	LO	Returns value as sent in the request	N	Y

Attribute Name	Tag	VR	Remark/ Comment	Matching Key Supported	Return Key Supported
Contrast Allergies	0010,2110	LO	Returns zero-length.	N	Y
Pregnancy Status	0010,21C0	US		N	Y
Special Needs	0038,0050	LO	Returns zero	N	Y
Patient State	0038,0500	LO	Returns value as sent in the request	N	Y
Visit Relationship Module					
Referenced Patient Sequence	0008,1120	SQ	Sequence is returned empty	N/A	Y
> Referenced SOP Class UID	0008,1150	UI		N	N
> Referenced SOP Instance UID	0008,1155	UI		N	N
Visit Identification Module					
Admission ID	0038,0010	LO	Returns value as sent in the request	N	Y
Visit Status Module					
Current Patient Location	0038,0300	LO	Returns value as sent in the request	N	Y
Scheduled Procedure Step Module					
Scheduled Procedure Step Sequence	0040,0100	SQ	The Attributes of the Scheduled Procedure Step can only be retrieved with Sequence Matching. The Scheduled Procedure Step Sequence contains only a single Item.	N/A	N/A
> Modality	0008,0060	CS		Y	Y
> Requested Contrast Agent	0032,1070	LO	Returns value as sent in the request	N	Y
> Scheduled Station AE Title	0040,0001	AE	The system uses a concept of resources which can map to one or more AE Titles. If the querying Modality is configured by the administrator to narrow the results by resources (AE titles), then the system returns all results that are scheduled on the resource, i.e. AE Titles mapped to that resource.	Y	Y
> Scheduled Procedure Step Start Date	0040,0002	DA	The Start Date and Time are combined with the 'Timezone offset from UTC' attribute from the request to determine the UTC date/Time. See Note [3] for explanation. If both date and time keys are specified for Range Matching, e.g. the date range " 5\July 7" and the time range "10am\6pm" specifies the time period starting on July 5, 10am until July 7, 6pm.	Y	Y
> Scheduled Procedure Step Start Time	0040,0003	TM		Y	Y
> Scheduled Performing Physician's Name	0040,0006	PN		N	Y
> Scheduled Procedure Step Description	0040,0007	LO		N	Y
> Scheduled Protocol Code Sequence	0040,0008	SQ		N/A	Y
>> Code Value	0008,0100	SH		N	Y
>> Coding Scheme Designator	0008,0102	SH		N	Y

Attribute Name	Tag	VR	Remark/ Comment	Matching Key Supported	Return Key Supported
>> Code Meaning	0008,0104	LO		N	Y
> Scheduled Procedure Step ID	0040,0009	SH		N	Y
> Scheduled Station Name	0040,0010	SH	Returns value as sent in the request.	N	Y
> Scheduled Procedure Step Location	0040,0011	SH	Returned when available	N	Y
> Pre-Medication	0040,0012	LO	Returns value as sent in the request	N	Y
> Scheduled Procedure Step Status	0040,0020	CS	Currently, the only two supported values are “INPROGRESS” and “SCHEDULED”.	N	Y
Requested Procedure Module					
Referenced Study Sequence	0008,1110	SQ		N/A	Y
> Referenced SOP Class UID	0008,1150	UI	Return value is fixed to “1.2.840.10008.3.1.2.3.1”	N	Y
> Referenced SOP Instance UID	0008,1155	UI		N	Y
Study Instance UID	0020,000D	UI		N	Y
Requested Procedure Description	0032,1060	LO		N	Y
Requested Procedure Code Sequence	0032,1064	SQ		N/A	Y
> Code Value	0008,0100	SH		N	Y
> Coding Scheme Designator	0008,0102	SH		N	Y
> Code Meaning	0008,0104	LO		N	Y
Requested Procedure ID	0040,1001	SH		Y	Y
Reason for the Requested Procedure	0040,1002	LO		N	Y
Requested Procedure Priority	0040,1003	SH	Returns: “STAT” or “ROUTINE”	N	Y
Patient Transport Arrangements	0040,1004	LO	Returns zero-length.	N	Y
Requested Procedure Comments	0040,1400	LT		N	Y
Imaging Service Request Comments	0040,2400	LT		N	Y
Imaging Service Request Module					
Accession Number	0008,0050	SH		Y	Y
Referring Physician's Name	0008,0090	PN	No matching but returned when available	N	Y
Requesting Physician	0032,1032	PN		N	Y
Reason for the Imaging Service Request	0040,2001	LO		N	Y
Filler Order Number	0040,2017	LO		N	Y

Notes:

[1] Keys that are not specified in the C-FIND-RQ are not returned in C-FIND-RSP.

[2] For return keys with the text “same value as in Request” in the remark/comment column the value supplied in the request is copied to every response that results from that request. Other return key values are obtained from the IntelliSpace Universal Data Manager 2.1 clinical data repository.

[3] Supplying the Timezone Offset from UTC (0008, 0201) adds the following semantics to the Scheduled Procedure Step Start Date (0040, 0002) and Scheduled Procedure Step Start Time (0040,0003):

i. If the Timezone Offset from UTC is supplied in the DMWL Request Identifier structure then this Timezone offset value is being used to adjust the matching and return value for Scheduled Procedure Step Start Date (0040,0002) and Scheduled Procedure Step Start Time (0040,0003) accordingly.

ii. When the Timezone offset from UTC is not being sent in the DMWL request Identifier structure, we first check if the UTC offset is available in the DMWL Configuration and use that to adjust the matching and return value for the attributes Scheduled Procedure Step Start Date (00400002) and Scheduled Procedure Step Start Time (0040,0003).
In case the UTC Offset is not available from the DMWL Configuration, the UTC offset of the server is used to adjust the matching and return values for the Scheduled Procedure Step Start Date and Scheduled Procedure Step Start Time.

iii. The Scheduled Procedure Step Start Date and the Scheduled Procedure Step Start Time returned in the C-FIND-RSP are corrected for the Timezone Offset from UTC (so are retuned in the Timezone of the client). The Timezone Offset from UTC (0008,0201) attribute itself is not returned.

Table 77: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Matching is complete	A response is sent with this status code.
Refused	A700	Out of Resources	A response is sent with this status code. Reason is Logged and released association.
Failure	C000	Unable to process	A response is send with this status code. The reason is logged in the file.
Pending	FF00	Current match is supplied	Matches are continuing; Current match is supplied.
Cancel	FE00	Matching terminated due to Cancel Request	No more C-FIND pending responses will be sent and a final response with this status code is sent. Cancel request is logged.

Table 78: Communication Failure Behavior

Exception	Behavior
Timeout	The association is released and the reason is logged
Association Aborted	The association is released and the reason is logged

4.2.3. WADO-RS Specifications

RESTful Services (RS) using HTTP(S) Get via WADO-RS is supported for the following:

- DICOM Requester (Retrieve Study/Series/Instance DICOM Objects)
- Frame Pixel Data Requester (Retrieve Instance Frame)
- Metadata Requester (Retrieve Metadata of the requested Instance)
- Bulkdata Requester (Retrieve Bulkdata)

These requests are HTTP/1.1 GET requests.

4.2.3.1. WADO-RS Retrieve Study

This allows a client to obtain all the DICOM instances associated with the given Study Unique Identifier (UID). Each DICOM instance of the study is sent as a separate part in a multi-part MIME response.

Table 79: WADO-RS Retrieve Study

Options	Restrictions
Request URL	{SERVICE}/WadoRs/studies/{StudyInstanceUID} Where, {SERVICE} is the base URL for the service. This will be a combination of scheme (HTTPS), host, port, and application. {StudyInstanceUID} is the study instance UID for a single study.
Data Types Supported (Accept Type)	Restricted to application/dicom multipart/related;type=application/dicom;[transfer-syntax={TransferSyntaxUID}]
Transfer Syntaxes Supported (transfer-syntax Accept parameter)	Multipart/related; type= {MediaType} which Specifies that the response can be pixel data encoded using a {MediaType/transfersyntaxUID}. The supported transfer Syntax UID's and encoding from ELE transfer syntax are: 1.2.840.10008.1.2.5 RLE Lossless 1.2.840.10008.1.2.4.50 JPEG BaseLine 1.2.840.10008.1.2.4.51 JPEG Extended 1.2.840.10008.1.2.4.70 JPEG Lossless Processes 14 1.2.840.10008.1.2.4.90 JPEG 2000 Image Compression (Lossless Only) 1.2.840.10008.1.2.4.91 JPEG 2000 Image Compression
DICOM Response	Content-Type: multipart/related; type=application/dicom; boundary={MessageBoundary} The entire multipart response contains every instance for the specified Study that can be converted to one of the requested Transfer Syntaxes. Each item in the multipart response represents a DICOM SOP Instance with the following http headers: •Content-Type: application/dicom
SOP Class Restrictions	Restricted to SOP classes supported by IntelliSpace Universal Data Manager 2.1
Size restrictions	For Study level retrieval the dicom data is streamed in continuous chunks of 32 KB

4.2.3.2. WADO-RS Retrieve Series

This allows a client to obtain all the DICOM instances associated with the given Series Unique Identifier (UID) for a Study. Each DICOM instance of the series is sent as a separate part in a multi-part MIME response.

Table 80: WADO-RS Retrieve Series

Options	Restrictions
Request URL	{SERVICE}/WadoRs/studies/{StudyInstanceUID}/series/{SeriesInstanceUID} Where, {SERVICE} is the base URL for the service. This will be a combination of scheme (HTTPS), host, port, and application. {StudyInstanceUID} is the study instance UID for a single study. {SeriesInstanceUID} is the series instance UID for a single series.
Data Types Supported (Accept Type)	Restricted to application/dicom multipart/related; type=application/dicom; [transfer-syntax={TransferSyntaxUID}]
Transfer Syntaxes Supported (transfer-syntax Accept parameter)	Multipart/related; type= {MediaType} which Specifies that the response can be pixel data encoded using a {MediaType/transfersyntaxUID} The supported transfer Syntax UID's and encoding from ELE transfer syntax are: • 1.2.840.10008.1.2.5 RLE Lossless • 1.2.840.10008.1.2.4.50 JPEG BaseLine • 1.2.840.10008.1.2.4.51 JPEG Extended • 1.2.840.10008.1.2.4.70 JPEG Lossless Processes 14 • 1.2.840.10008.1.2.4.90 JPEG 2000 Image Compression (Lossless Only) • 1.2.840.10008.1.2.4.91 JPEG 2000 Image Compression

Options	Restrictions
DICOM Response	Content-Type: multipart/related; type=application/dicom; boundary={MessageBoundary} The entire multipart response contains every instance for the specified Study that can be converted to one of the requested Transfer Syntaxes. Each item in the multipart response represents a DICOM SOP Instance with the following http headers: •Content-Type: application/dicom
SOP Class Restrictions	Restricted to SOP classes supported by IntelliSpace Universal Data Manager 2.1.
Size restrictions	For Series level retrieval the dicom data is streamed in continuous chunks of 32 KB

4.2.3.3. WADO-RS Retrieve Instance

This allows a client to obtain a specified SOP Instance associated with a study and series. The SOP Instance is sent as a separate part in a multi-part MIME message with each SOP Instances as a DICOM P10 byte stream (application/dicom) encoded in a single part.

Table 81: WADO-RS Retrieve Instance

Options	Restrictions
Request URL	{SERVICE}/WadoRs/studies/{StudyInstanceUID}/series/{SeriesInstanceUID}/instances/{SOPInstanceUID} {SERVICE} is the base URL for the service. This will be a combination of scheme (HTTPS), host, port, and application.
Data Types Supported (Accept Type)	Restricted to application/dicom application/dicom; transfersyntax: {transfersyntaxUID}
Transfer Syntaxes Supported (transfer-syntax Accept parameter)	Multipart/related; type= {MediaType} which Specifies that the response can be pixel data encoded using a {MediaType/transfersyntaxUID} The supported transfer Syntax UID's and encoding from ELE transfer syntax are: • 1.2.840.10008.1.2.5 RLE Lossless • 1.2.840.10008.1.2.4.50 JPEG BaseLine • 1.2.840.10008.1.2.4.51 JPEG Extended • 1.2.840.10008.1.2.4.70 JPEG Lossless Processes 14 • 1.2.840.10008.1.2.4.90 JPEG 2000 Image Compression (Lossless Only) • 1.2.840.10008.1.2.4.91 JPEG 2000 Image Compression
DICOM Response	Content-Type: multipart/related; type=application/dicom; boundary={MessageBoundary}
SOP Class Restrictions	Restricted to SOP classes supported by IntelliSpace Universal Data Manager 2.1.
Size restrictions	Not applicable

4.2.3.4. WADO-RS Retrieve Frames

This allows a client to retrieve the DICOM frames for a given set of frame numbers. The response is pixel data and is encapsulated in a multipart MIME response.

Table 82: WADO-RS Retrieve Frames

Options	Restrictions
Request URL	{SERVICE}/WadoRs/studies/{StudyInstanceUID}/series/{SeriesInstanceUID}/instances/{SOPInstanceUID}/frames/{FrameList} {FrameList} is a comma or %2C separated list of one or more non duplicate frame numbers. These may be in any order (e.g. /frames/1, 2, 4, 3).

Options	Restrictions
Data Types Supported (Accept Type)	Restricted to application/octet-stream application/octet-stream; transfersyntax: {transfersyntaxUID}
Transfer Syntaxes Supported (transfer-syntax Accept parameter)	Multipart/related; type= {MediaType} which Specifies that the response can be pixel data encoded using a {MediaType/transfersyntaxUID} The supported transfer Syntax UID's and encoding from ELE transfer syntax are: 1.2.840.10008.1.2.5 RLE Lossless 1.2.840.10008.1.2.4.50 JPEG BaseLine 1.2.840.10008.1.2.4.51 JPEG Extended 1.2.840.10008.1.2.4.70 JPEG Lossless Processes 14 1.2.840.10008.1.2.4.90 JPEG 2000 Image Compression (Lossless Only) 1.2.840.10008.1.2.4.91 JPEG 2000 Image Compression
DICOM Response	Content-Type: multipart/related; type=application/octet-stream; boundary={MessageBoundary} The entire multipart response contains all requested Frames for the specified Instance. The frames will be returned in the order specified by the Frame List.
SOP Class Restrictions	Restricted to SOP classes supported by IntelliSpace Universal Data Manager 2.1.
Size restrictions	Not applicable

4.2.3.5. WADO-RS Retrieve Bulk Data

This allows a client to retrieve the bulk (pixel) data for a DICOM instance. The response is pixel data and is encapsulated in a multipart MIME response.

Table 83: WADO-RS Retrieve Bulk Data

Options	Restrictions
Request URL	{SERVICE}/WadoRs/studies/{StudyInstanceUID}/series/{SeriesInstanceUID}/instances/{SOPInstanceUID}/Bulkdata
Status	Not Supported in current release

4.2.3.6. WADO-RS Retrieve Metadata

This allows a requestor to retrieve DICOM instances presented as instance metadata with bulk data removed. The response is metadata for DICOM attributes in XML or JSON response formats (In key value pair). The data in bulk data fields will be replaced with a URL which can be used to get the actual bulk data separately.
The XML response will be a multi-part MIME message with each SOP Instance returned as a separate XML document and encoded as a single part.

Table 84: WADO-RS Retrieve Metadata

Options	Restrictions
Request URL	{SERVICE}/WadoRs/studies/{StudyInstanceUID}/series/{SeriesInstanceUID}/instances/{SOPInstanceUID}/metadata {SERVICE}/WadoRs/studies/{StudyInstanceUID}/series/{SeriesInstanceUID}/metadata {SERVICE}/WadoRs/studies/{StudyInstanceUID}/metadata {SERVICE} is the base URL for the service. This will be a combination of scheme (HTTPS), host, port, and application.

Options	Restrictions
Data Types Supported (Accept Type)	application/dicom+xml application/json application/dicom application/dicom+json
Transfer Syntaxes Supported (transfer-syntax Accept parameter)	Not applicable for Metadata
SOP Class Restrictions	Restricted to SOP classes supported by IntelliSpace Universal Data Manager 2.1
Size restrictions	Not Applicable
Other	In a scenario where the DICOM instance has multiple OB/OW private elements /overlays they are currently returned as part of metadata calls.

4.2.3.7. WADO-RS Retrieve Study/Series/Instance/Frame for IntelliSpace Universal Data Manager iSyntax study

This is a preparatory capability of WADO-RS where the IntelliSpace Universal Data Manager iSyntax study can be retrieved in DICOM format and metadata formats by WADO-RS.
If the WADO-RS consumer is aware if the study/Series/Instance/Frame to be retrieved is in iSyntax format the following needs to be part of content-type need to be additionally added as part of request header.
If the consumer is not aware of the data format WADO-RS will internally determine the study format and location for its retrieval.
Note: The service is intelligent to give DICOM data if present in dicom format and when not present it will use iSyntax data to convert to DICOM and give it.

4.2.3.8. Connection Policies

4.2.3.8.1. General

4.2.3.8.1.1. Number of connections

Table 85: Number of RS Requests Supported

Description	Value
Maximum number of simultaneous RS requests	20

4.2.3.9. WADO Response Status Codes

Table 86: Status Codes

Service Status	HTTP Status Code	WADO –RS Description
Failure	406	Accept type not specified/Invalid types.
	400	Invalid Study Instance UID or validation failures.
	404	Incorrect/Unavailable Study Instance UID.
	500	Failure in Study retrieval by WADO-RS Service
Success	200	If the status for all instances included in the POST request is Success

4.2.4. STOW-RS Specifications

STOW-RS Service supports Store Instances action type. Store Instances action creates new resources for the given SOP Instances on the Server or appends to existing resources on the Server. This service stores one or more DICOM instances associated with one or more study instance unique identifiers (SUID).The incoming DICOM instances are stored as-is without any modifications by the STOW service provider. These requests are HTTP/1.1 POST requests.

4.2.4.1. STOW-RS Store Instance

This action stores one or more DICOM instances associated with one or more study instance unique identifiers (SUID). The request message can be DICOM or metadata and bulk data depending on the "Content-Type", and is encapsulated in a multipart request body.

Table 87: STOW-RS Store Instances Specification

Options	Restrictions
Request URL	{SERVICE}/StowRs/studies[/{StudyInstanceUID}] {SERVICE} is the base URL for the service. This will be a combination of scheme (HTTPS), host, port, and application. {StudyInstanceUID} is an optional parameter and is the study instance UID for a single study. If not specified, instances can be from multiple studies.
Media Types Supported (Accept header)	Restricted to application/dicom
Transfer Syntaxes Supported (Media Type parameter)	1.2.840.10008.1.2.5 RLE Lossless 1.2.840.10008.1.2.4.50 JPEG Baseline 1.2.840.10008.1.2.4.51 JPEG Extended 1.2.840.10008.1.2.4.70 JPEG Lossless Processes 14 1.2.840.10008.1.2.4.90 JPEG 2000 Image Compression (Lossless Only) 1.2.840.10008.1.2.4.91 JPEG 2000 Image Compression 1.2.840.10008.1.2.1 Explicit VR Little Endian 1.2.840.10008.1.2.2 Explicit VR Big Endian
Transfer Syntaxes Not Supported	1.2.840.10008.1.2.1 Implicit VR Little Endian
SOP Class Restrictions	Restricted to SOP classes supported by IntelliSpace Universal Data Manager 2.1
Size restriction	Server accepts dicom data uploads from client in a single stream or chunks.

4.2.4.2. Connection Policies

4.2.4.2.1. General

4.2.4.2.1.1. Number of connections

Table 88: Number of HTTP Requests Supported

Description	Value
Maximum number of simultaneous RS requests	10

4.2.4.2.2. Asynchronous Nature

Upon successful storage and validation, server sends the response synchronously however moving to the long term storage using the hosting IntelliSpace Universal Data Manager mechanism will be asynchronous.

4.2.4.3. AE Specifications

The DICOM SOP instances uploaded via STOW need to contain the following DICOM Tags mandatorily:
Receiving Application Entity Title (0002, 0018)
Sending Application Entity Title (0002, 0017)
The absence of these tags will result in reconciliation errors upon reverse migration to IntelliSpace Universal Data Manager.
Note:

1. Currently SOP instances with these tags missing are not rejected.
2. STOW service internally adds an IntelliSpace specific private block and private tags using the above mentioned DICOM tags.

4.2.4.4. STOW Response Status Codes

Table 89: Status Codes

Service Status	HTTP Status Code	STOW –RS Description
Failure	400	Invalid Study Instance UID or validation failures.
	500	Other server errors during Save
Success	200	If the status for all instances included in the POST request is Success
	202-Accepted	This indicates that the STOW-RS Service stored some of the instances but warnings or failures exist for others.

4.2.5. QIDO-RS Specifications

ISUDM 2.1 is an Origin Server for the QIDO-RS service. It receives QIDO-RS request at STUDY and SERIES levels. INSTANCE level is not supported. On receiving the request, ISUDM 2.1 responds with a set of matching responses.

Table 90: QIDO-RS Specification

Options	Restrictions
Request URL	{HOST}/QidoRs/v1/ {HOST} is the host url of the system.
Media Types Supported (Accept header)	Restricted to "multipart/related; type=application/dicom+xml" or "application/dicom+json"

4.2.5.1. QIDO-RS Query Matching Keys

The following attributes are supported for matching keys by ISUDM 2.1

Table 91: Matching Keys supported for QIDO-RS

Attribute	Tag	Type of Matching
STUDY Level		
StudyDate	0008,0020	R, S
StudyTime	0008,0030	R, S
AccessionNumber	0008,0050	S, *
ModalitiesInStudy	0008,0061	S
ReferringPhysicianName	0008,0090	S, *
PatientName	0010,0010	S, *
PatientID	0010,0020	S. *
StudyInstanceUID	0020,000D	S
StudyID	0020,0010	S, *
SERIES Level		
Modality	00080060	S
SeriesInstanceUID	0020000E	S
SeriesNumber	00200011	S, *
PerformedProcedureStepStartDate	00400244	R, S
PerformedProcedureStepStartTime	00400245	R, S

Attribute	Tag	Type of Matching
RequestAttributeSequence	00400275	*, S
>ScheduledProcedureStepID	00400009	*, S
>RequestedProcedureID	00401001	*, S

'R' - Range Matching
'*' – Wildcard Matching
'S' – Single Value Matching

4.2.5.2. QIDO-RS Query Return Keys

The following attributes are returned by ISUDM 2.1

Table 92: Return Keys supported for QIDO-RS

Attribute	Tag
STUDY Level	
Specific Character Set	(0008,0005)
Study Date	(0008,0020)
Study Time	(0008,0030)
Accession Number	(0008,0050)
Instance Availability	(0008,0056)
Modalities in Study	(0008,0061)
Referring Physician's Name	(0008,0090)
Timezone Offset From UTC	(0008,0201)
Retrieve URL	(0008,1190)
Patient's Name	(0010,0010)
Patient ID	(0010,0020)
Patient's Birth Date	(0010,0030)
Patient's Sex	(0010,0040)
Study Instance UID	(0020,000D)
Study ID	(0020,0010)
Number of Study Related Series	(0020,1206)
Number of Study Related Instances	(0020,1208)
SERIES Level	
Specific Character Set	(0008,0005)
Modality	(0008,0060)
Timezone Offset From UTC	(0008,0201)
Series Description	(0008,103E)
Retrieve URL	(0008,1190)
Series Instance UID	(0020,000E)
Series Number	(0020,0011)
Number of Series Related Instances	(0020,1209)
Performed Procedure Step Start Date	(0040,0244)

Attribute	Tag
Performed Procedure Step Start Time	(0040,0245)
Request Attribute Sequence	(0040,0275)
>Scheduled Procedure Step ID	(0040,0009)
>Requested Procedure ID	(0040,1001)

4.2.5.3. QIDO Response Status Codes

Table 93: Status Codes

Service Status	HTTP Status Code	STOW –RS Description
Success	200	The request was processed and the response is sent.
Failure	204	There are no results matching the Query
	400	The request is not recognized status is sent in the following conditions: If the request is bad. If the query contains unsupported tags. If query contains invalid tag Values.
	401	The request is not authorized.
	413	The number of matching responses for the request is large (more than 200).
	503	Service is unavailable will be sent when an HTTP request is sent instead of HTTPS.

4.3. Network Interfaces

4.3.1. Physical Network Interfaces

The System provides only DICOM V3.0 TCP/IP Network Communication Support as defined in PS 3.8 of the standard.
TCP/IP is the only protocol stack supported.
Supported physical medium include:
IEEE 802.3-1995, 10BASE-T
IEEE 802.3-1995, 100BASE-TX (Fast Ethernet)
IEEE 802.3, 1000BASE-X (Fiber Optic Gigabit Ethernet).

The TCP/IP Stack as supported by the underlying Operating System.
The API is the WinSock 2 interface as supported by the underlying Operating System.

4.3.2. Additional Protocols

Not applicable

4.4. Configuration

Any implementation's DICOM conformance may be dependent upon configuration, which takes place at the time of installation. Issues concerning configuration are addressed in this section.

4.4.1. AE Title/Presentation Address Mapping

An important installation issue is the translation from AE title to presentation address. How this is to be performed is described here.

4.4.1.1. Local AE Titles

The local AE title mapping and configuration are specified as:

Table 94: AE Title configuration table

Application Entity	Role	Default AE Title	Default TCP/IP Port
DICOM Server AE	STORE SCP	STENTOR_SCP	104
	STORE SCU	STENTOR_SCU	N/A
	Federation	DEFAULT	N/A
	Storage Commit SCU	STENTOR_SCSCU	N/A
	Q/R SCP	STENTOR_QRP	107
	Q/R SCU	STENTOR_QRU	N/A
	DMWL SCP	STENTOR_SCP	104/8104

4.4.1.2. Remote AE Title/Presentation Address Mapping

The configuration of the remote application is specified here.

4.4.2. Parameters

The specification of important operational parameters, their default value and range (if configurable) are specified here.

Table 95: Configuration Parameters Table

Parameter	Configurable	Default Value
General Parameter		
Time-out waiting for acceptance or rejection Response to an Association Open Request (Application Level timeout)	No	30 seconds
General DIMSE level time-out values (Verification, Storage, Storage Commitment)	No	30 seconds
Time-out for response to TCP/IP connect request. (Low-level timeout)	No	30 seconds
Time-out waiting for acceptance of a TCP/IP message over the network (Low-level timeout)	No	30 seconds
Time-out for waiting for data between TCP/IP packets. (Low-level timeout)	No	30 seconds
AE Specific Parameters		
Maximum PDU size the AE can receive	No	64234 bytes
Maximum PDU size the AE can send	No	64234 bytes
Storage Commitment Specific Parameters		
Storage Commitment Retry Count	No	18

5. Media Interchange

Not Applicable.

5.1. Security Profiles

IntelliSpace PACS 4.4.509 does not support any specific DICOM Security Profile. It is assumed that IntelliSpace PACS 4.4.509 is used within a secured environment that uses Firewall, Router Protection, etc.

5.2. Association Level Security

Not Applicable

5.3. Application Level Security

Not Applicable

6. Support of Character Sets

Any support for character sets in Network is described here

Table 96: 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	N/A	ISO-IR 6	G0	ISO 646
		N/A	ISO-IR 100	G1	Supplementary set of ISO 8859
Unicode in UTF-8	ISO_IR 192	-	-	-	-

7. Security

7.1. Audit Trail profiles

Following table describes the audit messages generated by ISUDM 2.1

Table 97: Supported DICOM Character Sets

Audit Event Trigger	Description	Message
Actor-start-stop	Application activity logs gets generated only on IS Monitor services Stop/Start	Application Activity
Study-used	Generated when instances are printed	DICOM Instances Accessed
PHI-export	Generated when DICOM instances are exported to media.	Export
Begin-storing-instances	DICOM Instances Transferred' audit message will be generated when there is data store from external source to ISUDM	DICOM Instances Transferred'
Query Information	Query is generated when a Query is performed to ISUDM.	Query
Security Alert	Generated when trying to connect to ISUDM with invalid certificates.	Security Alert