

[MS-OXOPOST]: Post Object Protocol Specification

Intellectual Property Rights Notice for Open Specifications Documentation

- **Technical Documentation.** Microsoft publishes Open Specifications documentation for protocols, file formats, languages, standards as well as overviews of the interaction among each of these technologies.
- **Copyrights.** This documentation is covered by Microsoft copyrights. Regardless of any other terms that are contained in the terms of use for the Microsoft website that hosts this documentation, you may make copies of it in order to develop implementations of the technologies described in the Open Specifications and may distribute portions of it in your implementations using these technologies or your documentation as necessary to properly document the implementation. You may also distribute in your implementation, with or without modification, any schema, IDL's, or code samples that are included in the documentation. This permission also applies to any documents that are referenced in the Open Specifications.
- **No Trade Secrets.** Microsoft does not claim any trade secret rights in this documentation.
- **Patents.** Microsoft has patents that may cover your implementations of the technologies described in the Open Specifications. Neither this notice nor Microsoft's delivery of the documentation grants any licenses under those or any other Microsoft patents. However, a given Open Specification may be covered by Microsoft's Open Specification Promise (available here: <http://www.microsoft.com/interop/osp>) or the Community Promise (available here: <http://www.microsoft.com/interop/cp/default.mspx>). If you would prefer a written license, or if the technologies described in the Open Specifications are not covered by the Open Specifications Promise or Community Promise, as applicable, patent licenses are available by contacting iplq@microsoft.com.
- **Trademarks.** The names of companies and products contained in this documentation may be covered by trademarks or similar intellectual property rights. This notice does not grant any licenses under those rights.

Reservation of Rights. All other rights are reserved, and this notice does not grant any rights other than specifically described above, whether by implication, estoppel, or otherwise.

Tools. The Open Specifications do not require the use of Microsoft programming tools or programming environments in order for you to develop an implementation. If you have access to Microsoft programming tools and environments you are free to take advantage of them. Certain Open Specifications are intended for use in conjunction with publicly available standard specifications and network programming art, and assumes that the reader either is familiar with the aforementioned material or has immediate access to it.

Revision Summary

Date	Revision History	Revision Class	Comments
04/04/2008	0.1		Initial Availability.
04/25/2008	0.2		Revised and updated property names and other technical content.
06/27/2008	1.0		Initial Release.
08/06/2008	1.01		Revised and edited technical content.
09/03/2008	1.02		Updated references.
12/03/2008	1.03		Updated IP notice.
04/10/2009	2.0		Updated applicable product releases.
07/15/2009	3.0	Major	Revised and edited for technical content.

Table of Contents

1 Introduction	5
1.1 Glossary	5
1.2 References	5
1.2.1 Normative References	5
1.2.2 Informative References	6
1.3 Protocol Overview	6
1.4 Relationship to Other Protocols	6
1.5 Prerequisites/Preconditions	6
1.6 Applicability Statement	6
1.7 Versioning and Capability Negotiation	6
1.8 Vendor-Extensible Fields	6
1.9 Standards Assignments	6
2 Messages	7
2.1 Transport	7
2.2 Message Syntax	7
2.2.1 Post Object Properties	7
2.2.2 Additional Property Constraints	7
2.2.2.1 PidTagConversationIndex	7
2.2.2.2 PidTagConversationTopic	7
2.2.2.3 PidTagIconIndex	7
2.2.2.4 PidTagMessageClass	8
2.2.2.5 Sender properties	8
2.2.2.6 Recipients	8
3 Protocol Details	9
3.1 Common Details	9
3.1.1 Abstract Data Model	9
3.1.1.1 Post Items	9
3.1.2 Timers	9
3.1.3 Initialization	9
3.1.4 Higher-Layer Triggered Events	9
3.1.4.1 Creation of a Post Object	9
3.1.4.2 Modification of a Post Object	9
3.1.4.3 Deletion of a Post Object	9
3.1.4.4 Reply to Folder	9
3.1.5 Message Processing Events and Sequencing Rules	10
3.1.6 Timer Events	10
3.1.7 Other Local Events	10
4 Protocol Examples	11
4.1 Sample Post Item	11
5 Security	13
5.1 Security Considerations for Implementers	13
5.2 Index of Security Parameters	13
6 Appendix A: Product Behavior	14
7 Change Tracking	15

1 Introduction

This document specifies the **Post object** Protocol, which defines **properties** of an object that models the electronic equivalent of a bulletin board post.

1.1 Glossary

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

address book
entry ID
Folder object
HTML
Message object
property
property ID
property type
recipient
remote operation (ROP)
store

The following terms are specific to this document:

Post object: A Message object that represents an entry in a discussion thread stored in a messaging store that adheres to the specifications in 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

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-OXCFOLD] Microsoft Corporation, "[Folder Object Protocol Specification](#)", June 2008.

[MS-OXCMSG] Microsoft Corporation, "[Message and Attachment Object Protocol Specification](#)", June 2008.

[MS-OXCPRPT] Microsoft Corporation, "[Property and Stream Object Protocol Specification](#)", June 2008.

[MS-OXGLOS] Microsoft Corporation, "[Exchange Server Protocols Master Glossary](#)", June 2008.

[MS-OXOABK] Microsoft Corporation, "[Address Book Object Protocol Specification](#)", June 2008.

[MS-OXOMSG] Microsoft Corporation, "[E-Mail Object Protocol Specification](#)", June 2008.

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

None.

1.3 Protocol Overview

The Post object Protocol allows the representation of a bulletin board post in a messaging **store**. The Post object Protocol extends the **Message** and **Attachment object** Protocol in that it adds **restrictions** to the properties that are specified in [\[MS-OXCMSG\]](#).

A Post object represents a bulletin board post. There are no properties specific to Post object. A Post object is stored in a **Folder Object**. The Post object Protocol also specifies how a Post object is created and manipulated.

1.4 Relationship to Other Protocols

The Post 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 [\[MS-OXCMSG\]](#).

The Post object Protocol is a peer of the **E-mail object** Protocol, and uses a subset of the properties specified in [\[MS-OXOMSG\]](#).

1.5 Prerequisites/Preconditions

The Post object Protocol has the same prerequisites and preconditions as the Message and Attachment object Protocol. For details about the Message and Attachment object protocol, see [\[MS-OXCMSG\]](#).

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 Post object Protocol uses protocols specified in [\[MS-OXCPRPT\]](#) and [\[MS-OXCMSG\]](#) as its primary transport mechanism.

2.2 Message Syntax

A Post 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 Post objects using the Message and **attachment** Protocol, as specified in [\[MS-OXCMSG\]](#). How a server operates on Post objects is implementation-dependent. The results of any such operations are exposed to clients in a manner that is consistent with the Post object Protocol.

Unless otherwise specified, a Post object adheres to all property constraints specified in [\[MS-OXPROPS\]](#) and [\[MS-OXCMSG\]](#). A Post object can also contain other properties [<1><2>](#), which are specified in [\[MS-OXPROPS\]](#), but these properties have no impact on the Post object Protocol.

2.2.1 Post Object Properties

There are no properties in addition to those listed in [\[MS-OXCMSG\]](#) and [\[MS-OXOMSG\]](#) that are specific to a **Post object**.

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 PidTagConversationIndex

Type: **PtypBinary**.

Specifies the depth of the reply in a hierarchical representation of Post objects in one **conversation**. This value **MUST** be set on a Post object as specified in [\[MS-OXOMSG\]](#).

2.2.2.2 PidTagConversationTopic

Type: **PtypString**.

Contains an unchanging copy of the original subject. This value **MUST** be set to the same value as [PidTagNormalizedSubject](#) on a new Post object when it is first saved. When creating a Post object as a reply, [PidTagConversationTopic](#) on the new Post object **MUST** be copied from the original Post object.

2.2.2.3 PidTagIconIndex

Type: **PtypInteger32**.

Specifies which icon is to be used by a user interface when displaying a group of Post objects. This value **MUST** be "0x00000001".

2.2.2.4 PidTagMessageClass

Type: **PtypString8**, case-insensitive.

Specifies the type of the **Message object**. This value MUST be "IPM.Post" or begin with "IPM.Post", in addition to meeting the criteria specified in [\[MS-OXCMSG\]](#).

2.2.2.5 Sender properties

The following properties are specified in [\[MS-OXOMSG\]](#) to represent the sender of an e-mail Message object. They are used in this protocol to represent the creator of a Post object:

- [PidTagSenderAddressType](#)
- [PidTagSenderEntryId](#)
- [PidTagSenderName](#)
- [PidTagSenderSearchKey](#)
- [PidTagSentRepresentingAddressType](#)
- [PidTagSentRepresentingEntryId](#)
- [PidTagSentRepresentingName](#)
- [PidTagSentRepresentingSearchKey](#)

2.2.2.6 Recipients

A Post object MUST NOT have **recipients**.

3 Protocol Details

General protocol details, as specified in [\[MS-OXPROPS\]](#) and [\[MS-OXCMSG\]](#), apply to Post objects.

3.1 Common Details

The client and server roles are to create and operate on electronic discussion items, and fulfill 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 the external behavior of the implementation is consistent with that specified in this document.

3.1.1.1 Post Items

A Post object extends the Message object as specified in [\[MS-OXCMSG\]](#).

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Higher-Layer Triggered Events

3.1.4.1 Creation of a Post Object

To create a Post object, the server or client creates a Message object ([\[MS-OXCMSG\]](#)), sets properties in accordance with the requirements in section [2](#) and [\[MS-OXCPRPT\]](#), and saves the resulting Message object ([\[MS-OXCMSG\]](#)).

3.1.4.2 Modification of a Post Object

When modifying a Post object, the client or server opens a Message object ([\[MS-OXCMSG\]](#)), modifies any properties in accordance with the requirements in Section [2](#) and [\[MS-OXCPRPT\]](#), and saves the Message object ([\[MS-OXCMSG\]](#)).

3.1.4.3 Deletion of a Post Object

Post objects have no special semantics in relation to deletion beyond what is defined in [\[MS-OXCFOLD\]](#).

3.1.4.4 Reply to Folder

To create a reply to a Post object, the protocol client creates a new Post object in the same Folder Object as the original. The new Post object has the same [PidTagConversationTopic](#) as the original, and an incremented [PidTagConversationIndex](#). For more details, see [\[MS-OXOMSG\]](#).

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 Post Item

Joe wants to record his grocery list of celery and broccoli, so he creates a Post object, adds a subject and body, and posts it in a Folder Object. The following is a description of what a client might do to accomplish Joe's intentions, and the responses a server might return. For more details about **ROPs**, see [\[MS-OXCPRPT\]](#) and [\[MS-OXCMSG\]](#).

To create a Post object, the client uses [RopCreateMessage](#). The server returns a success code and a **handle** to a Message object.

After Joe has input his content for the Post object, the client uses [RopSetProperties](#) to transmit his data to the server.

Property	Property ID	Property type	Value
PidTagIconIndex	0x1080	0x0003 (PtypInteger32)	0x00000001
PidTagMessageClass	0x001a	0x001e (PtypString8)	IPM.Post
PidTagNormalizedSubject	0x0e1d	0x001f (PtypString)	Grocery List
PidTagSubjectPrefix	0x003d	0x001f (PtypString)	(null)
PidTagConversationTopic	0x0070	0x001f (PtypString)	Grocery List
PidTagConversationIndex	0x0071	0x0102 (PtypBinary)	See Note 1, below.
PidTagHtml	0x1013	0x0102 (PtypBinary)	See Note 2, below.
PidTagSenderName	0x0c1a	0x001f (PtypString)	Joe Healy
PidTagSenderAddressType	0x0c1e	0x001f (PtypString)	EX
PidTagSenderEntryId	0x0c19	0x0102 (PtypBinary)	See Note 3, below.
PidTagSenderSearchKey	0x0c1d	0x0102 (PtypBinary)	See Note 4, below.
PidTagSentRepresentingName	0x0042	0x001f (PtypString)	Joe Healy
PidTagSentRepresentingAddressType	0x0064	0x001f	EX

Property	Property ID	Property type	Value
		(PtypString)	
PidTagSentRepresentingEntryId	0x0041	0x0102 (PtypBinary)	See Note 3, below.
PidTagSentRepresentingSearchKey	0x003b	0x0102 (PtypBinary)	See Note 4, below.

Note 1 [PidTagConversationIndex](#) is set with a depth of 1 according to [MS-OXCMSG], and has the following binary contents:

```
0000: 01 c8 73 2d a1 0a 3e b3-ee 24 90 f4 45 be 97 10
0010: 90 b2 a5 07 7a 13
```

Note 2 [PidTagHtml](#) is set to the **HTML** representation of "Celery\r\nBroccoli", which is as follows:

```
<html>
<head>
<META HTTP-EQUIV="Content-Type" CONTENT="text/html; charset=us-ascii">
</head>
<body lang=EN-US>
<p>Celery</p>
<p>Broccoli</p>
</body>
</html>
```

Note 3 [PidTagSenderEntryId](#) and [PidTagSentRepresentingEntryId](#) are identical because Joe isn't posting this on behalf of another user. The contents of these properties are Joe's **address book entry ID** as specified in [\[MS-OXOABK\]](#).

Note 4 [PidTagSenderSearchKey](#) and [PidTagSentRepresentingSearchKey](#) are identical because Joe isn't posting this on behalf of another user. The contents of these properties are specified in [\[MS-OXOMSG\]](#), and are used as Joe's search key, [PidTagSearchKey](#).

When Joe is ready to save his changes, the client uses [RopSaveChangesMessage](#) to commit the properties on the server, and then uses [RopRelease](#) to release the handle to the object.

The values of some properties will change during the execution of [RopSaveChangesMessage](#), but the properties specified in [MS-OXOPOST] will not change.

5 Security

5.1 Security Considerations for Implementers

There are no special security considerations specific to the Post 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: Product Behavior

The information in this specification is applicable to the following product versions:

- Microsoft Office Outlook 2003
- Microsoft Exchange Server 2003
- Microsoft Office Outlook 2007
- Microsoft Exchange Server 2007
- Microsoft Outlook 2010
- Microsoft Exchange Server 2010

Exceptions, if any, are noted below. If a service pack number appears with the product version, behavior changed in that service pack. The new behavior also applies to subsequent service packs of the product unless otherwise specified.

Unless otherwise specified, any statement of optional behavior in this specification 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.

<1> [Section 2.2](#): Outlook 2003 SP3 and Outlook 2007 SP1 sometimes set the following properties regardless of user input; their values have no meaning in the context of this protocol. [PidLidAgingDontAgeMe](#), [PidLidCurrentVersion](#), [PidLidCurrentVersionName](#), [PidLidPrivate](#), [PidLidSideEffects](#), [PidTagAlternateRecipientAllowed](#), [PidTagClientSubmitTime](#), [PidTagDeleteAfterSubmit](#), [PidTagImportance](#), [PidTagMessageDeliveryTime](#), [PidTagPriority](#), [PidTagReadReceiptRequested](#), [PidTagSensitivity](#), [PidLidReminderDelta](#), [PidLidReminderSet](#), [PidLidReminderTimeTime](#), [PidLidTaskMode](#), [PidTagInternetReferences](#)

<2> [Section 2.2](#): Outlook 2007 SP1 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](#)

7 Change Tracking

This section will report content and/or editorial changes, beginning with the next release.

8 Index

C

[Change tracking](#)

E

[Examples - overview](#)

G

[Glossary](#)

I

[Introduction](#)

M

Messages
[overview](#)

N

[Normative references](#)

P

[Product behavior](#)

R

References
[normative](#)
[Relationship to other protocols](#)

S

Security
[overview](#)

T

[Tracking changes](#)