

[MS-OXOJRNL]: Journal Object Protocol Specification

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Preliminary

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1 Introduction

This document specifies the Journal Object Protocol, which defines properties of an object that models an entry in a journal or log.

1.1 Glossary

The following terms are defined in [MS-OXGLOS]:

attachment object
entry ID
folder object
GUID
message object
named property
name ID
property
property ID/identifier
recipient
special folder
UTC

The following terms are specific to this document:

journal object: A **message object** that represents an entry in a journal or log and that adheres to the **property** specifications in this document.

journal associated attachment: An attachment on a journal object linking it with another object, such as a 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

1.2.1 Normative References

[MS-OXCFOLD] Microsoft Corporation, "Folder Object Protocol Specification", April 2008.

[MS-OXCMSG] Microsoft Corporation, "Message and Attachment Object Protocol Specification", April 2008.

[MS-OXCPRPT] Microsoft Corporation, "Property and Stream Object Protocol Specification", April 2008.

[MS-OXGLOS] Microsoft Corporation, "Office Exchange Protocols Master Glossary", April 2008.

[MS-OXOSFLD] Microsoft Corporation, "Special Folders Protocol Specification", April 2008.

[MS-OXPROPS] Microsoft Corporation, "Office Exchange Protocols Master Property List Specification", April 2008.

[MS-OXRTFCP] Microsoft Corporation, "Rich Text Format (RTF) Compression Protocol Specification", April 2008.

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

1.2.2 Informative References

[MS-OXBBODY] Microsoft Corporation, "Best Body Retrieval Protocol Specification", April 2008.

1.3 Protocol Overview (Synopsis)

The Journal Object Protocol allows the representation of journal entries in a messaging store. The Journal Object Protocol extends the Message and Attachment Object Protocol in that it defines new properties and adds restrictions to the properties that are defined in [MS-OXCMSG].

A **journal object** represents a journal entry. This document specifies the properties that are unique to journal objects. A journal object is characterized by the name of the activity, the duration, and any contacts or businesses associated with the activity, and is stored in a **folder object**. The Journal Object Protocol specifies how such journal objects are created, stored, and manipulated.

1.4 Relationship to Other Protocols

The Journal Object Protocol has the same dependencies as the Message and Attachment Object Protocol, which it extends. For details about the Message and Attachment Object Protocol, see [MS-OXCMSG].

1.5 Prerequisites/Preconditions

The Journal Object Protocol has the same prerequisites and preconditions as the Message and Attachment Object Protocol.

1.6 Applicability Statement

None.

1.7 Versioning and Capability Negotiation

None.

1.8 Vendor-Extensible Fields

This protocol provides no vendor-extensibility beyond what is already specified in [MS-OXCMSG].

1.9 Standards Assignments

None.

2 Messages

2.1 Transport

The Journal Object Protocol uses the protocols defined in [MS-OXCPRPT] and [MS-OXCMSG] as its primary transport mechanism.

2.2 Message Syntax

A journal object can be created and modified by clients and servers. Except where noted below, this section defines constraints under which both clients and servers operate.

Clients operate on journal objects using [MS-OXCMSG]. How a server operates on journal objects is implementation-dependent. The results of any such operations are exposed to clients in a manner that is consistent with this specification.

Unless otherwise specified below, a journal object adheres to all property constraints specified in [MS-OXPROPS] and all property constraints specified in [MS-OXCMSG]. A journal object MAY <1> <2> also contain other properties, which are defined in [MS-OXPROPS] but these properties have no impact on the Journal Object Protocol.

2.2.1 Journal Object Properties

2.2.1.1 PidLidLogType

Type: PtypString.

Briefly describes the activity being recorded.

2.2.1.2 PidLidLogTypeDesc

Type: PtypString.

Describes the activity being recorded.

2.2.1.3 PidLidLogStart

Type: PtypTime, in UTC.

The time at which the activity began; MUST be equal to PidLidCommonStart.

2.2.1.4 PidLidLogEnd

Type: PtypTime, in UTC.

The time at which the activity ended; MUST be equal to **PidLidCommonEnd**, and therefore greater than or equal to **PidLidLogStart**.

2.2.1.5 PidLidLogDuration

Type: PtypInteger32, signed.

The duration in minutes of the activity; MUST be the difference between **PidLidLogEnd** and **PidLidLogStart**.

2.2.1.6 PidLidLogFlags

Type: PtypInteger32.

A bit field containing metadata about the journal object expressed; MUST be set to a bitwise OR of zero or more of the following values.

Value	Meaning
0x40000000	This journal object has a journal associated attachment

2.2.1.7 PidLidLogDocumentPrinted

Type: PtypBoolean.

Indicates whether the document was printed during journaling.

2.2.1.8 PidLidLogDocumentSaved

Type: PtypBoolean.

Indicates whether the document was saved during journaling.

2.2.1.9 PidLidLogDocumentRouted

Type: PtypBoolean.

Indicates whether the document was sent to a routing recipient during journaling.

2.2.1.10 PidLidLogDocumentPosted

Type: PtypBoolean.

Indicates whether the document was sent by e-mail or posted to a server folder during journaling.

2.2.2 Additional Property Constraints

This protocol specifies additional constraints on the following properties beyond what is specified in [MS-OXCMSG].

2.2.2.1 PidTagMessageClass

Type: PtypString8, case-insensitive.

Specifies the type of the message item; MUST be “IPM.Activity” or begin with “IPM.Activity.”, in addition to meeting the criteria specified in [MS-OXCMSG].

2.2.2.2 Best Body Properties

The main text of the journal object; MUST be stored in PidTagRtfCompressed as specified in [MS-OXRTFCP].

2.2.2.3 PidTagIconIndex

Type: PtypInteger32.

Specifies which icon is to be used by a user interface when displaying a group of journal objects; MUST be one of the following values:

Value	Meaning
0x00000601	Conversation
0x00000612	Document
0x00000602	E-mail Message
0x00000609	Fax
0x0000060C	Letter
0x00000613	Meeting
0x00000614	Meeting cancellation
0x00000603	Meeting request
0x00000604	Meeting response
0x00000610	Microsoft Office Access
0x0000060E	Microsoft Office Excel
0x0000060F	Microsoft Office PowerPoint
0x0000060D	Microsoft Office Word
0x00000608	Note
0x0000060A	Phone call
0x00000615	Remote session
0x0000060B	Task
0x00000606	Task request
0x00000607	Task response
0x00000003	Other

2.2.2.4 Recipients

A journal object MUST NOT have recipients.

2.2.2.5 Journal Associated Attachments

A journal associated attachment follows the specifications for structured storage attachment objects in [MS-OXCMSG], except that certain properties on the attachment object MUST be set as follows:

Property	Value
PidTagAttachmentLinkId	0x00000004
PidTagAttachMethod	0x00000006
PidTagRenderingPosition	0xFFFFFFFF
PidTagAttachmentFlags	0x00000000
PidTagAttachmentHidden	0x00
PidTagAccess	0x00000002

The contents of the structured storage are written to PidTagAttachDataBinary. The structured storage contains 8 streams, the names and contents of which are detailed in the following table.

Name	Contents
IOlePres000	A metafile containing the icon to be used when rendering the attachment.
\3MailStream	Binary contents: 04 00 00 00 00 00 00 00 00 00 00 00
MailMsgAttFld	The entry ID of the folder of the linked message object
MailMsgAttMdb	The entry ID of the store of the linked message object
MailMsgAttMsg	The entry ID of the linked message object; required only if MailMsgAttSrchKey is empty
MailMsgAttSrchFld	The object entry ID of the Sent Items special folder [MS-OXOSFLD] of the linked message object
MailMsgAttSrchKey	PidTagSearchKey of the linked message object; required only if MailMsgAttMsg is empty
MailMsgAttSubject	PidTagSubject of the linked message object

* The 3 in \3MailStream above represents the byte 0x03.

A journal object MUST NOT have more than one journal associated attachment.

3 Protocol Details

General protocol details, as specified in [MS-OXPROPS] and [MS-OXCMSG], apply to Journal Objects.

3.1 Common Details

The client and server roles are to create and operate on electronic journal entries, and otherwise operate in their roles as specified in [MS-OXCMSG].

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 the behavior described in this document.

3.1.1.1 Journal Objects

A journal object extends the **message object** as defined in [MS-OXCMSG].

3.1.1.2 Journal Object Folders

A journal object is created in the Journal special folder as defined in [MS-OXOSFLD] unless the end-user or user agent explicitly specifies another folder object.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Higher-Layer Triggered Events

3.1.4.1 Creation of a Journal Object

To create a journal object, the server or client creates a message object as specified in [MS-OXCMSG], sets properties in accordance with the requirements in section 2 and [MS-OXCPRPT], and saves the resulting **message object** as specified in [MS-OXCMSG].

3.1.4.2 Modification of a Journal Object

When modifying a journal object, the client or server creates a message object as specified in [MS-OXCMSG], modifies any of the properties in accordance with the requirements in section 2 and [MS-OXCPRPT], and saves the message object as specified in [MS-OXCMSG].

3.1.4.3 Deletion of a Journal Object

Journal objects have no special semantics in relation to deletion beyond what is defined in [MS-OXCFOLD].

3.1.5 Message Processing Events and Sequencing Rules

None.

3.1.6 Timer Events

None.

3.1.7 Other Local Events

None.

4 Protocol Examples

4.1 Sample Journal Object for a Phone Call

Joe creates a journal object for a phone call, records the start and end times, puts notes in the body, and links a contact and company with it. The following is a description of what a client might do to accomplish Joe's intentions and the responses a server might return. See [MS-OXCPRPT] and [MS-OXCMSG] for details on ROPs.

Before manipulating journal objects, the client needs to ask the server to perform a mapping from named properties to property identifiers, using **RopGetPropertyIdsFromNames**.

Property	Property Set GUID	NameID
PidLidCommonStart	{00062008-0000-0000-C000-000000000046}	0x8516
PidLidCommonEnd	{00062008-0000-0000-C000-000000000046}	0x8517
PidLidCompanies	{00062008-0000-0000-C000-000000000046}	0x8539
PidLidContacts	{00062008-0000-0000-C000-000000000046}	0x853A
PidLidContactLinkName	{00062008-0000-0000-C000-000000000046}	0x8586
PidLidContactLinkEntry	{00062008-0000-0000-C000-000000000046}	0x8585
PidLidContactLinkSearchKey	{00062008-0000-0000-C000-000000000046}	0x8584
PidLidLogTypeDesc	{0006200A-0000-0000-C000-000000000046}	0x8712
PidLidLogType	{0006200A-0000-0000-C000-000000000046}	0x8700
PidLidLogStart	{0006200A-0000-0000-C000-000000000046}	0x8706
PidLidLogEnd	{0006200A-0000-0000-C000-000000000046}	0x8708
PidLidLogDuration	{0006200A-0000-0000-C000-000000000046}	0x8707
PidLidLogFlags	{0006200A-0000-0000-C000-000000000046}	0x870C
PidLidLogDocumentPrinted	{0006200A-0000-0000-C000-000000000046}	0x870E
PidLidLogDocumentSaved	{0006200A-0000-0000-C000-000000000046}	0x870F
PidLidLogDocumentRouted	{0006200A-0000-0000-C000-000000000046}	0x8710
PidLidLogDocumentPosted	{0006200A-0000-0000-C000-000000000046}	0x8711

The server might respond with the following identifiers, which will be used in the example that follows. (The actual identifiers are at the discretion of the server.)

Property	Property ID
PidLidCommonStart	0x81bd
PidLidCommonEnd	0x81bc
PidLidCompanies	0x800c
PidLidContacts	0x8019
PidLidContactLinkName	0x802b
PidLidContactLinkEntry	0x82f6
PidLidContactLinkSearchKey	0x82f7
PidLidLogTypeDesc	0x8230

PidLidLogType	0x801a
PidLidLogStart	0x8233
PidLidLogEnd	0x8234
PidLidLogDuration	0x8235
PidLidLogFlags	0x8236
PidLidLogDocumentPrinted	0x8238
PidLidLogDocumentSaved	0x8239
PidLidLogDocumentRouted	0x823a
PidLidLogDocumentPosted	0x823b

To create a journal object, the client use **RopCreateMessage**. The server returns a success code and a handle to a message object.

After Joe has input his content for the journal object, the client uses **RopSetProperties** to transmit his data to the server.

Property	Property ID	Data Type	Value
PidLidCommonStart	0x81bd	0x0040 (PtypTime)	2008/02/20 23:02:00.000
PidLidCommonEnd	0x81bc	0x0040 (PtypTime)	2008/02/20 23:12:00.000
PidLidCompanies	0x800c	0x101f (PtypMultipleString)	[1 entry] "Contoso Pharmaceuticals"
PidLidContacts	0x8019	0x101f (PtypMultipleString)	[1 entry] "Adam Barr"
PidLidContactLinkName	0x802b	0x001f (PtypString)	"Adam Barr"
PidLidContactLinkEntry	0x82f6	0x0102 (PtypBinary)	See Note 1, below.
PidLidContactLinkSearchKey	0x82f7	0x0102 (PtypBinary)	See Note 2, below.
PidLidLogTypeDesc	0x8230	0x001f (PtypString)	"Phone call"
PidLidLogType	0x801a	0x001f (PtypString)	"Phone call"
PidLidLogStart	0x8233	0x0040 (PtypTime)	2008/02/20 23:02:00.000
PidLidLogEnd	0x8234	0x0040 (PtypTime)	2008/02/20 23:12:00.000
PidLidLogDuration	0x8235	0x0003 (PtypInteger32)	0x0000000A
PidLidLogFlags	0x8236	0x0003 (PtypInteger32)	0x00000000
PidLidLogDocumentPrinted	0x8238	0x000b (PtypBoolean)	0x00
PidLidLogDocumentSaved	0x8239	0x000b (PtypBoolean)	0x00
PidLidLogDocumentRouted	0x823a	0x000b (PtypBoolean)	0x00
PidLidLogDocumentPosted	0x823b	0x000b (PtypBoolean)	0x00
PidTagRtfCompressed	0x1009	0x0102 (PtypBinary)	See Note 3, below.
PidTagIconIndex	0x1080	0x0003 (PtypInteger32)	0x0000060A

Note 1: PidLidContactLinkEntry contains a representation of the contact link as specified in [MS-OXCMSG].

Note 2: PidLidContactLinkSearchKey contains a representation of the contact link as specified in [MS-OXCMSG].

Note 3: PidTagRtfCompressed contains the compressed RTF representation of the body as specified in [MS-OXRTFCP].

When Joe is ready to save his changes, the client uses **RopSaveChangesMessage** to commit the properties on the server, and then **RopRelease** to release the journal object.

The values of some properties will change during the execution of **RopSaveChangesMessage**, but the properties specified in this document will not change.

5 Security

5.1 Security Considerations for Implementers

There are no special security considerations specific to the Journal Object Protocol. General security considerations pertaining to the underlying transport apply as specified in [MS-OXCMSG] and [MS-OXCPRPT].

5.2 Index of Security Parameters

None.

6 Appendix A: Office/Exchange Behavior

The information in this specification is applicable to the following versions of Office/Exchange:

- Microsoft Office 2003 with Service Pack 3 applied
- Microsoft Exchange 2003 with Service Pack 2 applied
- Microsoft Office 2007 with Service Pack 1 applied
- Microsoft Exchange 2007 with Service Pack 1 applied

Exceptions, if any, are noted below. Unless otherwise specified, any statement of optional behavior in this specification prescribed using the terms SHOULD or SHOULD NOT implies Office/Exchange behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies Office/Exchange does not follow the prescription.

<1> Section 2.2: “Microsoft Office Outlook 2003” and “Microsoft Office Outlook 2007” sometimes set the following properties regardless of user input; their values have no meaning in the context of this protocol.

PidLidAgingDontAgeMe, PidLidCurrentVersion, PidLidCurrentVersionName,
PidLidPrivate, PidLidSideEffect, PidTagAlternateRecipientAllowed,
PidTagClientSubmitTime, PidTagDeleteAfterSubmit, PidTagImportance,
PidTagMessageDeliveryTime, PidTagPriority, PidTagReadReceiptRequested,
PidTagSensitivity, PidLidReminderDelta, PidLidReminderSet, PidLidReminderNextTime,
PidLidTaskMode

<2> Section 2.2: “Microsoft Office Outlook 2007” sometimes sets the following properties regardless of user input; their values have no meaning in the context of this protocol.

PidLidPercentComplete, PidLidTaskActualEffort, PidLidTaskComplete,
PidLidTaskAssigner, PidLidTaskAcceptanceState, PidLidTaskEstimatedEffort,
PidLidTaskFFixOffline, PidLidTaskFRecurring, PidLidTaskNoCompute, PidLidTaskOrdinal,
PidLidTaskOwnership, PidLidTaskRole, PidLidTaskState, PidLidTaskStatus,
PidLidTaskVersion, PidLidTeamTask, PidLidValidFlagStringProof

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