

[MS-XWDDOC]: Web Distributed Authoring and Versioning (WebDAV) Extensions for Documents Support

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Revision Summary

Date	Revision History	Revision Class	Comments
12/03/2008	1.0	Major	Initial Release.
03/04/2009	1.0.1	Editorial	Revised and edited technical content.
04/10/2009	2.0	Major	Deprecated for Exchange 2010.
07/15/2009	3.0	Major	Changes made for template compliance.
11/04/2009	3.1.0	Minor	Updated the technical content.
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02/11/2013	4.3	No change	No changes to the meaning, language, or formatting of the technical content.

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1 Introduction

The Web Distributed Authoring and Versioning (WebDAV) Extensions for Documents Support allow for the creation and manipulation of [Document objects](#) by using [WebDAV](#). Document objects are [Message objects](#) with additional properties. These properties are available for query and manipulation as described in [\[MS-OXODOC\]](#) or by using WebDAV and the properties described in this document.

Sections 1.8, 2, and 3 of this specification are normative and can contain the terms MAY, SHOULD, MUST, MUST NOT, and SHOULD NOT as defined in RFC 2119. Sections 1.5 and 1.9 are also normative but cannot contain those terms. All other sections and examples in this specification are informative.

1.1 Glossary

The following terms are defined in [\[MS-GLOS\]](#):

access control list (ACL)
Hypertext Transfer Protocol (HTTP)
Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)

The following terms are defined in [\[MS-OXGLOS\]](#):

base64 encoding
display name
Document object
header
Inbox folder
Message object
message store
structured document
Uniform Resource Locator (URL)
Web Distributed Authoring and Versioning Protocol (WebDAV)
WebDAV client
WebDAV server

The following terms are specific to this document:

MAY, SHOULD, MUST, SHOULD NOT, MUST NOT: These terms (in all caps) are used as described in [\[RFC2119\]](#). All statements of optional behavior use either MAY, SHOULD, or SHOULD NOT.

1.2 References

References to Microsoft Open Specifications documentation do not include a publishing year because links are to the latest version of the technical documents, which are updated frequently. References to other documents include a publishing year when one is available.

1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information. Please check the archive site, <http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624>, as an additional source.

[MS-DTYP] Microsoft Corporation, "[Windows Data Types](#)".

[MS-OSHARED] Microsoft Corporation, "[Office Common Data Types and Objects Structures](#)".

[MS-OXCDATA] Microsoft Corporation, "[Data Structures](#)".

[MS-OXCFOLD] Microsoft Corporation, "[Folder Object Protocol](#)".

[MS-OXCFXICS] Microsoft Corporation, "[Bulk Data Transfer Protocol](#)".

[MS-OXCMAIL] Microsoft Corporation, "[RFC 2822 and MIME to Email Object Conversion Algorithm](#)".

[MS-OXCMSG] Microsoft Corporation, "[Message and Attachment Object Protocol](#)".

[MS-OXODOC] Microsoft Corporation, "[Document Object Protocol](#)".

[MS-WDVME] Microsoft Corporation, "[Web Distributed Authoring and Versioning \(WebDAV\) Protocol: Microsoft Extensions](#)".

[MS-WDVSE] Microsoft Corporation, "[Web Distributed Authoring and Versioning \(WebDAV\) Protocol: Server Extensions](#)".

[MS-XWDCAL] Microsoft Corporation, "[Web Distributed Authoring and Versioning \(WebDAV\) Extensions for Calendar Support](#)".

[MS-XWDEXT] Microsoft Corporation, "[Web Distributed Authoring and Versioning \(WebDAV\) Core Extensions](#)".

[MS-XWDFOLD] Microsoft Corporation, "[Web Distributed Authoring and Versioning \(WebDAV\) Extensions for Folders Support](#)".

[MS-XWDMAIL] Microsoft Corporation, "[Web Distributed Authoring and Versioning \(WebDAV\) Extensions for Email Support](#)".

[MS-XWDSTRUCTDOC] Microsoft Corporation, "[Web Distributed Authoring and Versioning \(WebDAV\) Extensions for Structured Documents](#)".

[RFC2068] Fielding, R., Gettys, J., Mogul, J., et al., "Hypertext Transfer Protocol -- HTTP/1.1", RFC 2068, January 1997, <http://www.ietf.org/rfc/rfc2068.txt>

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, <http://www.rfc-editor.org/rfc/rfc2119.txt>

[RFC2518] Goland, Y., Whitehead, E., Faizi, A., et al., "HTTP Extensions for Distributed Authoring - WebDAV", RFC 2518, February 1999, <http://www.ietf.org/rfc/rfc2518.txt>

[RFC4648] Josefsson, S., "The Base16, Base32, and Base64 Data Encodings", RFC 4648, October 2006, <http://www.ietf.org/rfc/rfc4648.txt>

1.2.2 Informative References

[MSDN-CESHU] Microsoft Corporation, "Constructing Exchange Store HTTP URLs", [http://msdn.microsoft.com/en-us/library/aa493863\(EXCHG.80\).aspx](http://msdn.microsoft.com/en-us/library/aa493863(EXCHG.80).aspx)

[MS-GLOS] Microsoft Corporation, "[Windows Protocols Master Glossary](#)".

[MS-OXGLOS] Microsoft Corporation, "[Exchange Server Protocols Master Glossary](#)".

[MS-OXPROPS] Microsoft Corporation, "[Exchange Server Protocols Master Property List](#)".

[MS-OXPROTO] Microsoft Corporation, "[Exchange Server Protocols System Overview](#)".

[MS-WDV] Microsoft Corporation, "[Web Distributed Authoring and Versioning \(WebDAV\) Protocol: Client Extensions](#)".

[RFC2291] Slein, J., Vitali, F., Whitehead, E., et al., "Requirements for a Distributed Authoring and Versioning Protocol for the World Wide Web", RFC 2291, February 1998, <http://www.ietf.org/rfc/rfc2291.txt>

[RFC2818] Rescorla, E., "HTTP Over TLS", RFC 2818, May 2000, <http://www.ietf.org/rfc/rfc2818.txt>

[RFC3744] Clemm, G., Reschke, J., Sedlar, E., and Whitehead, J., "Web Distributed Authoring and Versioning (WebDAV) Access Control Protocol", RFC 3744, May 2004, <http://www.rfc-editor.org/rfc/rfc3744.txt>

1.3 Overview

The WebDAV Extensions for Documents Support extend [\[RFC2518\]](#), [\[MS-WDVME\]](#), [\[MS-WDVSE\]](#), and [\[MS-WDV\]](#) to allow for manipulation of [Document object](#) properties by using [WebDAV](#). The properties of Document objects are available for query and manipulation by using WebDAV as described in this document or by using the protocol described in [\[MS-OXODOC\]](#).

Extensions to WebDAV constructs are used to manipulate and query Document object properties. No additional [headers \(2\)](#) or methods are described in this document. Standard WebDAV constructs are described in [\[RFC2518\]](#), and extensions to WebDAV constructs are described in [\[MS-WDVME\]](#), [\[MS-WDVSE\]](#), and [\[MS-WDV\]](#).

1.4 Relationship to Other Protocols

The WebDAV Extensions for Documents Support depend on [WebDAV](#) as described in [\[RFC2518\]](#). WebDAV, in turn, relies on the **Hypertext Transfer Protocol (HTTP)** 1.1, as described in [\[RFC2068\]](#). These extensions also rely on **Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)**, as described in [\[RFC2818\]](#), for data protection services.

These extensions are also dependent on client, server, and other extensions to [\[RFC2518\]](#) as described in [\[MS-WDVME\]](#), [\[MS-WDVSE\]](#), and [\[MS-WDV\]](#). These extensions are also dependent on the extension to [\[RFC2518\]](#) for verb, header, and element definitions described in [\[MS-XWDEXT\]](#).

The WebDAV document properties described in section 2.2 map to [Document object](#) properties, as described in [\[MS-OXODOC\]](#) section 2.2.2 and [\[MS-OXCMAIL\]](#) section 2.1.

All properties in this specification are listed in [\[MS-OXPROPS\]](#). The data type and format of the properties is described in [\[MS-OXCDATA\]](#).

For conceptual background information and overviews of the relationships and interactions between this and other protocols, see [\[MS-OXPROTO\]](#).

1.5 Prerequisites/Preconditions

The WebDAV Extensions for Documents Support require the following:

- A [WebDAV server](#), as described in [\[RFC2291\]](#).
- The [WebDAV client](#) has a [URL](#) that points to the WebDAV server.

- The WebDAV client obtains the URL through a mechanism that is outside of [WebDAV](#) and that is determined by the implementer.
- The WebDAV client and server support WebDAV **access control lists (ACLs)** as described in [\[RFC3744\]](#).
- The WebDAV client and server support ETags, as described in [\[RFC2068\]](#) section 14.19.

For more information about constructing WebDAV server URLs, see [\[MSDN-CESHU\]](#).

1.6 Applicability Statement

A client can use the WebDAV Extensions for Documents Support to communicate [Document object](#) data with a server by using [WebDAV](#).

1.7 Versioning and Capability Negotiation

This document covers versioning issues in the following areas:

- **Supported Transports:** The WebDAV Extensions for Documents Support use HTTP as their only transport.
- **Versioning:** This document introduces no new versioning mechanisms except those that already exist in [WebDAV](#) and HTTP as described in [\[RFC2518\]](#) and [\[RFC2068\]](#).
- **Capability Negotiation:** This specification introduces no new capability negotiations except those that already exist in [\[RFC2518\]](#) sections 10.1 and 18, and in [\[RFC2068\]](#) section 9.2, via the **OPTIONS** method.

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2 Messages

2.1 Transport

The WebDAV Extension for Documents Support transport messages by using HTTP, as specified in [\[RFC2518\]](#) and [\[RFC2068\]](#).

2.2 Message Syntax

This section contains the [WebDAV](#) extensions for [Document object](#) properties. Many of these properties map directly to the Document object properties specified in [\[MS-OXODOC\]](#).

2.2.1 DAV: Namespace Properties

2.2.1.1 PidNameContentClass

DAV property name: **DAV:contentclass**, **urn:schemas:mailheader:content-class**, **Content-Class**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameContentClass** property ([\[MS-OXCMSG\]](#) section 2.2.1.48) gets or sets the content class for the document item.

For more details about the **PidNameContentClass** property, see [\[MS-OXCMAIL\]](#) section 2.1.3.2.2.

2.2.1.2 PidNameDavId

DAV property name: **DAV:id**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameDavId** property ([\[MS-XWDCAL\]](#) section 2.2.1.2) gets the calculated value that contains the unique ID for the document.

2.2.1.3 PidNameDavIsCollection

DAV property name: **DAV:iscollection**

Data type: **PtypBoolean** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameDavIsCollection** property ([\[MS-XWDCAL\]](#) section 2.2.1.3) gets the calculated value that specifies whether an item is a collection, as specified in [\[MS-WDVME\]](#). Set to TRUE if the item is a collection; otherwise, set to FALSE.

2.2.1.4 PidNameDavIsStructuredDocument

DAV property name: **DAV:isstructureddocument**

Data type: **PtypBoolean** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameDavIsStructuredDocument** property ([\[MS-XWDCAL\]](#) section 2.2.1.4) gets the calculated value that specifies whether an item is a [structured document](#), as specified in [\[MS-XWDSTRUCTDOC\]](#). Set to TRUE if the item is a structured document; otherwise, set to FALSE.

2.2.1.5 PidNameDavParentName

DAV property name: **DAV:parentname**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameDavParentName** property ([\[MS-XWDCAL\]](#) section 2.2.1.5) gets the calculated value that specifies the absolute [URL](#) of the folder that contains the item.

2.2.1.6 PidNameDavUid

DAV property name: **DAV:uid**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameDavUid** property ([\[MS-XWDCAL\]](#) section 2.2.1.6) gets the calculated unique identifier for the item.

2.2.1.7 PidTagAttributeHidden

DAV property name: **DAV:ishidden**

Data type: **PtypBoolean** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagAttributeHidden** property ([\[MS-OXCFCAL\]](#) section 2.2.2.2.1) gets or sets the value that indicates whether the item is hidden, as specified in [\[MS-WDVME\]](#). Set to TRUE if the item is hidden; otherwise, set to FALSE.

2.2.1.8 PidTagAttributeReadOnly

DAV property name: **DAV:isreadonly**

Data type: **PtypBoolean** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagAttributeReadOnly** property ([\[MS-XWDCAL\]](#) section 2.2.1.8) gets or sets the value that indicates whether the item can be modified or deleted. Set to TRUE if the item is read-only; otherwise, set to FALSE.

2.2.1.9 PidTagSubfolder

DAV property name: **DAV:isfolder**

Data type: **PtypBoolean** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagSubfolder** property ([\[MS-XWDFOLD\]](#) section 2.2.1) gets a value that indicates whether the item is a folder. Set to TRUE if the item is a folder and is viewable in the mail client; otherwise, set to FALSE. This property is further specified in [\[MS-WDVME\]](#).

2.2.1.10 PidTagUrlName

DAV property name: **DAV:href**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagUrlName** property ([\[MS-XWDMAIL\]](#) section 2.2.2.1.4) gets the absolute URL of the document.

2.2.2 <http://schemas.microsoft.com/exchange/> Namespace Properties

2.2.2.1 PidTagExchangeNTSecurityDescriptor

DAV property name: **<http://schemas.microsoft.com/exchange/ntsecuritydescriptor>**

Data type: **PtypBinary** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagExchangeNTSecurityDescriptor** property ([\[MS-XWDCAL\]](#) section 2.2.8.8) gets or sets the calculated security descriptor for the item. The security descriptor MUST contain the item's primary owner and group and a discretionary **ACL** granting and denying various rights to particular users and groups. Clients MUST NOT manipulate the security descriptor directly. The **PidTagExchangeNTSecurityDescriptor** property is a **SECURITY_DESCRIPTOR** ([\[MS-DTYP\]](#)) in [base64 encoding](#), as specified in [\[RFC4648\]](#) section 4.

2.2.2.2 PidTagFlatUrlName

DAV property name: **<http://schemas.microsoft.com/exchange/permanenturl>**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagFlatUrlName** property ([\[MS-XWDCAL\]](#) section 2.2.8.9) gets the unique identifier for an item across the [message store](#). This value MUST NOT change as long as the item remains in the same folder. The **PidTagFlatUrlName** property contains the ID of the parent folder of the item, which changes when the item is moved to a different folder or is deleted. Changing a property on an item does not change the **PidTagFlatUrlName** property, nor will adding more items to the folder with the same [display name](#) or message subject. This property corresponds to the **MS-Exchange-Permanent-URL header (2)** value, as specified in [\[MS-XWDEXT\]](#) section 2.2.2.11.

2.2.2.3 PidTagMessageClass

DAV property name: **<http://schemas.microsoft.com/exchange/outlookmessageclass>**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagMessageClass** property ([\[MS-OXCMSG\]](#) section 2.2.1.3) gets or sets the type of document.

2.2.2.4 PidTagMid

DAV property name: **<http://schemas.microsoft.com/exchange/mid>**

Data type: **PtypInteger64** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidTagMid** property ([\[MS-OXCFXICS\]](#) section 2.2.1.2.1) gets the message ID (MID), as specified in [\[MS-OXCDATA\]](#) section 2.2.1.2.

2.2.3 urn:schemas-microsoft-com:office:office Namespace Properties

2.2.3.1 PidNameApplicationName

DAV property names: **AppName**, **urn:schemas-microsoft-com:office:office#NameOfApplication**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameApplicationName** property ([\[MS-OXODOC\]](#) section 2.2.1.9) gets or sets the name of the application used to create the document. This property corresponds to the **GKPIDSI_APPNAME** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.2 PidNameAuthor

DAV property names: **Author**, **urn:schemas-microsoft-com:office:office#Author**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameAuthor** property ([\[MS-OXODOC\]](#) section 2.2.1.3) gets or sets the author of the document. This property corresponds to the **GKPIDSI_AUTHOR** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.3 PidNameByteCount

DAV property names: **ByteCount**, **urn:schemas-microsoft-com:office:office#Bytes**

Data type: **PtypInteger32** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameByteCount** property ([\[MS-OXODOC\]](#) section 2.2.1.22) gets or sets the size of the document, in bytes. This property corresponds to the **GKPIDSI_BYTECOUNT** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.4 PidNameCategory

DAV property names: **Category**, **urn:schemas-microsoft-com:office:office#Category**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameCategory** property ([\[MS-OXODOC\]](#) section 2.2.1.18) gets or sets the category associated with the document. This property corresponds to the **GKPIDSI_CATEGORY** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.5 PidNameCharacterCount

DAV property name: **CharCount**, **urn:schemas-microsoft-com:office:office#Characters**

Data type: **PtypInteger32** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameCharacterCount** property ([\[MS-OXODOC\]](#) section 2.2.1.16) gets or sets the number of characters in the document. This property corresponds to the **GKPIDSI_CHARCOUNT** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.6 PidNameComments

DAV property names: **Comments**, **urn:schemas-microsoft-com:office:office#Comments**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameComments** property ([\[MS-OXODOC\]](#) section 2.2.1.5) gets or sets the comments associated with the document. This property corresponds to the **GKPIDSI_COMMENTS** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.7 PidNameCompany

DAV property name: **Company**, **urn:schemas-microsoft-com:office:office#Company**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameCompany** property ([\[MS-OXODOC\]](#) section 2.2.1.21) gets or sets the author's company. This property corresponds to the **GKPIDDSI_COMPANY** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.8 PidNameCreateDateTimeReadOnly

DAV property names: **CreateDtmRo**, **urn:schemas-microsoft-com:office:office#Created**

Data type: **PtypTime** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameCreateDateTimeReadOnly** property ([\[MS-OXODOC\]](#) section 2.2.1.12) gets or sets the date and time that the document was created. This property corresponds to the **GKPIDSI_CREATE_DTM** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.9 PidNameDocumentParts

DAV property names: **DocParts**, **urn:schemas-microsoft-com:office:office#PartTitles**

Data type: **PtypMultipleString** ([\[MS-OXCDATA\]](#) section 2.11.1.6.1)

The **PidNameDocumentParts** property ([\[MS-OXODOC\]](#) section 2.2.1.29) gets or sets the titles of the document parts. This property corresponds to the **GKPIDDSI_DOCPARTS** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.10 PidNameEditTime

DAV property names: **EditTime**, **urn:schemas-microsoft-com:office:office#TotalTime**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameEditTime** property ([\[MS-OXODOC\]](#) section 2.2.1.10) gets or sets the total editing time for the document. This property corresponds to the **GKPIDSI_EDITTIME** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.11 PidNameHeadingPairs

DAV property names: **HeadingPairs**, **urn:schemas-microsoft-com:office:office#HeadingPairs**

Data type: **PtypBinary** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameHeadingPairs** property ([\[MS-OXODOC\]](#) section 2.2.1.30) gets or sets the group of headings that are indented in the document. This property corresponds to the **GKPIDDSI_HEADINGPAIR** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.12 PidNameHiddenCount

DAV property names: **HiddenCount**, **urn:schemas-microsoft-com:office:office#HiddenSlides**

Data type: **PtypInteger32** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameHiddenCount** property ([\[MS-OXODOC\]](#) section 2.2.1.27) gets or sets the number of hidden slides in the document. This property corresponds to the **GKPIDDSI_HIDDENCOUNT** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.13 PidNameKeywords

DAV property names: **urn:schemas-microsoft-com:office:office#Keywords**, **http://schemas.microsoft.com/exchange/keywords-utf8, Keywords**

Data type: **PtypMultipleString** ([\[MS-OXCDATA\]](#) section 2.11.1.6.1)

The **PidNameKeywords** property ([\[MS-OXCMSG\]](#) section 2.2.1.17) gets or sets a list of keywords for the document. This property corresponds to the **GKPIDSI_KEYWORDS** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.14 PidNameLastAuthor

DAV property names: **LastAuthor**, **urn:schemas-microsoft-com:office:office#LastAuthor**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameLastAuthor** property ([\[MS-OXODOC\]](#) section 2.2.1.7) gets or sets the most recent author of the document. This property corresponds to the **GKPIDSI_LASTAUTHOR** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.15 PidNameLastPrinted

DAV property names: **LastPrinted**, **urn:schemas-microsoft-com:office:office#LastPrinted**

Data type: **PtypTime** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameLastPrinted** property ([\[MS-OXODOC\]](#) section 2.2.1.11) gets or sets the date and time when the document was last printed. This property corresponds to the **GKPIDSI_LASTPRINTED** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.16 PidNameLastSaveDateTime

DAV property names: **LastSaveDtm**, **urn:schemas-microsoft-com:office:office#LastSaved**

Data type: **PtypTime** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameLastSaveDateTime** property ([\[MS-OXODOC\]](#) section 2.2.1.13) gets or sets the date and time that the document was last saved. This property corresponds to the **GKPIDSI_LASTSAVE_DTM** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.17 PidNameLineCount

DAV property names: **LineCount**, **urn:schemas-microsoft-com:office:office#Lines**

Data type: **PtypInteger32** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameLineCount** property ([\[MS-OXODOC\]](#) section 2.2.1.23) gets or sets the number of lines in the document. This property corresponds to the **GKPIDDSI_LINECOUNT** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.18 PidNameLinksDirty

DAV property names: **LinksDirty**, **urn:schemas-microsoft-com:office:office#LinksUpToDate**

Data type: **PtypBoolean** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameLinksDirty** property ([\[MS-OXODOC\]](#) section 2.2.1.31) gets or sets a value that indicates whether the links in the document are up to date. Set to TRUE if the links are up to date; otherwise, set to FALSE. This property corresponds to the **GKPIDDSI_LINKSDIRTY** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.19 PidNameManager

DAV property names: **Manager**, **urn:schemas-microsoft-com:office:office#Manager**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameManager** property ([\[MS-OXODOC\]](#) section 2.2.1.20) gets or sets the manager of the author of the document. This property corresponds to the **GKPIDDSI_MANAGER** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.20 PidNameMultimediaClipCount

DAV property names: **MMClipCount**, **urn:schemas-microsoft-com:office:office#MultimediaClips**

Data type: **PtypInteger32** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameMultimediaClipCount** property ([\[MS-OXODOC\]](#) section 2.2.1.28) gets or sets the number of multimedia clips in the document. This property corresponds to the **GKPIDDSI_MMCLIPCOUNT** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.21 PidNameNoteCount

DAV property names: **NoteCount**, **urn:schemas-microsoft-com:office:office#Notes**

Data type: **PtypInteger32** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameNoteCount** property ([\[MS-OXODOC\]](#) section 2.2.1.26) gets or sets the number of notes in the document. This property corresponds to the **GKPIDDSI_NOTECOUNT** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.22 PidNamePageCount

DAV property names: **PageCount**, **urn:schemas-microsoft-com:office:office#Pages**

Data type: **PtypInteger32** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNamePageCount** property ([\[MS-OXODOC\]](#) section 2.2.1.14) gets or sets the number of pages in the document. This property corresponds to the **GKPIDSI_PAGECOUNT** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.23 PidNameParagraphCount

DAV property names: **ParCount**, **urn:schemas-microsoft-com:office:office#Paragraphs**

Data type: **PtypInteger32** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameParagraphCount** property ([\[MS-OXODOC\]](#) section 2.2.1.24) gets or sets the number of paragraphs in the document. This property corresponds to the **GKPIDDSI_PARACOUNT** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.24 PidNamePresentationFormat

DAV property names: **PresFormat**, **urn:schemas-microsoft-com:office:office#PresentationFormat**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNamePresentationFormat** property ([\[MS-OXODOC\]](#) section 2.2.1.19) gets or sets the presentation format for the document. This property corresponds to the **GKPIDDSI_PRESFORMAT** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.25 PidNameRevisionNumber

DAV property names: **RevNumber**, **urn:schemas-microsoft-com:office:office#Revision**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameRevisionNumber** property ([\[MS-OXODOC\]](#) section 2.2.1.8) gets or sets the revision number of the document. This property corresponds to the **GKPIDSI_REVNUMBER** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.26 PidNameScale

DAV property names: **Scale**, **urn:schemas-microsoft-com:office:office#ScaleCrop**

Data type: **PtypBoolean** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameScale** property ([\[MS-OXODOC\]](#) section 2.2.1.32) gets or sets a value that indicates whether the image is to be scaled or cropped. Set to TRUE for thumbnail scaling, or FALSE for cropping. This property corresponds to the **GKPIDDSI_SCALE** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.27 PidNameSecurity

DAV property names: **Security**, **urn:schemas-microsoft-com:office:office#Security**

Data type: **PtypInteger32** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameSecurity** property ([\[MS-OXODOC\]](#) section 2.2.1.17) gets or sets the security level of the document. This property corresponds to the **GKPIDSI_DOC_SECURITY** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.28 PidNameSlideCount

DAV property names: **SlideCount**, **urn:schemas-microsoft-com:office:office#Slides**

Data type: **PtypInteger32** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameSlideCount** property ([\[MS-OXODOC\]](#) section 2.2.1.25) gets or sets the number of slides in the document. This property corresponds to the **GKPIDDSI_SLIDECOUNT** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.29 PidNameSubject

DAV property names: **Subject**, **urn:schemas-microsoft-com:office:office#Subject**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameSubject** property ([\[MS-OXODOC\]](#) section 2.2.1.2) gets or sets the subject of the document. This property corresponds to the **GKPIDSI_SUBJECT** property, which is specified in [\[MS-OSHARED\]](#). This property is different from the mailheaders subject property, which is commonly the [display name](#).

2.2.3.30 PidNameTemplate

DAV property names: **Template**, **urn:schemas-microsoft-com:office:office#Template**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameTemplate** property ([\[MS-OXODOC\]](#) section 2.2.1.6) gets or sets the template file that the document was created from. This property corresponds to the **GKPIDSI_TEMPLATE** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.31 PidNameThumbnail

DAV property names: **Thumbnail**, **urn:schemas-microsoft-com:office:office#ThumbNail**

Data type: **PtypBinary** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameThumbnail** property ([\[MS-OXODOC\]](#) section 2.2.1.33) gets or sets the thumbnail image of the document or part of the document. This property corresponds to the **GKPIDSI_THUMBNAIL** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.32 PidNameTitle

DAV property names: **Title**, **urn:schemas-microsoft-com:office:office#Title**

Data type: **PtypString** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameTitle** property ([\[MS-OXODOC\]](#) section 2.2.1.1) gets or sets the title of the document. This property corresponds to the **GKPIDSI_TITLE** property, which is specified in [\[MS-OSHARED\]](#).

2.2.3.33 PidNameWordCount

DAV property names: **WordCount**, **urn:schemas-microsoft-com:office:office#Words**

Data type: **PtypInteger32** ([\[MS-OXCDATA\]](#) section 2.11.1.6)

The **PidNameWordCount** property ([\[MS-OXODOC\]](#) section 2.2.1.15) gets or sets the number of words in the document. This property corresponds to the **GKPIDSI_WORDCOUNT** property, which is specified in [\[MS-OSHARED\]](#).

3 Protocol Details

3.1 Client and Server Details

3.1.1 Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves. This document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

These extensions support retrieval and manipulation of a document's properties and searches for a document that has certain properties. The document can be either an individual document or a document attached to a [Message object](#) in a public or private folder. The document properties are specified in section [2.2](#).

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Higher-Layer Triggered Events

None.

3.1.5 Message Processing Events and Sequencing Rules

To retrieve [WebDAV](#) document properties, use the **PROPFIND** method, as specified in [\[RFC2518\]](#) section 8.1.

To set or remove WebDAV document properties, use the **PROPPATCH** method, as specified in [\[RFC2518\]](#) section 8.2.

To search for a document that has specified properties, use the **SEARCH** method, as specified in [\[MS-WDVSE\]](#).

3.1.6 Timer Events

None.

3.1.7 Other Local Events

None.

4 Protocol Examples

4.1 Using the PROPFIND Method to Retrieve All Properties on a Document

4.1.1 Request

In the following example, the user wants to retrieve all the properties set on the Product Planning document in the [Inbox folder](#). To achieve this, the [WebDAV client](#) connects to the [WebDAV server](#) and uses the **PROPFIND** method, as specified in [\[RFC2518\]](#) section 8.1, to retrieve all properties set on the Product Planning document.

```
PROPFIND /exchange/Mailbox/Inbox/Product%20Planning.docx HTTP/1.1
Content-Type: text/xml
Depth: 0

<?xml version="1.0" encoding="utf-8"?>
<a:propfind xmlns:a="DAV:">
  <allprop />
</a:propfind>
```

4.1.2 Response

The response message returns all the properties set on the document.

```
HTTP/1.1 207 Multi-Status
Cache-Control: no-cache
Transfer-Encoding: chunked
Content-Type: text/xml
Accept-Ranges: rows
Server: Microsoft-IIS/7.0
MS-WebStorage: 08.01.10240
X-Powered-By: ASP.NET
Date: Mon, 27 Oct 2008 16:49:27 GMT

<?xml version="1.0"?>
<a:multistatus xmlns:b="urn:uuid:c2f41010-65b3-11d1-a29f-00aa00c14882/"
xmlns:g="urn:schemas:httpmail:" xmlns:c="xml:"
xmlns:e="http://schemas.microsoft.com/exchange/" xmlns:d="urn:schemas-microsoft-
com:office:office" xmlns:f="http://schemas.microsoft.com/repl/" xmlns:h="urn:schemas-
microsoft-com:exch-data:" xmlns:a="DAV:">
  <a:response>
    <a:href>https://Server01/exchange/Mailbox/Inbox/Product%20Planning.docx</a:href>
    <a:propstat>
      <a:status>HTTP/1.1 200 OK</a:status>
      <a:prop>
        <a:contentclass>urn:content-classes:document</a:contentclass>
        <a:supportedlock>
          <lockentry xmlns="DAV:">
            <locktype>
              <transaction>
                <groupoperation />
              </transaction>
            </locktype>
            <lockscope>
              <local />
            </lockscope>
          </lockentry>
        </a:supportedlock>
      </a:prop>
    </a:propstat>
  </a:response>
</a:multistatus>
```

```

        </lockentry>
    </a:supportedlock>
    <e:permanenturl>https://Server01/-FlatUrlSpace-
/1c5a707ee8157a47bfce2b746a3dba25-12c281f/1c5a707ee8157a47bfce2b746a3dba25-
403ac2e6fa</e:permanenturl>
    <a:getcontenttype>application/vnd.openxmlformats-
officedocument.wordprocessingml.document</a:getcontenttype>
    <a:id>AQEAAAABLcGfAQAAQDrC5voAAAA</a:id>
    <e:mid b:dt="i8">-367392764146483199</e:mid>
    <a:isfolder b:dt="boolean">0</a:isfolder>
    <a:resourcetype />
    <a:getetag>"1c5a707ee8157a47bfce2b746a3dba2500403ac30c72"</a:getetag>
    <lockdiscovery xmlns="DAV:">
</lockdiscovery>
    <e:outlookmessageclass>IPM.Document.*docx</e:outlookmessageclass>
    <a:creationdate b:dt="dateTime.tz">2008-10-27T16:44:43.838Z</a:creationdate>
    <e:ntsecuritydescriptor
b:dt="bin.base64">CAAEAAAAABAC+MMAAAAEwAAAAAAAFAAAAIAHAABAAAAARAUAL8PHwABAQAAAAABQcAAAA
BBQAAAAAABRUAAAD0l0oajmNmy/EP4pXBAAAAQUAAAAAAUVAAAA9JdKGo5jZsvxD6+KAQIAAA==</e:ntsecurityde
scriptor>
    <a:ishidden b:dt="boolean">0</a:ishidden>
    <a:parentname>https://Server01/exchange/Mailbox/Inbox/</a:parentname>
    <a:getcontentlength b:dt="int">9984</a:getcontentlength>
    <a:isstructureddocument b:dt="boolean">0</a:isstructureddocument>
    <f:repl-uid>rid:1c5a707ee8157a47bfce2b746a3dba2500403ac2e6fa</f:repl-uid>
    <a:displayname>Product Planning.docx</a:displayname>
    <a:href>https://Server01/exchange/Mailbox/Inbox/Product%20Planning.docx</a:hr
ef>
    <a:isreadonly b:dt="boolean">0</a:isreadonly>
    <a:uid>AQEAAEA6wub6AAAAAIAAAAAA</a:uid>
    <a:getlastmodified b:dt="dateTime.tz">2008-10-
27T16:44:43.838Z</a:getlastmodified>
    <a:iscollection b:dt="boolean">0</a:iscollection>
    <g:read b:dt="boolean">1</g:read>
    <f:resourcetag>rt:1c5a707ee8157a47bfce2b746a3dba2500403ac2e6falc5a707ee8157a4
7bfce2b746a3dba2500403ac30c72</f:resourcetag>
    </a:prop>
</a:propstat>
</a:response>
</a:multistatus>

```

4.2 Using the PROPFIND Method to Retrieve Specific Properties on a Document

4.2.1 Request

In the following example, the user wants to retrieve specific properties set on the Product Planning document in the [Inbox folder](#). To achieve this, the [WebDAV client](#) connects to the [WebDAV server](#) and uses the **PROPFIND** method, as specified in [\[RFC2518\]](#) section 8.1, to retrieve specific properties set on the Product Planning document.

```

PROPFIND /exchange/Mailbox/Inbox/Product%20Planning.doc HTTP/1.1
Content-Type: text/xml
Depth: 0

<?xml version="1.0" encoding="utf-8"?>
<a:propfind xmlns:a="DAV:">
  <a:prop xmlns:o="urn:schemas-microsoft-com:office:office">

```

```

    <o:Author />
    <o:Bytes />
    <o:Category />
    <o:Characters />
    <o:Comments />
    <o:Company />
    <o:Created />
    <o:HeadingPairs />
    <o:HiddenSlides />
    <o:Keywords />
    <o>LastAuthor />
    <o>LastPrinted />
    <o>LastSaved />
    <o:Lines />
    <o:LinksUpToDate />
    <o:Manager />
    <o:MultimediaClips />
    <o:NameOfApplication />
    <o:Notes />
    <o:Pages />
    <o:Paragraphs />
    <o:PartTitles />
    <o:PresentationFormat />
    <o:Revision />
    <o:ScaleCrop />
    <o:Security />
    <o:Slides />
    <o:Subject />
    <o:Template />
    <o:ThumbNail />
    <o:Title />
    <o:TotalTime />
    <o:Version />
    <o:Words />
  </a:prop>
</a:propfind>

```

4.2.2 Response

The response message returns the values of the properties specified in the request.

```

HTTP/1.1 207 Multi-Status
Cache-Control: no-cache
Transfer-Encoding: chunked
Content-Type: text/xml
Accept-Ranges: rows
Server: Microsoft-IIS/7.0
MS-WebStorage: 08.01.10240
X-Powered-By: ASP.NET
Date: Mon, 27 Oct 2008 17:14:49 GMT

<?xml version="1.0"?>
<a:multistatus xmlns:b="urn:uuid:c2f41010-65b3-11d1-a29f-00aa00c14882/" xmlns:c="xml:"
xmlns:d="urn:schemas-microsoft-com:office:office" xmlns:a="DAV:">
  <a:response>
    <a:href>https://Server01/exchange/Mailbox/Inbox/Product%20Planning.doc</a:href>
    <a:propstat>

```

```

<a:status>HTTP/1.1 200 OK</a:status>
<a:prop>
  <d:Author>Holly Holt</d:Author>
  <d:Category>Planning</d:Category>
  <d:Characters b:dt="int">58</d:Characters>
  <d:Comments>This is the product planning document.</d:Comments>
  <d:Company>Contoso</d:Company>
  <d:Created b:dt="dateTime.tz">2008-10-27T17:07:00.000Z</d:Created>
  <d:HeadingPairs
b:dt="bin.base64">AgAAAB4AAAAIAAAVGl0bGUAAAADAAAAQAAAA==</d:HeadingPairs>
  <d:Keywords b:dt="mv.string">
    <c:v>Product;</c:v>
    <c:v>Planning</c:v>
  </d:Keywords>
  <d:LastAuthor>Holly Holt</d:LastAuthor>
  <d:LastSaved b:dt="dateTime.tz">2008-10-27T17:07:00.000Z</d:LastSaved>
  <d:Lines b:dt="int">1</d:Lines>
  <d:LinksUpToDate b:dt="boolean">0</d:LinksUpToDate>
  <d:Manager>Don Funk</d:Manager>
  <d:NameOfApplication>Microsoft Office Word</d:NameOfApplication>
  <d:Pages b:dt="int">1</d:Pages>
  <d:Paragraphs b:dt="int">1</d:Paragraphs>
  <d:PartTitles b:dt="mv.string">
    <c:v>
    </c:v>
  </d:PartTitles>
  <d:Revision>2</d:Revision>
  <d:ScaleCrop b:dt="boolean">0</d:ScaleCrop>
  <d:Security b:dt="int">0</d:Security>
  <d:Subject>Contoso Product Planning</d:Subject>
  <d:Template>Normal</d:Template>
  <d>Title>Product Planning</d>Title>
  <d:Words b:dt="int">10</d:Words>
</a:prop>
</a:propstat>
<a:propstat>
  <a:status>HTTP/1.1 415 Unsupported Media Type</a:status>
  <a:prop>
    <d:TotalTime />
  </a:prop>
</a:propstat>
<a:propstat>
  <a:status>HTTP/1.1 404 Resource Not Found</a:status>
  <a:prop>
    <d:Bytes />
    <d:HiddenSlides />
    <d>LastPrinted />
    <d:MultimediaClips />
    <d:Notes />
    <d:PresentationFormat />
    <d:Slides />
    <d:ThumbNail />
    <d:Version />
  </a:prop>
</a:propstat>
</a:response>
</a:multistatus>

```

4.3 Using the PROPPATCH Method to Set a Document Property

4.3.1 Request

In the following example, the user wants to set the **PidNameCategory** property ([\[MS-OXPROPS\]](#) section 2.402) on the Product Planning document. To achieve this, the [WebDAV client](#) connects to the [WebDAV server](#) and uses the **PROPPATCH** method, as specified in [\[RFC2518\]](#) section 8.2, to set the category property.

```
PROPPATCH /Server01/exchange/Mailbox/Inbox/Product%20Planning.doc HTTP/1.1
Content-type: text/xml

<?xml version="1.0"?>
<a:propertyupdate xmlns:a="DAV:" xmlns:o="urn:schemas-microsoft-com:office:office">
  <a:set>
    <a:prop>
      <o:Category>Product Planning.</o:Category>
    </a:prop>
  </a:set>
</a:propertyupdate>
```

4.3.2 Response

The response message returns an HTTP status code indicating that the change was successful.

```
HTTP/1.1 207 Multi-Status
Cache-Control: no-cache
Content-Length: 306
Content-Type: text/xml
Server: Microsoft-IIS/7.0
MS-Exchange-Permanent-URL: https://Server01/-FlatUrlSpace-/1c5a707ee8157a47bfce2b746a3dba25-12c281f/1c5a707ee8157a47bfce2b746a3dba25-403ac2e6fb
Repl-UID: <rid:1c5a707ee8157a47bfce2b746a3dba2500403ac2e6fb>
ResourceTag:
<rt:1c5a707ee8157a47bfce2b746a3dba2500403ac2e6fb1c5a707ee8157a47bfce2b746a3dba2500403ac30c7c>
MS-WebStorage: 08.01.10240
X-Powered-By: ASP.NET
Date: Mon, 27 Oct 2008 17:19:47 GMT

<?xml version="1.0"?>
<a:multistatus xmlns:b="urn:schemas-microsoft-com:office:office" xmlns:a="DAV:">
  <a:response>
    <a:href>https://Server01/exchange/Mailbox/Inbox/Product%20Planning.doc</a:href>
    <a:propstat>
      <a:status>HTTP/1.1 200 OK</a:status>
      <a:prop>
        <b:Category />
      </a:prop>
    </a:propstat>
  </a:response>
</a:multistatus>
```

5 Security

5.1 Security Considerations for Implementers

None.

5.2 Index of Security Parameters

None.

6 Appendix A: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include released service packs:

- Microsoft Exchange Server 2003
- Microsoft Exchange Server 2007

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is prescribed using the terms SHOULD or SHOULD NOT implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies that the product does not follow the prescription.

7 Change Tracking

This section identifies changes that were made to the [MS-XWDDOC] protocol document between the October 2012 and February 2013 releases. Changes are classified as New, Major, Minor, Editorial, or No change.

The revision class **New** means that a new document is being released.

The revision class **Major** means that the technical content in the document was significantly revised. Major changes affect protocol interoperability or implementation. Examples of major changes are:

- A document revision that incorporates changes to interoperability requirements or functionality.
- An extensive rewrite, addition, or deletion of major portions of content.
- The removal of a document from the documentation set.
- Changes made for template compliance.

The revision class **Minor** means that the meaning of the technical content was clarified. Minor changes do not affect protocol interoperability or implementation. Examples of minor changes are updates to clarify ambiguity at the sentence, paragraph, or table level.

The revision class **Editorial** means that the language and formatting in the technical content was changed. Editorial changes apply to grammatical, formatting, and style issues.

The revision class **No change** means that no new technical or language changes were introduced. The technical content of the document is identical to the last released version, but minor editorial and formatting changes, as well as updates to the header and footer information, and to the revision summary, may have been made.

Major and minor changes can be described further using the following change types:

- New content added.
- Content updated.
- Content removed.
- New product behavior note added.
- Product behavior note updated.
- Product behavior note removed.
- New protocol syntax added.
- Protocol syntax updated.
- Protocol syntax removed.
- New content added due to protocol revision.
- Content updated due to protocol revision.
- Content removed due to protocol revision.
- New protocol syntax added due to protocol revision.

- Protocol syntax updated due to protocol revision.
- Protocol syntax removed due to protocol revision.
- New content added for template compliance.
- Content updated for template compliance.
- Content removed for template compliance.
- Obsolete document removed.

Editorial changes are always classified with the change type **Editorially updated**.

Some important terms used in the change type descriptions are defined as follows:

- **Protocol syntax** refers to data elements (such as packets, structures, enumerations, and methods) as well as interfaces.
- **Protocol revision** refers to changes made to a protocol that affect the bits that are sent over the wire.

The changes made to this document are listed in the following table. For more information, please contact protocol@microsoft.com.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
1.1 Glossary	Added "message store" to the list of terms that are defined in [MS-OXGLOS].	N	Content updated.
1.1 Glossary	Removed "store" from the list of terms that are defined in [MS-OXGLOS].	N	Content updated.

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