

# [MS-OXOPOST]: Post Object Protocol Specification

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## 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.
11/04/2009	4.0.0	Major	Updated and revised the technical content.
02/10/2010	4.1.0	Minor	Updated the technical content.
05/05/2010	4.1.1	Editorial	Revised and edited the technical content.
08/04/2010	4.1.1	No change	No changes to the meaning, language, or formatting of the technical content.
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# Table of Contents

<b>1</b>	<b>Introduction</b>	<b>5</b>
1.1	Glossary	5
1.2	References	5
1.2.1	Normative References	5
1.2.2	Informative References	6
1.3	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
<b>2</b>	<b>Messages</b>	<b>7</b>
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	8
2.2.2.4	PidTagMessageClass	8
2.2.2.5	Sender properties	8
2.2.2.6	Recipients	8
<b>3</b>	<b>Protocol Details</b>	<b>9</b>
3.1	Common Details	9
3.1.1	Abstract Data Model	9
3.1.1.1	Post Objects	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
<b>4</b>	<b>Protocol Examples</b>	<b>11</b>
4.1	Sample Post Object	11
<b>5</b>	<b>Security</b>	<b>13</b>
5.1	Security Considerations for Implementers	13
5.2	Index of Security Parameters	13
<b>6</b>	<b>Appendix A: Product Behavior</b>	<b>14</b>
<b>7</b>	<b>Change Tracking</b>	<b>15</b>



# 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 [\[MS-GLOS\]](#):

### handle

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

**address book**  
**conversation**  
**entry ID**  
**Folder object**  
**Hypertext Markup Language (HTML)**  
**Message object**  
**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.

**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](mailto: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-OXCDATA] Microsoft Corporation, "[Data Structures](#)", April 2008.

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

[MS-OXPROPS] Microsoft Corporation, "[Exchange Server Protocols Master Property List](#)", 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-GLOS] Microsoft Corporation, "[Windows Protocols Master Glossary](#)", March 2007.

[MS-OXCROPS] Microsoft Corporation, "[Remote Operations \(ROP\) List and Encoding Protocol Specification](#)", June 2008.

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

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

## 1.3 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 objects. 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 [\[MS-OXPROPS\]](#), [\[MS-OXCMSG\]](#), and [\[MS-OXOMSG\]](#). 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.

Post object properties can be of several different data types. The following data types used by Post object properties are specified in [\[MS-OXCDATA\]](#) section 2.11.1:

- PtypBinary
- PtypInteger32
- PtypString
- PtypString8

#### 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 [\[MS-OXCMSG\]](#) and [\[MS-OXOMSG\]](#).

##### 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** ([\[MS-OXPROPS\]](#) section 2.907) on a new Post object when it is first

saved. When creating a Post object as a reply, **PidTagConversationTopic** ([\[MS-OXPROPS\]](#) section 2.723) 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: **PtypString**, 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** ([\[MS-OXPROPS\]](#) section 2.1103)
- **PidTagSenderEntryId** ([\[MS-OXPROPS\]](#) section 2.1105)
- **PidTagSenderName** ([\[MS-OXPROPS\]](#) section 2.1108)
- **PidTagSenderSearchKey** ([\[MS-OXPROPS\]](#) section 2.1109)
- **PidTagSentRepresentingAddressType** ([\[MS-OXPROPS\]](#) section 2.1117)
- **PidTagSentRepresentingEntryId** ([\[MS-OXPROPS\]](#) section 2.1119)
- **PidTagSentRepresentingName** ([\[MS-OXPROPS\]](#) section 2.1121)
- **PidTagSentRepresentingSearchKey** ([\[MS-OXPROPS\]](#) section 2.1122)

### 2.2.2.6 Recipients

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



## 3 Protocol Details

General protocol details, as specified in [\[MS-OXCPRPT\]](#) 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 Objects

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 (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 Post Object

When modifying a Post object, the client or server opens a Message object (as specified in [\[MS-OXCMSG\]](#)), modifies any 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 Post Object

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

###### 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** ([\[MS-OXPROPS\]](#) section 2.723) as the original, and an incremented **PidTagConversationIndex** ([\[MS-OXPROPS\]](#) section 2.721). 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 Object

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 **remote operations (ROPs)**, see [\[MS-OXCPRPT\]](#) and [\[MS-OXCMSG\]](#).

To create a Post object, the client uses **RopCreateMessage** ([\[MS-OXCROPS\]](#) section 2.2.6.2). 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** ([\[MS-OXCROPS\]](#) section 2.2.8.6) to transmit his data to the server.

Property	Property ID	Property type	Value
<b>PidTagIconIndex</b> ( <a href="#">[MS-OXPROPS]</a> section 2.813)	0x1080	0x0003 (PtypInteger32)	0x00000001
<b>PidTagMessageClass</b> ( <a href="#">[MS-OXPROPS]</a> section 2.884)	0x001a	0x001f (PtypString)	IPM.Post
<b>PidTagNormalizedSubject</b> ( <a href="#">[MS-OXPROPS]</a> section 2.907)	0x0e1d	0x001f (PtypString)	Grocery List
<b>PidTagSubjectPrefix</b> ( <a href="#">[MS-OXPROPS]</a> section 2.1146)	0x003d	0x001f (PtypString)	(null)
<b>PidTagConversationTopic</b> ( <a href="#">[MS-OXPROPS]</a> section 2.723)	0x0070	0x001f (PtypString)	Grocery List
<b>PidTagConversationIndex</b> ( <a href="#">[MS-OXPROPS]</a> section 2.721)	0x0071	0x0102 (PtypBinary)	See Note 1, following this table.
<b>PidTagHtml</b> ( <a href="#">[MS-OXPROPS]</a> section 2.809)	0x1013	0x0102 (PtypBinary)	See Note 2, following this table.
<b>PidTagSenderName</b> ( <a href="#">[MS-OXPROPS]</a> section 2.1108)	0x0c1a	0x001f (PtypString)	Joe Healy
<b>PidTagSenderAddressType</b> ( <a href="#">[MS-OXPROPS]</a> section 2.1103)	0x0c1e	0x001f (PtypString)	EX
<b>PidTagSenderEntryId</b> ( <a href="#">[MS-OXPROPS]</a> section 2.1105)	0x0c19	0x0102 (PtypBinary)	See Note 3, following this table.
<b>PidTagSenderSearchKey</b> ( <a href="#">[MS-OXPROPS]</a> section 2.1109)	0x0c1d	0x0102 (PtypBinary)	See Note 4, following this table.
<b>PidTagSentRepresentingName</b> ( <a href="#">[MS-OXPROPS]</a> section 2.1121)	0x0042	0x001f	Joe Healy

Property	Property ID	Property type	Value
		(PtypString)	
<b>PidTagSentRepresentingAddressType</b> ( <a href="#">[MS-OXPROPS]</a> section 2.1117)	0x0064	0x001f (PtypString)	EX
<b>PidTagSentRepresentingEntryId</b> ( <a href="#">[MS-OXPROPS]</a> section 2.1119)	0x0041	0x0102 (PtypBinary)	See Note 3, following this table.
<b>PidTagSentRepresentingSearchKey</b> ( <a href="#">[MS-OXPROPS]</a> section 2.1122)	0x003b	0x0102 (PtypBinary)	See Note 4, following this table.

## Notes

1. **PidTagConversationIndex** ([\[MS-OXPROPS\]](#) section 2.721) is set with a depth of 1, as described in [\[MS-OXOMSG\]](#) section 2.2.1.3, 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
```

2. **PidTagHtml** ([\[MS-OXPROPS\]](#) section 2.809) is set to the **Hypertext Markup Language (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>
```

3. **PidTagSenderId** ([\[MS-OXPROPS\]](#) section 2.1105) and **PidTagSentRepresentingEntryId** ([\[MS-OXPROPS\]](#) section 2.1119) 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 described in [\[MS-OXOABK\]](#).
4. **PidTagSenderSearchKey** ([\[MS-OXPROPS\]](#) section 2.1109) and **PidTagSentRepresentingSearchKey** ([\[MS-OXPROPS\]](#) section 2.1122) are identical because Joe isn't posting this on behalf of another user. The contents of these properties are described in [\[MS-OXOMSG\]](#), and are used as Joe's search key, **PidTagSearchKey** ([\[MS-OXPROPS\]](#) section 2.1098).

When Joe is ready to save his changes, the client uses **RopSaveChangesMessage** ([\[MS-OXCROPS\]](#) section 2.2.6.3) to commit the properties on the server, and then uses **RopRelease** ([\[MS-OXCROPS\]](#) section 2.2.15.3) to release the handle to the 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 Post Object Protocol. General security considerations pertaining to the underlying transport apply, as described 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 Microsoft products or supplemental software. References to product versions include released service packs:

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

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.

<1> [Section 2.2](#): Office Outlook 2003 and Office Outlook 2007 set the following properties regardless of user input, but 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**. For details about these properties, see [\[MS-OXPROPS\]](#).

<2> [Section 2.2](#): Office Outlook 2007 sets the following properties regardless of user input, but 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**. For details about these properties, see [\[MS-OXPROPS\]](#).

## 7 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

## 8 Index

### A

[Additional Property Constraints message](#) 7  
[Applicability](#) 6

### C

[Capability negotiation](#) 6  
[Change tracking](#) 15  
Client  
  [overview](#) 9

### F

[Fields - vendor-extensible](#) 6

### G

[Glossary](#) 5

### I

[Implementer - security considerations](#) 13  
[Index of security parameters](#) 13  
[Informative references](#) 6  
[Introduction](#) 5

### M

Messages  
  [Additional Property Constraints](#) 7  
  [Post Object Properties](#) 7  
  [transport](#) 7

### N

[Normative references](#) 5

### O

[Overview](#) 6

### P

[Parameters - security index](#) 13  
[Post Object Properties message](#) 7  
[Preconditions](#) 6  
[Prerequisites](#) 6  
[Product behavior](#) 14  
Proxy  
  [overview](#) 9

### R

References  
  [informative](#) 6  
  [normative](#) 5  
[Relationship to other protocols](#) 6

### S

Security  
  [implementer considerations](#) 13  
  [parameter index](#) 13  
Server  
  [overview](#) 9  
[Standards assignments](#) 6

### T

[Tracking changes](#) 15  
[Transport](#) 7

### V

[Vendor-extensible fields](#) 6  
[Versioning](#) 6