

[MS-OXSHARE]: Sharing Message Object Protocol

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 [Open Specification Promise](#) or the [Community Promise](#). 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 iplg@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. For a list of Microsoft trademarks, visit www.microsoft.com/trademarks.
- **Fictitious Names.** The example companies, organizations, products, domain names, email addresses, logos, people, places, and events depicted in this documentation are fictitious. No association with any real company, organization, product, domain name, email address, logo, person, place, or event is intended or should be inferred.

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.
12/02/2009	1.02		Updated references.
12/03/2008	1.03		Updated IP notice.
04/10/2009	2.0		Updated technical content and applicable product releases.
07/15/2009	3.0	Major	Revised and edited for technical content.
11/04/2009	3.0.1	Editorial	Revised and edited the technical content.
02/10/2010	3.0.1	None	Version 3.0.1 release
05/05/2010	3.0.2	Editorial	Revised and edited the technical content.
08/04/2010	3.1	Minor	Clarified the meaning of the technical content.
11/03/2010	4.0	Major	Significantly changed the technical content.
03/18/2011	4.0	No change	No changes to the meaning, language, and formatting of the technical content.
08/05/2011	4.0	No change	No changes to the meaning, language, or formatting of the technical content.
10/07/2011	4.0	No change	No changes to the meaning, language, or formatting of the technical content.
01/20/2012	5.0	Major	Significantly changed the technical content.
04/27/2012	5.0	No change	No changes to the meaning, language, or formatting of the technical content.
07/16/2012	5.0	No change	No changes to the meaning, language, or formatting of the technical content.
10/08/2012	5.1	Minor	Clarified the meaning of the technical content.
02/11/2013	5.1	No change	No changes to the meaning, language, or formatting of the technical content.
07/26/2013	5.1	No change	No changes to the meaning, language, or formatting of the technical content.

Date	Revision History	Revision Class	Comments
11/18/2013	5.1	No change	No changes to the meaning, language, or formatting of the technical content.
02/10/2014	5.1	No change	No changes to the meaning, language, or formatting of the technical content.

Table of Contents

1 Introduction	6
1.1 Glossary	6
1.2 References	7
1.2.1 Normative References	7
1.2.2 Informative References	7
1.3 Overview	7
1.4 Relationship to Other Protocols	8
1.5 Prerequisites/Preconditions	8
1.6 Applicability Statement	8
1.7 Versioning and Capability Negotiation	8
1.8 Vendor-Extensible Fields	8
1.9 Standards Assignments	8
2 Messages	9
2.1 Transport	9
2.2 Message Syntax	9
2.2.1 Common Message Object Properties	9
2.2.2 Common Sharing Message Object Properties	9
2.2.2.1 PidLidSharingCapabilities Property	9
2.2.2.2 PidNameXSharingCapabilities Property	10
2.2.2.3 PidLidSharingConfigurationUrl Property	10
2.2.2.4 PidNameXSharingConfigUrl Property	10
2.2.2.5 PidLidSharingFlavor Property	10
2.2.2.6 PidNameXSharingFlavor Property	11
2.2.2.7 PidLidSharingInitiatorEntryId Property	11
2.2.2.8 PidLidSharingInitiatorName Property	11
2.2.2.9 PidLidSharingInitiatorSmtip Property	11
2.2.2.10 PidLidSharingLocalType Property	11
2.2.2.11 PidNameXSharingLocalType Property	12
2.2.2.12 PidLidSharingProviderGuid Property	12
2.2.2.13 PidNameXSharingProviderGuid Property	12
2.2.2.14 PidLidSharingProviderName Property	12
2.2.2.15 PidNameXSharingProviderName Property	12
2.2.2.16 PidLidSharingProviderUrl Property	13
2.2.2.17 PidNameXSharingProviderUrl Property	13
2.2.3 Sharing Invitation and Response Acceptance Properties	13
2.2.3.1 PidLidSharingRemoteName Property	13
2.2.3.2 PidNameXSharingRemoteName Property	13
2.2.3.3 PidLidSharingRemoteStoreUid Property	13
2.2.3.4 PidNameXSharingRemoteStoreUid Property	13
2.2.3.5 PidLidSharingRemoteType Property	14
2.2.3.6 PidNameXSharingRemoteType Property	14
2.2.3.7 PidLidSharingRemoteUid Property	14
2.2.3.8 PidNameXSharingRemoteUid Property	14
2.2.4 Sharing Request Properties	14
2.2.4.1 PidLidSharingResponseTime Property	14
2.2.4.2 PidLidSharingResponseType Property	14
2.2.5 Additional Property Constraints	15
2.2.5.1 PidNameContentClass Property	15
2.2.5.2 PidTagMessageClass Property	15

2.2.6 Ignored Properties.....	15
3 Protocol Details.....	18
3.1 Client Details.....	18
3.1.1 Abstract Data Model	18
3.1.2 Timers	18
3.1.3 Initialization	18
3.1.4 Higher-Layer Triggered Events.....	18
3.1.4.1 Creating a Sharing Invitation	18
3.1.4.2 Creating a Sharing Request.....	18
3.1.4.3 Creating a Sharing Response – Accept	18
3.1.4.4 Creating a Sharing Response – Deny.....	19
3.1.5 Message Processing Events and Sequencing Rules.....	19
3.1.6 Timer Events	19
3.1.7 Other Local Events	19
3.2 Server Details	19
3.2.1 Abstract Data Model	19
3.2.2 Timers	19
3.2.3 Initialization	19
3.2.4 Higher-Layer Triggered Events.....	19
3.2.5 Message Processing Events and Sequencing Rules.....	19
3.2.6 Timer Events	20
3.2.7 Other Local Events	20
4 Protocol Examples.....	21
4.1 Sending a Sharing Request	23
4.2 Denying a Sharing Request.....	25
4.3 Accepting a Sharing Request.....	27
5 Security.....	31
5.1 Security Considerations for Implementers.....	31
5.2 Index of Security Parameters	31
6 Appendix A: Product Behavior	32
7 Change Tracking.....	34
8 Index	35

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

1.1 Glossary

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

big-endian handle

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

address book
Address Book object
Folder object
mailbox
Message object
named property
property ID
recipient
remote operation (ROP)
ROP request
ROP response
special folder
Uniform Resource Locator (URL)

The following terms are specific to this document:

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.

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

1.2 References

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

1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information.

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

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

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

[MS-OXCPRM] Microsoft Corporation, "[Exchange Access and Operation Permissions Protocol](#)".

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

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

[MS-OXOCAL] Microsoft Corporation, "[Appointment and Meeting Object Protocol](#)".

[MS-OXOMSG] Microsoft Corporation, "[Email Object Protocol](#)".

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

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

1.2.2 Informative References

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

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

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

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

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

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: **PtyInteger32** ([\[MS-OXCDATA\]](#) section 2.11.1)

The **PidLidSharingCapabilities** property ([\[MS-OXPROPS\]](#) section 2.237) MUST be set to one of the following values.

Value	Meaning
0x00040290	The Sharing Message object relates to a special folder .
0x000402B0	The Sharing Message object does not relate to a special folder.

2.2.2.2 PidNameXSharingCapabilities Property

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

The **PidNameXSharingCapabilities** property ([\[MS-OXPROPS\]](#) section 2.479) 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.

Hex value	Value of the PidNameXSharingCapabilities property
0x00040290	"40290"
0x000402B0	"402B0"

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 2.480) 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.

Value	Meaning
0x00020310	A sharing invitation for a special folder.
0x00000310	A sharing invitation for a folder that is not a special folder.
0x00020500	A sharing request for a special folder.
0x00020710	Both a sharing invitation for a special folder and a sharing request for the recipient's (2) equivalent special folder.
0x00025100	A sharing response that is denying a sharing request.
0x00023310	A sharing response that is accepting a sharing request.

2.2.2.6 PidNameXSharingFlavor Property

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

The **PidNameXSharingFlavor** property ([\[MS-OXPROPS\]](#) section 2.482) 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.

Hex value	Value of the PidNameXSharingFlavor property
0x00020310	"20310"
0x00000310	"310"
0x00020500	"20500"
0x00020710	"20710"
0x00025100	"25100"
0x00023310	"23310"

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 ([\[MS-OXCPerm\]](#) section 2.2.4) 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 ([\[MS-OXCfold\]](#) section 2.2.2.2.5) 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 PidLidSharingInitiatorSntp Property

Type: **PtypString** ([\[MS-OXCData\]](#) section 2.11.1)

The **PidLidSharingInitiatorSntp** property ([\[MS-OXPROPS\]](#) section 2.250) MUST be set to the value of the **PidTagSntpAddress** 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 ([\[MS-OXPROPS\]](#) section 2.259) MUST be set to the value of the **PidTagContainerClass** property ([\[MS-OXCAL\]](#) section 2.2.11.1) 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.

Type of folder	Value
Calendar	"IPF.Appointment"
Contacts	"IPF.Contact"
Tasks	"IPF.Task"
Notes	"IPF.StickyNote"
Journal	"IPF.Journal"

2.2.2.11 PidNameXSharingLocalType Property

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

The **PidNameXSharingLocalType** property ([\[MS-OXPROPS\]](#) section 2.484) MUST be set to the same value as the **PidLidSharingLocalType** property (section [2.2.2.10](#)).

2.2.2.12 PidLidSharingProviderGuid Property

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

The **PidLidSharingProviderGuid** property ([\[MS-OXPROPS\]](#) section 2.266) MUST be set to %xAE.F0.06.00.00.00.00.00.C0.00.00.00.00.00.46.

2.2.2.13 PidNameXSharingProviderGuid Property

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

The **PidNameXSharingProviderGuid** property ([\[MS-OXPROPS\]](#) section 2.485) MUST be set to the hexadecimal string representation of the value of the **PidLidSharingProviderGuid** property (section [2.2.2.12](#)). That is, "AEF0060000000000C000000000000046".

2.2.2.14 PidLidSharingProviderName Property

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

The **PidLidSharingProviderName** property ([\[MS-OXPROPS\]](#) section 2.267) specifies a user-displayable name of the **sharing provider** that is identified by the **PidLidSharingProviderGuid** property (section [2.2.2.12](#)). 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 2.486) 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 is generally used to provide more information about the sharing provider. 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 2.487) 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 2.488) 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 2.282) MUST be set to the hexadecimal string representation of the value of the **PidTagStoreEntryId** property ([\[MS-OXPROPS\]](#) section 2.1016) 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 2.490) MUST be set to the same value as **PidLidSharingRemoteStoreUid** (section [2.2.3.3](#)).

2.2.3.5 PidLidSharingRemoteType Property

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

The **PidLidSharingRemoteType** property ([MS-OXPROPS] section 2.281) MUST be set to the same value as the **PidLidSharingLocalType** property (section 2.2.2.10) and MAY <8> be ignored upon receipt.

2.2.3.6 PidNameXSharingRemoteType Property

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

The **PidNameXSharingRemoteType** property ([MS-OXPROPS] section 2.491) 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-OXCADATA] 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-OXCADATA] section 2.11.1)

The **PidNameXSharingRemoteUid** property ([MS-OXPROPS] section 2.492) 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-OXCADATA] section 2.11.1)

The **PidLidSharingResponseTime** property ([MS-OXPROPS] section 2.285) specifies the time at which the recipient (2) of the sharing request sent a sharing response.

2.2.4.2 PidLidSharingResponseType Property

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

The **PidLidSharingResponseType** property ([MS-OXPROPS] section 2.286) specifies the type of sharing response with which the recipient (2) of the sharing request responded. This property MUST be set to one of the following values.

Value	Meaning
0x00000001	Acceptance of the sharing request

Value	Meaning
0x00000002	Denial of the sharing request

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:

- **PidLidSharingAnonymity** ([\[MS-OXPROPS\]](#) section 2.234)
- **PidLidSharingBindingEntryId** ([\[MS-OXPROPS\]](#) section 2.235)
- **PidLidSharingBrowseUrl** ([\[MS-OXPROPS\]](#) section 2.236)
- **PidNameXSharingBrowseUrl** ([\[MS-OXPROPS\]](#) section 2.478)
- **PidLidSharingDataRangeEnd** ([\[MS-OXPROPS\]](#) section 2.239)
- **PidLidSharingDataRangeStart** ([\[MS-OXPROPS\]](#) section 2.240)
- **PidLidSharingDetail** ([\[MS-OXPROPS\]](#) section 2.241)
- **PidLidSharingExtensionXml** ([\[MS-OXPROPS\]](#) section 2.242)
- **PidNameXSharingExendedCaps** ([\[MS-OXPROPS\]](#) section 2.481)
- **PidLidSharingFilter** ([\[MS-OXPROPS\]](#) section 2.243)
- **PidLidSharingFlags** ([\[MS-OXPROPS\]](#) section 2.244)
- **PidLidSharingFolderEntryId** ([\[MS-OXPROPS\]](#) section 2.246)
- **PidLidSharingIndexEntryId** ([\[MS-OXPROPS\]](#) section 2.247)
- **PidLidSharingInstanceGuid** ([\[MS-OXPROPS\]](#) section 2.251)
- **PidNameXSharingInstanceGuid** ([\[MS-OXPROPS\]](#) section 2.483)
- **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 2.275)
- **PidLidSharingRemotePass** ([\[MS-OXPROPS\]](#) section 2.278)
- **PidLidSharingRemotePath** ([\[MS-OXPROPS\]](#) section 2.279)
- **PidNameXSharingRemotePath** ([\[MS-OXPROPS\]](#) section 2.489)
- **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 **named properties** to **property IDs**.

Property	Property set GUID	LID or property name
PidNameContentClass (section 2.2.5.1)	{00020386-0000-0000-c000-000000000046}	Content-class
PidLidSharingProviderGuid (section 2.2.2.12)	{00062040-0000-0000-C000-000000000046}	0x00008A01
PidNameXSharingProviderGuid (section 2.2.2.13)	{00020386-0000-0000-C000-000000000046}	X-Sharing-Provider-GUID
PidLidSharingProviderName (section 2.2.2.14)	{00062040-0000-0000-C000-000000000046}	0x00008A02
PidNameXSharingProviderName (section 2.2.2.15)	{00020386-0000-0000-C000-000000000046}	X-Sharing-Provider-Name
PidLidSharingProviderUrl (section 2.2.2.16)	{00062040-0000-0000-C000-000000000046}	0x00008A03
PidNameXSharingProviderUrl (section 2.2.2.17)	{00020386-0000-0000-C000-000000000046}	X-Sharing-Provider-URL
PidLidSharingConfigurationUrl (section 2.2.2.3)	{00062040-0000-0000-C000-000000000046}	0x00008A24
PidNameXSharingConfigUrl (section 2.2.2.4)	{00020386-0000-0000-C000-000000000046}	X-Sharing-Config-URL
PidLidSharingFlavor (section 2.2.2.5)	{00062040-0000-0000-C000-000000000046}	0x00008A18
PidNameXSharingFlavor (section 2.2.2.6)	{00020386-0000-0000-C000-000000000046}	X-Sharing-Flavor
PidLidSharingCapabilities (section 2.2.2.1)	{00062040-0000-0000-C000-000000000046}	0x00008A17
PidNameXSharingCapabilities (section 2.2.2.2)	{00020386-0000-0000-C000-000000000046}	X-Sharing-Capabilities
PidLidSharingLocalType (section 2.2.2.10)	{00062040-0000-0000-C000-000000000046}	0x00008A14
PidNameXSharingLocalType (section 2.2.2.11)	{00020386-0000-0000-C000-000000000046}	X-Sharing-Local-

Property	Property set GUID	LID or property name
2.2.2.11)	{000000000046}	Type
PidLidSharingInitiatorEntryId (section 2.2.2.7)	{00062040-0000-0000-C000-000000000046}	0x00008A09
PidLidSharingInitiatorName (section 2.2.2.8)	{00062040-0000-0000-C000-000000000046}	0x00008A07
PidLidSharingInitiatorSntp (section 2.2.2.9)	{00062040-0000-0000-C000-000000000046}	0x00008A08
PidLidSharingRemoteName (section 2.2.3.1)	{00062040-0000-0000-C000-000000000046}	0x00008A05
PidNameXSharingRemoteName (section 2.2.3.2)	{00020386-0000-0000-C000-000000000046}	X-Sharing-Remote-Name
PidLidSharingRemoteType (section 2.2.3.5)	{00062040-0000-0000-C000-000000000046}	0x00008A1D
PidNameXSharingRemoteType (section 2.2.3.6)	{00020386-0000-0000-C000-000000000046}	X-Sharing-Remote-Type
PidLidSharingRemoteUid (section 2.2.3.7)	{00062040-0000-0000-C000-000000000046}	0x00008A06
PidNameXSharingRemoteUid (section 2.2.3.8)	{00020386-0000-0000-C000-000000000046}	X-Sharing-Remote-Uid
PidLidSharingRemoteStoreUid (section 2.2.3.3)	{00062040-0000-0000-C000-000000000046}	0x00008A48
PidNameXSharingRemoteStoreUid (section 2.2.3.4)	{00020386-0000-0000-C000-000000000046}	X-Sharing-Remote-Store-Uid
PidLidSharingResponseType (section 2.2.4.2)	{00062040-0000-0000-C000-000000000046}	0x00008A27
PidLidSharingResponseTime (section 2.2.4.1)	{00062040-0000-0000-C000-000000000046}	0x00008A28

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.)

Property	Property ID
PidNameContentClass	0x806D
PidLidSharingProviderGuid	0x8243
PidNameXSharingProviderGuid	0x836F
PidLidSharingProviderName	0x8244
PidNameXSharingProviderName	0x8370

Property	Property ID
PidLidSharingProviderUrl	0x8245
PidNameXSharingProviderUrl	0x8371
PidLidSharingConfigurationUrl	0x83D0
PidNameXSharingConfigUrl	0x8377
PidLidSharingFlavor	0x823D
PidNameXSharingFlavor	0x836D
PidLidSharingCapabilities	0x823C
PidNameXSharingCapabilities	0x836C
PidLidSharingLocalType	0x824F
PidNameXSharingLocalType	0x8379
PidLidSharingInitiatorEntryId	0x8249
PidLidSharingInitiatorName	0x8029
PidLidSharingInitiatorSmtp	0x8248
PidLidSharingRemoteName	0x8026
PidNameXSharingRemoteName	0x8373
PidLidSharingRemoteType	0x8247
PidNameXSharingRemoteType	0x8376
PidLidSharingRemoteUid	0x8246
PidNameXSharingRemoteUid	0x8374
PidLidSharingRemoteStoreUid	0x83E1
PidNameXSharingRemoteStoreUid	0x8375
PidLidSharingResponseType	0x83E4
PidLidSharingResponseTime	0x83E3

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.

Property	Property ID	Property type	Value
PidTagMessageClass ([MS-OXCMSG] section 2.2.1.3)	0x001A	PtypString ([MS-OXCDATA] section 2.11.1)	"IPM.Sharing"
PidNameContentClass (section 2.2.5.1)	0x806D	PtypString	"Sharing"
PidTagNormalizedSubject ([MS-OXCMSG] section 2.2.1.10)	0x0E1D	PtypString	"Sharing request: calendar"
PidTagSubjectPrefix ([MS-OXCMSG] section 2.2.1.9)	0x003D	PtypString	"" (a zero-length string)
PidLidSharingProviderGuid (section 2.2.2.12)	0x8243	PtypBinary ([MS-OXCDATA] section 2.11.1)	*
PidNameXSharingProviderGuid (section 2.2.2.13)	0x836F	PtypString	"AEF0060000000000C00000000000046"
PidLidSharingProviderName (section 2.2.2.14)	0x8244	PtypString	"Microsoft Exchange"
PidNameXSharingProviderName (section 2.2.2.15)	0x8370	PtypString	"Microsoft Exchange"
PidLidSharingProviderUrl (section 2.2.2.16)	0x8245	PtypString	"HTTP://www.microsoft.com/exchange"
PidNameXSharingProviderUrl (section 2.2.2.17)	0x8371	PtypString	"HTTP://www.microsoft.com/exchange"
PidLidSharingConfigurationUrl (section 2.2.2.3)	0x83D0	PtypString	"" (a zero-length string)
PidNameXSharingConfigUrl (section 2.2.2.4)	0x8377	PtypString	"" (a zero-length string)
PidLidSharingFlavor (section 2.2.2.5)	0x823D	PtypInteger32 ([MS-OXCDATA] section 2.11.1)	0x00020500
PidNameXSharingFlavor (section 2.2.2.6)	0x836D	PtypString	"20500"
PidLidSharingCapabilities (section 2.2.2.1)	0x823C	PtypInteger32	0x00040290
PidNameXSharingCapabilities (section 2.2.2.2)	0x836C	PtypString	"40290"
PidLidSharingLocalType (section 2.2.2.10)	0x824F	PtypString	"IPF.Appointment"
PidNameXSharingLocalType	0x8379	PtypString	"IPF.Appointment"

Property	Property ID	Property type	Value
(section 2.2.2.11)			
PidLidSharingInitiatorEntryId (section 2.2.2.7)	0x8249	PtypBinary	**
PidLidSharingInitiatorName (section 2.2.2.8)	0x8029	PtypString	"user12"
PidLidSharingInitiatorSmtip (section 2.2.2.9)	0x8248	PtypString	"user12@fabrikam.com"

* 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 .....
```

** 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 2F 6F 3D 46 +/...../o=F
0020: 69 72 73 74 20 4F 72 67 61 6E 69 7A 61 74 69 6F irst Organizatio
0030: 6E 2F 6F 75 3D 45 78 63 68 61 6E 67 65 20 41 64 n/ou=Exchange Ad
0040: 6D 69 6E 69 73 74 72 61 74 69 76 65 20 47 72 6F ministrative Gro
0050: 75 70 20 28 46 59 44 49 42 4F 48 46 32 33 53 50 up (FYDIBOHF23SP
0060: 44 4C 54 29 2F 63 6E 3D 52 65 63 69 70 69 65 6E DLT)/cn=Recipien
0070: 74 73 2F 63 6E 3D 75 73 65 72 31 32 00          ts/cn=user12.
```

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.

Property	Property ID	Property type	Value
PidTagMessageClass ([MS-OXCMSG] section 2.2.1.3)	0x001A	PtypString ([MS-OXCDATA] section 2.11.1)	"IPM.Sharing"
PidNameContentClass (section 2.2.5.1)	0x806d	PtypString	"Sharing"

Property	Property ID	Property type	Value
PidTagNormalizedSubject ([MS-OXCMSG] section 2.2.1.10)	0x0E1D	PtypString	"Denied: sharing request: calendar"
PidTagSubjectPrefix ([MS-OXCMSG] section 2.2.1.9)	0x003D	PtypString	"" (a zero-length string)
PidLidSharingProviderGuid (section 2.2.2.12)	0x8243	PtypBinary ([MS-OXCDATA] section 2.11.1)	*
PidNameXSharingProviderGuid (section 2.2.2.13)	0x836F	PtypString	"AEF0060000000000C00000000000046"
PidLidSharingProviderName (section 2.2.2.14)	0x8244	PtypString	"Microsoft Exchange"
PidNameXSharingProviderName (section 2.2.2.15)	0x8370	PtypString	"Microsoft Exchange"
PidLidSharingProviderUrl (section 2.2.2.16)	0x8245	PtypString	"HTTP://www.microsoft.com/exchange"
PidNameXSharingProviderUrl (section 2.2.2.17)	0x8371	PtypString	"HTTP://www.microsoft.com/exchange"
PidLidSharingConfigurationUrl (section 2.2.2.3)	0x83D0	PtypString	"" (a zero-length string)
PidNameXSharingConfigUrl (section 2.2.2.4)	0x8377	PtypString	"" (a zero-length string)
PidLidSharingFlavor (section 2.2.2.5)	0x823D	PtypInteger32 ([MS-OXCDATA] section 2.11.1)	0x00025100
PidNameXSharingFlavor (section 2.2.2.6)	0x836D	PtypString	"25100"
PidLidSharingCapabilities (section 2.2.2.1)	0x823C	PtypInteger32	0x00040290
PidNameXSharingCapabilities (section 2.2.2.2)	0x836C	PtypString	"40290"
PidLidSharingLocalType (section 2.2.2.10)	0x824F	PtypString	"IPF.Appointment"
PidNameXSharingLocalType (section 2.2.2.11)	0x8379	PtypString	"IPF.Appointment"
PidLidSharingInitiatorEntryId (section 2.2.2.7)	0x8249	PtypBinary	**
PidLidSharingInitiatorName (section 2.2.2.8)	0x8029	PtypString	"user12"

Property	Property ID	Property type	Value
PidLidSharingInitiatorSmtP (section 2.2.2.9)	0x8248	PtypString	"user12@fabrikam.com"

* 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 .....
```

** 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 2F 6F 3D 46 +/...../o=F
0020: 69 72 73 74 20 4F 72 67 61 6E 69 7A 61 74 69 6F irst Organizatio
0030: 6E 2F 6F 75 3D 45 78 63 68 61 6E 67 65 20 41 64 n/ou=Exchange Ad
0040: 6D 69 6E 69 73 74 72 61 74 69 76 65 20 47 72 6F ministrative Gro
0050: 75 70 20 28 46 59 44 49 42 4F 48 46 32 33 53 50 up (FYDIBOHF23SP
0060: 44 4C 54 29 2F 63 6E 3D 52 65 63 69 70 69 65 6E DLT)/cn=Recipien
0070: 74 73 2F 63 6E 3D 75 73 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).

Property	Property ID	Property type	Data	Value
PidLidSharingResponseType (section 2.2.4.2)	0x83E4	PtypInteger32 ([MS-OXCROPS] section 2.11.1)	02 00 00 00	0x00000002
PidLidSharingResponseTime (section 2.2.4.1)	0x83E3	PtypTime ([MS-OXCROPS] section 2.11.1)	00 9A C2 CF E3 7F C8 01	2008/03/06 23:43:00.000

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.

Property	Property ID	Property type	Value
PidTagMessageClass ([MS-OXCMSG] section 2.2.1.3)	0x001A	PtypString ([MS-OXCDATA] section 2.11.1)	"IPM.Sharing"
PidNameContentClass (section 2.2.5.1)	0x806d	PtypString	"Sharing"
PidTagNormalizedSubject ([MS-OXCMSG] section 2.2.1.10)	0x0E1D	PtypString	"Allowed: sharing request: calendar"
PidTagSubjectPrefix ([MS-OXCMSG] section 2.2.1.9)	0x003D	PtypString	"" (a zero-length string)
PidLidSharingProviderGuid (section 2.2.2.12)	0x8243	PtypBinary	*
PidNameXSharingProviderGuid (section 2.2.2.13)	0x836F	PtypString	"AEF0060000000000C000000000000046"
PidLidSharingProviderName (section 2.2.2.14)	0x8244	PtypString	"Microsoft Exchange"
PidNameXSharingProviderName (section 2.2.2.15)	0x8370	PtypString	"Microsoft Exchange"
PidLidSharingProviderUrl (section 2.2.2.16)	0x8245	PtypString	"HTTP://www.microsoft.com/exchange"
PidNameXSharingProviderUrl (section 2.2.2.17)	0x8371	PtypString	"HTTP://www.microsoft.com/exchange"
PidLidSharingConfigurationUrl (section 2.2.2.3)	0x83D0	PtypString	"" (a zero-length string)
PidNameXSharingConfigUrl (section 2.2.2.4)	0x8377	PtypString	"" (a zero-length string)
PidLidSharingFlavor (section 2.2.2.5)	0x823D	PtypInteger32 ([MS-OXCDATA] section 2.11.1)	0x00023310
PidNameXSharingFlavor (section 2.2.2.6)	0x836D	PtypString	"23310"
PidLidSharingCapabilities (section 2.2.2.1)	0x823C	PtypInteger32	0x00040290
PidNameXSharingCapabilities (section 2.2.2.2)	0x836C	PtypString	"40290"
PidLidSharingLocalType (section 2.2.2.10)	0x824F	PtypString	"IPF.Appointment"

Property	Property ID	Property type	Value
PidNameXSharingLocalType (section 2.2.2.11)	0x8379	PtypString	"IPF.Appointment"
PidLidSharingInitiatorEntryId (section 2.2.2.7)	0x8249	PtypBinary (IMS-OXCDATA1 section 2.11.1)	**
PidLidSharingInitiatorName (section 2.2.2.8)	0x8029	PtypString	"user10"
PidLidSharingInitiatorSmtpp (section 2.2.2.9)	0x8248	PtypString	"user10@fabrikam.com"
PidLidSharingRemoteName (section 2.2.3.1)	0x8026	PtypString	"Calendar"
PidNameXSharingRemoteName (section 2.2.3.2)	0x8373	PtypString	"Calendar"
PidLidSharingRemoteType (section 2.2.3.5)	0x8247	PtypString	"IPF.Appointment"
PidNameXSharingRemoteType (section 2.2.3.6)	0x8376	PtypString	"IPF.Appointment"
PidLidSharingRemoteUid (section 2.2.3.7)	0x8246	PtypString	"00000000B0FCA4F63C21A642BD4B8F1BDBA04BC60100612A7BAB49F64E4B9C52DBFB5A53AA1C000000F04EEF0000"
PidNameXSharingRemoteUid (section 2.2.3.8)	0x8374	PtypString	"00000000B0FCA4F63C21A642BD4B8F1BDBA04BC60100612A7BAB49F64E4B9C52DBFB5A53AA1C000000F04EEF0000"
PidLidSharingRemoteStoreUid (section 2.2.3.3)	0x83E1	PtypString	"0000000038A1BB1005E5101AA1BB08002B2A56C20000454D534D44422E444C4C0000000000000001B55FA20AA6611CD9BC800AA002FC45A0C0000003336353952392D413131002F6F3D4669727374204F7267616E697A6174696F6E2F6F753D45786368616E67652041646D696E6973747261746976652047726F7570202846594449424F484632335350444C54292F636E3D526563697069656E74732F636E3D75736572313000"
PidNameXSharingRemoteStoreUid (section 2.2.3.4)	0x8375	PtypString	"0000000038A1BB1005E5101AA1BB08002B2A56C20000454D534D44422E444C4C0000000000000001B55FA20AA6611CD9BC800AA002FC45A0C0000003336353952392D413131002F6F3D4669727374204F7267616E697"

Property	Property ID	Property type	Value
			A6174696F6E2F6F753D457863 68616E67652041646D696E697 3747261746976652047726F75 70202846594449424F4846323 35350444C54292F636E3D5265 63697069656E74732F636E3D7 5736572313000"

* 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 46 .....
```

** 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 2F 6F 3D 46 +/...../o=F
0020: 69 72 73 74 20 4F 72 67 61 6E 69 7A 61 74 69 6F irst Organizatio
0030: 6E 2F 6F 75 3D 45 78 63 68 61 6E 67 65 20 41 64 n/ou=Exchange Ad
0040: 6D 69 6E 69 73 74 72 61 74 69 76 65 20 47 72 6F ministrative Gro
0050: 75 70 20 28 46 59 44 49 42 4F 48 46 32 33 53 50 up (FYDIBOHF23SP
0060: 44 4C 54 29 2F 63 6E 3D 52 65 63 69 70 69 65 6E DLT)/cn=Recipien
0070: 74 73 2F 63 6E 3D 75 73 65 72 31 30 00          ts/cn=user10.
```

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 [\[MS-OXODLGT\]](#).

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).

Property	Property ID	Property type	Data	Value
PidLidSharingResponseType (section 2.2.4.2)	0x83E4	PtypInteger32 ([MS-OXCROPS] section 2.11.1)	01 00 00 00	0x00000001
PidLidSharingResponseTime (section 2.2.4.1)	0x83E3	PtypTime ([MS-OXCROPS] section 2.11.1)	00 9A C2 CF E3 7F C8 01	2008/03/06 23:43:00.000

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 released service packs:

- Microsoft Exchange Server 2007
- Microsoft Exchange Server 2010
- Microsoft Exchange Server 2013
- Microsoft Office Outlook 2007
- Microsoft Outlook 2010
- Microsoft Outlook 2013

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 2.2.2.8](#): 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

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

8 Index

A

Abstract data model
[client](#) 18
[server](#) 19
[Accepting a sharing request example](#) 27
Additional property constraints
[PidNameContentClass property](#) 15
[PidTagMessageClass property](#) 15
[Additional Property Constraints message](#) 15
[Applicability](#) 8

C

[Capability negotiation](#) 8
[Change tracking](#) 34
Client
[abstract data model](#) 18
[initialization](#) 18
[message processing](#) 19
[other local events](#) 19
[overview](#) 18
[sequencing rules](#) 19
[timer events](#) 19
[timers](#) 18
Client - higher-layer triggered events
[creating a sharing invitation](#) 18
[creating a sharing request](#) 18
[creating a sharing response - accept](#) 18
[creating a sharing response - deny](#) 19
[Common Message Object Properties message](#) 9
Common Sharing Message object properties
[PidLidSharingCapabilities property](#) 9
[PidLidSharingConfigurationUrl property](#) 10
[PidLidSharingFlavor property](#) 10
[PidLidSharingInitiatorEntryId property](#) 11
[PidLidSharingInitiatorName property](#) 11
[PidLidSharingInitiatorSmtip property](#) 11
[PidLidSharingLocalType property](#) 11
[PidLidSharingProviderGuid property](#) 12
[PidLidSharingProviderName property](#) 12
[PidLidSharingProviderUrl property](#) 13
[PidNameXSharingCapabilities property](#) 10
[PidNameXSharingConfigUrl property](#) 10
[PidNameXSharingFlavor property](#) 11
[PidNameXSharingLocalType property](#) 12
[PidNameXSharingProviderGuid property](#) 12
[PidNameXSharingProviderName property](#) 12
[PidNameXSharingProviderUrl property](#) 13
[Common Sharing Message Object Properties message](#) 9

D

Data model - abstract
[client](#) 18
[server](#) 19
[Denying a sharing request example](#) 25

E

Examples
[accepting a sharing request](#) 27
[denying a sharing request](#) 25
[sending a sharing request](#) 23

F

[Fields - vendor-extensible](#) 8

G

[Glossary](#) 6

H

Higher-layer triggered events
[server](#) 19
Higher-layer triggered events - client
[creating a sharing invitation](#) 18
[creating a sharing request](#) 18
[creating a sharing response - accept](#) 18
[creating a sharing response - deny](#) 19

I

[Ignored Properties message](#) 15
[Implementer - security considerations](#) 31
[Index of security parameters](#) 31
[Informative references](#) 7
Initialization
[client](#) 18
[server](#) 19
[Introduction](#) 6

M

Message processing
[client](#) 19
[server](#) 19
Messages
[Additional Property Constraints](#) 15
[Common Message Object Properties](#) 9
[Common Sharing Message Object Properties](#) 9
[Ignored Properties](#) 15
[Sharing Invitation and Response Acceptance Properties](#) 13
[Sharing Request Properties](#) 14
[syntax](#) 9
[transport](#) 9

N

[Normative references](#) 7

O

Other local events
[client](#) 19
[server](#) 20
[Overview \(synopsis\)](#) 7

P

[Parameters - security index](#) 31
[PidLidSharingCapabilities](#) common Sharing Message object property 9
[PidLidSharingConfigurationUrl](#) common Sharing Message object property 10
[PidLidSharingFlavor](#) common Sharing Message object property 10
[PidLidSharingInitiatorEntryId](#) common Sharing Message object property 11
[PidLidSharingInitiatorName](#) common Sharing Message object property 11
[PidLidSharingInitiatorSmtip](#) common Sharing Message object property 11
[PidLidSharingLocalType](#) common Sharing Message object property 11
[PidLidSharingProviderGuid](#) common Sharing Message object property 12
[PidLidSharingProviderName](#) common Sharing Message object property 12
[PidLidSharingProviderUrl](#) common Sharing Message object property 13
[PidLidSharingRemoteName](#) sharing invitation and response property 13
[PidLidSharingRemoteStoreUid](#) sharing invitation and response property 13
[PidLidSharingRemoteType](#) sharing invitation and response property 14
[PidLidSharingRemoteUid](#) sharing invitation and response property 14
[PidLidSharingResponseTime](#) sharing request property 14
[PidLidSharingResponseType](#) sharing request property 14
[PidNameContentClass](#) additional property constraints 15
[PidNameXSharingCapabilities](#) common Sharing Message object property 10
[PidNameXSharingConfigUrl](#) common Sharing Message object property 10
[PidNameXSharingFlavor](#) common Sharing Message object property 11
[PidNameXSharingLocalType](#) common Sharing Message object property 12
[PidNameXSharingProviderGuid](#) common Sharing Message object property 12
[PidNameXSharingProviderName](#) common Sharing Message object property 12
[PidNameXSharingProviderUrl](#) common Sharing Message object property 13
[PidNameXSharingRemoteName](#) sharing invitation and response property 13
[PidNameXSharingRemoteStoreUid](#) sharing invitation and response property 13
[PidNameXSharingRemoteType](#) sharing invitation and response property 14

[PidNameXSharingRemoteUid](#) sharing invitation and response property 14
[PidTagMessageClass](#) additional property constraints 15
[Preconditions](#) 8
[Prerequisites](#) 8
[Product behavior](#) 32

R

[References](#) 7
[informative](#) 7
[normative](#) 7
[Relationship to other protocols](#) 8

S

Security
[implementer considerations](#) 31
[parameter index](#) 31
[Sending a sharing request example](#) 23
Sequencing rules
[client](#) 19
[server](#) 19
Server
[abstract data model](#) 19
[higher-layer triggered events](#) 19
[initialization](#) 19
[message processing](#) 19
[other local events](#) 20
[overview](#) 19
[sequencing rules](#) 19
[timer events](#) 20
[timers](#) 19
Sharing invitation and response acceptance properties
[PidLidSharingRemoteName](#) property 13
[PidLidSharingRemoteStoreUid](#) property 13
[PidLidSharingRemoteType](#) property 14
[PidLidSharingRemoteUid](#) property 14
[PidNameXSharingRemoteName](#) property 13
[PidNameXSharingRemoteStoreUid](#) property 13
[PidNameXSharingRemoteType](#) property 14
[PidNameXSharingRemoteUid](#) property 14
[Sharing Invitation and Response Acceptance Properties](#) message 13
Sharing request properties
[PidLidSharingResponseTime](#) property 14
[PidLidSharingResponseType](#) property 14
[Sharing Request Properties](#) message 14
[Standards assignments](#) 8
[Syntax](#) 9

T

Timer events
[client](#) 19
[server](#) 20
Timers
[client](#) 18
[server](#) 19
[Tracking changes](#) 34

[Transport](#) 9
Triggered events - client
 [creating a sharing invitation](#) 18
 [creating a sharing request](#) 18
 [creating a sharing response - accept](#) 18
 [creating a sharing response - deny](#) 19
Triggered events - higher-layer
 [server](#) 19

V

[Vendor-extensible fields](#) 8
[Versioning](#) 8