



Maximum Value Transferred Extension

Version 1.0b

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Working Draft

Revision History

Date	Version	By	Comments
2012-01-23	1.0a	Wesley Leggette, Cleversafe Inc.	Initial Creation
2012-01-26	1.0b	Marie McMinn	Performed technical edit.

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Maximum Value Transferred Extension

Overview

CDMI provides three methods by which the value of a data object may be transferred between CDMI clients and servers:

- UTF-8 encoding in JSON using a CDMI content type request/response,
- Base64 encoding in JSON using a CDMI content type request/response, and
- raw binary using a non-CDMI content type request/response.

Both UTF-8 and Base64 encoding in JSON is sufficient for most cases where object sizes are relatively small. However, most JSON parsers and encoders have intrinsic size limitations. A system-wide capability that indicates the maximum transfer size for JSON encoded value fields can advise clients on the maximum value size than can be expected from any request.

This proposed extension adds the ability for a CDMI server to indicate both the maximum size that the value component of a data object can be, and separately indicates the maximum size of the value attribute when an object is retrieved.

Modifications to the CDMI 1.0.1 spec:

1) Append to end of Clause "8.1 Overview"

The value of a data object may not be larger than the maximum value size specified in "cdmi_value_maxsize", if present. If "cdmi_value_transfer_maxsize" is present and less than "cdmi_value_maxsize", the value field may be larger than the maximum transfer size, but clients may only request data via ranges less than or equal to the maximum transfer size, a multi-part MIME request, or a non-CDMI Content Type request.

2) Modify Clause "8.4.6 Response Message Body", Table "Table 14 - Response Message Body - Read a Data Object using CDMI Content Type", add the following points.

Field Name	Type	Description	Requirement
valuerange	JSON String	If the pre-encoded (before UTF-8 or Base64 encoding) data object size is greater than the maximum supported value transfer size, this field shall be omitted from the response.	Conditional
value	JSON String	The data object value. If the pre-encoded (before UTF-8 or Base64 encoding) data object size is greater than the maximum supported value transfer size, this field shall be omitted from the response.	Conditional

3) Insert into Clause "12.1.1 Cloud Storage System-Wide Capabilities", Table "Table 102 - System-Wide Capabilities"

Capability Name	Type	Description
cdmi_value_maxsize	JSON String	If present, this capability indicates the maximum size, in bytes, that can be assigned to the value field of a data object.
cdmi_value_transfer_maxsize	JSON String	If present, this capability indicates the maximum pre-encoded size, in bytes, that can be transferred in a value field via a CDMI content-type GET, PUT, and POST request.