

DICOM Correction Proposal

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Correction Number	CP1614
Log Summary:	Add '/bulkdata' and /pixels sub-resources to Study Series and Instance
Name of Standard	PS3.18 2016a
Rationale for Correction:	Currently there is no why to retrieve all the Bulkdata or pixel data for a Study, Series, or Instance. This CP defines these resources.
Correction Wording:	

Update PS3.18, Table 10.1.1 as follows:

Table 10.1-1. Resources and Descriptions

Resource	Description
Studies Service	The Base URI of the Studies Service.
All Studies	The All Studies resource references the entire collection of Studies contained in the Studies Service.
Study	The Study resource references a single Study.
Study Metadata	The Study Metadata resource references the Metadata of a single Study.
<u>Study Bulkdata</u>	<u>The Study Bulkdata resource references the Bulkdata of a Study.</u>
<u>Study Pixel Data</u>	<u>The Study Pixel Data resource references the pixel data of a Study.</u>
Rendered Study	The Study Rendered resource references a Study to be rendered.
Study's Series	The Study's Series resource references the collection of all Series contained in a Study.
Study's Instances	The Study's Instances resource references the collection of all Instances in a single Study.
All Series	The All Series resource references the collection of all Series in all Studies contained in the Studies Service.
Series	The Series resource references a single Series.
Series Metadata	The Series Metadata resource contains the Metadata of a single Series in a Study.
<u>Series Bulkdata</u>	<u>The Series Bulkdata resource contains the Bulkdata of a Series.</u>
<u>Series Pixel Data</u>	<u>The Series Pixel Data resource references the pixel data of a Series.</u>
Rendered Series	The Series Rendered resource references a Series to be rendered.
Series' Instances	The Series' Instances resource references the collection of all Instances in a single Series.
All Instances	The All Instances resource references the collection of all Instances in all Series in all Studies contained in the Studies Service.
Instance	The Instance resource references a single Instance.
Instance Metadata	The Instance Metadata resource contains the Metadata of a single Instance.
<u>Instance Bulkdata</u>	<u>The Instance Bulkdata resource contains the Bulkdata of an Instance.</u>
<u>Instance Pixel Data</u>	<u>The Instance Pixel Data resource references the pixel data of an Instance.</u>

Rendered Instance	The Rendered Instance resource references an Instance to be rendered.
Frames	The Frames resource references an ordered collection of frames in a single multi-frame Instance.
Frames Pixel Data	<u>The Frames Pixel Data resource references the pixel data of an ordered collection of frames in a single multi-frame Instance.</u>
Rendered Frames	The Rendered Frames resource references an ordered collection of frames of a single multi-frame Instance, to be rendered.
Bulkdata	The Bulkdata resource contains one or more Bulkdata Values.

Update PS3.18 Table 10.3-2 as follows:

Table 10.3-2. Resources by Transaction

Resource	Retrieve	Store	Search
Studies Service			
All Studies		M	M
Study	M	M	M
Study Metadata	M		
Study Bulkdata	<u>M-O</u>		
<u>Study Pixel Data</u>	<u>O</u>		
Rendered Study	M		
Study's Series			M
Study's Instances			M
All Series			M
Series	M		M
Series Metadata	M		
Series Bulkdata	<u>M-O</u>		
<u>Series Pixel Data</u>	<u>O</u>		
Series' Instances			M
Rendered Series	M		
All Instances			M
Instance	M		M
Instance Metadata	M		
Instance Bulkdata	<u>M-O</u>		
<u>Instance Pixel Data</u>	<u>O</u>		
Rendered Instance	M		
Frames	M		
<u>Frames Pixel Data</u>	<u>O</u>		
Rendered Frames	M		
Bulkdata	M	M	

Insert the following after PS3.18 Section 10.4.1.1.3

10.4.1.1.4 Bulkdata Resources

Table 10.4.1-4 defines the Bulkdata resources that may be retrieved.

Table 10.4.1-4. Retrieve Bulkdata Resources

Target Resource	URI Template
Study Bulkdata	/studies/{study}/bulkdata
Series Bulkdata	/studies/{study}/series/{series}/bulkdata
Instance Bulkdata	/studies/{study}/series/{series}/instances/{instance}/bulkdata

The origin server shall return all the Bulkdata of the resource.

The content type of the response payload shall be application/octet-stream media type.

10.4.1.1.4 Pixel Data Resources

Table 10.4.1-4 defines the Bulkdata resources that may be retrieved.

Table 10.4.1-5. Retrieve Pixel Data Resources

Target Resource	URI Template
Study Pixel Data	/studies/{study}/pixels
Series Pixel Data	/studies/{study}/series/{series}/pixels
Instance Pixel Data	/studies/{study}/series/{series}/instances/{instance}/pixels
Frames Pixel Data	/studies/{study}/series/{series}/instances/{instance}/frames/{frames}/pixels

The origin server shall return all the pixel data of the resource.

The content type of the response payload shall be application/octet-stream media type.

Insert the following after PS3.18 Section 10.4.1.1.3

10.5.1.1.1 DICOM Resources

Table 10.5.1-1 defines the resources used to store Instances.

Table 10.5.1-1. Store Transaction DICOM Resources

Resource	URI Template	Description
Studies	/studies	Stores a set of representations that may have different Study UIDs.
Study	/studies/{study}	Stores a set of representations that belong to the same Study, i.e., each representation shall have the same Study UID.

10.5.1.1.2 Metadata Resources

10.5.1.1.2 Metadata Resources

Table 10.5.1-2 defines the Metadata resources that may be stored.

Table 10.5.1-2. Retrieve Transaction Metadata Resources

Resource	URI Template
Study Metadata	/studies/{study}/metadata
Series Metadata	/studies/{study}/series/{series}/metadata
Instance Metadata	/studies/{study}/series/{series}/instances/{instance}/metadata

The Metadata Resources are used to retrieve the DICOM instances without retrieving Bulkdata. The Metadata returned for a study, series, or instance resource includes all Attributes in the resource. For Data Elements having a Value Representation (VR) of DS, FL, FD, IS, LT, OB, OD, OF, OL, OW, SL, SS, ST, UC, UL, UN, US, and UT, the origin server is permitted to replace the Value Field of the Data Element with a Bulkdata URI. The user agent can use the Bulkdata URI to retrieve the Bulkdata.

10.5.1.1.2 Bulkdata Resources

10.5.1.1.3 Bulkdata Resources

Table 10.5.1-3 defines the Bulkdata resources that may be stored.

Table 10.5.1-3. Retrieve Bulkdata Resources

Target Resource	URI Template
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Study Bulkdata	/studies/{study}/bulkdata
Series Bulkdata	/studies/{study}/series/{series}/bulkdata
Instance Bulkdata	/studies/{study}/series/{series}/instances/{instance}/bulkdata

The origin server shall store all the Bulkdata in the request payload in the Target Resource.

The content type of the request payload shall be application/octet-stream media type.