[MS-OXSHARE]:
Sharing Message Object Protocol

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## Revision Summary

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1 Introduction

The Sharing Message Object Protocol is used to share mailbox folders between clients. This protocol extends the Message and Attachment Object Protocol, which is described in [MS-OXCMSG].

Sections 1.5, 1.8, 1.9, 2, and 3 of this specification are normative. All other sections and examples in this specification are informative.

1.1 Glossary

This document uses the following terms:

**address book**: A collection of **Address Book objects**, each of which are contained in any number of address lists.

**Address Book object**: An entity in an **address book** that contains a set of attributes, each attribute with a set of associated values.

**big-endian**: Multiple-byte values that are byte-ordered with the most significant byte stored in the memory location with the lowest address.

**Folder object**: A messaging construct that is typically used to organize data into a hierarchy of objects containing Message objects and folder associated information (FAI) Message objects.

**handle**: Any token that can be used to identify and access an object such as a device, file, or a window.

**long ID (LID)**: A 32-bit quantity that, in combination with a GUID, defines a **named property**.

**mailbox**: A message store that contains email, calendar items, and other **Message objects** for a single recipient.

**Message object**: A set of properties that represents an email message, appointment, contact, or other type of personal-information-management object. In addition to its own properties, a Message object contains recipient properties that represent the addressees to which it is addressed, and an attachments table that represents any files and other Message objects that are attached to it.

**named property**: A property that is identified by both a GUID and either a string name or a 32-bit identifier.

**named property set**: A GUID that groups related named properties into a set.

**property ID**: A 16-bit numeric identifier of a specific attribute. A property ID does not include any property type information.

**property name**: A string that, in combination with a property set, identifies a **named property**.

**recipient**: An entity that is in an address list, can receive email messages, and contains a set of attributes. Each attribute has a set of associated values.

**remote operation (ROP)**: An operation that is invoked against a server. Each ROP represents an action, such as delete, send, or query. A ROP is contained in a ROP buffer for transmission over the wire.

**ROP request**: See ROP request buffer.

**ROP response**: See ROP response buffer.
sharing invitation: A type of Sharing Message object that informs a user that the user was granted access to another user's folder and provides the information necessary to locate that folder.

Sharing Message object: A Message object that is used to inform a recipient that they were granted access to another user's folder, request access to a recipient's folder, or respond to a request for access to a folder.

sharing provider: A software agent that is responsible for properly generating and processing a predefined Sharing Message object format.

sharing request: A type of Sharing Message object that is used to request access to a user's folder.

sharing response: A type of Sharing Message object that is used to respond to a sharing request.

special folder: One of a default set of Folder objects that can be used by an implementation to store and retrieve user data objects.

Uniform Resource Locator (URL): A string of characters in a standardized format that identifies a document or resource on the World Wide Web. The format is as specified in [RFC1738].

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

1.2 References

Links to a document in the Microsoft Open Specifications library point to the correct section in the most recently published version of the referenced document. However, because individual documents in the library are not updated at the same time, the section numbers in the documents may not match. You can confirm the correct section numbering by checking the Errata.

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.

[MS-OXCDATA] Microsoft Corporation, "Data Structures".
[MS-OXCFOLD] Microsoft Corporation, "Folder Object Protocol".
[MS-OXCPRTPT] Microsoft Corporation, "Property and Stream Object Protocol".
[MS-OXOMSG] Microsoft Corporation, "Email Object Protocol".
[MS-OXOSFLD] Microsoft Corporation, "Special Folders Protocol".
1.2.2 Informative References


[MS-OXODLGT] Microsoft Corporation, "Delegate Access Configuration Protocol".


1.3 Overview

The Sharing Message Object Protocol allows a user to invite, request, accept, and deny the sharing of that user's mailbox folder. To communicate about the sharing of a folder, this protocol uses the Sharing Message object. The properties that are specific to a Sharing Message object facilitate granting access to a folder, requesting access to a folder, or responding to a request for access to a folder.

This protocol extends the Message and Attachment Object Protocol, which is described in [MS-OXCMSG], in that it defines new properties on a Message object and adds constraints to the existing properties of a Message object.

1.4 Relationship to Other Protocols

This protocol has the same dependencies as the Message and Attachment Object Protocol, as described in [MS-OXCMSG]. This protocol is a peer of the Email Object Protocol, which is described in [MS-OXOMSG].

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

1.5 Prerequisites/Preconditions

The Sharing Message Object Protocol has the same prerequisites and preconditions as the Message and Attachment Object Protocol, as specified in [MS-OXCMSG].

1.6 Applicability Statement

The client can use this protocol to send and respond to requests about the sharing of a folder in the user's mailbox.

The Sharing Message Object Protocol cannot be used to convey information about any type of object other than a Folder object.

1.7 Versioning and Capability Negotiation

None.

1.8 Vendor-Extensible Fields

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

1.9 Standards Assignments

None.
2 Messages

2.1 Transport

The Sharing Message Object Protocol uses the same underlying transport as that used by the Message and Attachment Object Protocol, as specified in [MS-OXCMSG].

2.2 Message Syntax

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

Clients operate on Sharing Message objects by using the Email Object Protocol specified in [MS-OXOMSG] and the Message and Attachment Object Protocol specified in [MS-OXCMSG]. How a server operates on Sharing Message objects is implementation-dependent, but the results of any such operation MUST be exposed to clients in a manner that is consistent with the Sharing Message Object Protocol.

Unless otherwise specified, a Sharing Message object adheres to all property constraints specified in [MS-OXPROPS] and all property constraints specified in [MS-OXCMSG].

Where a property's value is specified as a hexadecimal string representation of a binary value, the characters composing the string represent the hexadecimal digits that reflect the byte sequence of the binary value. For example, the string "00000000DCA740C8" is the hexadecimal string representation of the following byte sequence.

00 00 00 00 DC A7 40 C8

Where a property's value is specified as a hexadecimal string representation of an integer value, the characters composing the string represent the hexadecimal digits that reflect the integer value in **big-endian** format. Leading "0" characters are not included. For example, the hexadecimal string representation of the integer 0x0000010B is "10B".

2.2.1 Common Message Object Properties

The following properties are general properties used by a **Sharing Message object**.

- **PidTagNormalizedSubject** property ([MS-OXCMSG] section 2.2.1.10)
- **PidTagSubjectPrefix** property ([MS-OXCMSG] section 2.2.1.9)

2.2.2 Common Sharing Message Object Properties

The properties specified in section 2.2.2.1 through section 2.2.2.17 are common to all types of **Sharing Message objects**.

2.2.2.1 PidLidSharingCapabilities Property

Type: **PtypInteger32** ([MS-OXCDATA] section 2.11.1)

The **PidLidSharingCapabilities** property ([MS-OXPROPS] section 2.237) MUST be set to one of the following values.
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<th>Value</th>
<th>Meaning</th>
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<td>0x00040290</td>
<td>The <strong>Sharing Message object</strong> relates to a <strong>special folder</strong>.</td>
</tr>
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<td>0x000402B0</td>
<td>The Sharing Message object does not relate to a special folder.</td>
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### 2.2.2.2 PidNameXSharingCapabilities Property

**Type:** `PtypString` ([MS-OXCDATA] section 2.11.1)

The **PidNameXSharingCapabilities** property ([MS-OXPROPS] section 2.488) contains the hexadecimal string representation of the value of the **PidLidSharingCapabilities** property (section 2.2.2.1), as specified in the following table. The string does not include the leading zeros of the hexadecimal value.

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<td>0x000402B0</td>
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### 2.2.2.3 PidLidSharingConfigurationUrl Property

**Type:** `PtypString` ([MS-OXCDATA] section 2.11.1)

The **PidLidSharingConfigurationUrl** property ([MS-OXPROPS] section 2.238) MUST be set to a zero-length string.

### 2.2.2.4 PidNameXSharingConfigUrl Property

**Type:** `PtypString` ([MS-OXCDATA] section 2.11.1)

The **PidNameXSharingConfigUrl** property ([MS-OXPROPS] section 2.489) MUST be set to the same value as the **PidLidSharingConfigurationUrl** property (section 2.2.2.3).

### 2.2.2.5 PidLidSharingFlavor Property

**Type:** `PtypInteger32` ([MS-OXCDATA] section 2.11.1)

The **PidLidSharingFlavor** property ([MS-OXPROPS] section 2.245) specifies the type of **Sharing Message object**. This property MUST be set to one of the following values.

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<td>0x00020310</td>
<td>A <strong>sharing invitation</strong> for a <strong>special folder</strong>.</td>
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<tr>
<td>0x00000310</td>
<td>A sharing invitation for a folder that is not a special folder.</td>
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<tr>
<td>0x00020500</td>
<td>A <strong>sharing request</strong> for a special folder.</td>
</tr>
<tr>
<td>0x00020710</td>
<td>Both a sharing invitation for a special folder and a sharing request for the <strong>recipient’s</strong> equivalent special folder.</td>
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<tr>
<td>0x00025100</td>
<td>A <strong>sharing response</strong> that is denying a sharing request.</td>
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<td>Value</td>
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<tr>
<td>0x00023310</td>
<td>A sharing response that is accepting a sharing request.</td>
</tr>
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### 2.2.2.6 PidNameXSharingFlavor Property

Type: **PtypString** ([MS-OXCDATA] section 2.11.1)

The **PidNameXSharingFlavor** property ([MS-OXPROPS] section 2.491) MUST be set to the hexadecimal string representation of the value of the **PidLidSharingFlavor** property (section 2.2.2.5), as specified in the following table. The string does not include the leading zeros of the hexadecimal value.

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<tr>
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### 2.2.2.7 PidLidSharingInitiatorEntryId Property

Type: **PtypBinary** ([MS-OXCDATA] section 2.11.1)

The **PidLidSharingInitiatorEntryId** property ([MS-OXPROPS] section 2.248) MUST be set to the value of the **PidTagEntryId** property ([MS-OXOABK] section 2.2.3.2) for the **Address Book object** of the currently logged on user.

### 2.2.2.8 PidLidSharingInitiatorName Property

Type: **PtypString** ([MS-OXCDATA] section 2.11.1)

The **PidLidSharingInitiatorName** property ([MS-OXPROPS] section 2.249) MUST be set to the value of the **PidTagDisplayName** property ([MS-OXOABK] section 2.2.3.1) from the **Address Book object** that is identified by the **PidLidSharingInitiatorEntryId** property (section 2.2.2.7) and MAY<1> be ignored upon receipt.

### 2.2.2.9 PidLidSharingInitiatorSmtp Property

Type: **PtypString** ([MS-OXCDATA] section 2.11.1)

The **PidLidSharingInitiatorSmtp** property ([MS-OXPROPS] section 2.250) MUST be set to the value of the **PidTagSmtpAddress** property ([MS-OXOABK] section 2.2.3.21) from the **Address Book object** that is identified by the **PidLidSharingInitiatorEntryId** property (section 2.2.2.7) and MAY<2> be ignored upon receipt.
2.2.2.10 PidLidSharingLocalType Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidLidSharingLocalType property ([MS-OXPROP] section 2.259) MUST be set to the value of the PidTagContainerClass property ([MS-OXCOLD] section 2.2.2.2.2.3) of the folder that is to be shared. For a sharing response, the PidLidSharingLocalType property is set to the value of the PidLidSharingLocalType property of the associated sharing request.

The valid values are listed in the following table. These values specify folder types. For details about these folder types, see ([MS-OXOSFLD] section 2.2.1.

<table>
<thead>
<tr>
<th>Type of folder</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calendar</td>
<td>&quot;IPF.Appointment&quot;</td>
</tr>
<tr>
<td>Contacts</td>
<td>&quot;IPF.Contact&quot;</td>
</tr>
<tr>
<td>Tasks</td>
<td>&quot;IPF.Task&quot;</td>
</tr>
<tr>
<td>Notes</td>
<td>&quot;IPF.StickyNote&quot;</td>
</tr>
<tr>
<td>Journal</td>
<td>&quot;IPF.Journal&quot;</td>
</tr>
</tbody>
</table>

2.2.2.11 PidNameXSharingLocalType Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidNameXSharingLocalType property ([MS-OXPROP] section 2.493) MUST be set to the same value as the PidLidSharingLocalType property (section 2.2.10).

2.2.2.12 PidLidSharingProviderGuid Property

Type: PtypBinary ([MS-OXCDATA] section 2.11.1)

The PidLidSharingProviderGuid property ([MS-OXPROP] section 2.266) MUST be set to %xAE.F0.06.00.00.00.00.00.00.00.00.00.00.00.00.00.00.00.46.

2.2.2.13 PidNameXSharingProviderGuid Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidNameXSharingProviderGuid property ([MS-OXPROP] section 2.494) MUST be set to the hexadecimal string representation of the value of the PidLidSharingProviderGuid property (section 2.2.12). That is, "AEF0060000000000C000000000000046".

2.2.2.14 PidLidSharingProviderName Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidLidSharingProviderName property ([MS-OXPROP] section 2.267) specifies a user-displayable name of the sharing provider that is identified by the PidLidSharingProviderGuid property (section 2.2.12). This property MAY <3> be ignored upon receipt.
2.2.2.15  PidNameXSharingProviderName Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidNameXSharingProviderName property ([MS-OXPROPS] section 2.495) MUST be set to the same value as PidLidSharingProviderName (section 2.2.2.14) and MAY <4> be ignored upon receipt.

2.2.2.16  PidLidSharingProviderUrl Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidLidSharingProviderUrl property ([MS-OXPROPS] section 2.268) specifies a Uniform Resource Locator (URL) for the sharing provider that is identified by the PidLidSharingProviderGuid property (section 2.2.2.12). This property MAY <5> be ignored upon receipt.

2.2.2.17  PidNameXSharingProviderUrl Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidNameXSharingProviderUrl property ([MS-OXPROPS] section 2.496) MUST be set to the same value as the PidLidSharingProviderUrl property (section 2.2.2.16) and MAY <6> be ignored upon receipt.

2.2.3  Sharing Invitation and Response Acceptance Properties

The properties specified in section 2.2.3.1 through section 2.2.3.8 apply only to a sharing invitation, which is a Sharing Message object with its PidLidSharingFlavor property (section 2.2.2.5) set to either 0x00020310 or 0x00000310, and to a sharing response acceptance, which is a Sharing Message object with its PidLidSharingFlavor property set to 0x0023310. For all other types of Sharing Message objects, these properties SHOULD NOT <7> be set and MUST be ignored upon receipt.

2.2.3.1  PidLidSharingRemoteName Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidLidSharingRemoteName property ([MS-OXPROPS] section 2.277) MUST be set to the value of the PidTagDisplayName property ([MS-OXCFOLD] section 2.2.2.2.2.5) of the folder that is being shared.

2.2.3.2  PidNameXSharingRemoteName Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidNameXSharingRemoteName property ([MS-OXPROPS] section 2.497) MUST be set to the same value as the PidLidSharingRemoteName property (section 2.2.3.1).

2.2.3.3  PidLidSharingRemoteStoreUid Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidLidSharingRemoteStoreUid property ([MS-OXPROPS] section 2.280) MUST be set to the hexadecimal string representation of the value of the PidTagStoreEntryId property ([MS-OXPROPS] section 2.1028) of the folder that is being shared.
2.2.3.4 PidNameXSharingRemoteStoreUid Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidNameXSharingRemoteStoreUid property ([MS-OXPROPS] section 2.499) MUST be set to the same value as PidLidSharingRemoteStoreUid (section 2.2.3).

2.2.3.5 PidLidSharingRemoteType Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidLidSharingRemoteType property ([MS-OXPROPS] section 2.281) MUST be set to the same value as the PidLidSharingLocalType property (section 2.2.10) and MAY<8> be ignored upon receipt.

2.2.3.6 PidNameXSharingRemoteType Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidNameXSharingRemoteType property ([MS-OXPROPS] section 2.500) MUST be set to the same value as PidLidSharingRemoteType (section 2.2.3.5) and MAY<9> be ignored.

2.2.3.7 PidLidSharingRemoteUid Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidLidSharingRemoteUid property ([MS-OXPROPS] section 2.282) MUST be set to the hexadecimal string representation of the value of the PidTagEntryId property ([MS-OXCPERM] section 2.2.4) of the folder that is being shared.

2.2.3.8 PidNameXSharingRemoteUid Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidNameXSharingRemoteUid property ([MS-OXPROPS] section 2.501) MUST be set to the same value as the PidLidSharingRemoteUid property (section 2.2.3.7).

2.2.4 Sharing Request Properties

The properties specified in sections 2.2.4.1 and 2.2.4.2 apply only to a sharing request to which the user has responded. A sharing request has its PidLidSharingFlavor property (section 2.2.2.5) set to either 0x00020500 or 0x00020710. For all other types of Sharing Message objects, the properties specified in sections 2.2.4.1 and 2.2.4.2 MUST NOT be set.

2.2.4.1 PidLidSharingResponseTime Property

Type: PtypTime ([MS-OXCDATA] section 2.11.1)

The PidLidSharingResponseTime property ([MS-OXPROPS] section 2.285) specifies the time at which the recipient of the sharing request sent a sharing response.

2.2.4.2 PidLidSharingResponseType Property

Type: PtypInteger32 ([MS-OXCDATA] section 2.11.1)
The PidlLidSharingResponseType property ([MS-OXPROPS] section 2.286) specifies the type of sharing response with which the recipient of the sharing request responded. This property MUST be set to one of the following values.

<table>
<thead>
<tr>
<th>Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x00000001</td>
<td>Acceptance of the sharing request</td>
</tr>
<tr>
<td>0x00000002</td>
<td>Denial of the sharing request</td>
</tr>
</tbody>
</table>

2.2.5 Additional Property Constraints

The properties specified in sections 2.2.5.1 and 2.2.5.2 have additional constraints beyond what is specified in [MS-OXCMSG]. These properties apply to all types of Sharing Message objects.

2.2.5.1 PidNameContentClass Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidNameContentClass property ([MS-OXCMSG] section 2.2.1.48) MUST be set to "Sharing".

2.2.5.2 PidTagMessageClass Property

Type: PtypString ([MS-OXCDATA] section 2.11.1)

The PidTagMessageClass property ([MS-OXCMSG] section 2.2.1.3) MUST be set to "IPM.Sharing" or a value that begins with "IPM.Sharing.".

2.2.6 Ignored Properties

The following properties SHOULD NOT <10> be set and MUST be ignored upon receipt:

- PidlLidSharingAnonymity ([MS-OXPROPS] section 2.234)
- PidlLidSharingBindingEntryId ([MS-OXPROPS] section 2.235)
- PidlLidSharingBrowseUrl ([MS-OXPROPS] section 2.236)
- PidNameXSharingBrowseUrl ([MS-OXPROPS] section 2.487)
- PidlLidSharingDataRangeEnd ([MS-OXPROPS] section 2.239)
- PidlLidSharingDataRangeStart ([MS-OXPROPS] section 2.240)
- PidlLidSharingDetail ([MS-OXPROPS] section 2.241)
- PidlLidSharingExtensionXml ([MS-OXPROPS] section 2.242)
- PidNameXSharingExtendedCaps ([MS-OXPROPS] section 2.490)
- PidlLidSharingFilter ([MS-OXPROPS] section 2.243)
- PidlLidSharingFlags ([MS-OXPROPS] section 2.244)
- PidlLidSharingFolderEntryId ([MS-OXPROPS] section 2.246)
- PidlLidSharingIndexEntryId ([MS-OXPROPS] section 2.247)
- PidLidSharingInstanceGuid ([MS-OXPROPS] section 2.251)
- PidNameXSharingInstanceGuid ([MS-OXPROPS] section 2.492)
- PidLidSharingLastAutoSyncTime ([MS-OXPROPS] section 2.252)
- PidLidSharingLastSyncTime ([MS-OXPROPS] section 2.253)
- PidLidSharingLocalComment ([MS-OXPROPS] section 2.254)
- PidLidSharingLocalLastModificationTime ([MS-OXPROPS] section 2.255)
- PidLidSharingLocalName ([MS-OXPROPS] section 2.256)
- PidLidSharingLocalPath ([MS-OXPROPS] section 2.257)
- PidLidSharingLocalStoreUid ([MS-OXPROPS] section 2.258)
- PidLidSharingLocalUid ([MS-OXPROPS] section 2.260)
- PidLidSharingOriginalMessageEntryId ([MS-OXPROPS] section 2.261)
- PidLidSharingParentBindingEntryId ([MS-OXPROPS] section 2.262)
- PidLidSharingParticipants ([MS-OXPROPS] section 2.263)
- PidLidSharingPermissions ([MS-OXPROPS] section 2.264)
- PidLidSharingProviderExtension ([MS-OXPROPS] section 2.265)
- PidLidSharingRangeEnd ([MS-OXPROPS] section 2.269)
- PidLidSharingRangeStart ([MS-OXPROPS] section 2.270)
- PidLidSharingReciprocation ([MS-OXPROPS] section 2.271)
- PidLidSharingRemoteByteSize ([MS-OXPROPS] section 2.272)
- PidLidSharingRemoteComment ([MS-OXPROPS] section 2.273)
- PidLidSharingRemoteCrc ([MS-OXPROPS] section 2.274)
- PidLidSharingRemoteLastModificationTime ([MS-OXPROPS] section 2.275)
- PidLidSharingRemoteMessageCount ([MS-OXPROPS] section 2.276)
- PidLidSharingRemotePass ([MS-OXPROPS] section 2.278)
- PidLidSharingRemotePath ([MS-OXPROPS] section 2.279)
- PidNameXSharingRemotePath ([MS-OXPROPS] section 2.498)
- PidLidSharingRemoteUser ([MS-OXPROPS] section 2.283)
- PidLidSharingRemoteVersion ([MS-OXPROPS] section 2.284)
- PidLidSharingRoamLog ([MS-OXPROPS] section 2.287)
- PidLidSharingStart ([MS-OXPROPS] section 2.288)
- PidLidSharingStatus ([MS-OXPROPS] section 2.289)
- PidLidSharingStop ([MS-OXPROPS] section 2.290)
- **PidLidSharingSyncFlags** ([MS-OXPROPS] section 2.291)
- **PidLidSharingSyncInterval** ([MS-OXPROPS] section 2.292)
- **PidLidSharingTimeToLive** ([MS-OXPROPS] section 2.293)
- **PidLidSharingTimeToLiveAuto** ([MS-OXPROPS] section 2.294)
- **PidLidSharingWorkingHoursDays** ([MS-OXPROPS] section 2.295)
- **PidLidSharingWorkingHoursEnd** ([MS-OXPROPS] section 2.296)
- **PidLidSharingWorkingHoursStart** ([MS-OXPROPS] section 2.297)
- **PidLidSharingWorkingHoursTimeZone** ([MS-OXPROPS] section 2.298)
3 Protocol Details

3.1 Client Details

The client creates and manipulates a Sharing Message object and in all other ways operates within
the client role, 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 that described in this
document.

A Sharing Message object extends the Message object. In all other ways, the abstract data model
of this protocol does not differ from that specified in [MS-OXCMSG] section 3.1.1.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Higher-Layer Triggered Events

3.1.4.1 Creating a Sharing Invitation

When a user creates a sharing invitation, the client creates a Message object as specified in [MS-
OXCMSG] and sets properties in accordance with the requirements in section 2.2.1 through section
2.2.3 and section 2.2.5. The client then addresses and sends the message as specified in [MS-
OXOMSG].

3.1.4.2 Creating a Sharing Request

When a user creates a sharing request, the client creates a Message object as specified in [MS-
OXCMSG] and sets properties in accordance with the requirements in sections 2.2.1, 2.2.2, and 2.2.5.
The client then addresses and sends the message as specified in [MS-OXOMSG].

3.1.4.3 Creating a Sharing Response – Accept

When a user creates a sharing response to accept a sharing request, the client creates a Message
object as specified in [MS-OXCMSG] and sets properties in accordance with the requirements in
section 2.2.1 through section 2.2.3 and section 2.2.5. The client addresses and sends the response as
specified in [MS-OXOMSG].

The client then opens the sharing request as specified in [MS-OXCMSG] and sets the properties in
accordance with the requirements in section 2.2.4 to indicate that the request was accepted. The
client saves the sharing request as specified in [MS-OXCMSG].

The client can determine the special folder that is being requested for sharing by examining the
PidLidSharingLocalType property (section 2.2.2.10) of the sharing request.
3.1.4.4 Creating a Sharing Response – Deny

When a user creates a **sharing response** to deny a **sharing request**, the client creates a **Message object** as specified in [MS-OXCMSG] and sets properties in accordance with the requirements in sections 2.2.1, 2.2.2, and 2.2.5. The client addresses and sends the response as specified in [MS-OXOMSG].

The client then opens the sharing request as specified in [MS-OXCMSG] and sets the properties in accordance with the requirements in section 2.2.4 to indicate that the request was denied. The client saves the sharing request as specified in [MS-OXCMSG].

3.1.5 Message Processing Events and Sequencing Rules

None.

3.1.6 Timer Events

None.

3.1.7 Other Local Events

None.

3.2 Server Details

The server processes a client's requests regarding a **Sharing Message object** and in all other ways operates within the server role as specified in [MS-OXCMSG].

3.2.1 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.

A **Sharing Message object** extends the **Message object**. In all other ways, the abstract data model of this protocol does not differ from that specified in [MS-OXCMSG] section 3.2.1.

3.2.2 Timers

None.

3.2.3 Initialization

None.

3.2.4 Higher-Layer Triggered Events

None.

3.2.5 Message Processing Events and Sequencing Rules

The server responds to client requests as specified in [MS-OXCMSG] section 3.2.5.
3.2.6 Timer Events
None.

3.2.7 Other Local Events
None.
4 Protocol Examples

Kendall Keil wants to see Ryan Gregg's calendar special folder. Kendall sends a sharing request to Ryan and Ryan responds.

The following is a description of what a client might do to accomplish this scenario and the responses a server might return. For details about the remote operations (ROPs) used in this example, see [MS-OXCPRPT] and [MS-OXCMSG].

Before manipulating Sharing Message objects, the client sends a RopGetPropertyIdsFromNames ROP request ([MS-OXCROPS] section 2.2.8.1) to ask the server to map each named property to a property ID. The following table lists each named property with its named property set GUID and its long ID (LID) or property name. The server's RopGetPropertyIdsFromNames ROP response provides the corresponding property IDs, as shown in the subsequent table.

<table>
<thead>
<tr>
<th>Named property</th>
<th>Property set GUID</th>
<th>LID or property name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PidNameContentClass (section 2.2.5.1)</td>
<td>{00020386-0000-0000-c000-000000000046}</td>
<td>Content-class</td>
</tr>
<tr>
<td>PidLidSharingProviderGuid (section 2.2.12)</td>
<td>{00062040-0000-0000-C000-000000000046}</td>
<td>0x00008A01</td>
</tr>
<tr>
<td>PidNameXSharingProviderGuid (section 2.2.13)</td>
<td>{00020386-0000-0000-C000-000000000046}</td>
<td>X-Sharing-Provider-GUID</td>
</tr>
<tr>
<td>PidLidSharingProviderName (section 2.2.14)</td>
<td>{00062040-0000-0000-C000-000000000046}</td>
<td>0x00008A02</td>
</tr>
<tr>
<td>PidNameXSharingProviderName (section 2.2.15)</td>
<td>{00020386-0000-0000-C000-000000000046}</td>
<td>X-Sharing-Provider-Name</td>
</tr>
<tr>
<td>PidLidSharingProviderUrl (section 2.2.16)</td>
<td>{00062040-0000-0000-C000-000000000046}</td>
<td>0x00008A03</td>
</tr>
<tr>
<td>PidNameXSharingProviderUrl (section 2.2.17)</td>
<td>{00020386-0000-0000-C000-000000000046}</td>
<td>X-Sharing-Provider-URL</td>
</tr>
<tr>
<td>PidLidSharingConfigurationUrl (section 2.2.18)</td>
<td>{00062040-0000-0000-C000-000000000046}</td>
<td>0x00008A24</td>
</tr>
<tr>
<td>PidNameXSharingConfigUrl (section 2.2.19)</td>
<td>{00020386-0000-0000-C000-000000000046}</td>
<td>X-Sharing-Config-URL</td>
</tr>
<tr>
<td>PidLidSharingFlavor (section 2.2.20)</td>
<td>{00062040-0000-0000-C000-000000000046}</td>
<td>0x00008A18</td>
</tr>
<tr>
<td>PidNameXSharingFlavor (section 2.2.21)</td>
<td>{00020386-0000-0000-C000-000000000046}</td>
<td>X-Sharing-Flavor</td>
</tr>
<tr>
<td>PidLidSharingCapabilities (section 2.2.22)</td>
<td>{00062040-0000-0000-C000-000000000046}</td>
<td>0x00008A17</td>
</tr>
<tr>
<td>PidNameXSharingCapabilities (section 2.2.23)</td>
<td>{00020386-0000-0000-C000-000000000046}</td>
<td>X-Sharing-Capabilities</td>
</tr>
<tr>
<td>PidLidSharingLocalType (section 2.2.24)</td>
<td>{00062040-0000-0000-C000-000000000046}</td>
<td>0x00008A14</td>
</tr>
<tr>
<td>PidNameXSharingLocalType (section 2.2.25)</td>
<td>{00020386-0000-0000-C000-000000000046}</td>
<td>X-Sharing-Local-Type</td>
</tr>
</tbody>
</table>
The server sends a `RopGetPropertyIdsFromNames` ROP response with the following property IDs, which will be used in the examples that follow. (The actual property IDs are at the discretion of the server.)

<table>
<thead>
<tr>
<th>Property</th>
<th>Property ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>PidNameContentClass</td>
<td>0x806D</td>
</tr>
<tr>
<td>PidLidSharingProviderGuid</td>
<td>0x8243</td>
</tr>
<tr>
<td>PidNameXSharingProviderGuid</td>
<td>0x836F</td>
</tr>
<tr>
<td>PidLidSharingProviderName</td>
<td>0x8244</td>
</tr>
<tr>
<td>PidNameXSharingProviderName</td>
<td>0x8370</td>
</tr>
<tr>
<td>PidLidSharingProviderUrl</td>
<td>0x8245</td>
</tr>
<tr>
<td>PidNameXSharingProviderUrl</td>
<td>0x8371</td>
</tr>
<tr>
<td>PidLidSharingConfigurationUrl</td>
<td>0x83D0</td>
</tr>
</tbody>
</table>
### 4.1 Sending a Sharing Request

Kendall’s client creates a sharing request by using the `RopCreateMessage` ROP ([MS-OXCROPS] section 2.2.6.2). The server returns a success code and a handle to a Message object.

The client then sets the properties on the sharing request by using the `RopSetProperties` ROP ([MS-OXCROPS] section 2.2.8.6), as shown in the following table.

<table>
<thead>
<tr>
<th>Property</th>
<th>Property ID</th>
<th>Property type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>PidNameXSharingConfigUrl</code></td>
<td>0x8377</td>
<td>PtypString</td>
<td>&quot;IPM.Sharing&quot;</td>
</tr>
<tr>
<td><code>PidLidSharingFlavor</code></td>
<td>0x823D</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidNameXSharingFlavor</code></td>
<td>0x836D</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidLidSharingCapabilities</code></td>
<td>0x823C</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidNameXSharingCapabilities</code></td>
<td>0x836C</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidLidSharingLocalType</code></td>
<td>0x824F</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidNameXSharingLocalType</code></td>
<td>0x8379</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidLidSharingInitiatorEntryId</code></td>
<td>0x8249</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidLidSharingInitiatorName</code></td>
<td>0x8029</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidLidSharingInitiatorSmtp</code></td>
<td>0x8248</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidLidSharingRemoteName</code></td>
<td>0x8026</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidNameXSharingRemoteName</code></td>
<td>0x8373</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidLidSharingRemoteType</code></td>
<td>0x8247</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidNameXSharingRemoteType</code></td>
<td>0x8376</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidLidSharingRemoteUid</code></td>
<td>0x8246</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidNameXSharingRemoteUid</code></td>
<td>0x8374</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidLidSharingRemoteStoreUid</code></td>
<td>0x83E1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidNameXSharingRemoteStoreUid</code></td>
<td>0x8375</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidLidSharingResponseType</code></td>
<td>0x83E4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidLidSharingResponseTime</code></td>
<td>0x83E3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

[MS-OXSHARE] - v20210817  
Sharing Message Object Protocol  
Copyright © 2021 Microsoft Corporation  
Release: August 17, 2021
<table>
<thead>
<tr>
<th>Property</th>
<th>Property ID</th>
<th>Property type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>OXCMMSG</td>
<td>section 2.2.1.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PidTagSubjectPrefix ([MS-OXCMMSG] section 2.2.1.9)</td>
<td>0x003D</td>
<td>PtypString</td>
<td>&quot;&quot; (a zero-length string)</td>
</tr>
<tr>
<td>PidLidSharingProviderGuid (section 2.2.2.12)</td>
<td>0x8243</td>
<td>PtypBinary ([MS-OXCDATA] section 2.11.1)</td>
<td>*</td>
</tr>
<tr>
<td>PidNameXSharingProviderGuid (section 2.2.2.13)</td>
<td>0x836F</td>
<td>PtypString</td>
<td>&quot;AEF0060000000000C000000000000046&quot;</td>
</tr>
<tr>
<td>PidLidSharingProviderName (section 2.2.2.14)</td>
<td>0x8244</td>
<td>PtypString</td>
<td>&quot;Microsoft Exchange&quot;</td>
</tr>
<tr>
<td>PidNameXSharingProviderName (section 2.2.2.15)</td>
<td>0x8370</td>
<td>PtypString</td>
<td>&quot;Microsoft Exchange&quot;</td>
</tr>
<tr>
<td>PidLidSharingProviderUrl (section 2.2.2.16)</td>
<td>0x8245</td>
<td>PtypString</td>
<td>&quot;<a href="HTTP://www.microsoft.com/exchange">HTTP://www.microsoft.com/exchange</a>&quot;</td>
</tr>
<tr>
<td>PidNameXSharingProviderUrl (section 2.2.2.17)</td>
<td>0x8371</td>
<td>PtypString</td>
<td>&quot;<a href="HTTP://www.microsoft.com/exchange">HTTP://www.microsoft.com/exchange</a>&quot;</td>
</tr>
<tr>
<td>PidLidSharingConfigurationUrl (section 2.2.2.3)</td>
<td>0x83D0</td>
<td>PtypString</td>
<td>&quot;&quot; (a zero-length string)</td>
</tr>
<tr>
<td>PidNameXSharingConfigUrl (section 2.2.2.4)</td>
<td>0x8377</td>
<td>PtypString</td>
<td>&quot;&quot; (a zero-length string)</td>
</tr>
<tr>
<td>PidLidSharingFlavor (section 2.2.2.5)</td>
<td>0x823D</td>
<td>PtypInteger32 ([MS-OXCDATA] section 2.11.1)</td>
<td>0x00020500</td>
</tr>
<tr>
<td>PidNameXSharingFlavor (section 2.2.2.6)</td>
<td>0x836D</td>
<td>PtypString</td>
<td>&quot;20500&quot;</td>
</tr>
<tr>
<td>PidLidSharingCapabilities (section 2.2.2.1)</td>
<td>0x823C</td>
<td>PtypInteger32</td>
<td>0x00040290</td>
</tr>
<tr>
<td>PidNameXSharingCapabilities (section 2.2.2.2)</td>
<td>0x836C</td>
<td>PtypString</td>
<td>&quot;40290&quot;</td>
</tr>
<tr>
<td>PidLidSharingLocalType (section 2.2.2.10)</td>
<td>0x824F</td>
<td>PtypString</td>
<td>&quot;IPF.Appointment&quot;</td>
</tr>
<tr>
<td>PidNameXSharingLocalType (section 2.2.2.11)</td>
<td>0x8379</td>
<td>PtypString</td>
<td>&quot;IPF.Appointment&quot;</td>
</tr>
<tr>
<td>PidLidSharingInitiatorEntryId (section 2.2.2.7)</td>
<td>0x8249</td>
<td>PtypBinary</td>
<td>**</td>
</tr>
<tr>
<td>PidLidSharingInitiatorName (section 2.2.2.8)</td>
<td>0x8029</td>
<td>PtypString</td>
<td>&quot;user12&quot;</td>
</tr>
<tr>
<td>PidLidSharingInitiatorSmtp (section 2.2.2.9)</td>
<td>0x8248</td>
<td>PtypString</td>
<td>&quot;<a href="mailto:user12@fabrikam.com">user12@fabrikam.com</a>&quot;</td>
</tr>
</tbody>
</table>

* The following data shows the value of the PidLidSharingProviderGuid property. The size of the value is 16 bytes.
** The following data shows the value of the PidLidSharingInitiatorEntryId property. The size of the value is 125 bytes.

After addressing the message as described in [MS-OXOMSG], the client sends the message to Ryan by using the RopSubmitMessage ROP ([MS-OXCROPS] section 2.2.7.1) and then releases the Message object by using the RopRelease ROP ([MS-OXCROPS] section 2.2.15.3).

### 4.2 Denying a Sharing Request

Ryan wants to send a sharing response denying the sharing request that is described in section 4.1. The client creates a new Message object by using the RopCreateMessage ROP ([MS-OXCROPS] section 2.2.6.2). The server returns a success code and a handle to a Message object.

The client then sets the properties on the sharing response by using the RopSetProperties ROP ([MS-OXCROPS] section 2.2.8.6), as shown in the following table.

<table>
<thead>
<tr>
<th>Property</th>
<th>Property ID</th>
<th>Property type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PidTagMessageClass ([MS-OXCMSG] section 2.2.1.3)</td>
<td>0x001A</td>
<td>PtypString</td>
<td>&quot;IPM.Sharing&quot;</td>
</tr>
<tr>
<td>PidNameContentClass (section 2.2.5.1)</td>
<td>0x806d</td>
<td>PtypString</td>
<td>&quot;Sharing&quot;</td>
</tr>
<tr>
<td>PidTagNormalizedSubject ([MS-OXCMSG] section 2.2.1.10)</td>
<td>0x0E1D</td>
<td>PtypString</td>
<td>&quot;Denied: sharing request: calendar&quot;</td>
</tr>
<tr>
<td>PidTagSubjectPrefix ([MS-OXCMSG] section 2.2.1.9)</td>
<td>0x003D</td>
<td>PtypString</td>
<td>&quot;&quot; (a zero-length string)</td>
</tr>
<tr>
<td>PidLidSharingProviderGuid (section 2.2.2.12)</td>
<td>0x8243</td>
<td>PtypBinary</td>
<td>*</td>
</tr>
<tr>
<td>PidNameXSharingProviderGuid (section 2.2.2.13)</td>
<td>0x836F</td>
<td>PtypString</td>
<td>&quot;AEF0060000000000C00000000000046&quot;</td>
</tr>
<tr>
<td>PidLidSharingProviderName (section 2.2.2.14)</td>
<td>0x8244</td>
<td>PtypString</td>
<td>&quot;Microsoft Exchange&quot;</td>
</tr>
<tr>
<td>PidNameXSharingProviderName (section 2.2.2.15)</td>
<td>0x8370</td>
<td>PtypString</td>
<td>&quot;Microsoft Exchange&quot;</td>
</tr>
<tr>
<td>PidLidSharingProviderUrl (section 2.2.2.16)</td>
<td>0x8245</td>
<td>PtypString</td>
<td>&quot;<a href="HTTP://www.microsoft.com/exchange">HTTP://www.microsoft.com/exchange</a>&quot;</td>
</tr>
</tbody>
</table>
** The following data shows the value of the `PidLidSharingProviderGuid` property. The size of the value is 16 bytes.

```
0000: AE F0 06 00 00 00 00 00 C0 00 00 00 00 00 00 46 ...............F
```

** The following data shows the value of the `PidLidSharingInitiatorEntryId` property. The size of the value is 125 bytes.

```
0000: 00 00 00 00 DC A7 40 C8 C0 42 10 1A B4 B9 08 00 ......@..B......
0010: 2B 2F E1 82 01 00 00 00 00 00 00 00 00 2F 6F 3D 46 +/........../o=F
0020: 69 72 73 74 20 4F 72 67 61 6E 69 7A 61 74 69 6F
first Organizatio
0030: 6E 2F 6E 73 74 72 61 74 69 6F 20 47 72 6F
ministrative Gro
0040: 75 70 20 28 46 59 44 48 46 23 53 50 up (FYDIBOHF23SP
0050: 44 4L 75 3D 75 73 64 65 72 31 32 00 ts/cn=user12.
```

After addressing the message as described in [MS-OXOMSG], the client sends the message to Kendall by using the `RopSubmitMessage` ROP ([MS-OXCROPS] section 2.2.7.1) and then releases the Message object by using the `RopRelease` ROP ([MS-OXCROPS] section 2.2.15.3).
Then, the client opens the sharing request by using the **RopOpenMessage** ROP ([MS-OXCROPS] section 2.2.6.1). The server returns a success code and a handle to the Message object.

The client sets properties on the sharing request to indicate that the client has sent a sharing response denying the request and to specify the time at which the response was sent, as shown in the following table. The client sets these properties by using the **RopSetProperties** ROP ([MS-OXCROPS] section 2.2.8.6).

<table>
<thead>
<tr>
<th>Property ID</th>
<th>Property type</th>
<th>Data</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x83E4</td>
<td>PtypInteger32</td>
<td>02 00 00 00</td>
<td>2008/03/06 23:43:00.000</td>
</tr>
<tr>
<td>0x83E3</td>
<td>PtypTime</td>
<td>00 9A C2 CF E3 7F C8 01</td>
<td></td>
</tr>
</tbody>
</table>

The client saves the changes by using the **RopSaveChangesMessage** ROP ([MS-OXCROPS] section 2.2.6.3) and releases the Message object by using the **RopRelease** ROP.

### 4.3 Accepting a Sharing Request

Ryan wants to send a **sharing response** accepting the **sharing request** that is described in section 4.1. The client creates a new **Message object** by using the **RopCreateMessage** ROP ([MS-OXCROPS] section 2.2.6.2). The server returns a success code and a handle to a Message object.

The client sets the properties on a sharing response by using the **RopSetProperties** ROP ([MS-OXCROPS] section 2.2.8.6), as shown in the following table.

<table>
<thead>
<tr>
<th>Property ID</th>
<th>Property type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x001A</td>
<td>PtypString</td>
<td>&quot;IPM.Sharing&quot;</td>
</tr>
<tr>
<td>0x806d</td>
<td>PtypString</td>
<td>&quot;Sharing&quot;</td>
</tr>
<tr>
<td>0x0E1D</td>
<td>PtypString</td>
<td>&quot;Allowed: sharing request: calendar&quot;</td>
</tr>
<tr>
<td>0x003D</td>
<td>PtypString</td>
<td>&quot;&quot; (a zero-length string)</td>
</tr>
<tr>
<td>0x8243</td>
<td>PtypBinary</td>
<td>*</td>
</tr>
<tr>
<td>0x836F</td>
<td>PtypString</td>
<td>&quot;AEF0060000000000C00000000000046&quot;</td>
</tr>
<tr>
<td>0x8244</td>
<td>PtypString</td>
<td>&quot;Microsoft Exchange&quot;</td>
</tr>
<tr>
<td>0x8370</td>
<td>PtypString</td>
<td>&quot;Microsoft Exchange&quot;</td>
</tr>
</tbody>
</table>
| 0x8245      | PtypString    | "HTTP://www.microsoft.com/exchan
<table>
<thead>
<tr>
<th>Property</th>
<th>Property ID</th>
<th>Property type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2.2.16</td>
<td></td>
<td></td>
<td>ge”</td>
</tr>
<tr>
<td>PidNameXSharingProviderUrl</td>
<td>0x8371</td>
<td>PtypString</td>
<td>&quot;<a href="HTTP://www.microsoft.com/exchange">HTTP://www.microsoft.com/exchange</a>&quot;</td>
</tr>
<tr>
<td>PidLidSharingConfigurationUrl</td>
<td>0x83D0</td>
<td>PtypString</td>
<td>&quot;&quot; (a zero-length string)</td>
</tr>
<tr>
<td>PidNameXSharingConfigUrl</td>
<td>0x8377</td>
<td>PtypString</td>
<td>&quot;&quot; (a zero-length string)</td>
</tr>
<tr>
<td>PidLidSharingFlavor (section 2.2.2.5)</td>
<td>0x823D</td>
<td>PtypInteger32</td>
<td>0x00023310</td>
</tr>
<tr>
<td>PidNameXSharingFlavor (section 2.2.2.6)</td>
<td>0x836D</td>
<td>PtypString</td>
<td>&quot;23310&quot;</td>
</tr>
<tr>
<td>PidLidSharingCapabilities (section 2.2.2.1)</td>
<td>0x823C</td>
<td>PtypInteger32</td>
<td>0x00040290</td>
</tr>
<tr>
<td>PidNameXSharingCapabilities (section 2.2.2.2)</td>
<td>0x836C</td>
<td>PtypString</td>
<td>&quot;40290&quot;</td>
</tr>
<tr>
<td>PidLidSharingLocalType (section 2.2.2.10)</td>
<td>0x824F</td>
<td>PtypString</td>
<td>&quot;IPF.Appointment&quot;</td>
</tr>
<tr>
<td>PidNameXSharingLocalType (section 2.2.2.11)</td>
<td>0x8379</td>
<td>PtypString</td>
<td>&quot;IPF.Appointment&quot;</td>
</tr>
<tr>
<td>PidLidSharingInitiatorEntryId</td>
<td>0x8249</td>
<td>PtypString</td>
<td>&quot;&quot;</td>
</tr>
<tr>
<td>PidLidSharingInitiatorName</td>
<td>0x8029</td>
<td>PtypString</td>
<td>&quot;user10&quot;</td>
</tr>
<tr>
<td>PidLidSharingInitiatorSmtp</td>
<td>0x8248</td>
<td>PtypString</td>
<td>&quot;<a href="mailto:user10@fabrikam.com">user10@fabrikam.com</a>&quot;</td>
</tr>
<tr>
<td>PidLidSharingRemoteName (section 2.2.3.1)</td>
<td>0x8026</td>
<td>PtypString</td>
<td>&quot;Calendar&quot;</td>
</tr>
<tr>
<td>PidNameXSharingRemoteName (section 2.2.3.2)</td>
<td>0x8373</td>
<td>PtypString</td>
<td>&quot;Calendar&quot;</td>
</tr>
<tr>
<td>PidLidSharingRemoteType (section 2.2.3.5)</td>
<td>0x8247</td>
<td>PtypString</td>
<td>&quot;IPF.Appointment&quot;</td>
</tr>
<tr>
<td>PidNameXSharingRemoteType (section 2.2.3.6)</td>
<td>0x8376</td>
<td>PtypString</td>
<td>&quot;IPF.Appointment&quot;</td>
</tr>
<tr>
<td>PidLidSharingRemoteUid (section 2.2.3.7)</td>
<td>0x8246</td>
<td>PtypString</td>
<td>&quot;000000000B0FCA4F63C21A642BD4B8F1BD8A04BC60100612A7BAB49F64E4B9C52DBFB5A53AA1C000000F04EEF0000&quot;</td>
</tr>
<tr>
<td>Property</td>
<td>Property ID</td>
<td>Property type</td>
<td>Value</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-------------</td>
<td>---------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PidNameXSharingRemoteUid (section 2.2.3.8)</td>
<td>0x8374</td>
<td>PtypString</td>
<td>&quot;0000000000B0CA4F63C21A642B D4B8F1DBA04B6C06100612A7 BAB49F64E4B9C52DBF5BA53A A1C000000F04EEF0000&quot;</td>
</tr>
<tr>
<td>PidLidSharingRemoteStoreUid (section 2.2.3.3)</td>
<td>0x83E1</td>
<td>PtypString</td>
<td>&quot;0000000038A1BB1005E5101A A1BB08002B2A56C20000454D 534D44422E444C400000000 0000001B5F2A0A6611CD9 BC800AA002FC45A0C00000033 36353952392D41313102F6F3 D4696727374204F7267616E69 7A61746966E2F6F753D45786 368616E676520146D696E69 73747261746976652047726F75 57020286549449424F484632 335350444C5429F636E3D526 56369706965E74732F6363E3D 75736572313000&quot;</td>
</tr>
<tr>
<td>PidNameXSharingRemoteStoreUid (section 2.2.3.4)</td>
<td>0x8375</td>
<td>PtypString</td>
<td>&quot;0000000038A1BB1005E5101AA 1BB08002B2A56C20000454D5 34D44422E444C40000000000 0000001B5F2A0A6611CD93C800AA002FC45A0C00000033 36353952392D41313102F6F3 D4669727374204F7267616E69 7A61746966E2F6F753D45786 368616E676520146D696E69 73747261746976652047726F75 57020286549449424F484632 335350444C5429F636E3D526 56369706965E74732F6363E3D7 5736572313000&quot;</td>
</tr>
</tbody>
</table>

* The following data shows the value of the **PidLidSharingProviderGuid** property. The size of the value is 16 bytes.

```
0000: AE F0 06 00 00 00 00 00 00 00 00 00 00 00 46 ................F
```

** The following data shows the value of the **PidLidSharingInitiatorEntryId** property. The size of the value is 125 bytes.

```
0000: 00 00 00 00 DC A7 40 C8 C0 42 10 1A B4 B9 08 00 ....@..B......
0010: 2B 2F E1 82 01 00 00 00 00 00 00 00 00 00 00 2F 6F 3D 46 /....../o-F
0020: 69 72 73 74 20 4F 72 67 61 69 6E 69 7A 61 74 69 66 6F irst Organizatio
0030: 6E 2F 6F 75 3D 45 78 63 68 61 6E 67 65 20 41 64 6F n/ou=Exchange Ad
0040: 6D 69 6E 69 74 72 61 74 69 74 73 65 64 77 6F 6F 7261746976652047726F75
0050: 702084659449424F484632 335350444C5429F636E3D526 56369706965E74732F6363E3D7 5736572313000
```

After properly addressing the message as described in [MS-OXOMSG], the client sends the message to Kendall by using the **RopSubmitMessage** ROP ([MS-OXCROPS] section 2.2.7.1) and then releases the Message object by using the **RopRelease ROP** ([MS-OXCROPS] section 2.2.15.3).

The client then grants Kendall permission to the folder as described in [MS-OXODLGT].

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[MS-OXSHARE] - v20210817
Sharing Message Object Protocol
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Release: August 17, 2021
Then the client opens the sharing request by using the `RopOpenMessage` ROP ([MS-OXCROPS] section 2.2.6.1). The server returns a success code and a handle to the Message object.

The client sets the properties on the sharing request to indicate that the client has sent a sharing response accepting the request and to specify the time at which the response was sent, as shown in the following table. The client sets these properties by using the `RopSetProperties` ROP ([MS-OXCROPS] section 2.2.8.6).

<table>
<thead>
<tr>
<th>Property</th>
<th>Property ID</th>
<th>Property type</th>
<th>Data</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>PidLidSharingResponseType</code></td>
<td>0x83E4</td>
<td>PtypInteger32</td>
<td>01 00 00 00</td>
<td>0x00000001</td>
</tr>
<tr>
<td>(section 2.2.4.2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>PidLidSharingResponseTime</code></td>
<td>0x83E3</td>
<td>PtypTime</td>
<td>00 9A C2 CF E3 7F C8 01</td>
<td>2008/03/06 23:43:00.000</td>
</tr>
<tr>
<td>(section 2.2.4.1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The client saves the changes by using the `RopSaveChangesMessage` ROP ([MS-OXCROPS] section 2.2.6.3) and releases the Message object by using the `RopRelease` ROP.
5 Security

5.1 Security Considerations for Implementers

There are no security considerations specific to the Sharing Message Object Protocol. General security considerations pertaining to the underlying transport apply, as described in [MS-OXCMSG].

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 updates to those products.

- Microsoft Exchange Server 2007
- Microsoft Exchange Server 2010
- Microsoft Exchange Server 2013
- Microsoft Exchange Server 2016
- Microsoft Office Outlook 2007
- Microsoft Outlook 2010
- Microsoft Outlook 2013
- Microsoft Outlook 2016
- Microsoft Exchange Server 2019
- Microsoft Outlook 2019
- Microsoft Outlook 2021

Exceptions, if any, are noted in this section. If an update version, service pack or Knowledge Base (KB) number appears with a product name, the behavior changed in that update. The new behavior also applies to subsequent updates 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 2.2.2.8: Office Outlook 2007 sets the value of the PidLidSharingInitiatorName property (section 2.2.2.8) but, upon receipt, ignores the property and queries the address book for its value based on the PidLidSharingInitiatorEntryId property (section 2.2.2.7).

2. Section 2.2.2.9: Office Outlook 2007 sets the value of the PidLidSharingInitiatorSmtp property (section 2.2.2.9) but, upon receipt, ignores the property and queries the address book for its value based on the PidLidSharingInitiatorEntryId property (section 2.2.2.7).

3. Section 2.2.2.14: Office Outlook 2007 sets the value of the PidLidSharingProviderName property (section 2.2.2.14) but, upon receipt, ignores the property and instead uses a custom value based on the PidLidSharingProviderGuid property (section 2.2.2.12).

4. Section 2.2.2.15: Office Outlook 2007 sets the value of the PidNameXSharingProviderName property (section 2.2.2.15) but, upon receipt, ignores the property and instead uses a custom value based on the PidLidSharingProviderGuid property (section 2.2.2.12).

5. Section 2.2.2.16: Office Outlook 2007 sets the value of the PidLidSharingProviderUrl property (section 2.2.2.16) but, upon receipt, ignores the property and instead uses a custom value based on the PidLidSharingProviderGuid property (section 2.2.2.12).

6. Section 2.2.2.17: Office Outlook 2007 sets the value of the PidNameXSharingProviderUrl property (section 2.2.2.17) but, upon receipt, ignores the property and instead uses a custom value based on the PidLidSharingProviderGuid property (section 2.2.2.12).
<7> Section 2.2.3: Office Outlook 2007 sets these properties regardless of the type of Sharing Message object.

<8> Section 2.2.3.5: Office Outlook 2007 sets the PidLidSharingRemoteType property to the same value as the PidLidSharingLocalType property (section 2.2.2.10) but, upon receipt, ignores the property and uses only the PidLidSharingLocalType property to determine behavior.

<9> Section 2.2.3.6: Office Outlook 2007 sets the PidNameXSharingRemoteType property to the same value as the PidLidSharingLocalType property (section 2.2.2.10) but, upon receipt, ignores the property and uses only the PidLidSharingLocalType property to determine behavior.

<10> Section 2.2.6: Office Outlook 2007 sets differing subsets of these properties in different scenarios, but their values have no meaning in the context of this protocol.
7 Change Tracking

This section identifies changes that were made to this document since the last release. Changes are classified as Major, Minor, or None.

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.
- A document revision that captures changes to protocol functionality.

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 **None** means that no new technical changes were introduced. Minor editorial and formatting changes may have been made, but the relevant technical content is identical to the last released version.

The changes made to this document are listed in the following table. For more information, please contact [dochelp@microsoft.com](mailto:dochelp@microsoft.com).

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<td>6 Appendix A: Product Behavior</td>
<td>Updated list of supported products.</td>
<td>major</td>
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