

DICOM Correction Proposal

STATUS	Assigned
Date of Last Update	2018/06/14
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Correction Number	CP-1869
Log Summary:	Update PS3.18 Header Fields to include origin server and user agent permissions requirements
Name of Standard	PS 3.18 2019
Rationale for Correction:	<p>Many of the header fields in PS3.18 do not specify permissions and requirements for user agent and origin server.</p> <p>Many of the header fields in PS3.18 for similar transactions such as Retrieve, Store (Create/Update), and Search have inconsistent header field sections. This CP moves the header field requirements for Retrieve, Store (Create/Update), and Search transactions to Section 8 and then references them from Sections 9, 10, 11, and 12.</p>
Correction Wording:	<include proposed change below, following guidelines for formatting of changes in supplements>

Insert the following in PS3.18 after Section 8.4.3:

8.4.4 Request Header Fields

8.4.4.1 Retrieve Request Header Fields

The origin server shall support header fields as required in Table 8.4.4-1 in the request.

The user agent shall supply in the request header fields as required in Table 8.4.4-1.

Table 8.4.4.1. Retrieve Request Header Fields

Name	Value	Usage		Description
		User Agent	Origin Server	
Accept	media-type	O	M	The Acceptable Media Types for the response payload
Accept-Charset	charset	O	M	The Acceptable Character Sets of the response payload

8.4.4.2 Store Request Header Fields

The origin server shall support header fields as required in Table 8.4.4-2 in the request.

The user agent shall supply in the request header fields as required in Table 8.4.4-2.

Table 8.4.4-2. Store Request Header Fields

Name	Value	Usage		Description
		User Agent	Origin Server	
Accept	media-type	O	M	The Acceptable Media Types for the response payload
Accept-Charset	charset	O	M	The Acceptable Character Sets of the response payload

8.4.4.3 Search Request Header Fields

The origin server shall support header fields as required in Table 8.4.4-3 in the request.

The user agent shall supply in the request header fields as required in Table 8.4.4-3.

Table 8.4.4-3. Search Request Header Fields

Name	Value	Usage		Description
		User Agent	Origin Server	
Accept	media-type	M	M	The Acceptable Media Types for the response payload
Accept-Charset	charset	O	M	The Acceptable Character Sets of the response payload
Cache-Control	"no-cache"	O	M	If included, specifies that search results returned should be current and not cached.

8.4.5 Response Header Fields

8.4.5.1 Retrieve Response Header Fields

The origin server shall support header fields as required in Table 8.4.5-2.

Table 8.4.5-1. Retrieve Response Header Fields

Name	Value	Origin Server Usage	Description
Content-Type	media-type	C	The media type of the payload. Shall be present if the response has a payload.
Content-Location	url	C	The URL of the representation contained in the payload. Shall be present if the response has a payload containing a resource. See Section 8.4.3. May be present otherwise
Location	url	C	The URL of the Target Resource. Shall be present if the response has a 3xx (Redirection) status code. See [RFC7231] Section 7.1.2. May be present otherwise.
Content-Length	uint	C	Shall be present if the response has a payload and no content encoding has been applied to it
Content-Encoding	encoding	C	Shall be present if the response has a payload and a content encoding has been applied to the it

8.4.5.2 Store Response Header Fields

The origin server shall support header fields as required in Table 8.4.5-2.

Table 8.4.5-2. Store Response Header Fields

Name	Value	Origin Server Usage	Description
Content-Type	media-type	C	The media type of the payload. Shall be present if the response has a payload.
Content-Location	url	C	The URL of the representation contained in the payload. Shall be present if the response has a payload containing a resource. See Section 8.4.3. May be present otherwise
Location	url	C	The URL of the Target Resource. Shall be present if the response has a 3xx (Redirection) status code. See [RFC7231] Section 7.1.2. May be present otherwise.

Content-Length	uint	C	Shall be present if no content encoding has been applied to the payload
Content-Encoding	encoding	C	Shall be present if a content encoding has been applied to the payload

All success responses shall also contain the Content Representation (see Section 8.4.2) and Payload header fields (see Section 8.4.3) with appropriate values.

It is recommended that the text returned in the Warning header field (see RFC7234, Section 5.5 <<https://tools.ietf.org/html/rfc7234#section-5.5>>) contain a DICOM Status Code (see PS3.4 and PS3.7 Section C) and descriptive reason. For example:

Warning: A700 <service>: Out of memory

8.4.5.3 Search Response Header Fields

The origin server shall support header fields as required in Table 8.4.5-3.

Table 8.4.5-3. Search Response Header Fields

Name	Value	Origin Server Usage	Description
Content-Type	media-type	C	The media-type of the payload. Shall be present if the response has a payload.
Content-Length	uint	C	Shall be present if a content coding has not been applied to the payload
Content-Encoding	encoding	C	Shall be present if a content encoding has been applied to the payload
Cache-Control	directive	O	If included, specifies that search results returned should be current and not cached. See [RFC7234] Section 5.2.2

Update PS 3.18 Section 9.4.1.3 as follows:

9.4.1.3 Request Header Fields

~~The origin server shall support header fields as required in Table 9.4.1-2 in the request.~~

~~The user agent shall supply in the request header fields as required in Table 9.4.1-2.~~

Table 9.4.1-2. Request Header Fields

Name	Values	Usage		Description
		User Agent	Origin Server	
Accept	media-type	O	M	The Acceptable Media Types for the response payload
Accept-Charset	charset	O	M	The Acceptable Character Sets of the response payload

See also Section 8.4.

See Section 8.4.4.1

Update PS 3.18 Section 9.4.3.2 as follows:

~~The origin server shall support header fields as required in Table 9.4.3-2.~~

Table 9.4.3-2. Response Header Fields

Name	center	Origin-Server-Usage	Description
Content-Type	dicom-media-type	M	The media-type of the payload
Content-Length	uint	M	Shall be present if a content encoding has not been applied to the payload
Content-Encoding	encoding	M	Shall be present if a content encoding has been applied to the payload

See Section 8.4.

See Section 8.4.5.1

Update PS 3.18 Section 9.5.1.3 as follows:

9.5.1.3 Request Header Fields

The origin server shall support header fields as required in Table 9.5.1-2.

The user agent shall supply in the request header fields as required in Table 9.5.1-2.

Table 9.5.1-2. Request Header Fields

Name	Values	Usage		Description
		User-Agent	Origin-Server	
Accept	media-type	M	M	The Acceptable Media Types for the response payload
Accept-Charset	charset	0	M	List of one or more character sets

See Section 8.4.4.1.

The Acceptable Media Types shall contain only Rendered Media Types. See Section 8.7.4.

Update PS 3.18 Section 9.5.3.2 as follows:

9.5.3.2 Response Header Fields

The origin server shall support header fields as required in Table 9.5.3-2.

Table 9.5.3-2. Response Header Fields

Name	center	Origin-Server-Usage	Description
Content-Type	media-type	C	Shall be present if the response contains a payload. See Section 8.4.3.
Content-Encoding	encoding	C	Shall be present if the response payload has a content encoding. See Section 8.4.3.
Content-Length	uint	C	Shall be present if the response payload does not have a content encoding. See Section 8.4.3.
Content-Location	url	C	Shall be present if the response has a payload containing a resource. See Section 8.4.3.

See also Section 8.4.

See Section 8.4.5.1.

Update PS 3.18 Section 10.4.1.3 as follows:

10.4.1.3 Request Header Fields

The origin server shall support header fields as required in Table 10.4.1-6 in the request.

The user agent shall supply in the request header fields as required in Table 10.4.1-6.

Table 10.4.1-6. Request Header Fields

Name	Values	Usage		Description
		User Agent	Origin Server	
Accept	media-type	M	M	The Acceptable Media Types of the response payload
Accept-Charset	charset	O	M	The Acceptable Character Sets of the response payload

See also Section 8.4.

See Section 8.4.4.1.

Update PS 3.18 Section 10.4.3.2 as follows:

10.4.3.2 Response Header Fields

The origin server shall supply header fields as required by Table 10.4.3-2.

Table 10.4.3-2. Response Header Fields

Name	center	Origin Server Usage	Description
Content-Type	media-type	C	The media type of the payload. Shall be present if the response has a payload.

See also Section 8.4.

See Section 8.4.5.1

Update PS 3.18 Section 10.5.1.3 as follows:

10.5.1.3 Request Header Fields

The origin server shall support Header Fields as required in Table 10.5.1-2.

The user agent shall supply in the request Header Fields as required in Table 10.5.1-2.

Table 10.5.1-2. Request Header Fields

Name	Values	Usage		Description
		User-Agent	Origin-Server	
Content-Type	media-type	M	M	The DICOM Media Type of the request payload Shall be present if the request has a payload
Content-Length	uint	C	M	Shall be present if a content encoding has not been applied to the payload
Content-Encoding	encoding	C	M	Shall be present if a content encoding has been applied to the payload

See also Section 8.4.

See Section 8.4.4.2.

Update PS 3.18 Section 10.5.3.2 as follows:

10.5.3.2 Response Header Fields

The origin server shall support header fields as required in Table 10.5.3-2.

Table 10.5.3-2. Response Header Fields

Name	center	Origin-Server Usage	Description
Content-Type	media-type	M	The media type of the response payload, if present.
Content-Encoding	encoding	C	Shall be present if the response payload has a content encoding. See Section 8.4.3.
Content-Length	uint	C	Shall be present if the response payload does not have a content encoding. See Section 8.4.3.
Content-Location	url	C	Shall be present if a new resource was created. The value is the URL of the representation contained in the request payload. May be present otherwise
Location	url	C	Shall be present if a new resource was created. The value is the URL of the created resource. May be present otherwise

All success responses shall also contain the Content Representation (see Section 8.4.2) and Payload header fields (see Section 8.4.3) with appropriate values.

It is recommended that the text returned in the Warning header field (see [RFC7234] Section 5.5) contain a DICOM Status Code (see PS3.4 and Annex C “Status Type Encoding (Normative)” in PS3.7) and descriptive reason. For example:

Warning: A700 <service>: Out of memory

See also Section 8.4.

See Section 8.4.5.2.

Update PS 3.18 Section 10.6.1.3 as follows:

10.6.1.3 Request Header Fields

The origin server shall support header fields as required in Table 10.6.1-6 in the request.

The user agent shall supply in the request header fields as required in Table 10.6.1-6.

Table 10.6.1-6. Request Header Fields

Name	Values	Usage		Description
		User Agent	Origin Server	
Accept	media-type	M	M	The Acceptable Media Types for the response payload
Accept-Charset	charset	Ø	M	The Acceptable Character Sets of the response payload

See also Section 8.4.

See Section 8.4.4.3.

Update PS 3.18 Section 10.6.3.2 as follows:

10.6.3.2 Response Header Fields

The origin server shall support header fields as required in Table 10.6.3-2.

Table 10.6.3-2. Response Header Fields

Name	center	Origin Server Usage	Description
Content-Type	media-type	C	The DICOM Media Type of the response payload Shall be present if the response has a payload
Content-Length	uint	C	Shall be present if no content coding has been applied to the payload
Content-Encoding	encoding	C	Shall be present if a content encoding has been applied to the payload

See also Section 8.4.5.3.

Update PS 3.18 Section 11.4.1.3 as follows:

11.4.1.3 Request Header Fields

The origin server shall support header fields in Table 11.4.1-3.

The user agent shall supply in the request header fields as defined in Table 11.4.1-3.

Table 11.4.1-3. Request Header Fields

Name	Values	Usage		Description
		User-Agent	Origin-Server	
Content-Type	dicom-media-type	M	M	The media-type of the payload
Content-Length	uint	C	M	Shall be present if a content encoding has not been applied to the payload
Content-Encoding	encoding	C	M	Shall be present if a content encoding has been applied to the payload

See also Section 8.4.

See Section 8.4.4.1.

Update PS 3.18 Section 11.4.3.2 as follows:

11.4.3.2 Response Header Fields

The origin server shall support header fields as required in Table 11.4.3-2.

Table 11.4.3-2. Response Header Fields

Names	Value	Origin Server Usage	Condition
Content-Type	media-type	C	Shall be present if the response has a payload
Content-Length	uint	C	Shall be present if a content coding has not been applied to the payload
Content-Encoding	encoding	C	Shall be present if content encoding has been applied to the payload
Content-Location	url	O	Shall be present if the response has a payload containing a resource. See Section 8.4.3. May be present otherwise
Location	url	C	A URL-reference to the created Workitem. Shall be present if a Workitem was created. May be present if the payload contains a resource
Warning	See below	C	Shall be present if the Target Workitem was modified by the origin server and shall include the warning below

See Section 8.4.5.2.

If the Target Workitem was modified by the origin server, the response shall also have the following Warning header:

Warning: 299 <service>: The Workitem was created with modifications'

See also Section 8.4.

Update PS 3.18 Section 11.5.1.3 as follows:

11.5.1.3 Request Header Fields

The origin server shall support header fields as required in Table 11.5.1-1.

The user agent shall supply in the request header fields as defined in Table 11.5.1-1.

Table 11.5.1-1. Request Header Fields

Name	Values	Usage		Description
		User Agent	Origin Server	
Accept	1#-dicom-media-type	M	M	The Acceptable Media Types of the response payload

See also Section 8.4.

See Section 8.4.4.1

Update PS 3.18 Section 11.5.3.2 as follows:

11.5.3.2 Response Header Fields

The origin server shall support header fields as required in Table 11.5.3-2.

Table 11.5.3-2. Response Header Fields

Name	center	Origin Server Usage	Description
Content-Type	media-type	M	media type of the Target Workitem or Status Report in payload
Content-Location	url	O	Shall be present if the response has a payload containing a resource. See Section 8.4.3. May be present otherwise
Content-Length	uint	C	Shall be present if no content encoding has been applied to the payload
Content-Encoding	encoding	C	Shall be present if a content encoding has been applied to the payload

See also Section 8.4.

See Section 8.4.5.1

Update PS 3.18 Section 11.6.1.3 as follows:

11.6.1.3 Request Header Fields

The origin server shall support header fields as required in Table 11.6.1-1.

The user agent shall supply in the request header fields as defined in Table 11.6.1-1.

Table 11.6.1-1. Request Header Fields

Name	Values	Usage		Description
		User-Agent	Origin-Server	
Content-Type	dicom-media-type	M	M	The media-type of the payload
Content-Length	uint	C	M	Shall be present if a content encoding has not been applied to the payload
Content-Encoding	encoding	C	M	Shall be present if a content encoding has been applied to the payload

See also Section 8.4.

See Section 8.4.4.2.

Update PS 3.18 Section 11.6.3.2 as follows:

11.6.3.2 Response Header Fields

The origin server shall support header fields as required in Table 11.6.3-2.

Table 11.6.3-2. Response Header Fields

Name	center	Origin Server Usage	Description
Content-Type	media-type	M	The media-type of the payload
Content-Length	uint	C	Shall be present if no content encoding has been applied to the payload
Content-Encoding	encoding	C	Shall be present if a content encoding has been applied to the payload
Content-Location	url	O	Shall be present if the response has a payload containing a resource. See Section 8.4.3. May be present otherwise
Warning	see below	O	If the Target Workitem was modified by the origin server shall include one of the Warning header fields below.

See Section 8.4.5.2

If the Workitem was successfully updated but with modifications made by the origin server, the response shall include the following in the Warning header field:

Warning: 299 <service>: The Workitem was updated with modifications.

If optional Attributes were rejected, the response shall include the following Warning header field:

Warning: 299 <service>: Requested optional Attributes are not supported.

If the request was rejected with a failure status code, the response shall include a Warning header field with one of following messages that best describes the nature of the conflict:

Warning: 299 <service>: The target URI did not reference a claimed Workitem.

Warning: 299 <service>: The submitted request is inconsistent with the current state of the Workitem.

See also Section 8.4.

Update PS 3.18 Section 11.9.1.3 as follows:

11.9.1.3 Request Header Fields

The origin server shall support header fields as required in Table 11.9.1-1.

The user agent shall supply in the request header fields as defined in Table 11.9.1-1.

Table 11.9.1-1. Request Header Fields

Name	Values	Usage		Description
		User Agent	Origin Server	
Accept	1#-dicom-media-type	M	M	The Acceptable Media Types of the response payload.
Cache-Control	"no-cache"	Ø	M	If included, specifies that search results returned should be current and not cached.

See also Section 8.4.

See Section 8.4.4.3.

Update PS 3.18 Section 11.9.3.2 as follows:

11.9.3.2 Response Header Fields

The origin server shall support header fields as required in Table 11.9.3-2.

Table 11.9.3-2. Response Header Fields

Name	center	Origin Server Usage	Description
Content-Type	media-type	M	The media type of the payload.
Content-Length	Uint	Ø	Shall be present if a content coding has not been applied to the payload.
Content-Encoding	Encoding	Ø	Shall be present if a content encoding has been applied to the payload.
Content-Location	url	Ø	Shall be present if the response has a payload containing a resource. See Section 8.4.3. May be present otherwise.

See also Section 8.4.

See Section 8.4.5.3

Update PS 3.18 Section 12.4.1.3 as follows:

12.4.1.3 Request Header Fields

Table 12.4.1-2. Request Header Fields

Name	Values	Usage		Description
		User-Agent	Origin-Server	
Accept	1#-dicom-media-type	M	M	The Acceptable Media Types of the response payload

See also Section 8.4.

See Section 8.4.4.1

Update PS 3.18 Section 12.4.3.2 as follows:

12.4.3.2 Response Header Fields

Table 12.4.3-2. Response Header Fields

Header Field	Value	Origin-Server Usage	Requirements
Content-Type	dicom-media-type	M	The media-type of the response payload.
Content-Length	uint	C	Shall be present if no content encoding has been applied to the payload.
Content-Encoding	encoding	C	Shall be present if a content encoding has been applied to the payload.

See also Section 8.4.

See Section 8.4.5.1

Update PS 3.18 Section 12.5.1.3 as follows:

12.5.1.3 Request Header Fields

Table 12.5.1-2. Request Header Fields

Name	Values	Usage		Description
		User-Agent	Origin-Server	
Content-Type	media-type	M	M	The DICOM Media Type of the request payload.
Content-Length	uint	C	M	Shall be present if a content encoding has not been applied to the payload.
Content-Encoding	encoding	C	M	Shall be present if a content encoding has been applied to the payload.

See also Section 8.4.

See Section 8.4.4.2.

Update PS 3.18 Section 12.5.3.2 as follows:

12.5.3.2 Response Header Fields

Table 12.5.3-2. Response Header Fields

Header Field	Value	Origin Server Usage	Requirements
Content-Type	dicom-media-type	M	The media type of the response payload.
Content-Length	uint	C	Shall be present if a content encoding has not been applied to the payload
Content-Encoding	encoding	C	Shall be present if a content encoding has been applied to the payload

See also Section 8.4.

See Section 8.4.5.2

Update PS 3.18 Section 12.6.1.3 as follows:

12.6.1.3 Request Header Fields

Table 12.6.1-3. Request Header Fields

Name	Values	Usage		Description
		User Agent	Origin Server	
Accept	1# dicom-media-type	M	M	The Acceptable Media Types of the response payload

See also Section 8.4.

See Section 8.4.4.3

Update PS 3.18 Section 12.6.3.2 as follows:

12.6.3.2 Response Header Fields

Table 12.6.3-2. Response Header Fields

Header Field	Value	Origin Server Usage	Requirement
Content-Type	dicom-media-type	M	The media type of the response payload.
Content-Length	Uint	C	Shall be present if a content encoding has not been applied to the payload.
Content-Encoding	Encoding	C	Shall be present if a content coding has been applied to the payload.

See also Section 8.4.

See Section 8.4.5.3

