



# CDMI Extension: Maximum Value Transferred

**Version 1.1a**

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***Working Draft***

## Revision History

Date	Version	By	Comments
08-28-2014	1.1a	Marie McMinn, Cloud TWG Editor	New version of Maximum Value Transferred extension created for the CDMI 1.1.0 revision of the standard. Derived from the 1.0c draft.

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# Maximum Value Transferred Extension

## Overview

CDMI provides three methods to transfer the value of a data object between CDMI clients and servers:

- UTF-8 encoding in JSON using a CDMI request/response,
- Base64 encoding in JSON using a CDMI request/response, and
- raw binary using an HTTP 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 of the maximum value size that 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 also separately indicates the maximum size of the value attribute when an object is retrieved.

## Changes to the CDMI 1.1.0 spec:

### 1) Append to end of 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 an HTTP request.

### 2) Modify 8.3.6 Response Message Body, Table 27 - Response Message Body - Read a Data Object using CDMI by adding 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 12.1.1 Cloud Storage System-Wide Capabilities, Table 100 - System-Wide Capabilities**

<b>Capability Name</b>	<b>Type</b>	<b>Description</b>
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.