C-DAC's Medical Informatics Software Development Kit (SDK) for DICOM PS 3.0-2015 Conformance Statement

Company Name: Centre of Development for Advanced Computing

Product Name: C-DAC's Medical Informatics Software Development Kit (SDK)

Product Version: v3.5

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1. Conformance Statement Overview

Overview

C-DAC's Medical Informatics Software Development Kit v3.5 for DICOM is an implementation of NEMA's Digital Imaging and Communications in Medicine (DICOM) PS3.0-2015 Standard. The SDK is implemented using JDK 7, which facilitates incorporation of DICOM PS3.0-2015 in healthcare applications. The API library can also be used by Medical device manufacturers for making their medical device medical standards compliant.

Salient Features of SDK

- Complete object-oriented implementation of the SOP Classes in the standard.
- Implements all standard defined data types, sequences, macros, IOD's.
- Manipulate data using Dataset and/or IOD Data Model approach.
- Provides network communication capability with advanced application-level support for security / compression.
- Efficient handling of memory and native platform multicore / multiprocessing capabilities.
- Comprehensive Error / Warning Logging capability to assist debugging.
- Allows customization through extensible interfaces.
- Ready-to-run command line utilities and sample codes based on SDK included in package.
- Complete API and Help documents for easy understanding, reference, and use.
- Source code available for download and reference.

1.1.1. Transfer Syntaxes:

- Implicit VR Little Endian
- Explicit VR Little Endian
- LOSSY JPEG 8 BIT
- LOSSY JPEG 12 BIT
- JPEG LOSSLESS NON-HIERARCHICAL PROCESS 14
- LOSSLESS JPEG
- JPEG LS LOSSLESS
- JPEG 2000 LOSSLESS ONLY
- JPEG 2000
- RLE LOSSLESS
- Explicit VR Big Endian
- Default Lossless JPEG

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Table 1.1-1: NETWORK SERVICES

SOP Classes	User of Service (SCU)	Provider of Service (SCP)
Transfer		
Basic Text SR Storage	YES	YES
Breast Tomosynthesis Image Storage	YES	YES
CT Image Storage	YES	YES
Digital X-Ray Image Storage – For Presentation	YES	YES
Digital X-Ray Image Storage – For Processing	YES	YES
Enhanced CT Image Storage	YES	YES
Enhanced MR Image Storage	YES	YES
Enhanced SR Storage	YES	YES
Enhanced XA Image Storage	YES	YES
MR Image Storage	YES	YES
Image Storage	YES	YES
RT Dose Storage	YES	YES
RT Image Storage	YES	YES
RT Plan Storage	YES	YES
RT Structure Set Storage	YES	YES
Ultrasound Image Storage	YES	YES
Ultrasound Multi-Frame Image Storage	YES	YES
X-Ray 3D Angiographic Image Storage	YES	YES
X-Ray 3D Craniofacial Image Storage	YES	YES
X-Ray Angiographic Image Storage	YES	YES
X-Ray Radiation Dose SR Storage	YES	YES
X-Ray Radio fluoroscopic Image Storage	YES	YES
Storage Commitment Service Class	YES	YES
Structured Reporting Storage SOP Classes	YES	YES
Comprehensive SR Storage	YES	YES
Enhanced SR Storage	YES	YES
Comprehensive 3D SR Storage	YES	YES
Extensible SR Storage	YES	YES
Procedure Log Storage	YES	YES
Mammography CAD SR Storage	YES	YES
Key Object Selection Document Storage	YES	YES
Chest CAD SR Storage	YES	YES
X-Ray Radiation Dose SR Storage	YES	YES
Radiopharmaceutical Radiation Dose SR Storage	YES	YES
Colon CAD SR Storage	YES	YES
Implantation Plan SR Storage	YES	YES

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Hanging Protocol Storage Service Class	YES	YES
Color Palette Storage Service Class	YES	YES
Ophthalmic Refractive Measurements Storage SOP Classes	YES	YES
Media Creation Management Service Class	YES	YES
Non-Storage SOP Classes		
Basic Work list Management Service	YES	YES
Application Event Logging Service Class	YES	YES
Relevant Patient Information Query Service Class	YES	YES
Instance Availability Notification Service Class	YES	YES
Print Management Service	YES	YES
Softcopy Presentation State Storage SOP Classes	YES	YES
Hanging Protocol Query/Retrieve Service Class	YES	YES
Substance Administration Query Service Class	YES	YES
Color Palette Query/Retrieve Service Class	YES	YES
Instance and Frame Level Retrieve SOP Classes	YES	YES
Composite Instance Retrieve Without Bulk Data SOP Classes	YES	YES
Implant Template Query/Retrieve Service Classes	YES	YES
Unified Procedure Step Service and SOP Classes	YES	YES
RT Machine Verification Service Classes	YES	YES
Display System Management Service Class	YES	YES
Web Access to DICOM Object (WADO)	YES	YES

Table 1.1-2: MEDIA SERVICES

Media Storage Application Profile	Write Files	Read Files (FSR)
Media Storage Application Profiles	YES	YES
DICOM DIR	YES	YES

Table 1.1-2: - UID Values

UID Value	UID Name	Category
1.2.840.10008.1.20.1	Storage Commitment Push Model SOP Class	Workflow Management
1.2.840.10008.1.40	Procedural Event Logging SOP Class	Workflow Management
1.2.840.10008.1.42	Substance Administration Logging	Workflow Management
1.2.840.10008.3.1.2.3.3	Modality Performed Procedure Step SOP Class	Workflow Management
1.2.840.10008.3.1.2.3.4	Modality Performed Procedure Step Retrieve SOP Class	Workflow Management
1.2.840.10008.3.1.2.3.5	Modality Performed Procedure Step Notification SOP Class	Workflow Management
1.2.840.10008.4.2	Storage Service Class	Transfer
1.2.840.10008.5.1.4.1.1.1	Computed Radiography Image Storage	Transfer
1.2.840.10008.5.1.4.1.1.1.1	Digital X-Ray Image Storage - For Presentation	Transfer

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1.2.840.10008.5.1.4.1.1.1.1.1	Digital X-Ray Image Storage - For Processing	Transfer
1.2.840.10008.5.1.4.1.1.2	CT Image Storage	Transfer
1.2.840.10008.5.1.4.1.1.2.1	Enhanced CT Image Storage	Transfer
1.2.840.10008.5.1.4.1.1.3.1	Ultrasound Multi-Frame Image Storage	Transfer
1.2.840.10008.5.1.4.1.1.4	MR Image Storage	Transfer
1.2.840.10008.5.1.4.1.1.4.1	Enhanced MR Image Storage	Transfer
1.2.840.10008.5.1.4.1.1.4.2	MR Spectroscopy Storage	Transfer
1.2.840.10008.5.1.4.1.1.6.1	Ultrasound Image Storage	Transfer
1.2.840.10008.5.1.4.1.1.6.2	Enhanced US Volume Storage	Transfer
1.2.840.10008.5.1.4.1.1.12.1	X-Ray Angiographic Image Storage	Transfer
1.2.840.10008.5.1.4.1.1.12.1.1	Enhanced XA Image Storage	Transfer
1.2.840.10008.5.1.4.1.1.13.1.3	Breast Tomosynthesis Image Storage	Transfer
1.2.840.10008.5.1.4.1.1.78.1	Lensometry Measurements Storage	Transfer
1.2.840.10008.5.1.4.1.1.78.2	Autorefraction Measurements Storage	Transfer
1.2.840.10008.5.1.4.1.1.78.3	Keratometry Measurements Storage	Transfer
1.2.840.10008.5.1.4.1.1.78.4	Subjective Refraction Measurements Storage	Transfer
1.2.840.10008.5.1.4.1.1.78.5	Visual Acuity Measurements Storage	Transfer
1.2.840.10008.5.1.4.1.1.88.11	Basic Text SR	Transfer
1.2.840.10008.5.1.4.1.1.88.22	Enhanced SR	Transfer
1.2.840.10008.5.1.4.1.1.88.33	Comprehensive SR	Transfer
1.2.840.10008.5.1.4.1.1.88.34	Comprehensive 3D SR	Transfer
1.2.840.10008.5.1.4.1.1.88.40	Procedure Log Storage	Transfer
1.2.840.10008.5.1.4.1.1.481.1	RT Image Storage	Transfer
1.2.840.10008.5.1.4.1.1.481.2	RT Dose Storage	Transfer
1.2.840.10008.5.1.4.1.1.481.3	RT Structure Set Storage	Transfer
1.2.840.10008.5.1.4.1.1.481.4	RT Beams Treatment Record Storage	Transfer
1.2.840.10008.5.1.4.1.1.481.5	RT Plan Storage	Transfer
1.2.840.10008.5.1.4.1.1.481.6	RT Brachy Treatment Record Storage	Transfer
1.2.840.10008.5.1.4.1.1.481.7	RT Treatment Summary Record Storage	Transfer
1.2.840.10008.5.1.4.1.2.1.1	Patient Root Query/Retrieve Information Model – FIND	Query/Retrieve
1.2.840.10008.5.1.4.1.2.1.2	Patient Root Query/Retrieve Information Model – MOVE	Query/Retrieve
1.2.840.10008.5.1.4.1.2.1.3	Patient Root Query/Retrieve Information Model – GET	Query/Retrieve
1.2.840.10008.5.1.4.1.2.2.1	Study Root Query/Retrieve Information Model – FIND	Query/Retrieve
1.2.840.10008.5.1.4.1.2.2.2	Study Root Query/Retrieve Information Model – MOVE	Query/Retrieve
1.2.840.10008.5.1.4.1.2.2.3	Study Root Query/Retrieve Information Model – GET	Query/Retrieve
1.2.840.10008.5.1.4.1.2.4.2	Composite Instance Root Retrieve - MOVE	Query/Retrieve
1.2.840.10008.5.1.4.1.2.4.3	Composite Instance Root Retrieve - GET	Query/Retrieve

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1.2.840.10008.5.1.4.1.2.5.3	Composite Instance Retrieve Without Bulk Data – GET	Query/Retrieve
1.2.840.10008.5.1.4.31	Modality Worklist Information Model - FIND	Workflow Management
1.2.840.10008.5.1.4.33	Instance Availability Notification SOP Class	Workflow Management
1.2.840.10008.5.1.4.38.1	Hanging Protocol Storage	Workflow Management
1.2.840.10008.5.1.4.38.2	Hanging Protocol Information Model - FIND	Workflow Management
1.2.840.10008.5.1.4.38.3	Hanging Protocol Information Model - MOVE	Workflow Management
1.2.840.10008.5.1.4.38.4	Hanging Protocol Information Model - GET	Workflow Management
1.2.840.10008.5.1.4.39.1	Color Palette Storage	Transfer
1.2.840.10008.5.1.4.39.2	Color Palette Information Model - FIND	Query/Retrieve
1.2.840.10008.5.1.4.39.3	Color Palette Information Model - MOVE	Query/Retrieve
1.2.840.10008.5.1.4.39.4	Color Palette Information Model - GET	Query/Retrieve
1.2.840.10008.5.1.4.43.1	Generic Implant Template Storage	Workflow Management
1.2.840.10008.5.1.4.43.2	Generic Implant Template Storage-FIND	Workflow Management
1.2.840.10008.5.1.4.43.3	Generic Implant Template Storage-MOVE	Workflow Management
1.2.840.10008.5.1.4.43.4	Generic Implant Template Storage-GET	Workflow Management
1.2.840.10008.5.1.4.44.1	Implant Assembly Template Storage	Workflow Management
1.2.840.10008.5.1.4.44.2	Implant Assembly Template Storage-FIND	Workflow Management
1.2.840.10008.5.1.4.44.3	Implant Assembly Template Storage-MOVE	Workflow Management
1.2.840.10008.5.1.4.44.4	Implant Assembly Template Storage-GET	Workflow Management
1.2.840.10008.5.1.4.45.1	Implant Template Group Storage	Workflow Management
1.2.840.10008.5.1.4.45.2	Implant Template Group Storage-FIND	Workflow Management
1.2.840.10008.5.1.4.45.3	Implant Template Group Storage-MOVE	Workflow Management
1.2.840.10008.5.1.4.45.4	Implant Template Group Storage-GET	Workflow Management
1.2.840.10008.1.42	Substance Administration Logging SOP Class	Workflow Management
1.2.840.10008.5.1.4.1.1.78.1	Lensometry Measurements Storage	Workflow Management
1.2.840.10008.5.1.4.1.1.78.2	Autorefraction Measurements Storage	Workflow Management
1.2.840.10008.5.1.4.1.1.78.3	Keratometry Measurements Storage	Workflow Management
1.2.840.10008.5.1.4.1.1.78.4	Subjective Refraction Measurements Storage	Workflow Management
1.2.840.10008.5.1.4.1.1.78.5	Visual Acuity Measurements Storage	Workflow Management
1.2.840.10008.5.1.4.34.6.1	Unified Procedure Step - Push SOP Class	Workflow Management
1.2.840.10008.5.1.4.34.6.2	Unified Procedure Step - Watch SOP Class	Workflow Management
1.2.840.10008.5.1.4.34.6.3	Unified Procedure Step – Pull SOP Class	Workflow Management
1.2.840.10008.5.1.4.34.6.4	Unified Procedure Step - Event SOP Class	Workflow Management
1.2.840.10008.5.1.1.40	Display System SOP Class	Workflow Management
1.2.840.10008.5.1.4.34.8	RT Conventional Machine Verification	Workflow Management
1.2.840.10008.5.1.4.34.9	RT Ion Machine Verification	Workflow Management
1.2.840.10008.5.1.4.1.1.11.1	Grayscale Softcopy Presentation StateStorage SOP Class	Workflow Management

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A table of Supported Media Storage Application Profiles (with roles) is provided, organized in categories:

Table 1.1-4: Media Services

Media Storage Application Profile	Write Files (FSC or FSU)	Read Files (FSR)
General Purpose CD-R	Option	Yes
General Purpose DVD	Option	Yes
General Purpose Pen Drive	Option	Yes
General Purpose Mail	FSC	FSR

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2. Table of Content

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3. Introduction

C-DAC's Medical Informatics SDK for DICOM is a set of object-oriented APIs which can be used to make the Healthcare Applications compliant to DICOM 3.0-2015 Specification. DICOM (Digital Imaging and Communication in Medicine) standard is specified for interchanging digital images in medical domain along with the medical information. This standard is accepted universally by numerous medical device vendors to create DICOM images. In order to support interaction with such medical devices, existing EHR/EMR applications should have the capability of sending, receiving and interpreting DICOM data. Building such a capability from scratch is time consuming since implementer first need to understand the complexities of standard and then implement it in the EHR/EMR application.

This raises a need for a toolkit that would hide the complexities of the standard and provide easily understandable APIs along with comprehensive documentation that would support in rapid development at reduced cost and time.

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3.1. Revision History

Previous Versions are:

C-DAC's Medical Informatics SDK Suite v1.0 SDK for DICOM PS 3.0-2004	1.0
C-DAC's Medical Informatics SDK Suite v2.0 SDK for DICOM PS 3.0-2004	2.0
C-DAC's Medical Informatics SDK Suite v2.1 SDK for DICOM PS 3.0-2004	2.1
C-DAC's Medical Informatics SDK Suite v3.0 SDK for DICOM PS 3.0-2015c	3.0
C-DAC's Medical Informatics SDK Suite v3.0 SDK for DICOM PS 3.0-2015c	3.1

3.2. Intended Audience

This Conformance Statement is intended for:

- System integrators of medical equipment,
- Software designers implementing DICOM interfaces.
- It is assumed that the reader is familiar with the DICOM standard.

3.3. Remarks

The Conformance Statement should be read and understood in conjunction with the DICOM Standard. DICOM by itself does not guarantee interoperability. The Conformance Statement does, however, facilitate a first-level comparison for interoperability between different applications supporting compatible DICOM functionality.

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

3.4. Terms and Definitions

Application Entity (AE) -It is an end point of a DICOM information exchange, including the DICOM network or media interface software; i.e., the software that sends or receives DICOM information objects or messages. A single device may have multiple Application Entities.

Attribute -a unit of information in an object definition; a data element identified by a tag. The information may be a complex data structure (Sequence), itself composed of lower level data elements. Examples: Patient ID (0010, 0020).

Information Object Definition (IOD) -the specified set of Attributes that comprise a type of data object; does not represent a specific instance of the data object, but rather a class of similar data objects that have the same properties. The Attributes may be specified as Mandatory (Type 1), Required but possibly unknown (Type 2), or Optional (Type 3), and there may be conditions associated with the use of an Attribute (Types 1C and 2C).

Joint Photographic Experts Group (JPEG) -a set of standardized image compression techniques, available for use by DICOM applications.

Media Application Profile-the specification of DICOM information objects and encoding exchanged on

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removable media (e.g., CDs).

Service/Object Pair (SOP) Class-It is the specification of the network or media transfer (service) of a particular type of data (object); the fundamental unit of DICOM interoperability specification. Examples: Ultrasound Image Storage Service, Basic Grayscale Print Management.

Service/Object Pair (SOP) Instance -It is an information object; a specific occurrence of information exchanged in a SOP Class. Examples: a specific x-ray image.

Transfer Syntax-the encoding used for exchange of DICOM information objects and messages. Examples: JPEG compressed (images), little endian explicit value representation.

Unique Identifier (UID)- It is a globally unique "dotted decimal" string that identifies a specific objector a class of objects; an ISO-8824 Object Identifier. Examples: Study Instance UID, SOP Class UID, SOP Instance UID.

Value Representation (VR)- It is the format type of an individual DICOM data element, such as text, an integer, a person's name, or a code. DICOM information objects can be transmitted with either explicit identification of the type of each data element (Explicit VR), or without explicit identification (Implicit VR); with Implicit VR, the receiving application must use a DICOM data dictionary to look up the format of each data element.

3.5. Abbreviations

AE Application Entity

DICOM Digital Imaging and Communications in Medicine

DIMSE DICOM Message Service Element

DIMSE-C DICOM Message Service Element-Composite

DIMSE-N DICOM Message Service Element-Normalized

FSC File-Set Creator

FSU File-Set Updater

FSR File-Set Reader

IOD Information Object Definition

JPEG Joint Photographic Experts Group

OP Ophthalmic Photography

OPT Ophthalmic Tomography

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SC Secondary Capture

SCP Service Class Provider

SCU Service Class User

SOP Service-Object Pair

SD Structured Documents (HL7)

SR Structured Reporting

WADO Web access to DICOM persistent Objects

RS RESTful services

XML eXtensible Markup Language

IAN Instance Availability Notification

3.5. References

Digital Imaging and Communications in Medicine (DICOM), NEMA PS 3.1 2015.

4. Networking

4.1. Implementation Model

4.1.1. Application Data Workflow

Communication is a process of transferring information from one entity to another. It prescribes a uniform, well-understood set of rules for the communication of digital images. Communication between DICOM Application Entity follows following steps:

- Establishment of connection between two AE.
- Establishment of Association between two AE.
- Processing request of Service Class User by Service Class Provider.
- Release of Association. e. Connection closes.

First the connection between the two application entities is established. After that association is established. Association is next step after a network connection is made. It is the hand shaking process between two communicating AEs after establishment of connection. The establishment of an association between two AEs shall be performed through A-ASSOCIATE request, indication, response and confirmation primitives. Before two Application Entity (AE) perform a DICOM transaction they must first agree:

- what SOP Class they will use (e.g. MR Image Storage)

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- who will be the SCU, who will be the SCP
- what the Transfer Syntax will be (e.g. JPEG Lossless)

This is done through Association Negotiation process.

Let's take a closer look at Layered Architecture of SDK. Each layer serves a purpose defined in the standard.

Base Layer: Base layer supports all DICOM defined data types, data dictionary, supported data elements. Base layer provides dataset level manipulation of DICOM data which is very helpful for DICOM developers. Creation, navigation, manipulation of dataset allows developers to build DICOM defined structure for communication with other DICOM compliant entities. Dataset view of DICOM data allows developers to deal with the data at the DICOM level.

Data Model: Data Model supports all DICOM defined Information Object Definitions (IOD). The toolkit provides object-oriented approach through IODs to represent DICOM data. This mechanism is very useful for object-oriented developers having little knowledge of DICOM. Data Model view of DICOM data allows developers to deal with DICOM data through object-oriented wrappers.

DIMSE Layer: The toolkit provides extensive support for DICOM defined Composite and Normalized services. The developers can build Service Class Users (SCU) and/ or Service Class Providers (SCP) using this layer. The DIMSE layer hides complexity of the standard by providing object-oriented layer on top using which developer can build service modules.

Communication Layer: This layer involves raw communication entities at the core DICOM level. The developer can build their own application logic on top of it so that developer's own DIMSE wrapper can be built. The layer is designed taking into consideration memory and processing efficiency issues.

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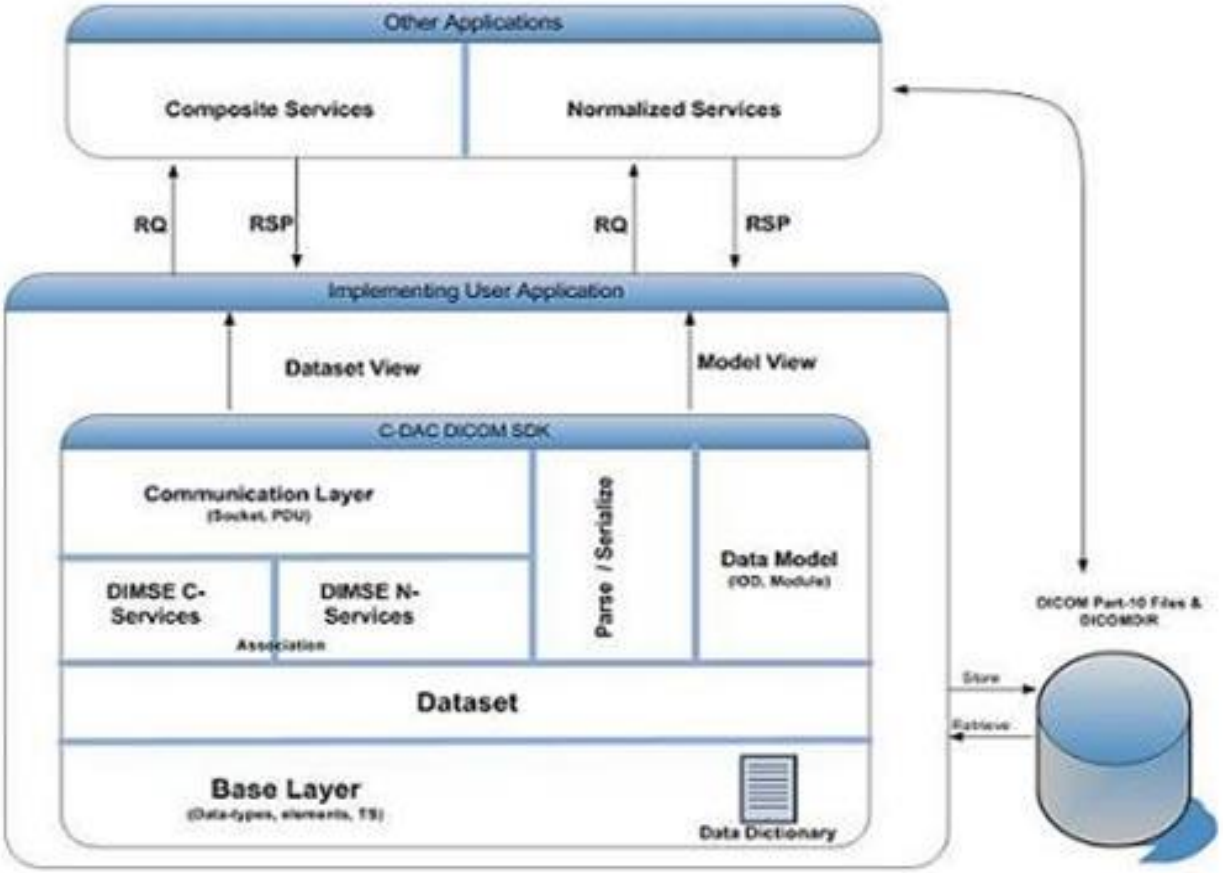

Figure: 1. Layered Architecture of SDK

4.1.2. Functional Definitions of AEs

4.1.2.1. Echo-SCP: ECHO-SCP waits in the background for connections, will accept associations with Presentation Contexts for the SOP Class of the Verification Service Class, and will respond successfully to echo requests.

4.1.2.2. Echo-SCU: ECHO-SCU invokes C-ECHO service to verify end-to-end communications with a peer DIMSE-service-user.

4.1.2.3. Store-SCP: STORE-SCP waits in the background for connections, will accept associations with Presentation Contexts for SOP Classes of the Storage Service Class, and will store the received instances to the local database where they may subsequently be listed and viewed through the user interface.

4.1.2.4. Store-SCU: STORE-SCU invokes C-STORE service to request the storage of Composite SOP Instance information by a peer DIMSE-service-user.

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4.1.2.5. Find-SCU: The FIND-SCU invokes C-FIND service to match a series of Attribute strings against the Attributes of the set of SOP Instances managed by a peer DIMSE-service-user.

4.1.2.6. Find-SCP: FIND- SCP waits in the background for connections, will accept associations with Presentation Contexts for the SOP Class of the Study Root Query/Retrieve Information Model – FIND Service Class or the Patient Root Query/Retrieve Information Model – FIND Service Class, and will respond successfully to query requests.

4.1.2.7. Move-SCU: A connection to the remote AE is established to initiate the retrieval and the STORAGE-SCP AE receives the retrieved instances.

4.1.2.8. Move-SCP: MOVE-SCP waits in the background for connections, will accept associations with Presentation Contexts for the SOP Class of the Study Root Query/Retrieve Information Model – MOVE Service Class or the Patient Root Query/Retrieve Information Model – MOVE Service Class, and will respond successfully to retrieve requests by initiating storage of instances to the remote Application Entity.

4.1.2.9. GET-SCP: GET-SCP waits in the background for connections, will accept associations with Presentation Contexts for the SOP Class of the Study Root Query/Retrieve Information Model – GET Service Class or the Patient Root Query/Retrieve Information Model – GET Service Class, and will respond successfully to retrieve requests by initiating storage of instances to the remote Application Entity.

4.1.2.10. GET-SCU: GET-SCU invokes C-GET service to fetch the information for one or more Composite SOP Instances from a peer DIMSE-service-user, based upon the Attributes supplied by the invoking DIMSE-service-user.

4.1.2.11. Application Event Logging (AEL)SCU: Application Event Logging -SCU notifies the SCP that an event has occurred that the SCP should record in a log. The Action Information of the N-ACTION-RQ contains the information about the event.

4.1.2.12. Application Event Logging SCP: Application Event Logging SCP responds with a confirmation of the status of the recording action.

4.1.2.13. Instance Availability Notification (IAN)-SCU: N-Create service allows an SCU to create an instance of the Instance Availability Notification SOP Class and to provide availability in-formation about Instances that are under the control of the SCU.

4.1.2.14. Instance Availability Notification -SCP: It returns, via the N-CREATE response primitive, the N-CREATE Response Status Code applicable to the associated request.

4.1.2.15. N-EVENT-REPORT-SCP: N-Event-Report-SCP works as a processor N-Event-Report-Service. It processes the arrived N-Event-Report Request and generates response accordingly. It processes the event notification operation generated by a Service Class User.

4.1.2.16. N-EVENT-REPORT-SCU: N-Event-Report-SCU works as a DIMSE Service User for N-Event-Report

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Service. It sends the N-Event-Report Request and receives response.

4.1.2.17. N-GET-SCP: N-GET-SCP works as a processor for N-GET-Service. It processes the request according to the Service Class SOP Class UID specified in request.

4.1.2.18. N-GET-SCU: N-GET-SCU works as a DIMSE Service User for N-Get Service. It sends the N-Get Request and receives response.

4.1.2.19. N-SET-SCP: N-SET-SCP works as a processor for N-Set Service. It processes the arrived N-Set Request and generates response. It processes the request according to the Service Class SOP Class UID specified in request**.**

4.1.2.20. N-SET-SCU: N-SET-SCU works as a DIMSE Service User for N- SET Service. It sends the N- SET Request and receives response.

4.1.2.21. N-ACTION-SCP: N-ACTION-SCP works as a processor for N- ACTION Service. It processes the arrived N- ACTION Request and generates response. It processes the request according to the Service Class SOP Class UID specified in request.

4.1.2.22. N-ACTION-SCU: N- ACTION -SCU works as a DIMSE Service User for N- ACTION Service. It sends the N- ACTION Request and receives response.

4.1.2.23. N-CREATE-SCP: N-CREATE-SCP works as a processor for N- CREATE Service. It processes the arrived N- CREATE Request and generates response. It processes the request according to the Service Class SOP Class UID specified in request**.**

4.1.2.24. N-CREATE-SCU: N- CREATE -SCU works as a DIMSE Service User for N- CREATE Service. It sends the N- CREATE Request and receives response.

4.1.2.25. N-DELETE-SCP: N-DELETE-SCP works as a processor for N- DELETE Service. It processes the arrived N- DELETE Request and generates response. It processes the request according to the Service Class SOP Class UID specified in request**.**

4.1.2.26. N-DELETE-SCU: N- DELETE -SCU works as a DIMSE Service User for N- DELETE Service. It sends the N- DELETE Request and receives response.

4.1.2.27. Relevant Patient Information Query Service SCU: The SCU requests that the SCP perform a match for the Matching Keys and return values for the Return Keys that have been specified in the Identifier of the request, against the Relevant Patient Information that the SCP possesses.

4.1.2.28. Relevant Patient Information Query Service SCP: The SCP generates a C-FIND response for at most one match with an Identifier containing the values of all Matching Key Attributes and all known Return Key Attributes requested. The response contains one relevant patient information instance in the form that matches the Template that was requested. This response shall contain a status of Pending. When the process of matching is complete, with zero or one match, a C-FIND response is sent with a status of Success and no Identifier.

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4.1.2.29. Storage Commitment Service SCU: The SCU transmits the SOP Instances to the SCP using an appropriate mechanism. The request for storage commitment is transmitted to the SCP together with a list of references to one or more SOP Instances.

4.1.2.30. Storage Commitment Service SCP: The SCP implementation defines how it provides its commitment to storage. Certain SCPs may commit to permanently store the SOP Instances (e.g., an archive system) while other SCPs may commit to provide storage of the SOP Instances for a limited amount of time.

4.1.2.31. Modality Worklist (MWL) SCU: An implementation that conforms to the Modality Worklist SOP Class shall support queries against the Worklist Information Model. An implementation that conforms to the Modality Worklist SOP Class as an SCU shall state in its Conformance Statement whether it requests matching on Optional Matching Key Attributes.

4.1.2.32. Modality Worklist (MWL) SCP: An implementation that conforms to the Modality Worklist SOP Class shall support queries against the Worklist Information Model.

4.1.2.33. Structured Reporting Storage SOP Class SCU: Structured Reporting Storage SCU is capable to send C-Store request to Structured Reporting Storage SCP. Process for connection and association establishment is same as it is for other DIMSE services.

4.1.2.34. Structured Reporting Storage SOP Class SCP: Structured Reporting Storage SCP is implemented by providing support for the specified service. SCP for the service is responsible to create structured document of information provided through dataset.

4.1.2.35. Ophthalmic Refractive Measurements Storage (ORMS) SCP: Ophthalmic Refractive Measurements Storage SCP is implemented by providing support for the specified service. SCP for the service is responsible to store the instance of Ophthalmic Refractive Measurements Storage SOP Class.

4.1.2.36. Ophthalmic Refractive Measurements Storage (ORMS) SCU: Ophthalmic Refractive Measurements Storage SCU is capable to send C-Store request to Ophthalmic Refractive Measurements Storage SCP. Process for connection and association establishment is same as it is for other DIMSE services.

4.1.2.37. Color Palette Storage Service Class SCP: Color Palette Storage SCP is implemented by providing support for the C-Store service. SCP for the service is responsible to store the instance of Color Palette Storage SOP Class.

4.1.2.38. Color Palette Storage Service Class SCU: Color Palette Storage SCU is capable to send C-Store request to Color Palette Storage SCP. Process for connection and association establishment is same as it is for other DIMSE services.

4.1.2.39. DICOMDIR SCP: It defines the directory structure.

4.1.2.40. Softcopy Presentation State Storage SOP Classes SCP: The device acting as an SCP of these

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SOP Classes makes all mandatory presentation Attributes available for application to the referenced images at the discretion of the display device user, for all Image Storage SOP Classes for which the Softcopy Presentation State Storage SOP Class is supported.

4.1.2.41. Softcopy Presentation State Storage SOP Classes SCU: The SCU of a Softcopy Presentation State Storage SOP Class Service request the SCP to store the Grayscale Softcopy Presentation State Storage SOP Instance and generate its Presentation State.

4.1.2.42. Hanging Protocol Storage Service Class SCP: Hanging Protocol Storage SCP is implemented by providing support for the C-Store service. SCP for the service is responsible to store the instance of Hanging Protocol Storage SOP Class.

4.1.2.43. Hanging Protocol Storage Service Class SCU: Hanging Protocol Storage SCU is capable to send C-Store request to Hanging Protocol Storage SCP. Process for connection and association establishment is same as it is for other DIMSE services.

4.1.2.44. Hanging Protocol Query/Retrieve Service Class SCP: The SCP returns, via the DIMSE-C C-FIND, C-MOVE and C-GET services response primitive, the Response Status Code applicable to the associated request. The SCP processes the respective request and provide access to all attributes defined in the Hanging Protocol IOD.SCP generates the response of the respective request and send response to the SCU.

4.1.2.45. Hanging Protocol Query/Retrieve Service Class SCU: Hanging Protocol Query/Retrieve Service Class uses the C-FIND, C-MOVE and C-GET DIMSE Service. The SCU recognizes the status of the response and take appropriate action based on the success or failure of the service.

4.1.2.46. Substance Administration Query Service Class SCP: Substance Administration Query Service Class SCP acts as a DICOM Application Entity (AE) which returns information about the Attributes of a substance, device, or a substance administration act. This information is organized into well-defined Substance Administration Query Information Models.

4.1.2.47. Substance Administration Query Service Class SCU: Substance Approval Query SOP Class SCU supports queries against the Information Model using the baseline C-FIND SCU Behavior. Process for connection and association establishment is same as it is for C-Find DIMSE service.

4.1.2.48. Color Palette Query/Retrieve Service Class SCP: The SCP returns, via the DIMSE-C C-FIND, C-MOVE and C-GET services response primitive, the Response Status Code applicable to the associated request. The SCP processes the respective request and provide access to all attributes defined in the Color Palette IOD.SCP generates the response of the respective request and send response to the SCU.

4.1.2.49. Color Palette Query/Retrieve Service Class SCU: Color Palette Query/Retrieve Service Class uses the C-FIND, C-MOVE and C-GET DIMSE Service. The SCU recognizes the status of the response and take appropriate action based on the success or failure of the service.

4.1.2.50. Instance and Frame Level Retrieve SOP Classes SCP: The Instance and Frame Level Retrieve SCP creates new SOP instances if necessary and then initiates C-STORE sub-operations for the

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corresponding storage SOP Instances. These C-STORE sub-operations occur on a different Association than the C-MOVE and C-Get service.

4.1.2.51. Instance and Frame Level Retrieve SOP Classes SCU: The Instance and Frame Level Retrieve SCU supplies Unique and Frame Range Key values to identify the requested SOP Instance(s) for C-Move and C-Get operation.

4.1.2.52. Composite Instance Retrieve Without Bulk Data SOP Classes SCP: The SCP identifies a set of Entities at the level of the transfer based upon the values in the Unique Keys in the Identifier of the C-GET request. The SCP initiates C-STORE sub-operations for the identified SOP Instances, but does not include in this C-STORE sub operation the Attributes described.

4.1.2.53. Composite Instance Retrieve Without Bulk Data SOP Classes SCU: The SCU specifies one Instance UID or a list of Instance UIDs. SCUs of the Composite Instance Retrieve Without Bulk Data Service generate retrievals using the C-GET, under which it supports the C-STORE sub-operations generated by the C-GET.

4.1.2.54. Implant Template Query/Retrieve Service Classes SCP: Implant Template SCP acts as a DICOM AE which possesses information about the Attributes of a number of Implant Template or Implant Assembly Template composite SOP Instances. The information is organized into an Information Model. It supports C-Find, C-get and C-Move operations.

4.1.2.55. Implant Template Query/Retrieve Service Classes SCU: Implant Templates SCU is capable to send C-Find, C-Move and C-Get request to Implant Template SCP. Process for connection and association establishment is same as it is for other DIMSE services.

4.1.2.56. Unified Procedure Step Service and SOP Classes SCP: The SCP returns, via the N-ACTION, N-Set, N-Create-FIND, N-Event Report and N-GET DIMSE services response primitive, the Response Status Code applicable to the associated request. The SCP processes the respective request and provide access to all attributes defined in the UPS service Class. SCP generates the response of the respective request and send response to the SCU.

4.1.2.57. Unified Procedure Step Service and SOP Classes SCU: Unified Procedure Step Service and SOP Classes uses the N-ACTION, N-Set, N-Create-FIND, N-Event Report and N-GET DIMSE Services. The SCU recognizes the status of the response and take appropriate action based on the success or failure of the service.

4.1.2.58. RT Machine Verification Service Classes SCP: RT Machine Verification SCP acts as Machine Parameter Verifier (MPV). After it receives the N-Create request from SCU, it then retrieves the data necessary to perform verification through DICOM or other means. After receiving N-Action request the SCP compares the values of the specified Attributes against the values of the Attributes from the referenced plan, and signals the status of the verification using N-EVENT-REPORT command with the Treatment Verification Status (3008,002C) Attribute indicating the verification result.

4.1.2.59. RT Machine Verification Service Classes SCU: RT Machine Verification SCU is the radiation delivery system used to administer the treatment. It initializes external verification of a new plan using the N-CREATE command. It uses the N-SET command request to instruct the SCP on the specified

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Attributes to be verified. It then requests that the verification start using an N-ACTION command. It may then optionally request the beam's verification parameters using an N-GET. It terminates the verification session at the Plan Level using an N-DELETE.

4.1.2.60. Display System Management Service Class SCP: Display System Management SCP returns the values for the specified Attributes of the Display System SOP Instance. It also returns the status code for the requested SOP Instance retrieval.

4.1.2.61. Display System Management Service Class SCU: Display System Management SCU uses the N-GET to request the SCP to provide the contents of a Display System SOP Instance. The SCU specifies in the N-GET request primitive the UID of the SOP Instance from which attributes are to be returned.

4.1.2.62. WADO SCU: In WADO-WS Specific Web Services parameters to be used for the sending the request to the server as per the WSDL rule of particular action. The SCU transmits the SOP Instances to the SCP as mention in the web service parameters. SCU invoked the C-GET operation and send request to the respective server. In WADO-RS Specific RESTful Services parameters to be used for the sending the request to the server by using particular action. The SCU transmits the SOP Instances to the SCP as mention in the rest service parameters of each action. SCU invoked the C-GET operation and send request to the respective server. For WADO-URI, the parameters of the query component of the Request-URI are sent to the web Server through the HTTP GET method request.

4.1.2.63. Print Management Service Class-SCP: The SCP returns, via the N-ACTION, N-Set, N-Create-Delete, N-Event Report and N-GET DIMSE services response primitive, the Response Status Code applicable to the associated request. The SCP processes the respective request and provide access to all attributes defined in the UPS service Class. SCP generates the response of the respective request and send response to the SCU.

4.1.2.64. Print Management Service Class-SCU: Print Management Service Class uses the N-ACTION, N-Set, N-Create, N-Delete, N-Event Report and N-GET DIMSE Services. The SCU recognizes the status of the response and take appropriate action based on the success or failure of the service.

4.1.3. Sequencing of Real-World Activities

SCU (Service Class User) requests the SCP (Service Class provider) for the services defined in DICOM. It is a DICOM term for the client application. All the communication in DICOM occurs between Service Class User and Service Class Provider where the SCU is the service requestor and SCP is the service provider.

Service Class Provider (SCP) provides services to the Service Class User. It is a DICOM term for the server application. All the communication in DICOM occurs between Service Class User and Service Class Provider where the SCU is the service requestor and SCP is the service provider.

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4.2. AE Specifications

4.2.1. ECHO-SCP

4.2.1.1. SOP Classes

ECHO-SCP provides Standard Conformance to the following SOP classes:

Table 4.2.1-1
SOP CLASSES SUPPORTED BY ECHO SCP

SOP Class Name	SOP Class UID
Verification SOP Class	1.2.840.10008.1.1

4.2.1.2. Association Policies

4.2.1.2.1. General

ECHO-SCP accepts but never initiates associations.

Table 4.2.1-2
MAXIMUM PDU SIZE RECEIVED AS A SCP FOR ECHO-SCP

Maximum PDU size received	16384(approximate)

4.2.1.2.2. Number of Associations

Table 4.2.1-3
NUMBER OF ASSOCIATIONS AS A SCP FOR ECHO-SCP

Maximum number of simultaneous associations	Unlimited

4.2.1.2.3. Asynchronous nature

ECHO-SCP will allow multiple outstanding operations on an Association. Therefore, ECHO-SCP will perform asynchronous operations window negotiation.

4.2.1.2.4. Implementation Identifying Information

4.2.1.3. Association Initiation Policy

ECHO-SCP does not initiate associations.

4.2.1.4. Association Acceptance Policy

ECHO-SCP by default accepts any called AE title provided by SCU. When ECHO-SCP accepts an association, it will respond to echo request.

4.2.1.4.1. Activity – Receive Echo Request

4.2.1.4.1.1. Description and Sequencing of Activities

As requests are received, they are responded to immediately.

4.2.1.4.1.2. Accepted Presentation Context

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Table 4.2.1-4

ACCEPTABLE PRESENTATION CONTEXTS FOR ECHO-SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Verification SOP Class	1.2.840.10008.1.1	Explicit VR Little Endian	1.2.840.10008.1.2.1	SCP	None
		Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Deflated Explicit VR Little Endian	1.2.840.10008.1.2.1.99	SCP	None
		LOSSY JPEG 8 BIT	1.2.840.10008.1.2.4.50	SCP	None
		LOSSY JPEG 12 BIT	1.2.840.10008.1.2.4.51	SCP	None
		JPEG LOSSLESS NON-HIERARCHICAL PROCESS 14	1.2.840.10008.1.2.4.57	SCP	None
		LOSSLESS JPEG	1.2.840.10008.1.2.4.70	SCP	None
		JPEG LS LOSSLESS	1.2.840.10008.1.2.4.80	SCP	None
		JPEG LS LOSSY NEAR LOSSLESS	1.2.840.10008.1.2.4.81	SCP	None
		JPEG 2000 LOSSLESS ONLY	1.2.840.10008.1.2.4.90	SCP	None
		JPEG 2000	1.2.840.10008.1.2.4.91	SCP	None
		RLE LOSSLESS	1.2.840.10008.1.2.5	SCP	None
		MPEG MAIN PROFILE	1.2.840.10008.1.2.4.100	SCP	None
		JPEG 2000 Part 2 Multi-component Image Compression	1.2.840.10008.1.2.4.93	SCP	None
		JPEG 2000 Part 2 Multi-component Image Compression (Lossless Only)	1.2.840.10008.1.2.4.92	SCP	None
		JPIP Referenced	1.2.840.10008.1.2.4.93	SCP	None
		JPIP Referenced Deflate	1.2.840.10008.1.2.4.94	SCP	None
		MPEG2 Main Profile @ High Level	1.2.840.10008.1.2.4.101	SCP	None
		MPEG-4 AVC/H.264 High Profile / Level 4.1	1.2.840.10008.1.2.4.102	SCP	None
		MPEG-4 AVC/H.264 BD-compatible High Profile / Level 4.1	1.2.840.10008.1.2.4.103	SCP	None
		MPEG-4 AVC/H.264 High Profile / Level 4.2For 2D Video	1.2.840.10008.1.2.4.104	SCP	None
		MPEG-4 AVC/H.264 High Profile / Level 4.2For 3D Video	1.2.840.10008.1.2.4.105	SCP	None
		MPEG-4 AVC/H.264 Stereo High Profile /Level 4.2	1.2.840.10008.1.2.4.106	SCP	None
		RFC 2557 MIME encapsulation	1.2.840.10008.1.2.6.1	SCP	None
		XML Encoding	1.2.840.10008.1.2.6.2	SCP	None

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4.2.1.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.1.4.1.3. SOP Specific Conformance

4.2.1.4.1.3.1.SOP Specific Conformance to Verification SOP Class

ECHO-SCP provides standard conformance to the Verification Service Class.

4.2.1.4.1.3.2. Transfer Syntax Selection Policies

ECHO-SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.2. ECHO-SCU

4.2.2.1. SOP Classes

ECHO-SCU provides Standard Conformance to the following SOP classes:

Table 4.2.2-1

SOP CLASSES SUPPORTED BY ECHO SCP

SOP Class Name	SOP Class UID
Verification SOP Class	1.2.840.10008.1.1

4.2.2.2. Association Policies

4.2.2.2.1. General

ECHO-SCU initiates associations but never accepts them.

Table 4.2.2-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR ECHO-SCP

Maximum PDU size received	16384(approximate)

4.2.2.2.2. Number of Associations

Table 4.2.2-3

NUMBER OF ASSOCIATIONS AS A SCP FOR ECHO-SCP

Maximum number of simultaneous associations	Unlimited

4.2.2.2.3. Asynchronous nature

ECHO-SCU will allow multiple outstanding operations on an Association. Therefore, ECHO-SCU will perform asynchronous operations window negotiation.

4.2.2.2.4. Implementation Identifying Information

4.2.2.3. Association Initiation Policy

ECHO-SCU initiates associations.

4.2.2.4. Association Acceptance Policy

ECHO-SCU does not accept associations.

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4.2.2.4.1. Activity – Receive Echo Request

4.2.2.4.1.1. Description and Sequencing of Activities

The C-ECHO service is invoked by a SCU to verify end-to-end communications with SCP. If association is successfully established then create Service Request. To send the C-ECHO Request to C-ECHO SCP, C-Echo SCU has to be created by passing the SCU Session object which has already been created. This represents that the C-ECHO SCU is created only for this particular session with SCP. Call sendMessage() method of CECHO SCU. This method waits until the response is received from C-ECHO SCP. It returns true if the request is sent to the C-ECHO SCP and response of request is arrived.
This method returns false if the SOP Class UID or Transfer Syntax of the Dataset which is sent in the request is not agreed in the association.

4.2.2.4.1.2. Accepted Presentation Context

Table 4.2.2-4

ACCEPTABLE PRESENTATION CONTEXTS FOR ECHO-SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Verification SOP Class	1.2.840.10008.1.1	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.2.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.2.4.1.3. SOP Specific Conformance

4.2.2.4.1.3.1. SOP Specific Conformance to Verification SOP Class

ECHO-SCU provides standard conformance to the Verification Service Class.

4.2.2.4.1.3.2. Transfer Syntax Selection Policies

ECHO-SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.2.4.1.3.3. Response Status

Table 4.2.2-5

RESPONSE STATUS FOR ECHO-SCU

Service Status	Further Meaning	Status Codes	Behavior
Failure	Process Failed	0110	Association closed, Message shown to user.
Success	Process Complete	0000	Association closed

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4.2.3. FIND-SCP

4.2.3.1. SOP Classes

FIND-SCP provides Standard Conformance to the following SOP classes:

Table 4.2.3-1

SOP CLASSES SUPPORTED BY FIND-SCP

SOP Class Name	SOP Class UID
General Relevant Patient Information Query	1.2.840.10008.5.1.4.37.1
Breast Imaging Relevant Patient Information Query	1.2.840.10008.5.1.4.37.2
Cardiac Relevant Patient Information Query	1.2.840.10008.5.1.4.37.3
Patient Root Query/Retrieve Information Model – FIND	1.2.840.10008.5.1.4.1.2.1.1
Study Root Query/Retrieve Information Model – FIND	1.2.840.10008.5.1.4.1.2.2.1
Modality Worklist Information Model - FIND	1.2.840.10008.5.1.4.31

4.2.3.2. Association Policies

4.2.3.2.1. General

FIND-SCP accepts but never initiates associations.

Table 4.2.3-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR FIND-SCP

Maximum PDU size received	16384(approximate)

4.2.3.2.2. Number of Associations

Table 4.2.3-3

NUMBER OF ASSOCIATIONS AS A SCP FOR FIND-SCP

Maximum number of simultaneous associations	Unlimited

4.2.3.2.3. Asynchronous nature

FIND-SCP allows multiple operations on an Association. Therefore, FIND-SCP will perform asynchronous operations window negotiation.

4.2.3.2.4. Implementation Identifying Information

4.2.3.3. Association Initiation Policy

FIND-SCP does not initiate associations.

4.2.3.4. Association Acceptance Policy

When FIND-SCP accepts an association, it will respond to query requests. The association will be rejected if:

- The Called AE Title does not match the AE Title shared by all the SCPs of the application.
- The Calling AE Title is not in the application's pre-configured list.

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4.2.3.4.1. Activity – Receive Query Request

4.2.3.4.1.1. Description and Sequencing of Activities

When a query is received, the local database is queried for the result set.

4.2.3.4.1.2. Accepted Presentation Context

Table 4.2.3-4

ACCEPTABLE PRESENTATION CONTEXTS FOR FIND-SCP

Presentation Context Table				
Abstract Syntax		**Transfer Syntax**	**Role**	**Extended Negotiation**
Name	**UID**	**Name**		
See **Table 4.2.3-1**	See **Table 4.2.3-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.3.4.1.2.1. Extended Negotiation

No extended negotiation is performed and in particular, relational queries are not supported.

4.2.3.4.1.3. SOP Specific Conformance

4.2.3.4.1.3.1.SOP Specific Conformance to C-FIND SOP Class

FIND-SCP provides standard conformance to the supported C-FIND SOP Classes.

Table 4.2.3-5

Attribute name	Tag
Patient ID	(0010,0020)
Study Date	(0008,0020)
Modality	(0008,0060)
Study Time	(0008,0030)
Accession Number	(0008,0050)
Number of Study Related Series	(0020,1206)
Number of Study Related Instances	(0020,1208)

4.2.3.4.1.3.2. Presentation Context Acceptance Criterion

FIND-SCP will always accept any Presentation Context for the supported SOP Classes with the supported Transfer Syntaxes.

4.2.3.4.1.3.3. Transfer Syntax Selection Policies

FIND-SCP will always select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

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4.2.4. FIND-SCU

4.2.4.1. SOP Classes

FIND-SCU provides Standard Conformance to the following SOP classes:

Table 4.2.4-1

SOP CLASSES SUPPORTED BY FIND-SCU

SOP Class Name	SOP Class UID
General Relevant Patient Information Query	1.2.840.10008.5.1.4.37.1
Breast Imaging Relevant Patient Information Query	1.2.840.10008.5.1.4.37.2
Cardiac Relevant Patient Information Query	1.2.840.10008.5.1.4.37.3
Patient Root Query/Retrieve Information Model – FIND	1.2.840.10008.5.1.4.1.2.1.1
Study Root Query/Retrieve Information Model – FIND	1.2.840.10008.5.1.4.1.2.2.1
Modality Worklist Information Model - FIND	1.2.840.10008.5.1.4.31

4.2.4.2. Association Policies

4.2.4.2.1. General

FIND-SCU initiates but never accepts associations.

Table 4.2.4-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR FIND-SCU

Maximum PDU size received	16384(approximate)

4.2.4.2.2. Number of Associations

Table 4.2.4-3

NUMBER OF ASSOCIATIONS AS A SCU FOR FIND-SCU

Maximum number of simultaneous associations	Unlimited

4.2.4.2.3. Asynchronous nature

FIND-SCU allows multiple operations on an Association. Therefore, FIND-SCU will perform asynchronous operations window negotiation.

4.2.4.2.4. Implementation Identifying Information

4.2.4.3. Association Initiation Policy

FIND-SCU initiates associations.

4.2.4.4. Association Acceptance Policy

FIND-SCU does not accept associations.

4.2.4.4.1. Activity – Receive Query Request

4.2.4.4.1.1. Description and Sequencing of Activities

C-FIND Service is related to querying of attributes. C-FIND service is invoked by SCU to match a series of attributes against the Attributes of the set of SOP Instances managed by C-FIND SCP. The C-FIND service

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returns for each match a list of requested Attributes and their values.

4.2.4.4.1.2. Accepted Presentation Context

Table 4.2.4-4

ACCEPTABLE PRESENTATION CONTEXTS FOR FIND-SCU

Presentation Context Table				
Abstract Syntax		**Transfer Syntax**	**Role**	**Extended Negotiation**
Name	**UID**	**Name**		
See **Table 4.2.3-1**	See **Table 4.2.3-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.4.4.1.2.1. Extended Negotiation

No extended negotiation is performed and in particular, relational queries are not supported.

4.2.4.4.1.3. SOP Specific Conformance

4.2.4.4.1.3.1. SOP Specific Conformance to C-FIND SCU Class

FIND-SCU provides standard conformance to the Supported C-FIND Service Class.

Table 4.2.4-5

Attribute name	Tag
Patient ID	(0010,0020)
Study Date	(0008,0020)
Modality	(0008,0060)
Study Time	(0008,0030)
Accession Number	(0008,0050)
Number of Study Related Series	(0020,1206)
Number of Study Related Instances	(0020,1208)

4.2.4.4.1.3.2. Presentation Context Acceptance Criterion

FIND-SCU does not accept associations.

4.2.4.4.1.3.3. Transfer Syntax Selection Policies

FIND-SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.4.4.1.3.4. Response Status

FIND-SCU will behave as described in the Table below when generating the C-FIND response command message.

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Table 4.2.4-6

RESPONSE STATUS FOR FIND-SCU

Service Status	Further Meaning	Status Codes	Behavior
Failure	Process Failed	0110	Association closed, Message shown to user.
Failure	Refused: Out of Resources	A700	Association closed, Message shown to user.
Failure	Identifier does not match SOP Class	A900	Association closed, Message shown to user.
Failure	SOP Class not supported	0122	Association closed, Message shown to user.
Failure	Unable to Process: Parsing Failed	C000	Association closed, Message shown to user.
Success	Process Complete	0000	Association closed
Cancel	Matching terminated due to Cancel request	FE00	Association closed, Message shown to user.
Pending	Matches are continuing - Current Match supplied	FF00	Processing continues, Message shown to user.
Pending	Matches are continuing - Warning that one or more Optional Keys were not supported	FF01	Processing continues, Message shown to user.

4.2.5. MOVE-SCU

4.2.5.1.SOP Classes

MOVE-SCU provides Standard Conformance to the following SOP classes:

Table 4.2.5-1

SOP CLASSES SUPPORTED BY MOVE-SCU

SOP Class Name	SOP Class UID
Patient Root Query/Retrieve Information Model – MOVE	1.2.840.10008.5.1.4.1.2.1.2
Study Root Query/Retrieve Information Model – MOVE	1.2.840.10008.5.1.4.1.2.2.2

4.2.5.2. Association Policies

4.2.5.2.1. General

MOVE-SCU initiates but never accepts associations.

Table 4.2.5-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR MOVE-SCU

Maximum PDU size received	16384(approximate)

4.2.5.2.2. Number of Associations

Table 4.2.5-3

NUMBER OF ASSOCIATIONS AS A SCP FOR MOVE-SCU

Maximum number of simultaneous associations	Unlimited

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4.2.5.2.3. Asynchronous Nature

MOVE-SCU allows multiple outstanding operations on an Association. Therefore, MOVE-SCU will perform asynchronous operations window negotiation.

4.2.5.2.4. Implementation Identifying Information

4.2.5.3. Association Initiation Policy

MOVE-SCU attempts to initiate a new association when the user performs the retrieve.

4.2.5.3.1. Activity – Retrieve from Remote AE

4.2.5.3.1.1. Description and Sequencing of Activities

The C-MOVE service is invoked by a SCU to move the information for one or more Composite SOP Instances from SCP, to a third party based upon the Attributes supplied by the invoking DIMSE service-user.

4.2.5.3.1.2. Proposed Presentation Contexts

Table 4.2.5-4

PROPOSED PRESENTATION CONTEXTS FOR MOVE-SCU

Presentation Context Table				
Abstract Syntax		**Transfer Syntax**	**Role**	**Extended Negotiation**
Name	**UID**	**Name**		
See **Table 4.2.5-1**	See **Table 4.2.5-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.5.3.1.2.1. Extended Negotiation

No extended negotiation is performed; in particular, relational retrievals are not supported.

4.2.5.3.1.3. SOP Specific Conformance

4.2.5.3.1.3.1.SOP Specific Conformance to C-MOVE SOP Classes

MOVE-SCU provides standard conformance to the supported C-MOVE SOP Classes, with one exception: the retrieval is performed from the AE that was queried by FIND-SCU, rather than the AE specified in the Retrieve AE Title attribute of the C-FIND response.

4.2.5.3.1.3.2. Presentation Context Acceptance Criterion

MOVE-SCU does not accept associations.

4.2.5.3.1.3.2.1. Transfer Syntax Selection Policies

MOVE-SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

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4.2.5.3.1.3.3. Response Status

Table 4.2.5-5

RESPONSE STATUS FOR MOVE-SCU

Service Status	Further Meaning	Status Codes	Behavior
Failure	Process Failed	0110	Association closed, Message shown to user.
Failure	Refused: Out of Resources - Unable to calculate number of matches	A701	Association closed, Message shown to user.
Failure	Refused: Out of Resources - Unable to perform sub-operations	A702	Association closed, Message shown to user.
Failure	Refused: Move Destination unknown	A801	Association closed, Message shown to user.
Failure	Identifier does not match SOP Class	A900	Association closed, Message shown to user.
Failure	Unable to Process-Parsing Failed	C000	Association closed, Message shown to user.
Failure	SOP class not supported	0122	Association closed, Message shown to user.
Warning	Sub-operations Complete - One or more Failures	B000	Association closed, Message shown to user.
Pending	Sub-operations are continuing	FF00	Processing continues, Message shown to user.
Cancel	Sub-operations terminated due to cancel Indication	FE00	Association closed, Message shown to user.
Success	Process Complete	0000	Association closed

Sub-operation Dependent Behavior: Since the C-MOVE operation is dependent on completion of C-STORE sub-operations that are occurring on another association, the question of failure of operations on the other association(s) must be considered.

4.2.5.4. Association Acceptance Policy

MOVE-SCU does not accept associations.

4.2.6 MOVE-SCP

4.2.6.1. SOP Classes

MOVE-SCP provides Standard Conformance to the following SOP classes:

Table 4.2.6-1

SOP CLASSES SUPPORTED BY MOVE-SCP

SOP Class Name	SOP Class UID
Patient Root Query/Retrieve Information Model – MOVE	1.2.840.10008.5.1.4.1.2.1.2
Study Root Query/Retrieve Information Model – MOVE	1.2.840.10008.5.1.4.1.2.2.2

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4.2.6.2. Association Policies

4.2.6.2.1. General

MOVE-SCP accepts but never initiates associations.

Table 4.2.6-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR MOVE-SCP

Maximum PDU size received	16384(approximate)

4.2.6.2.2. Number of Associations

Table 4.2.6-3

NUMBER OF ASSOCIATIONS AS A SCP FOR MOVE-SCP

Maximum number of simultaneous associations	Unlimited

4.2.6.2.3. Asynchronous nature

MOVE-SCP allows multiple outstanding operations on an Association. Therefore, MOVE-SCP will perform asynchronous operations window negotiation.

4.2.6.2.4. Implementation Identifying Information

4.2.6.3. Association Initiation Policy

MOVE-SCP initiates an association with the AE specified as the Move Destination in the MOVE request, in order to store the requested instances.

4.2.6.4. Association Acceptance Policy

When MOVE-SCP accepts an association, it will respond to query requests. The association will be rejected if:

- The Called AE Title does not match the AE Title shared by all the SCPs of the application.
- The move destination AE Title is not in the application's pre-configured list.

4.2.6.4.1. Activity – Receive MOVE Request

4.2.6.4.1.1. Description and Sequencing of Activities

As requests are received, a MOVE-SCU operation is initiated to send the requested instances to the specified remote AE.

4.2.6.4.1.2. Accepted Presentation Context

Table 4.2.6-4

ACCEPTABLE PRESENTATION CONTEXTS FOR MOVE-SCP

Presentation Context Table				
Abstract Syntax		**Transfer Syntax**	**Role**	**Extended Negotiation**
Name	**UID**	**Name**		
See **Table 4.2.5-1**	See **Table 4.2.5-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

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4.2.6.4.1.2.1. Extended Negotiation

No extended negotiation is performed and in particular, relational retrievals are not supported.

4.2.6.4.1.3.SOP Specific Conformance

4.2.6.4.1.3.1. SOP Specific Conformance to C-MOVE SOP Class

MOVE-SCP provides standard conformance to the supported C-MOVE SOP Classes.

4.2.6.4.1.3.2. Presentation Context Acceptance Criterion

MOVE-SCP will always accept any Presentation Context for the supported SOP Classes with the supported Transfer Syntaxes.

4.2.6.4.1.3.3. Transfer Syntax Selection Policies

MOVE-SCP will always select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.7. STORE-SCP

4.2.7.1.SOP Classes

STORE -SCP provides Standard Conformance to the following SOP classes:

Table 4.2.7-1
SOP CLASSES SUPPORTED BY STORE-SCP

SOP Class Name	SOP Class UID
Basic Text SR Storage	1.2.840.10008.5.1.4.1.1.88.11
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1
CT Image Storage	1.2.840.10008.5.1.4.1.1.2
Digital X-Ray Image Storage – For Presentation	1.2.840.10008.5.1.4.1.1.1.1
Digital X-Ray Image Storage – For Processing	1.2.840.10008.5.1.4.1.1.1.1.1
Enhanced CT Image Storage	1.2.840.10008.5.1.4.1.1.2.1
Enhanced MR Image Storage	1.2.840.10008.5.1.4.1.1.4.1
Enhanced SR Storage	1.2.840.10008.5.1.4.1.1.88.22
Enhanced XA Image Storage	1.2.840.10008.5.1.4.1.1.12.1.1
MR Image Storage	1.2.840.10008.5.1.4.1.1.4
RT Dose Storage	1.2.840.10008.5.1.4.1.1.481.2
RT Image Storage	1.2.840.10008.5.1.4.1.1.481.1
RT Plan Storage	1.2.840.10008.5.1.4.1.1.481.5
RT Structure Set Storage	1.2.840.10008.5.1.4.1.1.481.3
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1
X-Ray Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.12.1
X-Ray Radiation Dose SR Storage	1.2.840.10008.5.1.4.1.1.88.67
X-Ray Radio fluoroscopic Image Storage	1.2.840.10008.5.1.4.1.1.12.2

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4.2.7.2. Association Policies

4.2.7.2.1. General

STORE -SCP accepts but never initiates associations.

Table 4.2.7-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR STORE -SCP

Maximum PDU size received	16384

4.2.7.2.2. Number of Associations

Table 4.2.7-3

NUMBER OF ASSOCIATIONS AS A SCP FOR STORE-SCP

Maximum number of associations	Unlimited

4.2.7.2.3. Asynchronous nature

STORE –SCP allows multiple outstanding operations on an Association. Therefore, STORE -SCP will perform asynchronous operations window negotiation.

4.2.7.2.4. Implementation Identifying Information

4.2.7.3. Association Initiation Policy

STORE -SCP does not initiate associations.

4.2.7.4. Association Acceptance Policy

When STORE -SCP accepts an association, it will respond to storage requests. STORE -SCP accepts association requests from any Calling AE Title.

4.2.7.4.1. Activity – Receive Storage Request

4.2.7.4.1.1. Description and Sequencing of Activities

As instances are received, they are copied to the local file system and a record is created in the internal database. If the received instance is a duplicate of a previously received instance, the instance will be discarded.

4.2.7.4.1.2. Accepted Presentation Context

Table 4.2.7-4

ACCEPTABLE PRESENTATION CONTEXTS FOR STORE-SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.7-1**	See **Table 4.2.7-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	NONE

4.2.7.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

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4.2.7.4.1.3. SOP Specific Conformance

4.2.7.4.1.3.1.SOP Specific Conformance to Store SOP Class

STORE-SCP provides standard conformance to the Storage Service Class.

4.2.7.4.1.3.2. Presentation Context Acceptance Criterion

STORE-SCP will always accept any Presentation Context for the supported SOP Classes with the supported Transfer Syntaxes.

4.2.7.4.1.3.3. Transfer Syntax Selection Policies

STORE-SCP will always select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.8. STORE-SCU

4.2.8.1. SOP Classes

STORE -SCU provides Standard Conformance to the following SOP classes:

Table 4.2.8-1

SOP CLASSES SUPPORTED BY STORE-SCU

SOP Class Name	SOP Class UID
Basic Text SR Storage	1.2.840.10008.5.1.4.1.1.88.11
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1
CT Image Storage	1.2.840.10008.5.1.4.1.1.2
Digital X-Ray Image Storage – For Presentation	1.2.840.10008.5.1.4.1.1.1.1
Digital X-Ray Image Storage – For Processing	1.2.840.10008.5.1.4.1.1.1.1.1
Enhanced CT Image Storage	1.2.840.10008.5.1.4.1.1.2.1
Enhanced MR Image Storage	1.2.840.10008.5.1.4.1.1.4.1
Enhanced SR Storage	1.2.840.10008.5.1.4.1.1.88.22
Enhanced XA Image Storage	1.2.840.10008.5.1.4.1.1.12.1.1
MR Image Storage	1.2.840.10008.5.1.4.1.1.4
RT Dose Storage	1.2.840.10008.5.1.4.1.1.481.2
RT Image Storage	1.2.840.10008.5.1.4.1.1.481.1
RT Plan Storage	1.2.840.10008.5.1.4.1.1.481.5
RT Structure Set Storage	1.2.840.10008.5.1.4.1.1.481.3
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1
X-Ray Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.12.1
X-Ray Radiation Dose SR Storage	1.2.840.10008.5.1.4.1.1.88.67
X-Ray Radio fluoroscopic Image Storage	1.2.840.10008.5.1.4.1.1.12.2

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4.2.8.2. Association Policies

4.2.8.2.1. General

STORE -SCU initiates but never accepts associations.

Table 4.2.8-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR STORE -SCU

Maximum PDU size received	16384

4.2.8.2.2. Number of Associations

Table 4.2.8-3

NUMBER OF ASSOCIATIONS AS A SCU FOR STORE-SCU

Maximum number of associations	Unlimited

4.2.8.2.3. Asynchronous nature

STORE – SCU allows multiple outstanding operations on an Association. Therefore, STORE - SCU will perform asynchronous operations window negotiation.

4.2.8.2.4. Implementation Identifying Information

4.2.8.3. Association Initiation Policy

STORE -SCU initiates associations.

4.2.7.4. Association Acceptance Policy

When STORE -SCU does not accept an association.

4.2.8.4.1. Activity – Receive Storage Request

4.2.8.4.1.1. Description and Sequencing of Activities

The Storage Service Class defines an application-level class-of-service which facilitates the simple transfer of information Instances (objects). It allows one DICOM AE to send images, waveforms, reports, etc., to another. Two peer DICOM AEs implement a SOP Class of the Storage Service Class with one serving in the SCU role and one serving in the SCP role. SOP Classes of the Storage Service Class are implemented using the C-STORE DIMSE-C service. A successful completion of the C-STORE has the following semantics:

- Both the SCU and the SCP support the type of information to be stored.
- The information is stored in some medium.

4.2.8.4.1.2. Accepted Presentation Context

Table 4.2.8-4

ACCEPTABLE PRESENTATION CONTEXTS FOR STORE-SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.8-1**	See **Table 4.2.8-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	NONE

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4.2.8.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.8.4.1.3. SOP Specific Conformance

4.2.7.4.1.3.1. SOP Specific Conformance to Store SOP Class

STORE-SCU provides standard conformance to the Storage Service Class.

4.2.8.4.1.3.2. Presentation Context Acceptance Criterion

STORE-SCU does not accept associations.

4.2.8.4.1.3.3. Transfer Syntax Selection Policies

STORE-SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.8.4.1.3.4. Response Status

Table 4.2.8-5

RESPONSE STATUS FOR STORE-SCU

Service Status	Further Meaning	Status Codes	Behavior
Failure	Process Failed	0110	Association closed, Message shown to user.
Failure	Unable to Process-Parsing Failed	C000	Association closed, Message shown to user.
Failure	SOP class not supported	0122	Association closed, Message shown to user.
Warning	Coercion of Data Elements	B000	Processing continues, Message shown to user.
Warning	Data Set does not match SOP Class	B007	Processing continues, Message shown to user.
Warning	Elements Discarded	B006	Processing continues, Message shown to user.
Success	Process Complete	0000	Association closed

4.2.9. GET-SCP

4.2.9.1. SOP Classes

GET-SCP provides Standard Conformance to the following SOP classes:

Table 4.2.9-1

SOP CLASSES SUPPORTED BY GET-SCP

SOP Class Name	SOP Class UID
Patient Root Query/Retrieve Information Model – GET	1.2.840.10008.5.1.4.1.2.1.3
Study Root Query/Retrieve Information Model – GET	1.2.840.10008.5.1.4.1.2.2.3

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4.2.9.2. Association Policies

4.2.9.2.1. General

GET-SCP accepts but never initiates associations.

Table 4.2.9-2
MAXIMUM PDU SIZE RECEIVED AS A SCP FOR GET -SCP

Maximum PDU size received	16384

4.2.9.2.2. Number of Associations

Table 4.2.9-3
NUMBER OF ASSOCIATIONS AS A SCP FOR GET-SCP

Maximum number of simultaneous associations	Unlimited

4.2.9.2.3. Asynchronous nature

GET-SCP allows multiple operations on an Association. Therefore, GET -SCP will perform asynchronous operations window negotiation.

4.2.9.2.4. Implementation Identifying Information

4.2.9.3. Association Initiation Policy

GET -SCP does not initiate associations.

4.2.9.4. Association Acceptance Policy

When GET -SCP accepts an association, it will respond to query requests. The association will be rejected if:

- The Called AE Title does not match the AE Title shared by all the SCPs of the application.
- The Calling AE Title is not in the application's pre-configured list.

4.2.9.4.1. Activity – Receive Query Request

4.2.9.4.1.1. Description and Sequencing of Activities

When a query is received, the local database is queried for the result set.

4.2.9.4.1.2. Accepted Presentation Context

Table 4.2.9-4
ACCEPTABLE PRESENTATION CONTEXTS FOR GET –SCP

Presentation Context Table				
Abstract Syntax		**Transfer Syntax**	**Role**	**Extended Negotiation**
Name	**UID**	**Name**		
Patient Root Query/Retrieve Information Model – GET	1.2.840.10008.5.1.4.1.2.1.3	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None
Study Root Query/Retrieve Information Model – GET	1.2.840.10008.5.1.4.1.2.2.3	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

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4.2.9.4.1.2.1. Extended Negotiation

No extended negotiation is performed and in particular, relational queries are not supported.

4.2.9.4.1.3. SOP Specific Conformance

4.2.9.4.1.3.1. SOP Specific Conformance to C-GET SOP Class

GET-SCP provides standard conformance to the supported C-GET SOP Classes.

Table 4.2.9-5

Attribute name	Tag
Patient ID	(0010,0020)
Study Date	(0008,0020)
Modality	(0008,0060)
Study Time	(0008,0030)
Accession Number	(0008,0050)
Number of Study Related Series	(0020,1206)
Number of Study Related Instances	(0020,1208)

4.2.9.4.1.3.2. Presentation Context Acceptance Criterion

GET-SCP will always accept any Presentation Context for the supported SOP Classes with the supported Transfer Syntaxes. More than one proposed Presentation Context will be accepted for the same Abstract Syntax if the Transfer Syntax is supported, whether or not it is the same as another Presentation Context.

4.2.9.4.1.3.3. Transfer Syntax Selection Policies

GET -SCP will always select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.10. GET-SCU

4.2.10.1. SOP Classes

GET-SCU provides Standard Conformance to the following SOP classes:

Table 4.2.10-1

SOP CLASSES SUPPORTED BY GET -SCU

SOP Class Name	SOP Class UID
Patient Root Query/Retrieve Information Model – GET	1.2.840.10008.5.1.4.1.2.1.3
Study Root Query/Retrieve Information Model – GET	1.2.840.10008.5.1.4.1.2.2.3

4.2.10.2. Association Policies

4.2.10.2.1. General

GET -SCU initiates but never accepts associations.

Table 4.2.10-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR GET -SCU

Maximum PDU size received	16384

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4.2.10.2.2. Number of Associations

Table 4.2.10-3
NUMBER OF ASSOCIATIONS AS A SCU FOR GET -SCU

Maximum number of simultaneous associations	Unlimited

4.2.10.2.3. Asynchronous nature

GET -SCU allows multiple operations on an Association. Therefore, GET -SCU will perform asynchronous operations window negotiation.

4.2.10.2.4. Implementation Identifying Information

4.2.10.3. Association Initiation Policy

GET -SCU initiates associations.

4.2.10.4. Association Acceptance Policy

GET -SCU does not accept associations.

4.2.10.4.1. Activity – Receive Query Request

4.2.10.4.1.1. Description and Sequencing of Activities

The C-GET service is invoked by a SCU to fetch the information for one or more Composite SOP Instances from SCP, based upon the Attributes supplied by the invoking DIMSE-service-user.

4.2.10.4.1.2. Accepted Presentation Context

Table 4.2.10-4
ACCEPTABLE PRESENTATION CONTEXTS FOR GET-SCU

Presentation Context Table				
Abstract Syntax		**Transfer Syntax**	**Role**	**Extended Negotiation**
Name	**UID**	**Name**		
Patient Root Query/Retrieve Information Model – GET	1.2.840.10008.5.1.4.1.2.1.3	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None
Study Root Query/Retrieve Information Model – GET	1.2.840.10008.5.1.4.1.2.2.3	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.10.4.1.2.1. Extended Negotiation

No extended negotiation is performed and in particular, relational queries are not supported.

4.2.10.4.1.3. SOP Specific Conformance

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4.2.10.4.1.3.1. SOP Specific Conformance to C-GET SCU Class

GET -SCU provides standard conformance to the Supported C- GET Service Class.

Table 4.2.10-5

Attribute name	Tag
Patient ID	(0010,0020)
Study Date	(0008,0020)
Modality	(0008,0060)
Study Time	(0008,0030)
Accession Number	(0008,0050)
Number of Study Related Series	(0020,1206)
Number of Study Related Instances	(0020,1208)

4.2.10.4.1.3.2. Presentation Context Acceptance Criterion

GET -SCU does not accept associations.

4.2.10.4.1.3.3. Transfer Syntax Selection Policies

GET -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.10.4.1.3.4. Response Status

Table 4.2.10-6

RESPONSE STATUS FOR GET-SCU

Service Status	Further Meaning	Status Codes	Behavior
Failure	Process Failed	0110	Association closed, Message shown to user.
Failure	Refused: Out of Resources - Unable to calculate number of matches	A701	Association closed, Message shown to user.
Failure	Refused: Out of Resources - Unable to perform sub-operations	A702	Association closed, Message shown to user.
Failure	Identifier does not match SOP Class	A900	Association closed, Message shown to user.
Failure	Unable to Process-Parsing Failed	C000	Association closed, Message shown to user.
Failure	SOP class not supported	0122	Association closed, Message shown to user.
Warning	Sub-operations Complete - One or more Failures	B000	Association closed, Message shown to user.

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Service Status	Further Meaning	Status Codes	Behavior
Pending	Sub-operations are continuing	FF00	Processing continues, Message shown to user.
Cancel	Sub-operations terminated due to Cancel Indication	FE00	Association closed, Message shown to user.
Success	Process Complete	0000	Association closed

4.2.11. Application Event Logging-SCP

4.2.11.1. SOP Classes

Application Event Logging -SCP provides Standard Conformance to the following SOP classes:

Table 4.2.11-1

SOP CLASSES SUPPORTED BY APPLICATION EVENT LOGGING-SCP

SOP Class Name	SOP Class UID
Procedural Event Logging SOP Class	1.2.840.10008.1.40

4.2.11.2. Association Policies

4.2.11.2.1. General

Application Event Logging -SCP accepts but never initiates associations.

Table 4.2.11-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR APPLICATION EVENT LOGGING-SCP

Maximum PDU size received	16384(approximate)

4.2.11.2.2. Number of Associations

Table 4.2.11-3

NUMBER OF ASSOCIATIONS AS A SCP FOR APPLICATION EVENT LOGGING-SCP

Maximum number of simultaneous associations	1

4.2.11.2.3. Asynchronous nature

Application Event Logging –SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

4.2.11.2.4. Implementation Identifying Information

4.2.11.3. Association Initiation Policy

Application Event Logging -SCP does not initiate associations.

4.2.11.4. Association Acceptance Policy

Application Event Logging -SCP by default accepts any called AE title provided by SCU. When Application Event Logging -SCP accepts an association, it will respond to echo request.

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4.2.11.4.1. Activity – Receive Echo Request

4.2.11.4.1.1. Description and Sequencing of Activities

The SCP manages the creation of SOP Instances of the Procedure Log Storage Service. It receives, via the N-ACTION request primitive, requests for logging of events that occur during a Study. The SCP (consonant with application dependent constraints) incorporates those event records into a Procedure Log SOP Instance for the specified Study.

The SCP returns, via the N-ACTION response primitive, the N-ACTION Response Status Code applicable to the associated action request.

4.2.11.4.1.2. Accepted Presentation Context

Table 4.2.11-4

ACCEPTABLE PRESENTATION CONTEXTS APPLICATION EVENT LOGGING-SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Procedural Event Logging SOP Class	1.2.840.10008.1.40	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	NONE

4.2.11.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.11.4.1.3. SOP Specific Conformance

4.2.11.4.1.3.1. SOP Specific Conformance to Verification SOP Class

AEL -SCP provides standard conformance to the Procedural Event Logging SOP Class.

4.2.11.4.1.3.2. Transfer Syntax Selection Policies

AEL -SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.12. Application Event Logging-SCU

4.2.12.1. SOP Classes

Application Event Logging -SCU provides Standard Conformance to the following SOP classes:

Table 4.2.12-1

SOP CLASSES SUPPORTED BY APPLICATION EVENT LOGGINGSCU

SOP Class Name	SOP Class UID
Procedural Event Logging SOP Class	1.2.840.10008.1.40

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4.2.12.2. Association Policies

4.2.12.2.1. General

Application Event Logging -SCU initiates associations but never accepts them.

Table 4.2.12-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR APPLICATION EVENT LOGGING-SCU

Maximum PDU size received	16384(approximate)

4.2.12.2.2. Number of Associations

Table 4.2.12-3

NUMBER OF ASSOCIATIONS AS A SCU FOR APPLICATION EVENT LOGGING-SCU

Maximum number of simultaneous associations	Unlimited

4.2.12.2.3. Asynchronous nature

AEL -SCU will not allow multiple outstanding operations on an Association. Therefore, Application Event Logging -SCU will not perform asynchronous operations window negotiation.

4.2.12.2.4. Implementation Identifying Information

4.2.12.3. Association Initiation Policy

Application Event Logging -SCU initiates associations.

4.2.12.4. Association Acceptance Policy

Application Event Logging -SCU does not accept associations.

4.2.12.4.1. Activity – Receive Echo Request

4.2.12.4.1.1. Description and Sequencing of Activities

The SCU requests logging of events that occur during a Study, using the N-ACTION request primitive. The SCU receives N-ACTION responses. The actions taken upon a response status of Failure, or upon non-response of the SCP, are implementation dependent.

4.2.12.4.1.2. Accepted Presentation Context

Table 4.2.12-4

ACCEPTABLE PRESENTATION CONTEXTS FOR APPLICATION EVENT LOGGING -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Procedural Event Logging SOP Class	1.2.840.10008.1.40	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	NONE

4.2.12.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

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4.2.12.4.1.3. SOP Specific Conformance

4.2.12.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Application Event Logging -SCU provides standard conformance to Procedural Event Logging SOP Class.

4.2.12.4.1.3.2. Transfer Syntax Selection Policies

AEL -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.12.4.1.3.3. Response Status

Table 4.2.12-5

RESPONSE STATUS FOR APPLICATION EVENT LOGGING -SCU

Service Status	Further Meaning	Status Codes	Behavior
Failure	Process Failed	0110	Association closed, Message shown to user.
Success	Process Complete	0000	Association closed
Failure	Invalid attribute value	0110	Association closed, Message shown to user.
Failure	SOP Class not supported	0122	Association closed, Message shown to user.
Failure	Unable to process: Parsing Failed	C000	Association closed, Message shown to user.

4.2.13. (Instance Availability Notification) IAN-SCP

4.2.13.1. SOP Classes

IAN-SCP provides Standard Conformance to the following SOP classes:

Table 4.2.13-1

SOP CLASSES SUPPORTED BY IAN SCP

SOP Class Name	SOP Class UID
Instance Availability Notification SOP Class	1.2.840.10008.5.1.4.33

4.2.13.2. Association Policies

4.2.11.2.1. General

IAN -SCP accepts but never initiates associations.

Table 4.2.13-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR IAN -SCP

Maximum PDU size received	16384(approximate)

4.2.11.2.2. Number of Associations

Table 4.2.13-3

NUMBER OF ASSOCIATIONS AS A SCP FOR IAN -SCP

Maximum number of simultaneous associations	1

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4.2.13.2.3. Asynchronous nature

IAN –SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

4.2.13.2.4. Implementation Identifying Information

4.2.13.3. Association Initiation Policy

IAN -SCP does not initiate associations.

4.2.13.4. Association Acceptance Policy

IAN -SCP by default accepts any called AE title provided by SCU. IAN -SCP accepts an association, it will respond to echo request.

4.2.13.4.1. Activity – Receive Echo Request

4.2.13.4.1.1. Description and Sequencing of Activities

The SCP returns, via the N-CREATE response primitive, the N-CREATE Response Status Code applicable to the associated request.

4.2.13.4.1.2. Accepted Presentation Context

Table 4.2.13-4

ACCEPTABLE PRESENTATION CONTEXTS FOR IAN -SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Instance Availability Notification SOP Class	1.2.840.10008.5.1.4.33	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	NONE

4.2.13.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.13.4.1.3. SOP Specific Conformance

4.2.13.4.1.3.1. SOP Specific Conformance to Verification SOP Class

IAN -SCP provides standard conformance to the Instance Availability Notification SOP Class.

4.2.13.4.1.3.2. Transfer Syntax Selection Policies

IAN -SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

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4.2.14IAN-SCU

4.2.14.1. SOP Classes

IAN -SCU provides Standard Conformance to the following SOP classes:

Table 4.2.14-1

SOP CLASSES SUPPORTED BY IAN SCU

SOP Class Name	SOP Class UID
Instance Availability Notification SOP Class	1.2.840.10008.5.1.4.33

4.2.14.2. Association Policies

4.2.14.2.1. General

IAN -SCU initiates associations but never accepts them.

Table 4.2.14-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR IAN-SCU

Maximum PDU size received	16384(approximate)

4.2.14.2.2. Number of Associations

Table 4.2.14-3

NUMBER OF ASSOCIATIONS AS A SCU FOR IAN-SCU

Maximum number of simultaneous associations	Unlimited

4.2.14.2.3. Asynchronous nature

IAN -SCU will not allow multiple outstanding operations on an Association. Therefore IAN -SCU will not perform asynchronous operations window negotiation.

4.2.14.2.4. Implementation Identifying Information

4.2.14.3. Association Initiation Policy

IAN -SCU initiates associations.

4.2.14.4. Association Acceptance Policy

IAN -SCU does not accept associations.

4.2.14.4.1. Activity – Receive Echo Request

4.2.14.4.1.1. Description and Sequencing of Activities

The SCU specifies in the N-CREATE request primitive the SOP Class and SOP Instance UIDs of the Instance Availability Notification SOP Instance that is created and for which Attribute Values are to be provided. The SCU provides Attribute values for the Instance Availability Notification SOP Class Attributes. The encoding rules for Instance Availability Notification Attributes are specified in the N-CREATE request primitive specification.

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4.2.14.4.1.2. Accepted Presentation Context

Table 4.2.14-4

ACCEPTABLE PRESENTATION CONTEXTS FOR IAN-SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Instance Availability Notification SOP Class	1.2.840.10008.5.1.4.33	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.14.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.14.4.1.3. SOP Specific Conformance

4.2.14.4.1.3.1. SOP Specific Conformance to Verification SOP Class

IAN -SCU provides standard conformance to the Instance Availability Notification SOP Class.

4.2.14.4.1.3.2. Transfer Syntax Selection Policies

IAN -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.14.4.1.3.3. Response Status

Table 4.2.14-5

RESPONSE STATUS FOR IAN-SCU

Service Status	Further Meaning	Status Codes	Behavior
Failure	Process Failed	0110	Association closed, Message shown to user.
Failure	Invalid Attribute Value	0106	Association closed, Message shown to user.
Failure	SOP Class not supported	0122	Association closed, Message shown to user.
Failure	Unable to process-Parsing Failed	C000	Association closed, Message shown to user.
Warning	Memory allocation not supported	B600	Processing continues, Message shown to user.
Success	Process Complete	0000	Association closed

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4.2.15 N-EVENT-REPORT- SCP

4.2.15.1. SOP Classes

N-EVENT-REPORT -SCP provides Standard Conformance to the following SOP classes:

Table 4.2.15-1

SOP CLASSES SUPPORTED BY N-EVENT-REPORT -SCP

SOP Class Name	SOP Class UID
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1

4.2.15.2. Association Policies

4.2.15.2.1. General

Table 4.2.15-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR N-EVENT-REPORT -SCP

Maximum PDU size received	16384(approximate)

4.2.15.2.2. Number of Associations

Table 4.2.15-3

NUMBER OF ASSOCIATIONS AS A SCP FOR N-EVENT-REPORT -SCP

Maximum number of simultaneous associations	1

4.2.15.2.3. Asynchronous nature

N-EVENT-REPORT -SCP will not allow multiple outstanding operations on an Association. Therefore N-EVENT-REPORT -SCP will not perform asynchronous operations window negotiation.

4.2.15.2.4. Implementation Identifying Information

4.2.15.3. Association Initiation Policy

N-EVENT-REPORT -SCP does not initiate associations.

4.2.15.4. Association Acceptance Policy

N-EVENT-REPORT -SCP accept associations.

4.2.15.4.1. Activity – Receive Echo Request

4.2.15.4.1.1. Description and Sequencing of Activities

When an N-Action Request arrives to N-Action SCP call will be redirected to a Service Request method. Implementer of N-Action SCP is supposed to take the action for arrived request. Behavior of N-Services varies according to the implementing service classes. N-Action SCP process the N-Action RQ according to the implementation set on it. An implementation of Sink or Source is supposed to be set on N-Action SCP. Service class specifies whether DataSink is to be set or Data Source is to be set. If implementation is not provided then a processing failure response will be generated so an implementation for Sink or Source according to the Service Class is required in order to get success response.

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4.2.15.4.1.2. Accepted Presentation Context

Table 4.2.15-4

ACCEPTABLE PRESENTATION CONTEXTS FOR N-EVENT-REPORT -SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.15-1**	See **Table 4.2.15-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.15.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.15.4.1.3. SOP Specific Conformance

4.2.15.4.1.3.1. SOP Specific Conformance to Verification SOP Class

N-EVENT-REPORT -SCP provides standard conformance to the supported SOP Class.

4.2.15.4.1.3.2. Transfer Syntax Selection Policies

N-EVENT-REPORT -SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.16 N-EVENT-REPORT- SCU

4.2.16.1. SOP Classes

N-EVENT-REPORT -SCU provides Standard Conformance to the following SOP classes:

Table 4.2.16-1

SOP CLASSES SUPPORTED BY N-EVENT-REPORT -SCU

SOP Class Name	SOP Class UID
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1

4.2.16.2. Association Policies

4.2.16.2.1. General

Table 4.2.16-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR N-EVENT-REPORT -SCU

Maximum PDU size received	16384(approximate)

4.2.16.2.2. Number of Associations

Table 4.2.16-3

NUMBER OF ASSOCIATIONS AS A SCU FOR N-EVENT-REPORT -SCU

Maximum number of simultaneous associations	1

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4.2.16.2.3. Asynchronous nature

N-EVENT-REPORT - SCU will not allow multiple outstanding operations on an Association. Therefore N-EVENT-REPORT - SCU will not perform asynchronous operations window negotiation.

4.2.16.2.4. Implementation Identifying Information

4.2.16.3. Association Initiation Policy

N-EVENT-REPORT - SCU does initiate associations.

4.2.16.4. Association Acceptance Policy

N-EVENT-REPORT - SCU does not accept associations.

4.2.16.4.1. Activity – Receive Echo Request

4.2.16.4.1.1. Description and Sequencing of Activities

To send the N-EventReport Request to N-EventReport SCP, N-EventReport SCU has to be created by passing the SCU Session object which has already been created. Then call sendMessage () method of N-Event Report SCU.

This method waits until the response is received from N-EventReport SCP. It returns true if the request is sent to the N-Event Report SCP and response of request is arrived.

This method returns false if the SOP Class UID or Transfer Syntax of the Dataset which is sent in the request is not agreed in the association or if Abort comes from SCP.

4.2.16.4.1.2. Accepted Presentation Context

Table 4.2.16-4

ACCEPTABLE PRESENTATION CONTEXTS FOR N-EVENT-REPORT -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See Table 4.2.16-1	See Table 4.2.16-1	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.16.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.16.4.1.3. SOP Specific Conformance

4.2.16.4.1.3.1. SOP Specific Conformance to Verification SOP Class

N-EVENT-REPORT - SCU provides standard conformance to the supported SOP Class.

4.2.16.4.1.3.2. Transfer Syntax Selection Policies

N-EVENT-REPORT -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in

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DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.16.4.1.3.3. Response Status

Table 4.2.16-5

RESPONSE STATUS FOR N-EVENT-REPORT -SCU

Service Status	Further Meaning	Status Codes	Behavior
Failure	Process Failed	0110	Association closed, Message shown to user.
Failure	Invalid Attribute Value	0106	Association closed, Message shown to user.
Failure	SOP Class not supported	0122	Association closed, Message shown to user.
Failure	Unable to process-Parsing Failed	C000	Association closed, Message shown to user.
Success	Process Complete	0000	Association closed

4.2.17 N-GET- SCP

4.2.17.1. SOP Classes

N-GET -SCP provides Standard Conformance to the following SOP classes:

Table 4.2.17-1

SOP CLASSES SUPPORTED BY N-GET -SCP

SOP Class Name	SOP Class UID
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3
Media Creation Management SOP Class UID	1.2.840.10008.5.1.1.33

4.2.17.2. Association Policies

4.2.17.2.1. General

N-GET-SCP does not initiate associations but accepts them.

Table 4.2.17-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR N-GET -SCP

Maximum PDU size received	16384(approximate)

4.2.17.2.2. Number of Associations

Table 4.2.15-3

NUMBER OF ASSOCIATIONS AS A SCP FOR N-GET -SCP

Maximum number of simultaneous associations	1

4.2.17.2.3. Asynchronous nature

N- GET -SCP will not allow multiple outstanding operations on an Association. Therefore N- GET-SCP will not perform asynchronous operations window negotiation.

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4.2.17.2.4. Implementation Identifying Information

4.2.17.3. Association Initiation Policy

N- GET -SCP does not initiate associations.

4.2.17.4. Association Acceptance Policy

N- GET -SCP accept associations.

4.2.17.4.1. Activity – Receive Echo Request

4.2.17.4.1.1. Description and Sequencing of Activities

The N-GET service is used by a DIMSE-service-user to retrieve Attribute values from SCP. N-Get SCP (Service Class Provider) process the N-get request for normalized SOP Instances. When an N-Get Request arrives to N-Get SCP call will be redirected to onServiceRequest () method. Implementer of N-Get SCP is supposed to retrieve the attributes values of a managed SOP Instance for arrived request.

4.2.17.4.1.2. Accepted Presentation Context

Table 4.2.17-4

ACCEPTABLE PRESENTATION CONTEXTS FOR N-GET -SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.17-1**	See **Table 4.2.17-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.17.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.17.4.1.3. SOP Specific Conformance

4.2.17.4.1.3.1. SOP Specific Conformance to Verification SOP Class

N- GET -SCP provides standard conformance to the supported SOP Class.

4.2.17.4.1.3.2. Transfer Syntax Selection Policies

N- GET -SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.18 N-GET - SCU

4.2.18.1. SOP Classes

N- GET -SCU provides Standard Conformance to the following SOP classes:

Table 4.2.18-1

SOP CLASSES SUPPORTED BY N-GET -SCU

SOP Class Name	SOP Class UID
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3
Media Creation Management SOP Class UID	1.2.840.10008.5.1.1.33

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4.2.18.2. Association Policies

4.2.18.2.1. General

Table 4.2.18-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR N-GET -SCU

Maximum PDU size received	16384(approximate)

4.2.18.2.2. Number of Associations

Table 4.2.18-3

NUMBER OF ASSOCIATIONS AS A SCU FOR N-GET -SCU

Maximum number of simultaneous associations	1

4.2.18.2.3. Asynchronous nature

N- GET - SCU will not allow multiple outstanding operations on an Association. Therefore N- GET - SCU will not perform asynchronous operations window negotiation.

4.2.18.2.4. Implementation Identifying Information

4.2.18.3. Association Initiation Policy

N- GET - SCU does initiate associations.

4.2.18.4. Association Acceptance Policy

N- GET - SCU does not accept associations.

4.2.18.4.1. Activity – Receive Echo Request

4.2.18.4.1.1. Description and Sequencing of Activities

To send the N-Get Request to N-Get SCP, N-Get-SCU has to be created by passing the SCU Session object which has already been created. Then call sendMessage () method of N-Get SCU. This method waits until the response is received from N-Create SCP. It returns true if the request is sent to the N-Get SCP and response of request is arrived. This method returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

4.2.18.4.1.2. Accepted Presentation Context

Table 4.2.18-4

ACCEPTABLE PRESENTATION CONTEXTS FOR N-GET -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.18-1**	See **Table 4.2.18-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

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4.2.18.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.18.4.1.3. SOP Specific Conformance

4.2.18.4.1.3.1. SOP Specific Conformance to Verification SOP Class

N- GET - SCU provides standard conformance to the supported SOP Class.

4.2.18.4.1.3.2. Transfer Syntax Selection Policies

N- GET -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.18.4.1.3.3. Response Status

Table 4.2.18-5

RESPONSE STATUS FOR N-GET -SCU

Service Status	Further Meaning	Status Codes	Behavior
Failure	Process Failed	0110	Association closed, Message shown to user.
Failure	Invalid Attribute Value	0106	Association closed, Message shown to user.
Failure	SOP Class not supported	0122	Association closed, Message shown to user.
Failure	Unable to process-Parsing Failed	C000	Association closed, Message shown to user.
Failure	No such object Instance	0112	Association closed, Message shown to user.
Warning	Requested attribute not supported	0001	Processing continues, Message shown to user.
Success	Process Complete	0000	Association closed

4.2.19 N-SET- SCP

4.2.19.1. SOP Classes

N-SET -SCP provides Standard Conformance to the following SOP classes:

Table 4.2.19-1

SOP CLASSES SUPPORTED BY N-SET -SCP

SOP Class Name	SOP Class UID
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3

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4.2.19.2. Association Policies

4.2.19.2.1. General

N-SET-SCP does not initiate associations but accepts them.

Table 4.2.19-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR N-SET -SCP

Maximum PDU size received	16384(approximate)

4.2.19.2.2. Number of Associations

Table 4.2.19-3

NUMBER OF ASSOCIATIONS AS A SCP FOR N-SET -SCP

Maximum number of simultaneous associations	1

4.2.19.2.3. Asynchronous nature

N- SET -SCP will not allow multiple outstanding operations on an Association. Therefore N- SET-SCP will not perform asynchronous operations window negotiation.

4.2.19.2.4. Implementation Identifying Information

4.2.19.3. Association Initiation Policy

N- SET -SCP does not initiate associations.

4.2.19.4. Association Acceptance Policy

N- SET -SCP accepts associations.

4.2.19.4.1. Activity – Receive Echo Request

4.2.19.4.1.1. Description and Sequencing of Activities

N-Set SCP (Service Class Provider) process the N-Set request for normalized SOP Instances. When an N-Set Request arrives to N-Set SCP call will be redirected to onServiceRequest () method. Implementer of N-Set SCP is supposed to modify the attributes values of a managed SOP Instance for arrived request.

4.2.19.4.1.2. Accepted Presentation Context

Table 4.2.19-4

ACCEPTABLE PRESENTATION CONTEXTS FOR N-SET -SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.19-1**	See **Table 4.2.19-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.19.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

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4.2.19.4.1.3. SOP Specific Conformance

4.2.19.4.1.3.1. SOP Specific Conformance to Verification SOP Class

N- SET -SCP provides standard conformance to the supported SOP Class.

4.2.19.4.1.3.2. Transfer Syntax Selection Policies

N- SET -SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.20 N-SET - SCU

4.2.20.1. SOP Classes

N- SET -SCU provides Standard Conformance to the following SOP classes:

Table 4.2.20-1

SOP CLASSES SUPPORTED BY N-SET -SCU

SOP Class Name	SOP Class UID
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3

4.2.20.2. Association Policies

4.2.20.2.1. General

N- SET - SCU does initiate associations but does not accept them.

Table 4.2.20-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR N-SET -SCU

Maximum PDU size received	16384(approximate)

4.2.20.2.2. Number of Associations

Table 4.2.20-3

NUMBER OF ASSOCIATIONS AS A SCU FOR N-SET -SCU

Maximum number of simultaneous associations	1

4.2.20.2.3. Asynchronous nature

N- SET - SCU will not allow multiple outstanding operations on an Association. Therefore N- GET - SCU will not perform asynchronous operations window negotiation.

4.2.20.2.4. Implementation Identifying Information

4.2.20.3. Association Initiation Policy

N-SET - SCU does initiate associations.

4.2.20.4. Association Acceptance Policy

N-SET - SCU does not accept associations.

4.2.20.4.1. Activity – Receive Echo Request

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4.2.20.4.1.1. Description and Sequencing of Activities

The N-Set service is used by a DIMSE-service-user to retrieve Attribute values from a peer DIMSE service- user. If association is successfully established then create Service Request. To N-Set Request to N-Set SCP, N-Set-SCU has to be created by passing the SCUSession object which has already been created and then call sendMessage() method of N-Set SCU. This method waits until the response is received from N-Create SCP. It returns true if the request is sent to the N-Set SCP and response of request is arrived. This method returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

4.2.20.4.1.2. Accepted Presentation Context

Table 4.2.20-4

ACCEPTABLE PRESENTATION CONTEXTS FOR N-SET -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.20-1**	See **Table 4.2.20-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.20.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.20.4.1.3. SOP Specific Conformance

4.2.20.4.1.3.1. SOP Specific Conformance to Verification SOP Class

N- SET - SCU provides standard conformance to the supported SOP Class.

4.2.20.4.1.3.2. Transfer Syntax Selection Policies

N- SET -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.20.4.1.3.3. Response Status

Table 4.2.20-5

RESPONSE STATUS FOR N-SET -SCU

Service Status	Further Meaning	Status Codes	Behavior
Failure	Process Failed	0110	Association closed, Message shown to user.
Failure	Invalid Attribute Value	0106	Association closed, Message shown to user.
Failure	SOP Class not supported	0122	Association closed, Message shown to user.
Failure	Unable to process-Parsing Failed	C000	Association closed, Message shown to user.
Success	Process Complete	0000	Association closed

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4.2.21 N-ACTION- SCP

4.2.21.1. SOP Classes

N-ACTION-SCP provides Standard Conformance to the following SOP classes:

Table 4.2.21-1

SOP CLASSES SUPPORTED BY N-ACTION -SCP

SOP Class Name	SOP Class UID
Procedural Event Logging SOP Class	1.2.840.10008.1.40
Media Creation Management SOP Class UID	1.2.840.10008.5.1.1.33
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1

4.2.21.2. Association Policies

4.2.21.2.1. General

N- ACTION -SCP does not initiate associations but accepts them.

Table 4.2.21-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR N-ACTION -SCP

Maximum PDU size received	16384(approximate)

4.2.21.2.2. Number of Associations

Table 4.2.21-3

NUMBER OF ASSOCIATIONS AS A SCP FOR N-ACTION -SCP

Maximum number of simultaneous associations	1

4.2.21.2.3. Asynchronous nature

N- ACTION -SCP will not allow multiple outstanding operations on an Association. Therefore N-ACTION -SCP will not perform asynchronous operations window negotiation.

4.2.21.2.4. Implementation Identifying Information

4.2.21.3. Association Initiation Policy

N- ACTION -SCP does not initiate associations.

4.2.21.4. Association Acceptance Policy

N- ACTION -SCP accepts associations.

4.2.21.4.1. Activity – Receive Echo Request

4.2.21.4.1.1. Description and Sequencing of Activities

N-Action SCP (Service Class Provider) process the N-Action request for normalized SOP Instances. When an N-Action Request arrives to N-Action SCP call will be redirected to onServiceRequest () method. Implementer of N-Action SCP is supposed to take the action for arrived request. Behavior of N-Services varies according to the implementing service classes.

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4.2.21.4.1.2. Accepted Presentation Context

Table 4.2.21-4

ACCEPTABLE PRESENTATION CONTEXTS FOR N-ACTION -SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.21-1**	See **Table 4.2.21-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.21.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.21.4.1.3. SOP Specific Conformance

4.2.21.4.1.3.1. SOP Specific Conformance to Verification SOP Class

N- ACTION -SCP provides standard conformance to the supported SOP Class.

4.2.21.4.1.3.2. Transfer Syntax Selection Policies

N- ACTION -SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.22 N-ACTION - SCU

4.2.22.1. SOP Classes

N- ACTION -SCU provides Standard Conformance to the following SOP classes:

Table 4.2.22-1

SOP CLASSES SUPPORTED BY N-ACTION -SCU

SOP Class Name	SOP Class UID
Procedural Event Logging SOP Class	1.2.840.10008.1.40
Media Creation Management SOP Class UID	1.2.840.10008.5.1.1.33
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1

4.2.22.2. Association Policies

4.2.22.2.1. General

N-Action SCU initiates association.

Table 4.2.22-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR N-ACTION -SCU

Maximum PDU size received	16384(approximate)

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4.2.22.2.2. Number of Associations

Table 4.2.22-3

NUMBER OF ASSOCIATIONS AS A SCU FOR N-ACTION -SCU

Maximum number of simultaneous associations	1

4.2.22.2.3. Asynchronous nature

N- ACTION - SCU will not allow multiple outstanding operations on an Association. Therefore N-ACTION - SCU will not perform asynchronous operations window negotiation.

4.2.22.2.4. Implementation Identifying Information

4.2.22.3. Association Initiation Policy

N- ACTION - SCU does initiate associations.

4.2.22.4. Association Acceptance Policy

N- ACTION - SCU does not accept associations.

4.2.22.4.1. Activity – Receive Echo Request

4.2.22.4.1.1. Description and Sequencing of Activities

To send the N-Action Request to N-Action SCP, N-Action-SCU is created by passing the SCUSession object which has already been created. Then call sendMessage () method of N-Action SCU. This method waits until the response is received from N-Action SCP. It returns true if the request is sent to the N-Action SCP and response of request is arrived. This method returns false if the SOP Class UID or Transfer Syntax of the Dataset which is sent in the request is not agreed in the association or if Abort comes from SCP.

4.2.22.4.1.2. Accepted Presentation Context

Table 4.2.22-4

ACCEPTABLE PRESENTATION CONTEXTS FOR N-ACTION -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.22-1**	See **Table 4.2.22-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.22.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.22.4.1.3. SOP Specific Conformance

4.2.22.4.1.3.1. SOP Specific Conformance to Verification SOP Class

N- ACTION - SCU provides standard conformance to the supported SOP Class.

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4.2.22.4.1.3.2. Transfer Syntax Selection Policies

N- ACTION -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.22.4.1.3.3. Response Status

Table 4.2.22-5

RESPONSE STATUS FOR N-ACTION -SCU

Service Status	Further Meaning	Status Codes	Behavior
Failure	Process Failed	0110	Association closed, Message shown to user.
Success	Process Complete	0000	Association closed
Failure	Invalid attribute value	0110	Association closed, Message shown to user.
Failure	SOP Class not supported	0122	Association closed, Message shown to user.
Failure	Unable to process: Parsing Failed	C000	Association closed, Message shown to user.

4.2.23 N-CREATE- SCP

4.2.23.1. SOP Classes

N-CREATE-SCP provides Standard Conformance to the following SOP classes:

Table 4.2.23-1

SOP CLASSES SUPPORTED BY N-CREATE -SCP

SOP Class Name	SOP Class UID
Media Creation Management SOP Class UID	1.2.840.10008.5.1.1.33
Instance Availability Notification SOP Class	1.2.840.10008.5.1.4.33
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3

4.2.23.2. Association Policies

4.2.23.2.1. General

N- CREATE -SCP does not initiate associations but accepts them.

Table 4.2.23-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR N-CREATE -SCP

Maximum PDU size received	16384(approximate)

4.2.23.2.2. Number of Associations

Table 4.2.23-3

NUMBER OF ASSOCIATIONS AS A SCP FOR N-CREATE -SCP

Maximum number of simultaneous associations	1

4.2.23.2.3. Asynchronous nature

N- CREATE -SCP will not allow multiple outstanding operations on an Association. Therefore N-

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CREATE -SCP will not perform asynchronous operations window negotiation.

4.2.23.2.4. Implementation Identifying Information

4.2.23.3. Association Initiation Policy

N- CREATE -SCP does not initiate associations.

4.2.23.4. Association Acceptance Policy

N- CREATE -SCP accepts associations.

4.2.23.4.1. Activity – Receive Echo Request

4.2.23.4.1.1. Description and Sequencing of Activities

The N-CREATE service is invoked by a DIMSE-service-user to request a peer DIMSE-service-user to create an instance of a SOP Class. N-Create SCP (Service Class Provider) process the N-Create request for normalized SOP Instances. When an N-Create Request arrives to N-Create SCP call will be redirected to onServiceRequest () method. Implementer of N-Create SCP is supposed to create a new managed SOP Instance, complete with its identification and the values of its associated Attributes for arrived request.

4.2.23.4.1.2. Accepted Presentation Context

Table 4.2.23-4
ACCEPTABLE PRESENTATION CONTEXTS FOR N-CREATE -SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.23-1**	See **Table 4.2.23-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.23.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.23.4.1.3. SOP Specific Conformance

4.2.23.4.1.3.1. SOP Specific Conformance to Verification SOP Class

N- CREATE -SCP provides standard conformance to the supported SOP Class.

4.2.23.4.1.3.2. Transfer Syntax Selection Policies

N- CREATE -SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

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4.2.24 N-CREATE - SCU

4.2.24.1. SOP Classes

N- CREATE -SCU provides Standard Conformance to the following SOP classes:

Table 4.2.24-1

SOP CLASSES SUPPORTED BY N-CREATE -SCU

SOP Class Name	SOP Class UID
Media Creation Management SOP Class UID	1.2.840.10008.5.1.1.33
Instance Availability Notification SOP Class	1.2.840.10008.5.1.4.33
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3

4.2.24.2. Association Policies

4.2.24.2.1. General

N- CREATE - SCU does initiate associations but does not accept them.

Table 4.2.24-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR N-CREATE -SCU

Maximum PDU size received	16384(approximate)

4.2.24.2.2. Number of Associations

Table 4.2.24-3

NUMBER OF ASSOCIATIONS AS A SCU FOR N-CREATE -SCU

Maximum number of simultaneous associations	1

4.2.24.2.3. Asynchronous nature

N- CREATE - SCU will not allow multiple outstanding operations on an Association. Therefore N-CREATE - SCU will not perform asynchronous operations window negotiation.

4.2.24.2.4. Implementation Identifying Information

4.2.24.3. Association Initiation Policy

N- CREATE - SCU does initiate associations.

4.2.24.4. Association Acceptance Policy

N- CREATE - SCU does not accept associations.

4.2.24.4.1. Activity – Receive Echo Request

4.2.24.4.1.1. Description and Sequencing of Activities

To send the N-Create Request to N-Create SCP N-Create-SCU has to be created by passing the SCUSession object which has already been created. Then call sendMessage () method of N-Create SCU. This method waits until the response is received from N-Create SCP. It returns true if the request is sent to the N-Create SCP and response of request is arrived. This method returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

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4.2.24.4.1.2. Accepted Presentation Context

Table 4.2.24-4

ACCEPTABLE PRESENTATION CONTEXTS FOR N-CREATE -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.24-1**	See **Table 4.2.24-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.24.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.24.4.1.3. SOP Specific Conformance

4.2.24.4.1.3.1. SOP Specific Conformance to Verification SOP Class

N- CREATE - SCU provides standard conformance to the supported SOP Class.

4.2.24.4.1.3.2. Transfer Syntax Selection Policies

N- CREATE -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.24.4.1.3.3. Response Status

Table 4.2.24-5

RESPONSE STATUS FOR N-CREATE -SCU

Service Status	Further Meaning	Status Codes	Behavior
Failure	Process Failed	0110	Association closed, Message shown to user.
Failure	Invalid Attribute Value	0106	Association closed, Message shown to user.
Failure	SOP Class not supported	0122	Association closed, Message shown to user.
Failure	Unable to process-Parsing Failed	C000	Association closed, Message shown to user.
Warning	Memory allocation not supported	B600	Processing continues, Message shown to user.
Success	Process Complete	0000	Association closed

4.2.25 N-DELETE- SCP

4.2.25.1. SOP Classes

N-DELETE-SCP provides Standard Conformance to no such SOP class in our SDK.

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4.2.25.2. Association Policies

4.2.25.2.1. General

N- DELETE -SCP does not initiate associations but accepts them.

Table 4.2.25-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR N-DELETE -SCP

Maximum PDU size received	16384(approximate)

4.2.25.2.2. Number of Associations

Table 4.2.25-3

NUMBER OF ASSOCIATIONS AS A SCP FOR N-DELETE -SCP

Maximum number of simultaneous associations	1

4.2.25.2.3. Asynchronous nature

N- DELETE -SCP will not allow multiple outstanding operations on an Association. Therefore N-CREATE -SCP will not perform asynchronous operations window negotiation.

4.2.25.2.4. Implementation Identifying Information

4.2.25.3. Association Initiation Policy

N- DELETE -SCP does not initiate associations.

4.2.25.4. Association Acceptance Policy

N- DELETE -SCP accepts associations.

4.2.25.4.1. Activity – Receive Echo Request

4.2.25.4.1.1. Description and Sequencing of Activities

The N-DELETE service is used by DIMSE-service-user to request a SCP to delete a managed SOP Instance and to de-register its identification. N-Delete SCP (Service Class Provider) process the N-Delete request for normalized SOP Instances. When an N-Delete Request arrives to N-Delete SCP call will be redirected to onServiceRequest () method. Implementer of N-Delete SCP is supposed to delete a managed SOP Instance for arrived request.

4.2.25.4.1.2. Accepted Presentation Context

Table 4.2.25-4

ACCEPTABLE PRESENTATION CONTEXTS FOR N-DELETE -SCP

Presentation Context Table			
Transfer Syntax		**Role**	**Extended Negotiation**
Name	**UID**		
Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.25.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

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4.2.25.4.1.3. SOP Specific Conformance

4.2.25.4.1.3.1. SOP Specific Conformance to Verification SOP Class

N- DELETE -SCP provides standard conformance to the supported SOP Class.

4.2.25.4.1.3.2. Transfer Syntax Selection Policies

N- DELETE -SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.26 N-DELETE - SCU

4.2.26.1. SOP Classes

N- DELETE -SCU provides Standard Conformance to no such SOP class in our SDK**.**

4.2.26.2. Association Policies

4.2.26.2.1. General

N- DELETE - SCU does initiate associations but does not accept them.

Table 4.2.26-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR N-DELETE -SCU

Maximum PDU size received	16384(approximate)

4.2.26.2.2. Number of Associations

Table 4.2.26-3

NUMBER OF ASSOCIATIONS AS A SCU FOR N-DELETE -SCU

Maximum number of simultaneous associations	1

4.2.26.2.3. Asynchronous nature

N- DELETE - SCU will not allow multiple outstanding operations on an Association. Therefore N-DELETE - SCU will not perform asynchronous operations window negotiation.

4.2.26.2.4. Implementation Identifying Information

4.2.26.3. Association Initiation Policy

N- DELETE - SCU does initiate associations.

4.2.26.4. Association Acceptance Policy

N- DELETE - SCU does not accept associations.

4.2.26.4.1. Activity – Receive Echo Request

4.2.26.4.1.1. Description and Sequencing of Activities

To send the N-Delete Request to N-Delete SCP, N-Delete-SCU has to be created by passing the SCU Session object which has already been created. Then call sendMessage () method of N-Delete SCU. This method waits until the response is received from N-Delete SCP. It returns true if the request is sent to the N-Delete SCP and response of request is arrived. This method returns false if the SOP Class UID or Transfer Syntax of the Dataset which is sent in the request is not agreed in the association or if Abort comes from SCP.

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4.2.26.4.1.2. Accepted Presentation Context

Table 4.2.26-4

ACCEPTABLE PRESENTATION CONTEXTS FOR N-DELETE-SCU

Presentation Context Table			
Transfer Syntax		**Role**	**Extended Negotiation**
Name	**UID**		
Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.26.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.26.4.1.3. SOP Specific Conformance

4.2.26.4.1.3.1. SOP Specific Conformance to Verification SOP Class

N- DELETE - SCU provides standard conformance to the supported SOP Class.

4.2.26.4.1.3.2. Transfer Syntax Selection Policies

N- DELETE -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.26.4.1.3.3. Response Status

Table 4.2.26-5

RESPONSE STATUS FOR N-DELETE-SCU

Service Status	Further Meaning	Status Codes	Behavior
Failure	Process Failed	0110	Association closed, Message shown to user.
Failure	Invalid Attribute Value	0106	Association closed, Message shown to user.
Failure	SOP Class not supported	0122	Association closed, Message shown to user.
Failure	Unable to process-Parsing Failed	C000	Association closed, Message shown to user.
Success	Process Complete	0000	Association closed

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4.2.27. Relevant Patient Information Query Service SCU:

4.2.27.1. SOP Classes

Relevant Patient Information Query Service SCU provides Standard Conformance to the following SOP classes:

Table 4.2.27-1
SOP CLASSES SUPPORTED BY RELEVANT PATIENT INFORMATION QUERY SERVICE SCU

SOP Class Name	SOP Class UID
General Relevant Patient Information Query	1.2.840.10008.5.1.4.37.1
Breast Imaging Relevant Patient Information Query	1.2.840.10008.5.1.4.37.2
Cardiac Relevant Patient Information Query	1.2.840.10008.5.1.4.37.3

4.2.27.2. Association Policies

4.2.27.2.1. General

Relevant Patient Information Query Service SCU initiates associations but does not accept them.

Table 4.2.27-2
MAXIMUM PDU SIZE RECEIVED AS A SCU FOR RELEVANT PATIENT INFORMATION QUERY SERVICE SCU

Maximum PDU size received	16384(approximate)

4.2.27.2.2. Number of Associations

Table 4.2.27-3
NUMBER OF ASSOCIATIONS AS A SCU FOR N-RELEVANT PATIENT INFORMATION QUERY SERVICE SCU

Maximum number of simultaneous associations	1

4.2.27.2.3. Asynchronous nature

Relevant Patient Information Query Service SCU will not allow multiple outstanding operations on an Association. Therefore, Relevant Patient Information Query Service SCU will not perform asynchronous operations window negotiation.

4.2.27.2.4. Implementation Identifying Information

4.2.27.3. Association Initiation Policy

Relevant Patient Information Query Service SCU initiates associations.

4.2.27.4. Association Acceptance Policy

Relevant Patient Information Query Service SCU does not accept associations.

4.2.27.4.1. Activity – Receive Echo Request

4.2.27.4.1.1. Description and Sequencing of Activities

A baseline behavior of the DIMSE-C C-FIND is used in this Service Class. To send the Relevant Patient Information Query Service to Relevant Patient Information Query Service SCU, Relevant Patient Information Query Service -SCP has to be created by passing the SCU Session object which has already been created.

Then call sendMessage () method of Relevant Patient Information Query Service SCU. This method waits

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until the response is received from Relevant Patient Information Query Service SCP.
It returns true if the request is sent to the Relevant Patient Information Query Service SCP and response of request is arrived.
This method returns false if the SOP Class UID or Transfer Syntax of the Dataset which is sent in the request is not agreed in the association or if Abort comes from SCP.

4.2.27.4.1.2. Accepted Presentation Context

Table 4.2.27-4
ACCEPTABLE PRESENTATION CONTEXTS FOR RELEVANT PATIENT INFORMATION QUERY SERVICE SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.27-1**	See **Table 4.2.27-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.27.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.27.4.1.3. SOP Specific Conformance

4.2.27.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Relevant Patient Information Query Service SCU provides standard conformance to the supported SOP Class.

4.2.27.4.1.3.2. Transfer Syntax Selection Policies

Relevant Patient Information Query Service-SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.27.4.1.3.3. Response Status

Table 4.2.27-5
RESPONSE STATUS FOR RELEVANT PATIENT INFORMATION QUERY SERVICE SCU

Service Status	Further Meaning	Status Codes	Behavior
For C-Find Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**

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4.2.28Relevant Patient Information Query Service SCP

4.2.28.1. SOP Classes

Relevant Patient Information Query Service -SCP provides Standard Conformance to the following SOP classes:

Table 4.2.28-1

SOP CLASSES SUPPORTED BY RELEVANT PATIENT INFORMATION QUERY SERVICE -SCP

SOP Class Name	SOP Class UID
General Relevant Patient Information Query	1.2.840.10008.5.1.4.37.1
Breast Imaging Relevant Patient Information Query	1.2.840.10008.5.1.4.37.2
Cardiac Relevant Patient Information Query	1.2.840.10008.5.1.4.37.3

4.2.28.2. Association Policies

4.2.28.2.1. General

Relevant Patient Information Query Service -SCP does not initiate associations but does accept them.

Table 4.2.28-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR RELEVANT PATIENT INFORMATION QUERY SERVICE -SCP

Maximum PDU size received	16384(approximate)

4.2.28.2.2. Number of Associations

Table 4.2.28-3

NUMBER OF ASSOCIATIONS AS A SCP FOR RELEVANT PATIENT INFORMATION QUERY SERVICE -SCP

Maximum number of simultaneous associations	1

4.2.28.2.3. Asynchronous nature

Relevant Patient Information Query Service -SCP will not allow multiple outstanding operations on an Association. Therefore, Relevant Patient Information Query Service -SCP will not perform a-synchronous operations window negotiation.

4.2.28.2.4. Implementation Identifying Information

4.2.28.3. Association Initiation Policy

Relevant Patient Information Query Service -SCP does not initiate associations.

4.2.28.4. Association Acceptance Policy

Relevant Patient Information Query Service -SCP accepts associations.

4.2.28.4.1. Activity – Receive Echo Request

4.2.28.4.1.1. Description and Sequencing of Activities

SCPs of the Relevant Patient Information Query Service Class are capable of processing queries using the C-FIND. The C-FIND operation is the mechanism by which queries are performed. The SCP shall provide Relevant Patient Information for at most one matching patient in the C-FIND response.

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4.2.28.4.1.2. Accepted Presentation Context

Table 4.2.28-4

ACCEPTABLE PRESENTATION CONTEXTS FOR Relevant Patient Information Query Service -SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.28-1**	See **Table 4.2.28-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.28.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.28.4.1.3. SOP Specific Conformance

4.2.28.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Relevant Patient Information Query Service -SCP provides standard conformance to the supported SOP Class.

4.2.28.4.1.3.2. Transfer Syntax Selection Policies

Relevant Patient Information Query Service -SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.29. Storage Commitment Service Class-SCP

4.2.29.1. SOP Classes

STORAGE COMMITMENT-SCP provides Standard Conformance to the following SOP classes:

Table 4.2.29-1

SOP CLASSES SUPPORTED BY STORAGE COMMITMENT -SCP

SOP Class Name	SOP Class UID
Storage Commitment Push Model	1.2.840.10008.1.20.1

4.2.29.2. Association Policies

4.2.29.2.1. General

Storage Commitment SCP accepts associations for receiving storage commitment N-ACTION requests and initiates associations for sending storage commitment N-EVENT-REPORT notifications.

Table 4.2.29-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR STORAGE COMMITMENT-SCP

Maximum PDU size received	16384(approximate)

4.2.29.2.2. Number of Associations

Table 4.2.29-3

NUMBER OF ASSOCIATIONS AS A SCP FOR STORAGE COMMITMENT-SCP

Maximum number of simultaneous associations	Unlimited

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4.2.29.2.3. Asynchronous nature

Storage Commitment -SCP will only allow a single outstanding operation on an Association. Therefore, Storage Commitment -SCP will not perform asynchronous operations window negotiation.

4.2.29.2.4. Implementation Identifying Information

4.2.29.3. Association Initiation Policy

Storage Commitment -SCP does not initiate association.

4.2.29.4. Association Acceptance Policy

Storage Commitment- SCP accepts associations initiated from Storage Commitment -SCU for receiving storage commitment N-ACTION-RQ message.

4.2.29.4.1. Activity – Receive STORAGE COMMITMENT

4.2.29.4.1.29. Description and Sequencing of Activities

As requests are received, they are responded to immediately.

4.2.29.4.1.2. Accepted Presentation Context

Table 4.2.29-4

ACCEPTABLE PRESENTATION CONTEXTS FOR STORAGE COMMITMENT-SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Storage Commitment Push Model	1.2.840.10008.1.20.1	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.29.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.29.4.1.3. SOP Specific Conformance

4.2.29.4.1.3.1. SOP Specific Conformance to Storage Commitment SOP Class

The SCP will initiate an association and send the N-EVENT-REPORT notification to the requesting SCU.

4.2.29.4.1.3.2. Transfer Syntax Selection Policies

Storage Commitment -SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

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4.2.2. STORAGE COMMITMENT-SCU

4.2.30.1. SOP Classes

Storage Commitment - SCU provides Standard Conformance to the following SOP classes:

Table 4.2.30-1

SOP CLASSES SUPPORTED BY STORAGE COMMITMENT-SCU

SOP Class Name	SOP Class UID
Storage Commitment Push Model	1.2.840.10008.1.20.1

4.2.30.2. Association Policies

4.2.30.2.1. General

Storage Commitment SCU initiates associations for sending storage commitment N-ACTION requests and accepts associations for receiving storage commitment N-EVENT-REPORT.

Table 4.2.30-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR STORAGE COMMITMENT -SCU

Maximum PDU size received	16384(approximate)

4.2.30.2.2. Number of Associations

Table 4.2.30-3

NUMBER OF ASSOCIATIONS AS A SCU FOR STORAGE COMMITMENT-SCU

Maximum number of simultaneous associations	Unlimited

4.2.30.2.3. Asynchronous nature

Storage Commitment -SCU attempts to initiate a new association after a study is sent to a remote storage SCP successfully and the remote storage SCP is configured with the storage commitment support enabled.

4.2.30.2.4. Implementation Identifying Information

4.2.30.3. Association Initiation Policy

Storage Commitment -SCU initiates associations.

4.2.30.4. Association Acceptance Policy

Storage Commitment -SCU does not accept associations.

4.2.30.4.1. Activity – Receive STORAGE COMMITMENT -SCU Request

4.2.30.4.1.1. Description and Sequencing of Activities

The Storage Service of DICOM (C-Store) allows Service Class User (SCU) to transmit images and other information to Service Class provider (SCP). However, the C-Store Server does not provide any commitment for the storage of the Data. To provide safe keeping of the medical data DICOM explicitly defines commitment to stored SOP Instances. The Storage Commitment Service Class of DICOM facilitates this commitment to Storage. It enables an application entity acting as SCU to request SCP to make commitment of the medical data stored.

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4.2.30.4.1.2. Accepted Presentation Context

Table 4.2.30-4

ACCEPTABLE PRESENTATION CONTEXTS FOR STORAGE COMMITMENT-SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Storage Commitment Push Model	1.2.840.10008.1.20.1	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.30.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.30.4.1.3. SOP Specific Conformance

4.2.30.4.1.3.1. SOP Specific Conformance to Storage Commitment SOP Class

The Storage Commitment -SCU will initiate an association and send the N-EVENT-REPORT notification to the requesting SCU.

4.2.30.4.1.3.2. Transfer Syntax Selection Policies

Storage Commitment -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.30.4.1.3.3. Response Status

Table 4.2.30-5

RESPONSE STATUS FOR STORAGE COMMITMENT-SCU

Service Status	Further Meaning	Status Codes	Behavior
For C-Store, Refer: **Table 4.2.8-5**	Refer: **Table 4.2.8-5**	Refer: **Table 4.2.8-5**	Refer: **Table 4.2.8-5**

4.2.31 Modality Worklist -SCP

4.2.31.1. SOP Classes

Modality Worklist-SCP provides Standard Conformance to the following SOP classes:

Table 4.2.31-1

SOP CLASSES SUPPORTED BY MODALITY WORKLIST-SCP

SOP Class Name	SOP Class UID
Modality Worklist Information Model - FIND	1.2.840.10008.5.1.4.31

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4.2.31.2. Association Policies

4.2.31.2.1. General

Modality Worklist-SCP accepts but never initiates associations.

Table 4.2.31-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR MODALITY WORKLIST-SCP

Maximum PDU size received	16384(approximate)

4.2.31.2.2. Number of Associations

Table 4.2.31-3

NUMBER OF ASSOCIATIONS AS A SCP FOR MODALITY WORKLIST-SCP

Maximum number of simultaneous associations	Unlimited

4.2.31.2.3. Asynchronous nature

Modality Worklist-SCP will only allow a single outstanding operation on an Association. Therefore, Modality Worklist SCP will not perform asynchronous operations window negotiation.

4.2.31.2.4. Implementation Identifying Information

4.2.31.3. Association Initiation Policy

Modality Worklist-SCP does not initiate associations.

4.2.31.4. Association Acceptance Policy

When Modality Worklist-SCP accepts an association, it will respond to storage requests. Modality Worklist SCP accepts association requests from any Calling AE Title.

4.2.31.4.1. Activity – Receive MODALITY WORKLIST

4.2.31.4.1.1. Description and Sequencing of Activities

As requests are received, they are responded to immediately.

4.2.31.4.1.2. Accepted Presentation Context

Table 4.2.31-4

ACCEPTABLE PRESENTATION CONTEXTS FOR MODALITY WORKLIST-SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Modality Worklist Information Model - FIND	1.2.840.10008.5.1.4.31	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

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4.2.31.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.31.4.1.3. SOP Specific Conformance

4.2.31.4.1.3.1. SOP Specific Conformance to MODALITY WORKLIST SOP Class

The Modality Worklist -SCP will initiate an association and send the notification to the requesting SCU.

4.2.31.4.1.3.2. Transfer Syntax Selection Policies

Modality Worklist-SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context. Modality Worklist- SCP will accept duplicate Presentation Contexts; that is, if it is offered multiple Presentation Contexts, each of which offers acceptable Transfer Syntaxes, it will accept all Presentation Contexts, applying the same method for selecting a Transfer Syntax for each.

4.2.32. MODALITY WORKLIST-SCU

4.2.32.1. SOP Classes

Modality Worklist- SCU provides Standard Conformance to the following SOP classes:

Table 4.2.32-1

SOP CLASSES SUPPORTED BY MODALITY WORKLIST-SCU

SOP Class Name	SOP Class UID
Modality Worklist Information Model - FIND	1.2.840.10008.5.1.4.31

4.2.32.2. Association Policies

4.2.32.2.1. General

Modality Worklist -SCU initiates but never accepts associations.

Table 4.2.32-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR MODALITY WORKLIST -SCU

Maximum PDU size received	16384(approximate)

4.2.32.2.2. Number of Associations

Table 4.2.32-3

NUMBER OF ASSOCIATIONS AS A SCU FOR MODALITY WORKLIST-SCU

Maximum number of simultaneous associations	Unlimited

4.2.32.2.3. Asynchronous nature

Modality Worklist -SCU allows multiple outstanding operations on an Association. Therefore, Modality Worklist -SCU will perform asynchronous operations window negotiation.

4.2.32.2.4. Implementation Identifying Information

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4.2.32.3. Association Initiation Policy

Modality Worklist-SCU initiates associations.

4.2.32.4. Association Acceptance Policy

Modality Worklist-SCU does not accept associations.

4.2.32.4.1. Activity – Receive MODALITY WORKLIST -SCU Request

4.2.32.4.1.1. Description and Sequencing of Activities

The Modality Worklist (MWL) SOP class defined within the Basic Worklist Management Service Class defines an application-level class of service which facilitates the communication of information to the imaging modality about Scheduled Procedure Steps, and entities related to the Scheduled Procedure Steps.

4.2.32.4.1.2. Accepted Presentation Context

Table 4.2.32-4

ACCEPTABLE PRESENTATION CONTEXTS FOR MODALITY WORKLIST-SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Modality Worklist Information Model - FIND	1.2.840.10008.5.1.4.31	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.32.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.32.4.1.3. SOP Specific Conformance

4.2.32.4.1.3.1. SOP Specific Conformance to MODALITY WORKLIST SOP Class

The Modality Worklist-SCU will initiate an association and send the N-EVENT-REPORT notification to the requesting SCU.

4.2.32.4.1.3.2. Transfer Syntax Selection Policies

Modality Worklist -SCU will always select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.32.4.1.3.3. Response Status

Table 4.2.32-5

RESPONSE STATUS FOR MODALITY WORKLIST -SCU

Service Status	Further Meaning	Status Codes	Behavior
For C-Find, Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**

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4.2.33. Structured Reporting Storage-SCP

4.2.33.1. SOP Classes

Structured Reporting Storage-SCP provides Standard Conformance to the following SOP classes:

Table 4.2.33-1
SOP CLASSES SUPPORTED BY STRUCTURED REPORTING STORAGE-SCP

SOP Class Name	SOP Class UID
Basic Text SR Storage	1.2.840.10008.5.1.4.1.1.88.11
Comprehensive SR Storage	1.2.840.10008.5.1.4.1.1.88.4
Enhanced SR Storage	1.2.840.10008.5.1.4.1.1.88.22
Comprehensive SR Storage	1.2.840.10008.5.1.4.1.1.88.33
Comprehensive 3D SR Storage	1.2.840.10008.5.1.4.1.1.88.34
Extensible SR Storage	1.2.840.10008.5.1.4.1.1.88.35
Procedure Log Storage	1.2.840.10008.5.1.4.1.1.88.40
Mammography CAD SR Storage	1.2.840.10008.5.1.4.1.1.88.50
Key Object Selection Document Storage	1.2.840.10008.5.1.4.1.1.88.59
Chest CAD SR Storage	1.2.840.10008.5.1.4.1.1.88.65
X-Ray Radiation Dose SR Storage	1.2.840.10008.5.1.4.1.1.88.67
Radiopharmaceutical Radiation Dose SR Storage	1.2.840.10008.5.1.4.1.1.88.68
Colon CAD SR Storage	1.2.840.10008.5.1.4.1.1.88.69
Implantation Plan SR Storage	1.2.840.10008.5.1.4.1.1.88.70

4.2.33.2. Association Policies

4.2.33.2.1. General

Structured Reporting Storage-SCP accepts but never initiates associations.

Table 4.2.33-2
MAXIMUM PDU SIZE RECEIVED AS A SCP FOR STRUCTURED REPORTING STORAGE-SCP

Maximum PDU size received	16384(approximate)

4.2.33.2.2. Number of Associations

Table 4.2.33-3
NUMBER OF ASSOCIATIONS AS A SCP FOR STRUCTURED REPORTING STORAGE-SCP

Maximum number of simultaneous associations	Unlimited

4.2.33.2.3. Asynchronous nature

It will only allow a single outstanding operation on an Association. Therefore, Structured Reporting Storage -SCP will not perform asynchronous operations window negotiation.

4.2.33.2.4. Implementation Identifying Information

4.2.33.3. Association Initiation Policy

Structured Reporting Storage-SCP does not initiate associations.

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4.2.33.4. Association Acceptance Policy

When Structured Reporting Storage-SCP accepts an association, it will respond to the requests. Structured Reporting Storage-SCP accepts association requests from any Calling AE Title.

4.2.33.4.1. Activity – Receive STRUCTURED REPORTING STORAGE-SCP

4.2.33.4.1.1. Description and Sequencing of Activities

As requests are received, they are responded to immediately.

4.2.33.4.1.2. Accepted Presentation Context

Table 4.2.33-4

ACCEPTABLE PRESENTATION CONTEXTS FOR STRUCTURED REPORTING STORAGE-SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.33-1**	See **Table 4.2.33-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.33.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.33.4.1.3. SOP Specific Conformance

4.2.33.4.1.3.1. SOP Specific Conformance to Structured Reporting Storage SOP Class

The Structured Reporting Storage-SCP will initiate an association and send the notification to the requesting SCU.

4.2.33.4.1.3.2. Transfer Syntax Selection Policies

Structured Reporting Storage-SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context. STORAGE COMMITMENT SCP will accept duplicate Presentation Contexts; that is, if it is offered multiple Presentation Contexts, each of which offers acceptable Transfer Syntaxes, it will accept all Presentation Contexts, applying the same method for selecting a Transfer Syntax for each.

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4.2.34. Structured Reporting Storage-SCU

4.2.34.1. SOP Classes

Structured Reporting Storage-SCU provides Standard Conformance to the following SOP classes:

Table 4.2.34-1

SOP CLASSES SUPPORTED BY STRUCTURED REPORTING STORAGE-SCU

SOP Class Name	SOP Class UID
Basic Text SR Storage	1.2.840.10008.5.1.4.1.1.88.11
Comprehensive SR Storage	1.2.840.10008.5.1.4.1.1.88.4
Enhanced SR Storage	1.2.840.10008.5.1.4.1.1.88.22
Comprehensive SR Storage	1.2.840.10008.5.1.4.1.1.88.33
Comprehensive 3D SR Storage	1.2.840.10008.5.1.4.1.1.88.34
Extensible SR Storage	1.2.840.10008.5.1.4.1.1.88.35
Procedure Log Storage	1.2.840.10008.5.1.4.1.1.88.40
Mammography CAD SR Storage	1.2.840.10008.5.1.4.1.1.88.50
Key Object Selection Document Storage	1.2.840.10008.5.1.4.1.1.88.59
Chest CAD SR Storage	1.2.840.10008.5.1.4.1.1.88.65
X-Ray Radiation Dose SR Storage	1.2.840.10008.5.1.4.1.1.88.67
Radiopharmaceutical Radiation Dose SR Storage	1.2.840.10008.5.1.4.1.1.88.68
Colon CAD SR Storage	1.2.840.10008.5.1.4.1.1.88.69
Implantation Plan SR Storage	1.2.840.10008.5.1.4.1.1.88.70

4.2.34.2. Association Policies

4.2.34.2.1. General

Structured Reporting Storage-SCU initiates but never accepts associations.

Table 4.2.34-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR STRUCTURED REPORTING STORAGE-SCU

Maximum PDU size received	16384(approximate)

4.2.34.2.2. Number of Associations

Table 4.2.34-3

NUMBER OF ASSOCIATIONS AS A SCU FOR STRUCTURED REPORTING STORAGE -SCU

Maximum number of simultaneous associations	Unlimited

4.2.34.2.3. Asynchronous nature

Structured Reporting Storage-SCU allows multiple outstanding operations on an Association. Therefore, Structured Reporting Storage-SCU will perform asynchronous operations window negotiation.

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4.2.34.2.4. Implementation Identifying Information

4.2.34.3. Association Initiation Policy

Structured Reporting Storage -SCU initiates associations.

4.2.34.4. Association Acceptance Policy

Structured Reporting Storage-SCU does not accept associations.

4.2.34.4.1. Activity – Receive STORAGE COMMITMENT-SCU Request

4.2.34.4.1.1. Description and Sequencing of Activities

SR objects record observations made for an imaging based diagnostic or interventional procedure, particularly those that describe or reference images, waveforms, or specific regions of interest.

DICOM SR is the standard to exchange structured data produced in the course of image acquisition or post-processing, where:

– Leveraging the DICOM infrastructure is easy and desirable

– Results should be managed with other study evidence.

4.2.34.4.1.2. Accepted Presentation Context

Table 4.2.34-4

ACCEPTABLE PRESENTATION CONTEXTS FOR STRUCTURED REPORTING STORAGESCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.34-1**	See **Table 4.2.34-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.34.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.34.4.1.3. SOP Specific Conformance

4.2.34.4.1.3.1. SOP Specific Conformance to Storage Commitment SOP Class

Structured Reporting Storage-SCU provides standard conformance to the Basic Text SR Storage , Comprehensive SR Storage, Enhanced SR Storage, Comprehensive SR Storage, Comprehensive3D SR Storage, Extensible SR Storage, Procedure Log Storage, Mammography CAD SR Storage, Key Object Selection Document Storage, Chest CAD SR Storage, Chest CAD SR Storage, X-Ray Radiation Dose SR Storage, Radiopharmaceutical Radiation Dose SR Storage, Colon CAD SR Storage and Implantation Plan SR Storage

.

4.2.34.4.1.3.2. Transfer Syntax Selection Policies

Structured Reporting Storage-SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

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4.2.34.4.1.3.3. Response Status

Table 4.2.34-5

RESPONSE STATUS FOR STRUCTURED REPORTING STORAGE-SCU

Service Status	Further Meaning	Status Codes	Behavior
For C-Store, **Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**

4.2.35. ORMS-SCP

4.2.35.1. SOP Classes

ORMS -SCP provides Standard Conformance to the following SOP classes:

Table 4.2.35-1

SOP CLASSES SUPPORTED BY ORMS -SCP

SOP Class Name	SOP Class UID
Lensometry Measurements Storage	1.2.840.10008.5.1.4.1.1.78.1
Autorefraction Measurements Storage	1.2.840.10008.5.1.4.1.1.78.2
Keratometry Measurements Storage	1.2.840.10008.5.1.4.1.1.78.3
Subjective Refraction Measurements Storage	1.2.840.10008.5.1.4.1.1.78.4
Visual Acuity Measurements Storage	1.2.840.10008.5.1.4.1.1.78.5

4.2.35.2. Association Policies

4.2.35.2.1. General

ORMS -SCP accepts but never initiates associations.

Table 4.2.35-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR ORMS-SCP

Maximum PDU size received	16384(approximate)

4.2.35.2.2. Number of Associations

Table 4.2.35-3

NUMBER OF ASSOCIATIONS AS A SCP FOR ORMS -SCP

Maximum number of simultaneous associations	1

4.2.35.2.3. Asynchronous nature

ORMS –SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

4.2.35.2.4. Implementation Identifying Information

4.2.35.3. Association Initiation Policy

ORMS -SCP does not initiate associations.

4.2.35.4. Association Acceptance Policy

ORMS -SCP by default accepts any called AE title provided by SCU. When ORMS -SCP accepts an

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association, it will respond to the request.

4.2.35.4.1. Activity – Receive Echo Request

4.2.35.4.1.1. Description and Sequencing of Activities

The SCP manages the creation of SOP Instances of the ORMS Service. When a C-Store Request arrives to ORMS-SCP, a call is redirected to onServiceRequest () method. After the processing, ORMS –SCP stores the image at the location provided by the user and also, stores it in the database for further querying or retrieval.

4.2.35.4.1.2. Accepted Presentation Context

Table 4.2.35-4

ACCEPTABLE PRESENTATION CONTEXTS ORMS -SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.35-1**	See **Table 4.2.35-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.35.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.35.4.1.3. SOP Specific Conformance

4.2.35.4.1.3.1. SOP Specific Conformance to Verification SOP Class

ORMS -SCP provides standard conformance to all the ORMS Sop classes.

4.2.35.4.1.3.2. Transfer Syntax Selection Policies

ORMS -SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.36. ORMS -SCU

4.2.36.1. SOP Classes

ORMS -SCU provides Standard Conformance to the following SOP classes:

Table 4.2.36-1

SOP CLASSES SUPPORTED BY ORMS SCU

SOP Class Name	SOP Class UID
Lensometry Measurements Storage	1.2.840.10008.5.1.4.1.1.78.1
Autorefraction Measurements Storage	1.2.840.10008.5.1.4.1.1.78.2
Keratometry Measurements Storage	1.2.840.10008.5.1.4.1.1.78.3
Subjective Refraction Measurements Storage	1.2.840.10008.5.1.4.1.1.78.4
Visual Acuity Measurements Storage	1.2.840.10008.5.1.4.1.1.78.5

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4.2.36.2. Association Policies

4.2.36.2.1. General

ORMS -SCU initiates associations but never accepts them.

Table 4.2.36-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR ORMS -SCU

Maximum PDU size received	16384(approximate)

4.2.36.2.2. Number of Associations

Table 4.2.36-3

NUMBER OF ASSOCIATIONS AS A SCU FOR ORMS -SCU

Maximum number of simultaneous associations	Unlimited

4.2.36.2.3. Asynchronous nature

ORMS -SCU will not allow multiple outstanding operations on an Association. Therefore, ORMS -SCU will not perform asynchronous operations window negotiation.

4.2.36.2.4. Implementation Identifying Information

4.2.36.3. Association Initiation Policy

ORMS -SCU initiates associations.

4.2.36.4. Association Acceptance Policy

ORMS -SCU does not accept associations.

4.2.36.4.1. Activity – Receive Echo Request

4.2.36.4.1.1. Description and Sequencing of Activities

ORMS-SCU sends the C-STORE Request to ORMS – SCP. ORMSSCU is created by passing the SCUSession object which has already been created. And then sendMessage() method of ORMSSCU is called. This method returns true if the request is sent to the ORMS SCP and response of request is arrived and returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

4.2.36.4.1.2. Accepted Presentation Context

Table 4.2.36-4

ACCEPTABLE PRESENTATION CONTEXTS FOR ORMS -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See **Table 4.2.36-1**	See **Table 4.2.36-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.36.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

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4.2.36.4.1.3. SOP Specific Conformance

4.2.36.4.1.3.1. SOP Specific Conformance to Verification SOP Class

ORMS -SCU provides standard conformance to all the ORMS SOP Classes.

4.2.36.4.1.3.2. Transfer Syntax Selection Policies

ORMS -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.36.4.1.3.3. Response Status

Table 4.2.36-5

RESPONSE STATUS FOR ORMS -SCU

Service Status	Further Meaning	Status Codes	Behavior
For C-Store, **Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**

4.2.37. Color Palette Storage Service Class-SCP

4.2.37.1. SOP Classes

Color Palette -SCP provides Standard Conformance to the following SOP classes:

Table 4.2.37-1

SOP CLASSES SUPPORTED BY Color Palette -SCP

SOP Class Name	SOP Class UID
Color Palette Storage SOP Class	1.2.840.10008.5.1.4.39.1

4.2.37.2. Association Policies

4.2.37.2.1. General

Color Palette -SCP accepts but never initiates associations.

Table 4.2.37-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR Color Palette -SCP

Maximum PDU size received	16384(approximate)

4.2.37.2.2. Number of Associations

Table 4.2.37-3

NUMBER OF ASSOCIATIONS AS A SCP FOR Color Palette -SCP

Maximum number of simultaneous associations	1

4.2.37.2.3. Asynchronous nature

Color Palette –SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

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4.2.37.2.4. Implementation Identifying Information

4.2.37.3. Association Initiation Policy

Color Palette -SCP does not initiate associations.

4.2.37.4. Association Acceptance Policy

Color Palette -SCP by default accepts any called AE title provided by SCU. When ORMS -SCP accepts an association, it will respond to the request.

4.2.37.4.1. Activity – Receive Echo Request

4.2.37.4.1.1. Description and Sequencing of Activities

The SCP manages the creation of SOP Instances of the Color Palette Service. When a C-Store Request arrives to Color Palette -SCP, a call is redirected to onServiceRequest() method. After the processing, Color Palette –SCP stores the image at the location provided by the user and also, stores it in the database for further querying or retrieval.

4.2.37.4.1.2. Accepted Presentation Context

Table 4.2.37-4

ACCEPTABLE PRESENTATION CONTEXTS Color Palette -SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Color Palette Storage SOP Class	1.2.840.10008.5.1.4.39.1	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.37.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.37.4.1.3. SOP Specific Conformance

4.2.37.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Color Palette -SCP provides standard conformance to all the Color Palette SOP classes.

4.2.37.4.1.3.2. Transfer Syntax Selection Policies

Color Palette -SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

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4.2.38. Color Palette Storage Service Class -SCU

4.2.38.1. SOP Classes

Color Palette -SCU provides Standard Conformance to the following SOP classes:

Table 4.2.38-1

SOP CLASSES SUPPORTED BY Color Palette SCU

SOP Class Name	SOP Class UID
Color Palette Storage SOP Class	1.2.840.10008.5.1.4.39.1

4.2.38.2. Association Policies

4.2.38.2.1. General

Color Palette -SCU initiates associations but never accepts them.

Table 4.2.38-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR Color Palette -SCU

Maximum PDU size received	16384(approximate)

4.2.38.2.2. Number of Associations

Table 4.2.38-3

NUMBER OF ASSOCIATIONS AS A SCU FOR Color Palette -SCU

Maximum number of simultaneous associations	Unlimited

4.2.38.2.3. Asynchronous nature

Color Palette -SCU will not allow multiple outstanding operations on an Association. Therefore, Color Palette -SCU will not perform asynchronous operations window negotiation.

4.2.38.2.4. Implementation Identifying Information

4.2.38.3. Association Initiation Policy

Color Palette -SCU initiates associations.

4.2.38.4. Association Acceptance Policy

Color Palette -SCU does not accept associations.

4.2.38.4.1. Activity – Receive Echo Request

4.2.38.4.1.1. Description and Sequencing of Activities

Color Palette -SCU sends the C-STORE Request to Color Palette – SCP. Color Palette SCU is created by passing the SCUSession object which has already been created. And then sendMessage() method of Color Palette SCU is called.

This method returns true if the request is sent to the Color Palette SCP and response of request is arrived and returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

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4.2.38.4.1.2. Accepted Presentation Context

Table 4.2.38-4

ACCEPTABLE PRESENTATION CONTEXTS FOR Color Palette -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Color Palette Storage SOP Class	1.2.840.10008.5.1.4.39.1	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.38.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.38.4.1.3. SOP Specific Conformance

4.2.38.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Color Palette -SCU provides standard conformance to all the Color Palette SOP Classes.

4.2.38.4.1.3.2. Transfer Syntax Selection Policies

Color Palette -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.38.4.1.3.3. Response Status

Table 4.2.38-5

RESPONSE STATUS FOR Color Palette -SCU

Service Status	Further Meaning	Status Codes	Behavior
For C-Store, **Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**

4.2.39. DICOMDIR-SCP

4.2.39.1. SOP Classes

DICOMDIR -SCP provides Standard Conformance to no SOP class in our SDK.

4.2.39.2. Association Policies

4.2.39.2.1. General

DICOMDIR -SCP accepts but never initiates associations.

Table 4.2.39-1

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR DICOMDIR-SCP

Maximum PDU size received	16384(approximate)

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4.2.39.2.2. Number of Associations

Table 4.2.39-2
NUMBER OF ASSOCIATIONS AS A SCP FOR DICOMDIR-SCP

Maximum number of simultaneous associations	1

4.2.39.2.3. Asynchronous nature

DICOMDIR –SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

4.2.39.2.4. Implementation Identifying Information

4.2.39.3. Association Initiation Policy

DICOMDIR -SCP does not initiate associations.

4.2.39.4. Association Acceptance Policy

DICOMDIR -SCP by default accepts any called AE title provided by SCU.

4.2.39.4.1. Activity – Receive Echo Request

4.2.39.4.1.1. Description and Sequencing of Activities

Provide a directory that facilitates access to the information stored in the files of a File-set based on key medical information. Such a directory facility relies on a hierarchical information model of medical summary information referencing the content of the Files stored in a File-set on a storage medium.

4.2.39.4.1.2. Accepted Presentation Context

Table 4.2.39-3
ACCEPTABLE PRESENTATION CONTEXTS DICOMDIR -SCP

Presentation Context Table			
Transfer Syntax		Role	Extended Negotiation
Name	UID		
Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.39.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.39.4.1.3. SOP Specific Conformance

4.2.39.4.1.3.1. SOP Specific Conformance to Verification SOP Class

DICOMDIR -SCP provides standard conformance to all the SOP classes.

4.2.39.4.1.3.2. Transfer Syntax Selection Policies

DICOMDIR -SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

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4.2.40. Substance Administration Query Service Class-SCP

4.2.40.1. SOP Classes

Substance Administration Query Service Class-SCP provides Standard Conformance to following classes:

Table 4.2.40-1

SOP CLASSES SUPPORTED BY Substance Administration Query Service Class-SCP

SOP Class Name	SOP Class UID
Product Characteristics Query Information Model - FIND	1.2.840.10008.5.1.4.41
Substance Approval Query Information Model - FIND	1.2.840.10008.5.1.4.42

4.2.40.2. Association Policies

4.2.40.2.1. General

Substance Administration Query Service Class-SCP accepts but never initiates associations.

Table 4.2.40-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR Substance Administration Query Service Class-SCP

Maximum PDU size received	16384 (approximate)

4.2.40.2.2. Number of Associations

Table 4.2.40-3

NUMBER OF ASSOCIATIONS AS A SCP FOR Substance Administration Query Service Class -SCP

Maximum number of simultaneous associations	1

4.2.40.2.3. Asynchronous nature

Substance Administration Query Service Class–SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

4.2.40.2.4. Implementation Identifying Information

4.2.40.3. Association Initiation Policy

Substance Administration Query Service Class-SCP does not initiate associations.

4.2.40.4. Association Acceptance Policy

Substance Administration Query Service Class-SCP by default accepts any called AE title provided by SCU.

4.2.40.4.1. Activity – Receive Echo Request

4.2.40.4.1.1. Description and Sequencing of Activities

On receiving request from SCU, SCP generates at most one C-FIND response for a match with an Identifier containing the values of all Matching Key Attributes and all known Return Key Attributes requested. This response shall contain a status of Pending. When the process of matching is complete, with zero or one match, a C-FIND response is sent with a status of Success and no Identifier. A Failure response to a C-FIND request indicates that the SCP is unable to process the request.

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4.2.40.4.1.2. Accepted Presentation Context

Table 4.2.40-3

ACCEPTABLE PRESENTATION CONTEXTS Substance Administration Query Service Class-SCP

Presentation Context Table			
Transfer Syntax		Role	Extended Negotiation
Name	UID		
Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.40.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.40.4.1.3. SOP Specific Conformance

4.2.40.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Substance Administration Query Service Class-SCP provides standard conformance to all the SOP classes.

4.2.40.4.1.3.2. Transfer Syntax Selection Policies

Substance Administration Query Service Class-SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.41. Substance Administration Query Service Class-SCU

4.2.41.1. SOP Classes

Substance Administration Query Service Class -SCU provides Standard Conformance to the following SOP classes:

Table 4.2.41-1

SOP CLASSES SUPPORTED BY Substance Administration Query Service Class SCU

SOP Class Name	SOP Class UID
Product Characteristics Query SOP Class	1.2.840.10008.5.1.4.41
Substance Approval Query SOP Class	1.2.840.10008.5.1.4.42

4.2.41.2. Association Policies

4.2.41.2.1. General

Substance Administration Query Service Class -SCU initiates associations but never accepts them.

Table 4.2.41-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR Substance Administration Query Service Class -SCU

Maximum PDU size received	16384 (approximate)

4.2.41.2.2. Number of Associations

Table 4.2.41-3

NUMBER OF ASSOCIATIONS AS A SCU FOR Substance Administration Query Service Class -SCU

Maximum number of simultaneous associations	Unlimited

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4.2.41.2.3. Asynchronous nature

Substance Administration Query Service Class -SCU will not allow multiple outstanding operations on an Association. Therefore, Substance Administration Query Service Class -SCU will not perform asynchronous operations window negotiation.

4.2.41.2.4. Implementation Identifying Information

4.2.41.3. Association Initiation Policy

Substance Administration Query Service Class -SCU initiates associations.

4.2.41.4. Association Acceptance Policy

Substance Administration Query Service Class -SCU does not accept associations.

4.2.41.4.1. Activity – Receive Echo Request

4.2.41.4.1.1. Description and Sequencing of Activities

Substance Administration Query Service Class -SCU requests that the SCP perform a match of all keys specified in the Identifier of the request against the information it possesses of the Query specified in the request. Substance Administration Query Service Class SCU is created by passing the SCUSession object which has already been created. And then sendMessage() method of Substance Administration Query Service Class SCU is called.

This method returns true if the request is sent to the Substance Administration Query Service Class SCP and response of request is arrived and returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

4.2.41.4.1.2. Accepted Presentation Context

Table 4.2.41-4

ACCEPTABLE PRESENTATION CONTEXTS FOR Substance Administration Query Service Class -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Product Characteristics Query SOP Class	1.2.840.10008.5.1.4.41	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None
Substance Approval Query SOP Class	1.2.840.10008.5.1.4.42	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.41.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.41.4.1.3. SOP Specific Conformance

4.2.41.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Substance Administration Query Service Class -SCU provides standard conformance to all the Substance Administration Query Service Class SOP Classes.

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4.2.41.4.1.3.2. Transfer Syntax Selection Policies

Substance Administration Query Service Class -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.41.4.1.3.3. Response Status

Table 4.2.41-5

RESPONSE STATUS FOR Substance Administration Query Service Class -SCU

Service Status	Further Meaning	Status Codes	Behavior
For C-Find, Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**

4.2.42. Instance and Frame Level Retrieve SOP Class-SCP

4.2.42.1. SOP Classes

Instance and Frame Level Retrieve SOP Class-SCP provides Standard Conformance to following classes:

Table 4.2.42-1

SOP CLASSES SUPPORTED BY Instance and Frame Level Retrieve SOP Class SCP

SOP Class Name	SOP Class UID
Composite Instance Root Retrieve - MOVE	1.2.840.10008.5.1.4.1.2.4.2
Composite Instance Root Retrieve - GET	1.2.840.10008.5.1.4.1.2.4.3

4.2.42.2. Association Policies

4.2.42.2.1. General

Instance and Frame Level Retrieve SOP Class-SCP accepts but never initiates associations.

Table 4.2.42-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR Instance and Frame Level Retrieve SOP Class-SCP

Maximum PDU size received	16434(approximate)

4.2.42.2.2. Number of Associations

Table 4.2.42-3

NUMBER OF ASSOCIATIONS AS A SCP FOR Instance and Frame Level Retrieve SOP Class -SCP

Maximum number of simultaneous associations	1

4.2.42.2.3. Asynchronous nature

Instance and Frame Level Retrieve SOP Class–SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

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4.2.42.2.4. Implementation Identifying Information

4.2.42.3. Association Initiation Policy

Instance and Frame Level Retrieve SOP Class-SCP does not initiate associations.

4.2.42.4. Association Acceptance Policy

Instance and Frame Level Retrieve SOP Class-SCP by default accepts any called AE title provided by SCU.

4.2.42.4.1. Activity – Receive Echo Request

4.2.42.4.1.1. Description and Sequencing of Activities

For both C-Move and C-Get operation SCU supplies Unique and Frame Range Key values to identify the requested SOP Instance(s). The SCP creates new SOP instances if necessary and then initiates C-STORE sub-operations for the corresponding storage SOP Instances. These C-STORE sub-operations occur on a different Association than the C-MOVE or C-GET service. A Failure response to a C-MOVE or C-GET request indicates that the SCP is unable to process the request.

4.2.42.4.1.2. Accepted Presentation Context

Table 4.2.42-4

ACCEPTABLE PRESENTATION CONTEXTS Instance and Frame Level Retrieve SOP Class-SCP

Presentation Context Table			
Transfer Syntax		Role	Extended Negotiation
Name	UID		
Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.42.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.42.4.1.3. SOP Specific Conformance

4.2.42.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Instance and Frame Level Retrieve SOP Class-SCP provides standard conformance to all the SOP classes.

4.2.42.4.1.3.2. Transfer Syntax Selection Policies

Instance and Frame Level Retrieve SOP Class-SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

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4.2.43. Instance and Frame Level Retrieve SOP Class-SCU

4.2.43.1. SOP Classes

Instance and Frame Level Retrieve SOP Class -SCU provides Standard Conformance to the following SOP classes:

Table 4.2.43-1

SOP CLASSES SUPPORTED BY Instance and Frame Level Retrieve SOP Class SCU

SOP Class Name	SOP Class UID
Composite Instance Root Retrieve - MOVE	1.2.840.10008.5.1.4.1.2.4.2
Composite Instance Root Retrieve - GET	1.2.840.10008.5.1.4.1.2.4.3

4.2.43.2. Association Policies

4.2.43.2.1. General

Instance and Frame Level Retrieve SOP Class -SCU initiates associations but never accepts them.

Table 4.2.43-2

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR Instance and Frame Level Retrieve SOP Class -SCU

Maximum PDU size received	16384 (approximate)

4.2.43.2.2. Number of Associations

Table 4.2.43-3

NUMBER OF ASSOCIATIONS AS A SCU FOR Instance and Frame Level Retrieve SOP Class -SCU

Maximum number of simultaneous associations	Unlimited

4.2.43.2.3. Asynchronous nature

Instance and Frame Level Retrieve SOP Class -SCU will not allow multiple outstanding operations on an Association. Therefore, Instance and Frame Level Retrieve SOP Class -SCU will not perform asynchronous operations window negotiation.

4.2.43.2.4. Implementation Identifying Information

4.2.43.3. Association Initiation Policy

Instance and Frame Level Retrieve SOP Class -SCU initiates associations.

4.2.43.4. Association Acceptance Policy

Instance and Frame Level Retrieve SOP Class -SCU does not accept associations.

4.2.43.4.1. Activity – Receive Echo Request

4.2.43.4.1.1. Description and Sequencing of Activities

Instance and Frame Level Retrieve SOP Class -SCU requests that the SCP perform a match of all keys specified in the Identifier of the request against the information it possesses of the Query specified in the request. Instance and Frame Level Retrieve SOP Class SCU is created by passing the SCUSession object which has already been created. And then sendMessage() method of Instance and Frame Level Retrieve SOP Class SCU is called.

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This method returns true if the request is sent to the Instance and Frame Level Retrieve SOP Class SCP and response of request is arrived and returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

4.2.43.4.1.2. Accepted Presentation Context

Table 4.2.43-4
ACCEPTABLE PRESENTATION CONTEXTS FOR Instance and Frame Level Retrieve SOP Class -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Composite Instance Root Retrieve - MOVE	1.2.840.10008.5.1.4.1.2.4.2	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None
Composite Instance Root Retrieve - GET	1.2.840.10008.5.1.4.1.2.4.3	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.43.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.43.4.1.3. SOP Specific Conformance

4.2.43.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Instance and Frame Level Retrieve SOP Class -SCU provides standard conformance to all the Instance and Frame Level Retrieve SOP Class SOP Classes.

4.2.43.4.1.3.2. Transfer Syntax Selection Policies

Instance and Frame Level Retrieve SOP Class -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.43.4.1.3.3. Response Status

Table 4.2.43-5
RESPONSE STATUS FOR Instance and Frame Level Retrieve SOP Class -SCU

Service Status	Further Meaning	Status Codes	Behavior
For C-Find, Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**
For C-Move, Refer: **Table 4.2.5-5**	Refer: **Table 4.2.5-5**	Refer: **Table 4.2.5-5**	Refer: **Table 4.2.5-5**

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4.2.44. Implant Template Query/Retrieve Service Class-SCP

4.2.44.1. SOP Classes

Implant Template Query/Retrieve Service Class-SCP provides Standard Conformance to following SOP Classes in our SDK.

Table 4.2.44-1

SOP CLASSES SUPPORTED BY Implant Template Query/Retrieve Service Class SCP

SOP CLASS UID	SOP CLASS Name
1.2.840.10008.5.1.4.43.2	Generic Implant Template Storage-FIND
1.2.840.10008.5.1.4.43.3	Generic Implant Template Storage-MOVE
1.2.840.10008.5.1.4.43.4	Generic Implant Template Storage-GET
1.2.840.10008.5.1.4.44.2	Implant Assembly Template Storage-FIND
1.2.840.10008.5.1.4.44.3	Implant Assembly Template Storage-MOVE
1.2.840.10008.5.1.4.44.4	Implant Assembly Template Storage-GET
1.2.840.10008.5.1.4.45.2	Implant Template Group Storage-FIND
1.2.840.10008.5.1.4.45.3	Implant Template Group Storage-MOVE
1.2.840.10008.5.1.4.45.4	Implant Template Group Storage-GET

4.2.44.2. Association Policies

4.2.44.2.1. General

Implant Template Query/Retrieve Service Class-SCP accepts but never initiates associations.

Table 4.2.44-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR Implant Template Query/Retrieve Service Class-SCP

Maximum PDU size received	16434(approximate)

4.2.44.2.2. Number of Associations

Table 4.2.44-3

NUMBER OF ASSOCIATIONS AS A SCP FOR Implant Template Query/Retrieve Service Class -SCP

Maximum number of simultaneous associations	1

4.2.44.2.3. Asynchronous nature

Implant Template Query/Retrieve Service Class–SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

4.2.44.2.4. Implementation Identifying Information

4.2.44.3. Association Initiation Policy

Implant Template Query/Retrieve Service Class-SCP does not initiate associations.

4.2.44.4. Association Acceptance Policy

Implant Template Query/Retrieve Service Class-SCP by default accepts any called AE title provided by SCU.

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4.2.44.4.1. Activity – Receive Echo Request

4.2.44.4.1.1. Description and Sequencing of Activities

For both C-Move and C-Get operation SCU supplies Unique and Frame Range Key values to identify the requested SOP Instance(s). The SCP creates new SOP instances if necessary and then initiates C-STORE sub-operations for the corresponding storage SOP Instances. These C-STORE sub-operations occur on a different Association than the C-MOVE or C-GET service. A Failure response to a C-MOVE or C-GET request indicates that the SCP is unable to process the request.

4.2.44.4.1.2. Accepted Presentation Context

Table 4.2.44-4

ACCEPTABLE PRESENTATION CONTEXTS Implant Template Query/Retrieve Service Class-SCP

Presentation Context Table			
Transfer Syntax		Role	Extended Negotiation
Name	UID		
Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.44.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.44.4.1.3. SOP Specific Conformance

4.2.44.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Implant Template Query/Retrieve Service Class-SCP provides standard conformance to all the SOP classes.

4.2.44.4.1.3.2. Transfer Syntax Selection Policies

Implant Template Query/Retrieve Service Class-SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.45. Implant Template Query/Retrieve Service Class-SCU

4.2.45.1. SOP Classes

Implant Template Query/Retrieve Service Class -SCU provides Standard Conformance to the SOP classes listed in Table 4.2.44-1.

4.2.45.2. Association Policies

4.2.45.2.1. General

Implant Template Query/Retrieve Service Class -SCU initiates associations but never accepts them.

Table 4.2.45-1

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR Implant Template Query/Retrieve Service Class -SCU

Maximum PDU size received	16384 (approximate)

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4.2.45.2.2. Number of Associations

Table 4.2.45-2

NUMBER OF ASSOCIATIONS AS A SCU FOR Implant Template Query/Retrieve Service Class -SCU

Maximum number of simultaneous associations	Unlimited

4.2.45.2.3. Asynchronous nature

Implant Template Query/Retrieve Service Class -SCU will not allow multiple outstanding operations on an Association. Therefore, Implant Template Query/Retrieve Service Class -SCU will not perform asynchronous operations window negotiation.

4.2.45.2.4. Implementation Identifying Information

4.2.45.3. Association Initiation Policy

Implant Template Query/Retrieve Service Class -SCU initiates associations.

4.2.45.4. Association Acceptance Policy

Implant Template Query/Retrieve Service Class -SCU does not accept associations.

4.2.45.4.1. Activity – Receive Echo Request

4.2.45.4.1.1. Description and Sequencing of Activities

Implant Template Query/Retrieve Service Class -SCU requests that the SCP perform a match of all keys specified in the Identifier of the request against the information it possesses of the Query specified in the request. Implant Template Query/Retrieve Service Class SCU is created by passing the SCUSession object which has already been created. And then sendMessage() method of Implant Template Query/Retrieve Service Class SCU is called.

This method returns true if the request is sent to the Implant Template Query/Retrieve Service Class SCP and response of request is arrived and returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

4.2.45.4.1.2. Accepted Presentation Context

Table 4.2.45-3

ACCEPTABLE PRESENTATION CONTEXTS FOR Implant Template Query/Retrieve Service Class -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Refer to **Table 4.2.44-1**	Refer to **Table 4.2.44-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.45.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

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4.2.45.4.1.3. SOP Specific Conformance

4.2.45.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Implant Template Query/Retrieve Service Class -SCU provides standard conformance to all the Implant Template Query/Retrieve Service Class SOP Classes.

4.2.45.4.1.3.2. Transfer Syntax Selection Policies

Implant Template Query/Retrieve Service Class -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.45.4.1.3.3. Response Status

Table 4.2.45-4

RESPONSE STATUS FOR Implant Template Query/Retrieve Service Class -SCU

Service Status	Further Meaning	Status Codes	Behavior
For C-Find, Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**
For C-Move, Refer: **Table 4.2.5-5**	Refer: **Table 4.2.5-5**	Refer: **Table 4.2.5-5**	Refer: **Table 4.2.5-5**
For C-Get, Refer: **Table 4.2.10-6**	Refer: **Table 4.2.10-6**	Refer: **Table 4.2.10-6**	Refer: **Table 4.2.10-6**

4.2.46. RT Machine Verification Service Class-SCP

4.2.46.1. SOP Classes

RT Machine Verification Service Class-SCP provides Standard Conformance to following SOP Classes in our SDK.

Table 4.2.46-1

SOP CLASSES SUPPORTED BY RT Machine Verification Service Class SCP

SOP Class Name	SOP Class UID
Basic Text SR Storage	1.2.840.10008.5.1.4.1.1.88.11
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1
CT Image Storage	1.2.840.10008.5.1.4.1.1.2
Digital X-Ray Image Storage – For Presentation	1.2.840.10008.5.1.4.1.1.1.1
Digital X-Ray Image Storage – For Processing	1.2.840.10008.5.1.4.1.1.1.1.1
Enhanced CT Image Storage	1.2.840.10008.5.1.4.1.1.2.1
Enhanced MR Image Storage	1.2.840.10008.5.1.4.1.1.4.1
Enhanced SR Storage	1.2.840.10008.5.1.4.1.1.88.22
Enhanced XA Image Storage	1.2.840.10008.5.1.4.1.1.12.1.1

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MR Image Storage	1.2.840.10008.5.1.4.1.1.4
RT Dose Storage	1.2.840.10008.5.1.4.1.1.481.2
RT Image Storage	1.2.840.10008.5.1.4.1.1.481.1
RT Plan Storage	1.2.840.10008.5.1.4.1.1.481.5
RT Structure Set Storage	1.2.840.10008.5.1.4.1.1.481.3
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1
X-Ray Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.12.1
X-Ray Radiation Dose SR Storage	1.2.840.10008.5.1.4.1.1.88.67
X-Ray Radiofluoroscopic Image Storage	1.2.840.10008.5.1.4.1.1.12.2

4.2.46.2. Association Policies

4.2.46.2.1. General

RT Machine Verification Service Class-SCP accepts but never initiates associations.

Table 4.2.46-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR RT Machine Verification Service Class-SCP

Maximum PDU size received	16384 (approximate)

4.2.46.2.2. Number of Associations

Table 4.2.46-3

NUMBER OF ASSOCIATIONS AS A SCP FOR RT Machine Verification Service Class -SCP

Maximum number of simultaneous associations	1

4.2.46.2.3. Asynchronous nature

RT Machine Verification Service Class–SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

4.2.46.2.4. Implementation Identifying Information

4.2.46.3. Association Initiation Policy

RT Machine Verification Service Class-SCP does not initiate associations.

4.2.46.4. Association Acceptance Policy

RT Machine Verification Service Class-SCP by default accepts any called AE title provided by SCU.

4.2.46.4.1. Activity – Receive Echo Request

4.2.46.4.1.1. Description and Sequencing of Activities

When SCU initializes external verification of a new plan using the N-CREATE command, SCP retrieves the data necessary to perform verification through DICOM or other means. The SCU uses the N-SET command request to instruct the SCP on the specified Attributes to be verified. The SCU then requests that the verification start using an N-ACTION command. The SCP compares the values of the specified Attributes against the values of the Attributes from the referenced plan, and signals the status of the

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verification using N-EVENT-REPORT command with the Treatment Verification Status (3008,002C) Attribute indicating the verification result. The SCU may then optionally request the beam's verification parameters using an N-GET. Finally, when all beams have been delivered or abandoned, the SCU terminates the verification session at the Plan Level using an N-DELETE. A Failure response to a C-MOVE or C-GET request indicates that the SCP is unable to process the request.

4.2.46.4.1.2. Accepted Presentation Context

Table 4.2.46-4

ACCEPTABLE PRESENTATION CONTEXTS RT Machine Verification Service Class-SCP

Presentation Context Table			
Transfer Syntax		Role	Extended Negotiation
Name	UID		
Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.46.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.46.4.1.3. SOP Specific Conformance

4.2.46.4.1.3.1. SOP Specific Conformance to Verification SOP Class

RT Machine Verification Service Class-SCP provides standard conformance to all the SOP classes.

4.2.46.4.1.3.2. Transfer Syntax Selection Policies

RT Machine Verification Service Class-SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.47. RT Machine Verification Service Class-SCU

4.2.47.1. SOP Classes

RT Machine Verification Service Class -SCU provides Standard Conformance to the SOP classes listed in Table 4.2.46-1.

4.2.47.2. Association Policies

4.2.47.2.1. General

RT Machine Verification Service Class -SCU initiates associations but never accepts them.

Table 4.2.47-1

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR RT Machine Verification Service Class -SCU

Maximum PDU size received	16384(approximate)

4.2.47.2.2. Number of Associations

Table 4.2.47-2

NUMBER OF ASSOCIATIONS AS A SCU FOR RT Machine Verification Service Class -SCU

Maximum number of simultaneous associations	Unlimited

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4.2.47.2.3. Asynchronous nature

RT Machine Verification Service Class -SCU will not allow multiple outstanding operations on an Association. Therefore, RT Machine Verification Service Class -SCU will not perform asynchronous operations window negotiation.

4.2.47.2.4. Implementation Identifying Information

4.2.47.3. Association Initiation Policy

RT Machine Verification Service Class -SCU initiates associations.

4.2.47.4. Association Acceptance Policy

RT Machine Verification Service Class -SCU does not accept associations.

4.2.47.4.1. Activity – Receive Echo Request

4.2.47.4.1.1. Description and Sequencing of Activities

To send the N-Create Request to RT Machine Verification Service Class SCP, RT Machine Verification Service Class -SCU has to be created by passing the SCUSession object which has already been created. Then call sendMessage () method of N-Create SCU. This method waits until the response is received from RT Machine Verification Service Class SCP.

For N-Delete, N-Set, N-Get, N-Action request RT Machine Verification Service Class -SCU requests that the SCP perform a match of all keys specified in the Identifier of the request against the information it possesses of the Query specified in the request. RT Machine Verification Service Class SCU is created by passing the SCUSession object which has already been created. And then sendMessage() method of RT Machine Verification Service Class SCU is called.

This method returns true if the request is sent to the RT Machine Verification Service Class SCP and response of request is arrived and returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

4.2.47.4.1.2. Accepted Presentation Context

Table 4.2.47-3

ACCEPTABLE PRESENTATION CONTEXTS FOR RT Machine Verification Service Class -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Refer to **Table 4.2.46-1**	Refer to **Table 4.2.46-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.47.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.47.4.1.3. SOP Specific Conformance

4.2.47.4.1.3.1. SOP Specific Conformance to Verification SOP Class

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RT Machine Verification Service Class -SCU provides standard conformance to all the RT Machine Verification Service Class SOP Classes.

4.2.47.4.1.3.2. Transfer Syntax Selection Policies

RT Machine Verification Service Class -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.47.4.1.3.3. Response Status

Table 4.2.47-4

RESPONSE STATUS FOR RT Machine Verification Service Class -SCU

Service Status	Further Meaning	Status Codes	Behavior
For N-Create, Refer: **4.2.24-5**	Refer: **4.2.24-5**	Refer: **4.2.24-5**	Refer: **4.2.24-5**
For N-Delete, Refer: **Table 4.2.26-5**	Refer: **Table 4.2.26-5**	Refer: **Table 4.2.26-5**	Refer: **Table 4.2.26-5**
For N-Set, Refer: **Table 4.2.20-5**	Refer: **Table 4.2.20-5**	Refer: **Table 4.2.20-5**	Refer: **Table 4.2.20-5**
For N-Get, Refer: **Table 4.2.18-5**	Refer: **Table 4.2.18-5**	Refer: **Table 4.2.18-5**	Refer: **Table 4.2.18-5**
For N-Event-Report, Refer: **Table 4.2.16-5**	Refer: **Table 4.2.16-5**	Refer: **Table 4.2.16-5**	Refer: **Table 4.2.16-5**
For N-Action, Refer: **Table 4.2.22-5**	Refer: **Table 4.2.22-5**	Refer: **Table 4.2.22-5**	Refer: **Table 4.2.22-5**

4.2.48. Display System Management Service Class-SCP

4.2.48.1. SOP Classes

Display System Management Service Class-SCP provides Standard Conformance to Display System SOP class, 1.2.840.10008.5.1.1.40.

4.2.48.2. Association Policies

4.2.48.2.1. General

Display System Management Service Class-SCP accepts but never initiates associations.

Table 4.2.48-1

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR Display System Management Service Class-SCP

Maximum PDU size received	16384(approximate)

4.2.48.2.2. Number of Associations

Table 4.2.48-2

NUMBER OF ASSOCIATIONS AS A SCP FOR Display System Management Service Class -SCP

Maximum number of simultaneous associations	1

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4.2.48.2.3. Asynchronous nature

Display System Management Service Class–SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

4.2.48.2.4. Implementation Identifying Information

4.2.48.3. Association Initiation Policy

Display System Management Service Class-SCP does not initiate associations.

4.2.48.4. Association Acceptance Policy

Display System Management Service Class-SCP by default accepts any called AE title provided by SCU.

4.2.48.4.1. Activity – Receive Echo Request

4.2.48.4.1.1. Description and Sequencing of Activities

The Display System Service Class allows service users retrieve parameters related to the Display Subsystem for which it uses N-Get Service. When an N-Get Request arrives to N-Get SCP call will be redirected to onServiceRequest () method. Implementer of N-Get SCP is supposed to retrieve the attributes values of a managed SOP Instance for arrived request.

4.2.48.4.1.2. Accepted Presentation Context

Table 4.2.48-3

ACCEPTABLE PRESENTATION CONTEXTS Display System Management Service Class-SCP

Presentation Context Table			
Transfer Syntax		Role	Extended Negotiation
Name	UID		
Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.48.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.48.4.1.3. SOP Specific Conformance

4.2.48.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Display System Management Service Class-SCP provides standard conformance to all the SOP classes.

4.2.48.4.1.3.2. Transfer Syntax Selection Policies

Display System Management Service Class-SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

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4.2.49. Display System Management Service Class-SCU

4.2.49.1. SOP Classes

Display System Management Service Class -SCU provides Standard Conformance to the SOP classes listed in Table 4.2.48-1.

4.2.49.2. Association Policies

4.2.49.2.1. General

Display System Management Service Class -SCU initiates associations but never accepts them.

Table 4.2.49-1

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR Display System Management Service Class -SCU

Maximum PDU size received	16384(approximate)

4.2.49.2.2. Number of Associations

Table 4.2.49-2

NUMBER OF ASSOCIATIONS AS A SCU FOR Display System Management Service Class -SCU

Maximum number of simultaneous associations	Unlimited

4.2.49.2.3. Asynchronous nature

Display System Management Service Class -SCU will not allow multiple outstanding operations on an Association. Therefore, Display System Management Service Class -SCU will not perform asynchronous operations window negotiation.

4.2.49.2.4. Implementation Identifying Information

4.2.49.3. Association Initiation Policy

Display System Management Service Class -SCU initiates associations.

4.2.49.4. Association Acceptance Policy

Display System Management Service Class -SCU does not accept associations.

4.2.49.4.1. Activity – Receive Echo Request

4.2.49.4.1.1. Description and Sequencing of Activities

The SCU uses the N-GET to request the SCP to provide the contents of a Display System SOP Instance. The SCU specifies the list of Display System Attributes for which values are to be returned and in the N-GET request primitive the well-known UID of the SOP Instance. Display System Management Service Class SCU is created by passing the SCUSession object which has already been created. And then sendMessage() method of Display System Management Service Class SCU is called.

This method returns true if the request is sent to the Display System Management Service Class SCP and response of request is arrived and returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

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4.2.49.4.1.2. Accepted Presentation Context

Table 4.2.49-3

ACCEPTABLE PRESENTATION CONTEXTS FOR Display System Management Service Class -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Display System SOP class	1.2.840.10008.5.1.1.40	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.49.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.49.4.1.3. SOP Specific Conformance

4.2.49.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Display System Management Service Class -SCU provides standard conformance to all the Display System Management Service Class SOP Classes.

4.2.49.4.1.3.2. Transfer Syntax Selection Policies

Display System Management Service Class -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.49.4.1.3.3. Response Status

Table 4.2.49-4

RESPONSE STATUS FOR Display System Management Service Class -SCU

Service Status	Further Meaning	Status Codes	Behavior
For N-Get, Refer: **Table 4.2.18-5**	Refer: **Table 4.2.18-5**	Refer: **Table 4.2.18-5**	Refer: **Table 4.2.18-5**

4.2.50. Softcopy Presentation State Storage SOP Class SCP

4.2.50.1. SOP Class

Softcopy Presentation State Storage SOP Class SCP provides Standard Conformance to Softcopy Presentation State Storage class, 1.2.840.10008.5.1.4.1.1.11.1.

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4.2.50.2. Association Policies

4.2.50.2.1. General

Softcopy Presentation State Storage SOP Class -SCP accepts but never initiates associations.

Table 4.2.50-1

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR Softcopy Presentation State Storage SOP Class-SCP

Maximum PDU size received	16384(approximate)

4.2.50.2.2. Number of Associations

Table 4.2.50-2

NUMBER OF ASSOCIATIONS AS A SCP FOR Softcopy Presentation State Storage SOP Class-SCP

Maximum number of simultaneous associations	1

4.2.50.2.3. Asynchronous nature

Softcopy Presentation State Storage SOP Class –SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

4.2.50.2.4. Implementation Identifying Information

4.2.50.3. Association Initiation Policy

Softcopy Presentation State Storage SOP Class -SCP does not initiate associations.

4.2.50.4. Association Acceptance Policy

Softcopy Presentation State Storage SOP Class -SCP by default accepts any called AE title provided by SCU.

4.2.50.4.1. Activity – Receive Echo Request

4.2.50.4.1.1. Description and Sequencing of Activities

The Softcopy Presentation State Storage SOP Classes extend the functionality of the Storage Service class to add the ability to convey an intended presentation state or record an existing presentation state. The SOP Classes specify the information and behavior that may be used to present images that are referenced from within the SOP Classes. When C-Store Request arrives to C-Store SCP call will be redirected to onServiceRequest () method. Implementer of C-Store SCP is supposed to store the attributes values of a managed SOP Instance for arrived request.

4.2.50.4.1.2. Accepted Presentation Context

Table 4.2.50-3

ACCEPTABLE PRESENTATION CONTEXTS Softcopy Presentation State Storage SOP Class-SCP

Presentation Context Table			
Transfer Syntax		**Role**	**Extended Negotiation**
Name	**UID**		
Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

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4.2.50.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.50.4.1.3. SOP Specific Conformance

4.2.50.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Softcopy Presentation State Storage SOP Class -SCP provides standard conformance to all the SOP Class.

4.2.50.4.1.3.2. Transfer Syntax Selection Policies

Softcopy Presentation State Storage SOP Class -SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.51. Softcopy Presentation State Storage SOP Class-SCU

4.2.51.1. SOP Class

Softcopy Presentation State Storage SOP Class -SCU provides Standard Conformance to the SOP Class listed in Table 4.2.50-1.

4.2.51.2. Association Policies

4.2.51.2.1. General

Softcopy Presentation State Storage SOP Class -SCU initiates associations but never accepts them.

Table 4.2.51-1

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR Softcopy Presentation State Storage SOP Class -SCU

Maximum PDU size received	16384(approximate)

4.2.51.2.2. Number of Associations

Table 4.2.51-2

NUMBER OF ASSOCIATIONS AS A SCU FOR Softcopy Presentation State Storage SOP Class-SCU

Maximum number of simultaneous associations	Unlimited

4.2.51.2.3. Asynchronous nature

Softcopy Presentation State Storage SOP Class -SCU will not allow multiple outstanding operations on an Association. Therefore, Softcopy Presentation State Storage SOP Class -SCU will not perform asynchronous operations window negotiation.

4.2.51.2.4. Implementation Identifying Information

4.2.51.3. Association Initiation Policy

Softcopy Presentation State Storage SOP Class -SCU initiates associations.

4.2.51.4. Association Acceptance Policy

Softcopy Presentation State Storage SOP Class -SCU does not accept associations.

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4.2.51.4.1. Activity – Receive Echo Request

4.2.51.4.1.1. Description and Sequencing of Activities

The SCU uses the C-Store to request the SCP to store presentation state of Softcopy Presentation State SOP Instance. The SCU specifies the DICOM image for which Presentation state is to be generate. Softcopy Presentation State Storage SOP Class SCU is created by passing the SCUSession object which has already been created. And then sendMessage() method of Softcopy Presentation State Storage Service Class SCU is called.

This method returns true if the request is sent to the of Softcopy Presentation State Storage Service Class SCP and response of request is arrived and returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

4.2.51.4.1.2. Accepted Presentation Context

Table 4.2.51-3

ACCEPTABLE PRESENTATION CONTEXTS Softcopy Presentation State Storage SOP Class-SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Grayscale Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.1	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.51.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.51.4.1.3. SOP Specific Conformance

4.2.51.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Softcopy Presentation State Storage SOP Class -SCU provides standard conformance to all the Softcopy Presentation State Storage SOP Class.

4.2.51.4.1.3.2. Transfer Syntax Selection Policies

Softcopy Presentation State Storage SOP Class -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.51.4.1.3.3. Response Status

Table 4.2.51-4

RESPONSE STATUS FOR Softcopy Presentation State Storage SOP Class-SCU

Service Status	Further Meaning	Status Codes	Behavior
For C-Store, **Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**

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4.2.52. Hanging Protocol Storage Service Class-SCP

4.2.52.1. SOP Classes

Hanging Protocol Storage Service Class -SCP provides Standard Conformance to Hanging Protocol Storage Service Class SOP, 1.2.840.10008.5.1.4.38.1.

4.2.52.2. Association Policies

4.2.52.2.1. General

Hanging Protocol Storage Service Class-SCP accepts but never initiates associations.

Table 4.2.52-1

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR Hanging Protocol Storage Service Class-SCP

Maximum PDU size received	16384(approximate)

4.2.52.2.2. Number of Associations

Table 4.2.52-2

NUMBER OF ASSOCIATIONS AS A SCP FOR Hanging Protocol Storage Service Class -SCP

Maximum number of simultaneous associations	1

4.2.52.2.3. Asynchronous nature

Hanging Protocol Storage Service Class–SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

4.2.52.2.4. Implementation Identifying Information

4.2.52.3. Association Initiation Policy

Hanging Protocol Storage Service Class-SCP does not initiate associations.

4.2.52.4. Association Acceptance Policy

Hanging Protocol Storage Service Class-SCP by default accepts any called AE title provided by SCU.

4.2.52.4.1. Activity – Receive Echo Request

4.2.52.4.1.1. Description and Sequencing of Activities

The Hanging Protocol Storage Service Class allows service users to store parameters related to the Hanging Protocol Storage for which it uses C-Store Service. When C-Store Request arrives to C-Store SCP call will be redirected to onServiceRequest () method. Implementer of C-Store SCP is supposed to store the attributes values of a managed SOP Instance for arrived request.

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4.2.52.4.1.2. Accepted Presentation Context

Table 4.2.52-3

ACCEPTABLE PRESENTATION CONTEXTS Hanging Protocol Storage Service Class-SCP

Presentation Context Table			
Transfer Syntax		Role	Extended Negotiation
Name	UID		
Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.52.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.52.4.1.3. SOP Specific Conformance

4.2.52.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Hanging Protocol Storage Service Class-SCP provides standard conformance to all the SOP classes.

4.2.52.4.1.3.2. Transfer Syntax Selection Policies

Hanging Protocol Storage Service Class-SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.53. Hanging Protocol Storage Service Class-SCU

4.2.53.1. SOP Classes

Hanging Protocol Storage Service Class -SCU provides Standard Conformance to the SOP classes listed in Table 4.2.52-1.

4.2.53.2. Association Policies

4.2.53.2.1. General

Hanging Protocol Storage Service Class -SCU initiates associations but never accepts them.

Table 4.2.53-1

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR Hanging Protocol Storage Service Class -SCU

Maximum PDU size received	16384(approximate)

4.2.53.2.2. Number of Associations

Table 4.2.53-2

NUMBER OF ASSOCIATIONS AS A SCU FOR Hanging Protocol Storage Service Class -SCU

Maximum number of simultaneous associations	Unlimited

4.2.53.2.3. Asynchronous nature

Hanging Protocol Storage Service Class -SCU will not allow multiple outstanding operations on an Association. Therefore, Hanging Protocol Storage Service Class -SCU will not perform asynchronous operations window negotiation.

4.2.53.2.4. Implementation Identifying Information

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4.2.53.3. Association Initiation Policy

Hanging Protocol Storage Service Class -SCU initiates associations.

4.2.53.4. Association Acceptance Policy

Hanging Protocol Storage Service Class -SCU does not accept associations.

4.2.53.4.1. Activity – Receive Echo Request

4.2.53.4.1.1. Description and Sequencing of Activities

The SCU uses the C-Store to request the SCP to store Hanging Protocol SOP Instance. The SCU specifies the DICOM image for which storage is to be done. Hanging Protocol Storage Service Class SCU is created by passing the SCUSession object which has already been created. And then sendMessage() method of Hanging Protocol Storage Service Class SCU is called.

This method returns true if the request is sent to the Hanging Protocol Storage Service Class SCP and response of request is arrived and returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

4.2.53.4.1.2. Accepted Presentation Context

Table 4.2.53-3

ACCEPTABLE PRESENTATION CONTEXTS FOR Hanging Protocol Storage Service Class -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Hanging Protocol Storage	1.2.840.10008.5.1.4.38.1	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.53.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.53.4.1.3. SOP Specific Conformance

4.2.53.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Hanging Protocol Storage Service Class -SCU provides standard conformance to all the Hanging Protocol Storage Service Class SOP.

4.2.53.4.1.3.2. Transfer Syntax Selection Policies

Hanging Protocol Storage Service Class -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

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4.2.53.4.1.3.3. Response Status

Table 4.2.53-4

RESPONSE STATUS FOR Hanging Protocol Storage Service Class -SCU

Service Status	Further Meaning	Status Codes	Behavior
For C-Store, **Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**

4.2.54. Hanging Protocol Query/Retrieve Service Class-SCP

4.2.54.1. SOP Classes

Hanging Protocol Query/Retrieve Service Class-SCP provides Standard Conformance to following SOP

Table 4.2.54-1

SOP Classes Supported by Hanging Protocol Query/Retrieve Service Class-SCP

Hanging Protocol Information Model - FIND	1.2.840.10008.5.1.4.38.2
Hanging Protocol Information Model - MOVE	1.2.840.10008.5.1.4.38.3
Hanging Protocol Information Model - GET	1.2.840.10008.5.1.4.38.4

4.2.54.2. Association Policies

4.2.54.2.1. General

Hanging Protocol Query/Retrieve Service Class-SCP accepts but never initiates associations.

Table 4.2.54-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR Hanging Protocol Query/Retrieve Service Class-SCP

Maximum PDU size received	16384(approximate)

4.2.54.2.2. Number of Associations

Table 4.2.54-3

NUMBER OF ASSOCIATIONS AS A SCP FOR Hanging Protocol Query/Retrieve Service Class -SCP

Maximum number of simultaneous associations	1

4.2.54.2.3. Asynchronous nature

Hanging Protocol Query/Retrieve Service Class–SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

4.2.54.2.4. Implementation Identifying Information

4.2.54.3. Association Initiation Policy

Hanging Protocol Query/Retrieve Service Class-SCP does not initiate associations.

4.2.54.4. Association Acceptance Policy

Hanging Protocol Query/Retrieve Service Class-SCP by default accepts any called AE title provided by SCU.

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4.2.54.4.1. Activity – Receive Echo Request

4.2.54.4.1.1. Description and Sequencing of Activities

The Hanging Protocol Query/Retrieve Service Class defines an application-level class-of-service that facilitates access to Hanging Protocol composite objects. It provides query and retrieve/transfer capabilities similar to the Basic Worklist Management Service Class and Query/Retrieve Service Class. When a Service Request arrives to the associated SCP call will be redirected to onServiceRequest () method.

4.2.54.4.1.2. Accepted Presentation Context

Table 4.2.54-4

ACCEPTABLE PRESENTATION CONTEXTS Hanging Protocol Query/Retrieve Service Class-SCP

Presentation Context Table			
Transfer Syntax		Role	Extended Negotiation
Name	UID		
Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.54.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.54.4.1.3. SOP Specific Conformance

4.2.54.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Hanging Protocol Query/Retrieve Service Class-SCP provides standard conformance to all the SOP classes.

4.2.54.4.1.3.2. Transfer Syntax Selection Policies

Hanging Protocol Query/Retrieve Service Class-SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.55. Hanging Protocol Query/Retrieve Service Class-SCU

4.2.55.1. SOP Classes

Hanging Protocol Query/Retrieve Service Class -SCU provides Standard Conformance to the SOP classes listed in Table 4.2.54-1.

4.2.55.2. Association Policies

4.2.55.2.1. General

Hanging Protocol Query/Retrieve Service Class -SCU initiates associations but never accepts them.

Table 4.2.55-1

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR Hanging Protocol Query/Retrieve Service Class -SCU

Maximum PDU size received	16384(approximate)

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4.2.55.2.2. Number of Associations

Table 4.2.55-2

NUMBER OF ASSOCIATIONS AS A SCU FOR Hanging Protocol Query/Retrieve Service Class -SCU

Maximum number of simultaneous associations	Unlimited

4.2.55.2.3. Asynchronous nature

Hanging Protocol Query/Retrieve Service Class -SCU will not allow multiple outstanding operations on an Association. Therefore, Hanging Protocol Query/Retrieve Service Class -SCU will not perform asynchronous operations window negotiation.

4.2.55.2.4. Implementation Identifying Information

4.2.55.3. Association Initiation Policy

Hanging Protocol Query/Retrieve Service Class -SCU initiates associations.

4.2.55.4. Association Acceptance Policy

Hanging Protocol Query/Retrieve Service Class -SCU does not accept associations.

4.2.55.4.1. Activity – Receive Echo Request

4.2.55.4.1.1. Description and Sequencing of Activities

The SCU uses the C-Find, C-Move and C-Get request primitive. Hanging Protocol Query/Retrieve Service Class SCU is created by passing the SCUSession object which has already been created. And then sendMessage() method of Hanging Protocol Query/Retrieve Service Class SCU is called.
This method returns true if the request is sent to the Hanging Protocol Query/Retrieve Service Class SCP and response of request is arrived and returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

4.2.55.4.1.2. Accepted Presentation Context

Table 4.2.55-3

ACCEPTABLE PRESENTATION CONTEXTS FOR Hanging Protocol Query/Retrieve Service Class -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Hanging Protocol Information Model - FIND	1.2.840.10008.5.1.4.38.2	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None
Hanging Protocol Information Model - MOVE	1.2.840.10008.5.1.4.38.3	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

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Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name	UID		
Hanging Protocol Information Model - GET	1.2.840.10008.5.1.4.38.4	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.55.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.55.4.1.3. SOP Specific Conformance

4.2.55.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Hanging Protocol Query/Retrieve Service Class -SCU provides standard conformance to all the Hanging Protocol Query/Retrieve Service SOP Classes.

4.2.55.4.1.3.2. Transfer Syntax Selection Policies

Hanging Protocol Query/Retrieve Service Class -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.55.4.1.3.3. Response Status

Table 4.2.55-4

RESPONSE STATUS FOR Hanging Protocol Query/Retrieve Service Class -SCU

Service Status	Further Meaning	Status Codes	Behavior
For C-Find, Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**
For C-Move, Refer: **Table 4.2.5-5**	Refer: **Table 4.2.5-5**	Refer: **Table 4.2.5-5**	Refer: **Table 4.2.5-5**
For C-Get, Refer: **Table 4.2.10-6**	Refer: **Table 4.2.10-6**	Refer: **Table 4.2.10-6**	Refer: **Table 4.2.10-6**

4.2.56. Composite Instance Retrieve Without Bulk Data SOP Class-SCP

4.2.56.1. SOP Classes

Composite Instance Retrieve Without Bulk Data Class-SCP provides Standard Conformance to Composite Instance Retrieve Without Bulk Data Class, 1.2.840.10008.5.1.4.1.2.5.3.

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4.2.56.2. Association Policies

4.2.56.2.1. General

Composite Instance Retrieve Without Bulk Data SOP Class-SCP accepts but never initiates associations.

Table 4.2.56-1

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR Composite Instance Retrieve Without Bulk Data SOP Class-SCP

Maximum PDU size received	16384(approximate)

4.2.56.2.2. Number of Associations

Table 4.2.56-2

NUMBER OF ASSOCIATIONS AS A SCP FOR Composite Instance Retrieve Without Bulk Data SOP -SCP

Maximum number of simultaneous associations	1

4.2.56.2.3. Asynchronous nature

Composite Instance Retrieve Without Bulk Data SOP Class–SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

4.2.56.2.4. Implementation Identifying Information

4.2.56.3. Association Initiation Policy

Composite Instance Retrieve Without Bulk Data SOP Class-SCP does not initiate associations.

4.2.56.4. Association Acceptance Policy

Composite Instance Retrieve Without Bulk Data SOP Class-SCP by default accepts any called AE title provided by SCU.

4.2.56.4.1. Activity – Receive Echo Request

4.2.56.4.1.1. Description and Sequencing of Activities

Composite Instance Retrieve Without Bulk Data Service is a service within the DICOM Query/Retrieve Service class. The retrieve capability of this service allows a DICOM AE to retrieve Composite Instances without retrieving their pixel data or other potentially large Attributes. When a C-Get Request arrives to C-Get SCP call will be redirected to onServiceRequest () method. Implementer of C-Get SCP is supposed to retrieve the attributes values of a managed SOP Instance for arrived request.

4.2.56.4.1.2. Accepted Presentation Context

Table 4.2.56-3

ACCEPTABLE PRESENTATION CONTEXTS Composite Instance Retrieve Without Bulk Data SOP -SCP

Presentation Context Table			
Transfer Syntax		**Role**	**Extended Negotiation**
Name	**UID**		
Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

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4.2.56.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.56.4.1.3. SOP Specific Conformance

4.2.56.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Composite Instance Retrieve Without Bulk Data SOP Class-SCP provides standard conformance to all the SOP classes.

4.2.56.4.1.3.2. Transfer Syntax Selection Policies

Composite Instance Retrieve Without Bulk Data SOP Class-SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.57. Composite Instance Retrieve Without Bulk Data SOP Class-SCU

4.2.57.1. SOP Classes

Composite Instance Retrieve Without Bulk Data SOP Class -SCU provides Standard Conformance to Composite Instance Retrieve Without Bulk Data Class, 1.2.840.10008.5.1.4.1.2.5.3.

4.2.57.2. Association Policies

4.2.57.2.1. General

Composite Instance Retrieve Without Bulk Data SOP Class -SCU initiates associations but never accepts them.

Table 4.2.57-1

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR Composite Instance Retrieve Without Bulk Data SOP Class -SCU

Maximum PDU size received	16384(approximate)

4.2.57.2.2. Number of Associations

Table 4.2.57-2

NUMBER OF ASSOCIATIONS AS A SCU FOR Composite Instance Retrieve Without Bulk Data SOP Class - SCU

Maximum number of simultaneous associations	Unlimited

4.2.57.2.3. Asynchronous nature

Composite Instance Retrieve Without Bulk Data SOP Class -SCU will not allow multiple outstanding operations on an Association. Therefore, Composite Instance Retrieve Without Bulk Data SOP Class - SCU will not perform asynchronous operations window negotiation.

4.2.57.2.4. Implementation Identifying Information

4.2.57.3. Association Initiation Policy

Composite Instance Retrieve Without Bulk Data SOP Class -SCU initiates associations.

4.2.57.4. Association Acceptance Policy

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Composite Instance Retrieve Without Bulk Data SOP Class -SCU does not accept associations.

4.2.57.4.1. Activity – Receive Echo Request

4.2.57.4.1.1. Description and Sequencing of Activities

The SCU uses the C-GET to request the SCP to the contents of a Composite Instance Retrieve Without Bulk Data SOP Instance. The SCU specifies the list of SOP Instance for which Composite Instance to be Retrieve. Composite Instance Retrieve Without Bulk Data SOP Class SCU is created by passing the SCUSession object which has already been created. And then sendMessage() method of Composite Instance Retrieve Without Bulk Data SOP Class SCU is called.

This method returns true if the request is sent to the Composite Instance Retrieve Without Bulk Data SOP Class SCP and response of request is arrived and returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

4.2.57.4.1.2. Accepted Presentation Context

Table 4.2.57-3
ACCEPTABLE PRESENTATION CONTEXTS FOR Composite Instance Retrieve Without Bulk Data SOP Class -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Composite Instance Retrieve Without Bulk Data	1.2.840.10008 .5.1.4.1.2.5.3	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.57.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.57.4.1.3. SOP Specific Conformance

4.2.57.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Composite Instance Retrieve Without Bulk Data SOP Class -SCU provides standard conformance to all the Composite Instance Retrieve Without Bulk Data SOP Class.

4.2.57.4.1.3.2. Transfer Syntax Selection Policies

Composite Instance Retrieve Without Bulk Data SOP Class -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

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4.2.57.4.1.3.3. Response Status

Table 4.2.57-4

RESPONSE STATUS FOR Composite Instance Retrieve Without Bulk Data SOP Class -SCU

Service Status	Further Meaning	Status Codes	Behavior
For C-Get, Refer: **Table 4.2.10-6**	Refer: **Table 4.2.10-6**	Refer: **Table 4.2.10-6**	Refer: **Table 4.2.10-6**

4.2.58. Unified Procedure Step Service and SOP Classes -SCP

4.2.58.1. SOP Classes

Unified Procedure Step Service and SOP Classes-SCP provides Standard Conformance to Unified Procedure Step Service SOP classes,

Table 4.2.58-1

SOP Classes Supported by Unified Procedure Step Service and SOP Classes -SCP

Unified Procedure Step - Push SOP Class	1.2.840.10008.5.1.4.34.6.1
Unified Procedure Step - Watch SOP Class	1.2.840.10008.5.1.4.34.6.2
Unified Procedure Step - Pull SOP Class	1.2.840.10008.5.1.4.34.6.3
Unified Procedure Step - Event SOP Class	1.2.840.10008.5.1.4.34.6.4

4.2.58.2. Association Policies

4.2.58.2.1. General

Unified Procedure Step Service and SOP Classes-SCP accepts but never initiates associations.

Table 4.2.58-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR Unified Procedure Step Service and SOP Classes-SCP

Maximum PDU size received	16384(approximate)

4.2.58.2.2. Number of Associations

Table 4.2.58-3

NUMBER OF ASSOCIATIONS AS A SCP FOR Unified Procedure Step Service and SOP Classes -SCP

Maximum number of simultaneous associations	1

4.2.58.2.3. Asynchronous nature

Unified Procedure Step Service and SOP Classes–SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

4.2.58.2.4. Implementation Identifying Information

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4.2.58.3. Association Initiation Policy

Unified Procedure Step Service and SOP Classes-SCP does not initiate associations.

4.2.58.4. Association Acceptance Policy

Unified Procedure Step Service and SOP Classes-SCP by default accepts any called AE title provided by SCU.

4.2.58.4.1. Activity – Receive Echo Request

4.2.58.4.1.1. Description and Sequencing of Activities

The Unified Procedure Step Service Class provides for management of simple worklists, including creating new worklist items, querying the worklist, and communicating progress and results.
A worklist is a list of Unified Procedure Step (UPS) instances. Each UPS instance unifies the worklist details for a single requested procedure step together with the result details of the corresponding performed procedure step. When a Service Request arrives to its SCP, call will be redirected to onServiceRequest () method. Implementer of that service SCP is supposed to retrieve the attributes values of a managed SOP Instance for arrived request.

4.2.58.4.1.2. Accepted Presentation Context

Table 4.2.58-4

ACCEPTABLE PRESENTATION CONTEXTS Unified Procedure Step Service and SOP Classes-SCP

Presentation Context Table			
Transfer Syntax		Role	Extended Negotiation
Name	UID		
Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.58.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.58.4.1.3. SOP Specific Conformance

4.2.58.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Unified Procedure Step Service and SOP Classes-SCP provides standard conformance to all the SOP classes.

4.2.58.4.1.3.2. Transfer Syntax Selection Policies

Unified Procedure Step Service and SOP Classes-SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

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4.2.59. Unified Procedure Step Service and SOP Classes-SCU

4.2.59.1. SOP Classes

Unified Procedure Step Service and SOP Classes -SCU provides Standard Conformance to the SOP classes listed in Table 4.2.58-1.

4.2.59.2. Association Policies

4.2.59.2.1. General

Unified Procedure Step Service and SOP Classes -SCU initiates associations but never accepts them.

Table 4.2.59-1

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR Unified Procedure Step Service and SOP -SCU

Maximum PDU size received	16384(approximate)

4.2.59.2.2. Number of Associations

Table 4.2.59-2

NUMBER OF ASSOCIATIONS AS A SCU FOR Unified Procedure Step Service and SOP Classes-SCU

Maximum number of simultaneous associations	Unlimited

4.2.59.2.3. Asynchronous nature

Unified Procedure Step Service and SOP Classes -SCU will not allow multiple outstanding operations on an Association. Therefore, Unified Procedure Step Service and SOP Classes -SCU will not perform asynchronous operations window negotiation.

4.2.59.2.4. Implementation Identifying Information

4.2.59.3. Association Initiation Policy

Unified Procedure Step Service and SOP Classes -SCU initiates associations.

4.2.59.4. Association Acceptance Policy

Unified Procedure Step Service and SOP Classes -SCU does not accept associations.

4.2.59.4.1. Activity – Receive Echo Request

4.2.59.4.1.1. Description and Sequencing of Activities

The SCU uses the N-Service to request the SCP to provide the contents of a Worklist Service. Unified Procedure Step Service and SOP Classes SCU is created by passing the SCUSession object which has already been created. And then sendMessage() method of Unified Procedure Step Service and SOP Classes SCU is called.

This method returns true if the request is sent to the Unified Procedure Step Service and SOP Classes SCP and response of request is arrived and returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

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4.2.59.4.1.2. Accepted Presentation Context

Table 4.2.59-3
ACCEPTABLE PRESENTATION CONTEXTS FOR Unified Procedure Step Service and SOP Classes -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Unified Procedure Step - Push SOP Class	1.2.840.10008.5.1.4.34.6.1	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None
Unified Procedure Step - Watch SOP Class	1.2.840.10008.5.1.4.34.6.2	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None
Unified Procedure Step - Pull SOP Class	1.2.840.10008.5.1.4.34.6.3	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None
Unified Procedure Step - Event SOP Class	1.2.840.10008.5.1.4.34.6.4	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.59.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.59.4.1.3. SOP Specific Conformance

4.2.59.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Unified Procedure Step Service and SOP Classes -SCU provides standard conformance to all the Unified Procedure Step Service and SOP Classes SOP Classes.

4.2.59.4.1.3.2. Transfer Syntax Selection Policies

Unified Procedure Step Service and SOP Classes -SCU will select the Transfer Syntax provided by the worklist that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

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4.2.59.4.1.3.3. Response Status

Table 4.2.59-4

RESPONSE STATUS FOR Unified Procedure Step Service and SOP Classes -SCU

Service Status	Further Meaning	Status Codes	Behavior
For N-Create, Refer: **4.2.24-5**	Refer: **4.2.24-5**	Refer: **4.2.24-5**	Refer: **4.2.24-5**
For N-Delete, Refer: **Table 4.2.26-5**	Refer: **Table 4.2.26-5**	Refer: **Table 4.2.26-5**	Refer: **Table 4.2.26-5**
For N-Set, Refer: **Table 4.2.20-5**	Refer: **Table 4.2.20-5**	Refer: **Table 4.2.20-5**	Refer: **Table 4.2.20-5**
For N-Get, Refer: **Table 4.2.18-5**	Refer: **Table 4.2.18-5**	Refer: **Table 4.2.18-5**	Refer: **Table 4.2.18-5**
For N-Event-Report, Refer: **Table 4.2.16-5**	Refer: **Table 4.2.16-5**	Refer: **Table 4.2.16-5**	Refer: **Table 4.2.16-5**
For N-Action, Refer: **Table 4.2.22-5**	Refer: **Table 4.2.22-5**	Refer: **Table 4.2.22-5**	Refer: **Table 4.2.22-5**

4.2.60. Color Palette Query/Retrieve Service Class SCP:

4.2.60.1. SOP Classes

Color Palette Query/Retrieve Service Class-SCP provides Standard Conformance to following classes.

Table 4.2.60-1

SOP Classes Supported by Color Palette Query/Retrieve Service Class SCP

SOP Instance UID	Content Description
1.2.840.10008.1.5.1	HOT IRON
1.2.840.10008.1.5.2	PET
1.2.840.10008.1.5.3	HOT METAL BLUE
1.2.840.10008.1.5.4	PET 20 STEP

4.2.60.2. Association Policies

4.2.60.2.1. General

Color Palette Query/Retrieve Service Class-SCP accepts but never initiates associations.

Table 4.2.60-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR Color Palette Query/Retrieve Service Class

Maximum PDU size received	16384(approximate)

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4.2.60.2.2. Number of Associations

Table 4.2.60-3

NUMBER OF ASSOCIATIONS AS A SCP FOR Color Palette Query/Retrieve Service Class SCP

Maximum number of simultaneous associations	1

4.2.60.2.3. Asynchronous nature

Color Palette Query/Retrieve Service Class–SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

4.2.60.2.4. Implementation Identifying Information

4.2.60.3. Association Initiation Policy

Color Palette Query/Retrieve Service Class SCP does not initiate associations.

4.2.60.4. Association Acceptance Policy

Color Palette Query/Retrieve Service Class-SCP by default accepts any called AE title provided by SCU.

4.2.60.4.1. Activity – Receive Echo Request

4.2.60.4.1.1. Description and Sequencing of Activities

The Color Palette Storage Service Class defines an application-level class-of-service that allows one DICOM AE to send a Color Palette SOP Instance to another DICOM AE Both the SCU and the SCP support Color Palette information.

4.2.60.4.1.2. Accepted Presentation Context

Table 4.2.60-4

ACCEPTABLE PRESENTATION CONTEXTS Color Palette Query/Retrieve Service Class-SCP

Presentation Context Table			
Transfer Syntax		Role	Extended Negotiation
Name	UID		
Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.60.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.60.4.1.3. SOP Specific Conformance

4.2.60.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Color Palette Query/Retrieve Service Class-SCP provides standard conformance to all the SOP classes.

4.2.60.4.1.3.2. Transfer Syntax Selection Policies

Color Palette Query/Retrieve Service Class-SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

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4.2.61. Color Palette Query/Retrieve Service Class-SCU

4.2.61.1. SOP Classes

Color Palette Query/Retrieve Service Class -SCU provides Standard Conformance to the SOP classes listed in Table 4.2.60-1.

4.2.61.2. Association Policies

4.2.61.2.1. General

Color Palette Query/Retrieve Service Class -SCU initiates associations but never accepts them.

Table 4.2.61-1

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR Color Palette Query/Retrieve Service Class -SCU

Maximum PDU size received	16384(approximate)

4.2.61.2.2. Number of Associations

Table 4.2.61-2

NUMBER OF ASSOCIATIONS AS A SCU FOR Color Palette Query/Retrieve Service Class -SCU

Maximum number of simultaneous associations	Unlimited

4.2.61.2.3. Asynchronous nature

Color Palette Query/Retrieve Service Class -SCU will not allow multiple outstanding operations on an Association. Therefore, Color Palette Query/Retrieve Service Class -SCU will not perform asynchronous operations window negotiation.

4.2.61.2.4. Implementation Identifying Information

4.2.61.3. Association Initiation Policy

Color Palette Query/Retrieve Service Class -SCU initiates associations.

4.2.61.4. Association Acceptance Policy

Color Palette Query/Retrieve Service Class -SCU does not accept associations.

4.2.61.4.1. Activity – Receive Echo Request

4.2.61.4.1.1. Description and Sequencing of Activities

The SCU uses the C-GET to request the SCP to provide the contents of a Color Palette Query/Retrieve Service. The SCU specifies the list of Color Palette Attributes for which values are to be returned and in the GET request primitive the well-known UID of the SOP Instance. Color Palette Query/Retrieve Service Class SCU is created by passing the SCUSession object which has already been created. And then sendMessage() method of Color Palette Query/Retrieve Service Class SCU is called.

This method returns true if the request is sent to the Color Palette Query/Retrieve Service Class SCP and response of request is arrived and returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

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4.2.61.4.1.2. Accepted Presentation Context

Table 4.2.61-3
ACCEPTABLE PRESENTATION CONTEXTS FOR Color Palette Query/Retrieve Service Class -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Hot Iron Color Palette SOP Instance	1.2.840.10008.1.5.1	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None
PET Color Palette SOP Instance	1.2.840.10008.1.5.2	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None
Hot Metal Blue Color Palette SOP Instance	1.2.840.10008.1.5.3	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None
PET 20 Step Color Palette SOP Instance	1.2.840.10008.1.5.4	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.61.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.61.4.1.3. SOP Specific Conformance

4.2.61.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Color Palette Query/Retrieve Service Class -SCU provides standard conformance to all the Color Palette Query/Retrieve Service Class SOP Classes.

4.2.61.4.1.3.2. Transfer Syntax Selection Policies

Color Palette Query/Retrieve Service Class -SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.61.4.1.3.3. Response Status

Table 4.2.61-4
RESPONSE STATUS FOR Color Palette Query/Retrieve Service Class -SCU

Service Status	Further Meaning	Status Codes	Behavior
For C-Find, Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**	Refer: **Table 4.2.4-6**

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Service Status	Further Meaning	Status Codes	Behavior
For C-Move, Refer: **Table 4.2.5-5**	Refer: **Table 4.2.5-5**	Refer: **Table 4.2.5-5**	Refer: **Table 4.2.5-5**
For C-Get, Refer: **Table 4.2.10-6**	Refer: **Table 4.2.10-6**	Refer: **Table 4.2.10-6**	Refer: **Table 4.2.10-6**

4.2.62. WADO-SCU

4.2.62.1. SOP Classes

WADO -SCU provides Standard Conformance to the SOP classes listed in Table 4.2.8-1

4.2.62.2. Association Policies

4.2.62.2.1. General

WADO-SCU initiates associations but never accepts them.

Table 4.2.62-1

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR WADO-SCU

Maximum PDU size received	16384(approximate)

4.2.62.2.2. Number of Associations

Table 4.2.62-2

NUMBER OF ASSOCIATIONS AS A SCU FOR WADO-SCU

Maximum number of simultaneous associations	Unlimited

4.2.62.2.3. Asynchronous nature

WADO-SCU will not allow multiple outstanding operations on an Association. Therefore, WADO-SCU will not perform asynchronous operations window negotiation.

4.2.62.2.4. Implementation Identifying Information

4.2.62.3. Association Initiation Policy

WADO-SCU -SCU initiates associations.

4.2.62.4. Association Acceptance Policy

WADO-SCU does not accept associations.

4.2.62.4.1. Activity – Receive Echo Request

4.2.62.4.1.1. Description and Sequencing of Activities

The reception of a WADO request will activate the AE. An internal request is sent to the search capabilities of the WADO-SERVICE. This request is based upon the request parameters or the URL resource end point from the WADO request. The response is a list of all SOP instances stored on system that match the request parameters. If there are no matching instances, the AE will indicate this in the WADO response.

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For all matching instances, the AE will utilize the internal image transfer request to obtain a copy of each instance. If the request was for retrieval of instances, these instances will be returned. If the request was for retrieval of rendered instances, then the AE will render each instance and return the rendered results.
For the particular type of service, we use that particular type of DIMSE C-Services SCP as the service provider for WADO-SCU.

WADO-WS Retrieve Imaging Document Set

Parameter	**Restriction**
Transfer Syntaxes Supported	Supports all transfer syntax listed in conformance statement
SOP Class Restrictions	Any SOP class supported by the hosting EXAMPLE-PACS-ARCHIVE
Size restriction	Any size supported by the hosting EXAMPLE-PACS-ARCHIVE

WADO-WS Retrieve Rendered Imaging Documents Specification

Parameter	**Restriction**
Transfer Syntaxes Supported	Supports all transfer syntax listed in conformance statement
SOP Class Restrictions	Supports all SOP classes listed in conformance statement
Size restriction	None
Rendered formats available	Supports XML.
Rows restrictions	None
Columns restrictions	None
Region restrictions	None
Window Center restrictions	None
Window Width restrictions	None
Image Quality restrictions	None
Anonymization	None
Annotation restrictions	None
Compression available	No
Other restrictions	None

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WADO-RS Specifications:

WADO-RS Retrieve Study

Parameter	Restriction
Data Types Supported (Accept Type)	Restricted to application/dicom or application/octet stream
Transfer Syntaxes Supported	Supports all transfer syntax listed in conformance statement
SOP Class Restrictions	Any SOP class supported by the hosting syntax listed in conformance statement
Size restriction	Any size supported by the hosting system

WADO-RS Retrieve Series

Parameter	Restriction
Data Types Supported (Accept Type)	Restricted to application/dicom or application/octet stream
Transfer Syntaxes Supported	Supports all transfer syntax listed in conformance statement
SOP Class Restrictions	Any SOP class supported by the hosting syntax listed in conformance statement
Size restriction	Any size supported by the hosting system

WADO-RS Retrieve Instance

Parameter	Restriction
Data Types Supported (Accept Type)	Restricted to application/dicom or application/octet stream
Transfer Syntaxes Supported	Supports all transfer syntax listed in conformance statement
SOP Class Restrictions	Any SOP class supported by the hosting syntax listed in conformance statement
Size restriction	Any size supported by the hosting system

WADO-RS Retrieve Frames

Parameter	Restriction
Data Types Supported (Accept Type)	Restricted to application/dicom or application/octet stream
Transfer Syntaxes Supported	Supports all transfer syntax listed in conformance statement
SOP Class Restrictions	Any SOP class supported by the hosting syntax listed in conformance statement
Size restriction	Any size supported by the hosting system

WADO-RS Retrieve Metadata

Parameter	Restriction
Data Types Supported (Accept Type)	Restricted to application/dicom+xml
Transfer Syntaxes Supported	Supports all transfer syntax listed in conformance statement
SOP Class Restrictions	Any SOP class supported by the hosting syntax listed in conformance statement
Size restriction	Any size supported by the hosting system

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4.2.62.4.1.2. Accepted Presentation Context

Table 4.2.62-3
ACCEPTABLE PRESENTATION CONTEXTS FOR WADO-SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
See Table 4.2.8-1	**See Table 4.2.8-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.62.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.62.4.1.3. SOP Specific Conformance

4.2.62.4.1.3.1. SOP Specific Conformance to Verification SOP Class

WADO-SCU provides standard conformance to all the WADO-SCU SOP Classes.

4.2.62.4.1.3.2. Transfer Syntax Selection Policies

WADO-SCU will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

4.2.62.4.1.3.3. Response Status

Table 4.2.62-4
RESPONSE STATUS FOR WADO-SCU

Client Error Code	Client Error Name	Error Situation
206	Partial Content	Accept type, Transfer Syntax or decompression method supported for some but not all requested content.
400	Bad Request	Malformed resource
404	Not Found	Specified resource does not exist
406	Not Acceptable	Accept type, Transfer Syntax or decompression method not supported
410	Gone	Specified resource was deleted
503	Busy	Service is unavailable

4.2.63. Print Management Service Classes -SCP

4.2.63.1. SOP Classes

Print Management Service Class-SCP provides Standard Conformance to following SOP classes:

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Table 4.2.63-1SOP Classes

Basic Film Session Class	1.2.840.10008.5.1.1.1
Basic Film Box SOP Class	1.2.840.10008.5.1.1.2
Basic Grayscale Image Box SOP Class	1.2.840.10008.5.1.1.4
Basic Grayscale Print Management Meta SOP Class	1.2.840.10008.5.1.1.9
Print Job SOP Class	1.2.840.10008.5.1.1.14
Basic Annotation Box SOP Class	1.2.840.10008.5.1.1.15
Printer SOP Class	1.2.840.10008.5.1.1.16
Presentation LUT SOP Class	1.2.840.10008.5.1.1.23
Printer Configuration Retrieval SOP Instance	1.2.840.10008.5.1.1.17.376

4.2.63.2. Association Policies

4.2.63.2.1. General

Print Management Service Class-SCP accepts but never initiates associations.

Table 4.2.63-2

MAXIMUM PDU SIZE RECEIVED AS A SCP FOR Print Management Service Class-SCP

Maximum PDU size received	16384(approximate)

4.2.63.2.2. Number of Associations

Table 4.2.63-3

NUMBER OF ASSOCIATIONS AS A SCP FOR Print Management Service Class-SCP

Maximum number of simultaneous associations	1

4.2.63.2.3. Asynchronous nature

Print Management Service Class-SCP does not allow multiple outstanding operations on an Association. Therefore, it will not perform asynchronous operations window negotiation.

4.2.63.2.4. Implementation Identifying Information

4.2.63.3. Association Initiation Policy

Print Management Service Class-SCP does not initiate associations.

4.2.63.4. Association Acceptance Policy

Print Management Service Class-SCP by default accepts any called AE title provided by SCU.

4.2.63.4.1. Activity – Receive Echo Request

4.2.63.4.1.1. Description and Sequencing of Activities

The Print Management Service Class provides for management of Meta SOP Classes, which correspond with the mandatory functionality, and of supported optional SOP Classes. When a Service Request arrives to its SCP, call will be redirected to onServiceRequest () method. Implementer of that service SCP is supposed to retrieve the attributes values of a managed SOP Instance for arrived request.

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4.2.63.4.1.2. Accepted Presentation Context

Table 4.2.63-4
ACCEPTABLE PRESENTATION CONTEXTS Print Management Service Class-SCP

Presentation Context Table			
Transfer Syntax		Role	Extended Negotiation
Name	UID		
Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

4.2.63.4.1.2.1. Extended Negotiation

No extended negotiation is performed.

4.2.63.4.1.3. SOP Specific Conformance

4.2.63.4.1.3.1. SOP Specific Conformance to Verification SOP Class

Print Management Service Class-SCP provides standard conformance to all the SOP classes.

4.2.63.4.1.3.2. Transfer Syntax Selection Policies

Print Management Service Class-SCP will select the first Transfer Syntax proposed by the client that is supported by the SCP, per Presentation Context.

4.2.64. Print Management Service Class-SCU

4.2.64.1. SOP Classes

Print Management Service Class -SCU provides Standard Conformance to the SOP classes listed in Table 4.2.63-1.

4.2.64.2. Association Policies

4.2.64.2.1. General

Print Management Service and SOP Classes -SCU initiates associations but never accepts them.

Table 4.2. 64-1
MAXIMUM PDU SIZE RECEIVED AS A SCU FOR Print Management Service Class -SCU

Maximum PDU size received	16384(approximate)

4.2.64.2.2. Number of Associations

Table 4.2. 64-2
NUMBER OF ASSOCIATIONS AS A SCU FOR Print Management Service Class -SCU

Maximum number of simultaneous associations	Unlimited

4.2.64.2.3. Asynchronous nature

Print Management Service Class -SCU will not allow multiple outstanding operations on an Association. Therefore, Print Management Service and SOP Classes -SCU will not perform asynchronous operations window negotiation.

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4.2.64.2.4. Implementation Identifying Information

4.2.64.3. Association Initiation Policy
Print Management Service Class -SCU initiates associations.

4.2.64.4. Association Acceptance Policy
Print Management Service Class -SCU does not accept associations.

4.2.64.4.1. Activity – Receive Echo Request

4.2.64.4.1.1. Description and Sequencing of Activities
The SCU uses the N-Service to request the SCP to provide the functionality. Print Management Service and SOP Classes SCU is created by passing the SCUSession object which has already been created. And then sendMessage() method of Print Management Service and SOP Classes SCU is called. This method returns true if the request is sent to the Print Management Service and SOP Classes SCP and response of request is arrived and returns false if the SOP Class UID or Transfer Syntax of the DataSet which is sent in the request is not agreed in the association or if Abort comes from SCP.

4.2.64.4.1.2. Accepted Presentation Context

Table 4.2. 64-3

ACCEPTABLE PRESENTATION CONTEXTS FOR Print Management Service Class -SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Table 4.2.63-1	**Table 4.2.63-1**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

4.2.64.4.1.2.1. Extended Negotiation
No extended negotiation is performed.

4.2.64.4.1.3. SOP Specific Conformance

4.2.64.4.1.3.1. SOP Specific Conformance to Verification SOP Class
Print Management Service Class -SCU provides standard conformance to all the Print Management Service and SOP Classes SOP Classes.

4.2.64.4.1.3.2. Transfer Syntax Selection Policies
Print Management Service Class -SCU will select the Transfer Syntax provided by the worklist that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

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4.2.64.4.1.3.3. Response Status

Table 4.2.64-4

RESPONSE STATUS FOR Print Management Service Class -SCU

Service Status	Further Meaning	Status Codes	Behavior
For N-Create, Refer: **4.2.24-5**	Refer: **4.2.24-5**	Refer: **4.2.24-5**	Refer: **4.2.24-5**
For N-Delete, Refer: **Table 4.2.26-5**	Refer: **Table 4.2.26-5**	Refer: **Table 4.2.26-5**	Refer: **Table 4.2.26-5**
For N-Set, Refer: **Table 4.2.20-5**	Refer: **Table 4.2.20-5**	Refer: **Table 4.2.20-5**	Refer: **Table 4.2.20-5**
For N-Get, Refer: **Table 4.2.18-5**	Refer: **Table 4.2.18-5**	Refer: **Table 4.2.18-5**	Refer: **Table 4.2.18-5**
For N-Event-Report, Refer: **Table 4.2.16-5**	Refer: **Table 4.2.16-5**	Refer: **Table 4.2.16-5**	Refer: **Table 4.2.16-5**
For N-Action, Refer: **Table 4.2.22-5**	Refer: **Table 4.2.22-5**	Refer: **Table 4.2.22-5**	Refer: **Table 4.2.22-5**

4.3. NETWORK INTERFACES

4.3.1. Physical Network Interface

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

4.3.2. Additional Protocols

When host names rather than IP addresses are used in the configuration properties to specify presentation addresses for remote AEs, the application is dependent on the name resolution mechanism of the underlying operating system.

4.3.3. IPv4 and IPv6Support

By default, this product supports IPv4. When configured, it will also support IPv6.

4.4. CONFIGURATION

4.4.1 AE Title /Presentation Address Mapping

4.4.2 Configurable Parameters

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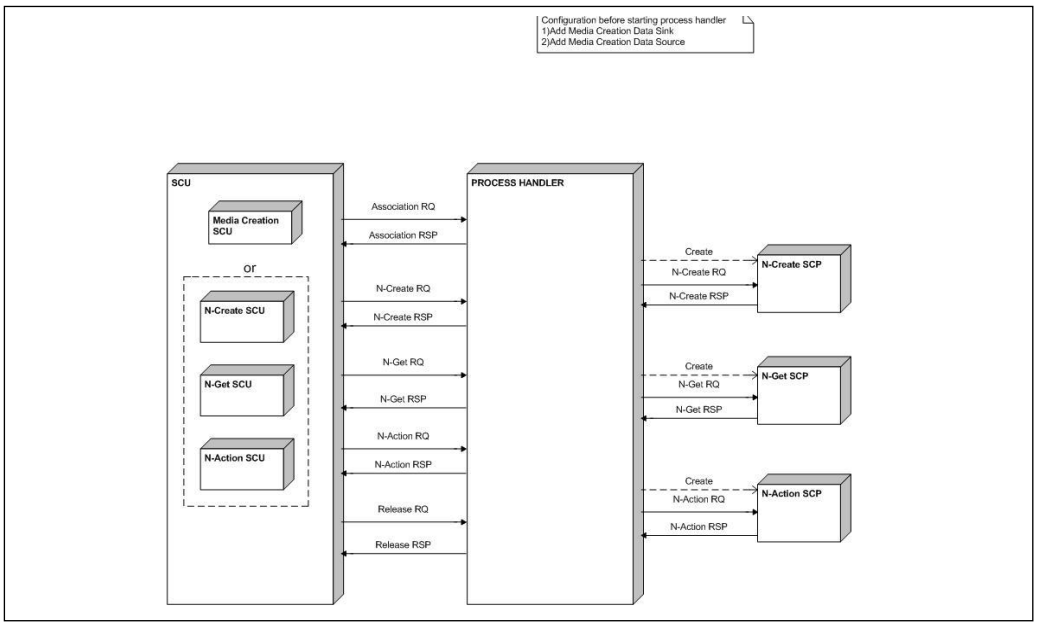
5.1 Implementation Model

The Media Creation Service Class defines an application-level class-of-service that facilitates the simple transfer of images and associated information between DICOM AEs by means of Storage Media. It supports the Interchange of images and a wide range of associated information. DICOM AEs implement a SOP Class of the Media Storage Service Class by supporting one or more roles among the three roles FSC, FSR or FSU. SOP Classes of the Media Storage Service Class are implemented using the Media Storage Operations (M-WRITE, M-READ, M-DELETE, M-INQUIRE FILE-SET and M-INQUIRE FILE).

5.1.1 Application Data Flow Diagram



5.1.2. Functional Definitions of AEs

5.1.2.1. Media Creation Management Service

Media Creation Management SCU is capable to send N-Create, N-Get and N-Action request to Media Creation Management SCP. Process for connection and association establishment is same as it is for other DIMSE services**.**

SCP for this service is responsible to create instance of Media Creation Management SOP Class, retrieval of status attributes for an instance and handling of initiate and cancel action of media creation for an instance.

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5.1.3. Sequencing of Real-World Activities

5.2. AE Specifications

5.2.1. Media Creation Management Service Class

5.2.1.1. SOP Classes

Media Creation Management Service Class provides Standard Conformance to the following SOP classes:

Table 5.2.1-1

SOP CLASSES SUPPORTED BY MEDIA CREATION MANAGEMENT SERVICE CLASS

SOP Class Name	SOP Class UID
Media Creation Management SOP Class	1.2.840.10008.5.1.1.33

5.2.1.2. Association Policies

5.2.1.2.1. General

Media Creation Management Service Class SCU initiates but never accepts associations.

Table 5.2.1-2

MAXIMUM PDU SIZE RECEIVED BY MEDIA CREATION MANAGEMENT SERVICE CLASS

Maximum PDU size received	16384(approximate)

5.2.1.2.2. Number of Associations

Table 5.2.1-3

NUMBER OF ASSOCIATIONS BY MEDIA CREATION MANAGEMENT SERVICE CLASS

Maximum number of simultaneous associations	Unlimited

5.2.1.2.3. Asynchronous nature

In Media Creation Management Service there is no asynchronous notification.

5.2.1.2.4. Implementation Identifying Information

5.2.1.3. Association Initiation Policy

Media Creation SCU initiates associations.

5.2.1.4. Association Acceptance Policy

Media Creation SCP accepts associations but does not initiate them.

5.2.1.4.1. Activity – Receive Query Request

5.2.1.4.1.1. Description and Sequencing of Activities

Media Creation Management Service Class defines a mechanism by which an SCU can instruct a device to create Interchange Media containing a set of Composite SOP Instances that have already been transferred to the media creation device using the Storage Service Class.

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5.2.1.4.1.2. Accepted Presentation Context

Table 5.2.1-4
Media Creation Management Service FOR SCP

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Media Creation Management SOP Class	1.2.840.10008.5.1.1.33	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCP	None

Table 5.2.1-5
Media Creation Management Service FOR SCU

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Media Creation Management SOP Class	1.2.840.10008.5.1.1.33	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	Supports all the Transfer Syntax specified in **Table 4.2.1-4.**	SCU	None

5.2.4.1.1.2.1. Extended Negotiation

No extended negotiation is performed and in particular, relational queries are not supported.

5.2.1.4.1.3. SOP Specific Conformance

5.2.1.4.1.3.1. SOP Specific Conformance to Media Creation Management Service Class

Media Creation Management Service provides standard conformance to the Supported N-CREATE Service Class.

Table 5.2.1-6

Attribute name	Tag
Specific Character Set	(0008,0005)
Storage Media File-Set ID	(0088,0130)
Storage Media File-Set UID	(0088,0140)
Study Time	(0008,0030)
Accession Number	(0008,0050)
Number of Study Related Series	(0020,1206)
Number of Study Related Instances	(0020,1208)

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Attribute name	Tag
Label Using Information Extracted from Instances	(2200,0001)
Label Text	(2200,0002)
Label Style Selection	(2200,0003)
Barcode Value	(2200,0005)
Barcode Symbology	(2200,0006)
Media Disposition	(2200,0004)
Allow Media Splitting	(2200,0007)
Allow Lossy Compression	(2200,000F)
Include Non-DICOM Objects	(2200,0008)
Include Display Application	(2200,0009)
Preserve Composite Instances After Media Creation	(2200,000A)
Referenced SOP Sequence	(0008,1199)
>Referenced SOP Class UID	(0008,1150)
>Referenced SOP Instance UID	(0008,1155)
>Requested Media Application Profile	(2200,000C)
>Icon Image Sequence	(0088,0200)

5.2.1.4.1.3.2. Presentation Context Acceptance Criterion

Media Creation Management Service Class -SCU does not accept associations.

5.2.1.4.1.3.3. Transfer Syntax Selection Policies

Media Creation Management will select the Transfer Syntax provided by the DICOM Image that is supported by the SCU, per Presentation Context. It checks the whether the Transfer Syntax UID provided in DICOM image is a valid one or not from the list of Transfer Syntaxes already defined.

5.2.1.4.1.3.4. Response Status

Media Creation Management will behave as described in the Table below when generating the Media Creation Management response command message.

Table 5.2.1-7
STATUS FOR MEDIA CREATION MANAGEMENT SERVICE CLASS

Service Status	Further Meaning	Status Codes	Behavior
For C-Store, **Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**	**Refer: Table 4.2.8-5**

5.3. Augmented and Private Application Profiles

5.4 Media Configuration

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6. Transformation of DICOM to CDA

Currently our SDK doesn't provide any support for transformation of DICOM to CDA.

7. Support of Character Sets

7.1. Overview

The system supports the following character sets defined in the DICOM 2015c standard.

Support extends to correctly decoding and displaying the correct symbol for all names and strings found in storage instances from media and received over the network, and in the local database.

7.2. Character Sets

Table 5.2-1
SUPPORTED SPECIFIC CHARACTER SET DEFINED TERMS

Character Set Description	Defined Term
Unicode in UTF-8	ISO_IR 192

8. Security

8.1. Security Profiles

1.Online Electronic Storage Secure Use Profile

The Online Electronic Storage Secure Use Profile allows Application Entities to track and verify the status of SOP Instances in these cases where local security policies require tracking of the original data set and subsequent copies.

Online Electronic Storage an Application Entity that holds SOP Instance whose SOP Instance Status is Authorized Original (AO) or Authorized Copy (AC) may send an Authorized Copy of the SOP Instance to another Application Entity as long as the following rules are followed:

1.The transfer shall occur on a Secure Transport Connection.

2.The two Application Entities involved in the transfer shall authenticate each other, and shall confirm via the authentication that the other supports the Online Electronic Storage Secure Use Profile.

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3.The sending Application Entity shall set the SOP Instance Status to either Not Specified (NS) or Authorized Copy (AC) in the copy sent. The SOP Instance UID shall not change.

4.The receiving Application Entity shall reject the storage request and discard the copy if data integrity checks done after the transfer indicate that the SOP Instance was altered during transmission.

5.If communicating with a system that does not support the Online Electronic Storage Secure Use Profile, or if communication is not done over a Secure Transport Connection, then

•sending Application Entity that conforms to this Security Profile shall either set the SOP Instance Status to Not Specified (NS), or leave out the SOP Instance Status and associated parameters of any SOP Instances that the sending Application Entity sends out over the unsecured Transport Connection or to systems that do not support the Online Electronic Storage Secure Use Profile.

•A receiving Application Entity that conforms to this Security Profile shall set the SOP Instance Status to Not Specified (NS)of any SOP Instance received over the unsecured Transport Connection or from systems that do not support the Online Electronic Storage Secure Use Profile

•When the implementation signs a Key Object Selection Document SOP Instance the Digital Signatures shall be created in accordance with the Structured Report RSA Digital Signature Profile.

2. The Basic TLS Secure Transport Connection Profile

An implementation that supports the Basic TLS Secure Transport Connection Profile utilize the framework and negotiation mechanism specified by the Transport Layer Security Version 1.0 protocol.

Supported TLS Feature	Minimum Mechanism
Entity Authentication	RSA based certificates
Exchange of Master Secrets	RSA
Data Integrity	SHA
Privacy	Triple DES

IP ports on which an implementation accepts TLS connections, or the mechanism by which this port number is selected or configured

The maximum allowed TLS record size is smaller than the maximum allowed PDU size.

MAXIMUM PDU SIZE RECEIVED AS A SCU FOR Basic TLS Secure Transport Connection Profile -SCU

Maximum PDU size received	16384(approximate)

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3. Digital Signature Profiles

The creator of a digital signature shall use one of the RIPEMD-160, MD5, SHA-1 or SHA-2 family (SHA256, SHA384, SHA512) of hashing functions to generate a MAC, which is then encrypted using a private RSA key. All validators of digital signatures shall be capable of using a MAC generated by any of the hashing functions specified.

Verification of a digital signature includes a validation of the certificate of signer. The validation process attempts to construct a certification chain beginning with the certificate of signer up to the self-signed root Certification Authority (CA) certificate. All CA certificates up to the root CA certificate are read from a directory of trusted CA certificates it can be configured by the user. Validation succeeds if the complete certification chain can be constructed and none of the certificates is expired. If a digital signature is valid but the certificate of signer cannot be validated, the signature is reported as "untrustworthy" since it might be the result of a man-in-the-middle attack.

RSA Digital Signature Profile

The creator of a DICOM SOP Instance generate signatures using the Creator RSA Digital Signature Profile. The Digital Signature produced by this Profile serves as a lifetime data integrity check that can be used to verify that the pixel data in the SOP instance has not been altered since its initial creation.

The Digital Signature shall be created using the methodology described in the Base RSA Digital Signature Profile. Typically, the certificate and associated private key used to produce Creator RSA Digital Signatures are configuration parameters of the Application Entity set by service.

4.Basic DICOM Media Security Profile

Basic DICOM Media Security Profile specifies the use of either AES or Triple-DES for content encryption and RSA, or password-based encryption and AES or Triple-DES, for the key transport of the content-encryption keys. The encrypted content is a DICOM File that can either

1.be signed with one or more digital signatures, using SHA-1, SHA256, SHA384, or SHA512 as the digest algorithm and RSA as the signature algorithm, or

2.be digested with SHA-1, SHA256, SHA384, or SHA512 as digest algorithm, without application of digital signatures.

Creators of a Secure DICOM File conforming to this security profile may use either AES or Triple-DES for content-encryption. Readers claiming conformance to this profile shall be capable of decrypting Secure DICOM Files using either AES or Triple-DES. The AES key length may be any length allowed by the RFCs. The Triple-DES key length is 168 bits as defined by ANSIX9.52. Encoding shall be performed according to the specifications for RSA Key Transport and Triple DES Content Encryption inRFC-3370, and for AES Content Encryption in RFC-3565.

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8.2. Association Level Security

Not Applicable.

8.3. Transport Level Security

Not Applicable.

9. Media Storage Application Profiles

9.1. Media Storage Application Profiles

Media Storage Application Profile is a mechanism for selecting an appropriate set of choices from the parts of DICOM for the support of a particular media interchange application. Application Profiles for commonly used interchange scenarios, such as inter-institutional exchange or printing from recordable media. It allows to the interoperable interchange of medical images and related information (DICOMDIR File Set) on storage media for specific clinical uses. DICOM AEs implement a Profile of the Media Storage Service Class by supporting one or more roles among the three roles FSC, FSR or FSU. SOP Classes of the Media Storage Service Profiles are implemented using the Media Storage Operations (M-WRITE, M-READ, M-DELETE, M-INQUIRE FILE-SET and M-INQUIRE FILE). M-Write, to create new files in a File-set, M-READ to read existing files, M-Delete to delete existing files, M-Inquire File-Set to inquire free space available for creating new files, M-Inquire File to inquire date and time of file creation (or last update if applicable) for any file within the File-set.

9.2 Roles and Service Class Options

9.2.1 File Set Creator

The application entity acting as a file-set creator generates a DICOMDIR file set for specific DICOM file. FSC ensure that the m-write results in the creation of a correctly formatted DICOM file. The manner in which this is achieved is beyond the scope of the DICOM standard. The FSC shall support the media storage operation m-inquire file-set.

9.2.2 File Set Reader

The role of file set reader is used by application entities that receive a transferred file set. The FSR recognize a file-set and the corresponding DICOMDIR containing the media storage directory sop class. Typical entities using this role would include display workstations, and archive systems that receive a patient record transferred from another institution. File set reader shall be able to read all the sop classes defined for the specific application profile. The FSR shall support the media storage operation m-inquire file.

9.2.3 File Set Updater

The role of file set updater is used by application entities that receive a transferred file set and update it by the addition of information. Typical entities using this role would include analytic workstations,

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which, for instance, may add to the file-set an information object containing an image. The FSU shall support the media storage operation m-inquire file and the m-inquire file-set. The FSU shall be able to update the contents of the DICOMDIR file by using m-delete and or m-write operations.

9.3. List of Included Profiles

9.3.1 Basic Media Storage Application Profile

It defines an Application Profile Class for Creation of DICOMDIR File Set on various Media Storage devices. It also Supports Read and Update Functionalities. This Application Profile support one or more of the roles of File-set Creator, File-set Reader, and File-set Updater. This General Profile Supports following Related Profiles:

- Basic Cardiac X-Ray Angiographic Application Profile
- 1024 X-Ray Angiographic Application Profile
- Ultrasound Application Profile
- General Purpose CD-R, DVD and BD Interchange Profiles
- CT and MR Image Application Profiles
- DVD MPEG2 Interchange Profiles
- Dental Application Profile

9.3.2 General Purpose Compression Interchange Profiles

It defines an Application Profile Class potentially inclusive of all defined Media Storage SOP Classes. This class is intended to be used for the interchange of DICOMDIR File Set via media for general purpose applications. File Set compressed without loss. This Application Profile support one or more of the roles of File-set Creator and File-set Reader. This General Profile Supports following Related Profiles:

- General Purpose DVD With Compression Interchange Profiles
- General Purpose USB and Flash Memory with Compression Interchange Profiles
- General Purpose BD With Compression Interchange Profiles
- General Purpose USB and Flash Memory with Compression Interchange Profiles

9.3.3 General Purpose Mail Interchange profile

It defines an Application Profile Class including all defined Media Storage SOP Classes. This class is intended to be used for the interchange of DICOMDIR File Set via e-mail for general purpose applications. This Application Profiles support one or more of the roles of File-set Creator and File-set Reader. This General Profile Supports following Related Profiles:

- General Purpose MIME Interchange Profile
- ZIP File Over Email Interchange Profiles

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9.4 Extensions / Specializations / Privatizations

9.4.1 Standard Extended SOP Classes
SDK provides Standard Extended Conformance to all supported SOP Classes.

9.4.2 Private SOP Class
None.

9.4.3 Private Transfer Syntaxes

None

9.5 Configuration
- Location of DICOMDIR
- Set Read or Write
- Set Choice of Delete or Rewrite

9.6 Implementation Model

9.6.1 Application Data Flow Diagram
Media Storage Application Profile initialize Media by acting as an FSC to create a new DICOM File-set on Media as stated in 8.2.1. The SOP instances written to media must be one of the instances supported by DICOM. A pre-existing File-set will be updated with the information in DICOM files copied to media. The media interchange application model for the DICOM SDK shown in the following Illustration:

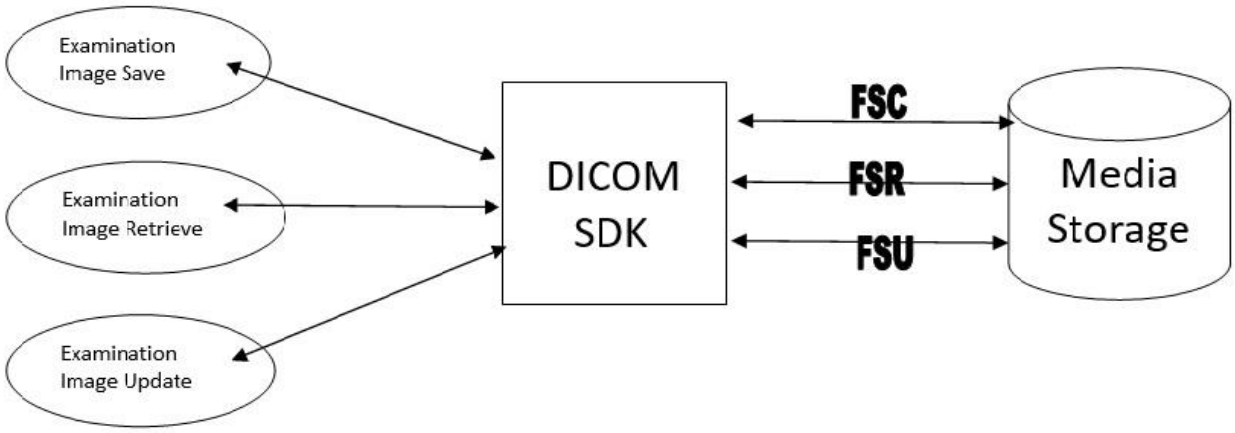

Figure 2: Application Data Flow Diagram

9.6.2Functional Definition of AE's

- Create a new DICOMDIR File-Set on media Storage
- Update DICOMDIR File-Set
- Read information from the DICOMDIR File-Set

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10. DICOM Content Mapping Resources (DCMR)

10.1. Overviews

The DICOM Standard is structured as a multi-part document using the guidelines established in the following document:

ISO/IEC Directives, 1989 Part 3: Drafting and Presentation of International Standards. PS 3.1 should be used as the base reference for the current parts of this standard.

10.1.1. Scope and field of application

This part of the DICOM Standard specifies the DICOM Content Mapping Resource (DCMR) which defines the templates and context groups used elsewhere in the standard.

10.1.2. Code and Controlled Terminology Definitions:

The following definitions are commonly used in this Part of the DICOM Standard:

Baseline Context Group Identifier (BCID): Identifier that specifies the suggested Context Group for a Code Sequence Attribute.

Defined Context Group Identifier (DCID): Identifier that specifies the Context Group for a Code Sequence Attribute that shall be used.

Context ID (CID): Identifier of a Context Group.

Mapping Resource: A resource that defines context-dependent usage constraints (i.e. Value Set or Relationship Type restrictions) for Attributes. A resource that specifies the mapping of the content of an external controlled terminology to the components of a message standard.

DICOM Content Mapping Resource (DCMR): A Mapping Resource that defines Templates and Context Groups for use in DICOM IODs.

Template ID (TID): Identifier of a Template.

Value Set: The allowed values of a Code Sequence Attribute in a given context. This Specified either as one or more individual values or by reference to a Context Group.

Baseline Template Identifier (BTID): Identifier that specifies a template suggested to be used in the creation of a set of Content Items.

Defined Template Identifier (DTID): Identifier that specifies a template that shall be used in the creation of a set of Content Items.

Coding schemes: Dictionaries (lexicons) of concepts (terms) with assigned codes and well-defined meanings.

Note: Examples of coding schemes include SNOMED.

MAXIMUM PDU SIZE RECEIVED

Maximum PDU size received	16384(approximate)

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10.2. TID's overview

SDK provides support following Template ID (TID).

1. General Templates.
2. Procedure Log IOD Templates.
3. Quantitative Ventricular Analysis Report SR IOD Templates.
4. Quantitative Arterial Analysis Report SR IOD Templates.
5. IVUS Report Templates.
6. Stress Testing Report Templates.
7. Hemodynamics Report Templates.
8. ECG Report Templates.
9. Cath Lab Clinical Report Templates.
10. CT/MR Cardiovascular Analysis Report Templates.
11. Mammography CAD SR IOD Templates.
12. Chest CAD SR IOD Templates.
13. Colon CAD SR IOD Templates.
14. Breast Imaging Report Templates.
15. OB-GYN Report Templates.
16. Vascular Ultrasound Report Templates.
17. Echocardiography Procedure Report Templates.
18. Implantation Plan SR Document Templates.
19. Relevant Patient Information Templates.
20. X-Ray Radiation Dose SR IOD Templates.
21. CT Radiation Dose SR IOD Templates.
22. Radiopharmaceutical Radiation Dose SR IOD Templates.

10.3. Extensions / Specializations / Privatizations

10.3.1. Standard Extended SOP Classes

SDK provides Standard Extended Conformance to all supported SOP Classes.

10.3.2. Private SOP Class

None.

10.3.3. Private Transfer Syntaxes

None

10.3.4. Private Data Element

DICOM Private Data Elements

Tag	Name	Keyword	VR	VM
(0009,0009)	SNOMED CT ID	SNOMEDCTID	SH	1

10.3.5. Private Data Element

(0009,0009) SNOMED CT ID

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11. Annexes

NA

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